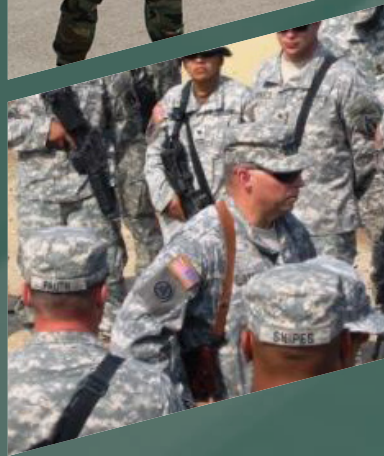


2006



Department of Defense Survey of Health Related Behaviors Among the Guard and Reserve Force

A Component of the Defense Lifestyle Assessment Program (DLAP)



September 2007

*Prepared by: RTI International.
RTI International is a trade name of Research Triangle Institute.*

2006 Department of Defense Survey of Health Related Behaviors Among the Guard and Reserve Force

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Executive Summary

This report presents the primary results of the 2006 Department of Defense (DoD) Survey of Health Related Behaviors Among the Guard and Reserve Force. This study is the first comprehensive, population-based, on-site examination of health behaviors in the total Guard and Reserve force. It was conducted under the direction of the Office of the Assistant Secretary of Defense (Health Affairs). The purpose of this survey is to assess lifestyle factors affecting health and readiness; identify and track health-related trends and high-risk groups; target groups and/or lifestyle factors for intervention; and help identify future directions for additional studies, DoD programs, and policies.

The eligible population for the 2006 survey consisted of all Reserve component personnel (including full-time and/or activated Guard and Reservists) except military academy students, personnel absent without official leave (AWOL), and personnel who had a permanent change of station (PCS) at the time of data collection. Guard and Reserve personnel, referred to collectively as the Reserve component, came from six Reserve components: Army Reserve, Army National Guard, Navy Reserve, Marine Corps Reserve, Air Force Reserve, and Air National Guard. The final sample consisted of 18,342 military personnel (2,796 Army National Guard, 3,215 Navy Reserve, 1,159 Marine Corps Reserve, 6,656 Air Force Reserve, 2,851 Air National Guard, and 1,665 Army Reserve) who completed self-administered questionnaires anonymously. Participants were selected to represent Reserve/Guard men and women in all pay grades throughout the world. Data were collected primarily from participants in group sessions at military installations; they were obtained by mail for those not attending the sessions. The overall response rate was 55.3%. The data were weighted to represent all Reserve component personnel.

Selected key findings from the 2006 survey are noted below. *In interpreting and understanding the findings, three points should be considered: (a) the*

data and results are self-reported findings that may differ from information in official records or other objective data sources; (b) some questionnaire items comprise screeners suggestive of possible substance abuse or mental health issues; results from these screeners may suggest the need for further evaluation but do not represent a formal clinical diagnosis; and (c) in reporting the findings, the term “significant” is often used. This term refers to statistical significance resulting from statistical tests of differences that were conducted.

Substance Use

To better understand the influence of alcohol, tobacco, and illicit drug use on the readiness of Reserve and Guard personnel, the 2006 survey examined various factors related to the use of these substances in the military.

Alcohol Use

- Hazardous drinking or worse (i.e., harmful drinking or dependence as measured by the AUDIT) was reported by 20.1% of all personnel and was reported at rates three to ten times higher for heavy drinkers than for those who drank at lower levels.
- About 3.1% showed probable alcohol dependence; rates were highest among those in the E1-E3 pay grade.
- For all levels of drinking, the most important reasons for limiting drinking were that (1) drinking is bad for one's health, (2) drinking can interfere with one's military career, (3) drinking can make one feel sick, and (4) drinking and driving can cause problems with the police.
- Heavy drinkers reported celebrating and relaxing as important reasons to drink. Heavy drinkers also saw being sociable and having fun as important reasons to drink.
- Heavy drinkers reported high rates of risky behavior after consuming alcohol.
- Heavy drinkers were more likely to have mental health problems than those who drank less.

Tobacco Use

- In the total Reserve component, 23.7% of personnel were current smokers (any smoking in the past 30 days), 9.3% were heavy smokers, and 5.8% were classified as dependent on nicotine. Rates of any smoking were higher in the Marine Corps Reserve, Army National Guard, and Army Reserve than in the Navy Reserve, Air National Guard, or Air Force Reserve. Rates of heavy smoking were higher in the Army National Guard than in any other Reserve component.
- Cigarette smoking after joining the military is a significant concern regarding Reserve personnel. Of the total Reserve component, 14.3% of all respondents and 38.4% of current smokers started smoking after joining the military.
- Three frequently cited reasons for starting to smoke were to help relax and calm down (22.0%), to help relieve stress (21.6%), and to relieve boredom (20.4%).
- A majority of Reserve personnel have tried to quit smoking. Among past-year smokers, 63.9% tried to quit or quit successfully in the past 12 months. About a quarter of current smokers indicated that they planned to quit within the next 30 days, and an additional 39.0% reported an intention to quit within the next 6 months.
- Overall, 11.0% of all personnel and 12.9% of males reported using smokeless tobacco in the past 30 days. Personnel in the Marine Corps Reserve had the highest prevalence of use (21.8%), followed by the Army National Guard (14.1%). Smokeless tobacco use was higher among younger personnel within each Reserve component.
- Of the total Reserve component, personnel who were current heavy smokers were more likely to report stress or mental health problems than were personnel who had never smoked. Also, current heavy smokers were more likely to screen positive for needing further anxiety and depression evaluation, report suicide ideation in the past year, and report posttraumatic stress disorder (PTSD) symptoms in the past 30 days.

Illicit Drug Use

- Adjusted rates of past-12-month any illicit drug use for the Army National Guard (14.6%) were significantly higher than for the other components, except for the Army Reserve; rates of past-12-

month use for the Air National Guard (5.5%) were significantly lower than for the other components.

- In 2006, analgesics and marijuana were the most common form of illicit drug used among Reserve personnel in response to past-month and past-year behavior. In 2006, 4.0% of Reserve personnel reported using analgesics and 3.0% reported using marijuana within the past month; rates of use in the past year were 7.3% for analgesics and 6.1% for marijuana.
- Overall, users of illicit drugs reported more stress and mental health problems than did those who were not users. Past-month illicit drug users reported more stress at their civilian job (26.7% compared with 18.8%), at their military job (19.2% compared with 12.4%), or in their family life (33.1% compared with 16%). They were also more likely to meet criteria for needing further depression evaluation (33.8% compared with 15.9%), report suicidal ideation in the past year (17.0% compared with 3.8%), meet screening criteria for PTSD in the past 30 days (15.7% compared with 6.6%), and report physical or sexual abuse (46.2% compared with 28.1%).

Stress and Mental Health

The 2006 survey examined various mental health issues among Reserve and Guard personnel. These included stress in civilian and military jobs, stress in family life, sources for stress, and coping mechanisms. Mental health issues such as depression, anxiety, PTSD symptoms, suicidal ideation, and physical and sexual abuse were also assessed.

- Higher percentages of Reserve component members rated their civilian jobs (20.4%) and their personal lives (19.2%) as more stressful than their military jobs (12.9%).
- The most frequently indicated stressors for both men and women were being away from family (10.6%), problems with money (10.5%), and problems at their civilian job (10.4%).
- Women were more likely than men to use alcohol or cigarettes as coping behaviors. More men than women reported using cigars or smokeless tobacco (11.4% vs. 3.6%) to cope with stress. Women were more likely than men to talk to a friend or family member (78.4% vs. 64.4%) or to pray (70.0% vs. 53.2%) as a coping strategy.

- An estimated 7.7% of Reserve component members met screening criteria for PTSD in the past 30 days. Army National Guard members were most likely to screen positive for current probable PTSD.
- A small percentage of members had seriously considered (5.5%) or attempted (1.8%) suicide in the past year.
- More than half of the women and a third of the men reported some type of past physical or sexual abuse. Almost 40% of women reported lifetime experience of unwanted sexual contact.

Healthy Behaviors and Healthy Lifestyles

This chapter examined various lifestyle measures in the Reserve and Guard population. Variables assessed include prevalence of overweight, fruit and vegetable consumption, physical activity, and other preventive measures such as high blood pressure and cholesterol checks.

- Slightly over one-third (34.5%) of Reserve component members considered themselves overweight; however, almost two-thirds (62.7%) were categorized as overweight according to body mass index calculations based on self-reported height and weight.
- Vegetable consumption of 3 times or more per day was higher (11.3%) than fruit consumption (9.6%) among Reserve component personnel.
- Over 35% of Reserve component personnel engaged in 20 minutes of vigorous leisure-time physical activity for 3 or more days each week.
- Over half of Reserve component personnel (60%) reported having taken dietary supplements at least once per week in the past 12 months.
- Approximately 88% of Reserve component members reported that they had their blood pressure checked within the 2 years prior to the survey and knew the result. Of those, 8.3% reported being diagnosed as having high blood pressure in the past 2 years. Overall, 61% of Reserve component members had their cholesterol checked within the preceding 5 years.

Other Specific Issues

The 2006 Reserve component survey also investigated several other specific issues that may affect the health of the Reserve component: (a) injuries and injury prevention, (b) sexually transmitted infections, (c) sleep habits, (d) poor physical health, (e) risk taking and sensation seeking, (f) oral health, (g) maternal and infant health, and (h) gambling.

Injuries and Injury Prevention

- Air Force personnel (95.1%) reported the highest rates of seat belt use among Reserve components. Younger age groups were less likely to wear seatbelts than older Reserve component members.
- Male Army Reservists (71.2%) were more likely than female Army Reservists to wear motorcycle helmets (59.5%). Female bicyclists reported higher rates of always or nearly always wearing a helmet than did male bicyclists.
- Hearing protection use was highest among male Army Reservists and Air National Guardsmen. Female Army National Guard and Army Reservists reported higher use rates than did the other components. Overall, men (69.1%) reported higher rates than women (58.5%).

Sexually Transmitted Infections (STIs)

- Nearly 12% of Guard and Reserve personnel had ever had an STI. Approximately 17% of Guard and Reserve women reported ever having an STI compared with about 10% of men.
- Approximately 3% of personnel in the total Guard and Reserve component (2% of men and 6% of women) reported having an STI in the preceding year. The Air National Guard had significantly fewer STIs during the past year than all other components (with the exception of the Marine Corps Reserve, whose estimates were suppressed due to small sample).

Sleep Habits

- Less than one-third (30.0%) of the total Reserve component reported getting 7 or more hours of sleep on average per night, 59.1% reported getting 5 or 6 hours per night, 8.7% reported getting 3 to 4 hours, and 2.3% reported an average of 2 hours or less of sleep per night.

- Air National Guard and Air Force Reserve personnel get more sleep per night than personnel in the other components. Fewer younger personnel (aged 25 to 34) and personnel aged 45 or older reported getting 7 or more hours of sleep per night.

Poor Physical Health

- Of Reserve component personnel aged 24 or younger, 82.0% had not limited their usual activities in the past month because of poor physical health, and over 84.0% of personnel aged 25 or older had not limited their usual activities in the past month because of poor physical health. Among the individual components, Air National Guard and Air Force Reserve personnel were the least likely to have been kept from their regular activities by poor physical health at least once a week or more (3.2%), followed by the Marine Corps Reserve (3.4%) and the Navy Reserve (3.8%).

Risk Taking and Sensation Seeking

- Overall, personnel were classified as either low risk takers (19.9%), moderate risk takers (53.7%), or high risk takers (26.5%).
- Guard and Reserve personnel who were high risk takers were more likely to drink heavily, use illicit drugs, drink and drive, report suicidal ideation, on-the-job accidents, hospitalizations for unintended injuries, seldom using seat belts, seldom using a motorcycle helmet, and seldom using hearing protection during activities other than firing their weapon.
- Overall, an estimated 10.8% of personnel were classified as low sensation seekers, 31.5% were classified as moderate sensation seekers, and 57.7% were classified as high sensation seekers.
- Like high risk takers, high sensation seekers were more likely to report suicidal ideation in the past year, on-the-job accidents, hospitalization for unintended injuries, seldom using seat belts, and seldom using hearing protection for activities other than firing their weapon.

Oral Health

- Slightly over half (57.5%) of Reserve component personnel had a dental check-up in the past 12 months. Of all Reserve personnel, about 30% were required to get dental work done in the past 12 months before they could be deployed at sea or in the field. Approximately 11% of all personnel had

lost a permanent tooth or teeth because of cavities since joining the military. Other reasons for tooth loss included gum disease, mouth injury, tooth crowding or braces, corrective jaw surgery, or some other problem. Of those personnel who did not have a dental check-up in the past 12 months, 43.5% did not because they did not have dental insurance. Approximately 24% of all personnel who did not have a dental check-up in the past 12 months did not because of other reasons.

Maternal and Infant Health

- Over 10% of Guard and Reserve women reported that they had been pregnant within the past year or they were currently pregnant, and an additional 2.0% were unsure if they were pregnant at the time of the survey. Across all the components, 30.3% of Guard and Reserve women had been pregnant within the past 5 years. The Marine Corps Reserve had the highest percentage of women who were currently pregnant (15.2%), nearly three times as high as the next highest component (Army Reserve, 5.9%). Nearly 88% of women received prenatal care during their first trimester.
- Of all Guard and Reserve women who were pregnant in the past 5 years, 17.2% reported using alcohol at least once during their most recent pregnancy. Army Reserve women were nearly twice as likely to have indicated use of alcohol at least once during their last pregnancy (20.6%) as Navy Reserve women (10.8%) and Air Force Reserve women (11.9%). Women aged 35 to 44 were more likely to have indicated using alcohol at least once (30.0%) during their last pregnancy than women aged 25 to 34 (16.5%).
- An estimated 15.6% of Guard and Reserve women who were pregnant during the past 5 years reported smoking cigarettes during their last pregnancy. Less cigarette use during pregnancy was reported by Air National Guard women (0.7%) than their counterparts in the Army Reserve (4.6%) and Air Force Reserve (4.9%).

Gambling

- Of 10 screening scale items for problem gambling, preoccupation with gambling was the most commonly reported symptom (4.1%), followed closely by gambling to win back lost money (4.0%).
- Both of the Army components (National Guard and Reserve) indicated preoccupation with

gambling more frequently than any of the other gambling-related items. The remaining four components indicated gambling to win back lost money most frequently. Nearly 2% of the total Guard and Reserve component reported having five or more gambling-related symptoms, indicative of problem gambling according to the DSM-IV-TR. Because the screener asks about things ever happening, this 2% represents a lifetime measure and not a current diagnosis.

- Marine Corps Reservists reported a significantly higher percentage of three or more problems, as well as five or more problems, than any of the other components except for the Army National Guard, while the Navy Reserve reported the lowest percentage with five or more problems (0.8%).

Deployment and Job Satisfaction

The 2006 survey also investigated deployment and job satisfaction among Reserve and Guard personnel.

Issues addressed include stress and mental health and deployment, substance use and deployment, and job satisfaction.

- The percentage of personnel who reported experiencing high family stress was significantly higher among those who had deployed three or more times in the past 2 years compared with those who had not deployed (26.0% vs. 18.6%). Also, those who had deployed more than once were more likely to (a) meet screening criteria for needing further depression evaluation (20.5% vs. 17.7%) and report posttraumatic stress disorder (PTSD) symptoms (9.1% vs. 6.7%), (b) have limited usual activities because of poor mental health (2.7% vs. 1.2%), and (c) have admitted to suicidal ideation in the past year (7.2% vs. 4.2%).
- Personnel who had served in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) reported more work and family stress than those who had served in any other theater and those who had not served in any theater. Personnel who served in OIF/OEF were also more likely to meet screening criteria for needing further depression evaluation and to report PTSD symptoms.
- Compared with personnel who had not been deployed in the past 24 months, those who had been deployed one or more times had higher percentages of past-month heavy alcohol use, past-

year illicit drug use except marijuana, past-year any illicit drug use, and possible alcohol dependence.

- Guard and Reserve personnel who had served in OIF/OEF were more likely to report past-year illicit drug use except marijuana, past-year any illicit drug use, and possible alcohol dependence than those who did not serve in any operational theater.
- Time since last deployment also impacted substance use. Overall, the percentage of personnel reporting past 30 day substance use tended to decrease as time since most recent deployment increased.
- Personnel in Army components were less likely to stay in the Guard or Reserves than members of other components. An estimated 77.3% of all personnel were satisfied or very satisfied overall with their work assignment. Male personnel under age 24 were less satisfied overall than personnel aged 25 or older. A slightly higher percentage of female personnel under age 24 reported being satisfied or very satisfied than personnel aged 25 to 34.

Comparisons of Active Duty and Reserve Personnel

The last chapter of this report includes selected comparisons between the 2005 DoD Survey of Health Related Behaviors among Active-Duty Personnel and the 2006 Reserve component study. Reserve component personnel were segmented into two groups: Reserve components excluding Active Guard/Reserve Program and/or full-time National Guard Reservist (AGR/FTS/AR) and the AGR/FTS/AR. Reserve component personnel were somewhat older, more likely to be married, and had higher education levels than active-duty personnel. The following results examine differences and similarities among the active-duty force and Reserve component:

- Reserve component personnel were significantly less likely to engage in heavy alcohol use, binge drinking, and cigarette smoking than active-duty personnel. Past-year illicit drug use adjusted rates were not statistically different among active-duty personnel, Reserve component personnel

- excluding AGR/FTS/AR, and Reserve component AGR/FTS/AR personnel.
- Adjusted estimates show that heavy alcohol use was significantly higher for active-duty and Reserve component deployed personnel compared with their nondeployed colleagues (20.1% vs. 16.5% active duty, 17.9% vs. 13.9% Reserve component). Active-duty and Reserve component personnel who were deployed also reported significantly higher past-year illicit drug use than those not deployed (12.4% vs. 10.3% active duty, 12.6% vs. 8.3% Reserve component).
 - Deployed active-duty personnel showed significantly higher rates than nondeployed personnel for past-year cigarette smoking (44.5% vs. 39.6%), heavy smoking (12.8% vs. 9.9%), and nicotine dependence (8.9% vs. 7.2%), whereas deployed and nondeployed Reserve component personnel showed no significant differences.
 - Theater of operation was also associated with substance use. Active-duty or Reserve component personnel deployed either to OIF/OEF or to another theater tended to have higher rates of use relative to those not deployed to a theater. This was true for illicit drug use and cigarette smoking. For heavy alcohol use, the pattern held for active-duty personnel, but Reserve component personnel did not differ by theater.
 - After adjustment for demographic differences between the active and Reserve component forces, active-duty personnel were significantly more likely to report high work stress in their military job and higher stress as a woman (33.2%, 36.7%) than Reserve component personnel excluding AGR/FTS/AR (12.3%, 21.0%) and AGR/FTS/AR personnel (19.0%, 27.9%).
 - Active-duty personnel were significantly more likely to need further evaluation for depression than either of the Reserve component groups (23.2% vs. 17.5% and 19.0%) and more likely to have met screening criteria for generalized anxiety disorder (GAD) symptoms than the Reserve component groups (13.1% vs. 10.1% and 8.5%).
 - Active-duty personnel were significantly more likely to have been deployed in the past year (29.9%) than Reserve component personnel excluding AGR/FTS/AR (18.8%), but about the same as AGR/FTS/AR personnel (24.9%). Active-duty personnel who were deployed were significantly more likely to report high stress while carrying out their military duties and in their family life. Regarding suicidal ideation and suicide attempts, active-duty personnel showed no significant differences due to deployment (5.4% vs. 4.5% ideation; 1.0% vs. 0.6% attempts), whereas Reserve component personnel who were deployed were significantly more likely to report these behaviors than those not deployed (7.1% vs. 3.8% ideation; 2.3% vs. 0.9% attempts).
 - Theater of operation was also associated with stress and mental health. The general pattern was that whereas theater of operation was not associated with many of the measures for active-duty personnel, it was associated for Reserve component personnel. This was true for higher family stress, need for further depression evaluation, met screening criteria for anxiety symptoms, and poor mental health limiting normal activities.
 - Adjusted estimates show that AGR/FTS/AR personnel were significantly more likely to be categorized as overweight (66.5%) than active-duty (62.1%) and non-AGR/FTS/AR Reserve component personnel (61.6%).
 - Active-duty personnel were more likely to report moderate (70.5%) and vigorous (57.7%) physical activity than the Reserve component excluding AGR/FTS/AR (54.2% and 36.7%) and AGR/FTS/AR groups (59.2% and 45.0%).
 - Reserve component personnel excluding AGR/FTS/AR were significantly more likely to report fruit (9.8%) and vegetable intake (11.2%) than active-duty and AGR/FTS/AR personnel.
 - Active-duty personnel reported higher seat belt use than Reserve component excluding AGR/FTS/AR (92.2% vs. 88.7%), but was similar to AGR/FTS/AR (91.0%).
 - AGR/FTS/AR personnel reported significantly higher rates of productivity loss (42.0%) than active duty (36.0%) and the Reserve component excluding AGR/FTS/AR (20.7%).
 - Active-duty personnel reported significantly higher rates of dental check-ups in the past 12 months (80.7%) than Reserve component excluding

AGR/FTS/AR (59.2%) and AGR/FTS/AR (65.1%) personnel.

Maintaining the health of the Reserve and Guard components is an important factor contributing to mission readiness. The findings noted above and other related findings are discussed in greater detail in this report. The report also describes the methodologies used to develop these estimates and suggests areas in need of attention to address key health issues that the military faces in the early 21st century.

Chapter 1: Introduction and Background

This report presents findings from the 2006 Department of Defense (DoD) Reserve Component Survey, conducted by RTI International in Research Triangle Park, North Carolina. The 2006 survey is the first on site population-based survey to provide detailed information about substance use, health behaviors related to selected *Healthy People 2010* objectives (U.S. Department of Health and Human Services [DHHS], 2000), and stress and mental health among the National Guard and Reserves. Comparisons are made to the 2005 DoD Survey of Health Related Behaviors (HRB) among Active Duty Military Personnel, after which the survey is modeled. Findings from each of the six Reserve components are presented—Army National Guard, Army Reserve, Navy Reserve, Air National Guard, Air Force Reserve, and Marine Corps Reserve—as well as for the total Reserve component.

1.1 Organization of the Report

This chapter discusses the relevance of health promotion to the military, both for the active-duty and Reserve components, along with background on the DoD active duty HRB survey series, objectives for the 2006 Reserve component survey, and findings from other studies of the prevalence of substance use and other health-related behaviors among military personnel and civilians. For this report, *substance use* includes use of alcohol, illicit drugs (illegal drugs or prescription drugs used without a doctor's prescription, or in greater amounts than prescribed, or for the feelings they caused), and tobacco (cigarettes, smokeless tobacco, pipes, and cigars).

The general methodology for the 2006 survey is presented in Chapter 2, including sampling design, instrument development, data collection procedures, survey performance rates, sample participants and military population characteristics, key definitions and measures, analytic approach, variability and suppression of estimates, and strengths and limitations of the data.

The next three chapters describe the prevalence, trends, correlates, and comparisons with the civilian population

of rates of alcohol use (Chapter 3), tobacco use (Chapter 4), and illicit drug use (Chapter 5).

Chapter 6 focuses on stress and mental health, including sources and correlates of stress, stress and productivity loss, coping with stress, screening for anxiety and depression, screening for posttraumatic stress disorder (PTSD) and suicide risk, relationships between mental health problems and productivity loss, and physical and sexual abuse. Chapter 7 examines healthy lifestyles and disease prevention, including measures of overweight, obesity, and underweight; physical activity; food intake and use of dietary supplements; and blood pressure and cholesterol screening. Chapter 8 examines other health-related behaviors, including injuries and injury prevention, sexually transmitted infections, sleep habits, poor health and limitations on activity, risk-taking and sensation seeking, maternal and infant health, and gambling. Included is an assessment of the status of *Healthy People 2010* objectives for each of these areas.

Chapter 9 focuses on deployment and job satisfaction, including the relationship between deployment and stress, mental health, substance use, and dependence. Chapter 10 presents comparisons of active-duty and Reserve component personnel on substance use and other health behaviors, stress, and mental health.

Several appendixes have been included for readers interested in details about the survey's sampling and analysis methodologies, the study questionnaire, and additional data tables. Appendix A describes the sampling design and estimation procedures for the 2006 survey. Appendix B contains a set of supplemental tables that augment data reported in the main text. Appendix C provides a detailed discussion of the alcohol summary measures used in this report. In Appendixes D and E, the technical details of the survey's approach to standardization and to multivariate analyses are described. Appendix F lists the DoD survey liaison officers who oversaw and coordinated the survey efforts at each of the participating installations. Finally,

Appendix G contains a copy of the instrument for the 2006 survey.

1.2 Health Promotion and the Military

1.2.1 Background and Relevance

Just as health-related behaviors are of relevance to society in general, they also are of interest and concern to DoD and the Services for a number of reasons. First, poor health practices among military personnel, including heavy alcohol use and illicit drug use, interfere with the DoD mission of maintaining a high state of military readiness among the armed forces. For example, abuse of alcohol or illicit drugs can impair work performance or pose a danger to others if personnel are either under the influence of alcohol or other drugs or recovering from the effects of these drugs when carrying out their military jobs. Moreover, alcohol and other drug abuse can create personal or family problems, which in turn can interfere with job performance.

Second, DoD considers any use of illicit drugs by military personnel to be abuse and grounds for dismissal from the Services. The rationale for this policy is that the defiance of laws prohibiting use of illicit drugs can have a potentially deleterious effect on military discipline, even if the effects or consequences of such use are minimal.

Third, the health-related behaviors and habits that military personnel acquire or receive reinforcement to maintain during their military careers can lead to the future development of chronic diseases or can reduce the risk of their development. Even though the military force is composed primarily of young, healthy persons, behaviors such as cigarette smoking and heavy alcohol use can lead to serious health problems later in life. Research has shown that Air Force recruits who were smokers reported higher alcohol use, more frequent binge drinking, greater smokeless tobacco use, and less physical activity (Haddock, Klesges, Talcott, Lando, & Stein, 1998). Conversely, military personnel can still maintain behaviors that promote health, such as vigorous physical exercise, long after they are discharged. Effective management of stress, depression, and other

mental health problems also can contribute to healthier military personnel.

For these reasons, DoD has been placing increased emphasis on health promotion since the mid-1980s. The remainder of this section briefly describes DoD health promotion policies and discusses health objectives for the nation and the military and their relevance to the 2006 DoD Reserve component survey.

1.2.2 DoD Health Promotion Policies and Programs

DoD has had a long-standing interest in the health and well-being of its members. Indeed, having ready access to a comprehensive health care program at little or no cost to members has long been viewed as an important benefit of military life (Stanley & Blair, 1993). Health promotion efforts in the military emerged as an outgrowth of drug and alcohol abuse problems that surfaced in the 1970s. In response to reports of widespread drug abuse among troops during the Vietnam War, and in recognition of the significance of the alcohol abuse problem in the Services, the DoD issued a policy directive in March 1972 (Directive No. 1010.2 [DoD, 1972]) that set forth prevention and treatment policies for alcohol abuse and alcoholism among military personnel. Other DoD policy directives (e.g., DoD Directive Nos. 1010.3 and 1010.4 and Instruction Nos. 1010.5 and 1010.6 [DoD, 1985b, 1980a, 1980b, 1985a, respectively]) and programs provide for the following:

- assessment of the nature, extent, and consequences of substance use and abuse in the military (DoD, 1980a, 1985b, 1997c)
- prevention programs designed to deter substance abuse, which include both education and drug urinalysis testing (DoD, 1980b)
- treatment and rehabilitation programs designed to return substance abusers to full performance capabilities (DoD, 1985a)
- evaluation of drug urinalysis programs and treatment and rehabilitation programs (DoD, 1985b, 1997c)

In 1986, DoD established a formal, coordinated, and integrated health promotion policy (DoD Directive No.

1010.10) designed to improve and maintain military readiness and the quality of life of DoD personnel and other beneficiaries (DoD, 1986a). This directive defined health promotion as activities designed to support and influence persons to manage their own health through lifestyle decisions and self-care. The directive identified six broad program areas: smoking prevention and cessation, physical fitness, nutrition, stress management, alcohol and other drug abuse prevention, and hypertension prevention.

Smoking prevention and cessation programs aim to create a social environment that supports abstinence and discourages use of tobacco products, thereby creating a healthy working environment. The programs also seek to provide smokers with encouragement and professional assistance to stop smoking. Information on the health consequences of smoking is presented to personnel when they enter the military, as part of routine physical and dental examinations, and at the time of a permanent change of station (PCS). Personnel are prohibited from smoking during basic training and, in some Services, during part of their next phase of technical or advanced training. In early 1994, DoD issued Instruction No. 1010.15, mandating a smoke-free workplace (DoD, 1994). Under this instruction, smoking is banned indoors in all DoD workplaces. Policy related to smoking in clubs, eating facilities, and living facilities, such as bachelor's quarters, is still governed by DoD Directive 1010.10, which permits smoking areas to be designated if adequate space is available for nonsmokers and ventilation is adequate to provide them with a healthy environment (DoD, 1986a).

Physical fitness programs aim to encourage and assist military personnel to establish and maintain the physical stamina and cardiorespiratory endurance necessary for mission performance, good health, and a productive lifestyle. Programs that integrate fitness activities into normal work routines and community activities are encouraged.

Nutrition programs aim to encourage and assist military personnel to establish and maintain dietary habits that contribute to good health, prevent disease, and control weight. The weight control aspect of health

promotion overlaps with the goals of physical fitness programs discussed above, but nutrition programs also provide information about the nutritional value of foods and the relationship between diet and chronic disease.

Stress management programs aim to reduce environmental stressors and help target populations cope with stress. Commanders are to develop leadership practices and work policies that promote productivity and health and to offer education to military personnel on stress management techniques.

Alcohol and other drug abuse prevention programs aim to prevent the misuse of alcohol and other drugs, eliminate the illegal use of such substances, provide counseling or rehabilitation to abusers who desire assistance, and provide education to various target audiences about the risks associated with drinking. (This policy supplements earlier alcohol and drug abuse prevention policy.)

Hypertension prevention programs aim to identify hypertension early, provide information about control and lifestyle factors, and provide treatment referral where indicated.

As a response to this health promotion directive, the individual Services established their own health promotion programs consistent with DoD policy to meet the distinctive problems and needs of their members.

After the publication of *Healthy People 2000* (PHS, 1991), the DoD identified a subset of objectives of most relevance to the military. In 2000, *Healthy People 2010* was published and includes goals and objectives for the improved health of the nation (DHHS, 2000). These objectives have, in part, focused attention on specific health-related behavior changes that are desirable to achieve during the present decade. The next section discusses these objectives for the nation and the military in greater detail.

1.2.3 *Healthy People 2010 and the Military*

Healthy People 2010 aims to continue to improve the health of persons, communities, and the nation through the following two goals:

- Increase the quality and years of healthy life for all Americans.
- Eliminate health disparities among segments of the population.

Health promotion strategies relate to personal choices made in a social context that reflect an individual's lifestyle and therefore influence prospects for future health. Health protection strategies are those related to environmental or regulatory measures that confer protection on large population groups. In contrast to health promotion strategies (which have an individual focus), health protection strategies generally involve a community-wide focus. Preventive services include counseling, screening, and immunization interventions for persons in clinical settings. Surveillance and data systems are incorporated to ensure useful measurement of progress toward achieving the objectives. Existing data sources (e.g., ongoing surveys) are identified that can be used to measure progress, and the need for additional measurement tools.

The following specific *Healthy People 2010* objectives were examined through the 2005 active duty survey and the current Reserve component survey:

- Reduce the prevalence of cigarette smoking among military personnel for persons aged 18 or older (2010 objective: 12% or less).
- Reduce smokeless tobacco use (2010 objective: 0.4% or less for all personnel).
- Reduce binge drinking among adults (2010 objective: 6.0% or less).
- Reduce illicit drug use, past 30 days among adults (2010 objective: 2.0%).
- Increase **healthy** weight, as measured by Body Mass Index (BMI) (2010 objective: 60% or more for persons aged 20 or older). Although there is no 2010 objective for overweight (it was replaced by the objective for healthy weight), estimates are also provided using the 2005 CDC guidelines, as well as the 1998 National Heart, Lung, and Blood Institute (NHLBI) guidelines.
- Increase the proportion of people aged 18 or older who engage in vigorous physical activity 3 or more days per week for 20 or more minutes per occasion (2010 objective: 30% or more).

- Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high (2010 objective: 95% or more).
- Increase the proportion of people with high blood pressure who are taking action to help control their blood pressure (2010 objective: 95% or more).
- Increase the proportion of adults who had their blood cholesterol checked within the preceding 5 years (2010 objective: 80% or more).
- Reduce nonfatal unintentional injuries that require hospitalization (2000 objective: no more than 754 per 100,000 people; no objective for 2010).
- Increase the use of occupant protection systems, such as safety belts, inflatable safety restraints, and child safety seats (2010 objective: 92% or more).
- Increase the use of helmets by motorcyclists and bicyclists (2010 objective: 79% or more for motorcyclists).
- Increase the proportion of sexually active, unmarried people who used a condom at last sexual intercourse (2010 objective: 50% or more).
- Increase the proportion of women aged 18 or older with an intact uterine cervix who have ever received a Pap test (2010 objective: 97% or more) and the proportion of those who received a Pap test within the preceding 3 years (2010 objective: 90% or more).
- Increase abstinence from alcohol during pregnancy (2010 objective: 94% or more).
- Increase abstinence from tobacco use during pregnancy (2010 objective: 99% or more).

1.3 DoD Health Behavior Survey Series

A systematic effort to obtain data for use to guide and evaluate health and substance abuse programs and policies began in 1980 under the direction of OASD (HA). DoD initiated a series of recurrent surveys to (a) improve understanding of the nature, causes, and consequences of substance use and health in the military; (b) determine the appropriateness of the emphasis placed on program elements; and (c) examine the impact of current and future program policies. The 1980 survey was conducted by Burt Associates, Incorporated, of Bethesda, Maryland (Burt, Biegel, Carnes, & Farley, 1980). The 1982, 1985, 1988, 1992, 1995, 1998, 2002,

and 2005 surveys were conducted by RTI (Bray et al., 1983, 1986, 1988, 1992, 1995b, 1999, 2003, 2006). All nine surveys assessed the extent and consequences of alcohol and other drug use among active-duty military personnel around the world. Over the years, the survey's focus was broadened to include an assessment of health promotion efforts and was supplemented to reflect health issues of primary and current concern to the military.

The most recent 2005 DoD HRB Survey of military personnel built on the findings of the previous 2002 survey by providing more detailed data on selected trends, improving on earlier surveys by including recent standardized measures that have been found to be psychometrically sound in military and civilian populations, and addressing current health-related issues of priority to DoD. Specifically, the 2005 study (a) continued to assess the nature, extent, and consequences of substance use and abuse in each Service and in the entire military; (b) provided an assessment of progress for the military in meeting selected *Healthy People 2010* objectives; (c) assessed trends in general health status and behaviors; (d) appraised mental health; (e) evaluated the receipt of medical and mental health care; (f) continued to monitor special topics, such as sexual health, gender-specific issues, and oral health; (g) examined relationships among demographic, medical, psychosocial, occupational, and environmental factors; and (h) developed profiles of subgroups of personnel who are least and most at risk of experiencing problems due to health-related behaviors. Taken together, the results of this survey may suggest areas in which interventions can be targeted to improve military health and readiness and may identify other areas that require further study among active-duty personnel.

The initiation of the Defense Lifestyle Assessment Program (DLAP) in 2005 expanded the scope of the active-duty series to include the National Guard and Reserves, as well as other special studies. The current report presents the findings of the first Reserve component study, which follows the methodology of the active-duty series to provide comparable information. Because relatively little research has been conducted on the Reserve component population, the following section

reviews highlights of primarily the active-duty and civilian health behavior literature.

1.4 Prior Studies on Substance Use among Military and Civilian Populations

Findings from both active duty military and civilian studies have shown declines in illicit drug use and cigarette smoking during the last 2 decades. Recent surveys, however, indicate that the prevalence of illicit drug use, particularly marijuana use, may have leveled off among some segments of both populations (Bray & Marsden, 1999) and may be increasing again among some subgroups (OAS, 2006).

The prevalence of cigarette smoking among the civilian population has declined since the mid-1960s. Declines in the prevalence of cigarette smoking among active duty military personnel has occurred more recently (i.e., since the early 1980s). Although cigarette smoking among military personnel in 1998 (29.9%) was at its lowest level since the DoD survey series began, this prevalence increased in 2002 to 33.8% and was 32.2% in 2005, still well above the *Healthy People 2010* target of 12.0% for military personnel by the year 2010 (Bray et al., 1992, 1995b, 1999, 2003, 2006; Bray, Kroutil, & Marsden, 1995a; Kroutil, Bray, & Marsden, 1994).

In both the active duty military and civilian populations, the prevalence of heavy alcohol use has been more stable over time (Bray et al., 1995a; Clark & Hilton, 1986; Clark & Midanik, 1982; Polich & Kaelber, 1985; OAS, 2006; Johnston, O'Malley, Bachman, & Schulenberg, 2006a, 2006b; CDC, 2002, 2005). The prevalence of heavy alcohol use in the past 30 days has stayed around 7% of the civilian population in recent years. Among military personnel, the actual prevalence of heavy alcohol use has declined since the early 1980s until 1998, but this decline appears to have been due to changes in the sociodemographic composition of the military; recently, the military has shown an increased prevalence of heavy alcohol use.

Findings from civilian surveys indicate that the prevalence of smokeless tobacco use was highest among

young adult males. Findings from the 2005 DoD survey also indicate that the prevalence of smokeless tobacco use in the past 12 months was higher among young males relative to the total military population.

Comparisons of rates of substance use in the active duty military and civilian populations that have taken into account sociodemographic differences between the two populations indicate consistently higher rates of heavy alcohol use and lower rates of cigarette use and illicit drug use in the military (Bray & Hourani, 2007). In particular, rates of heavy alcohol use in the past 30 days among military men aged 18 to 25 have been nearly twice the standardized rates for civilian men in the same age group, although the gap appears to be narrowing.

Substance use data on the Reserve component have been very limited. In the only comprehensive large-scale mail survey of the health status of all segments of the military, Guard/Reserve personnel were less likely than active-duty personnel to have consumed alcohol in the past 30 days (29.2% vs. 25.5%), but had similar rates of current cigarette smoking (26.6% vs. 28.9%) and heavy smoking (11.2% vs. 11.9%) (Vincus et al., 1999) suggesting that members of the Guard/Reserves are not immune from substance use problems. In a rare study of alcohol abuse among Guard/Reserve personnel, it was found that 46% reported binge drinking in the month before basic military training, 4% drove after consuming 5 or more drinks, and 9% rode as a passenger with a driver who had been drinking heavily (Vander Weg, DeBon, Sherrill-Mittleman, Klesges, & Relyea, 2006). Though Reserve and Guard members may be older than active duty members, their current substance use patterns relative to their active duty and civilian counterparts is unknown.

1.5 Prior Studies on Other Health Behaviors among Military and Civilian Populations

Poor health practices have been shown to decrease longevity and adversely affect both physical and mental health. Conversely, classic studies by Belloc and Breslow (1972) and Breslow and Enstrom (1980) demonstrated that good health practices, such as nonuse

of cigarettes, moderate use of alcohol, adequate sleep, regular exercise, and proper nutrition, have an additive effect on health.

Since the Surgeon General's report on health promotion and disease prevention (PHS, 1979) and with the release of *Healthy People 2000* and *Healthy People 2010* (PHS, 1991; DHHS, 2000), health behaviors known to affect morbidity and mortality have been monitored in the U.S. population through the NHIS, sponsored by the National Center for Health Statistics (NCHS). In 1984, CDC established the Behavioral Risk Factor Surveillance System (BRFSS)

Findings from civilian surveys suggest that progress is still needed with respect to several of the *Healthy People 2010* objectives discussed above (CDC, 1988a; 1998b; 1995–2002; Mulrow, 1998; NCHS, 1993; Powell-Griner et al., 1997; Siegel et al., 1993; NHTSA, 2002; Schucker et al., 1987; Abma, Chandra, Mosher, Peterson, & Piccinino, 1997; PHS, 1991) though BRFSS data has indicated that some states are already close to or have exceeded objectives related to cervical cancer screening (i.e., Pap tests) among women (Siegel, Frazier, Mariolis, Brackbill, & Smith, 1993).

Findings from the 2005 DoD survey suggest that the active duty military in 2005 was either very close to or had exceeded general population *Healthy People 2010* objectives in the areas of physical exercise, obesity, seat belt use, helmet use, Pap test ever received and received in the past 3 years, and no alcohol use during pregnancy.

It may be that some features of active duty military life may facilitate the military's achievement of some of these objectives by the year 2010. Given the emphasis in the military on fitness and readiness, one might expect its population to meet the objectives related to exercise and overweight status. Similarly, access to preventive medical care is likely to be less of a problem in the active duty military population than it is for some segments of the civilian population. The military also can mandate that personnel receive age-appropriate medical screening at specific intervals and could require that personnel receive preventive medical services, such as cholesterol screening or Pap tests, in accordance with targets set in *Healthy People 2010*. As civilians

however, personnel in the Reserve component may not be as likely as active duty members to exercise regularly or have access to preventive medical care. An examination of such issues is essential to assess the readiness of the Reserve component force.

1.6 Prior Studies on Mental Health, Stress, and Coping among Military and Civilian Populations

The effects of high levels of work-related stressors such as properties of the working environment (e.g., physical hazards, noise); time factors (e.g., length of the work day, shift work); changes in job (e.g., demotion and transfer); role-related stress (e.g., responsibility for people), relationships with coworkers and supervisors, underutilization of abilities, as well as high levels of stressors related to the family environment, such as major life events and balancing the responsibilities of family with those of work, have been studied extensively in civilian populations and have been related to poorer mental health and performance outcomes (Stansfeld & Candy, 2006; Holt, 1982).

Several national epidemiologic studies have examined risk factors for specific mental disorders, such as stressors, and the comorbidity of mental disorders and substance abuse in civilian and veteran populations (Kessler et al., 1994; Kulka et al., 1990; Regier et al., 1990). Numerous studies have reported strong relationships among stress, alcohol consumption, and mental disorders, with particularly robust connections reported between stressful life events and depression, especially for women (e.g., Pianta & Egeland, 1994). Kessler, Sonnega, Bromet, Hughes, and Nelson (1995) found in their analysis of data from the National Comorbidity Survey that stress-related psychiatric disorders were highly comorbid and with substance abuse and dependence. Similar relationships among mental health and substance abuse problems have been reported in national surveys of Vietnam-era veterans.

Most studies that have examined the relationship of stressors and mental health and functioning of the active-duty military population have focused on the effect of combat stress during historical military operations. For

example, recent studies and reports, mostly stemming from data obtained from soldiers and Marines deployed to Iraq and/or Afghanistan, reveal strong links between combat related stressors and psychological symptoms of depression, anxiety, and PTSD (Hoge et al., 2005; 2005, 2006; USAMC, 2006). Such links have also been found among recent studies of deployment during peacekeeping missions (Bolton et al., 2001; Adler et al., 2005).

Research also has shown that a number of variables can mediate the effects of stressors on mental health outcomes, including the use of different types of coping strategies (Lazarus, 1966; Moos & Billings, 1982). Although research on the stress-moderating effects of different types of coping resources such as social support is more recent, this literature is characterized by a level of complexity that precludes succinct summarization. Nevertheless, the extant research literature suggests that coping styles aimed at managing the problem are generally more effective than coping strategies that focus on emotions or attempt to ignore or avoid the problem (Aldwin, 1993).

Considerable research on Vietnam veterans' postwar adjustment suggests that supportive relationships both within and outside the military can reduce the deleterious effects of exposure to a variety of stressors associated with combat and military service (Egendorf, Kadushin, Laufer, Rothbart, & Sloan, 1981; King, King, Fairbank, Keane, & Adams, 1998; Norman, 1988). Though informative, this work has focused largely on the effects of social support on military stressors associated with service in a war zone. Little is known about types of coping that military personnel use to manage the diversity of stressors experienced in their military duties and personal lives.

Several studies have shown that stress and mental health problems are also related to lost productivity in the military. For example, findings from the National Vietnam Veterans Readjustment Study (Kulka et al., 1990) show a strong relationship between exposure to traumatic stress while serving in a military combat zone and subsequent occupational instability. Indeed, Kulka et al.'s (1990) research indicates that male veterans with

stress-related psychiatric disorders were more than five times as likely to be unemployed as their counterparts without such stress-related disorders. Findings from a study investigating the effects of combat-relevant stressors on cognitive performance showed that stressors can affect performance, different stressors induce a variety of reactions, the effects of stress vary across persons, and stressors affect the performance of various tasks differentially (Orasanu & Backer, 1996).

In 2005, according to the DoD HRB Survey of active-duty personnel, stress levels among active duty military personnel were found to be stable since 2002, with higher percentages rating their jobs as stressful (32.5%) compared with their personal lives (18.9%). The prevalence of anxiety and depression symptoms, as measured by the screeners used in the study, was 12.7% and 22.3%, respectively. An estimated 8.1% met criteria for serious psychological distress, and 6.7% met screening criteria for the need for further PTSD evaluation. Lower productivity levels were associated with high stress and with meeting the screening criteria for anxiety symptoms and depression. Although the military released a directive that protects the rights of Service members who seek a mental health evaluation (DoD, 1997a), stigma has continued to be pervasive in the military and often prevented service members from seeking needed care. Among personnel who perceived a need for mental health counseling who did not receive services, 63.2% believed that seeking help definitely or probably would damage their military careers in 2005.

It is unknown to what degree the above findings apply to the Reserve component. However, the evidence from the PDHRA suggests that they may have substantial psychological needs (i.e., 49% of Army National Guard and 43% of Marine Reserve self-reported psychological health concerns on the PDHRA conducted approximately 3 months following deployment [DoD, 2007]). The challenges in studying this population are enormous given the spread of the members of the six components across the country coming together only in relatively small reserve centers or armories at variable schedules and duty times. This also presents significant challenges for program development, intervention, and evaluation. Indeed, the 2007 DoD Task Force on Mental

Health (2007) acknowledged the unique and critical challenges in assessing and addressing the psychological health needs of members of the National Guard and Reserves.

1.7 Overview and Objectives of the 2006 DoD Reserve Component Survey

Compared to the data on active duty military personnel, little is known about the extent of substance use and other health behaviors among the 1.2 million personnel in the Guard and Reserve components of the military. Approximately 300,000 members of the Reserve components have been called to active duty since September 11, 2001, providing support to the Global War on Terror and other operational requirements, increasing DoD reliance on the Reserve components. Increased reliance on the Reserves exposes personnel to a host of unanticipated stressors for which many have received little training to manage. This increased stress is exacerbated by relatively few support systems available to ease the transition from active duty to civilian life. No other comprehensive population-based survey of the Reserve component has been conducted on-site at duty locations across the country to maximize the generalizability of data across the entire Reserve component population.

The objectives of the 2006 DoD Reserve Component Survey were as follows:

- Provide a baseline assessment of the nature, extent, and consequences of substance use and abuse in each component.
- Establish baseline measures of the *Healthy People 2010* objectives and examine general health status and behaviors.
- Appraise stress and mental health indicators, especially related to deployment.
- Evaluate the receipt of medical and mental health care.
- Monitor special topics, such as deployment-related health issues, gender-specific issues, and oral health.
- Examine relationships among demographic, medical, psychosocial, occupational, and environmental factors.

- Develop profiles of subgroups of personnel who are least and most at risk of experiencing problems due to health-related behaviors.
- Compare findings with active duty personnel to assess strengths, limitations, and special needs of Reserve component personnel.

Chapter 2: Methodology of the 2006 DoD Reserve Survey

This chapter describes the methodology used for the *2006 Department of Defense (DoD) Reserve Component Survey*. Our discussion includes an overview of the sampling design, instrumentation and data collection procedures, and survey performance rates. In addition, the 2006 Reserve survey respondents and demographic characteristics of the eligible respondent population are described. An overview of measurement approaches and analysis techniques also is provided. Many of the activities, such as questionnaire development, sampling, and support for field operations, were collaborative efforts that involved the cooperation of DoD, the individual Services, and the research team.

2.1 Sampling Design Overview

The target population for the 2006 DoD survey included all nonactivated, military Reserve Component personnel at the time of data collection, April through September 2006. Reserve and Guard personnel came from six Reserve components—Army Reserve, Army National Guard, Navy Reserve, Marine Corps Reserve, Air Force Reserve, and Air National Guard.

A sampling frame was initially constructed using data provided by the Defense Manpower Data Center (DMDC). A unit listing was provided for each of the six Reserve components. The listing contained personnel counts broken out by gender and pay grade (E1-E3, E4-E6, E7-E9, W1-W5, O1-O3, and O4-O10). Using the address fields, the units were collapsed into the facilities that they served. Marine Corps Reserve data were largely missing from DMDC's database, so they were supplemented by data from the Corps' online Web site (<http://www.mfr.usmc.mil/units>).

The first three digits of the unit's ZIP code were used as a rough measure to indicate a geographic cluster. Most of these clusters are relatively small and confined to a small portion of a state, but in the southwestern and central states, they can represent a much larger piece of the state since ZIP codes cover larger areas. Still, ZIP

code proved to be an adequate variable for sampling because it was easy to construct and the majority of centers were within 60 to 90 minutes of each other.

Next, we tabulated the number of strata that appeared in each geographic cluster. Our goal was to obtain clusters that have representation from all six Reserve components. (Note that the large number of facilities and the uncertain demographic composition of personnel attending a particular weekend drill precluded further stratification by demographic variables.) We quickly realized that Air Force Reservists and Air National Guard tended to serve at installations with active-duty personnel, and the Air Force/Air Guard personnel were serving in large numbers at fewer installations. In other words, a lot of clusters may have had representation from the other Services but not the Air Force/Air Guard. Using an atlas, some of the three-digit clusters were combined into a larger two-digit cluster when they were geographically close and all six strata could be represented.

After these clusters were reworked, approximately 80% of all Reserve and National Guard personnel served in a cluster that would have a chance of being selected for a site visit. The remaining 20% were considered "geographically dispersed" and would receive the survey by mail which will be discussed later. RTI allocated the sample according to this split—16,000 (80%) sample members would participate in the site visit survey, while 4,000 (20%) would participate by mail.

Sixteen clusters were then randomly chosen using probability proportional to size methods (Figure 2.1). We intended to survey approximately 1,000 personnel per cluster. Within each cluster, we wanted to sample 167 personnel from each Reserve component ($1,000 / 6 = 167$). Facilities were then randomly chosen within the cluster. If a facility had fewer than 167 personnel, additional facilities were chosen until we reached that sum. At this point, site visits were arranged for data collection.

Figure 2.1 The 16 randomly selected geographic sites



Figures 2.2 and 2.3 are examples of how close the facilities are within a cluster. Note that the facilities for the San Antonio, Texas, cluster were relatively nearby and fell along the I-410 Loop. However, for the Charleston, South Carolina, cluster, some sites fell outside the city bounds. RTI has since gained access to DMDC's Unit Identification Code Search System (UICSS database).

The geographically dispersed facilities (i.e., remote personnel) are simply facilities residing in areas where there is not representation from all six Reserve components. In terms of personnel, facilities can be small or large, and their inclusion is important to the study. The only reason they did not receive a site visit was because of travel cost efficiency. Thus, 80 dispersed facilities (approximately 13 per Reserve component) randomly selected. Each facility received a packet of 50 surveys to randomly hand out, complete, and mail back.

2.2 Instrumentation and Data Collection Procedures

The survey questionnaire was designed to achieve the two broad purposes of the study: (a) to measure progress of the Reserve components in meeting *Healthy People 2010* objectives and (b) to survey substance abuse and health behaviors among Guard and Reserve military personnel. Participants completed the questionnaire either during group sessions conducted by field teams at the centers/armories where they report for drill or by mail. When possible, questionnaires were distributed to eligible personnel who did not participate in a group session at a center/armory. We obtained 97.9% of the completed survey questionnaires from the group sessions.

Figure 2.2 Facilities at the San Antonio, Texas, cluster

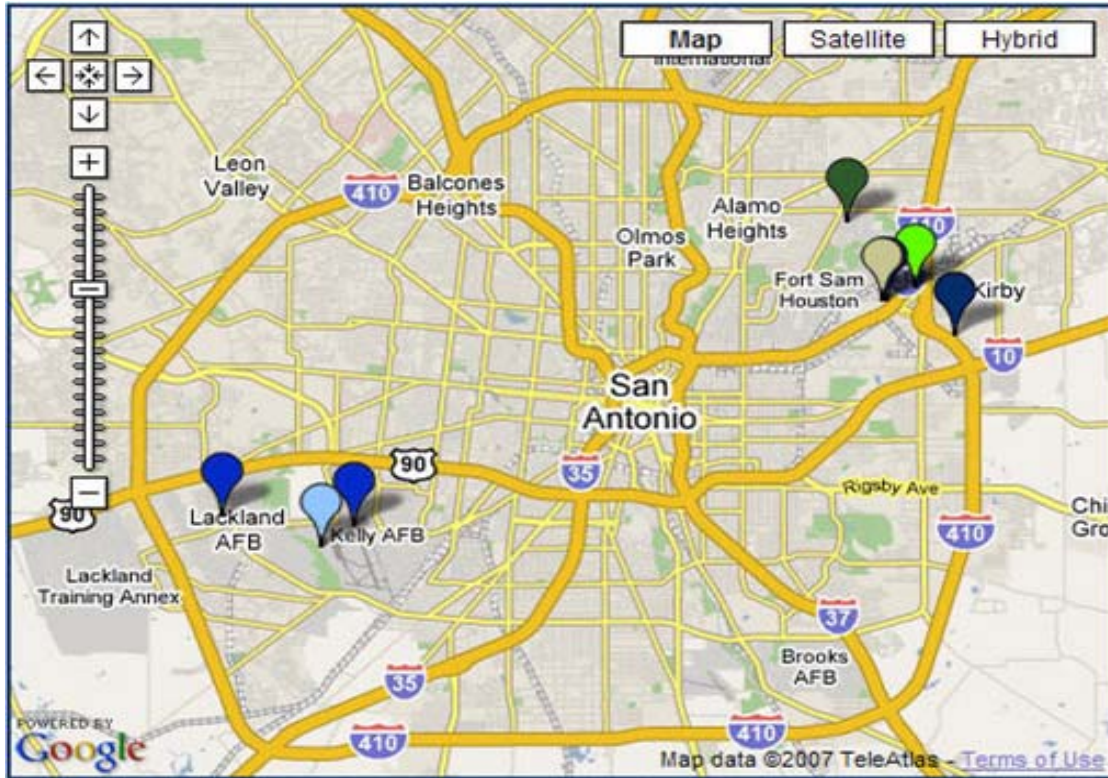
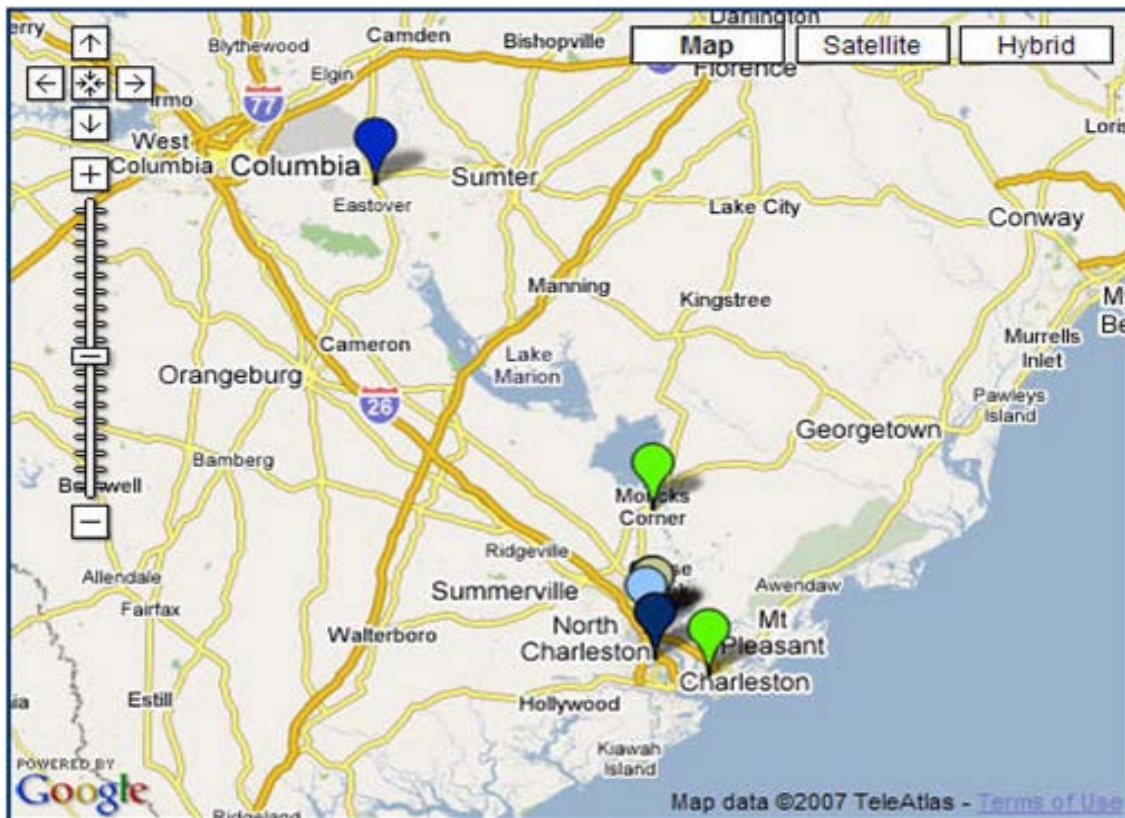


Figure 2.3 Facilities at the Charleston, South Carolina, cluster



2.2.1 Survey Questionnaire

The survey instrument was a self-administered questionnaire designed for optical-mark reader scanning. In collaboration with DoD, the Headquarters Liaison Officers (HLOs), and other experts from the Reserve components, RTI created the questionnaire based on the 2005 Survey of Health Related Behaviors Among Military Personnel instrument to provide comparative measures for the objectives discussed in Chapter 1. The instrument contained measures of selected aspects of substance use and other health behaviors. More specifically, the questionnaire included a broad array of items about

- sociodemographic characteristics and military experience;
- quantity, frequency, and correlates of alcohol use;
- problems associated with alcohol use, including symptoms associated with alcohol dependence;
- context for alcohol use;
- reasons for drinking and limiting drinking;
- use of cigarettes and other forms of tobacco;
- reasons for starting to smoke cigarettes, intentions to quit smoking, and actual attempts to quit;
- nonmedical use of drugs other than alcohol or tobacco;
- health behaviors related to exercise, eating, and supplement use;
- use of seat belts and helmets;
- stress experienced at work or in family life, specific sources of stress, and coping behaviors;
- mental wellness indicators; and
- job satisfaction and deployment.

In December 2005, a pilot study was conducted with Army National Guard personnel to examine the adequacy of questionnaire item wording, formatting, and response alternatives. Based on analyses of item distributions and feedback from informal debriefings of selected participants, some items were refined and item formatting or wording was modified to enhance clarity.

2.2.2 Phase 1 Data Collection

Phase 1 questionnaire administrations took place from April through September 2006 at 104 selected Guard/Reserve centers/armories located within the United States. Data collection was scheduled to be completed by the end of August, but was extended because of delays in obtaining access to selected centers/armories. An HLO was appointed for each Service component, and a point of contact (POC) at each participating center/armory was appointed to facilitate survey activities.

Each HLO performed a variety of tasks that were vital to a successful data collection effort. Specifically, the HLOs

- informed the Reserve components and selected centers/armories about the survey by sending a series of notifications to appropriate command levels,
- obtained POC names and contact information for the research team, and
- worked with RTI staff to coordinate survey scheduling and preparations at the centers/armories.

POCs were also integral to the data collection effort, and before the team arrived, were responsible for

- providing RTI staff with drill schedules for armories/centers,
- working with RTI staff to determine the optimal time for data collection,
- arranging rooms for the survey sessions,
- notifying personnel of the survey,
- scheduling personnel into one of the survey sessions, and
- coordinating personnel attendance at sessions.

During the field team visits, the POCs were responsible for monitoring and encouraging attendance of selected personnel at the sessions. The level of effort required by each POC varied depending on the number of personnel at the center/armory and by the turnout of participants in response to their initial notification. At those centers/armories where turnout was high, the POCs spent considerably less time than at those where turnout

was low. In the latter case, the POC duties were more time consuming because a higher percentage of no-shows had to be contacted and rescheduled into a new data collection session. Twelve two-person RTI field teams collected Phase 1 data in survey sessions at the 104 centers/armories selected for the study. In general, RTI coordinated arrangements with POCs for the data collection itinerary to permit us to survey personnel at a center/armory during a drill weekend. Additional weekend visits were allowed at locations where personnel did not all drill on the same weekend. Where feasible in these cases, RTI teams returned on a subsequent weekend to survey those personnel who were not drilling during the original visit. On data collection days, team members typically started a group session every 90 minutes, usually holding up to five or six sessions per day. If necessary, the two-member teams split and worked alone to conduct concurrent sessions at the center/armory. Before data collection began, RTI held a 1-day training session to ensure that teams were familiar with all procedures to conduct the survey.

The field teams' major responsibilities were to

- establish itineraries consistent with POC recommendations,
- coordinate preparations with the POC at the center/armory,
- conduct scheduled survey sessions,
- ship completed survey forms from centers/armories for optical scanning, and
- report to RTI central staff on the completion of the survey at each site.

At the Phase 1 group sessions, field teams described the purpose of the study, assured the respondents of anonymity, informed participants of the voluntary nature of the survey, distributed introductory handouts, ensured that an ombudsperson was present for each group administration to attest that teams explained the voluntary nature of participation, and showed personnel the correct procedures for marking the questionnaire. Then team members distributed the optical-mark questionnaires to participants, who completed and returned them. On average, the questionnaire required about 45-55 minutes to complete.

During the visit to a center/armory, team members attempted to survey all drilling personnel. Any eligible personnel who failed to attend their scheduled session were contacted and asked to attend a subsequent session. At completion of the site visit, field teams inventoried completed questionnaires and packaged the questionnaires for shipment. The teams then shipped the questionnaires to Pearson Assessments in Minnesota for optical-scan processing and reported attendance and completion data to RTI.

2.2.3 Phase 2 Data Collection

At the conclusion of Phase 1 data collection for each center/armory, if there were a large number of drilling personnel who were unable to attend the group sessions, and a return visit on a future drill weekend was not feasible, field teams prepared questionnaire packets to be distributed to the absent personnel. The Phase 2 packet included a cover letter from RTI that explained the purpose and importance of the study, an introductory handout explaining the study and each participant's rights, a copy of a blank questionnaire precoded to identify the center/armory and the study phase, and a business-reply envelope for the respondent to use in mailing the completed questionnaire directly to Pearson-NCS for scanning. As with Phase 1 data collection, respondents completed the questionnaire anonymously. These packets were left with the POC to be distributed to the personnel when they next reported to the center/armory.

2.2.4 Remote Personnel

As noted in Section 2.1 regarding the sampling design, a subset of military personnel who were distant or remote from major centers/armories was sent a questionnaire by mail. Approximately 20% of personnel were classified as remote. Shipments of questionnaire packets were prepared and mailed to the commander of each selected remote location. Commanders were asked to distribute the questionnaire packets to up to 50 personnel who drilled at their location. These packets included a cover letter explaining the study, an introductory handout, a copy of the questionnaire, and a business-reply envelope for the respondents to use to return their completed

questionnaires. Questionnaires were preprinted with a common identifier to flag them as part of the remote sample. As with Phases 1 and 2, questionnaire responses were anonymous.

2.3 Survey Performance Rates

Response or participation rate information is useful for assessing the quality of survey field operations and for assessing nonresponse bias. The term “response rate” can be used for several different performance rates, each important from a survey operational perspective or from a statistical perspective. In the simplest case, the response rate can be calculated as the number of individuals in the population of inferential interest (i.e., those to whom you wish to generalize results) for whom information was obtained, divided by the total number of individuals in the population of inferential interest who were slated for data collection (i.e., the sample). However, when the population surveyed and the population of inferential interest is not the same, or when only partial information is obtained for the population units in the sample, the definition becomes more complicated. For the 2006 survey, it is problematic to define the denominator because the sample is not constructed from roster-based lists. Instead, the denominator is opportunistic, based on who is drilling that particular weekend. If the installation is small enough (less than 200), then the denominator might be accurately captured by the number drilling. However, at larger installations, particularly Air Force installations, the field team had to randomly pick units to participate. Under those circumstances, the actual number of persons available is unknown, although we can use the number attending the sessions as an approximate guide. It is possible for an individual to avoid attending the session so that the denominator is underreported.

Table 2.1 presents three response rates. The first rate is computed using as the denominator all personnel who were slated to attend an in-person group data collection session. Of the nearly 30,000 personnel sampled to attend an in-person data collection, we received 17,963 completed surveys, for a completion rate of 61.6%.

A second response rate appears in Table 2.1 under the heading of Phase II Remotes; these personnel were

drilling at a location outside our clustering scheme, so we were unable to conduct in-person data collection sessions for them. Instead, survey packets, including a postage-paid reply envelope, were mailed to the drilling location’s commander, who was asked to disseminate them to Guard or Reserve personnel. Of the 4,000 personnel sampled during this phase, only 379 returned a completed survey—a response rate of 9.5%.

Finally, Table 2.1 presents a response rate for the total sample, including respondents from both the in-person data collection administrations and the Phase II remotes. As can be seen, our total sample consisted of more than 33,000 personnel, from whom we received 18,342 completed surveys. This results in an overall study response rate of 55.3%.

As mentioned earlier, the response rate discussed above are very conservative since the denominator accounts for all persons drilling that weekend and we may have surveyed a subset of them. An alternative measure, participation rate, can be constructed where the denominator is based on the number of personnel that attended the sessions. This rate can only be constructed for the non-remotes. As can be seen from Table 2.1, the participation rate was very high for all service components. Overall the participation rate was 96.4%.

The true response rate will be in-between the two estimates. It is thought to be closer to the participation rate since we know that the number we attempted to survey is closer to the number of people attending the sessions than were drilling at the installation, particularly for the Air Force.

Note that Table 2.1 includes full-time and/or activated Guard/Reservists. These personnel are omitted from subsequent tables because they differ in important ways (e.g., received medical benefits) from the majority of Guard and Reserve personnel. However, we retain them here in Table 2.1 to provide a snapshot of data collection activities at these 104 Guard and Reserve facilities. After the full-time and activated personnel are removed using Q2 (Membership Category) and Q13 (Current Work Status), the number of completed interviews drops 15.3% from 17,963 to 15,212.

Table 2.1

SURVEY RESPONSE DATA AND PERFORMANCE RATES

Survey Phase/Response Data	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Total Drilling Sample Without Phase II Remotes							
Sample	3,377	1,870	4,574	5,455	12,164	1,729	29,169
Attending sessions	2,935	1,584	3,176	2,919	6,698	1,319	18,631
Completed interviews	2,732	1,582	3,161	2,783	6,592	1,113	17,963
Response rate (%)	80.9	84.6	69.1	51.0	54.2	64.4	61.6
Participation rate (%)	93.1	99.9	99.5	95.3	98.4	84.4	96.4
Phase II Remotes							
Sample	650	750	650	650	650	650	4,000
Completed interviews	64	83	54	68	64	46	379
Response rate (%)	9.8	11.1	8.3	10.5	9.8	7.1	9.5
Total Sample							
Total center (drilling & not drilling)	6,021	4,461	8,136	9,548	20,908	3,037	52,111
Total Sample (drilling & remotes)	4,027	2,620	5,224	6,105	12,814	2,379	33,169
Complete interviews	2,796	1,665	3,215	2,851	6,656	1,159	18,342
Response rate (%)	69.4	63.5	61.5	46.7	51.9	48.7	55.3

Source: 2006 Department of Defense Reserve Component Survey.

2.4 *Sample Participants and Military Population Characteristics*

Table 2.2 displays the distribution of survey respondents for each Reserve component by several sociodemographic characteristics—gender, race/ethnicity, education, age, marital status, and pay grade. These are the raw totals after data collection and cleaning. Table 2.3 parallels Table 2.2, but it shows the weighted proportions and standard errors *after adjusting for nonresponse*. Calculating a proportion from Table 2.2 will be similar but not exact to Table 2.3. However, Table 2.3 contains the values of interest since they are the estimates of our population of interest. Overall, a Guard or Reservist member tended to be male (82.5%), white (69.0%), with at least some college education (74.1), and 25 years of age or older (68.0%). However, there is a lot of variability among the Reserve components on these characteristics, probably because of the role each component plays. For example, women comprised only 4.6% in the Marine Corps Reserve, but up to 24.8% of the Air Force Reserve.

With regard to race/ethnicity, the percentage of whites varied from 57.5% in the Army Reserve to 72.6% in the

Army National Guard. African Americans varied from 7.2% in the Marine Corps Reserve to 21.5% in the Army Reserve. Hispanics ranged from 5.1% in the Air National Guard to 17.1% in the Marine Corps Reserve.

Education, age, and marital status seemed to follow a pattern. The Navy Reserve, Air National Guard, and Air Force Reserve had fewer personnel 24 years of age or younger—8.8%, 17.8%, and 15.9%, respectively—than the other components. These were also the top Reserve components when it came to having at least some college education—85.1%, 88.4%, and 90.1%, respectively. Additionally, these were the only Reserve components where the majority of personnel were married—62.0%, 61.6%, and 57.5%, respectively.

On the other hand, the population for the Army National Guard, Army Reserve, and Marine Corps Reserve tended to have proportionally more personnel who were 24 years old or younger—37.6%, 35.7%, and 69.3%,

respectively. Although the majority had some college education, the number was proportionally less than the components discussed previously—(63.7%, 76.5%, and 71.6%, respectively). The majority of these personnel were also unmarried—54.3%, 56.2%, and 73.9%, respectively.

Table 2.4 summarizes the survey respondents' service characteristics and history for each component. The vast majority of National Guard and Reservists work part-time at their position (87.6% to 93.1%). Most tend to work another civilian job full-time (65.4% to 79.2%). A high percentage had at least a part-time civilian job [(81.8% to 89.2%). The percentage of personnel who were attending school varied from 19.4% in the Navy Reserve to 42.6% in the Marine Corps Reserve. The high rate in the Marine Corps Reserve is likely explained by their high percentage of personnel under age 24.

(Except for the Army National Guard and the Marine Corps Reserve (which had imprecise estimates), the majority of National Guard and Reserve personnel had served at least 5 years. The Navy Reserve, Air National Guard, and Air Force Reserve had the highest rates for personnel serving 10 years or more. The majority of personnel served in their National Guard or Reserve capacity less than 60 days in the past year (64.0% to 80.9%).

The percentage of personnel who ever served on active duty varied from 49.7% in the Army National Guard to 72.4% in the Navy Reserve. The Air National Guard had the highest rate for volunteerism to active duty (28.8%), followed closely by the Air Force Reserve (25.6%). The Army had the highest rate of ordering personnel to active duty in the National Guard (35.8%) and in the Reserve (27.4%).

2.5 *Key Definitions and Measures*

2.5.1 *Sociodemographic Characteristics*

The sociodemographic characteristics examined in this report include gender, race/ethnicity, education, age, marital status, and pay grade. Definitions for these different characteristics are described below.

Table 2.2

UNWEIGHTED FREQUENCIES OF 2006 RESPONDENTS, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	1,916	1,039	2,359	1,491	4,139	1,046	11,990
Female	352	428	745	376	1,270	51	3,222
Race/Ethnicity							
White, non-Hispanic	1,109	709	1,986	1,251	3,645	771	9,471
African American, non-Hispanic	238	366	387	131	818	74	2,014
Hispanic	322	317	487	213	580	187	2,106
Other	599	75	244	272	366	65	1,621
Education							
High school or less	759	369	435	218	555	329	2,665
Some college	1,101	745	1,346	998	2,957	659	7,806
College graduate or higher	408	353	1,323	651	1,897	109	4,741
Age							
24 or younger	781	554	242	342	818	836	3,573
25-34	742	454	900	554	1,256	219	4,125
35-44	515	298	1,419	617	2,076	40	4,965
45 or older	230	161	543	354	1,259	2	2,549
Marital Status^a							
Not married	1,196	856	1,185	803	2,311	839	7,190
Married	1,053	591	1,884	1,049	3,044	237	7,858
Pay Grade							
E1-E3	258	249	245	77	182	665	1,676
E4-E6	1,653	947	1,959	1,256	3,168	397	9,380
E7-E9	155	83	189	332	1,308	19	2,086
W1-W5	25	16	5	N/A	N/A	0	46
O1-O3	115	103	174	88	247	5	732
O4-O10	62	69	532	114	504	11	1,292

(Table continued on next page)

Table 2.2 UNWEIGHTED FREQUENCIES OF 2006 RESPONDENTS, BY SOCIODEMOGRAPHIC CHARACTERISTICS (CONTINUED)

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Annual Household Income (in Dollars)^b							
Less than 15,000	256	244	172	132	334	245	1,383
15,000 to 19,999	192	160	119	83	222	152	928
20,000 to 24,999	209	138	165	93	245	158	1,008
25,000 to 34,999	358	196	301	168	473	168	1,664
35,000 to 44,999	287	147	381	185	554	91	1,645
45,000 to 49,999	178	92	208	125	370	52	1,025
50,000 to 74,999	377	232	635	413	1,271	92	3,020
75,000 or more	329	218	1,041	621	1,737	79	4,025
Total Personnel	2,268	1,467	3,104	1,867	5,409	1,097	15,212

Note: Table entries are the number of respondents who completed a usable questionnaire. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13). Refer to Chapter 2 for descriptions of sociodemographic variables.

^aIndividuals with missing marital status are not included in these totals.

^bIndividuals with missing household income are not included in these totals.

N/A: Estimate not applicable.

Source: 2006 Department of Defense Reserve Component Survey.

Table 2.3

WEIGHTED PROPORTIONS AND STANDARD ERRORS OF 2006 RESPONDENTS, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	86.3 (2.4) ^{a-d}	76.4 (3.3) ^{e,f}	79.2 (1.4) ^{d-f}	83.6 (4.0) ^{d,f}	75.2 (1.2) ^{b,c,e,f}	95.4 (1.0) ^{a-e}	82.5 (1.6)
Female	13.7 (2.4) ^{a-d}	23.6 (3.3) ^{e,f}	20.8 (1.4) ^{d-f}	16.4 (4.0) ^{d,f}	24.8 (1.2) ^{b,c,e,f}	4.6 (1.0) ^{a-e}	17.5 (1.6)
Race/Ethnicity							
White, non-Hispanic	72.6 (6.4)	57.5 (5.7)	64.2 (3.5)	+ (+)	71.6 (5.1)	68.5 (4.9)	69.0 (3.5)
African American, non-Hispanic	12.8 (3.1)	21.5 (3.6) ^{c,f}	14.6 (2.6) ^f	7.4 (4.2) ^a	15.5 (3.3) ^f	7.2 (1.7) ^{a,b,d}	14.4 (1.8)
Hispanic	10.1 (3.3)	15.7 (3.8) ^{c,d}	10.9 (3.6)	5.1 (3.0) ^{a,f}	6.8 (1.9) ^{a,f}	17.1 (3.8) ^{c,d}	11.0 (1.9)
Other	+ (+)	5.2 (3.1)	10.4 (3.0)	+ (+)	6.0 (3.2)	7.2 (2.2)	5.6 (1.8)
Education							
High school or less	36.3 (2.5) ^{a-d,f}	23.5 (3.1) ^{b-d,e}	14.9 (0.8) ^{a,c-f}	11.6 (1.3) ^{a,b,e,f}	10.0 (1.0) ^{a,b,e,f}	28.5 (2.1) ^{b-e}	25.8 (2.0)
Some college	46.1 (0.9) ^{c,f}	48.7 (2.4)	42.4 (2.3) ^{c,d,f}	53.6 (2.5) ^{b,e}	49.4 (1.5) ^b	55.9 (3.3) ^{b,e}	47.9 (0.9)
College graduate or higher	17.6 (2.3) ^{a-d}	27.8 (3.4) ^{b,d-f}	42.7 (2.8) ^{a,d,e}	34.8 (3.6) ^{e,f}	40.7 (2.0) ^{a,e,f}	15.7 (3.4) ^{a-d}	26.2 (1.8)
Age							
24 or younger	37.6 (3.6) ^{b-d,f}	35.7 (3.3) ^{b-d,f}	8.8 (0.8) ^{a,c-f}	17.8 (2.4) ^{a,b,e,f}	15.9 (0.8) ^{a,b,e,f}	69.3 (4.9) ^{a-e}	32.0 (2.1)
25-34	30.4 (1.9) ^{d,f}	27.8 (1.6) ^{d,f}	28.3 (1.7) ^{d,f}	30.4 (1.4) ^{d,f}	21.7 (0.7) ^{a-c,e}	20.1 (2.3) ^{a-c,e}	28.3 (1.0)
35-44	20.9 (1.7) ^{b-d,f}	21.6 (1.2) ^{b-d,f}	45.6 (1.8) ^{a,c-f}	30.8 (1.6) ^{a,b,d-f}	38.6 (1.2) ^{a-c,e,f}	10.0 (4.5) ^{a-e}	25.5 (1.1)
45 or older	11.2 (0.9) ^{b-d,f}	14.9 (1.9) ^{c,d,f}	17.3 (1.0) ^{d-f}	21.0 (2.4) ^{a,e,f}	23.8 (1.1) ^{a,b,e,f}	0.6 (0.6) ^{a-e}	14.2 (0.9)
Marital Status							
Not married	54.3 (3.4) ^{b-d,f}	56.2 (2.0) ^{b-d,f}	38.0 (1.8) ^{a,d-f}	38.4 (5.1) ^{a,e,f}	42.5 (1.1) ^{a,b,e,f}	73.9 (2.7) ^{a-e}	51.5 (1.9)
Married	45.7 (3.4) ^{b-d,f}	43.8 (2.0) ^{b-d,f}	62.0 (1.8) ^{a,d-f}	61.6 (5.1) ^{a,e,f}	57.5 (1.1) ^{a,b,e,f}	26.1 (2.7) ^{a-e}	48.5 (1.9)

(Table continued on next page)

Table 2.3

**WEIGHTED PROPORTIONS AND STANDARD ERRORS OF 2006 RESPONDENTS, BY SOCIODEMOGRAPHIC CHARACTERISTICS
(CONTINUED)**

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Pay Grade							
E1-E3	23.9 (4.2) ^{b-d,f}	18.2 (1.1) ^{b-d,f}	10.4 (1.5) ^{a,d-f}	8.1 (3.1) ^{a,e,f}	5.6 (0.3) ^{a,b,e,f}	54.9 (4.2) ^{a-e}	19.6 (2.0)
E4-E6	59.5 (3.8) ^f	56.3 (3.1) ^f	58.7 (3.0) ^f	62.5 (2.6) ^{d,f}	52.3 (1.8) ^{c,f}	33.2 (3.9) ^{a-e}	56.9 (1.9)
E7-E9	7.2 (1.1) ^{c,d}	10.0 (2.0) ^{c,d}	7.6 (0.7) ^{c,d}	17.2 (1.7) ^{a,b,e,f}	19.4 (0.7) ^{a,b,e,f}	5.0 (1.6) ^{c,d}	9.9 (0.9)
W1-W5	2.1 (1.3)	0.5 (0.2)	0.2 (0.2)	+ (+)	+ (+)	0 (+)	1.0 (0.6)
O1-O3	4.8 (0.5) ^f	7.6 (2.1) ^f	5.6 (0.9) ^f	5.1 (1.2) ^f	6.4 (0.6) ^f	1.4 (0.6) ^{a-e}	5.6 (0.6)
O4-O10	2.5 (1.0) ^{a-d}	7.3 (1.6) ^{b,d,e}	17.4 (2.2) ^{a,c,e,f}	7.0 (0.7) ^{b,d,e}	16.2 (1.6) ^{a,c,e,f}	5.5 (3.5) ^{b,d}	7.0 (0.9)

Note: Table displays the percentage of Reserve military personnel in each Reserve component by sociodemographic characteristic (i.e., table displays column percentages). Percents may not add to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13). Refer to Chapter 2 for descriptions of sociodemographic variables.

^aEstimate is significantly different from the Army Reserve at the 95% confidence level.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey.

Table 2.4

WEIGHTED PROPORTIONS AND STANDARD ERRORS OF 2006 RESPONDENTS, BY SERVICE CHARACTERISTICS

Service Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Are You Currently?							
Working part-time as a National Guard/Reservist	90.6 (1.1) ^{a,b}	88.2 (1.0) ^{c,d}	87.7 (0.6) ^{c-e}	93.1 (1.1) ^{a,b,f}	87.6 (0.6) ^{c-e}	91.4 (1.0) ^{a,b,f}	89.8 (0.6)
Working full-time in a civilian job	70.6 (1.7) ^{a,d}	65.4 (2.6) ^{a-c}	79.2 (0.9) ^{b-f}	73.8 (2.2) ^{a,d,f}	72.9 (1.2) ^{a,d,f}	65.9 (0.8) ^{a-c,e}	70.5 (1.1)
Working part-time in a civilian job	14.8 (0.8) ^{a-d}	16.4 (1.4) ^{a-d}	10.0 (0.7) ^{d-f}	10.8 (0.8) ^{d-f}	11.2 (0.5) ^{d-f}	23.2 (1.2) ^{a-c,e,f}	14.4 (0.6)
Working as self-employed in own business or profession	6.1 (0.8) ^{a,c,d}	7.5 (1.0)	9.3 (0.8) ^e	8.4 (0.4) ^e	7.7 (0.5)	10.1 (1.4) ^e	7.3 (0.5)
Unpaid worker (volunteer)	3.3 (0.5) ^{a-d}	4.5 (0.5) ^{a,c}	7.4 (1.0) ^{e,f}	5.8 (0.4) ^{e,f}	5.7 (0.6) ^e	5.5 (0.8) ^e	4.6 (0.3)
In school	30.0 (3.1) ^{a,b,d}	30.5 (1.3) ^{a-d}	19.4 (0.5) ^{c-f}	25.7 (1.8) ^{a,b,d,f}	21.0 (0.9) ^{c-f}	42.6 (1.8) ^{a-c,e,f}	28.5 (1.5)
A homemaker, housewife, househusband	3.3 (0.7) ^{a,b}	5.7 (1.4) ^d	6.2 (0.4) ^{c-e}	3.9 (0.3) ^{a,b,d}	5.6 (0.3) ^{c-e}	2.0 (0.4) ^{a-c,f}	4.3 (0.4)
Working multiple jobs	17.8 (1.3)	15.9 (1.7) ^{b,c}	16.6 (0.9) ^{b,c}	19.3 (0.6) ^{a,f}	19.7 (0.9) ^{a,f}	20.5 (2.0)	17.7 (0.6)
Working temporary jobs	7.0 (0.7) ^{a-d}	7.3 (0.8) ^{a-d}	4.1 (0.6) ^{d-f}	5.2 (0.3) ^{d-f}	4.8 (0.4) ^{d-f}	10.3 (1.0) ^{a-c,e,f}	6.6 (0.4)
In All, How Many Years Have You Served?							
Less than 6 months	5.7 (0.7) ^b	6.8 (1.0) ^b	6.0 (0.6) ^b	4.4 (1.4)	2.4 (0.3) ^{a,e,f}	+ (+)	5.5 (0.5)
At least 6 months, but less than 1 year	7.8 (1.5) ^{b,c}	7.8 (0.6) ^{a-c}	5.4 (0.7) ^{b,c,f}	2.5 (0.7) ^{a,e,f}	3.2 (0.5) ^{a,e,f}	+ (+)	6.6 (0.7)
At least 1 year, but less than 2 years	10.3 (1.6) ^b	11.4 (1.3) ^{b,c}	9.2 (0.6) ^{b,c}	7.2 (0.7) ^{a,f}	6.0 (0.5) ^{a,e,f}	+ (+)	9.8 (0.8)
At least 2 years, but less than 3 years	8.5 (0.9) ^{a,c}	8.4 (1.0) ^{a,c}	6.1 (0.3) ^{e,f}	5.2 (0.9) ^{e,f}	6.8 (0.3)	+ (+)	8.0 (0.5)
At least 3 years, but less than 4 years	9.8 (0.8) ^{b,c,f}	5.9 (0.9) ^{a,e}	8.5 (0.5) ^{b,c,f}	6.3 (0.2) ^{a,e}	6.2 (0.3) ^{a,e}	+ (+)	8.1 (0.5)
At least 4 years, but less than 5 years	8.5 (0.6) ^{a-c}	7.5 (1.0)	6.0 (0.4) ^e	4.7 (1.4) ^e	5.9 (0.4) ^e	+ (+)	7.4 (0.5)
At least 5 years, but less than 10 years	20.9 (1.3)	20.6 (1.5)	18.2 (1.2) ^c	22.0 (1.1) ^a	19.1 (1.1)	+ (+)	20.6 (0.7)
At least 10 years, but less than 20 years	18.7 (2.4) ^{a-c}	18.2 (1.5) ^{a-c}	28.5 (1.0) ^{e,f}	28.5 (1.8) ^{e,f}	30.9 (0.9) ^{e,f}	+ (+)	21.5 (1.3)
20 or more years	9.9 (0.9) ^{b,c}	13.3 (1.5) ^{b,c}	12.0 (1.1) ^{b,c}	19.2 (1.7) ^{a,e,f}	19.6 (1.5) ^{a,e,f}	+ (+)	12.6 (0.8)
Have You Ever Served on Active Duty in the Active Component?							
Yes	49.7 (3.2) ^{a,b}	54.5 (2.0) ^{a,b}	72.4 (2.0) ^{c,e,f}	54.9 (4.1) ^{a,b}	70.0 (1.0) ^{c,e,f}	+ (+)	55.7 (1.6)
No	50.3 (3.2) ^{a,b}	45.5 (2.0) ^{a,b}	27.6 (2.0) ^{c,e,f}	45.1 (4.1) ^{a,b}	30.0 (1.0) ^{c,e,f}	+ (+)	44.3 (1.6)

(Table continued on next page)

Table 2.4 **WEIGHTED PROPORTIONS AND STANDARD ERRORS OF 2006 RESPONDENTS, BY SERVICE CHARACTERISTICS (CONTINUED)**

Service Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Number of Actual Days Spent Performing Your Duty in the National Guard or Reserves, Past 12 Months							
Less than 21 days	20.3 (1.1) ^a	22.3 (1.4) ^b	23.5 (0.8) ^{b,e}	22.5 (0.9) ^b	17.3 (1.1) ^{a,c,f}	+ (+)	21.0 (0.6)
At least 21 days, but less than 28	15.4 (1.3) ^{a,c}	19.0 (1.4) ^a	25.8 (1.2) ^{b,c,e,f}	22.1 (1.2) ^{a,b,e}	18.0 (1.3) ^{a,c}	+ (+)	18.2 (0.8)
At least 28 days, but less than 35	13.8 (2.5)	11.4 (1.3)	12.7 (0.7) ^b	13.3 (0.9) ^b	10.7 (0.6) ^{a,c}	+ (+)	12.8 (1.1)
At least 35 days, but less than 60	15.4 (2.1)	16.3 (0.8) ^a	18.9 (1.1) ^f	16.8 (0.6)	18.0 (0.9)	+ (+)	16.5 (0.9)
At least 60 days, but less than 90	10.8 (1.7) ^a	9.5 (1.0) ^b	7.4 (0.4) ^{b,e}	8.8 (0.7) ^b	11.8 (0.5) ^{a,c,f}	+ (+)	9.9 (0.8)
More than 90 days	24.2 (4.6) ^a	21.6 (2.2) ^a	11.6 (1.1) ^{b,c,e,f}	16.5 (1.6) ^{a,b}	24.2 (3.3) ^{a,c}	+ (+)	21.5 (2.1)
Did You Volunteer for Your Most Recent Call to Active Duty or Were You Ordered to Active Duty? (Past 24 Months)							
I volunteered	17.4 (2.0) ^{a-c,f}	11.7 (1.7) ^{b,c,e}	10.5 (0.8) ^{b,c,e}	28.8 (2.4) ^{a,e,f}	25.6 (1.6) ^{a,e,f}	+ (+)	17.5 (1.1)
I was ordered	35.8 (5.6) ^{a-c}	27.4 (2.9) ^{a-c}	9.4 (0.6) ^{e,f}	8.0 (0.8) ^{e,f}	10.6 (3.5) ^{e,f}	+ (+)	24.8 (3.0)
I volunteered for and was ordered	4.1 (0.6)	2.8 (0.6)	3.1 (0.5)	4.4 (1.2)	3.6 (0.6)	+ (+)	3.7 (0.3)
I have not been called	42.7 (5.3) ^{a-c,f}	58.0 (2.3) ^{a,e}	77.0 (1.4) ^{b,c,e,f}	58.8 (2.9) ^{a,e}	60.3 (4.6) ^{a,e}	+ (+)	54.0 (2.8)

Note: Table displays the percentage of Reserve military personnel in each Reserve component by sociodemographic characteristic (i.e., table displays column percentages). Percentages may not add to 100 because of rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Current Work Status Q13; Years Served Q138; Served on Active Duty Q139; Days Spent on Guard/Reserve Q140; Volunteered Ordered for Active Duty Q144).

Gender	Gender was defined as male or female.
Race/Ethnicity	Personnel were divided into four racial/ethnic groups that are mostly self-explanatory: white, non-Hispanic; African American, non-Hispanic; Hispanic; and Other.
Education	Education was defined as the highest level of education attained. Categories included high school or less, some college, and college degree or beyond. Personnel with General Equivalency Diplomas (GEDs) were classified as high school graduates.
Age	Age of respondents was defined as current age at the time of the survey. For several of the analyses presented in this report, estimates are presented for the age groups 24 or younger, 25 to 34, 35 to 44, and 45 or older.
Marital Status	Categories included married or not married. Marital status was not defined based on whether the spouses lived together.
Pay Grade Groups	Military pay grades for enlisted personnel were grouped as E1 to E3, E4 to E6, and E7 to E9. Pay grades for officers and warrant officers were grouped as O1 to O3, O4 to O10, and W1 to W5.

2.5.2 Reference Periods

In this report, most estimates are given for the following time periods:

Past 30 Days	Occurrence of the behavior (e.g., heavy alcohol use, exercise) in the 30 days prior to the survey (also referred to as “past month” or “current” use or behavior).
Past 12 Months	Occurrence of the behavior (e.g., illicit drug use, helmet use) in the 12 months prior to the survey (also referred to as “past year”).
Lifetime	Occurrence of the behavior or condition (e.g., high blood pressure) at least once in a person’s lifetime.

Some estimates related to specific *Healthy People 2010* objectives (U.S. Department of Health and Human Services [DHHS], 2000) refer to a time period other than the ones listed above. In these situations, the time period refers to the specified length of time prior to the survey. For example, “the past 5 years” refers to the 5-year period preceding the survey.

2.5.3 Substance Use Measures

Measures of substance use for the 2006 DoD survey are generally consistent with those used in prior surveys in the active duty series and with those in major national surveys, such as the National Survey on Drug Use and Health (NSDUH).

Alcohol Use. Alcohol use in this study was measured in terms of the quantity of alcohol consumed and frequency of drinking. Alcohol use in summary form is expressed as the average number of ounces of absolute alcohol (ethanol) consumed per day and as drinking levels. The ethanol index was computed following the method used in prior DoD surveys (Bray et al., 1983, 1986, 1988, 1992, 1995b, 1999, 2002) and the Rand study of alcohol use among Air Force personnel (Polich & Orvis, 1979). The ethanol index is a function of (a) the amount of ethanol contained in the ounces of beer, wine, and liquor consumed on a typical drinking day during the past 30 days; (b) the frequency of use of each beverage; and (c) the amount of ethanol consumed on a typical (i.e., heavy) drinking days during the past 12 months. The index represents average daily ounces of ethanol consumed per day among all personnel during a 12-month period. Although the index is expressed in terms of 12-month use, most of the data come from reports of 30-day typical use. Appendix E provides additional details about the procedures for creating this index.

The drinking-level classification scheme used in the 2006 DoD survey was adapted from Mulford and Miller (1960) and followed the method used in prior DoD surveys (Bray et al., 1983, 1986, 1988, 1992, 1995b, 1999, 2003). The (a) quantity per typical drinking occasion and (b) the frequency of drinking for the type of beverage (beer, wine, or hard liquor) with the largest amount of absolute alcohol per day to fit individuals into

1 of 10 categories resulting from all combinations of quantity and frequency of consumption were used. The resulting quantity-frequency categories were then collapsed into five drinking-level groups: abstainers, infrequent/light drinkers, moderate drinkers, moderate/heavy drinkers, and heavy drinkers. Heavy drinkers, the category of most concern, were defined as drinking five or more drinks per typical drinking occasion at least once a week in the 30 days prior to the survey. The criterion of five or more drinks to define heavy drinkers is consistent with the definition used in other national surveys of civilians, such as NSDUH (Office of Applied Studies [OAS], 2002) and the Monitoring the Future study (Johnston, O'Malley, & Bachman, 1998a, 1998b; University of Michigan, 2003). Additional details about the procedures for creating the drinking-level classification scheme are described in Appendix E.

In addition to this drinking-level classification scheme, binge drinking among military personnel was examined. Binge drinking was defined as having five or more drinks on a single occasion at least once in the past 30 days.

Negative Effects of Alcohol Use. The prevalence of adverse effects associated with alcohol use in the past 12 months also was estimated. Three summary measures of alcohol-related negative effects were created: serious consequences, productivity loss, and symptoms of dependence. The measure of alcohol-related serious consequences refers to the occurrence of one or more of the following problems in the past 12 months: (a) being passed over for promotion because of drinking, (b) receiving a lower score on a performance rating because of drinking, (c) losing 1 week or more from duty because of a drinking-related illness, (d) receiving Uniform Code of Military Justice (UCMJ) punishment because of drinking, (e) being arrested for driving under the influence of alcohol (DUI), (f) receiving an alcohol-related arrest other than DUI, (g) receiving an alcohol-related incarceration, (h) inflicting an alcohol-related injury to another Service person, (i) causing an alcohol-related accident resulting in someone else's injury or property damage, (j) physically fighting while drinking, (k) having spouse threaten to leave or leaving because of

drinking, and (l) having spouse ask Service person to leave or leaving the spouse.

The measure of alcohol-related productivity loss refers to one or more occurrences in the past 12 months of any two of the following, or of two occurrences of any one of the following: (a) being hurt in an on-the-job accident because of drinking; (b) being late for work or leaving early because of drinking, a hangover, or an illness caused by drinking; (c) not coming to work because of an illness or a personal accident caused by drinking; (d) performing below a normal level of performance because of drinking; (e) being drunk while working; or (f) being called in during off-duty hours and reporting feeling drunk.

For this study, possible alcohol dependence was assessed using the Alcohol Use Disorders Identification Test (AUDIT). The AUDIT was developed by the World Health Organization (WHO) as a simple method of screening for excessive drinking and to assist in brief assessment. The test consists of 10 questions, with a total score ranging from 0 to 40. Scores between 8 and 15 are indicative of hazardous drinking, scores between 16 and 19 suggest harmful drinking, and scores of 20 or above clearly warrant further diagnostic evaluation for possible alcohol dependence.

Illicit Drug Use. Illicit drug use was measured in terms of the prevalence of nonmedical use of any of 12 categories of drugs: marijuana/hashish; PCP, LSD, or other hallucinogens; cocaine; methamphetamine; amphetamines or other stimulants; tranquilizers or other depressants; barbiturates or other sedatives/hypnotics; heroin or other opiates; analgesics or other narcotics; inhalants; anabolic steroids; and sexual enhancers. These categories are slightly different from those addressed by past active duty surveys. For instance, in 2005, the PCP and LSD/other hallucinogen categories from 2002 were included with hallucinogens. Similarly, the GHB and designer drugs categories from 2002 were absorbed into new 2005 categories (GHB was included with barbiturates/other sedatives, and designer drugs were included with hallucinogens). Finally, the 2005 survey added a drug category for sexual enhancers such as Viagra. No attempt was made to measure quantity (e.g.,

number of pills) or the size of doses because most respondents cannot furnish this information adequately and because there is considerable variation in “street” drug purity.

To estimate the prevalence of use, questions were included about use of each drug type within the past 30 days and within the past 12 months. Definitions followed those used in prior active duty DoD surveys to facilitate comparisons. These definitions also have been commonly used in NSDUH (e.g., OAS, 2002). Indices were constructed of any drug use and any drug use except marijuana by creating use/no use dichotomies for each drug category and then setting an individual’s score to the maximum score value of the categories that were included (i.e., all, or all but the marijuana category).

Tobacco Use. Most analyses of tobacco use focus on cigarette smoking. “Current smokers” were defined as persons who smoked at least 100 cigarettes during their lifetime and who last smoked a cigarette during the past 30 days. “Heavy smokers” were defined as current smokers who smoked one or more packs of cigarettes per day during the past 30 days. In some analyses, personnel were classified in terms of whether they were lifetime smokers (i.e., smoked at least 100 cigarettes in their lifetime but did not smoke in the past 30 days) or nonsmokers (had not smoked 100 cigarettes in their lifetime).

The 2006 survey also measured the prevalence of use of other forms of tobacco in addition to cigarettes (i.e., cigars, pipes, and smokeless tobacco). “Current” users of smokeless tobacco were defined as personnel who used smokeless tobacco products (i.e., chewing tobacco or snuff) at least once during the past 30 days. Pipe and cigar use was defined as smoking one or more times during the past 30 days.

Tobacco Use Dependence. Dependence on tobacco was assessed using the Fagerstrom Nicotine Dependency Assessment (Heatherton, Kozlowski, & Frecker, 1991). This brief, 6-item scale has been widely used and validated to assess severity of nicotine addiction. In this report, scale scores were dichotomized such that respondents with summed scale scores of 5 or above

(medium or high dependence) were classified as nicotine dependent, whereas respondents with summed scale scores of 4 or below (low or no dependence) were classified as not nicotine dependent.

2.5.4 Other Health Behaviors

A major focus of the 2006 DoD survey was the investigation of health behaviors of Guard and Reserve personnel other than use of alcohol, illicit drugs, or tobacco. During the transition into the 21st century, progress toward *Healthy People 2010* goals for the military will be examined. In particular, the following health behaviors or factors related to specific *Healthy People 2010* objectives were measured:

- substance use
- weight and exercise
- blood pressure screening and action
- cholesterol screening and action
- hospitalization for injuries
- seat belt use
- motorcycle and bicycle helmet use
- receipt of Pap tests
- substance use during pregnancy

Overweight and underweight were defined in terms of the Body Mass Index (BMI), where BMI is weight (in kilograms) divided by the square of height (in meters). For this study, overweight is defined as a BMI greater than or equal to 25 for adults. Obesity is defined as a BMI greater than or equal to 30 (Kuczmarski & Flegal, 2000).

The BMI was also used to estimate the percentage of military personnel who could be considered underweight, although this was not a *Healthy People 2010* objective. For this study, underweight is defined as a BMI less than 18.5. *Healthy People 2010* sets goals to encourage people to maintain a healthy weight, defined as a BMI greater than 18.5 and less than 25.0.

Measures for the other *Healthy People 2010* behaviors were based primarily on responses to specific questions about the behavior and generally did not involve the

construction of special indices. More detailed discussion about specific measures for these other behaviors is given in Chapters 3 and 8.

In addition to behaviors measured by *Healthy People 2010* objectives, risk-taking/impulsivity and sensation-seeking behaviors (Cherpitel, 1999) were assessed. The impulsivity items included the following: (a) I often act on the spur of the moment without stopping to think, (b) I get a real kick out of doing things that are a little dangerous, (c) you might say I act impulsively, (d) I like to test myself every now and then by doing something a little chancy, and (e) many of my actions seem hasty. The set of sensation-seeking items included the following: (a) I'm always up for a new experience, (b) I like to try new things just for the excitement, (c) I go for the thrills in life when I get a chance, and (d) I like to experience new and different sensations. For our analyses, the items of these scales were combined and we scored each question from 1 to 4, creating a mean score for each scale. A mean score of 1 was categorized as low, a mean score between 1 and 2 (inclusive of 2) was categorized as moderate, and a mean score of 3 or greater was categorized as high.

The 2006 survey includes a number of new items geared toward establishing measures of exercise, nutrition, use of alternative health methods, and supplement use behavior among personnel. Each of these items asked about specific types of behavior; for instance, Question 84 asks participants about their past-30-day leisure-time physical activity. The item gives detailed descriptions of what constitutes moderate and vigorous physical activity. As such, these items do not require additional constructed measures.

2.5.5 *Mental Health*

The 2006 DoD survey included questions on the following mental health issues:

- levels of stress at work and in family life
- sources of stress
- behaviors for coping with stress
- perceived mental health

- symptoms of anxiety and depression
- symptoms of posttraumatic stress disorder (PTSD)
- suicidal ideation and suicide attempt(s)
- receipt of mental health services in the past 12 months, including the sources of any such services
- perceived need for mental health services in the past 12 months
- perceived damage to one's military career associated with seeking mental health services

Measures for most of these items were based on responses to specific questions. To determine personnel in need of further depression screening, an eight-item set of symptoms that included six items from the Center for Epidemiologic Studies–Depression Scale (CES-D) (Radloff, 1977) was used, as well as two items from the Diagnostic Interview Schedule (Robins, Helzer, Croughan, & Ratcliff, 1981). Analyses of data from a general population showed that the Burnam screener had high sensitivity and good positive predictive value for detecting depressive disorder (Burnam et al., 1988). Need for further depression evaluation was scored according to a multiple logistic regression probability formula, using a cutpoint of 0.060, based on Burnam and Wells's (1990) method for attaining at least 85% sensitivity and high positive values when using these eight items. To allow for some missing data, if at least two of five CES-D items or both of the Diagnostic Interview Schedule items were answered positively, the respondent was categorized as being in need of further depression evaluation.

To screen for generalized anxiety disorder (GAD) symptoms, a set of items adapted from the Patient Health Questionnaire (Spitzer, Kroenke, & Williams, 1999) was used. If respondents reported that they had been feeling nervous, anxious, or "on edge," or that they had been worrying a lot about different things (the first questions in the set) for several days, then we examined whether they reported any of the other symptoms. If they reported experiencing three or more symptoms on more than half of the days in the past 30 days, then respondents were considered to meet the screening criteria.

The 2006 survey includes the PTSD Checklist-civilian version (PCL-C) (Weathers, Litz, Huska, & Keane, 1994), which consists of a set of 17 questions that asks about experiences related to PTSD. The civilian rather than military version (PCL-M) was used to capture PTSD symptoms that may be the result of nonmilitary experiences (i.e., traumatic exposures occurring prior to being in the Guard/Reserve). Items include characteristics such as loss of interest in activities the respondent used to enjoy, being “superalert” or watchful or on guard, having physical reactions when reminded of a stressful experience, and feeling jumpy or easily started. Respondents were asked to indicate how much they had been bothered by each of the 17 statements; response options were “not at all,” “a little bit,” “moderately,” “quite a bit,” and “extremely.” Each statement was scored 0 to 4 and a sum for all items was computed. The standard cutoff was used such that if the sum was greater than or equal to 50, the participant was classified as positive for PTSD; those with scores less than 50 were considered not to have PTSD (Lang & Stein, 2004).

2.5.6 Other Behaviors of Interest

In terms of spiritual practices, respondents were asked to what extent they agreed with two questions regarding importance of religious/spiritual beliefs and the degree to which religious/spiritual beliefs influence their decision making. Respondents’ spirituality was categorized as high if they reported “strongly agree” to both items, medium if they reported either “strongly agree” or “agree” to at least one of the questions, and low if they reported either “disagree” or “strongly disagree” to both questions. These items were drawn from those used in the NSDUH.

2.6 Analytic Approach

The focus of our analyses of the 2006 Reserve component survey was to provide knowledge about current levels of substance use and health behaviors, negative effects associated with alcohol use, and trends in these behaviors throughout the survey series. In addition, analyses provide estimates of selected *Healthy People 2010* objectives and other selected behaviors of

interest. These analyses provide information to help assess and guide policy and program directions, including the most effective targeting of resources to problem areas.

To accomplish these aims, four basic types of analyses were conducted within this study:

- descriptive univariate and bivariate analyses of the prevalence of substance use, negative consequences, health behaviors, and selected *Healthy People 2010* objectives in 2006
- standardized comparisons of the extent of substance use among personnel in the six Reserve components in 2006
- standardized comparisons to active-duty and civilian rates of substance use
- multivariate logistic regression analyses

Most analyses were descriptive, cross-tabulations of the responses from two or more variables. Statistical significance for these data were assessed using *t* tests.

Although the observed rates mark the realities that the components must address in combating substance abuse, some of the differences in rates among them are likely to be a function of differences in their demographic compositions. For example, as shown in Table 2.2 and Table 2.3, Navy Reserve, Air National Guard, and Air Force Reserve personnel tended to be older and better educated than personnel in the other Service components at the time of the survey. Because these characteristics are associated with lower rates of substance use, all other things being equal, one would expect the prevalences of heavy drinking, drug use, and smoking to be lower than in the other components. Comparisons of efforts by the Services to combat substance abuse must consider demographic differences in risk factors. To take into account the sociodemographic differences among Services, a second set of adjusted estimates was computed. As with the approach described above, direct standardization (Kalton, 1968) was used to adjust the 2006 prevalence rates for each Service and to construct the rates that would be expected if each Service were to have the gender, age, education, race/ethnicity, and marital status distribution of the total Reserve component.

Finally, logistic regression analyses in Chapter 3, Alcohol Use; Chapter 4, Tobacco Use; Chapter 5, Any Illicit Drug Use; and Chapter 6, Stress and Mental Health were used to model outcome measures of heavy drinking, cigarette smoking, illicit drug use, and mental health as a function of demographic variables. In logistic regression, the natural log of the odds (i.e., $\ln p/1-p$) is modeled as a linear function of the independent variables. The parameters of a logistic regression model are transformed to reflect relative changes in the odds due to changes in the independent variables.

2.7 Variability and Suppression of Estimates

Table 2.3 and other tables in the following chapters generally present two numbers in each cell. The first number is an estimate of the percentage of the population with the characteristics that define the cell. The second number, in parentheses, is the standard error of the estimate. Standard errors represent the degree of variation associated with observing a sample rather than observing every member of the population.

Confidence intervals, or ranges that are very likely to include the true population value, can be constructed using standard errors. A basic 95% confidence interval can be computed by adding to and subtracting from the estimated proportion, the result of multiplying 1.96 times the standard error for that cell. The confidence interval range means that, if the study were to be repeated with 100 identically drawn samples (which might include different individuals), the confidence interval would include the true parameter value 95% of the time. For a given confidence level (such as 95%), then, the precision with which the cell proportions estimate the true population value varies with the size of the standard error. Because of the weighting employed to the estimates, construction of an accurate 95% confidence interval for the estimates presented in this report is significantly more complex.

In this report, estimates that were considered to be unreliable were omitted. More specifically, estimates of means and proportions that could not be reported with confidence because they either were based on small

sample sizes ($n < 30$) or had large sampling errors were suppressed. The rules for classifying estimates as unreliable are explained in Appendix C. Unreliable estimates that were omitted are noted by a “+” in the tables. Very small estimates (i.e., $< 0.05\%$) that were not suppressed by the rules, but that rounded to zero, also were omitted from the tables and are shown as two asterisks (**).

2.8 Strengths and Limitations of the Data

Self-reports, in which respondents provide data about their behaviors, rely on respondents’ ability and veracity to provide correct information about observations and events. Surveys have been a major vehicle for obtaining self-reported data about a wide variety of behaviors, including substance use and health behaviors. A major strength of the 2006 DoD survey is that it permitted the collection of a rich array of information from each Reserve and National Guard component and the extent of these behaviors of interest, along with information about correlates of these behaviors. Another strength of the 2006 DoD survey is that it includes commonly used questionnaire items that allow for precise estimates of substance use and health behaviors, which in turn allows for comparisons between active-duty personnel and civilians.

Despite these strengths, survey results also are subject to the potential bias of self-reports and to the ambiguities caused by questions with varying interpretations. In addition, there are other potential problems with the validity of survey data, including issues of population coverage and response rates. If the population is not properly represented in the survey or if response rates are low, biases may be introduced that can invalidate the survey results. The design and field procedures of the 2006 DoD survey are believed to adequately address these concerns to the extent possible using the most current survey methodology. A pretest was used to identify and eliminate ambiguities in question wording, study domains and issues were properly represented, and the response rate was within an acceptable range (although somewhat lower than for the comparable active duty HRB surveys). Furthermore, a nonresponse

adjustment was made to help compensate for the potential bias of nonsurveyed persons.

Many individuals question the validity of self-reported data on sensitive topics, such as alcohol and drug use, claiming that survey respondents will give socially desirable rather than truthful answers. In some situations, respondents may have strong motivations not to report drug use behavior honestly, and data may yield drug use estimates that are conservative. This issue was of concern for the 2006 survey because of the belief that Reserve component personnel might not reveal information about behaviors that could have the potential to jeopardize their careers in the Guard/Reserves.

These issues have been the topic of a number of empirical investigations that have demonstrated that although self-reports may sometimes underestimate the extent of substance use, they generally provide useful and meaningful data. For example, in an examination of the validity of alcohol-problem measures among Air Force personnel, Polich and Orvis (1979) found little evidence of underreporting when comparing self-reported data on adverse effects with police records and supervisor reports. Air Force beverage sales data, however, suggested that self-reports may underestimate actual prevalence of alcohol use by as much as 20%.

The reliability and validity of self-reported data among respondents from the U.S. civilian population have been explicitly tested in relation to alcohol use (Lemmens, Tan, & Knibbe, 1992; Mayer & Filstead, 1979; Midanik, 1982; Smith, Remington, Williamson, & Anda, 1980) and drug use (Haberman, Josephson, Zanes, & Elinson, 1972; Harrison, 1995; Kandel & Logan, 1984; O'Malley, Bachman, & Johnston, 1983; Rouse, Kozel,

& Richards, 1985). Overall, the various reviews of the literature are encouraging in suggesting that self-reports on alcohol use and drug use can be reasonably reliable and valid.

Additional information about the validity of self-reports on drug use has been addressed by Harrison (1995) and in a monograph by Rouse et al. (1985). A general conclusion emerging from these reviews is that most people appear to be truthful (within the bounds of capability) under the proper conditions. Such conditions include believing that the research has a legitimate purpose, having suitable privacy for providing answers, having assurances that answers will be kept confidential, and believing that those collecting the data can be trusted (Harrison, 1995; Johnston & O'Malley, 1985). When respondents believe survey questions are reasonable and justified in terms of their purpose, and when they have confidence that their answers will not be used against them, their self-reports can be sufficiently valid for research and policy purposes. When those conditions are not met, there may well be very substantial underreporting.

Support for the validity of data reported in the 2006 DoD survey (as well as the 1980–2005 DoD active-duty surveys) derives from this extensive body of research and the methodological rigor used to conduct the studies. Throughout the DoD survey series, a strong research design has been used and rigorous procedures have been followed that encourage honest reporting. For example, respondents have been kept anonymous, questionnaires have been answered privately, and neutral civilian teams collected the data and assured respondents that the data would not be shared with military personnel at the participating installations.

Chapter 3: Alcohol Use

This chapter reports results of detailed analyses of alcohol use among National Guard and Reserve personnel. It examines comparisons of alcohol use in each Service's Guard and/or Reserve units, correlates of heavy alcohol use, binge drinking, negative effects of alcohol use, reasons for drinking and for limiting alcohol use, engagement in risky behaviors, and stress and mental health problems. As described in Chapter 2, alcohol use has been defined in terms of both average ounces of alcohol (i.e., ethanol) consumed and levels of alcohol use, with special emphasis on the heaviest level of alcohol use. Binge drinking is defined as consuming five or more drinks on at least one occasion during the past 30 days. Negative effects of alcohol use include serious consequences, productivity loss, and dependence symptoms. We have included in Appendix B additional information on sociodemographic characteristics associated with alcohol use (Tables B.1 to B.8 and B16).

3.1 Reserve Component Comparisons of Alcohol Use

In this section, we provide four sets of estimates for each Reserve component: (1) one for per capita average daily ethanol use, (2) one for the prevalence of heavy alcohol use, (3) one for binge drinking (consuming five or more drinks per sitting one or more times in the past month), and (4) one for feeling drunk more than six times in the past year. We begin by presenting unadjusted estimates on these measures for each of the Reserve components. These unadjusted estimates are descriptive only and yield no explanatory information about differences among the Reserve components. They do, however, reflect the average amount of alcohol consumed per day by all personnel in each component and the prevalences of heavy alcohol use, binge drinking, and feeling drunk in 2005 for each of the components.

One possible explanation for differences across the Reserve components stems from differences in their sociodemographic composition. To address this possibility, we also provide adjusted estimates of ethanol use, heavy alcohol use, binge drinking, and feeling

drunk, using direct standardization procedures to control for sociodemographic differences (see Appendix F). These constructed estimates resulting from standardization permit comparisons among the components, as if each component had the sociodemographic composition of the total Reserve component in 2006. Unadjusted and adjusted estimates for average ounces of ethanol, heavy alcohol use, binge drinking, and feeling drunk more than six times in the past year are shown in Table 3.1.

3.1.1 Unadjusted Estimates

Reserve component comparisons of unadjusted per capita estimates for 2006 of average daily ethanol consumption shown in Table 3.1 indicate that Air Force Reserve and Navy Reserve personnel on average consumed significantly less alcohol per day than did personnel in the Army National Guard, Army Reserve, or Marine Corps Reserve. Average daily alcohol consumption was also lower among Air National Guard personnel when compared with rates for the Army National Guard and Marine Corps Reserve. Marine Corps Reserve consumed significantly more alcohol per day than personnel in all other groups.

Unadjusted rates of heavy alcohol use (i.e., five or more drinks per typical drinking occasion at least once a week, on average) in 2006 were also significantly lower among Navy Reserve, Air National Guard, and Air Force Reserve personnel than among personnel in the Army National Guard, Army Reserve, or Marine Corps Reserve. Rates were lower among Army Reserve personnel when compared with rates for the Army National Guard and Marine Corps Reserve.

The percentage of binge drinkers was significantly lower among Navy Reserve personnel than among personnel in the Army National Guard, Army Reserve, Air Force Reserve, or Marine Corps Reserve and lower among Army Reserve, Air National Guard, and Air Force Reserve personnel than among Army National Guard or

Table 3.1 ESTIMATES OF ALCOHOL USE, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY RESERVE COMPONENT

Measure/Type of Estimate	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Average Daily Ounces of Ethanol							
Unadjusted	1.89 (0.18) ^{a-d}	1.44 (0.19) ^{a,c,d}	0.73 (0.04) ^{d-f}	0.96 (0.16) ^{d,e}	0.84 (0.05) ^{d-f}	3.11 (0.20) ^{a-c,e-f}	1.54 (0.12)
Adjusted	1.73 (0.18) ^{a-d}	1.40 (0.18) ^d	1.14 (0.08) ^{d,e}	1.26 (0.16) ^{d,e}	1.25 (0.09) ^{d,f}	2.51 (0.17) ^{a-c,e-f}	1.55 (0.06)
Heavy Alcohol Use^g							
Unadjusted	21.1 (1.3) ^{a-d,f}	15.6 (2.0) ^{a-e}	7.4 (0.6) ^{d-f}	9.9 (1.5) ^{d-f}	8.9 (0.7) ^{d-f}	30.4 (2.1) ^{a-c,e-f}	16.7 (0.9)
Adjusted	18.9 (1.1) ^{a-c}	15.8 (1.8) ^a	10.7 (0.8) ^{d-f}	12.1 (1.8) ^{d,f}	12.8 (1.1) ^{d,f}	20.4 (2.0) ^{a-c}	15.1 (0.6)
Alcohol Binge Episode^h							
Unadjusted	47.4 (2.8) ^{a-d,f}	37.7 (2.9) ^{a,c-e}	26.6 (0.9) ^{c-f}	29.5 (3.6) ^{d,f}	31.0 (1.2) ^{a,d,f}	59.3 (3.0) ^{a-c,e-f}	40.4 (1.7)
Adjusted	45.0 (2.7) ^{a-c}	38.2 (2.6) ^{a,d}	32.2 (1.2) ^{c-f}	32.2 (3.8) ^{d,f}	37.0 (1.5) ^{a,d,e}	47.5 (2.6) ^{a-c,f}	38.7 (1.0)
Felt Drunk More Than 6 Times in Past Year							
Unadjusted	31.2 (2.1) ^{a-d}	25.7 (2.7) ^{a,c,d}	15.3 (0.8) ^{c-f}	18.3 (3.0) ^{d,f}	18.4 (0.8) ^{a,d,f}	48.9 (4.6) ^{a-c,e-f}	26.7 (1.3)
Adjusted	28.3 (1.9) ^a	26.0 (2.3) ^{a,d}	20.8 (0.9) ^{c-f}	21.9 (3.4) ^d	24.5 (1.1) ^{a,d}	35.6 (3.6) ^{a-c,f}	26.2 (1.0)

Note: Table entries for average daily ounces of ethanol are average values among military personnel by Reserve component. Table entries for heavy alcohol use, alcohol binge episode, and felt drunk more than six times in past year are percentages among military personnel by Reserve component. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the Reserve components. The main effects of gender, age group, enlisted/officer indicator, marital status, education, and race/ethnicity were used in this standardization process. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

^gDefined as consuming five or more drinks on the same occasion at least once a week in the past 30 days.

^hDefined as having consumed five or more drinks (four for females) on the same occasion at least once during the past 30 days.

Source: 2006 Department of Defense Reserve Component Survey (Average Daily Ounces of Ethanol, Q19–Q27; Heavy Alcohol Use, Q19–Q22 and Q24–Q27; Binge Episode Q29; Drunk More Than 6 Times in Past Year, Q31).

Marine Corps Reserve personnel. In 2006, 26.6% of Navy Reserve personnel acknowledged at least one binge drinking episode in the past month, whereas rates for the Army National Guard (47.4%), Army Reserve (37.7%), Air Force Reserve (31.0%), and Marine Corps Reserve (59.3%) were significantly higher. The Marine Corps Reserve faces the greatest challenges in addressing this issue, with more than one in two personnel in these units reporting binge drinking.

Likewise, rates of feeling drunk more than six times in the past year were lower in the Navy Reserve (15.3%) than in the Army National Guard (32.2%), Army Reserve (25.7%), Air Force Reserve (18.4%), or Marine Corps Reserve (48.9%) and lower among Air National Guard (18.3%), and Air Force Reserve (18.4%) personnel than among Army National Guard or Marine Corps Reserve personnel.

3.1.2 *Adjusted Estimates*

Observed differences in per capita average daily alcohol (ethanol) use and heavy alcohol use among the six Reserve components may be partially accounted for by differences in the sociodemographic composition of the components. In particular, the higher rates of alcohol consumption on average and of heavy alcohol use in the Marine Corps Reserve may have been due, in part, as shown in Table 3.1, to the sociodemographic composition of the Marine Corps Reserve in comparison with the other Reserve components' units. The Marine Corps in general has traditionally had higher percentages of personnel who were male, younger, less educated, unmarried, and enlisted—groups that have been shown in previous DoD surveys to be more likely to be heavy drinkers (Bray et al., 2003). Conversely, the lower levels of alcohol consumption and heavy alcohol use in the Navy Reserve and Air Force National Guard and Reserve may have been due, in part, to the sociodemographic composition of these units; their personnel are more likely to be older, better educated, and married compared with the other Reserve components. Thus, the Marine Corps Reserve, Army National Guard, and Army Reserve could have had lower levels of average alcohol consumption and lower prevalence of heavy alcohol use as well as lower binge

drinking rates, and the Navy Reserve, Air Force Reserve, and Air National Guard could have had higher levels of alcohol consumption, binge drinking, and heavy alcohol use, had had the components the same sociodemographic composition.

To examine the potential impact of sociodemographic composition of the Reserve components on alcohol use rates, we developed adjusted estimates of average daily alcohol use, heavy alcohol use, binge drinking rates, and frequent intoxication in 2006. To do so, we standardized the sociodemographic composition of the Reserve components to the gender, age, enlisted/officer indicator, education, race/ethnicity, and marital status distributions for the total Reserve component (see Appendix F). These adjusted estimates following standardization are presented in Table 3.1 for average daily alcohol use, heavy alcohol use, binge drinking, and frequent intoxication.

For average daily alcohol (ethanol) consumption, adjusting the estimates for sociodemographic differences decreased the Army National Guard estimate from 1.89 ounces to 1.73 ounces and decreased the Army Reserve from 1.44 ounces to 1.40 ounces. Standardization raised the Navy Reserve from 0.73 ounce to 1.14 ounces and raised the Air National Guard and Air Force Reserve estimates from an average of 0.96 ounce of ethanol per day to an average of 1.26 ounces and 0.84 ounce to 1.25 ounces, respectively. Standardization also had an effect on the Marine Corps Reserves' estimate, resulting in a decrease from 3.11 ounces per day on average to 2.51 ounces.

Following standardization, however, the Marine Corps Reserve continued to have a significantly higher level of per capita alcohol consumption compared with the Army National Guard and Army Reserve, the Navy Reserve, and the Air Force Reserve and Air National Guard; the Navy Reserve, Air National Guard, and Air Force Reserve levels were still significantly lower than Army National Guard rates. These results suggest that the lower levels of average daily alcohol consumption in the Air Force and Navy were not due only to differences in sociodemographic composition.

With regard to heavy alcohol use, standardization to the total Reserve component sociodemographic composition raised the prevalence estimates slightly for the Army Reserve from 15.6% to 15.8%. Estimates for the Navy Reserve were raised from 7.4% to 10.7% and raised for the Air National Guard and Air Force Reserve (from 9.9% to 12.1% and from 8.9% to 12.8%, respectively). Adjusting the estimates for sociodemographic differences decreased the Army National Guard estimates (21.1% unadjusted vs. 18.9% adjusted) and decreased the Marine Corps Reserve estimates by 10 percentage points (30.4% unadjusted vs. 20.4% adjusted). Following standardization, adjusted rates of heavy alcohol use for the Navy Reserve, Air National Guard, and Air Force Reserve were still significantly lower than the rates for the Army National Guard and Marine Corps Reserve; additionally, Navy Reserve rates differed from those for the Army Reserve.

Standardization of binge drinking rates resulted in the Marine Corps Reserve continuing to have a significantly higher rate of binge drinking compared with the other components with the exception of the Army National Guard. The adjusted rate for the Army Reserve increased slightly from 37.7% to 38.2%, for the Navy Reserve from 26.6% to 32.2%, for the Air National Guard from 29.5% to 32.2%, and for the Air Force Reserve from 31.0% to 37.0%. In contrast, the Army National Guard rate decreased slightly from 47.4% to 45.0%, and the Marine Corps Reserve from 59.3% to 47.5%.

Adjusted rates for feeling drunk showed a similar pattern, revealing increases in the Army Reserve, Navy Reserve, Air National Guard, and Air Force Reserve and a small decrease in the Army National Guard. The largest decrease was demonstrated in the Marine Corps Reserve.

These results indicate that some of the differences in the unadjusted rates of heavy alcohol use in 2006 among the Reserve component can be accounted for by differences in their sociodemographic composition. This finding is particularly evident and important for the Marine Corps, which has consistently shown the highest unadjusted rates of heavy alcohol use across the DoD survey series

and continued to do so in the Reserve units (though the Army National Guard was similar). However, the distinctive sociodemographic makeup of the Marine Corps Reserve, which has a higher representation of personnel at greater risk for heavy alcohol use, is an important factor in the rate of heavy alcohol use. As long as the Marine Corps Reserve has higher percentages of sociodemographic groups at increased risk for heavy alcohol use than the other Reserve components have, it will continue to face the greatest challenge in coping with heavy alcohol use among its personnel.

3.2 Correlates of Heavy Alcohol Use

Past research on military and civilian populations has firmly established that alcohol use patterns differ among certain sociodemographic groups and social conditions (Bray et al., 1992, 2005; Clark & Hilton, 1991; Midanik & Clark, 1994; Williams et al., 2002). For example, drinking tends to be more common and heavier among younger persons, males, and less well-educated people. Knowledge about these correlates of alcohol use is useful for specifying high-risk populations to be targeted for educational and treatment efforts. This section examines the correlates of heavy alcohol use. Two types of analyses were conducted: descriptive prevalence analyses and multivariate logistic regression analyses. Results of both are presented in Table 3.2: the first column of numbers presents prevalence data for the sociodemographic groups and the next column shows the odds ratios from the logistic regression.

The prevalence rates in Table 3.2 indicate substantial differences for Reserve component, gender, race/ethnicity, age, marital status, pay grade, and current military job. As discussed previously, heavy alcohol use is more prevalent among Army National Guard, Army Reserve, and Marine Corps Reserve personnel than among Navy Reserve, Air National Guard, and Air Force Reserve personnel. Heavy alcohol use also is more prevalent among males; non-Hispanic whites and Hispanics; those aged 24 or younger and 25 to 34; not married personnel; those in pay grades E1 to E6; and those in infantry, gun crew, or seamanship specialist occupations.

Table 3.2

SOCIODEMOGRAPHIC CORRELATES OF HEAVY ALCOHOL USE, PAST 30 DAYS, TOTAL RESERVE COMPONENT

Sociodemographic Characteristics	Prevalence	Odds Ratio ^a	
		Adjusted	95% CI ^b
Reserve Component			
Army National Guard	21.1 (1.3)	0.91	(0.63, 1.30)
Army Reserve	15.6 (2.0)	0.71	(0.44, 1.14)
Navy Reserve	7.4 (0.6)	0.48 ^c	(0.30, 0.75)
Air National Guard	9.9 (1.5)	0.50 ^c	(0.31, 0.82)
Air Force Reserve	8.9 (0.7)	0.58 ^c	(0.36, 0.94)
Marine Corps Reserve	30.4 (2.1)	1.00	
Gender			
Male	18.0 (1.0)	2.21 ^c	(1.55, 3.14)
Female	10.5 (1.3)	1.00	
Race/Ethnicity			
White, non-Hispanic	17.4 (1.2)	1.00	
African American, non-Hispanic	9.5 (1.7)	0.43 ^c	(0.24, 0.79)
Hispanic	21.6 (1.9)	1.07	(0.80, 1.44)
Other	15.4 (2.7)	0.69	(0.47, 1.03)
Age			
24 or younger	27.5 (1.9)	3.17 ^c	(1.61, 6.26)
25-34	17.2 (1.2)	1.94 ^c	(1.18, 3.19)
35-44	8.7 (1.1)	1.31	(0.91, 1.89)
45 or older	5.6 (1.2)	1.00	
Marital Status			
Not married	22.8 (1.2)	1.58 ^c	(1.29, 1.94)
Married	10.3 (0.9)	1.00	
Pay Grade			
E1-E3	24.3 (2.4)	3.48	(0.84, 14.34)
E4-E6	18.4 (1.3)	3.76	(0.90, 15.65)
E7-E9	6.5 (1.2)	2.58	(0.62, 10.73)
W1-W5, O1-O3	7.4 (1.8)	1.43	(0.58, 3.50)
O4-O10	4.2 (1.3)	1.00	
Current Military Job			
Infantry, gun crew, or seamanship specialist	26.5 (2.7)	3.36	(0.90, 12.53)
Electronic equipment repairman	18.2 (4.1)	2.99	(0.90, 9.97)
Communications/intelligence specialist	18.5 (2.7)	2.45	(0.79, 7.60)
Health care specialist	14.5 (2.1)	2.46	(0.74, 8.09)
Other technical specialist	14.1 (2.3)	2.07	(0.63, 6.86)
Functional support and administration	9.3 (1.5)	1.90	(0.57, 6.29)
Electrical/mechanical equipment repairman	17.3 (2.4)	2.63	(0.80, 8.70)
Craftsman	10.5 (1.4)	2.06	(0.63, 6.68)
Service and supply handler	18.5 (2.2)	3.53 ^c	(1.13, 11.01)
Nonoccupational enlisted	18.9 (4.3)	3.45	(0.99, 12.01)
General officer or executive	+ (+)	3.34 ^c	(1.29, 8.67)
Tactical operations officer	9.1 (2.7)	4.96 ^c	(1.11, 22.08)
Intelligence officer	+ (+)	1.79	(0.25, 12.93)
Engineering/maintenance officer	5.7 (3.6)	1.95	(0.43, 8.77)
Scientist or professional (nonhealth care)	+ (+)	6.80 ^c	(1.47, 31.53)
Health care officer	2.6 (0.8)	2.27	(0.73, 7.09)
Administrator	6.4 (2.2)	4.22 ^c	(1.18, 15.11)
Supply, procurement, allied officer	15.7 (4.9)	8.54 ^c	(2.61, 27.99)
Nonoccupational officer	+ (+)	1.00	

(Table continued on next page)

Table 3.2

SOCIODEMOGRAPHIC CORRELATES OF HEAVY ALCOHOL USE, PAST 30 DAYS, TOTAL RESERVE COMPONENT (CONTINUED)

Sociodemographic Characteristics	Prevalence	Odds Ratio ^a	
		Adjusted	95% CI ^b
Deployed Within Past 24 Months			
At least once	18.3 (1.4)	1.25	(0.96, 1.62)
Not within 24 months	14.4 (1.2)	1.00	
Total	16.7 (0.9)		

Note: Prevalence estimates are percentages of Reserve military personnel in each sociodemographic group who were classified as heavy alcohol users in the past 30 days. The standard error of each estimate is presented in parentheses. Heavy alcohol use is defined as consuming five or more drinks on the same occasion at least once a week in the past 30 days. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aOdds ratios were adjusted for Reserve component, gender, race/ethnicity, age, marital status, pay grade, current military job, and deployment within past 24 months (Q147).

^b95% CI = 95% confidence interval of the odds ratio.

^cOdds ratio is significantly different from the reference group.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Heavy Alcohol Use, Q19–Q22 and Q24–Q27).

For the logistic regression model, we used the probability of being a heavy drinker as the dependent measure. The dichotomous outcome measure was heavy alcohol use versus other drinking levels (excluding abstainers). The independent variables included eight sociodemographic variables: Reserve component, gender, race/ethnicity, age, marital status, pay grade, and military job. As shown in Table 3.2, all of the sociodemographic variables, with the exception of pay grade, were significant predictors of heavy alcohol use. After we adjusted for all other variables in the analysis, the odds of being heavy drinkers were significantly higher for the following subgroups:

- Marine Corps Reserve compared with Navy Reserve, Air National Guard, and Air Force Reserve
- Males compared with females
- Non-Hispanic whites compared with non-Hispanic African Americans
- Those aged 24 or younger and aged 25 to 34 compared with those aged 45 or older
- Those who were not married compared with those who were married
- Those who were service and supply handlers, general officers or executives, tactical operations officers, scientists or health professionals, administrators, and supply, procurement or allied officers compared with nonoccupational officers.

Age, gender, and current military job showed the strongest effects in the model. The odds of being a heavy drinker were three times as high for persons aged 24 or younger as for those aged 45 or older. The odds for male personnel being heavy drinkers were more than two times those of female personnel. The logistic model also showed that the odds of being heavy drinkers for not married personnel were higher than those for married personnel. These logistic regression analyses suggest that prevention efforts for heavy alcohol use are likely to be most productive if they focus on lower-grade male personnel in the Army National Guard, Army Reserve, and Marine Corps Reserve, as well as on single personnel.

3.3 Problem Drinking and Possible Alcohol Dependence

In this section, we examine problem drinking among Reserve component personnel. First, we examine problem drinking and possible alcohol dependence as a function of pay grade. Next, we examine the relation between drinking levels and possible alcohol dependence.

3.3.1 *Pay Grade and Possible Alcohol Dependence*

For this survey, the measure of symptoms of alcohol dependence was determined using the Alcohol Use Disorders Identification Test (AUDIT). The AUDIT was developed by the World Health Organization (WHO) as a simple method of screening for excessive drinking and to assist in brief assessment. The AUDIT consists of 10 questions, each scored from 0 to 4, with a total score ranging from 0 to 40. Scores between 8 and 15 are indicative of hazardous drinking, scores between 16 and 19 suggest harmful drinking, and scores of 20 or above clearly warrant further diagnostic evaluation for alcohol dependence.

Other surveys have consistently shown that lower pay grades are more likely to drink heavily; thus, a similar distribution might be expected with respect to harmful and hazardous drinking levels as well as possible alcohol dependence. As seen in Table 3.3, considerable variation is shown in problem drinking levels for personnel in different pay grades. The highest levels of hazardous drinking consistently occurred in the lowest pay grades (i.e., E1 to E3 and E4 to E6). For the total Reserve component, the prevalence of hazardous drinking or above was 28.0% for E1s to E3s and 7.4% for O4s to O10s. This pattern in the total Reserve component was repeated for each of the Reserve components.

Using the AUDIT, 40.0% of E1s to E3s in the Marine Corps Reserve were drinking at or above hazardous levels along with 27.2% of Army National Guard, 27.1% of Army Reserve, 22.2% of Air National Guard, 18.3% of Air Force Reserve, and 14.7% of Navy Reserve personnel. Possible dependence on alcohol was shown in 8.0% of E1s to E3s in the Marine Corps Reserve, 4.8% of Army National Guard, 4.2% of Air Force Reserve, 3.3% of Army Reserve, and 0.9% of Navy Reserve personnel in these lower pay grades.

Overall, the Marine Corps Reservists showed significantly higher rates of drinking at hazardous levels or above than any of the other Reserve components, while personnel in the Navy Reserve, Air National Guard, and Air Force Reserve demonstrated the lowest

rates of drinking at these levels. Likewise, Marine Corps Reservists and Army National Guard members had significantly higher rates of possible alcohol dependence than Navy Reserve, Air National Guard, and Air Force Reserve members, and Army Reserve personnel had lower rates than personnel in the Marine Corps Reserve but higher rates than personnel in the Navy Reserve, Air National Guard, and Air Force Reserve.

3.3.2 *Drinking Levels and Possible Alcohol Dependence*

To better understand the influence of drinking levels on the potential for developing alcohol dependence, we examined the relationship between drinking levels (omitting abstainers) and the percentage of personnel with possible alcohol dependence (see Table 3.4). Possible alcohol dependence was evident among 13.3% of the heavy drinkers but in only 3.3% of the moderate/heavy drinkers. The prevalence of possible alcohol dependence was lowest among moderate drinkers (0.2%). The rate of drinking at or above hazardous levels (AUDIT score of greater than or equal to 8) was 73.0% among heavy drinkers, 27.5% among moderate/heavy drinkers, 6.6% among moderate drinkers, and 1.4% among infrequent/light drinkers.

3.4 *Reasons for Limiting Drinking*

Table 3.5 lists the importance of certain reasons for limiting drinking, by drinking levels. Among moderate drinkers, 71.7% limited drinking because it is bad for one's health, compared with 62.1% of heavy drinkers. Concern about damage to one's military career was also an important reason for limiting drinking among moderate drinkers (68.4%); 66.9% of moderate/heavy and 63.8% of heavy drinkers listed this as an important reason. Holding strong beliefs or values was a strong limiting factor for drinking among light drinkers (49.5%) and moderate drinkers (48.4%), while being a less important reason for moderate/heavy (36.5%) or heavy drinkers (32.4%). Avoiding problems associated with drinking and driving was a strong incentive for all levels of drinkers.

Table 3.3 ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT) SCORE, PAST 12 MONTHS, BY PAY GRADE

Measure/Pay Grade	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
AUDIT Score of 8-15 (Hazardous Drinking)							
E1-E3	17.7 (2.5) ^a	19.5 (2.7) ^b	13.5 (3.1) ^a	16.4 (5.5)	13.0 (1.8) ^{a,c}	26.0 (2.2) ^{b,d,e}	18.9 (1.6)
E4-E6	18.2 (0.9) ^{b,c,e,f}	14.9 (1.2) ^{a,b,d-f}	7.6 (0.5) ^{a-d}	10.7 (1.6) ^{a,c,d}	11.4 (1.0) ^{a,c,d,e}	22.3 (2.3) ^{b,c,e,f}	15.1 (0.7)
E7-E9	16.7 (3.0) ^{b,e,f}	+ (+)	4.6 (1.4) ^d	2.0 (1.4) ^{b,d}	6.1 (0.7) ^{d,f}	+ (+)	8.7 (1.7)
W1-W5,O1-O3	13.9 (6.0)	+ (+)	7.0 (2.2)	4.2 (2.7)	4.2 (1.0)	+ (+)	10.9 (3.0)
O4-O10	+ (+)	2.0 (1.2) ^{b,e}	5.1 (0.8) ^c	+ (+)	6.8 (1.4) ^c	+ (+)	6.6 (1.6)
Total	17.6 (1.0) ^{a-c,e,f}	13.3 (1.3) ^{a,b,d-f}	7.5 (0.4) ^{a-d}	8.9 (1.3) ^{a,c,d}	9.3 (0.6) ^{a,c,d,e}	24.7 (1.6) ^{b,c,d-f}	14.3 (0.7)
AUDIT Score of 16-19 (Harmful Drinking)							
E1-E3	4.7 (1.9) ^e	4.3 (1.0) ^{b,e}	0.4 (0.3) ^{a,c,d}	+ (+)	1.1 (0.9) ^{a,c}	6.1 (1.0) ^{b,e}	4.4 (1.0)
E4-E6	4.0 (0.5) ^{b,e,f}	3.2 (0.9) ^{e,f}	1.1 (0.2) ^{a,c,d}	0.8 (0.3) ^{a-d}	1.6 (0.2) ^{a,d,f}	6.4 (1.4) ^{b,e,f}	3.1 (0.3)
E7-E9	0.5 (0.4)	+ (+)	+ (+)	0.2 (0.2)	0.5 (0.2)	+ (+)	0.3 (0.1)
W1-W5, O1-O3	1.8 (1.5)	+ (+)	+ (+)	+ (+)	1.6 (0.7)	+ (+)	0.9 (0.7)
O4-O10	1.1 (1.0)	0.7 (0.5)	0.6 (0.2)	+ (+)	0.2 (0.2)	+ (+)	0.5 (0.2)
Total	3.7 (0.5) ^{b,e,f}	2.7 (0.6) ^{a,b,e,f}	0.8 (0.1) ^{a,c,d}	0.7 (0.3) ^{a,c,d}	1.1 (0.2) ^{a,c,d}	5.5 (1.1) ^{b,c,e,f}	2.7 (0.3)
AUDIT Score of 20+ (Possible Dependence)							
E1-E3	4.8 (1.4) ^e	3.3 (1.0) ^{a,e}	0.9 (0.6) ^{a,c,d}	+ (+)	4.2 (2.2)	8.0 (1.2) ^{c,e}	4.7 (0.8)
E4-E6	5.1 (0.8) ^{b,e,f}	3.8 (0.6) ^{b,e,f}	1.5 (0.5) ^{a,c,d}	0.6 (0.4) ^{a,c,d}	1.4 (0.1) ^{a,c,d}	5.3 (1.3) ^{b,e,f}	3.6 (0.4)
E7-E9	0.1 (0.1)	+ (+)	+ (+)	0.5 (0.6)	0.4 (0.2)	+ (+)	0.2 (0.1)
W1-W5,O1-O3	+ (+)	0.7 (0.5)	+ (+)	+ (+)	1.1 (0.6)	+ (+)	0.4 (0.2)
O4-O10	+ (+)	+ (+)	+ (+)	+ (+)	0.8 (0.5)	+ (+)	0.3 (0.2)
Total	4.2 (0.5) ^{b,e,f}	2.8 (0.5) ^{a,b,e,f}	1.0 (0.3) ^{a,c,d}	0.9 (0.6) ^{a,c,d}	1.3 (0.1) ^{a,c,d}	6.1 (0.9) ^{b,c,e,f}	3.1 (0.3)

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Table 3.3

ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT) SCORE, PAST 12 MONTHS, BY PAY GRADE (CONTINUED)

Measure/Pay Grade	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
AUDIT Score of 8+							
E1-E3	27.2 (3.0) ^{a,b,e}	27.1 (4.0) ^{a,e}	14.7 (3.2) ^{a,c,d}	22.2 (7.5) ^a	18.3 (3.0) ^{a,d}	40.0 (3.4) ^{b-f}	28.0 (1.9)
E4-E6	27.4 (1.3) ^{b,c,e,f}	22.0 (1.9) ^{a,b,d-f}	10.2 (0.4) ^{a-d}	12.1 (2.3) ^{a,c,d}	14.5 (1.1) ^{a,c-e}	34.0 (3.2) ^{b,c,e,f}	21.8 (1.1)
E7-E9	17.3 (3.0) ^{b,e,f}	+ (+)	4.6 (1.4) ^d	2.7 (2.0) ^{b,d}	7.1 (0.9) ^{d,f}	+ (+)	9.2 (1.7)
W1-W5, O1-O3	+ (+)	+ (+)	7.0 (2.2)	4.8 (3.3)	6.9 (1.5)	+ (+)	12.2 (3.2)
O4-O10	+ (+)	2.7 (1.5) ^b	5.8 (0.9)	+ (+)	7.8 (1.7) ^c	+ (+)	7.4 (1.7)
Total	25.5 (1.1) ^{a-c,e-f}	18.8 (1.9) ^{a,b,d-f}	9.3 (0.5) ^{a-d}	10.5 (2.1) ^{a,c,d}	11.7 (0.6) ^{a,c-e}	36.3 (3.0) ^{b-f}	20.1 (1.0)

Note: Table displays the percentage of Reserve military personnel in each Reserve component by pay-grade group who reported alcohol dependence symptoms. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Air National Guard at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Dependence Symptoms, Q39–Q42).

Table 3.4 ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT) SCORE, PAST 12 MONTHS, BY DRINKING LEVEL

Measure/Drinking Level	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
AUDIT Score of 8-15 (Hazardous Drinking)							
Infrequent/light	1.2 (1.0) ^a	0.9 (0.4) ^a	0.9 (0.4) ^a	0.4 (0.5) ^a	0.3 (0.2) ^a	15.3 (4.2) ^{b-f}	1.3 (0.4)
Moderate	8.9 (1.0) ^{d-f}	5.5 (1.7)	3.0 (0.9) ^{a,b}	2.3 (0.3) ^{a,b}	2.6 (0.5) ^{a,b}	11.9 (3.5) ^{d-f}	6.1 (0.7)
Moderate/heavy	24.5 (2.3) ^{a,d-f}	25.9 (2.4) ^{a,d-f}	16.6 (1.4) ^{a-c}	15.2 (2.5) ^{a-c}	18.2 (1.7) ^{a-c}	34.4 (2.9) ^{b-f}	22.9 (1.3)
Heavy	50.5 (3.0) ^d	45.8 (4.4)	39.1 (3.1) ^{b,e,f}	49.3 (3.5) ^d	48.1 (2.8) ^d	46.7 (2.5)	48.4 (1.9)
Total	17.6 (1.0) ^{a,c-f}	13.3 (1.3) ^{a,b,d-f}	7.5 (0.4) ^{a-c,f}	8.9 (1.3) ^{a-c}	9.3 (0.6) ^{a-d}	24.7 (1.6) ^{b-f}	14.3 (0.7)
AUDIT Score of 16-19 (Harmful Drinking)							
Infrequent/light	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Moderate	0.5 (0.3)	0.3 (0.3)	+ (+)	+ (+)	+ (+)	+ (+)	0.2 (0.1)
Moderate/heavy	4.6 (1.5) ^{d,f}	3.2 (0.8) ^{d,f}	0.6 (0.3) ^{a-c}	2.1 (1.0)	0.8 (0.2) ^{a-c}	6.2 (1.9) ^{d,f}	3.3 (0.6)
Heavy	11.3 (1.1) ^{d,e}	13.5 (3.3) ^e	8.1 (1.1) ^{b-e}	2.1 (1.4) ^{a-d,f}	9.9 (1.6) ^e	14.0 (3.0) ^e	11.2 (1.1)
Total	3.7 (0.5) ^{d-f}	2.7 (0.6) ^{a,d-f}	0.8 (0.1) ^{a-c}	0.7 (0.3) ^{a-c}	1.1 (0.2) ^{a-c}	5.5 (1.1) ^{c-f}	2.7 (0.3)
AUDIT Score of 20+ (Possible Dependence)							
Infrequent/light	+ (+)	+ (+)	0.4 (0.3)	+ (+)	0.2 (0.1)	+ (+)	+ (+)
Moderate	+ (+)	0.5 (0.2)	0.2 (0.2)	+ (+)	0.6 (0.3)	0.6 (0.6)	0.2 (0.1)
Moderate/heavy	1.2 (0.5)	2.3 (0.9) ^{e,f}	0.8 (0.4) ^a	0.3 (0.3) ^{a,c}	0.3 (0.2) ^{a,c}	3.6 (1.1) ^{d-f}	1.4 (0.3)
Heavy	14.3 (2.2) ^{d,f}	13.2 (1.9) ^{d,f}	7.5 (2.1) ^{a-c}	+ (+)	7.6 (1.1) ^{a-c}	17.2 (2.8) ^{d,f}	13.3 (1.4)
Total	4.2 (0.5) ^{d-f}	2.8 (0.5) ^{a,d-f}	1.0 (0.3) ^{a-c}	0.9 (0.6) ^{a-c}	1.3 (0.1) ^{a-c}	6.1 (0.9) ^{c-f}	3.1 (0.3)

(Table continued on next page)

Table 3.4

ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT) SCORE, PAST 12 MONTHS, BY DRINKING LEVEL (CONTINUED)

Measure/Drinking Level	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
AUDIT Score of 8+							
Infrequent/light	1.2 (1.0) ^a	0.9 (0.4) ^a	1.3 (0.5) ^a	0.4 (0.5) ^a	0.5 (0.2) ^a	15.3 (4.2) ^{b-f}	1.4 (0.4)
Moderate	9.4 (1.0) ^{d-f}	6.2 (1.8) ^e	3.2 (1.0) ^{a,b}	2.3 (0.3) ^{a-c}	3.2 (0.4) ^{a,b}	12.5 (3.7) ^{d-f}	6.6 (0.7)
Moderate/heavy	30.3 (2.3) ^{a,d-f}	31.4 (2.8) ^{a,d-f}	18.0 (1.6) ^{a-c}	17.6 (2.5) ^{a-c}	19.4 (1.6) ^{a-c}	44.2 (3.7) ^{b-f}	27.5 (1.4)
Heavy	76.1 (2.3) ^{d-f}	72.4 (3.5) ^{d,e}	54.7 (3.1) ^{a-c,f}	60.1 (4.1) ^{a-c}	65.6 (2.2) ^{a,b,d}	77.9 (3.0) ^{d-f}	73.0 (1.6)
Total	25.5 (1.1) ^{a,c-f}	18.8 (1.9) ^{a,b,d-f}	9.3 (0.5) ^{a-c,f}	10.5 (2.1) ^{a-c}	11.7 (0.6) ^{a-d}	36.3 (3.0) ^{b-f}	20.1 (1.0)

Note: Table displays the percentage of Reserve military personnel in each Reserve component by past-month drinking-level group who reported alcohol dependence symptoms. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^eEstimate is significantly different from the Air National Guard at the 95% confidence level.

^fEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Dependence Symptoms, Q39–Q42).

Table 3.5

IMPORTANCE OF CERTAIN REASONS FOR LIMITING DRINKING, BY DRINKING LEVEL

Reason for Limiting Drinking	Drinking Level			
	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Drinking bad for health	65.5 (4.0)	71.7 (1.5) ^a	69.4 (1.8) ^a	62.1 (2.6) ^{b,c}
Costs too much	49.6 (3.5) ^a	53.0 (2.3)	55.2 (1.9)	59.2 (2.4) ^d
Family/friends get upset	39.7 (2.8) ^a	42.8 (1.7)	43.8 (1.8)	47.8 (2.2) ^d
Might interfere with civilian or military career	60.2 (4.1)	68.4 (1.4) ^a	66.9 (2.1)	63.8 (1.8) ^b
Goes against basic values or beliefs	49.5 (3.1) ^{a,c}	48.4 (2.2) ^{a,c}	36.5 (1.7) ^{b,d}	32.4 (1.7) ^{b,d}
Afraid of becoming an alcoholic	35.8 (2.5)	33.2 (1.4) ^{a,c}	38.9 (1.6) ^b	39.4 (1.8) ^b
Makes me do things I'm sorry for later	34.3 (2.8) ^{a,c}	35.0 (1.6) ^{a,c}	39.8 (1.9) ^{a,b,d}	44.7 (2.2) ^{b,c,d}
Can make me feel sick	50.1 (3.8) ^b	58.3 (2.3) ^{a,d}	56.8 (2.4) ^a	51.2 (1.7) ^{b,c}
Drinking can get me in trouble with police	49.2 (3.5) ^b	57.1 (1.5) ^d	54.9 (2.6)	53.0 (2.6)
Leads to losing control over my life	43.2 (2.7)	45.9 (1.9)	42.6 (2.2)	42.0 (2.3)

Note: Table displays the percentage of Reserve military personnel in each drinking-level group who reported the specified reason for limiting drinking was "somewhat important" or "very important." The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., infrequent/light vs. moderate, moderate vs. heavy). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the heavy drinking level at the 95% confidence level.

^bEstimate is significantly different from the moderate drinking level at the 95% confidence level.

^cEstimate is significantly different from the moderate/heavy drinking level at the 95% confidence level.

^dEstimate is significantly different from the infrequent/light drinking level at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Reasons for Limiting Drinking, Q38).

Endorsement for fear of losing control over one's life was found equally across all drinking levels. Feeling sick was a strong reason for limiting drinking among 58.3% of moderate drinkers, 56.8% of moderate/heavy drinkers, and 51.2% of heavy drinkers.

3.5 Military-Related Beliefs

Table 3.6 lists the importance of certain military-related beliefs about drinking, by drinking levels. Among light drinkers, 14.9% reported drinking because it was part of being in the military, compared with 34.4% of heavy drinkers. Heavy drinkers also endorsed strong beliefs that drinking was the only recreation available (18.9%), they had been encouraged to drink at parties (18.8%), and that leadership was tolerant of off-duty intoxication (30.1%). Among light and moderate drinkers, 5.5% and 5.0% reported the belief that drinking was part of being in their unit compared with 14.4% of heavy drinkers. Light and moderate drinkers also had lower rates of

endorsing the belief that drinking was the only recreation available (4.8% and 5.8%, respectively).

3.6 Reasons for Drinking

Table 3.7 provides the importance of certain reasons for drinking, by drinking level. The most important reasons for drinking among heavy drinkers were to celebrate (82.2%), to relax (77.1%), to be sociable (75.5%), and to enjoy a party (69.1%). Nearly four times as many heavy drinkers reported drinking to fit in (25.2%) compared with light drinkers (5.9%). Nearly six times as many heavy drinkers reported drinking to feel more confident than light drinkers (29.2% vs. 4.5%). Heavy drinkers were nearly 10 times as likely as light drinkers to report drinking to forget about problems (39.2% vs. 4.0%) or to cheer up when in a bad mood (43.9% vs. 4.7%). Drinking because of pressure from friends and so that they would not be teased by others were not important reasons for any of the drinking levels.

Table 3.6

MILITARY-RELATED BELIEFS ABOUT DRINKING, BY DRINKING LEVEL

Beliefs About Drinking	Drinking Level				
	Nondrinker	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Hard to fit in if not drinking	7.2 (1.1) ^{a,b}	5.4 (0.7) ^c	4.1 (0.8) ^{c,d}	4.7 (0.7) ^{c,d}	10.6 (1.9) ^{a,b,e}
Drinking is part of being in my unit	8.2 (1.2) ^{a,c}	5.5 (1.0) ^{b,c}	5.0 (0.6) ^{b,c,d}	8.6 (0.8) ^{a,c,e}	14.4 (1.7) ^{a,b,d,e}
Drinking is part of being in the military	15.2 (1.4) ^{b,c}	14.9 (1.6) ^{a,c}	20.3 (1.9) ^{c,e}	23.9 (2.0) ^{c,d,e}	34.4 (1.9) ^{a,b,d,e}
Drinking is the only recreation available	4.1 (0.6) ^{b,c}	4.8 (0.9) ^{b,c}	5.8 (0.9) ^{b,c}	9.1 (1.4) ^{a,c-e}	18.9 (1.2) ^{a,b,d,e}
Encouraged to drink at parties/socials	11.8 (1.3) ^c	9.1 (1.2) ^{b,c}	10.1 (1.3) ^{b,c}	12.6 (0.8) ^{a,c,e}	18.8 (2.5) ^{a,b,d,e}
Nonalcoholic beverages always available at parties	47.4 (3.1) ^{a,b,e}	59.2 (3.2) ^d	60.6 (2.5) ^{c,d}	63.3 (2.0) ^{c,d}	52.0 (2.3) ^{a,b}
Leadership is tolerant of off-duty intoxication	15.3 (1.3) ^{b,c}	14.4 (1.4) ^{b,c}	15.5 (1.7) ^{b,c}	20.3 (1.8) ^{a,c-e}	30.1 (1.9) ^{a,b,d,e}

Note: Table displays the percentage of Reserve military personnel in each drinking-level group who reported they agreed or strongly agreed with the specified belief about drinking. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., infrequent/light vs. moderate, moderate vs. heavy). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the moderate drinking level at the 95% confidence level.

^bEstimate is significantly different from the moderate/heavy drinking level at the 95% confidence level.

^cEstimate is significantly different from the heavy drinking level at the 95% confidence level.

^dEstimate is significantly different from the nondrinker level at the 95% confidence level.

^eEstimate is significantly different from the infrequent/light drinking level at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Beliefs about Drinking, Q43).

Table 3.7**IMPORTANCE OF CERTAIN REASONS FOR DRINKING, BY LEVEL OF DRINKING**

Reason for Drinking	Drinking Level			
	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
To celebrate	34.4 (2.7) ^{a-c}	60.6 (2.0) ^{b-d}	73.3 (1.3) ^{a,c,d}	82.2 (1.4) ^{a,b,d}
To relax	25.6 (2.5) ^{a-c}	52.5 (2.6) ^{b-d}	64.3 (1.7) ^{a,c,d}	77.1 (1.6) ^{a,b,d}
To be sociable	33.2 (2.4) ^{a-c}	56.8 (2.5) ^{b-d}	65.6 (1.4) ^{a,c,d}	75.5 (1.8) ^{a,b,d}
To enjoy a party	15.6 (1.8) ^{a-c}	33.1 (2.7) ^{b-d}	51.9 (1.6) ^{a,c,d}	69.1 (1.0) ^{a,b,d}
To fit in	5.9 (1.1) ^{a-c}	9.9 (1.2) ^{b-d}	15.8 (1.1) ^{a,c,d}	25.2 (1.4) ^{a,b,d}
To feel more self-confident	4.5 (0.7) ^{a-c}	8.5 (1.1) ^{b-d}	16.5 (1.1) ^{a,c,d}	29.2 (1.6) ^{a,b,d}
To not feel left out	5.8 (1.3) ^{b,c}	6.9 (0.8) ^{b,c}	10.3 (0.8) ^{a,c,d}	21.0 (1.5) ^{a,b,d}
Makes social gatherings more fun	16.8 (2.0) ^{a-c}	37.8 (3.0) ^{b-d}	55.0 (1.5) ^{a,c,d}	71.9 (1.3) ^{a,b,d}
To forget about problems	4.0 (0.8) ^{a-c}	12.3 (1.2) ^{b-d}	20.3 (1.0) ^{a,c,d}	39.2 (3.2) ^{a,b,d}
To cheer up when in bad mood	4.7 (0.7) ^{a-c}	12.8 (1.5) ^{b-d}	24.0 (1.3) ^{a,c,d}	43.9 (2.1) ^{a,b,d}
Because friends pressure	2.0 (0.7) ^{b,c}	2.4 (0.4) ^c	3.7 (0.6) ^{c,d}	15.0 (2.0) ^{a,b,d}
So others won't kid/tease	2.1 (0.5) ^c	1.8 (0.3) ^c	2.8 (0.5) ^c	9.0 (1.2) ^{a,b,d}

Note: Table displays the percentage of Reserve military personnel in each drinking-level group who reported the specified reason for drinking was "somewhat important" or "very important." The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., infrequent/light vs. moderate, moderate vs. heavy). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the moderate drinking level at the 95% confidence level.

^bEstimate is significantly different from the moderate/heavy drinking level at the 95% confidence level.

^cEstimate is significantly different from the heavy drinking level at the 95% confidence level.

^dEstimate is significantly different from the infrequent/light drinking level at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Reasons for Drinking, Q37).

3.7 Risky Behaviors

Table 3.8 provides estimates of engaging in risky behaviors, by drinking level. Heavy drinkers were more than four times as likely to report driving a vehicle after having too much to drink (44.9%) compared with moderate drinkers (10.4%) and nearly two times as likely as moderate/heavy drinkers (23.8%). Heavy drinkers were also more likely to ride in a car driven by someone who had too much to drink (39.3%) compared with moderate/heavy (20.2%), moderate (10.3%), or light drinkers (2.9%). Heavy drinkers were three times more likely to drive or ride in a boat after having too much to drink (18.0%) compared with moderate/heavy drinkers (6.0%). Finally, heavy drinkers were more likely to report operating machinery after having too much to drink (10.7%) than were moderate/heavy drinkers (2.1%), moderate (1.4%), or light (0.4%) drinkers.

3.8 Alcohol-Related Productivity Loss

To understand the influence of drinking levels on negative effects of alcohol use, we examined the relation between heavy and binge drinkers and the percentage of personnel with any reported military work days affected by drinking. Measures of alcohol-related productivity loss examined individual factors, including (a) being hurt in an on-the-job accident because of drinking; (b) being late for work or leaving early because of drinking, hangover, or an illness caused by drinking; (c) not coming to work because of an illness or a personal accident caused by drinking; (d) performing below a normal level of performance caused by drinking; (e) being drunk while working; or (f) being called in during off-duty hours and reporting feeling drunk. Table 3.9 provides estimates of percentages of heavy and binge drinkers, by number of days affected by alcohol use.

Table 3.8

RISKY BEHAVIORS, BY DRINKING LEVEL

Risky Behavior	Drinking Level			
	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Drive a car or other vehicle after too much to drink	2.8 (0.6) ^{a-c}	10.4 (1.2) ^{b-d}	23.8 (1.7) ^{a,c,d}	44.9 (1.5) ^{a,b,d}
Ride in a car driven by someone who had too much to drink	2.9 (0.6) ^{a-c}	10.3 (1.4) ^{b-d}	20.2 (1.7) ^{a,c,d}	39.3 (2.3) ^{a,b,d}
Drive or ride in boat after too much to drink	0.9 (0.4) ^{a-c}	2.1 (0.2) ^{b-d}	6.0 (0.8) ^{a,c,d}	18.0 (1.8) ^{a,b,d}
Operate machinery after too much to drink	0.4 (0.3) ^{b,c}	1.4 (0.5) ^c	2.1 (0.3) ^{c,d}	10.7 (1.6) ^{a,b,d}

Note: Table displays the percentage of Reserve military personnel in each drinking-level group who reported engaging in risky behaviors. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., infrequent/light vs. moderate, moderate vs. heavy). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the moderate drinking level at the 95% confidence level.

^bEstimate is significantly different from the moderate/heavy drinking level at the 95% confidence level.

^cEstimate is significantly different from the heavy drinking level at the 95% confidence level.

^dEstimate is significantly different from the infrequent/light drinking level at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Risky Behaviors, Q36).

Over 5% of heavy drinkers reported being late for work or leaving early because of drinking, hangover, or an illness caused by drinking on two or more days compared with binge drinkers (3.0%), not coming to work because of an illness or a personal accident caused by drinking (4.1% vs. 2.1%), performing below a normal level of performance caused by drinking (10.7% vs. 6.2%), being drunk while working (3.7% vs. 2.0%), and being called in during off-duty hours and reporting feeling drunk (2.4% vs. 1.4%). Fewer heavy drinkers reported missing no work days as a result of being hurt in an on-the-job accident because of drinking (96.6%) compared with binge drinkers (98.0%).

3.9 Stress and Mental Health Problems

The relation of alcohol use during the past 30 days to perceived stress at civilian or military jobs, stress in the family, and mental health measures is examined in Table 3.10. Relative to nondrinkers, heavy alcohol users were more likely to report a lot of stress while carrying out military duties (15.1% vs. 11.2%) and with their families (24.0% vs. 14.4%), to experience 11 or more days in which their mental health interfered with usual activities (4.6% vs. 1.3%), to meet screening criteria for further depression evaluation (24.5% vs. 15.6%), and to report suicidal ideation in the past year (10.4% vs. 4.0%).

3.10 Summary

3.10.1 Reserve Components' Comparisons of Alcohol Use

Observed differences in ethanol use and heavy alcohol use among the four Reserve components may be partially accounted for by differences in the sociodemographic composition of the Reserve components (Table 3.1):

- Comparisons of unadjusted estimates showed that average daily ethanol consumption in 2006 was significantly higher among Marine Corps Reserve personnel than among members of the Army National Guard, Army Reserve, Navy Reserve, Air National Guard, and the Air Force Reserve.
- Unadjusted rates of heavy alcohol use were significantly lower among Navy Reserve, Air National Guard, and Air Force Reserve personnel than among personnel from the Army National Guard, Army Reserve, and the Marine Corps Reserve; and Army Reserve rates were lower than those for the Army National Guard and Marine Corps Reserve. About one in three Marine Corps Reservists (30.4%) and one in five Army National Guard Soldiers (21.1%) drank heavily in the 30 days before the 2006 survey; such a high prevalence of heavy alcohol use may be cause for concern about military readiness.

Table 3.9

ALCOHOL USE AND ALCOHOL-RELATED PRODUCTIVITY LOSS, PAST 12 MONTHS, TOTAL RESERVE COMPONENT

Productivity Loss/Number of Military Work Days Affected, Past 12 Months	Heavy Drinkers ^a		Binge Drinkers ^b		All Personnel	
Sample	1,897		5,275		15,212	
Hurt in an On-the-Job Accident Because of Drinking						
No days ^c	96.6	(1.0) ^d	98.0	(0.5)	99.1	(0.2)
1 day	1.4	(0.5)	0.8	(0.2)	0.4	(0.1)
2 or more days	2.0	(0.9)	1.2	(0.4)	0.5	(0.2)
Late for Military Job or Left Military Job Because of Drinking, Hangover, or Illness Caused by Drinking						
No days ^c	86.6	(1.5) ^d	91.1	(0.6)	96.1	(0.3)
1 day	8.0	(0.9) ^d	5.9	(0.5)	2.7	(0.2)
2 or more days	5.4	(1.1) ^d	3.0	(0.4)	1.2	(0.2)
Did Not Come to Work Because of Hangover, Illness, or Personal Accident Caused by Drinking						
No days ^c	91.0	(1.5) ^d	94.0	(0.6)	97.3	(0.3)
1 day	4.9	(0.7)	3.9	(0.3)	1.7	(0.2)
2 or more days	4.1	(0.9) ^d	2.1	(0.4)	1.0	(0.1)
Worked Below Normal Performance Level Because of Drinking, Hangover, or Illness Caused by Drinking						
No days ^c	76.5	(1.3) ^d	83.6	(0.8)	92.5	(0.5)
1 day	12.7	(1.0) ^d	10.3	(0.7)	4.9	(0.4)
2 or more days	10.7	(1.0) ^d	6.2	(0.5)	2.6	(0.3)
Drunk While Working Military Job						
No days ^c	92.5	(1.4) ^d	95.8	(0.6)	98.2	(0.2)
1 day	3.8	(1.2)	2.2	(0.4)	1.0	(0.2)
2 or more days	3.7	(0.7) ^d	2.0	(0.4)	0.8	(0.2)
Was Called in During Off-Duty Hours and Reported to Work Feeling Drunk						
No days ^c	94.3	(1.0) ^d	96.8	(0.5)	98.6	(0.2)
1 day	3.2	(0.9) ^d	1.9	(0.4)	0.8	(0.2)
2 or more days	2.4	(0.7) ^d	1.4	(0.3)	0.6	(0.1)

Note: Table displays the percentage of Reserve military personnel in the three groups of interest (all personnel, heavy drinkers, and binge drinkers) who reported the specified problem (e.g., late for work or left work early) affected no days, 1 day, or 2 or more days of work in the past 12 months. Sample sizes by group are also provided. The standard error of each estimate is presented in parentheses. Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aDefined as consumption of five or more drinks (four for females) on the same occasion at least once a week in the past 30 days.

^bDefined as having consumed five or more drinks on the same occasion at least once during the past 30 days.

^cIncludes those respondents who indicated they "don't drink."

^dEstimate is significantly different from binge drinkers the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol-related Productivity Loss, Q33).

Table 3.10

STRESS AND MENTAL HEALTH PROBLEMS, BY DRINKING LEVEL

Problem/Level	Drinking Level				
	Nondrinker	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Stress at Civilian Job, Past 12 Months					
A lot	18.3 (1.0) ^a	21.8 (4.3)	19.1 (1.8) ^a	23.5 (1.1) ^{b,c}	21.1 (3.4)
Some/a little	50.3 (2.2) ^c	54.1 (3.7)	57.7 (2.3) ^{b,d}	54.4 (1.4) ^d	47.5 (3.3) ^{a,c}
None at all	31.4 (2.3) ^{a,c,e}	24.1 (2.0) ^{b,d}	23.2 (2.5) ^{b,d}	22.1 (1.2) ^{b,d}	31.4 (1.5) ^{a,c,e}
Stress While Carrying out Military Duties, Past 12 Months					
A lot	11.2 (0.9) ^d	15.2 (4.7)	12.4 (1.8)	11.5 (1.1) ^d	15.1 (1.3) ^{a,b}
Some/a little	54.8 (2.2) ^{a,c}	58.3 (3.4)	62.1 (2.1) ^{b,d}	61.3 (2.4) ^{b,d}	52.6 (1.9) ^{a,c}
None at all	33.9 (2.0) ^{a,c,e}	26.5 (2.3) ^{b,d}	25.5 (1.8) ^{b,d}	27.2 (1.8) ^{b,d}	32.3 (2.0) ^{a,c,e}
Stress at Family, Past 12 Months					
A lot	14.4 (1.3) ^{a,d}	21.1 (4.1)	18.2 (1.4) ^d	21.0 (1.5) ^b	24.0 (2.0) ^{b,c}
Some/a little	55.7 (2.4) ^d	58.2 (3.7) ^d	59.0 (1.5) ^d	57.6 (2.1) ^d	48.4 (2.0) ^{a-c,e}
None at all	29.9 (1.8) ^{a,c,e}	20.6 (2.2) ^{b,d}	22.9 (1.3) ^{b,d}	21.4 (1.1) ^{b,d}	27.6 (1.7) ^{a,c,e}
Days in Past Month Limited Usual Activities Due to Poor Mental Health^f					
11 or more days	1.3 (0.4) ^d	1.1 (0.4) ^d	1.0 (0.3) ^d	1.7 (0.4) ^d	4.6 (0.8) ^{a-c,e}
4-10 days	1.3 (0.3) ^d	1.2 (0.4) ^d	1.9 (0.5) ^d	2.2 (0.5) ^d	4.0 (0.9) ^{a-c,e}
1-3 days	6.3 (1.0)	5.0 (0.6) ^{a,d}	7.6 (1.3)	8.0 (0.8) ^e	9.0 (1.2) ^e
None	91.1 (0.9) ^{a,d}	92.6 (0.8) ^{a,c,d}	89.5 (1.1) ^{d,e}	88.1 (0.9) ^{b,d,e}	82.4 (1.5) ^{a-c,e}
Met Screening Criteria for Generalized Anxiety Disorder (GAD) Symptoms, Past 30 Days					
Yes	10.6 (1.1)	13.7 (4.8)	8.1 (0.9) ^a	10.9 (0.9) ^c	9.9 (1.1)
No	89.4 (1.1)	86.3 (4.8)	91.9 (0.9) ^a	89.1 (0.9) ^c	90.1 (1.1)
Need for Further Depression Evaluation					
Yes	15.6 (1.4) ^{a,d}	21.3 (4.9)	14.8 (1.2) ^{a,d}	19.8 (1.3) ^{b-d}	24.5 (1.8) ^{a-c}
No	84.4 (1.4) ^{a,d}	78.7 (4.9)	85.2 (1.2) ^{a,d}	80.2 (1.3) ^{b-d}	75.5 (1.8) ^{a-c}
Suicidal Ideation, Past Year					
Yes	4.0 (0.7) ^d	3.6 (0.6) ^d	4.1 (0.7) ^d	4.2 (0.5) ^d	10.4 (1.2) ^{a-c,e}
No	96.0 (0.7) ^d	96.4 (0.6) ^d	95.9 (0.7) ^d	95.8 (0.5) ^d	89.6 (1.2) ^{a-c,e}

(Table continued on next page)

Table 3.10 STRESS AND MENTAL HEALTH PROBLEMS, BY DRINKING LEVEL (CONTINUED)

Problem/Level	Drinking Level				
	Nondrinker	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Need for Further PTSD^g Evaluation					
Yes	4.8 (0.6) ^{a,d}	9.5 (4.9)	4.7 (0.8) ^{a,d}	8.0 (1.1) ^{b-d}	12.7 (1.4) ^{a-c}
No	95.2 (0.6) ^{a,d}	90.5 (4.9)	95.3 (0.8) ^{a,d}	92.0 (1.1) ^{b-d}	87.3 (1.4) ^{a-c}
Any Physical/Sexual Abuse					
Yes	29.8 (1.9)	35.6 (4.2)	33.6 (2.0)	32.9 (1.8)	33.2 (2.2)
No	70.2 (1.9)	64.4 (4.2)	66.4 (2.0)	67.1 (1.8)	66.8 (2.2)

Note: Table displays the percentage of Reserve military personnel by drinking level who reported the stress and mental health problems indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Column group estimates may not sum to 100 because of rounding. Pairwise significance tests were done between all possible drinking-level combinations (e.g., infrequent/light vs. moderate, moderate vs. heavy). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the moderate/heavy drinking level at the 95% confidence level.

^bEstimate is significantly different from the nondrinker level at the 95% confidence level.

^cEstimate is significantly different from the moderate drinking level at the 95% confidence level.

^dEstimate is significantly different from the heavy drinking level at the 95% confidence level.

^eEstimate is significantly different from the infrequent/light drinking level at the 95% confidence level.

^fBased on respondents' perception of number of days when mental health limited usual activities.

^gPTSD is Posttraumatic Stress Disorder. Meeting screening criteria suggests a need for further evaluation, not a clinical diagnosis.

Source: 2006 Department of Defense Reserve Component Survey (Stress at Work, Q89; Stress in Family, Q90; Mental Health, Past 30 Days, Q100; Need for Further Depression Evaluation, Q97-Q99; Further Anxiety Evaluation, Q100; Suicidal Ideation, Q101A; Psychological Distress, Q100; PTSD, Q104; Abuse, Q103).

- After standardizing for sociodemographic differences among the Reserve components, the adjusted rates of average ethanol use for all the components except the Marine Corps Reserve showed the same pattern as seen in comparisons of unadjusted rates. But the adjusted Marine Corps Reserve estimate of average ethanol consumption was substantially lower than the original unadjusted estimate. This suggests that the difference between the Marine Corps' level of consumption and that of the other Reserve components may be partially accounted for by differences in sociodemographic composition.
- The pattern of differences between unadjusted rates of heavy alcohol use among the Reserve components persisted when the rates were adjusted, except for the Marine Corps Reserve, whose adjusted rate was much lower than its unadjusted rate and similar to the rates for the Army National Guard and the Army Reserve.

3.10.2 Correlates of Heavy Alcohol Use

Surveys of military and civilian populations have established certain enduring patterns in alcohol use among sociodemographic groups that are useful in targeting prevention and treatment efforts. Logistic regression analyses showed that Reserve component, gender, race/ethnicity, age, marital status, and current military job were significantly related to heavy alcohol use. Specifically, the odds of heavy alcohol use were significantly greater among the following groups (Table 3.2):

- Marine Corps Reserve compared with Navy Reserve, Air National Guard, and Air Force Reserve
- Males compared with females
- Non-Hispanic whites compared with non-Hispanic African Americans
- Those aged 24 or younger and aged 25 to 34 compared with those aged 45 or older
- Those who were not married compared with those who were married
- Those who were service and supply handlers, general officers or executives, tactical operations officers, scientists or health professionals, administrators, and supply, procurement or allied officers compared with nonoccupational officers.

3.10.3 Problem Drinking and Possible Alcohol Dependence

The survey measured problem drinking levels and alcohol dependence symptoms (Table 3.3, Table 3.4, and Tables B.1 to B.8):

- Hazardous drinking or worse was reported by 20.1% of all personnel, and 3.1% showed probable alcohol dependence (see Tables 3.3 and 3.4).
- Dependence symptoms were substantially higher among the E1 to E3 pay grades than among other pay grades (Table 3.3).
- Possible alcohol dependence was experienced by heavy drinkers at rates nearly ten times as high as military personnel who drank at only moderate/heavy levels (Table 3.4).
- Hazardous drinking was reported at rates from three to ten times as high for heavy drinkers as for those who drank at lighter levels.

3.10.4 Reasons for Limiting Drinking

Ratings of reasons to limit drinking revealed the following (Table 3.5):

- For all levels of drinking, the most important reasons for limiting drinking were that (1) drinking is bad for one's health, (2) drinking can interfere with one's military career, (3) drinking can make one feel sick, and (4) drinking and driving can cause problems with the police.
- A higher percentage of light drinkers listed holding strong values and beliefs as reasons for limiting drinking compared with moderate/heavy and heavy drinkers.
- Among heavy drinkers, the cost of alcohol was a strong incentive for limiting drinking.

3.10.5 Reasons for Drinking, Risky Behaviors, and Productivity Loss

Beliefs about drinking, the importance of reasons for drinking, risky behaviors, and the relation of productivity loss to drinking levels showed the following findings (Tables 3.6 to 3.9):

- Heavy drinkers strongly endorsed the belief that it is hard to fit in if one is not drinking, that drinking is

part of being in one's unit and in the military, that drinking is the only recreation available, that drinking is encouraged at parties, and that leadership is tolerant of off-duty intoxication.

- Light and moderate drinkers had the lowest rates of endorsing drinking to fit in and the belief that drinking is part of being in their unit.
- Heavy drinkers reported celebrating and relaxing as important reasons to drink. Heavy drinkers also saw being sociable and having fun as important reasons to drink.
- Light and moderate drinkers had low rates of drinking to fit in, drinking to keep from feeling left out, and drinking to increase self-confidence. These groups also listed celebrating and being sociable as important reasons for drinking but found them to be less important than did heavier drinking groups.
- Heavy drinkers reported high rates of driving after drinking too much, riding with a drinking driver, driving or riding in a boat after drinking too much, and operating heavy machinery after drinking.

- Heavy drinkers reported higher rates of being late for work or missing work, working below normal performance levels, being drunk while working, and being called when off-duty and reporting to work feeling drunk on 2 or more days compared with binge drinkers.

3.10.6 Stress and Mental Health Problems

- Compared with their counterparts who did not drink, heavy drinkers had more problems at work or in their families, were more likely to need further depression evaluation, and reported more limitations in activities because of poor mental health (Table 3.10).
- Heavy drinkers were more likely to have a history of suicide ideation than those who drank less.
- These findings show a strong comorbid relation between heavy alcohol use and mental health problems and suggest that these issues need further assessment.

Chapter 4: Tobacco Use

Historically, the military has had a reputation as an environment in which tobacco use is accepted and common. Two decades ago, just over half of military personnel on active duty were smokers. In the 1980s and 1990s, the Department of Defense (DoD) increased efforts to lower tobacco use by members of the Armed Forces, and the rate has declined sharply. However, in the active-duty population the rate of smoking increased significantly from 1998 to 2002 and maintained that higher level in 2005. In addition, the data from the *2006 Department of Defense Reserve Component Survey* indicate that the rate of tobacco use is fairly high among personnel in the Reserve component (see Table 4.1).

This high rate of smoking is of concern to DoD for several reasons. First, smoking-related illnesses take a toll on the physical readiness of the Armed Forces. Thousands of studies have demonstrated an association between the use of tobacco and negative health outcomes, such as cardiovascular diseases, various cancers, and pulmonary disease (Haddock et al., 1998). The use of tobacco also has been associated with negative performance outcomes, such as higher absenteeism, diminished motor and perceptual skills, and poorer endurance (Chisick, Poindexter, & York, 1998). A second concern is financial. Each year, DoD spends an estimated \$875 million on smoking-related health care and productivity loss (Conway, 1998).

This chapter focuses on tobacco use among Reserve component personnel, including use of cigarettes, smokeless tobacco, cigars, and pipes, as well as information on nicotine dependence, which is characterized by both tolerance and withdrawal symptoms related to nicotine use (see Section 2.5.3 for more information on the measurement of nicotine dependence). Information is presented regarding prevalence of tobacco use among the Reserve components, correlates of smoking, cigarette smoking initiation and perceived availability, cigarette use and productivity loss, attempts to stop smoking, and associations between smoking and mental health problems. Additional information is included in

Appendix B (Tables B.12 through B.15) about sociodemographic characteristics associated with tobacco use.

4.1 Cigarette Use

4.1.1 Reserve Component Comparisons of Cigarette Use

In this section, two sets of estimates of the observed extent of cigarette use and dependence for each Reserve component are presented. The first estimates are unadjusted estimates for each of the Reserve components. These estimates, which indicate the observed prevalence rates of smoking and dependence in 2006, provide a perspective on the comparative magnitude of the challenge facing each Reserve component in its efforts to reduce smoking.

As discussed in Section 2.6, sociodemographic differences among the Reserve components may contribute to the observed differences in cigarette smoking. For example, if a given behavior is more common among unmarried personnel, then Reserve components that have a higher proportion of unmarried personnel likely would show higher rates of that behavior. Thus, observed differences in rates of tobacco use may not reflect systematic program-level differences among the Reserve components. To address this possibility, adjusted estimates of the prevalence of smoking and dependence were computed, using direct standardization procedures to control for sociodemographic differences (see Appendix D). These constructed estimates resulting from standardization permit comparisons among the Reserve components, as if each Reserve component had the sociodemographic composition of the total Reserve component in 2006.

Unadjusted and adjusted estimates for any smoking, heavy smoking, and dependence in the past 30 days are shown in Table 4.1. When looking at the unadjusted prevalence rates of any smoking, one sees that the unadjusted rate for any smoking was significantly higher

Table 4.1

ESTIMATES OF CIGARETTE USE, PAST 30 DAYS, AND NICOTINE DEPENDENCE UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY RESERVE COMPONENT

Smoking Measure/Type of Estimate	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Any Smoking							
Unadjusted	28.2 (2.5) ^{a-c}	23.9 (2.4) ^{a-c}	14.3 (0.8) ^{c-f}	16.9 (1.1) ^{d-f}	18.5 (1.2) ^{a,d-f}	28.1 (2.9) ^{a-c}	23.7 (1.3)
Adjusted ^g	25.9 (2.3) ^{a,b}	25.6 (1.9) ^{a,b}	16.4 (0.9) ^{c-f}	17.1 (1.8) ^{c-f}	21.6 (1.3) ^{a,b}	25.7 (2.8) ^{a,b}	22.1 (0.8)
Heavy Smoking							
Unadjusted	12.7 (1.5) ^{a-c,e,f}	8.1 (1.3) ^{a,d}	4.6 (0.4) ^{d-f}	5.9 (0.6) ^d	6.7 (1.1) ^d	7.1 (1.1) ^{a,d}	9.3 (0.9)
Adjusted ^g	11.2 (1.4) ^{a-c,f}	9.3 (1.1) ^{a,b}	5.8 (0.6) ^{d,e}	5.6 (0.4) ^{c-e}	8.0 (1.0) ^{b,d}	6.9 (1.1) ^d	7.8 (0.4)
Nicotine Dependence							
Unadjusted	7.9 (1.3) ^{a-c}	5.6 (1.2) ^{a,b}	2.8 (0.3) ^{c-f}	3.1 (0.2) ^{d-f}	4.1 (0.5) ^{a,d}	5.1 (0.9) ^{a,b}	5.8 (0.7)
Adjusted ^g	7.2 (1.3) ^{a-c}	6.3 (1.1) ^{a,b}	3.2 (0.3) ^{c-f}	2.9 (0.4) ^{c-f}	4.5 (0.5) ^{a,b,d}	5.4 (1.0) ^{a,b}	4.9 (0.4)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported any smoking, heavy smoking, or nicotine dependence in the past 30 days. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^gAdjusted estimates have been adjusted to correct for differences in the demographic distributions between the Reserve components. The main effects of gender, age group, enlisted/officer indicator, marital status, education, and race/ethnicity were used in this standardization process.

Source: 2006 Department of Defense Reserve Component Survey (Any Smoking, Past 30 Days, Q49 and Q50; Heavy Smoking, Q50; Nicotine Dependence, Q53-Q58).

among the Army National Guard (28.2%), Marine Corps Reserve (28.1%), and Army Reserve (23.9%), than among the other Reserve components. The unadjusted rates of heavy smoking were significantly higher in the Army National Guard (12.7%) than any other Reserve component. In addition, the unadjusted rates of nicotine dependence were significantly higher in the Army National Guard (7.9%), the Army Reserve (5.6%), and the Marine Corps Reserve (5.1%) than in the Navy Reserve (2.8%) or Air National Guard (3.1%). Overall, about 6% of the total Reserve component (unadjusted) was classified as dependent on nicotine in 2006.

To examine the potential impact of sociodemographic differences among the Reserve component, adjusted prevalence estimates were developed by standardizing the sociodemographic compositions of the Reserve component to the gender, age, education, race/ethnicity, and marital status distributions for the total Reserve component. These adjusted estimates are presented in Table 4.1.

As shown, adjusting for sociodemographic differences resulted in somewhat lower rates of any smoking for the Army National Guard and the Marine Corps Reserve and somewhat higher rates for the other Reserve components. This increase was most notable in the Air Force Reserve, which after adjusting for these sociodemographic factors had a significantly higher rate of any smoking (21.6%) than the Air National Guard (17.1%), and similar rates of any smoking as the Army National Guard, Army Reserve, and Marine Corps Reserve.

With respect to heavy smoking, adjusting for sociodemographic differences reduced the rate of heavy smoking in the Army National Guard from 12.7% to 11.2%, but the Army National Guard still had a significantly higher rate of heavy smoking than any other Reserve component with the exception of the Army Reserve. Adjusting for sociodemographic differences resulted in somewhat higher rates of heavy smoking for the Army Reserve, Navy Reserve, and Air Force Reserve and resulted in little change for the Air National Guard and the Marine Corps Reserve. The rate of heavy smoking in the total Reserve component was

reduced to 7.8% (from 9.3%) after adjusting for sociodemographic differences.

With respect to nicotine dependence, the effect of adjusting for sociodemographic differences was minimal. The pattern across the Reserve component was similar to the pattern found before adjusting for sociodemographic differences, with the exception that after making these adjustments the rate of nicotine dependence was significantly higher in the Air Force Reserve (4.5%) than in the Air National Guard (2.9%) and the Navy Reserve (3.2%). As was the case with heavy smoking, adjusting for sociodemographic differences resulted in an overall decrease in the rate of nicotine dependence in the total Reserve component (4.9% adjusted, 5.8% unadjusted).

In summary, adjusting for sociodemographic composition resulted in an overall decrease in the rates of any smoking, heavy smoking, and nicotine dependence in the total Reserve component and had inconsistent effects on the rates within the different Reserve components. The rates for the Army National Guard and Marine Corps Reserve tended to go down after making these adjustments (the rates for nicotine dependence in the Marine Corps Reserve being an exception), and the rates for the Army Reserve, Navy Reserve, and Air Force Reserve tended to increase. Perhaps the most notable changes after adjusting for sociodemographic factors were the differences between the Air National Guard and the Air Force Reserve. These two components had similar rates of any smoking, heavy smoking, and nicotine dependence before making any adjustments, but the Air Force Reserve had higher rates of each of these variables than the Air National Guard following the adjustments.

4.1.2 Correlates of Cigarette Use

Knowing the characteristics of tobacco users is essential if the military is to develop sound policies and programs that meet the needs of the military organization and personnel. In this section, the sociodemographic correlates of cigarette smoking are examined. Prevalence estimates presented in Table 4.2 are the percentages of personnel with each sociodemographic characteristic who were current smokers (smoked within the past

Table 4.2

SOCIODEMOGRAPHIC CORRELATES OF ANY CIGARETTE SMOKING, PAST 30 DAYS, TOTAL RESERVE COMPONENT

Sociodemographic Characteristics	Prevalence	Odds Ratio ^a	
		Adjusted	95% CI ^b
Reserve Component			
Army National Guard	28.2 (2.5)	1.13	(0.74, 1.71)
Army Reserve	23.9 (2.4)	1.05	(0.73, 1.50)
Navy Reserve	14.3 (0.8)	0.60 ^c	(0.43, 0.86)
Air National Guard	16.9 (1.1)	0.59 ^c	(0.40, 0.87)
Air Force Reserve	18.5 (1.2)	0.81	(0.56, 1.17)
Marine Corps Reserve	28.1 (2.9)	1.00	
Gender			
Male	24.0 (1.4)	0.99	(0.82, 1.19)
Female	22.2 (1.6)	1.00	
Race/Ethnicity			
White, non-Hispanic	26.3 (1.5)	1.00	
African American, non-Hispanic	11.5 (1.7)	0.29 ^c	(0.20, 0.42)
Hispanic	24.2 (1.8)	0.78 ^c	(0.64, 0.96)
Other	22.3 (2.2)	0.79	(0.62, 1.02)
Marital Status			
Not married	27.4 (1.5)	1.27 ^c	(1.03, 1.57)
Married	19.9 (1.6)	1.00	
Pay Grade			
E1-E3	28.3 (3.1)	4.32 ^c	(2.73, 6.83)
E4-E6	26.7 (1.6)	4.49 ^c	(3.11, 6.47)
E7-E9	18.6 (2.1)	3.05 ^c	(1.87, 4.96)
W1-W5, O1-O3	10.9 (2.4)	1.42	(0.79, 2.55)
O4-O10	6.8 (1.1)	1.00	
Deployed Within Past 24 Months			
At least once	25.4 (1.6)	1.19 ^c	(1.02, 1.39)
Not within 24 months	21.6 (1.3)	1.00	
Total	23.7 (1.3)		

Note: Prevalence estimates are percentages among Reserve military personnel in each sociodemographic group who smoked at least once in the past 30 days. Standard errors are in parentheses. Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13). Refer to Chapter 2 for descriptions of sociodemographic variables.

^aOdds ratios were adjusted for Reserve component, gender, race/ethnicity, marital status, pay grade, and deployment within the past 24 months (Q147).

^b95% CI = 95% confidence interval of the odds ratio.

^cEstimate is significantly different from the reference group at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Any Cigarette Smoking, Past 30 Days, Q49 and Q50)

30 days) at the time of the survey. Significant correlates are identified by statistically significant odds ratios in a multivariate logistic regression model predicting current smoking.

Table 4.2 presents the prevalence estimates of current cigarette use by selected sociodemographic characteristics. As shown in Table 4.1, the Navy Reserve and Air National Guard had the lowest rates of any smoking (14.3% and 16.9%, respectively), and these

rates were significantly lower than the rate for the Marine Corps Reserve. Surprisingly, there was little difference in the rate of any smoking between males and females in the Reserve component. Among personnel in different racial/ethnic groups, the rate of any smoking was lower among non-Hispanic African Americans (11.5%) and Hispanics (24.2%) than among non-Hispanic whites (26.3%). As pay grade increased, smoking rates declined. Married personnel were less likely to smoke (19.9%) than were unmarried personnel

(27.4%). Finally, the prevalence of smoking was higher among personnel who had been deployed at least once within the past 24 months (25.4%) than among those who had not been deployed (21.6%).

The picture, however, may not be as simple as it appears. For example, personnel who are in a lower pay grade are also less likely to be married. One needs a multiple regression framework to assess the independent effects of these factors. Therefore, logistic regression analyses were conducted to examine the independent contribution of each of the sociodemographic characteristics when they were considered simultaneously. Results are presented as adjusted odds ratios in Table 4.2

For these multiple regression analyses, a dichotomous (0,1) smoking variable was created. Current smokers were coded as 1, and nonsmokers were coded as 0. The logistic regression analyses estimated the odds of being a smoker, based on sociodemographic variables, which were independent or predictor variables in the model. Reference groups (i.e., those to whom all other categories of each sociodemographic variable were compared) are designated by a 1.00 in the adjusted odds ratio column in Table 4.2. Odds ratios greater than 1.00 indicate a greater odds of smoking in the comparison group relative to the reference group, and those less than 1.00 indicate a lesser odds. Confidence intervals of 95% indicate whether the odds ratio is significant at the .05 level or less. Any interval that includes 1.00 within its boundaries indicates that the odds ratio is not significant at the .05 level (i.e., there is no significant difference between the reference group and the comparison group).

Results of the logistic regression analysis presented in Table 4.2 show that the following groups were significantly more likely to be current smokers when the effects of all other sociodemographic variables in the model were held constant:

- personnel in the Navy Reserve and Air National Guard compared with those in the Marine Corps Reserve
- white non-Hispanics compared with African American non-Hispanics and Hispanics

- those in all enlisted pay grades compared with those in pay grades O4 and above
- those who had been deployed in the past 24 months compared with those who had not been deployed

There were not significant adjusted odds ratios for gender.

For a presentation of sociodemographic differences in smoking within each Reserve component, please see Appendix B (Tables B.12, B.13, and B.14).

4.1.3 Cigarette Smoking Initiation, Perceived Cigarette Availability and Acceptability, and Reasons for Starting Smoking

Some previously published studies suggest that the military environment encourages smoking (Schei & Sogaard, 1994; Cronan & Conway, 1998). To examine this issue directly, the *2006 DoD Reserve Component Survey* included a question about smoking initiation in the military. Table 4.3 presents information on cigarette smoking initiation, both for the total Reserve component, as well as for those who were current smokers. Findings reveal that, overall, 14.3% of respondents started smoking after joining the military. This percentage was somewhat higher for males than for females and for those aged 18 to 25 than for those aged 26 to 55, although note that this latter difference was only true for females. Rates of smoking initiation were significantly lower in the Navy Reserve (9.8%) than any other Reserve component and were highest in the Marine Corps Reserve (18.7%), the Army National Guard (15.4%), and the Army Reserve (15.0%). Furthermore, 38.4% of current smokers reported that they started smoking after joining the military. Smoking initiation rates among current smokers were higher in the Marine Corps Reserve and Army Reserve than in the Air National Guard and Air Force Reserve. Note that the small number of current smokers among females in the Reserve component prevents a meaningful comparison of gender differences in the rates of smoking initiation among this population.

Table 4.3 CIGARETTE SMOKING INITIATION IN THE RESERVE COMPONENT, BY DEMOGRAPHICS AND RESERVE COMPONENT

Smoking Status/ Gender/Age Group	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Estimates Among Total Reserve							
Males							
18-25	13.6 (1.8) ^{a,b}	15.9 (2.2) ^a	13.5 (4.0)	+ (+)	13.4 (1.5) ^{a,b}	20.2 (1.7) ^{a,c,d}	14.4 (1.2)
26-55	16.0 (1.6) ^{d,e}	15.6 (2.5) ^e	9.7 (1.0) ^{a,c,d,f}	13.5 (0.5) ^{d,e}	12.0 (0.4) ^{a,c,e}	14.1 (2.9)	14.3 (0.9)
All ages ^g	15.0 (1.5) ^e	16.2 (1.7) ^{a,d,e}	10.2 (1.1) ^{b,c,f}	12.1 (0.8) ^{b,f}	12.4 (0.4) ^{b,f}	18.5 (1.8) ^{a,d,e}	14.5 (0.8)
Females							
18-25	17.6 (4.9) ^e	16.4 (2.9) ^e	2.8 (1.0) ^{a-d,f}	17.7 (4.9) ^e	15.4 (2.3) ^e	+ (+)	16.5 (2.5)
26-55	17.8 (3.6) ^{d-f}	8.5 (1.1) ^{a,c}	9.0 (1.4) ^c	13.9 (2.0) ^f	9.7 (1.3) ^c	+ (+)	11.6 (1.1)
All ages ^g	17.9 (3.4) ^e	11.4 (1.4) ^{a,b}	8.3 (1.2) ^{a-c}	15.2 (1.1) ^{b,d-f}	10.8 (1.4) ^{a,b}	23.4 (2.6) ^{a,d-f}	13.6 (1.2)
Total							
18-25	14.3 (1.8) ^b	16.0 (2.2) ^a	11.0 (3.1) ^b	8.0 (2.9) ^{b,d,f}	14.1 (1.0) ^{a,b}	20.1 (1.7) ^{a,c-e}	14.9 (1.1)
26-55	16.2 (1.6) ^{d,e}	14.0 (1.9) ^e	9.6 (0.8) ^{a-d,f}	13.6 (0.6) ^{d,e}	11.5 (0.3) ^{a,c,e}	15.1 (2.7) ^e	13.9 (0.8)
All ages ^g	15.4 (1.5) ^{d,e}	15.0 (1.5) ^{d,e}	9.8 (0.8) ^{a-d,f}	12.6 (0.9) ^{b,e}	12.0 (0.3) ^{b,c,e,f}	18.7 (1.7) ^{a,d,e}	14.3 (0.8)
Estimates Among Current Smokers							
Males							
18-25	35.2 (2.9) ^{a,b}	40.0 (4.9) ^a	+ (+)	+ (+)	29.4 (4.4) ^b	49.0 (3.1) ^{a,c,d}	37.3 (2.1)
26-55	39.0 (4.4)	45.0 (5.7)	35.5 (3.4)	35.1 (3.3)	38.2 (2.1)	29.1 (6.5)	39.2 (2.7)
All ages ^g	37.9 (2.9)	43.5 (4.1) ^a	36.2 (3.8)	31.4 (2.9) ^{b,f}	35.9 (2.2) ^b	44.2 (3.3) ^{a,d}	38.9 (1.8)
Females							
18-25	+ (+)	43.6 (5.4) ^{a,e}	+ (+)	+ (+)	+ (+)	+ (+)	35.0 (7.7)
26-55	41.6 (4.9) ^d	40.9 (5.0) ^d	37.4 (4.5) ^d	+ (+)	22.9 (2.9) ^{c,e,f}	+ (+)	37.0 (2.9)
All ages ^g	+ (+)	42.0 (4.0) ^d	32.8 (4.0)	+ (+)	28.2 (4.5) ^f	+ (+)	36.0 (4.5)

(Table continued on next page)

Table 4.3

**CIGARETTE SMOKING INITIATION IN THE RESERVE COMPONENT, BY DEMOGRAPHICS AND RESERVE COMPONENT
(CONTINUED)**

Smoking Status/ Gender/Age Group	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Total							
18-25	34.2 (3.8) ^b	40.8 (3.7) ^a	+ (+)	+ (+)	33.3 (3.3) ^b	48.6 (3.4) ^{a,c,d}	36.8 (2.3)
26-55	39.2 (4.2)	44.3 (5.0) ^d	36.0 (3.1)	35.1 (4.5)	34.1 (1.5) ^f	29.1 (6.5)	38.9 (2.5)
All ages ^g	37.5 (2.7)	43.2 (3.2) ^{a,d}	35.4 (3.2)	31.4 (4.2) ^{b,f}	33.8 (1.0) ^{b,f}	44.1 (3.6) ^{a,d}	38.4 (1.7)

Note: Table displays the percentage of Reserve military personnel by Reserve component, gender, and age group who started smoking since joining the military. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Air National Guard at the 95% confidence level.

^bEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^cEstimate is significantly different from the Army National Guard at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

^gEstimates have been provided for all ages, not just 18-55 year olds.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Smoking Initiation in the Military, Q48).

Table 4.4 presents information on perceived cigarette availability and acceptability. Overall, 29.3% reported that the number of places to buy cigarettes on military installations makes it easy to smoke, and a similar percentage (27.0%) reported that most of their friends in the military smoke. Furthermore, 44.6% indicated that they do not like being around people when they are smoking, and 34.2% indicated that “my spouse, live-in partner, or the person I date disapproves of my smoking (or would disapprove if I did smoke).” However, only 13.0% of respondents reported that smoking is part of being in the military. Compared with personnel from the other Reserve components, personnel in the Marine Corps Reserve and Army National Guard were the most likely to report that most of their friends smoke (40.0% and 35.5%, respectively), and those in the Air National Guard were the least likely to say that most of their friends smoke (10.2%). Personnel in the Army National Guard, Marine Corps Reserve, and Army Reserve were less likely than personnel in the other Reserve components to report that smoking is part of being in the military, and that they do not like being around people when they are smoking. Personnel in the Army National Guard were more likely than personnel in the Army Reserve, Navy Reserve, Air National Guard, or Air Force Reserve to indicate that the number of places to buy cigarettes on military installations makes it easy to smoke.

Table 4.4 also presents information about the reasons military personnel start smoking regularly. In the total Reserve component, there are three frequently cited reasons: to help relax and calm down (22.0%), to help relieve stress (21.6%), and to relieve boredom (20.4%). Only 4.1% reported that they started to smoke to fit in with the military unit. Personnel in the Air National Guard tended to be less likely than personnel in the other components to list stress relief or help in relaxation as reasons for starting to smoke regularly. Personnel in the Marine Corps Reserve were more likely than personnel in the other components, with the exception of the Army Reserve, to list relief from boredom and to keep alert and awake as reasons for starting to smoke regularly.

4.1.4 Cigarette Use and Productivity Loss

Data presented earlier in this chapter showed that in 2006 approximately one-fourth of all personnel were current smokers. An important related issue is the possible effect of this behavior on productivity within the Reserve component. Data addressing this question are presented in Table 4.5.

Table 4.5 presents information on productivity loss in the Reserve component, by all personnel, current smokers, lifetime smokers, and nonsmokers. For purposes of comparison, the data for all personnel (regardless of cigarette use) are presented first. Overall, the prevalence of any productivity loss (1 or more work days affected) ranged from 6.9% to 19.0%. The most frequent types of productivity loss were being late for work by 30 minutes or more (19.0%), leaving work early (17.4%), working below normal performance level (16.0%), and missing work because of an illness or injury (15.0%). Being hurt in an on-the-job accident showed a much lower prevalence (6.9%).

Next is an examination of the data for personnel who were current smokers at the time they completed the survey. Compared with nonsmokers, current smokers reported higher percentages of each measure of productivity loss. For example, current smokers were 1.6 times more likely to have worked below their normal performance level than nonsmokers. Ratios for other types of productivity loss were approximately 1.4. Individuals classified as “lifetime smokers” showed similar productivity losses to those of nonsmokers.

Although the findings from this survey reveal a tendency for current smokers to report greater productivity loss, it should be noted that the productivity loss ratios ranged from 1.4 to 1.6. Hence, any evidence suggesting that cigarette smoking is related to these measures of productivity loss in the military is relatively weak.

Table 4.4

PERCEIVED CIGARETTE AVAILABILITY AND ACCEPTABILITY, AND REASONS FOR STARTING SMOKING REGULARLY, BY RESERVE COMPONENT

Measure/Type of Estimate	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Perceived Availability and Acceptability^a							
The number of places to buy cigarettes on military installations makes it easy to smoke	33.4 (2.3) ^{b-c}	28.2 (1.3) ^f	24.7 (1.4) ^f	23.5 (2.7) ^f	25.3 (1.4) ^f	29.3 (2.4)	29.3 (1.1)
Most of my friends in the military smoke	35.5 (2.0) ^{b-e}	27.4 (2.7) ^{c-g}	13.5 (1.0) ^{b,d,f,g}	10.2 (1.1) ^{b,c,e-g}	14.1 (0.7) ^{b,d,f,g}	40.0 (4.6) ^{b-e}	27.0 (1.6)
Smoking is part of being in the military	16.6 (2.0) ^{c-e}	12.2 (1.6) ^{c-e}	8.6 (0.7) ^{b,f,g}	7.9 (0.6) ^{b,f,g}	8.5 (0.8) ^{b,f,g}	14.8 (2.3) ^{c-e}	13.0 (1.0)
My spouse, live-in partner, or the person I date disapproves of my smoking (or would disapprove if I did smoke)	31.6 (1.9) ^{c,d,g}	33.3 (2.6) ^g	37.9 (1.3) ^f	39.8 (2.9) ^f	34.7 (1.2) ^g	40.8 (1.6) ^{b,e,f}	34.2 (1.2)
I don't like being around people when they're smoking	38.5 (1.7) ^{c-e}	43.8 (2.1) ^{c-e}	55.6 (2.2) ^{b,e-g}	55.6 (2.0) ^{b,e-g}	51.1 (0.7) ^{b-d,f,g}	41.5 (3.7) ^{b,e,f}	44.6 (1.2)
Use of tobacco is against my basic values or beliefs	24.8 (2.4) ^{c-e}	29.5 (1.9) ^{c,d}	36.9 (2.2) ^{b,e-g}	40.4 (5.0) ^{b,f,g}	31.5 (0.7) ^{c,f,g}	21.7 (4.1) ^{b,e,f}	29.2 (1.6)
Why Started Smoking Regularly^h							
To fit in with my friends	12.3 (2.0) ^g	8.2 (1.0) ^{c,e,g}	12.6 (1.7) ^{b,g}	10.9 (1.3) ^g	12.2 (1.0) ^{b,g}	4.8 (1.1) ^{b-f}	10.8 (1.0)
To fit in with my military unit	4.9 (1.1)	3.2 (0.7)	4.6 (0.7) ^e	3.9 (0.4) ^e	2.8 (0.2) ^{c,d}	3.6 (1.0)	4.1 (0.6)
To rebel against my parents or other in authority	7.4 (1.1) ^g	4.7 (1.3)	6.5 (1.4)	5.0 (0.6)	5.0 (0.9)	3.6 (0.9) ^f	6.1 (0.6)
To look "cool" or be "cool"	9.1 (1.6) ^g	8.2 (1.4) ^g	11.0 (1.3) ^g	8.9 (0.7) ^g	9.9 (1.5) ^g	3.8 (1.0) ^{b-f}	8.8 (0.8)
To help relieve stress	23.1 (2.2) ^{d,e}	24.7 (2.6) ^{c-e}	18.2 (1.8) ^b	13.7 (2.2) ^{b,f,g}	17.1 (0.9) ^{b,f,g}	22.6 (2.4) ^{d,e}	21.6 (1.2)
To help me relax or calm down	24.2 (2.3) ^{c,e}	23.2 (2.3) ^{d,e}	17.5 (2.4) ^{f,g}	15.2 (1.9) ^{b,f,g}	17.5 (1.1) ^{b,f,g}	24.9 (2.3) ^{c-e}	22.0 (1.2)
To relieve boredom	21.7 (1.3) ^{c-e,g}	22.9 (3.2) ^{c-e}	14.7 (1.8) ^{b,f,g}	14.2 (2.6) ^{b,f,g}	14.6 (1.0) ^{b,f,g}	27.8 (2.6) ^{c-f}	20.4 (1.1)
So I wouldn't want to eat as much	6.2 (1.2)	8.5 (1.0) ^{c,e,g}	4.9 (1.0) ^b	4.2 (2.1)	5.4 (0.6) ^b	4.5 (0.8) ^b	6.3 (0.7)

(Table continued on next page)

Table 4.4 PERCEIVED CIGARETTE AVAILABILITY AND ACCEPTABILITY, AND REASONS FOR STARTING SMOKING REGULARLY, BY RESERVE COMPONENT (CONTINUED)

Measure/Type of Estimate	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
To look or feel like an adult	5.9 (1.2)	5.7 (0.9)	6.1 (0.8)	5.0 (0.4)	6.1 (0.8)	3.9 (1.3)	5.7 (0.6)
Majority of my family smoked	6.5 (1.3) ^{d,g}	4.0 (1.0)	6.3 (1.2) ^{d,g}	3.0 (0.9) ^{e,f}	6.0 (0.6) ^{d,g}	3.1 (1.0) ^{e,c,f}	5.3 (0.7)
To prove I could handle it	4.2 (1.2) ^d	3.3 (0.9)	2.4 (0.5)	1.4 (0.5) ^{e,f}	2.6 (0.2) ^d	3.6 (1.0)	3.4 (0.6)
To be like someone I admired	4.9 (1.3)	2.7 (0.6)	3.5 (0.4)	2.1 (0.9)	3.5 (0.4)	2.6 (1.0)	3.8 (0.6)
To show I was tough	5.8 (1.0) ^{d,g}	3.9 (0.8)	3.3 (0.8)	2.8 (0.2) ^{e,f}	3.9 (0.3) ^d	2.9 (0.7) ^f	4.5 (0.5)
To avoid gaining weight	4.0 (1.1)	5.6 (0.6) ^d	4.7 (0.8)	3.1 (1.0) ^b	4.4 (0.5)	3.1 (1.2)	4.3 (0.5)
To keep me alert or awake	11.1 (1.4) ^{e,g}	13.9 (1.3) ^{c-e}	8.2 (1.3) ^{b,g}	7.2 (1.7) ^{b,g}	7.2 (0.5) ^{b,f,g}	18.5 (3.3) ^{c-f}	11.2 (0.8)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported the above mentioned perceived cigarette availability and acceptability and reasons for started smoking regularly. Standard errors are in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Definitions and measures of substance use are given in Chapter 2. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aTable entries are percentages of respondents indicating they agreed or strongly agreed with statements about cigarette availability and acceptability.

^bEstimate is significantly different from the Army Reserve at the 95% confidence level.

^cEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^dEstimate is significantly different from the Air National Guard at the 95% confidence level.

^eEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army National Guard at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hTable entries are percentages of respondents indicating the reason started smoking regularly was very important.

Source: 2006 Department of Defense Reserve Component Survey (Perceived Availability and Acceptability, Q64; Importance of Reason Started Smoking, Q65).

Table 4.5

CIGARETTE USE AND PRODUCTIVITY LOSS, PAST 12 MONTHS, TOTAL RESERVE COMPONENT

Productivity Loss/Number of Military Work Days Affected, ^a Past 12 Months	Current Smokers ^b	Lifetime Smokers ^c	Nonsmokers ^d	All Personnel
<i>Sample</i>	3,027	2,203	9,465	15,212
Late for Work by 30 Minutes or More				
0 days	75.1 (1.4) ^{e,f}	83.8 (1.1) ^g	82.6 (0.8) ^g	81.0 (0.6)
1 day	12.0 (1.2)	9.2 (1.1)	9.5 (0.7)	10.1 (0.6)
2 or 3 days	7.7 (0.6) ^{e,f}	4.9 (0.8) ^g	4.8 (0.4) ^g	5.5 (0.3)
4 or more days	5.2 (1.0) ^{e,f}	2.2 (0.5) ^g	3.0 (0.4) ^g	3.4 (0.5)
1 or more days	24.9 (1.4) ^{e,f}	16.2 (1.1) ^g	17.4 (0.8) ^g	19.0 (0.6)
Left Work Early				
0 days	78.0 (1.6) ^{e,f}	82.9 (1.5) ^g	84.2 (0.8) ^g	82.6 (0.8)
1 day	8.8 (0.9)	6.8 (0.7)	7.0 (0.5)	7.3 (0.4)
2 or 3 days	8.2 (0.8) ^f	7.5 (1.1)	6.0 (0.5) ^g	6.7 (0.5)
4 or more days	5.0 (1.0) ^{e,f}	2.7 (0.5) ^g	2.8 (0.3) ^g	3.3 (0.4)
1 or more days	22.0 (1.6) ^{e,f}	17.1 (1.5) ^g	15.8 (0.8) ^g	17.4 (0.8)
Hurt In an On-the-Job Accident				
0 days	91.2 (1.2) ^f	92.9 (1.3)	93.8 (0.5) ^g	93.1 (0.6)
1 day	4.9 (0.7)	4.1 (0.7)	4.1 (0.4)	4.3 (0.4)
2 or 3 days	1.6 (0.4)	1.4 (0.7)	1.3 (0.2)	1.4 (0.2)
4 or more days	2.3 (0.7) ^f	1.6 (0.6)	0.8 (0.2) ^g	1.3 (0.3)
1 or more days	8.8 (1.2) ^f	7.1 (1.3)	6.2 (0.5) ^g	6.9 (0.6)
Worked Below Normal Performance Level				
0 days	79.6 (0.9) ^{e,f}	87.3 (1.7) ^g	84.7 (0.7) ^g	84.0 (0.4)
1 day	6.1 (0.8) ^e	3.6 (0.6) ^{f,g}	5.7 (0.5) ^e	5.4 (0.3)
2 or 3 days	6.4 (0.5) ^e	3.5 (0.7) ^{f,g}	5.3 (0.5) ^e	5.3 (0.3)
4 or more days	8.0 (0.9) ^f	5.6 (1.3)	4.3 (0.4) ^g	5.3 (0.4)
1 or more days	20.4 (0.9) ^{e,f}	12.7 (1.7) ^g	15.3 (0.7) ^g	16.0 (0.4)
Did Not Come Into Work Because of Illness or Injury				
0 days	81.5 (1.1) ^f	83.9 (1.5)	86.4 (0.8) ^g	85.0 (0.6)
1 day	8.0 (1.3)	5.6 (0.9)	6.3 (0.5)	6.5 (0.4)
2 or 3 days	5.9 (0.9)	6.1 (1.0)	5.1 (0.3)	5.4 (0.3)
4 or more days	4.6 (0.8) ^f	4.5 (1.0) ^f	2.2 (0.3) ^{e,g}	3.1 (0.3)
1 or more days	18.5 (1.1) ^f	16.1 (1.5)	13.6 (0.8) ^g	15.0 (0.6)

Note: Table displays the percentage of Reserve military personnel in the four groups of interest (all personnel, current smokers, lifetime smokers, and nonsmokers) who reported the specified problem (e.g., late for work by 30 minutes or more, affected no days, 1 day, 2 or 3 days, 4 or more days, and 1 or more days). Sample sizes by group are also provided. The standard error of each estimate is presented in parentheses. Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aMilitary work days are days spent performing military duties.

^bMilitary personnel who smoked at least 100 cigarettes in lifetime and smoked in the past 30 days.

^cMilitary personnel who smoked at least 100 cigarettes in lifetime but did not smoke in the past 30 days.

^dMilitary personnel who smoked fewer than 100 cigarettes in lifetime.

^eEstimate is significantly different from lifetime smokers at the 95% confidence level.

^fEstimate is significantly different from nonsmokers at the 95% confidence level.

^gEstimate is significantly different from current smokers at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Productivity Loss, Q86; Current Smoker, Lifetime Smoker, and Nonsmoker, Q46 and Q50).

4.1.5 Attempts to Stop Smoking Cigarettes

Information regarding attempts to stop smoking provides valuable insights into the response of smokers in the Reserve component to policies and programs designed to reduce smoking. For this reason, these data are particularly relevant to developing additional military smoking policies and programs.

Table 4.6 presents the findings on respondents' smoking cessation behaviors during the past year. As shown in the top panel, a large percentage (62.2%) of personnel in the Reserve component never smoked. In the total Reserve component, a considerable proportion of personnel (14.4%) stopped smoking successfully, including 10.7% who stopped smoking over a year ago and 3.7% who stopped smoking within the past year. Among all personnel, 13.6% were current smokers who tried to quit within the past 12 months, and 9.8% were smokers who did not try to stop smoking. The Marine Corps Reserve, Army National Guard, and Army Reserve had higher percentages of current smokers who tried to quit within the past year than the other Reserve components.

Perhaps of most interest to DoD are patterns of quit attempts and intentions to quit among past-year smokers. The middle panel of Table 4.6 shows smokers' attempts to stop smoking cigarettes during the past year. For the total Reserve component, 13.7% of smokers quit within the past year, 50.2% tried to quit but continued smoking, and 36.1% did not try to quit. Overall, 63.9% of the personnel in the total Reserve component who were smokers in the past year made an attempt to quit during the past year. Past-year smokers in the Air Force Reserve were less likely to have tried to quit in the past year than past-year smokers in all other Reserve components, with the exception of the Army National Guard.

A final consideration for those planning smoking cessation programs is the intent of current smokers to quit smoking. The bottom panel of Table 4.6 presents this information. Current smokers indicated whether they planned to quit smoking in the next 30 days or intended to quit in the next 6 months but not within the

next 30 days. The time frame distinction was made because personnel who were planning to quit within 30 days may have been more committed to cessation than were those who planned to quit at a later date; a more proximal cessation goal may reflect that an individual is further along in the "stages of change" process (DiClemente et al., 1991). Table 4.6 shows that approximately a fourth of current smokers (24.5%) were planning to quit soon, with an additional 39.0% reporting an intention to quit in the next 6 months.

In summary, there is considerable interest in smoking cessation. On the other hand, roughly one out of three past-year smokers did not try to quit in the past year, and the same proportion of current smokers reported no plans to quit in the near future.

4.2 Cigar, Pipe, and Smokeless Tobacco Use

Military personnel use forms of tobacco other than cigarettes. Knowing the extent of tobacco use other than cigarettes is necessary to develop comprehensive policies and programs for prevention and cessation of tobacco use. This section examines data related to the use of smokeless tobacco as well as cigar and pipe smoking.

4.2.1 Prevalence of Smokeless Tobacco Use, Past 30 Days

Table 4.7 presents the prevalence of past-month smokeless tobacco use for each of the Reserve components and for the total Reserve component. Because smokeless tobacco is used predominantly by males, prevalence estimates are presented in greater detail for males.

As shown in Table 4.7, 11.0% of all Reserve component personnel in 2006 reported using smokeless tobacco in the past 30 days. Among males across the total Reserve component, the rate of smokeless tobacco use was 12.9%, and prevalence of use declined as the age of personnel increased. The prevalence rate of smokeless tobacco use for men aged 24 or younger was 16.7%, but only 10.1% of those aged 35 or older.

Table 4.6

SMOKING STATUS AND SMOKING CESSATION, PAST 12 MONTHS, BY RESERVE COMPONENT

Measure/Type of Estimate	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Among all Personnel^a							
Never smoked ^b	58.8 (3.1) ^{c,d}	61.9 (2.0) ^c	70.0 (1.2) ^{d,h}	66.2 (1.3) ^{c,e}	65.8 (1.8) ^c	61.4 (2.8) ^c	62.2 (1.4)
Former smoker, quit over a year ago	9.3 (0.9) ^{d,g}	10.5 (0.6) ^{d,g}	12.4 (1.5) ^h	14.1 (0.7) ^{e,f,h}	13.3 (1.2) ^{e,f,h}	7.6 (1.5) ^{c,d,g}	10.7 (0.5)
Former smoker, quit within past year	4.0 (0.7) ^g	4.1 (0.9)	3.6 (0.4) ^g	3.1 (0.5)	2.6 (0.2) ^{c,e}	3.1 (0.4)	3.7 (0.4)
Current smoker, tried to quit within past year	16.0 (1.8) ^{c,d,g}	14.2 (1.4) ^{c,d,g}	8.2 (0.8) ^{e,f,h}	9.9 (0.5) ^{e,f,h}	9.8 (0.7) ^{e,f,h}	17.5 (1.7) ^{c,d,g}	13.6 (0.9)
Current smoker, didn't try to quit within past year	12.0 (1.1) ^{c,d,g}	9.3 (1.2) ^c	5.9 (0.4) ^{e-h}	6.8 (0.8) ^{e,h}	8.6 (0.6) ^{c,e}	10.5 (1.7) ^{c,d}	9.8 (0.6)
Among Smokers, Past Year^a							
Quit within past year	12.5 (2.1) ^c	15.0 (3.7)	20.2 (1.2) ^{e,g,h}	15.8 (2.0) ^h	12.4 (0.9) ^c	9.8 (1.3) ^{c,d}	13.7 (1.4)
Tried to quit within past year	50.0 (2.9)	51.4 (2.5)	46.6 (2.6) ^h	49.9 (2.0)	46.5 (1.1) ^h	56.2 (2.8) ^{c,g}	50.2 (1.5)
Didn't try to quit within past year	37.5 (1.8)	33.6 (2.7) ^g	33.2 (2.4) ^g	34.3 (1.3) ^g	41.1 (1.5) ^{c,d,f,h}	33.9 (3.3) ^g	36.1 (1.2)
Among Current Smokersⁱ							
Planning to quit in next 30 days	23.9 (2.7)	25.7 (1.6)	22.2 (2.7)	24.0 (1.7)	24.0 (1.1)	+ (+)	24.5 (1.4)
Intending to quit in next 6 months	39.6 (2.4) ^c	34.3 (4.0) ^{c,g}	48.3 (2.2) ^{e-g}	42.7 (3.6)	42.9 (1.3) ^{c,f}	+ (+)	39.0 (1.6)

Note: Table displays the percentage of Reserve military personnel by Reserve component in the three groups of interest (all personnel, past year smokers, and current smokers) who reported the current smoking status and smoking cessation indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. For each row, pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimates in each column may not sum to 100 because of rounding.

^bSmoked fewer than 100 cigarettes in their lifetime (Q46).

^cEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^dEstimate is significantly different from the Air National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

^gEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^hEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

ⁱCurrent smokers are defined as those who smoked at least 100 cigarettes in their lifetime and who smoked in the past 30 days.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Former Smoker, Quit Over a Year Ago or Within Past Year, Q46 and Q49; Current Smoker, Tried to Quit or Didn't Try to Quit, Q46, Q50, and Q51; Current Smoker, Planning to Quit in Next 30 Days, Q46, Q50, and Q52; Current Smoker, Planning to Quit in Next 6 Months, Q46, Q50, and Q52).

Table 4.7**ESTIMATES OF SMOKELESS TOBACCO USE, PAST 30 DAYS, FOR ALL PERSONNEL AND FOR MALES, BY RESERVE COMPONENT AND AGE GROUP**

Age Group	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
All personnel	14.1 (2.3) ^{a-d}	9.0 (1.9) ^d	5.9 (0.7) ^{d,e}	6.5 (1.1) ^{d,e}	7.1 (0.6) ^{d,e}	21.8 (2.6) ^{a-c,e,f}	11.0 (1.1)
Males							
All ages	15.6 (2.7) ^{a-c}	11.6 (2.4) ^d	7.3 (0.8) ^{d,e}	7.5 (1.3) ^{d,e}	9.2 (0.9) ^{d,e}	22.5 (2.7) ^{a-c,f}	12.9 (1.3)
Age 24 or younger	17.7 (3.3) ^b	15.0 (3.3)	10.8 (3.5) ^d	8.1 (1.6) ^{c-e}	15.5 (2.0) ^b	21.2 (2.8) ^{a,b}	16.7 (1.9)
Age 25-34	15.3 (3.0) ^a	11.5 (3.1)	7.7 (1.1) ^{d,e}	9.1 (2.2) ^d	12.0 (2.2)	16.8 (2.4) ^{a,b}	13.0 (1.6)
Age 35 or older	13.6 (3.0) ^{a-c}	8.4 (1.9)	6.6 (1.1) ^e	6.5 (1.1) ^e	7.0 (0.6) ^e	+ (+)	10.1 (1.2)

Note: Table displays the percentage of Reserve personnel by component that reported any smokeless tobacco use in the past 30 days. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Smokeless Tobacco Use, Q59).

Comparisons across the six Reserve components show large differences in past-month smokeless tobacco use in 2006. Personnel in the Marine Corps Reserve had the highest prevalence of use (21.8%), followed by the Army National Guard (14.1%). The other Reserve components had lower rates of past-month smokeless tobacco use (5.9% to 9.0%). The prevalence of smokeless tobacco use was especially high among males aged 24 or younger in the Army National Guard and the Marine Corps Reserve, with approximately one-fifth of males reporting past-month use. Within each Reserve component, the pattern of lower prevalence rates among older personnel applied. For a more detailed look at sociodemographic correlates of smokeless tobacco use, please see Appendix B (Table B.15).

4.2.2 *Smokeless Tobacco Initiation*

As was the case with cigarette use (see Section 4.1.3), a substantial number of personnel began using smokeless tobacco after joining the military (see Table 4.8). In the total Reserve component, 13.6% of males indicated that they had initiated smokeless tobacco use in the military. In the total Reserve component, 16.4% of males aged 18 to 25 had initiated smokeless tobacco use since joining the military, as had 12.0% of males aged 26 to 55. Initiation of smokeless tobacco in the military was higher in the Marine Corps Reserve (24.1%) than in any other Reserve component, followed by the Army National Guard (16.8%).

4.2.3 *Prevalence and Frequency of Cigar and Pipe Smoking and Smokeless Tobacco Use, Past 12 Months*

In addition to past-30-day use of smokeless tobacco, the prevalence and frequency of past-year use of smokeless tobacco, as well as cigars or pipes was examined. The bottom panel of Table 4.9 presents the unadjusted prevalence of past-year use of smokeless tobacco for the total Reserve component and for each of the components. Overall, the prevalence of past-year use was 17.1%. Estimates of past-year use were highest in the Marine Corps Reserve (33.0%) and were lowest in the Navy Reserve (8.9%), Air National Guard (9.5%), and Air Force Reserve (9.7%). An examination of the frequency information reveals that, regardless of Reserve

component, most personnel who used smokeless tobacco did so 1 or more days a week.

The top panel of Table 4.9 shows the frequency of cigar or pipe use. In the total Reserve component population, the prevalence of past-year cigar or pipe use was 21.0%. The highest prevalence was reported by the Marine Corps Reserve (34.8%), and the lowest prevalence was reported by the Air National Guard (16.0%), Air Force Reserve (16.2%), and Navy Reserve (16.9%). The Army Reserve and Army National Guard had intermediate values (22.7%, and 21.6%, respectively).

4.3 *Stress and Mental Health Problems by Smoking Status*

Table 4.10 shows the prevalence of stress and mental health problems for personnel who were current heavy smokers, current but not heavy smokers, former smokers, and never smokers. For each variable, personnel who were current heavy smokers were more likely to report stress or mental health problems than were personnel who had never smoked. Furthermore, for many variables, current heavy smokers were more likely to report stress or mental health problems than former smokers. For example, 30.7% of current heavy smokers reported “a lot” of stress at their civilian job in the 12 months, compared with 22.9% of former smokers and 18.0% of those who had never smoked; 18.4% of current heavy smokers had limited their usual activities due to poor mental health on at least one day in the past month, compared with 11.4% of former smokers and 9.3% who had never smoked. Compared with former and never smokers, current heavy smokers were about 1.5 times as likely to require further anxiety evaluation, 1.8 times as likely to require further depression evaluation, 2.5 times as likely to report suicide ideation in the past year, and 2 times as likely to report PTSD symptoms in the past 30 days. It should be noted that these associations do not necessarily imply a causal relationship between smoking and these stress and mental health variables.

Table 4.8 SMOKELESS TOBACCO INITIATION IN THE MILITARY AMONG MALES, BY AGE AND RESERVE COMPONENT

Age Group	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
18-25	18.0 (2.5) ^{a-c}	14.5 (3.2) ^b	10.0 (1.9) ^{d,e}	4.9 (2.2) ^{c-f}	11.0 (2.1) ^{b,d,e}	22.1 (2.7) ^{a-c}	16.4 (1.6)
26-55	16.0 (2.1) ^{a-c,e}	10.5 (2.5) ^e	6.4 (0.8) ^{d,e}	7.7 (0.7) ^{d,e}	7.8 (0.6) ^{d,e}	29.5 (5.9) ^{a-d,f}	12.0 (1.2)
Total (18-55)	16.8 (1.8) ^{a-c,e}	12.1 (2.1) ^{a,b,e}	6.8 (0.7) ^{d-f}	7.1 (0.9) ^{d-f}	8.3 (0.8) ^{d,e}	24.1 (2.9) ^{a-d,f}	13.6 (1.1)

Note: Table displays the percentage of Reserve military personnel by Reserve component and age group who started using smokeless tobacco since joining the military. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done within age group between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Smokeless Tobacco Initiation in the Military, Q60).

Table 4.9

FREQUENCY OF CIGAR, PIPE, AND SMOKELESS TOBACCO USE, PAST 12 MONTHS, BY RESERVE COMPONENT

Tobacco/Frequency	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Cigars or Pipes							
Didn't smoke cigars or pipes	78.4 (2.2) ^{a-c}	77.3 (1.8) ^{a-d}	83.1 (1.2) ^{c,e}	84.0 (1.9) ^{c,e,f}	83.8 (0.8) ^{c,e,f}	65.2 (2.3) ^{a,b,d-f}	79.0 (1.1)
Less than once/week	16.8 (2.0) ^c	19.9 (1.5) ^{a-d}	15.3 (1.1) ^{c,e}	13.9 (1.7) ^{c,e}	14.0 (0.6) ^{c,e}	30.9 (2.2) ^{a,b,d-f}	17.6 (1.0)
1 or more days/week	4.8 (0.8) ^{a,b,d,e}	2.9 (0.5) ^{d,f}	1.6 (0.3) ^{c,e,f}	2.1 (0.4) ^f	2.2 (0.4) ^f	3.9 (0.9) ^d	3.4 (0.4)
Any cigar or pipe use	21.6 (2.2) ^{a-c}	22.7 (1.8) ^{a-d}	16.9 (1.2) ^{c,e}	16.0 (1.9) ^{c,e,f}	16.2 (0.8) ^{c,e,f}	34.8 (2.3) ^{a,b,d-f}	21.0 (1.1)
Smokeless Tobacco							
Didn't use smokeless tobacco	79.1 (2.3) ^{a-d}	83.6 (2.0) ^{a-d}	91.1 (0.7) ^{c,e,f}	90.5 (1.9) ^{c,e,f}	90.3 (1.0) ^{c,e,f}	67.0 (2.9) ^{a,b,d-f}	82.9 (1.3)
Less than once/week	7.7 (0.7) ^{a-d}	7.4 (1.2) ^{a-d}	3.4 (0.3) ^{c,e,f}	3.2 (0.6) ^{c,e,f}	3.1 (0.3) ^{c,e,f}	13.4 (1.4) ^{a,b,d-f}	6.6 (0.5)
1 or more days/week	13.2 (2.0) ^{a-d}	9.0 (1.1) ^{c,d}	5.6 (0.5) ^{c,e,f}	6.3 (1.4) ^{c,f}	6.6 (0.8) ^{c,f}	19.6 (2.4) ^{a,b,d-f}	10.5 (1.0)
Any smokeless tobacco use	20.9 (2.3) ^{a-d}	16.4 (2.0) ^{a-d}	8.9 (0.7) ^{c,e,f}	9.5 (1.9) ^{c,e,f}	9.7 (1.0) ^{c,e,f}	33.0 (2.9) ^{a,b,d-f}	17.1 (1.3)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported cigar or pipe and smokeless tobacco frequency of use as indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Air National Guard at the 95% confidence level.

^bEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^cEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army National Guard at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Cigar or Pipe Use, Q62; Smokeless Tobacco Use, Q61).

Table 4.10

STRESS AND MENTAL HEALTH PROBLEMS, BY SMOKING STATUS

Problem/Level	Smoking Status			
	Never Smoked	Former Smokers	Current but Not Heavy Smokers	Current Heavy Smokers
Stress at Civilian Job, Past 12 Months				
A lot	18.0 (1.3) ^{a,b}	22.9 (1.7) ^{b,c}	22.6 (2.7) ^b	30.7 (2.8) ^{a,c,d}
Some/a little	52.9 (1.5) ^b	54.5 (2.8) ^b	52.9 (2.2)	46.5 (2.5) ^{a,c}
None at all	29.1 (1.2) ^{a,b,d}	22.5 (2.3) ^c	24.6 (1.8) ^c	22.8 (3.1) ^c
Stress during Military Duties, Past 12 Months				
A lot	12.0 (1.8) ^b	13.8 (1.8)	13.6 (1.1)	17.6 (2.4) ^c
Some/a little	57.0 (2.0)	60.0 (2.4) ^b	58.8 (2.1) ^b	50.9 (4.3) ^{a,d}
None at all	31.0 (1.4) ^a	26.2 (2.4) ^c	27.6 (2.1)	31.5 (4.7)
Stress in Family, Past 12 Months				
A lot	17.1 (0.9) ^{b,d}	15.9 (1.5) ^{b,d}	26.6 (1.6) ^{a,c}	28.5 (2.4) ^{a,c}
Some/a little	54.7 (1.6) ^a	61.2 (2.1) ^{c,d}	55.3 (2.2) ^a	52.3 (4.0)
None at all	28.3 (1.2) ^{a,b,d}	22.9 (1.9) ^c	18.2 (1.6) ^c	19.2 (3.1) ^c
Days in Past Month Limited Usual Activities Due to Poor Mental Health^e				
11 or more days	1.2 (0.2) ^{b,d}	1.6 (0.5) ^b	2.8 (0.6) ^{b,c}	6.1 (1.5) ^{a,c,d}
4-10 days	1.3 (0.3) ^{b,d}	2.6 (0.6)	3.3 (0.9) ^c	3.9 (1.1) ^c
1-3 days	6.8 (0.6)	7.2 (1.0)	8.6 (1.0)	8.3 (1.4)
None	90.7 (0.8) ^{b,d}	88.6 (1.0) ^b	85.3 (1.4) ^c	81.6 (1.9) ^{a,c}
Need for Further Anxiety Evaluation, Past 30 Days				
Yes	10.1 (1.2) ^b	9.3 (1.0) ^b	10.9 (1.2) ^b	15.3 (2.2) ^{a,c,d}
No	89.9 (1.2) ^b	90.7 (1.0) ^b	89.1 (1.2) ^b	84.7 (2.2) ^{a,c,d}
Need for Further Depression Evaluation				
Yes	16.8 (0.8) ^{b,d}	17.3 (1.7) ^{b,d}	22.5 (1.7) ^{a,c}	29.4 (2.6) ^{a,c,d}
No	83.2 (0.8) ^{b,d}	82.7 (1.7) ^{b,d}	77.5 (1.7) ^{a,c}	70.6 (2.6) ^{a,c,d}
Suicidal Ideation, Past Year				
Yes	4.5 (0.5) ^{b,d}	4.0 (0.9) ^{b,d}	8.0 (0.8) ^{a,c}	9.9 (1.6) ^{a,c}
No	95.5 (0.5) ^{b,d}	96.0 (0.9) ^{b,d}	92.0 (0.8) ^{a,c}	90.1 (1.6) ^{a,c}
PTSD^f Symptoms, Past 30 Days				
Yes	6.2 (1.2) ^{b,d}	6.2 (1.0) ^{b,d}	12.2 (1.5) ^{a,c}	12.6 (2.3) ^{a,c}
No	93.8 (1.2) ^{b,d}	93.8 (1.0) ^{b,d}	87.8 (1.5) ^{a,c}	87.4 (2.3) ^{a,c}

Note: Table displays the percentage of Reserve military personnel by smoking status who reported the stress and mental health problems noted in the rows of the table. The standard error of each estimate is presented in parentheses. Estimates may not sum within each column group to 100 because of rounding. Pairwise significance tests were done between all possible smoking status levels.

Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the former smoker at the 95% confidence level.

^bEstimate is significantly different from the current heavy at the 95% confidence level.

^cEstimate is significantly different from the never smoked at the 95% confidence level.

^dEstimate is significantly different from the current smoker but not heavy at the 95% confidence level.

^eBased on respondents' perception of number of days when mental health limited usual activities.

^fPTSD is posttraumatic stress disorder.

Source: 2006 Department of Defense Reserve Component Survey (Stress at Work, Q88 & 89; Stress in Family, Q90; Mental Health, Past 30 Days, Q100; Need for Further Depression Evaluation, Q97-Q99; Further Anxiety Evaluation, Q100; Suicidal Ideation, Q101A; Psychological Distress, Q100; PTSD Symptoms, Q104).

4.4 Summary

This chapter describes tobacco use (cigarettes, smokeless tobacco, cigars, and pipes) among Reserve component personnel. Correlates of tobacco use, initiation rates of tobacco use after joining the military, perceived availability and acceptability of cigarettes, productivity loss from cigarette use, and tobacco cessation data have also been presented.

4.4.1 Prevalence of Cigarette Use and Reserve Component Comparisons

In the total Reserve component, 23.7% of personnel were current smokers (any smoking in the past 30 days), 9.3% were heavy smokers, and 5.8% were classified as dependent on nicotine (see Table 4.1). Rates of any smoking were higher in the Marine Corps Reserve, Army National Guard, and Army Reserve than in the Navy Reserve, Air National Guard, or Air Force Reserve. Rates of heavy smoking were higher in the Army National Guard than in any other Reserve component. The comparisons of unadjusted and adjusted rates for any smoking and heavy smoking suggest that variations in the sociodemographic composition of the Reserve components did play a role in explaining Reserve component differences in smoking, although the role was relatively small. These adjustments led to decreases in the rates for the Army National Guard; increases in the rates for the Army Reserve, Navy Reserve, and Air Force Reserve; and inconsistent results for the Marine Corps Reserve (notable decrease in the rate of any smoking, little change in the rates of heavy smoking and nicotine dependence) and led to little change in the rates for the Air National Guard.

4.4.2 Correlates of Cigarette Use

Results of logistic regression analysis (Table 4.2) show that the following groups were significantly more likely to be current smokers when the effects of all other sociodemographic variables in the model were held constant: personnel in the Marine Corps Reserve relative to personnel in the Navy Reserve and Air National Guard, white non-Hispanics, those who were not married, enlisted personnel, and those who had been deployed at least once in the past 24 months.

4.4.3 Cigarette Smoking Initiation and Perceived Cigarette Availability and Acceptability

Some previously published studies suggest that the military environment encourages smoking. This was confirmed with these data, which showed that in the total Reserve component, 14.3% of all respondents and 38.4% of current smokers, started smoking after joining the military (Table 4.3). Findings from Table 4.4 reveal that, in the total Reserve component, there are three frequently cited reasons for starting to smoke: to help relax and calm down (22.0%), to help relieve stress (21.6%), and to relieve boredom (20.4%). Personnel in the Marine Corps Reserve were more likely than personnel in any other component, with the exception of the Army Reserve, to list relief from boredom and helping to keep awake or alert as reasons for starting to smoke regularly.

4.4.4 Cigarette Use, Productivity Loss, and Attempts to Stop Smoking Cigarettes

Tobacco use has been linked with productivity loss. The most frequent types of productivity loss among Reserve component personnel were being late for work by 30 minutes or more (19.0%), leaving work early (17.4%), working below normal performance level (16.0%), and missing work because of illness or injury (15.0%) (see Table 4.5). Compared with nonsmokers, current smokers were more likely to report each measure of productivity loss, although the associations are weak.

Among past-year smokers, 63.9% tried to quit or quit successfully in the past 12 months (Table 4.6). An estimated 24.5% of current smokers indicated that they planned to quit within the next 30 days, and an additional 39.0% reported an intention to quit within the next 6 months. This indicates that more than a third (36.5%) of current smokers do not have immediate plans to try and quit.

4.4.5 Other Tobacco Use

In the total Reserve component, 11.0% of all personnel and 12.9% of males reported using smokeless tobacco in the past 30 days. Personnel in the Marine Corps Reserve

had the highest prevalence of use (21.8%), followed by the Army National Guard (14.1%). The other Reserve components had lower rates of past-month smokeless tobacco use (5.9% to 9.0%). Within each Reserve component, the rates of smokeless tobacco use were higher among younger personnel relative to older personnel. Males in the Marine Corps Reserve had higher rates than males in the other components of smokeless tobacco initiation after joining the military (24.1%), followed by the Army National Guard (16.8%) and Army Reserve (12.1%) (see Table 4.7). For a more detailed look at sociodemographic correlates of smokeless tobacco use, please see Appendix B (Table B.15).

In the total Reserve component population, the prevalence of past-year cigar or pipe use was 21.0% (Table 4.8). The prevalence of cigar or pipe use in 2005 was highest in the Marine Corps Reserve (34.8%), followed by the Army Reserve (22.7%) and Army National Guard (21.6%).

4.4.6 *Associations with Stress and Mental Health Problems*

In the total Reserve component, personnel who were current heavy smokers were more likely to report stress or mental health problems than were personnel who had never smoked (Table 4.9). Compared with former smokers and those who never smoked, current heavy smokers were more likely to require further anxiety evaluation, require further depression evaluation, report suicide ideation in the past year, and report PTSD symptoms in the past 30 days. It should be noted that these associations do not necessarily imply a causal relationship between smoking and these stress and mental health variables.

4.4.7 *Conclusion*

Taken together, findings from the 2006 Reserve component survey related to tobacco use do provide

some positive news. First, a large majority of personnel in the Reserve component do not use tobacco, and only about 1 in 20 was classified as dependent on nicotine. Second, only a small minority of respondents (13%) believed the smoking was “part of being in the military,” and only 4.1% reported that they first started smoking to fit in with their military unit. Third, nearly two-thirds (63.9%) of the military personnel who were smokers in the past year attempted to quit during the past year, and a similar percentage of current smokers (63.5%) planned to quit in the next 6 months.

Despite these encouraging findings, these data indicate a number of areas of concern regarding tobacco use in the Reserve component. First, although a majority of the military personnel who were smokers in the past year attempted to quit during that time, roughly one-third of past-year smokers did not try to quit in the past year, and the same proportion of current smokers reported no plans to quit in the near future. These smokers may represent a more formidable target for military policies and programs designed to encourage cessation. Second, 38.4% of Reserve component personnel who were current smokers reported that they started smoking for the first time after joining the military. This suggests that some elements of military culture may encourage personnel to use tobacco. Third, there was considerable variation in the rates of tobacco use between the Reserve components, with the Marine Corps Reserve, Army National Guard, and Army Reserve generally showing higher rates of smoking than the Navy Reserve, Air National Guard, and Air Force Reserve. Though some variation between Reserve components is expected due to differences in mission, these substantial differences could indicate that the tobacco use environment and the effectiveness of existing tobacco use reduction efforts vary between the components.

Chapter 5: Illicit Drug Use

This chapter examines illicit drug use among Reserve military personnel, including Reserve component comparisons of illicit drug use; prevalence of the use of specific drugs and classes of drugs; correlates of illicit drug use; the relationship of illicit drug use to productivity loss; the relationship of drug use to drug-testing history, predictability of last drug test, and the possible absence of testing; and the relationship of drug use to stress and mental health. Supplemental tables on drug use, including sociodemographic characteristics associated with illicit drug use, are included for each Reserve component in Appendix B (Tables B.10, B.18, and B.26).

As described in Section 2.5.3, illicit drug use is defined as nonmedical use of any of nine categories of drugs: marijuana/hashish; cocaine (including crack); hallucinogens (PCP, LSD); heroin or other opiates; inhalants; amphetamines, methamphetamines, or other stimulants; tranquilizers or other depressants; barbiturates or other sedatives; and analgesics or other narcotics. Nonmedical use is any use of these drugs either without a doctor's prescription, in greater amounts or more often than prescribed, or for any reasons other than as prescribed, such as for the feelings they caused. Not included in the measure of illicit drug use are anabolic steroids and sexual enhancers.

5.1 Reserve Component Comparisons of Illicit Drug Use

In this section, two sets of estimates of the extent of drug use for each of the Reserve components are provided. Actual or unadjusted estimates are presented first, followed by adjusted estimates. Unadjusted estimates, which indicate observed past-year prevalence rates, provide a perspective on the comparative magnitude of the challenge facing the Reserve components in their efforts to eradicate drug use. As discussed in Section 2.6, one possible explanation for observed differences in drug use across the Reserve components is variation in the

sociodemographic composition of each. Thus, adjusted estimates using direct standardization procedures to control for these differences are also provided. These adjusted or constructed estimates permit comparisons among the Reserve components after controlling for differences in the sociodemographic composition of each Reserve component.

Both unadjusted and adjusted estimates of past-12-month drug use prevalence for the total Reserve component and individual components are shown in Table 5.1. Because marijuana is typically the most commonly used drug among both active-duty military personnel and the civilian population, data are presented separately for marijuana use, any illicit drug use except marijuana, and any illicit drug use among Guard and Reserve members.

5.1.1 Unadjusted Estimates

As shown in Table 5.1, the Army National Guard had the highest unadjusted rate of past-12-month use of any illicit drug (15.3%), any illicit drug except marijuana (11.7%), and marijuana (8.8%) among the Reserve components in 2006; these rates were significantly higher than those of the Navy Reserve, Air National Guard, and Air Force Reserve. The Army National Guard had similar unadjusted rates of past-12-month any illicit drug use, any illicit drug use except marijuana, and marijuana use to rates among Army Reserve and Marine Corps Reserve personnel.

The Air National Guard had significantly lower unadjusted past-12-month rates of any illicit drug use (5.1%) compared with those for the other Reserve components. The Air National Guard also had significantly lower past-12-month unadjusted rates of marijuana (1.1%) and any illicit drug use except marijuana (4.7%) compared with the Army National Guard, Army Reserve, and Marine Corps Reserve, but had similar rates of marijuana use compared with the Navy Reserve and similar rates of any illicit drug use except marijuana use compared with the Air Force Reserve. These findings show the relative challenges

Table 5.1 ESTIMATES OF ILLICIT DRUG USE, PAST 12 MONTHS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY RESERVE COMPONENT

Drug/Type of Estimate	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Marijuana							
Unadjusted	8.8 (1.4) ^{a-c}	6.9 (1.2) ^{a-c}	1.7 (0.3) ^{d-f}	1.1 (0.2) ^{c-f}	2.2 (0.2) ^{b,d-f}	6.8 (1.4) ^{a-c}	6.1 (0.7)
Adjusted ^g	7.8 (1.2) ^{a-c,f}	6.7 (1.1) ^{a-c}	2.7 (0.5) ^{b,d,e}	1.4 (0.3) ^{a,c-f}	3.2 (0.4) ^{b,d,e}	4.2 (0.8) ^{b,d}	4.3 (0.3)
Any Illicit Drug Except Marijuana^h							
Unadjusted	11.7 (1.2) ^{a-c}	10.2 (1.9) ^{b,c}	6.7 (0.6) ^{b,d}	4.7 (0.2) ^{a,d-f}	5.7 (0.7) ^{d,e}	8.2 (1.6) ^b	9.4 (0.8)
Adjusted ^a	11.4 (1.3) ^{a-c}	10.1 (1.6) ^{b,c}	7.5 (0.8) ^{b,d}	4.8 (0.4) ^{a,d-f}	6.0 (0.8) ^{d,e}	7.8 (1.5) ^b	7.9 (0.5)
Any Illicit Drugⁱ							
Unadjusted	15.3 (1.6) ^{a-c}	13.2 (2.1) ^{a-c}	7.3 (0.5) ^{b,d,e}	5.1 (0.2) ^{a,c-f}	6.7 (0.7) ^{b,d-f}	11.3 (2.0) ^{b,c}	12.0 (0.9)
Adjusted ^a	14.6 (1.5) ^{a-c,f}	13.0 (1.8) ^{a-c}	8.9 (0.8) ^{b,d,e}	5.5 (0.4) ^{a,c-f}	7.5 (0.9) ^{b,d,e}	9.5 (1.6) ^{b,d}	9.8 (0.5)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported any illicit drug use in the past 12 months, as noted in the rows of the table. The standard error of each estimate is presented in parentheses. Estimates may not sum within each column group to 100 because of rounding. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^gAdjusted estimates have been adjusted to correct for differences in the demographic distributions between the Reserve components. The main effects of gender, age group, enlisted/officer indicator, marital status, education, and race/ethnicity were used in this standardization process.

^hAny nonmedical use of cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

ⁱAny nonmedical use of marijuana, cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

Source: 2006 Department of Defense Reserve Component Survey (Marijuana: Past 12 Months, Q66A, Q67A, and Q68A; Any Illicit Drug Use Except Marijuana: Past 12 Months, Q66B-I, Q67B-I, and Q68B-I; Any Illicit Drug Use: Past 12 Months, Q66A-I, Q67A-I, and Q68A-I).

that the Reserve components face in combating illicit drug use. The Army National Guard and Army Reserve face the greatest challenges, whereas the Air National Guard and Air Force Reserve face smaller challenges.

5.1.2 *Adjusted Estimates*

The unadjusted results present prevalence estimates but do not examine any underlying explanations for Reserve component differences in rates of illicit drug use. Adjusting for differences in sociodemographic compositions of the Reserve components may explain some of the discrepancies. As shown in Table 5.1, adjusting for sociodemographic differences among the components resulted in small changes in drug use measures for the Army National Guard, Army Reserve, Air National Guard, and Air Force Reserve. The adjustments had the largest effect on the Marine Corps Reserves, with the estimates for use of any illicit drug decreasing from 11.3% to 9.5%, and on the Navy Reserve, with the estimates increasing from 7.3% to 8.9%. Adjusted estimates show that the Marine Corps Reserve's marijuana and any illicit drug use rates were significantly lower than the adjusted rates for the Army National Guard, higher than those for the Air National Guard, and similar to the other Reserve components. The Navy Reserve adjusted estimates show that the component's marijuana and any illicit drug use rates were significantly lower than the adjusted rates for the Army National Guard and Army Reserve, but significantly higher than the rates for the Air National Guard. Thus, the levels of unadjusted rates of illicit drug use in the Marine Corps and Navy Reserves can be explained in part by the sociodemographic composition of those components. The Air National Guard still had significantly lower adjusted rates of use compared with the rates for the other Reserve components for marijuana and any illicit drug use; adjusted rates for any illicit drug except marijuana were also significantly lower compared with the Army, Navy, and Marine components and similar to the rates for the Air Force Reserve, even when controlling for sociodemographic characteristics.

Although the standardization reduced the estimates of illicit drug use for the Marine Corps Reserve, that

component faces a greater challenge than the others because it has a higher proportion of personnel in sociodemographic groups at high risk for using drugs. The data also suggest that the low rates in the Air National Guard are a function of both sociodemographic and other factors because the rates of marijuana and any illicit drug use in the Air Force components were lower than rates for most other Reserve components both before and after standardization.

Overall, these findings suggest that differences among the Reserve components in sociodemographic composition remain viable as a partial explanation for some differences observed in drug use. Clearly, this explanation does not account for all observed differences in drug use among the components. The standardizations conducted here controlled for component differences in gender, age, enlisted/officer status, marital status, education, and race/ethnicity, but they may not have controlled for all important differentiating factors. An alternative explanation accounting for observed differences is that the components may vary in policies and practices associated with controlling drug use or that personnel across the components may have different attitudes and values regarding drug use.

5.2 *Prevalence of Specific Drug Use*

Table 5.2 presents the percentage of use of 11 specific drugs or drug classes during the 30 days before the survey for each component and for the total Reserve component in 2006; comparable data for the 12 months before the survey are presented in Table 5.3. Four summary measures also are included: use of any illicit drug, use of any illicit drug except marijuana, use of any illicit drug except analgesics, and use of any illicit drug except analgesics and marijuana. These measures are based on use of 9 of the 11 classes of drugs, excluding steroids and sexual enhancers. The rates presented in these two tables have not been adjusted for sociodemographic differences among the components.

Table 5.2 ILLICIT DRUG USE IN THE PAST 30 DAYS, BY RESERVE COMPONENT, BY DRUG

Drug	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Marijuana	4.6 (0.8) ^{a-c}	2.7 (0.6) ^{a-c}	0.5 (0.2) ^{c-f}	0.2 (0.3) ^{c-f}	1.2 (0.2) ^{a,b,d,f}	3.8 (1.0) ^{a-c}	3.0 (0.5)
Cocaine (including crack)	2.7 (0.7) ^{a-c,e}	0.9 (0.3) ^{b,d}	0.3 (0.1) ^{d,f}	0.1 (0.1) ^{c-f}	0.5 (0.1) ^{b,d,f}	1.8 (0.4) ^{a-c}	1.5 (0.3)
Hallucinogens (PCP, LSD)	2.3 (0.6) ^{a-c,e}	0.7 (0.2) ^{d,f}	0.3 (0.1) ^{c,d,f}	0.1 (0.2) ^{c,d,f}	0.6 (0.1) ^{a,b,d,f}	1.7 (0.4) ^{a-c,e}	1.3 (0.3)
Heroin/other opiates	1.5 (0.5) ^{a-c}	0.7 (0.3)	0.3 (0.1) ^{d,f}	+ (+)	0.5 (0.1) ^{d,f}	1.6 (0.5) ^{a,c}	1.0 (0.2)
Inhalants	1.7 (0.5) ^{a,c,e}	0.6 (0.1) ^{d,f}	0.5 (0.1) ^{d,f}	+ (+)	0.4 (0.1) ^{d,f}	1.5 (0.4) ^{a,c,e}	1.0 (0.3)
Amphetamines/stimulants (methamphetamine)	2.0 (0.4) ^{a-c,e}	0.7 (0.3) ^{d,f}	0.4 (0.1) ^{b,d,f}	0.7 (0.0) ^{a,d,f}	0.5 (0.1) ^{d,f}	2.0 (0.5) ^{a-c,e}	1.3 (0.2)
Tranquilizers/depressants	2.2 (0.5) ^{a-c}	1.1 (0.4) ^b	0.7 (0.2) ^{d,f}	0.2 (0.2) ^{c-f}	0.8 (0.1) ^{b,d,f}	2.1 (0.6) ^{a-c}	1.5 (0.3)
Barbiturates/sedatives	2.0 (0.4) ^{a-c}	1.5 (0.5) ^{a,b}	0.4 (0.1) ^{d-f}	0.3 (0.1) ^{c-f}	0.7 (0.2) ^{b,d,f}	1.6 (0.3) ^{a-c}	1.4 (0.2)
Analgesics/other narcotics	5.9 (1.0) ^{a-c,e,f}	3.5 (0.7) ^{b-d}	2.3 (0.2) ^{b,d}	1.1 (0.2) ^{a,c-f}	1.9 (0.2) ^{b,d,e}	2.9 (0.7) ^{b,d}	4.0 (0.5)
Any illicit drug ^g	9.5 (1.3) ^{a-c}	6.5 (1.1) ^{a-c}	3.3 (0.4) ^{b,d-f}	1.9 (0.3) ^{a,c-f}	3.1 (0.3) ^{b,d-f}	6.2 (1.2) ^{a-c}	6.6 (0.8)
Any illicit drug except marijuana ^h	7.6 (1.3) ^{a-c,f}	4.9 (0.9) ^{b,c}	3.1 (0.4) ^{b,d}	1.7 (0.2) ^{a,c-f}	2.6 (0.3) ^{b,d-f}	4.4 (0.8) ^{b-d}	5.3 (0.7)
Any illicit drug except analgesics ⁱ	6.7 (1.0) ^{a-c}	4.4 (0.8) ^{a-c}	1.6 (0.4) ^{d-f}	1.2 (0.2) ^{d-f}	1.9 (0.3) ^{d-f}	5.5 (1.1) ^{a-c}	4.6 (0.6)
Any illicit drug except analgesics and marijuana ^j	4.7 (0.9) ^{a-c}	2.5 (0.7) ^b	1.4 (0.3) ^{d,f}	1.0 (0.0) ^{d-f}	1.4 (0.2) ^{d,f}	3.6 (0.6) ^{a-c}	3.1 (0.5)

(Table continued on next page)

Table 5.2 ILLICIT DRUG USE IN THE PAST 30 DAYS, BY RESERVE COMPONENT, BY DRUG (CONTINUED)

Drug	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Steroids	2.2 (0.5) ^{a,c,e}	0.7 (0.2) ^{d,f}	0.5 (0.1) ^{d,f}	+ (+)	0.5 (0.1) ^{d,f}	1.8 (0.3) ^{a,c,e}	1.3 (0.3)
Sexual enhancers	2.8 (0.5) ^{a,c}	2.0 (0.4)	1.2 (0.2) ^d	1.2 (0.6)	1.4 (0.1) ^d	1.7 (0.4)	2.1 (0.3)

Note: Table displays the percentage of Reserve military personnel by Reserve component that used the drug indicated in the past month. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^gAny illicit drug use is defined as one or more uses of any of the above classes of drugs, excluding steroids and sexual enhancers.

^hAny illicit drug use except marijuana is defined as one or more uses of any of the above classes of drugs, excluding marijuana, steroids, and sexual enhancers.

ⁱAny illicit drug except analgesics is defined as one or more uses of any of the above classes of drugs, excluding analgesics/other narcotics, steroids, and sexual enhancers.

^jAny illicit drug except analgesics and marijuana is defined as one or more uses of any of the above classes of drugs, excluding analgesics/other narcotics, marijuana, steroids, and sexual enhancers.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: Past 30 Days, Q66 and Q68).

Table 5.3 | **ILLICIT DRUG USE IN THE PAST 12 MONTHS, BY RESERVE COMPONENT, BY DRUG**

Drug	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Marijuana	8.8 (1.4) ^{a-c}	6.9 (1.2) ^{a-c}	1.7 (0.3) ^{d-f}	1.1 (0.2) ^{c-f}	2.2 (0.2) ^{b,d-f}	6.8 (1.4) ^{a-c}	6.1 (0.7)
Cocaine (including crack)	3.7 (0.6) ^{a-c}	2.5 (0.7) ^{a-c}	0.6 (0.1) ^{b,d-f}	0.2 (0.2) ^{a,c-f}	0.6 (0.1) ^{b,d-f}	2.9 (0.6) ^{a-c}	2.4 (0.4)
Hallucinogens (PCP, LSD)	4.0 (0.9) ^{a-c,e}	1.9 (0.5) ^{a-d}	0.5 (0.1) ^{d-f}	0.4 (0.1) ^{c-f}	0.7 (0.1) ^{b,d-f}	2.1 (0.5) ^{a-c}	2.4 (0.5)
Heroin/other opiates	2.0 (0.5) ^{a-c}	1.1 (0.4) ^b	0.4 (0.1) ^{d,f}	0.2 (0.0) ^{c-f}	0.6 (0.1) ^{b,d,f}	1.8 (0.5) ^{a-c}	1.3 (0.2)
Inhalants	2.3 (0.6) ^{a,c}	1.5 (0.3) ^{a,c}	0.7 (0.1) ^{d-f}	+ (+)	0.6 (0.1) ^{d-f}	2.2 (0.5) ^{a,c}	1.6 (0.3)
Amphetamines/stimulants (methamphetamine)	2.9 (0.5) ^{a-c}	1.8 (0.5) ^c	0.8 (0.2) ^{d,f}	0.8 (0.1) ^{d,f}	0.6 (0.1) ^{d-f}	3.3 (0.8) ^{a-c}	2.0 (0.3)
Tranquilizers/depressants	3.2 (0.5) ^{a-c}	2.8 (0.7) ^{a,b}	1.2 (0.3) ^{b,d-f}	0.4 (0.3) ^{a,c-f}	1.4 (0.2) ^{b,d,f}	3.0 (0.7) ^{a-c}	2.4 (0.3)
Barbiturates/sedatives	3.4 (0.4) ^{a-c}	2.2 (0.7) ^{a,b}	0.7 (0.2) ^{d-f}	0.7 (0.1) ^{d-f}	1.1 (0.2) ^{c,d}	2.6 (0.4) ^{a-c}	2.3 (0.3)
Analgesics/other narcotics	9.0 (1.0) ^{a-c,f}	8.1 (1.5) ^{b,c}	5.6 (0.6) ^{b,d}	3.8 (0.2) ^{a,d,e}	4.7 (0.6) ^{d,e}	5.5 (1.1) ^d	7.3 (0.6)
Any illicit drug ^g	15.3 (1.6) ^{a-c}	13.2 (2.1) ^{a-c}	7.3 (0.5) ^{b,d,e}	5.1 (0.2) ^{a,c-f}	6.7 (0.7) ^{b,d-f}	11.3 (2.0) ^{b,c}	12.0 (0.9)
Any illicit drug except marijuana ^h	11.7 (1.2) ^{a-c}	10.2 (1.9) ^{b,c}	6.7 (0.6) ^{b,d}	4.7 (0.2) ^{a,d-f}	5.7 (0.7) ^{d,e}	8.2 (1.6) ^b	9.4 (0.8)
Any illicit drug except analgesics ⁱ	11.5 (1.6) ^{a-c}	9.4 (1.5) ^{a-c}	3.1 (0.4) ^{d-f}	2.3 (0.2) ^{c-f}	3.5 (0.4) ^{b,d-f}	9.4 (1.8) ^{a-c}	8.4 (0.9)
Any illicit drug except analgesics and marijuana ^j	7.8 (1.2) ^{a-c}	5.6 (1.3) ^{a-c}	2.4 (0.4) ^{d-f}	1.9 (0.2) ^{d-f}	2.4 (0.3) ^{d-f}	6.1 (1.2) ^{a-c}	5.5 (0.7)

(Table continued on next page)

Table 5.3 ILLICIT DRUG USE IN THE PAST 12 MONTHS, BY RESERVE COMPONENT, BY DRUG (CONTINUED)

Drug	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Steroids	2.9 (0.6) ^{a-c,e}	1.0 (0.3) ^{b,d,f}	0.6 (0.1) ^{d,f}	0.2 (0.2) ^{c-f}	0.7 (0.1) ^{b,d,f}	2.7 (0.5) ^{a-c,e}	1.7 (0.3)
Sexual enhancers	4.5 (0.8) ^{a-c}	3.2 (0.6)	2.3 (0.3) ^d	2.4 (0.7) ^d	2.5 (0.1) ^d	3.2 (0.5)	3.5 (0.4)

Note: Table displays the percentage of Reserve military personnel by Reserve component that used the drug indicated in the past month. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^gAny illicit drug use is defined as one or more uses of any of the above classes of drugs, excluding steroids and sexual enhancers.

^hAny illicit drug except marijuana is defined as one or more uses of any of the above classes of drugs, excluding marijuana, steroids, and sexual enhancers.

ⁱAny illicit drug except analgesics is defined as one or more uses of any of the above classes of drugs, excluding analgesics/other narcotics, steroids, and sexual enhancers.

^jAny illicit drug except analgesics and marijuana is defined as one or more uses of any of the above classes of drugs, excluding analgesics/other narcotics, marijuana, steroids, and sexual enhancers.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: Past 12 Months, Q66–Q68).

As shown in Table 5.2, past-month use of all specific drugs was relatively low. Analgesics were the most commonly used drug in the past month at 4.0% for the total Reserve components, followed by marijuana at 3.0%. Past-30-day use of each of the individual drugs other than analgesics and marijuana was 1.5% or less for the total Reserve components. In addition, 2.1% of Reserve component personnel reported having used sexual enhancers in the past 30 days and 1.3% used steroids. In 2006, past-30-day use of specific drugs was generally higher among Army National Guard, Army Reserve, and Marine Corps Reserve personnel than among Air National Guard, Navy Reserve, and Air Force Reserve personnel.

5.3 *Correlates of Illicit Drug Use*

In addition to examining overall prevalence rates, the sociodemographic correlates of illicit drug use were assessed. Two types of analysis were conducted to examine any illicit drug use during the past 12 months and past 30 days: descriptive prevalence analysis and multivariate logistic regression analysis (described in Chapter 2 and Appendix E). Results of both are presented in Table 5.4 for illicit drug use in the past 30 days and Table 5.5 for illicit drug use in the past 12 months. Column 1 of each table presents prevalence data for the sociodemographic groups, including Reserve component, and column 2 shows the odds ratios from the logistic regression.

The prevalence data in Tables 5.4 and 5.5 indicate substantial differences in past-12-month and past-30-day any illicit drug use for Reserve component, gender, race/ethnicity, age, marital status, pay grade, and deployment within the past 24 months. As discussed previously, Army National Guard, Army Reserve, and Marine Reserve personnel were more likely than the other components to use drugs. Although differences in prevalence rates were not tested here for statistical significance, drug use was also higher among females, Hispanics, younger personnel, unmarried personnel, those at lower pay grades, and those deployed at least once in the past 24 months compared with those not deployed within the past 24 months.

For the logistic regression models, the probability of past-30-day or past-12-month drug use was used as the dependent variable. Independent variables in the model included Reserve component, gender, race/ethnicity, age, marital status, pay grade, and deployment within the past 24 months. As shown in Table 5.5, results of the analysis for past-12-month use showed that Reserve component, gender, race/ethnicity, marital status, pay grade, and deployment within the past 24 months were significantly related to the probability of any drug use in the past 12 months. Results show that the odds of being a past-12-month drug user were significantly higher (after adjusting for all the other variables in the analysis) for the following groups:

- those who were not married compared with those who were married
- those in pay grades E1 to E6 relative to officers in grades O4 to O10
- those deployed at least once within the past 24 months compared with personnel who were not deployed within the past 24 months

Odds were significantly lower among the following:

- Air National Guard personnel compared with Marine Corps Reserve personnel
- males compared with females
- African American, non-Hispanics and those in the “other” race/ethnicity group compared with white, non-Hispanic personnel

Pay grade, marital status, and deployment within the past 24 months showed the strongest effects in the model. Odds of past-12-month illicit drug use among E1 to E3 and E4 to E6 pay grades were three times those of O4 to O10 pay grades. Odds of past-12-month illicit drug use among unmarried personnel were 1.8 times that of married personnel. Odds of past-12-month illicit drug use among Reserve personnel deployed at least once within the past 24 months were more than 1.5 times those of personnel not deployed within the past 24 months. This logistic regression analysis suggests that drug use prevention efforts should focus on lower pay grades, unmarried personnel, and those deployed within the past 24 months.

Table 5.4

SOCIODEMOGRAPHIC CORRELATES OF ANY ILLICIT DRUG USE, PAST 30 DAYS, TOTAL RESERVE COMPONENT

Sociodemographic Characteristic	Any Illicit Drug, ^a Past 30 Days		
	Prevalence	Adjusted Odds Ratio ^b	95% CI ^c
Reserve Component			
Army National Guard	9.5 (1.3)	1.51	(0.86, 2.65)
Army Reserve	6.5 (1.1)	1.27	(0.71, 2.28)
Navy Reserve	3.3 (0.4)	0.75	(0.45, 1.27)
Air National Guard	1.9 (0.3)	0.37 ^d	(0.22, 0.62)
Air Force Reserve	3.1 (0.3)	0.66	(0.38, 1.15)
Marine Corps Reserve	6.2 (1.2)	1.00	
Gender			
Male	6.1 (0.9)	0.64 ^d	(0.42, 0.97)
Female	9.1 (0.9)	1.00	
Race/Ethnicity			
White, non-Hispanic	6.9 (1.0)	1.00	
African American, non-Hispanic	6.1 (0.9)	0.81	(0.48, 1.35)
Hispanic	7.5 (1.1)	0.83	(0.50, 1.39)
Other	2.9 (1.2)	0.39 ^d	(0.21, 0.70)
Age			
24 and younger	9.8 (1.0)	0.75	(0.45, 1.25)
25-34	6.1 (1.2)	0.54 ^d	(0.32, 0.91)
35-44	4.3 (0.7)	0.69	(0.44, 1.10)
45 or older	4.9 (0.6)	1.00	
Marital Status			
Not married	9.0 (1.2)	1.76 ^d	(1.31, 2.36)
Married	4.2 (0.6)	1.00	
Pay Grade			
E1-E3	9.1 (2.2)	3.03 ^d	(1.10, 8.36)
E4-E6	7.5 (0.6)	3.26 ^d	(1.66, 6.37)
E7-E9	2.1 (0.7)	1.05	(0.48, 2.26)
W1-W5, O1-O3	3.6 (1.3)	1.80	(0.86, 3.75)
O4-O10	2.3 (0.7)	1.00	
Deployed Within Past 24 Months			
At least once	8.1 (0.8)	1.86 ^d	(1.38, 2.51)
Not within 24 months	4.6 (0.6)	1.00	
Total	6.6 (0.8)		

Note: Prevalence estimates are percentages among Reserve military personnel in each sociodemographic group that were classified as any illicit drug users in the past 30 days. The standard error of each estimate is presented in parentheses. Refer to Section 2.5.1 for descriptions of sociodemographic variables. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aAny nonmedical use of marijuana, cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^bOdds ratios were adjusted for Reserve component, gender, race/ethnicity, education, age, marital status, pay grade, and deployment within 24 months (Q147).

^c95% CI = 95% confidence interval of the odds ratio.

^dOdds ratio is significantly different from the reference group.

Source: 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: Past 30 Days, Q66A-I and Q68A-I).

Table 5.5

**SOCIODEMOGRAPHIC CORRELATES OF ANY ILLICIT DRUG USE, PAST 12 MONTHS,
TOTAL RESERVE COMPONENT**

Sociodemographic Characteristics	Any Illicit Drug Use, ^a Past 12 Months		
	Prevalence	Odds Ratio ^b	
		Adjusted	95% CI ^c
Reserve Component			
Army National Guard	15.3 (1.6)	1.44	(0.93, 2.23)
Army Reserve	13.2 (2.1)	1.45	(0.89, 2.38)
Navy Reserve	7.3 (0.5)	0.92	(0.61, 1.41)
Air National Guard	5.1 (0.2)	0.56 ^d	(0.37, 0.85)
Air Force Reserve	6.7 (0.7)	0.80	(0.49, 1.28)
Marine Corps Reserve	11.3 (2.0)	1.00	
Gender			
Male	11.0 (1.0)	0.62 ^d	(0.49, 0.78)
Female	16.2 (1.3)	1.00	
Race/Ethnicity			
White, non-Hispanic	12.5 (1.1)	1.00	
African American, non-Hispanic	9.3 (1.3)	0.60 ^d	(0.39, 0.93)
Hispanic	14.1 (1.9)	0.90	(0.66, 1.23)
Other	7.1 (1.6)	0.47 ^d	(0.29, 0.75)
Age			
24 or younger	16.9 (1.5)	0.82	(0.56, 1.20)
25-34	12.1 (1.4)	0.74	(0.50, 1.11)
35-44	8.1 (0.8)	0.80	(0.58, 1.11)
45 or older	7.8 (1.0)	1.00	
Marital Status			
Not married	15.8 (1.2)	1.78 ^d	(1.45, 2.19)
Married	7.9 (0.8)	1.00	
Pay Grade			
E1-E3	16.1 (2.3)	3.31 ^d	(1.94, 5.66)
E4-E6	13.6 (0.9)	3.09 ^d	(2.02, 4.74)
E7-E9	4.2 (1.1)	1.04	(0.59, 1.81)
W1-W5, O1-O3	5.8 (1.6)	1.35	(0.76, 2.39)
O4-O10	4.3 (0.8)	1.00	
Deployed Within Past 24 Months			
At least once	13.5 (1.0)	1.56 ^d	(1.22, 1.99)
Not within 24 months	9.8 (1.0)	1.00	
Total	12.0 (0.9)		

Note: Prevalence estimates are percentages among military personnel in each sociodemographic group that were classified as any illicit drug users in the past 12 months. Standard errors are in parentheses. Definitions and measures of substance use are given in Chapter 2. Refer to Chapter 2 for descriptions of sociodemographic variables. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aAny nonmedical use of marijuana, cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^bOdds ratios were adjusted for Reserve component, gender, race/ethnicity, education, age, marital status, pay grade, and deployment within the past 24 months (Q147).

^c95% CI = 95% confidence interval of the odds ratio.

^dOdds ratio is significantly different from the reference group.

Source: 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: Past 12 Months, Q66A-I, Q67A-I, and Q68A-I).

Related analyses are presented in Table 5.4 for any illicit drug use in the past 30 days. As with analyses for use in the past 12 months, Reserve component, gender, race/ethnicity, marital status, pay grade, and deployment within the past 24 months were significant predictors. Age was not a significant predictor for past-12-month illicit drug use but was a predictor for past-30-day use. Pay grades E1 to E3 and E4 to E6 were more than three times as likely as pay grades O4 to O10 to use drugs in the past 30 days. Personnel deployed at least once in the past 24 months were almost twice as likely as personnel not deployed in the past 24 months to use drugs in the past 30 days.

5.4 *Illicit Drug Use and Productivity Loss*

The relationship between illicit drug use and productivity loss for Reserve component personnel was also examined. The indicators of productivity loss examined were being late for work, leaving work early, being hurt in an on-the-job accident, working below one's normal level of performance, and not coming to work because of illness or injury. For the 2006 Reserve component survey, these items were asked in regard to military work days without any attributions to use of illicit drugs.

Table 5.6 presents productivity loss indicators for all Reserve component personnel, for those reporting any illicit drug use during the past 12 months, and for those reporting any illicit drug use except marijuana during the past 12 months. The table also shows the significance of differences among the three groups. Estimates are presented as the number of military work days lost in the past 12 months as the result of a particular productivity loss indicator. Examination of the table shows that personnel who reported past-year use of any illicit drugs or any illicit drug except marijuana were significantly more likely to also report a higher percentage of productivity loss on 1 or more military work days in the past year for all measures of productivity loss compared with the total Reserve personnel. For example, 19% of all Reserve personnel reported being late for work compared with more than 30% of those who reported using any illicit drug or any

illicit drug except marijuana. A similar difference is apparent for each of the other measures, but differences were largest for working below one's normal performance level and not coming into work because of illness or injury.

The percentage of those who reported having 4 or more military work days affected by the productivity loss indicators was also significantly higher among both drug-use categories than among the total Reserve component. Approximately 5% of total Reserve personnel reported working below normal performance level on 4 or more days in the past year, compared with about 15% of those who reported any illicit drug use in the past year, and 16% of those who used any illicit drug except marijuana in the past year. Approximately 9% of those who reported any illicit drug use and 11% of those who reported any illicit drug use except marijuana in the past year reported not coming into work because of illness or injury on 4 or more days in the past year compared with 3% of the total Reserve component personnel. For those in both drug use categories, 10% reported being late for work on 4 or more days compared with 3% of the total Reserve component personnel. Conversely, the total Reserve component personnel showed a higher percentage of those who reported productivity loss on no days in the past year compared with those who reported any illicit drug use and illicit drug use except marijuana in the past year.

These data provide some evidence that illicit drug use affects productivity and performance and thus results in lost time from military work. The data also suggest that these indicators may be a red flag to indicate possible substance abuse problems by Reserve personnel. That is, if personnel have an excessive number of occurrences of being late for work, leaving early, or working below their normal levels, drug use is one possible explanation. Caution, of course, must be used before jumping to this conclusion, because a number of other reasons could explain these behaviors.

Table 5.6

ANY ILLICIT DRUG USE AND PRODUCTIVITY LOSS, PAST 12 MONTHS, TOTAL RESERVE COMPONENT

Productivity Loss/Number of Military Work Days Affected, Past 12 Months	Any Illicit Drug Use ^a	Any Illicit Drug Use Except Marijuana ^b	All Personnel
<i>Sample</i>	1,282	1,045	15,212
Late for Work by 30 Minutes or More			
0 days	68.4 (1.7) ^c	68.9 (1.8) ^c	81.0 (0.6) ^{d,e}
1 day	12.1 (1.2)	11.7 (1.8)	10.1 (0.6)
2 or 3 days	10.0 (1.1) ^c	9.4 (1.0) ^c	5.5 (0.3) ^{d,e}
4 or more days	9.5 (1.8) ^c	10.1 (2.1) ^c	3.4 (0.5) ^{d,e}
1 or more days	31.6 (1.7) ^c	31.1 (1.8) ^c	19.0 (0.6) ^{d,e}
Left Work Early			
0 days	72.3 (2.0) ^{c,e}	69.9 (2.1) ^{c,d}	82.6 (0.8) ^{d,e}
1 day	8.7 (1.0)	8.0 (1.2)	7.3 (0.4)
2 or 3 days	10.6 (1.4) ^c	11.8 (1.7) ^c	6.7 (0.5) ^{d,e}
4 or more days	8.3 (2.1) ^{c,e}	10.3 (2.6) ^{c,d}	3.3 (0.4) ^{d,e}
1 or more days	27.7 (2.0) ^{c,e}	30.1 (2.1) ^{c,d}	17.4 (0.8) ^{d,e}
Hurt in an On-the-Job Accident			
0 days	84.9 (2.6) ^{c,e}	82.7 (3.0) ^{c,d}	93.1 (0.6) ^{d,e}
1 day	6.5 (1.2) ^c	7.0 (1.7)	4.3 (0.4) ^d
2 or 3 days	2.4 (0.6) ^c	2.5 (0.7)	1.4 (0.2) ^d
4 or more days	6.2 (1.9) ^{c,e}	7.9 (2.4) ^{c,d}	1.3 (0.3) ^{d,e}
1 or more days	15.1 (2.6) ^{c,e}	17.3 (3.0) ^{c,d}	6.9 (0.6) ^{d,e}
Worked Below Normal Performance Level			
0 days	68.8 (2.1) ^{c,e}	66.0 (2.4) ^{c,d}	84.0 (0.4) ^{d,e}
1 day	6.8 (1.1)	7.1 (1.3)	5.4 (0.3)
2 or 3 days	9.8 (1.2) ^c	10.7 (1.6) ^c	5.3 (0.3) ^{d,e}
4 or more days	14.6 (1.9) ^c	16.3 (2.5) ^c	5.3 (0.4) ^{d,e}
1 or more days	31.2 (2.1) ^{c,e}	34.0 (2.4) ^{c,d}	16.0 (0.4) ^{d,e}
Did Not Come into Work Because of Illness or Injury			
0 days	71.7 (2.0) ^{c,e}	68.0 (2.1) ^{c,d}	85.0 (0.6) ^{d,e}
1 day	10.0 (1.1) ^c	10.8 (1.7) ^d	6.5 (0.4) ^{d,e}
2 or 3 days	9.1 (1.4) ^c	9.9 (1.8) ^d	5.4 (0.3) ^{d,e}
4 or more days	9.1 (1.9) ^{c,e}	11.3 (2.4) ^{c,d}	3.1 (0.3) ^{d,e}
1 or more days	28.3 (2.0) ^{c,e}	32.0 (2.1) ^{c,d}	15.0 (0.6) ^{d,e}

Note: Table displays the percentage of Reserve military personnel in the three groups of interest (all enlisted personnel, any illicit drug users, and any illicit drug users except marijuana only) that reported the specified problem (e.g., late for work by 30 minutes or more) affected no days, 1 day, 2 or 3 days, 4 or more days, and 1 or more days. Sample sizes by group are also provided. The standard error of each estimate is presented in parentheses. Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimates among those who reported nonmedical use of marijuana, PCP/LSD/hallucinogens, cocaine, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^bEstimates among those who reported nonmedical use of PCP/LSD/hallucinogens, cocaine, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^cEstimate is significantly different from all personnel at the 95% confidence level.

^dEstimate is significantly different from any illicit drug use at the 95% confidence level.

^eEstimate is significantly different from any illicit drug use except marijuana at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Productivity Loss, Q86; Any Illicit Drug Use: Past 12 Months, Q66A-I, Q67A-I, and Q68A-I; Any Illicit Drug Use Except Marijuana: Past 12 Months, Q66B-I, Q67B-I, and Q68B-I).

5.5 *Illicit Drug Use and Drug Testing*

This section examines the association of past-12-month drug use and military drug-testing experience among Reserve personnel. Table 5.7 presents the distribution of testing periods overall and by illicit drug use status.

The time frames include being tested for drugs in the past 30 days, more than 30 days ago, and never.

As shown, virtually all Reserve personnel (93.4%) had been tested for drugs at some point in their military career. Overall, 16.5% of personnel reported being tested within the past 30 days and 76.9% more than 30 days ago. Among the Reserve components, almost all personnel had been tested for drugs; higher percentages of personnel in the Army Reserve (21.7%), Navy Reserve (23.1%), Army National Guard (16.7%), and Marine Corps Reserve (15.3%) than personnel in the Air Force Reserve (5.5%) and Air National Guard (8.1%) had been tested in the past 30 days.

Military drug testing showed a clear association with drug use. Overall, drug users were significantly more likely to be tested in the past 30 days (21.5%) than nonusers (15.8%). This pattern held for the Army National Guard, while for the Air National Guard and Marine Corps Reserve, drug users were significantly less likely to be tested in the past 30 days than were nonusers. Differences between users and nonusers were not significant for the other components.

Perceptions of the relative difficulty of predicting the last drug test by 12-month illicit drug use status was also examined. Reserve personnel were asked to think about their last drug test and then rate how easy it was to predict that they were going to be tested. Predictability of testing was assessed on a 4-point scale from “very easy” to “very hard.”

As shown in Table 5.8, a majority of Reserve personnel (54.5%) reported that it was very hard to predict the time of their last drug test. Overall, the Air Force Reserve (72.7%), Air National Guard (72.0%), and Navy Reserve (62.7%) had the highest percentage

of personnel reporting that it was very hard to predict when they were last going to be tested for drug use. Fewer personnel in the Army National Guard (50.6%), Army Reserve (45.3%), and Marine Corps Reserve (42.8%) reported that it was very hard to predict when they were last tested.

Personnel who did not use drugs were more likely to rate that it was very hard to predict testing (55.5%) compared with past-12-month drug users (46.9%). There are many possible explanations for this difference; it would be reasonable to assume, for example, that drug users would be “on guard” and thus would be suspicious of any indication that a test was forthcoming. Furthermore, these individuals may be more likely to perceive that they “knew” they were going to be tested, while nonusers would not. Another explanation may be that drug users are minimizing their perception of their risk of being caught using drugs to rationalize their use. Self-assessments of the likelihood of illicit drug use if there were no drug testing in the military were also examined by level of current drug use. As shown in Table 5.9, Reserve personnel who had used drugs were much more likely to believe that they would use illicit drugs if there were no drug testing than were personnel who had not used drugs. For example, 30.6% of Reserve personnel who had used illicit drugs in the past 30 days stated that they would be likely to use drugs even if there were no drug testing, while 4.3% who had not used drugs stated that they were not likely to use illicit drugs even if there were no testing. Similar findings were observed among users of marijuana only or any illicit drug other than marijuana.

5.6 *Illicit Drug Use, Stress, and Mental Health*

The relationship of illicit drug use during the past 12 months to perceived stress at work, mental health, and abuse history was examined in Table 5.10. A strong relationship exists between any illicit drug use, stress, and mental health measures. In particular, relative to abstainers, past-12-month illicit drug users were more likely to

Table 5.7

LAST TIME TESTED FOR ILLICIT DRUG USE, BY ANY ILLICIT DRUG USE IN PAST 12 MONTHS

Reserve Component/Testing	Any Illicit Drug Use, ^a Past 12 Months		Total ^b
	Yes	No	
Army National Guard			
Tested in past 30 days	23.9 (6.7) ^c	15.5 (3.9)	16.7 (4.3)
Tested more than 30 days ago	72.1 (6.4)	77.3 (3.6)	76.5 (3.9)
Never tested	4.0 (1.5)	7.2 (1.1)	6.7 (0.9)
Army Reserve			
Tested in past 30 days	24.9 (5.3)	21.2 (6.8)	21.7 (6.5)
Tested more than 30 days ago	68.2 (4.9)	72.0 (6.0)	71.5 (5.8)
Never tested	6.9 (1.3)	6.8 (1.7)	6.8 (1.6)
Navy Reserve			
Tested in past 30 days	26.7 (4.3)	22.8 (5.1)	23.1 (5.0)
Tested more than 30 days ago	69.2 (3.1)	74.0 (4.6)	73.7 (4.4)
Never tested	4.2 (1.8)	3.2 (0.6)	3.2 (0.7)
Air National Guard			
Tested in past 30 days	4.3 (1.2) ^c	8.3 (0.9)	8.1 (0.8)
Tested more than 30 days ago	89.6 (4.5)	85.1 (2.4)	85.3 (2.4)
Never tested	+ (+)	6.7 (1.8)	6.6 (1.9)
Air Force Reserve			
Tested in past 30 days	4.9 (1.1)	5.5 (0.6)	5.5 (0.6)
Tested more than 30 days ago	84.4 (3.4)	87.0 (1.0)	86.8 (1.1)
Never tested	10.7 (4.0)	7.5 (0.7)	7.7 (0.8)
Marine Corps Reserve			
Tested in past 30 days	5.1 (2.7) ^c	16.6 (6.1)	15.3 (5.7)
Tested more than 30 days ago	89.3 (3.6) ^c	75.1 (5.9)	76.6 (5.7)
Never tested	5.6 (2.1) ^c	8.3 (1.3)	8.1 (1.3)
Total Reserve			
Tested in past 30 days	21.5 (4.0) ^c	15.8 (2.5)	16.5 (2.6)
Tested more than 30 days ago	73.2 (3.8)	77.4 (2.3)	76.9 (2.4)
Never tested	5.3 (1.0)	6.7 (0.6)	6.5 (0.6)

Note: Table displays the percentage of military personnel in each Reserve component by any illicit drug use group (yes or no) that reported random, unannounced military drug testing in the past 12 months. Estimates may not sum to 100 by column group because of rounding. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aAny nonmedical use of marijuana, cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^bIndividuals with missing "any illicit drug use in the past 12 months" are not included in these estimates.

^cUser estimate is significantly different from nonuser estimate at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: Past 12 Months, Q66A-I, Q67A-I, and Q68A-I; Last Time Tested, Q69).

Table 5.8

PREDICTABILITY OF DRUG TESTING, BY ANY ILLICIT DRUG USE IN PAST 12 MONTHS

Reserve Component/Testing	Any Illicit Drug Use, ^a Past 12 Months		Total ^b
	Yes	No	
Army National Guard			
Not very hard	50.5 (3.7) ^c	41.1 (2.0)	42.5 (1.6)
Very hard	45.4 (3.3)	51.5 (1.7)	50.6 (1.5)
Never tested	4.0 (1.5)	7.4 (1.1)	6.9 (0.9)
Army Reserve			
Not very hard	52.1 (5.5)	47.0 (3.5)	47.6 (3.6)
Very hard	40.9 (5.5)	46.0 (2.7)	45.3 (3.0)
Never tested	7.0 (1.3)	7.0 (1.9)	7.0 (1.7)
Navy Reserve			
Not very hard	44.0 (3.4) ^c	33.2 (1.7)	34.0 (1.6)
Very hard	51.9 (3.7) ^c	63.5 (1.6)	62.7 (1.5)
Never tested	4.1 (1.8)	3.3 (0.6)	3.3 (0.7)
Air National Guard			
Not very hard	22.8 (5.4)	21.2 (1.0)	21.3 (0.9)
Very hard	+ (+)	72.1 (1.6)	72.0 (1.9)
Never tested	+ (+)	6.7 (1.8)	6.7 (1.9)
Air Force Reserve			
Not very hard	21.5 (2.6)	19.3 (0.6)	19.5 (0.7)
Very hard	67.3 (5.3)	73.1 (0.9)	72.7 (1.0)
Never tested	11.2 (4.2)	7.5 (0.7)	7.8 (0.8)
Marine Corps Reserve			
Not very hard	49.7 (2.5)	48.9 (1.8)	49.0 (1.6)
Very hard	44.6 (3.1)	42.5 (1.7)	42.8 (1.4)
Never tested	5.8 (2.2)	8.5 (1.3)	8.2 (1.3)
Total Reserve			
Not very hard	47.7 (2.8) ^c	37.6 (1.7)	38.8 (1.7)
Very hard	46.9 (2.7) ^c	55.5 (1.7)	54.5 (1.7)
Never tested	5.4 (1.0)	6.9 (0.7)	6.7 (0.6)

Note: Table displays the percentage of military personnel in each Reserve component, by any illicit drug use group (yes or no) that reported the predictability of random, unannounced military drug testing was not very hard, very hard, or respondent was never tested. Estimates may not sum to 100 by column group because of rounding. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Definitions and measure of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aAny nonmedical use of marijuana, cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^bIndividuals with missing "any illicit drug use in the past 12 months" answers are not included in these estimates.

^cUser estimate is significantly different from nonuser estimate at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: Past 12 Months, Q66A-I, Q67A-I, and Q68A-I; Predictability of Drug Testing, Q70).

Table 5.9

LIKELIHOOD OF DRUG USE IF NO RANDOM DRUG TESTING, BY TYPE OF DRUG USE

Current Drug Use	Likely to Use Drugs If There Was No Testing		Total ^a
	Yes	No	
Never			
Never used illicit drug	35.4 (2.7) ^b	70.4 (1.3)	67.6 (1.3)
Marijuana			
Past 30 days	21.6 (3.1) ^b	1.3 (0.2)	2.9 (0.4)
Past 12 months	36.4 (4.1) ^b	3.3 (0.5)	5.9 (0.7)
Any Illicit Drug Except Marijuana^c			
Past 30 days	22.2 (3.6) ^b	3.7 (0.5)	5.1 (0.7)
Past 12 months	36.6 (2.6) ^b	6.9 (0.6)	9.2 (0.7)
Any Illicit Drug^d			
Past 30 days	30.6 (3.9) ^b	4.3 (0.5)	6.4 (0.7)
Past 12 months	46.4 (3.6) ^b	8.8 (0.7)	11.7 (0.9)

Note: Table displays the percentage of Reserve military personnel by “likely to use drugs if there were no testing” indicator (yes or no) that reported use of the drugs noted in the rows of the table (i.e., table displays column percentages). The standard error of each estimate is presented in parentheses. Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aIndividuals with missing “likely to use drugs if there were no drug testing” responses are not included in these estimates.

^bLikely estimate is significantly different from nonlikely estimate at the 95% confidence level.

^cEstimates are among those who reported nonmedical use of PCP/LSD/hallucinogens, cocaine, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^dEstimates are among those who reported nonmedical use of marijuana, PCP/LSD/hallucinogens, cocaine, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

Source: 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: Past 30 Days, Q66A-I and Q68A-I; Any Illicit Drug Use: Past 12 Months, Q66A-I, Q67A-I, and Q68A-I; Likelihood of Drug Use If No Random Drug Testing, Q71).

- perceive “a lot” of stress at their civilian job (26.7% compared with 18.8%), at their military job (19.2% compared with 12.4%), or in their family life (33.1% compared with 16.0%);
- experience 11 or more days during the month when their mental health interfered with their usual activities (6.7% compared with 1.3%);
- meet the criteria for needing further depression evaluation (33.8% compared with 15.9%);
- report suicidal ideation in the past year (17.0% compared with 3.8%);
- meet screening criteria for PTSD in the past 30 days (15.7% compared with 6.6%); and
- report any physical or sexual abuse (46.2% compared with 28.1%).

These findings are consistent with other national studies showing high rates of comorbidity between substance use and mental health problems, both in the general population of the United States (Regier et al., 1990) and among military veterans (Kulka et al., 1990). Although it is clear that there is also a

relationship between any illicit drug use in the past 12 months and stress at work, the data do not allow us to infer the direction of the relationship. It seems more likely, however, that illicit drug use would be used as a relatively ineffective avoidance strategy for coping with stress rather than as a precursor of stress.

5.7 Summary

5.7.1 Reserve Component Comparisons of Illicit Drug Use

Unadjusted and adjusted estimates of drug use for each of the Services were computed to assess the effects of sociodemographic composition on drug use rates (Table 5.1):

- Comparisons of unadjusted 12-month estimates showed that the rate of any illicit drug use during the past year was highest among Army National Guard (15.3%) and Army Reserve (13.2%) personnel, which was significantly higher than among personnel from the Navy Reserve (7.3%),

Table 5.10

STRESS AND MENTAL HEALTH PROBLEMS IN THE PAST 30 DAYS AND PAST 12 MONTHS, BY DRUG USE

Problem/Level	Drug Use		
	Never Used Drugs	Used in Lifetime but Not Past 12 Months	Used in Past 12 Months
Stress at Civilian Job, Past 12 Months			
A lot	18.8 (1.4) ^a	22.0 (1.8) ^a	26.7 (1.7) ^{b,c}
Some/a little	51.9 (1.3)	55.8 (1.7)	50.7 (3.2)
None at all	29.3 (1.5) ^{a,c}	22.2 (1.4) ^b	22.5 (2.0) ^b
Stress at Military Job, Past 12 Months			
A lot	12.4 (1.7) ^a	10.7 (1.1) ^a	19.2 (1.8) ^{b,c}
Some/a little	55.2 (1.7) ^c	63.3 (2.6) ^b	58.0 (3.1)
None at all	32.3 (1.2) ^{a,c}	26.0 (2.6) ^b	22.7 (2.6) ^b
Stress in Family, Past 12 Months			
A lot	16.0 (0.9) ^{a,c}	21.5 (1.8) ^{a,b}	33.1 (1.8) ^{b,c}
Some/a little	55.3 (1.2) ^{a,c}	60.2 (2.4) ^{a,b}	49.7 (3.0) ^{b,c}
None at all	28.6 (1.2) ^{a,c}	18.3 (1.1) ^b	17.2 (2.0) ^b
Days in Past Month Limited Usual Activities Because of Poor Mental Health^d			
11 or more days	1.3 (0.2) ^a	0.8 (0.3) ^a	6.7 (1.4) ^{b,c}
4-10 days	1.2 (0.2) ^{a,c}	2.6 (0.5) ^{a,b}	5.5 (1.2) ^{b,c}
1-3 days	5.9 (0.7) ^{a,c}	8.0 (0.8) ^{a,b}	15.1 (2.4) ^{b,c}
None	91.6 (0.6) ^{a,c}	88.6 (1.0) ^{a,b}	72.7 (2.1) ^{b,c}
Need for Further Anxiety Evaluation, Past 30 Days			
Yes	10.6 (1.1)	9.2 (1.0) ^a	13.8 (1.3) ^c
No	89.4 (1.1)	90.8 (1.0) ^a	86.2 (1.3) ^c
Need for Further Depression Evaluation			
Yes	15.9 (0.8) ^a	20.0 (1.9) ^a	33.8 (2.0) ^{b,c}
No	84.1 (0.8) ^a	80.0 (1.9) ^a	66.2 (2.0) ^{b,c}
Suicidal Ideation, Past Year			
Yes	3.8 (0.5) ^a	4.7 (0.8) ^a	17.0 (1.8) ^{b,c}
No	96.2 (0.5) ^a	95.3 (0.8) ^a	83.0 (1.8) ^{b,c}
PTSD,^e Past 30 Days			
Yes	6.6 (1.1) ^a	6.5 (0.9) ^a	15.7 (1.8) ^{b,c}
No	93.4 (1.1) ^a	93.5 (0.9) ^a	84.3 (1.8) ^{b,c}
Any Physical/Sexual Abuse			
Yes	28.1 (0.9) ^{a,c}	40.2 (1.7) ^{a,b}	46.2 (2.4) ^{b,c}
No	71.9 (0.9) ^{a,c}	59.8 (1.7) ^{a,b}	53.8 (2.4) ^{b,c}

Note: Table displays the percentage of Reserve military personnel by drug use who reported the stress and mental health problems indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Column group estimates may not sum to 100 because of rounding. Pairwise significance tests were done between all possible drug use combinations (e.g., never used drugs vs. used in lifetime but not past year, never used drugs vs. used in past 12 months). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from used in past 12 months at the 95% confidence level.

^bEstimate is significantly different from never used drugs at the 95% confidence level.

^cEstimate is significantly different from used in lifetime but not past 12 months at the 95% confidence level.

^dBased on respondents' perception of number of days when mental health limited usual activities.

^ePTSD is posttraumatic stress disorder.

Source: 2006 Department of Defense Reserve Component Survey (Any Drug Use, Q66-Q68; Stress at Civilian Job Q88; Stress at Military Job, Q89; Stress in Family, Q90; Mental Health, Past 30 Days, Q87; Need for Further Depression Evaluation, Q97-Q99; Need for Further Anxiety Evaluation, Q100; Suicidal Ideation, Q101A; PTSD, Q104; Abuse, Q103).

Air Force Reserve (6.7%), and Air National Guard (5.1%); the rate for Marine Corps Reserve personnel was 11.3%. This same pattern was observed for marijuana use and any illicit drug use except marijuana in the past 12 months.

- Adjustments for sociodemographic differences among the Reserve components had the largest effect on the Marine Corps Reserves, with the estimates for use of any illicit drug decreasing from 11.3% to 9.5%, and on the Navy Reserve, with the estimates increasing from 7.3% to 8.9%. After the adjustments, rates of past-12-month any illicit drug use for the Army National Guard (14.6%) were significantly higher than the other components, except for the Army Reserve; rates of past-12-month use for the Air National Guard (5.5%) were significantly lower than the other components.
- Differences between adjusted and unadjusted rates suggest that differences among the Reserve components in sociodemographic composition are a partial explanation for differences in drug use among the Services.

5.7.2 Prevalence of Specific Drug Use

Analgesics and marijuana were the most commonly used drugs in the past 30 days by Reserve personnel in 2006; use of all other drugs was much lower (Tables 5.2 and 5.3):

- In 2006, 4.0% of Reserve personnel reported use of analgesics and 3.0% reported use of marijuana within the past month; rates of use in the past year were 7.3% for analgesics and 6.1% for marijuana.
- Except for analgesics and marijuana, 30-day use of all other individual illicit drugs was 2.0% or less, and 12-month use was less than 3.0% in 2005.

5.7.3 Correlates of Illicit Drug Use

Illicit drug use was related to a number of sociodemographic factors (Tables 5.4 and 5.5). Logistic regression analysis showed that Reserve component, gender, race/ethnicity, marital status, pay grade, and deployment within the past 24 months were significantly related to the probability of any drug use in the past 30 days and past 12 months. Age was also significantly related to any illicit drug use in the past 30 days. Specifically, the probability of any illicit drug

use in the past 30 days and past 12 months was significantly higher among the following:

- those who were not married compared with those who were married
- those in pay grades E1 to E6 relative to officers in grades O4 to O10
- personnel deployed at least once in the past 24 months compared with personnel not deployed within the past 24 months

Probability was significantly lower among the following:

- the Air National Guard compared with the Marine Corps Reserve
- males relative to females
- African American, non-Hispanics, and personnel in the “other” race/ethnicity group compared with white, non-Hispanic personnel

Pay grade, marital status, and deployment within the past 24 months showed the strongest effects in the model. Personnel in pay grades E1 to E3 and E4 to E6, unmarried personnel, and those who had been deployed at least once in the past 24 months had higher odds of drug use than other personnel. This logistic regression analysis suggests that drug use prevention efforts should focus on personnel in pay grades E1 to E6, unmarried personnel, and those who have been deployed at least once in the past 24 months.

5.7.4 Illicit Drug Use and Productivity Loss

Illicit drug use was related to productivity loss, as measured by being late for work, leaving work early, being hurt in an on-the-job accident, working below one’s normal level of performance, and not coming to work because of illness or injury (Table 5.6):

- Reserve personnel who reported past-year use of any illicit drug or any illicit drug except marijuana were significantly more likely than the total Reserve personnel to also report a higher percentage of productivity loss on 1 or more military work days in the past year. The percentage of those who reported 4 or more military work days affected by the productivity loss indicators was also significantly higher among both drug use

categories than among the total Reserve component.

- About 5% of the total Reserve personnel reported working below normal performance level on 4 or more days in the past year compared with about 15% of those who reported any illicit drug use in the past year, and 16% of those who used any illicit drug except marijuana in the past year.
- Approximately 9% of those who reported any illicit drug use in the past year and 11% of those who reported any illicit drug use except marijuana reported not coming into work because of illness or injury on 4 or more days compared with about 3% of the total Reserve component personnel. For those in both drug use categories, 10% reported being late for work on 4 or more days compared with 3% of the total Reserve component personnel.

5.7.5 *Illicit Drug Use and Drug Testing*

Drug testing is used to deter and detect drug use among Reserve personnel. Analyses examined the association of past-12-month drug use and drug-testing experience among Reserve personnel (Tables 5.7, 5.8, and 5.9):

- Virtually all Reserve personnel (93.4%) had been tested for drugs at some point since joining the military. Overall, 16.5% of personnel reported being tested within the past 30 days and 76.9% more than 30 days ago. Army Reserve (21.7%), Navy Reserve (23.1%), Army National Guard (16.7%), and Marine Corps Reserve (15.3%) personnel reported higher rates of testing in the past 30 days than personnel in the Air Force Reserve (5.5%) and Air National Guard (8.1%).
- Drug testing showed a clear association with drug use. Overall, past-12-month drug users were significantly more likely to be tested in the past 30 days (21.5%) than nonusers (15.8%).
- A majority of Reserve personnel (54.5%) reported that it was very hard to predict the time of their last drug test. This estimate varied, however, by Reserve component. The Air Force Reserve (72.7%), Air National Guard (72.0%), and the Navy Reserve (62.7%) had the highest percentages of personnel reporting that it was very hard to predict when they were last going to be tested for drug use, followed by the Army National Guard (50.6%), Army Reserve (45.3%), and Marine Corps Reserve (42.8%).

- Reserve personnel who did not report drug use in the past 12 months were more likely to rate that it was very hard to predict testing (55.5%) than those who did report drug use (46.9%).
- Reserve personnel who used drugs in the past 30 days or past 12 months were more likely than nonusers to believe that they would use illicit drugs if there were no drug testing.

5.7.6 *Stress, Mental Health, and Illicit Drug Use*

Consistent with other national studies showing high rates of comorbidity between substance use and mental health problems, a strong relationship existed between illicit drug use, stress, mental health problems, and physical or sexual abuse among Reserve personnel (Table 5.10):

- Compared with their counterparts who did not use illicit drugs, past-month illicit drug users had more problems with stress at their civilian job (26.7% compared with 18.8%), at their military job (19.2% compared with 12.4%) or in their family life (33.1% compared with 16.0%), and were more likely to experience 11 or more days during the month when their mental health interfered with their usual activities (6.7% compared with 1.3%).
- Past-year illicit drug users were also more likely than nonusers to meet the criteria for needing further depression evaluation (33.8% compared with 15.9%), report suicidal ideation in the past year (17.0% compared with 3.8%), meet screening criteria for PTSD in the past 30 days (15.7% compared with 6.6%), and report any physical or sexual abuse (46.2% compared with 28.1%).

Chapter 6: Stress and Mental Health

The demanding characteristics of the military environment are such that many stressors are inherent (Orasanu & Backer, 1996). These stressors are compounded in times of war. To assess the effect of these stressors on Reserve component personnel and to compare these effects with those among active-duty personnel, the 2006 *Department of Defense Reserve Component Survey* contained a set of questions about the mental health of Guard and Reserve members. Like the active-duty surveys (Bray et al., 1988, 1992, 1995b, 1999, 2002, 2005), the Reserve component survey asked respondents to appraise their levels of stress at work (both civilian and military) and in their intimate and family relationships. Respondents also provided information on specific sources of stress and on the perceived effect of work-related and personal or family-related stress on their military performance. We also asked respondents to specify the methods they used to cope with stress. In addition, information was collected on indicators of depressive and anxiety symptoms for different time frames. To support the 1999 DoD initiatives to control combat stress among Service members and to expand DoD's suicide prevention program (Office of the Assistant Secretary of Defense [OASD], 1999), we obtained baseline prevalence information with standardized instruments to screen for posttraumatic stress disorder (PTSD) symptoms and suicidal ideation (see Chapter 2). Finally, we assessed the use of, perceived need for, and perceived career damage associated with mental health counseling by Reserve component personnel, as well as the relationship between perceived career damage and selected mental health measures. In this chapter, we present findings related to the issues of mental health, exposure to stress, coping strategies, and functioning.

6.1 *Appraisal of Stress and Impact on Military Job*

Psychosocial theories of stress generally recognize the importance of cognitive factors in the development and maintenance of stress-related symptoms and problems in life functioning. Folkman and Lazarus (1980, 1985), for

example, proposed a psychosocial model that emphasizes the important role that appraisal plays in the development and maintenance of stress-related adjustment problems. Indeed, a number of experimental and applied studies have shown robust relationships between individuals' appraisal of the level of stress associated with specific life events and their capacity to function effectively (see Foa, Steketee, and Rothbaum [1989]). Most studies examining deployment stressors have been limited to selected combat troops and/or veteran groups (e.g., Vogt et al. [2005]; Hoge et al. [2004]). The Reserve component survey offered the opportunity to assess the degree to which deployment and interpersonal stressors were cited as main sources of stress in the general Guard and Reserve populations.

Personnel were asked to separately appraise their levels of work and family stress, as well as the degree to which stress interfered with the performance of their military and civilian jobs. Table 6.1 shows that Guard and Reserve members reported higher levels of stress at their civilian jobs and in their personal lives than at their military jobs. Approximately 20% of the total Reserve component reported "a lot" of stress at their civilian jobs, compared with the less than 13% who reported "a lot" of stress at their military jobs. Members of the Navy Reserve and Air National Guard reported significantly less stress at their military jobs than those in other Reserve components. Members of the Army National Guard and Marine Corps Reserve reported more stress in their personal or family lives than those in the Air Force Reserve or Air Guard. Of the total Reserve component, about 13% reported that civilian work or family stressors interfered "some" or "a lot" with the performance of their military job.

6.2 *Specific Sources and Correlates of Stress*

To enhance our understanding of the nature of perceived stress, we examined responses to the following specific questions on potential sources of stress in the domains of work and family life:

Table 6.1 LEVELS OF PERCEIVED STRESS AT WORK AND IN FAMILY LIFE, PAST 12 MONTHS, BY RESERVE COMPONENT

Type and Level of Stress	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Stress at Civilian Job							
A lot	21.1 (2.9)	20.3 (1.6)	19.6 (0.9)	18.1 (0.9) ^a	21.5 (0.8) ^b	20.3 (1.9)	20.4 (1.3)
Some	23.2 (1.3) ^{a-c}	26.3 (1.7) ^{b,c}	30.3 (1.1) ^{d-f}	32.7 (2.5) ^{d-f}	29.1 (0.8) ^{d,f}	23.8 (1.6) ^{a-c}	26.2 (1.0)
A little	25.7 (2.2)	24.2 (0.8) ^{a-c,f}	28.9 (1.0) ^e	28.0 (0.6) ^e	26.8 (0.9) ^e	29.2 (1.6) ^e	26.2 (0.9)
None at all	30.0 (1.3) ^{a-c}	29.3 (2.7) ^{a-c}	21.2 (1.1) ^{d-f}	21.2 (2.5) ^{d,e}	22.6 (0.9) ^{d,e}	26.8 (2.2) ^c	27.1 (1.1)
Stress at Military Job							
A lot	14.9 (2.7) ^{b,c}	12.5 (1.5) ^{b,c,f}	8.5 (0.5) ^{a,b,d-f}	6.4 (0.6) ^{a,c-f}	13.0 (0.8) ^{b,c,f}	21.6 (2.7) ^{a-c,e}	12.9 (1.3)
Some	23.2 (2.7) ^a	26.9 (1.3)	24.6 (1.1) ^a	26.2 (1.0) ^a	29.8 (1.2) ^{b-d}	27.2 (1.6)	25.4 (1.3)
A little	29.2 (1.4) ^{b,c}	31.2 (1.4) ^{b,c}	35.8 (0.9) ^{a,d-f}	38.2 (1.9) ^{a,d-f}	32.3 (0.9) ^{b,c}	30.4 (1.8) ^{b,c}	31.7 (0.9)
None at all	32.7 (3.0) ^{a,f}	29.3 (1.5) ^{a,f}	31.0 (1.2) ^{a,f}	29.2 (2.7) ^f	25.0 (0.9) ^{c,d,e}	20.8 (2.2) ^{b-e}	30.0 (1.5)
Stress in Family							
A lot	21.2 (1.2) ^{a-c}	19.5 (1.7) ^a	16.4 (0.9) ^d	15.9 (0.7) ^{d,f}	15.5 (0.9) ^{d-f}	21.0 (2.4) ^{a,b}	19.2 (0.7)
Some	22.5 (1.3)	22.5 (1.7)	23.6 (0.5)	24.9 (0.9)	24.0 (0.9)	22.5 (1.7)	23.0 (0.7)
A little	29.7 (2.1) ^{a-c}	32.9 (1.8)	35.9 (1.2) ^d	36.0 (3.1)	35.3 (0.7) ^d	32.9 (2.3)	32.5 (1.2)
None at all	26.6 (2.2)	25.1 (1.2)	24.1 (1.3)	23.1 (2.6)	25.3 (1.2)	23.6 (1.5)	25.3 (1.1)
Civilian Work Stress Interfered with Military Job Performance							
A lot	6.0 (1.8) ^b	3.2 (0.5)	2.8 (0.3)	2.3 (0.4) ^{a,d}	3.3 (0.3) ^b	3.7 (0.7)	4.2 (0.8)
Some	7.7 (0.5) ^a	8.9 (1.0)	8.2 (0.6)	7.3 (0.9) ^a	9.5 (0.5) ^{b,d}	10.1 (1.4)	8.3 (0.4)
A little	12.1 (1.4) ^{a,c,f}	14.1 (1.3)	15.6 (0.7) ^{b,d}	12.9 (0.8) ^{a,c,f}	15.9 (0.8) ^{b,d}	15.3 (0.8) ^{b,d}	13.5 (0.7)
None at all	74.2 (1.1)	73.8 (1.6)	73.4 (1.0) ^b	77.5 (1.4) ^{a,c,f}	71.3 (1.4) ^b	70.9 (1.5) ^b	73.9 (0.7)

(Table continued on next page)

Table 6.1

LEVELS OF PERCEIVED STRESS AT WORK AND IN FAMILY LIFE, PAST 12 MONTHS, BY RESERVE COMPONENT (CONTINUED)

Type and Level of Stress	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Family Stress Interfered with Military Job Performance							
A lot	6.5 (1.8) ^{a-c}	4.0 (0.5) ^{a-c}	2.7 (0.3) ^{b,d,e}	1.6 (0.2) ^{a,c-f}	2.6 (0.2) ^{b,d,e}	4.2 (0.9) ^b	4.5 (0.9)
Some	8.6 (0.5) ^{a-c}	9.0 (0.9) ^{a-c}	6.5 (0.5) ^{d,e}	5.9 (0.5) ^{d,e}	6.8 (0.5) ^{d,e}	9.2 (2.2)	8.1 (0.3)
A little	13.3 (1.6) ^{a-c,e}	17.4 (1.0) ^d	18.5 (0.8) ^d	17.7 (1.0) ^d	17.2 (0.8) ^d	17.3 (1.8)	15.9 (0.8)
None at all	71.5 (1.6)	69.6 (1.3) ^{a,b}	72.3 (0.9) ^f	74.8 (1.1) ^{e,f}	73.4 (1.3) ^{e,f}	69.3 (0.5) ^{a-c}	71.6 (0.7)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported the indicated type and level of stress in the past 12 months. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Stress at Civilian Job, Q88; Stress at Military Job, Q89; Stress in Family, Q90; Work Stress Interference Q91; Family Stress Interference Q92).

During the past 12 months, how much stress did you experience from each of the following?

- being deployed at sea or in the field
- problems at your civilian job
- problems at your military job
- conflicts between your military and family responsibilities
- conflicts between your military and civilian job demands
- insufficient training for your military job
- being away from your family
- having a baby
- finding childcare/daycare
- death in the family
- divorce or breakup
- problems with money
- health problems that you had
- health problems in your family
- behavior problems in some of your children
- unexpected events/problems (e.g., hurricane, flood, home robbery)

As shown in Table 6.2, the most frequently reported sources of stress were being away from family (10.6%), problems with money (10.5%), and problems at a civilian job (10.4%). Deployment was the next most frequently acknowledged source of stress (7.5%), followed by conflicts between military and civilian job demands (6.6%). These top sources of stress were reported by both genders, although several significant differences were observed. Women experienced significantly more stress than men in 9 of the 16 sources of stress. Some exceptions where no gender differences were reported included deployment, problems at military job, conflicts between military and family responsibilities, and conflicts between military and civilian job demands.

Because Guard and Reserve members tend to be older and are more likely to have children than active-duty

personnel (see Chapter 10) and to hold concurrent civilian jobs, the potential for conflict with their military job demands is greater. We therefore included the Work-Family Conflict and Family-Work Conflict Scales (Netemeyer, Boles, & McMurrian, 1996) to further assess potential specific problem areas. As shown in Table 6.3, Reserve component members were twice as likely to agree with statements describing work conflicts with family life than with statements of family life conflicting with work. The greatest agreement was with the statement that because of military work-related activities, they had to make changes to their plans for family activities. More than one-third of members (35.5%) agreed that demands of military work interfered with their home/family life. Members of the Marine Corps Reserve were more likely than members of the other components to report work-with-family conflicts. Also shown in Table 6.3, 15.9% of Reserve component members agreed that family demands interfered with work-related activities. Members of the Air National Guard reported the fewest family-work conflicts, and members of the Navy Reserve were more likely than those in other Reserve components to report that things they wanted to do at their military job did not get done because of family demands.

The military may present special challenges for women working in a male-dominated, combat-oriented environment. As shown in Table 6.4, 22.2% of women in the Reserve component reported being under a “great deal” or a “fairly large amount” of stress related to being a woman in the military. Excluding women in the Marine Corps Reserve because of low precision, women in the Army National Guard and Army Reserve were much more likely to perceive stress as a woman than those in the Navy Reserve, Air National Guard, or Air Force Reserve. Married women tended to report less stress as a woman in the military than unmarried women, although not all differences reached statistical significance.

Table 6.5 shows the prevalence of high levels of military work stress and its sociodemographic predictors. Members of the Marine Corps Reserve reported more work stress than those in any other components (21.6%),

Table 6.2

SPECIFIC SOURCES OF STRESS, PAST 12 MONTHS, BY GENDER, BY TOTAL RESERVE COMPONENT

Stressor	Gender		Total Reserve Component
	Male	Female	
Deployment	7.6 (0.8)	6.7 (1.2)	7.5 (0.8)
Problems at my civilian job	9.6 (0.8) ^a	14.1 (2.0)	10.4 (0.9)
Problems at my military job	5.7 (1.0)	7.3 (1.0)	6.0 (0.9)
Conflicts between military and family responsibilities	6.0 (0.8)	7.3 (1.6)	6.2 (0.9)
Conflicts between military and civilian job demands	6.5 (0.9)	7.3 (1.7)	6.6 (1.0)
Insufficient training for my military job	5.3 (0.4)	6.8 (0.8)	5.6 (0.3)
Being away from my family	10.0 (0.9) ^a	13.5 (1.6)	10.6 (0.8)
Having a baby	3.7 (0.3)	5.3 (0.9)	3.9 (0.3)
Finding childcare/daycare	3.2 (0.3) ^a	6.4 (0.7)	3.8 (0.2)
Death in the family	3.8 (0.3) ^a	7.5 (1.1)	4.4 (0.3)
Divorce or breakup	5.2 (0.4) ^a	8.1 (0.9)	5.7 (0.3)
Problems with money	9.7 (0.5) ^a	13.9 (1.4)	10.5 (0.5)
Personal health problems	3.0 (0.4) ^a	5.3 (0.8)	3.4 (0.3)
Family health problems	3.8 (0.4) ^a	6.9 (1.0)	4.3 (0.4)
Behavior problems in children	2.2 (0.3) ^a	3.9 (0.7)	2.5 (0.3)
Unexpected event/problem	2.8 (0.4)	5.2 (1.2)	3.2 (0.3)

Note: Table displays the percentage of Reserve military personnel by gender who reported the indicated source of stress was “a lot” in the past 12 months. The standard error of each estimate is presented in parentheses. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aDifference between males and females is significant at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Specific Sources of Stress, Q95).

and were more than three times as likely to report high levels of military work stress than those in the Air National Guard. Indeed, members of the Air National Guard (6.4%) reported significantly less work stress than those of any other component. Women reported more work stress in their military jobs than men and personnel of racial/ethnic backgrounds other than white non-Hispanic, black non-Hispanic, or Hispanic reported the least work stress of any racial/ethnic category. Guard and Reserve members who had deployed within the past 24 months were also more likely to report high levels of military work stress than those who had not deployed.

Similarly, Table 6.6 shows the prevalence of high levels of family or personal stress and the independent contribution of each sociodemographic correlate controlling for deployment in past 2 years. An estimated 28.4% of woman reported a high level of family stress and were twice as likely as men to report a high level. Members of the Army National Guard were significantly

more likely to report a high level of family stress than members of other components as were personnel in pay grades E1-E6.

6.3 Stress and Productivity Loss

We also asked respondents about loss of productivity at work. Guard and Reserve members were asked to indicate on how many work days in the past 12 months any of the following occurred:

- They were late for work by 30 minutes or more.
- They left work early for a reason other than an errand or early holiday leave.
- They were hurt in an on-the-job accident.
- They worked below their normal level of performance.
- They did not come to work at all because of an illness or a personal accident.

Table 6.3 WORK AND FAMILY CONFLICT, BY RESERVE COMPONENT

Conflict	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Work							
Demands of military work interfere with home/family life	33.4 (2.0) ^{a,b}	36.9 (1.8) ^{b,c}	36.0 (1.3) ^{b,c}	30.6 (0.6) ^{a,b,d,e}	39.1 (1.4) ^{b,c,f}	49.9 (2.6) ^{a,c-f}	35.5 (1.0)
Amount of time military job requires makes it difficult to fulfill family responsibilities	23.8 (1.7) ^{b,c}	24.5 (1.8) ^{b,c}	23.9 (0.9) ^{b,c}	18.7 (0.7) ^{a,b,d-f}	26.0 (1.9) ^{b,c}	32.0 (1.3) ^{a,c-f}	24.0 (0.9)
Things I want to do at home do not get done because of demands of military job	24.4 (1.5) ^{a,b}	26.8 (1.6) ^{b,c}	26.6 (1.4) ^{a-c}	22.8 (0.9) ^{a,b,d,e}	30.9 (1.6) ^{c,e,f}	33.0 (2.4) ^{c-f}	26.0 (0.8)
Strain of military job makes it difficult to fulfill family duties	21.3 (1.8) ^{b,c}	22.4 (1.1) ^{b,c}	20.0 (0.7) ^{b,c}	15.8 (0.5) ^{a,b,d-f}	21.6 (1.5) ^{b,c}	29.1 (1.0) ^{a,c-f}	21.3 (0.9)
Military work-related duties cause changes to plans for family activities	48.0 (2.3) ^{a,b}	50.6 (1.6) ^{a,b}	52.0 (2.2) ^b	48.1 (0.8) ^{a,b}	55.9 (1.3) ^{b,c,d,f}	63.0 (2.8) ^{a,c-f}	50.5 (1.2)
Family							
Demands of family interfere with military work-related activities	15.8 (1.2) ^c	17.2 (1.4) ^c	18.1 (0.9) ^c	11.0 (0.5) ^{a,b,d-f}	15.7 (1.0) ^c	16.9 (0.9) ^c	15.9 (0.7)
Have to put off doing things at military job because of demands on my time at home	10.7 (1.0) ^{d,e}	15.2 (1.6) ^{c,f}	16.5 (0.7) ^{a-c,f}	10.7 (0.6) ^{d,e}	12.7 (1.1) ^e	12.1 (1.3) ^e	12.6 (0.7)
Things I want to do at military job do not get done because of the demands of family	9.7 (1.2) ^{c,e}	11.6 (0.7) ^{b,c,e}	14.3 (0.4) ^{a-d,f}	6.1 (0.7) ^{a,d-f}	9.9 (0.7) ^{c,e}	8.7 (1.1) ^{d,e}	10.2 (0.6)
Home life interferes with responsibilities at military job	10.2 (1.2) ^c	10.3 (0.6) ^{a,c}	10.0 (0.4) ^{a,c}	6.5 (0.9) ^{d-f}	7.9 (0.7) ^{d,e}	9.3 (1.2)	9.5 (0.6)

(Table continued on next page)

Table 6.3

WORK AND FAMILY CONFLICT, BY RESERVE COMPONENT (CONTINUED)

Conflict	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Family-related strain interferes with ability to perform military job-related duties	10.3 (1.0) ^c	10.7 (0.6) ^{a,c}	10.2 (0.9) ^{a,c}	5.7 (0.3) ^{a,b,d-f}	8.0 (0.6) ^{b,c,d,e}	11.9 (1.2) ^{a,c}	9.8 (0.5)

Note: Table entries are percentages (with standard errors in parentheses) of personnel who “agree” or “strongly agree” with the above statements. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^bEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Army Reserve at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army National Guard at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Work-Family Conflict, Q93; Family-Work Conflict, Q94).

Table 6.4 STRESS ASSOCIATED WITH BEING A WOMAN IN THE MILITARY, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS, BY RESERVE COMPONENT

Sociodemographic Characteristics	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Race/Ethnicity							
White, non-Hispanic	28.4 (3.0) ^{a-c}	22.1 (3.0) ^{a,b}	12.3 (1.3) ^{d,e}	14.5 (2.1) ^{d,e}	16.8 (2.0) ^d	+ (+)	21.9 (1.6)
African American, non-Hispanic	15.6 (6.2)	25.9 (3.0) ^{a,c}	15.3 (2.7) ^c	+ (+)	14.5 (2.0) ^e	+ (+)	20.2 (2.5)
Hispanic	+ (+)	27.9 (2.6) ^{a-c}	11.8 (4.0) ^c	12.3 (5.4) ^e	12.1 (3.0) ^e	+ (+)	25.8 (3.1)
Other	34.3 (4.2) ^{a,b}	+ (+)	8.8 (3.1) ^d	8.0 (3.8) ^d	+ (+)	+ (+)	25.1 (4.5)
Education							
High school or less	26.3 (4.2)	20.2 (4.4)	+ (+)	+ (+)	19.0 (5.2)	+ (+)	23.3 (2.8)
Some college	28.4 (3.7) ^{a-c}	26.9 (1.5) ^{a-c}	12.8 (1.7) ^{d,e}	11.8 (1.7) ^{d,e}	16.3 (2.4) ^{d,e}	+ (+)	22.7 (1.6)
College graduate or higher	25.7 (7.6)	23.5 (6.7)	12.5 (1.4) ^c	16.9 (3.4)	17.2 (1.6) ^a	+ (+)	20.8 (2.8)
Age							
24 or younger	26.2 (5.2) ^b	26.1 (2.4) ^{b,c}	20.8 (5.3)	11.5 (4.3) ^{d,e}	17.1 (3.2) ^e	+ (+)	24.5 (2.8)
25-34	25.0 (4.5) ^{a,b}	27.2 (3.9) ^{a-c}	13.0 (2.4) ^{d,e}	10.1 (4.2) ^{d,e}	16.1 (2.1) ^e	+ (+)	21.8 (2.3)
35-44	+ (+)	+ (+)	8.6 (2.0) ^c	19.2 (5.7)	14.9 (1.8) ^a	+ (+)	18.2 (3.2)
45 or older	+ (+)	22.9 (7.1)	16.5 (4.6)	+ (+)	20.3 (2.5)	+ (+)	22.7 (3.2)
Marital Status							
Not married	28.9 (4.0) ^{a-c}	28.1 (2.9) ^{a-c}	14.6 (2.1) ^{d,e}	14.4 (1.9) ^{d,e}	18.5 (2.0) ^{d,e}	+ (+)	24.8 (1.9)
Married	23.1 (6.2) ^a	19.4 (5.4)	9.9 (1.8) ^{c,d}	13.2 (2.6)	14.7 (1.4) ^a	+ (+)	17.6 (2.4)
Pay Grade							
E1-E3	19.9 (4.7)	17.0 (3.0)	10.4 (4.4) ^c	+ (+)	27.5 (4.7) ^a	+ (+)	19.4 (2.8)
E4-E6	32.0 (4.1) ^{a-c}	27.5 (2.8) ^{a-c}	13.6 (1.6) ^{d,e}	9.9 (1.6) ^{c-e}	15.9 (2.4) ^{b,d,e}	+ (+)	23.5 (1.7)
E7-E9	+ (+)	+ (+)	9.8 (4.4) ^b	27.9 (2.5) ^{a,c}	19.5 (3.4) ^b	+ (+)	29.3 (3.5)
W1-W5, O1-O3	+ (+)	15.7 (4.6)	9.8 (5.1)	+ (+)	10.6 (4.7)	+ (+)	14.4 (2.2)
O4-O10	+ (+)	+ (+)	11.1 (2.2)	+ (+)	16.2 (3.3)	+ (+)	20.1 (3.7)
Total	27.2 (2.1)^{a-c}	24.8 (1.8)^{a-c}	12.5 (1.1)^{c-e}	13.9 (1.2)^{d,e}	16.9 (1.6)^{a,d,e}	+ (+)	22.2 (1.0)

Note: Table displays the percentage of women in the military by Reserve component and sociodemographic characteristic who indicated "a great deal" or "a fairly large amount" of stress associated with being a woman in the military. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13). Refer to Chapter 2 for description of sociodemographic variables.

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Stress Associated with Being a Woman in the Military, Q165);

Table 6.5

SOCIODEMOGRAPHIC CORRELATES OF HIGH MILITARY WORK STRESS, PAST 12 MONTHS

Sociodemographic Characteristics	Prevalence	Odds Ratio ^a	
		Adjusted	95% CI ^b
Reserve Component			
Army National Guard	14.9 (2.7)	2.48 ^c	(1.51, 4.07)
Army Reserve	12.5 (1.5)	1.96 ^c	(1.41, 2.72)
Navy Reserve	8.5 (0.5)	1.40 ^c	(1.04, 1.89)
Air National Guard	6.4 (0.6)	1.00	
Air Force Reserve	13.0 (0.8)	2.13 ^c	(1.66, 2.75)
Marine Corps Reserve	21.6 (2.7)	4.95 ^c	(3.31, 7.41)
Gender			
Male	12.4 (1.3)	1.00	
Female	15.5 (1.8)	1.48 ^c	(1.16, 1.89)
Race/Ethnicity			
White, non-Hispanic	13.1 (1.3)	1.37 ^c	(1.01, 1.86)
African American, non-Hispanic	13.7 (2.7)	1.54	(0.86, 2.75)
Hispanic	12.7 (1.3)	1.30	(0.86, 1.97)
Other	9.2 (1.6)	1.00	
Age			
24 or younger	12.8 (1.1)	1.00	
25-34	12.9 (1.2)	1.16	(0.90, 1.49)
35-44	10.8 (1.1)	0.95	(0.70, 1.30)
45 or older	17.0 (4.9)	1.64	(0.82, 3.31)
Marital Status			
Not married	12.7 (1.0)	1.00	
Married	13.2 (1.8)	1.17	(0.98, 1.41)
Pay Grade			
E1-E3	14.3 (2.1)	1.24	(0.75, 2.03)
E4-E6	11.3 (0.6)	0.88	(0.60, 1.28)
E7-E9	13.1 (1.7)	0.90	(0.60, 1.36)
W1-W5, O1-O3	+ (+)	2.01	(0.61, 6.60)
O4-O10	13.9 (2.3)	1.00	
Deployed within Past 24 Months			
At least once	15.1 (1.0)	1.56 ^c	(1.08, 2.25)
Not within 24 months	11.2 (2.1)	1.00	
Total	12.9 (1.3)		

Note: Prevalence estimates are percentages among Reserve military personnel in each sociodemographic group that reported "a lot" of military work stress in the past 12 months. The standard error of each estimate is presented in parentheses. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aOdds ratios were adjusted for Reserve component, gender, race/ethnicity, age, marital status, pay grade, and deployment within the past 24 months (Q147).

^b95% CI = 95% confidence interval of the odds ratio.

^cOdds ratio is significantly different from the reference group.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Stress while Carrying out Military Duties, Q89).

Table 6.6

SOCIODEMOGRAPHIC CORRELATES OF HIGH FAMILY STRESS, PAST 12 MONTHS

Sociodemographic Characteristics	Prevalence	Odds Ratio ^a	
		Adjusted	95% CI ^b
Reserve Component			
Army National Guard	21.2 (1.2)	1.34 ^a	(1.08, 1.68)
Army Reserve	19.5 (1.7)	1.15	(0.93, 1.42)
Navy Reserve	16.4 (0.9)	1.10	(0.88, 1.38)
Air National Guard	15.9 (0.7)	1.00	
Air Force Reserve	15.5 (0.9)	0.95	(0.76, 1.19)
Marine Corps Reserve	21.0 (2.4)	1.50	(0.96, 2.33)
Gender			
Male	17.2 (0.8)	1.00	
Female	28.4 (1.5)	2.03 ^a	(1.67, 2.47)
Race/Ethnicity			
White, non-Hispanic	19.5 (1.0)	1.35	(0.99, 1.84)
African American, non-Hispanic	17.2 (2.3)	1.02	(0.60, 1.73)
Hispanic	21.8 (3.0)	1.43	(0.99, 2.07)
Other	15.7 (2.0)	1.00	
Age			
24 or younger	21.9 (1.7)	1.00	
25-34	20.1 (1.5)	0.86	(0.69, 1.08)
35-44	15.6 (1.1)	0.84	(0.62, 1.13)
45 or older	18.1 (4.7)	1.11	(0.58, 2.15)
Marital Status			
Not married	21.5 (1.0)	1.00	
Married	16.8 (1.5)	0.84	(0.68, 1.04)
Pay Grade			
E1-E3	20.6 (3.0)	1.65 ^a	(1.02, 2.66)
E4-E6	20.0 (0.7)	1.89 ^a	(1.21, 2.97)
E7-E9	12.1 (1.8)	1.09	(0.70, 1.70)
W1-W5, O1-O3	+ (+)	3.09	(0.95, 10.07)
O4-O10	11.6 (1.4)	1.00	
Deployed within Past 24 Months			
At least once	19.8 (0.7)	1.13	(0.96, 1.33)
Not within 24 months	18.9 (1.0)	1.00	
Total	19.2 (0.7)		

Note: Prevalence estimates are percentages among Reserve military personnel in each sociodemographic group that reported "a lot" of family stress in the past 12 months. The standard error of each estimate is presented in parentheses.

Estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

^aOdds ratios were adjusted for Reserve Component, gender, race/ethnicity, age, Marital Status, pay grade, and deployment within the past 24 months (Q147).

^b95% CI = 95% confidence interval of the odds ratio.

^cOdds ratio is significantly different from the reference group.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Stress Experienced in Family Life, Q90).

Table 6.7 shows the percentages of Guard and Reserve members who experienced these performance problems during the past year across five categories of occurrence: 0 days, 1 day, 2 or 3 days, 4 or more days, and any number of days (this last category was not a separate response option but represents the sum percentage of personnel who endorsed 1 or more days). Findings are displayed for all Reserve component members, for members in a high-stress group (i.e., those who experienced “a lot” of stress at work or in the family within the past 12 months), and for a moderate/low-stress group (i.e., members who reported “some,” “a little,” or no stress both at their military job and in the family in the past 12 months). Note that personnel who experienced a high level of stress in either the family or military work environment were categorized into the high-stress group.

The productivity loss most frequently reported by all personnel, for 1 or more days, was being late for work by at least 30 minutes (19.0%), followed by leaving work early (17.4%) and working below normal performance level (16.0%). Not coming to work because of injury or illness was reported by 15.0% of respondents, and being hurt in an on-the-job accident was reported by 6.9% of respondents.

When we examined the relationship between stress and productivity loss, a consistent pattern emerged. As shown in the first and second columns of Table 6.7, compared with Reserve component members who perceived low to moderate levels of stress, those who experienced high levels of job-related or personal stress were more likely to experience a corresponding productivity loss. For example, working below normal performance level 1 or more days during the past 12 months was reported by 24.1% of the high-stress group, compared with 12.4% of the moderate/low-stress group. The high-stress group also was much more likely to report more days affected in the past 12 months in all domains of productivity loss. Personnel in the high-stress group were nearly three times as likely as those in the moderate/low-stress group to report 4 or more days of working below their normal performance level (9.1% vs. 3.5%) and being hurt in an on-the-job-accident (2.4% vs. 0.8%).

These findings are consistent with an extensive body of research (e.g., Kanki [1996]; Orasanu & Backer [1996]) that shows a strong relationship between high levels of stress and impaired occupational functioning, including increased absenteeism, lower levels of productivity, and more interpersonal problems. A caveat to this finding is that it cannot be stated definitively that higher levels of stress are causing reduced performance. It could be that lower productivity (e.g., frequently working below normal performance level or being hurt on the job more often than others) causes individuals to feel higher levels of stress. Regardless of the direction of the relationship, however, it is clear that stress and job performance are related. It is likely that Reserve component members who are experiencing high levels of stress at work, in their personal lives, or in both of these domains are at increased risk for a host of adverse psychological and health conditions. These conditions, in turn, could potentially compromise military readiness.

6.4 Coping with Stress

Coping has been defined in terms of the strategies and processes that individuals use to modify adverse aspects of their environment, as well as to minimize internal distress induced by environmental demands (Lazarus, 1966; Moos & Billings, 1982). An important dimension of coping is the distinction between problem-focused coping strategies (efforts to recognize, modify, or eliminate the effect of a stressor), emotion-focused coping strategies (efforts to regulate negative emotions that occur in reaction to a stressor event), and avoidance strategies (efforts to avoid dealing with the stressor). Although the utility of any approach depends on the demands of the situation and the skill and flexibility of the individual to use the coping strategy, preference for an avoidance strategy has been linked with a greater risk of mental health problems in military personnel, especially when they are faced with a radically changing environment (Johnsen, Laberg, & Eid, 1998).

We asked respondents to identify the types of strategies they use to cope when they “feel pressured, stressed, depressed, or anxious.” The list of response categories included items that tap approach- and problem-oriented strategies (e.g., “think of plan to solve problem”),

Table 6.7

PERCEIVED STRESS AND PRODUCTIVITY LOSS, PAST 12 MONTHS, TOTAL RESERVE COMPONENT

Productivity Loss/Number of Military Work Days Affected, Past 12 Months	Moderate or Low Level of Stress, Past 12 Months ^a	High Level of Stress, Past 12 Months ^b	All Personnel ^c
<i>Sample</i>	9,690	4,312	15,212
Late for Work by 30 Minutes or More			
0 days	82.6 (0.8) ^d	77.3 (1.5)	81.0 (0.6)
1 day	9.9 (0.7)	10.2 (1.1)	10.1 (0.6)
2 or 3 days	4.7 (0.4) ^d	7.4 (0.9)	5.5 (0.3)
4 or more days	2.7 (0.3) ^d	5.0 (1.1)	3.4 (0.5)
1 or more days	17.4 (0.8) ^d	22.7 (1.5)	19.0 (0.6)
Left Work Early			
0 days	84.7 (0.9) ^d	77.7 (1.3)	82.6 (0.8)
1 day	6.6 (0.6)	8.7 (0.9)	7.3 (0.4)
2 or 3 days	6.2 (0.4) ^d	8.3 (1.0)	6.7 (0.5)
4 or more days	2.5 (0.4) ^d	5.2 (0.7)	3.3 (0.4)
1 or more days	15.3 (0.9) ^d	22.3 (1.3)	17.4 (0.8)
Hurt in an On-the-Job Accident			
0 days	94.4 (0.6) ^d	89.9 (1.1)	93.1 (0.6)
1 day	3.6 (0.3) ^d	6.0 (0.8)	4.3 (0.4)
2 or 3 days	1.3 (0.3)	1.7 (0.3)	1.4 (0.2)
4 or more days	0.8 (0.2) ^d	2.4 (0.7)	1.3 (0.3)
1 or more days	5.6 (0.6) ^d	10.1 (1.1)	6.9 (0.6)
Worked Below Normal Performance Level			
0 days	87.6 (0.6) ^d	75.9 (1.3)	84.0 (0.4)
1 day	4.8 (0.5) ^d	6.9 (0.8)	5.4 (0.3)
2 or 3 days	4.1 (0.5) ^d	8.1 (0.9)	5.3 (0.3)
4 or more days	3.5 (0.4) ^d	9.1 (0.8)	5.3 (0.4)
1 or more days	12.4 (0.6) ^d	24.1 (1.3)	16.0 (0.4)
Did Not Come into Work because of Illness or Injury			
0 days	87.6 (0.7) ^d	79.3 (1.2)	85.0 (0.6)
1 day	5.5 (0.4) ^d	8.8 (0.7)	6.5 (0.4)
2 or 3 days	4.8 (0.4) ^d	6.7 (0.6)	5.4 (0.3)
4 or more days	2.2 (0.3) ^d	5.2 (0.7)	3.1 (0.3)
1 or more days	12.4 (0.7) ^d	20.7 (1.2)	15.0 (0.6)

Note: Table displays the percentage of reserve military personnel in the three groups of interest (personnel exhibiting moderate or low levels of stress, personnel exhibiting high levels of stress, and all personnel) who reported that the specified problem (e.g., late for work by 30 minutes or more) affected 0 days, 1 day, 2 to 3 days, 4 or more days, and 1 or more days. Sample sizes by group are also provided. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aPersonnel who experienced "some," "a little," or no stress both at military work and in the family in the past 12 months.

^bPersonnel who experienced "a lot" of stress either at military work or in the family in the past 12 months.

^cAny individuals with missing level of productivity loss are not included in these estimates.

^dEstimate is significantly different from high levels of stress at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Stress at Work, Q89; Stress in Family, Q90; Productivity Loss, Q86).

emotion-focused strategies, such as seeking social support (“talk to friend or family member”), and avoidance strategies (e.g., “have a drink,” “smoke marijuana or use other illegal drugs,” “think about hurting yourself or killing yourself”). Table 6.8 shows the percentage of personnel, by Reserve component, who commonly used specific coping strategies under conditions of stress. Table 6.9 shows the distribution of these percentages by gender and for the total Reserve component.

As shown in Table 6.8, Reserve component members seemed to be more likely to use problem- or emotion-oriented coping strategies than avoidance-oriented alternatives. When the responses of the total Reserve component were rank ordered, each of the five problem- or emotion-oriented options were reported by more personnel than any of the five avoidance-oriented options. “Think of plan to solve problem” was overwhelmingly indicated by Reserve component personnel as a “frequently” or “sometimes” implemented coping strategy (78.6%), followed by “talk to friend or family member” (66.9%), “engage in a hobby” (58.2%), and “exercise or play sports” (58.0%). A solid majority of personnel often used these potentially effective problem-focused and approach-oriented coping strategies to deal with stress, daily pressures, and feelings of depression. Slightly more than half (56.2%) of personnel reported saying a prayer to cope with stress. With respect to generally less-effective avoidant coping strategies, 44.1% indicated that they “get something to eat” when confronted with stress, 24.9% “have a drink,” 19.4% “light up a cigarette,” 4.7% considered hurting or killing themselves, and 2.4% used illegal substances as a coping option for stress and/or depressive symptoms. Members of the Marine Corps Reserve were more likely to use drinking or smoking a cigar/chewing tobacco as a coping mechanism than those in other components; members of the Army National Guard were the least likely of all component members to use talking to a friend or family member or exercising/playing sports as coping mechanisms.

Table 6.9 shows significant gender differences in coping strategies. More women than men reported

using social support (78.4% vs. 64.4%), thinking of a plan to solve the problem (81.7% vs. 78.0%), prayer (70.0% vs. 53.2%), and food (51.8% vs. 42.5%). In contrast, men were more likely than women to smoke a cigar or use smokeless tobacco (11.4% vs. 3.6%) as a method of coping.

6.5 Screening for Anxiety

We included seven items from the Patient Health Questionnaire (PHQ) that have been used widely to screen for generalized anxiety disorder symptoms (Spitzer, Kroenke, & Williams, 1999). If respondents had been bothered by feeling nervous, anxious, on edge, or worrying a lot about different things for several days in the past month and had at least three other symptoms for more than half the days, they were scored as needing further anxiety evaluation. Table 6.10 shows, by selected sociodemographic characteristics, the percentages of Reserve component personnel who met this screening criterion. The sociodemographic characteristics were gender, race/ethnicity, education, age, marital status, and pay grade. Overall, 10.7% of the survey respondents met screening criteria suggesting a need for further anxiety evaluation. This is consistent with other screening studies using the PHQ, where a range of rates were found in older samples (e.g., 4% to 16%; Spitzer et al. [1999]) and is lower than the 19.1% prevalence rate for reporting mental health problems among Service members returning from Iraq (Hoge et al., 2006). Unlike active-duty personnel, among Reserve component personnel there was no clear pattern of rates of needing further anxiety evaluation decreasing with age. Consistent with the literature, women, respondents with a high school education or less, and those in the lowest ranks had the highest rates of needing further evaluation. Overall, Army National Guard and Army Reservists had the greatest risk of anxiety symptoms, and Air National Guard members had the lowest risk.

The finding that a considerable proportion of Reserve component personnel were in need of further evaluation for anxiety is not surprising. Anxiety disorder is one of the most common mental health

Table 6.8 BEHAVIORS FOR COPING WITH STRESS, BY RESERVE COMPONENT

Coping Behavior	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Talk to friend/family member	61.2 (1.7) ^{a-e}	68.0 (1.4) ^{b-d,f}	74.4 (0.7) ^{a,d,f}	73.6 (0.8) ^{a,d,f}	73.0 (0.8) ^{a,d,f}	67.1 (2.0) ^{b-d,f}	66.9 (1.1)
Light up a cigarette	22.8 (1.8) ^{b-d}	19.8 (2.0) ^{b-d}	12.7 (1.0) ^{a,d,f}	13.7 (0.8) ^{a,d,f}	15.3 (1.1) ^{a,d,f}	22.3 (2.9) ^{b-d}	19.4 (0.9)
Have a drink	27.1 (1.8) ^{b-e}	25.0 (2.2) ^{b,c,e}	19.6 (0.9) ^{a,d,f}	18.3 (2.3) ^{a,d,f}	21.5 (0.9) ^{e,f}	36.9 (3.8) ^{a-d,f}	24.9 (1.0)
Smoke a cigar or use smokeless tobacco	11.6 (1.3) ^{b-e}	11.0 (1.4) ^{b-e}	6.4 (0.6) ^{a,c,e,f}	4.4 (0.8) ^{a,b,d-f}	7.0 (0.5) ^{a,c,e,f}	17.4 (2.6) ^{a-d,f}	10.0 (0.8)
Say a prayer	50.1 (2.5) ^{a-d}	59.4 (1.9) ^{b,d,f}	65.0 (1.7) ^{a,e,f}	58.2 (1.7) ^{b,d-f}	66.6 (3.2) ^{a,c,e,f}	49.0 (1.9) ^{a-d}	56.2 (1.6)
Exercise or play sports	52.4 (2.6) ^{a-e}	60.7 (1.5) ^{b,f}	65.3 (0.8) ^{a,c,d,f}	60.7 (1.0) ^{b,f}	61.0 (1.4) ^{b,f}	64.2 (1.6) ^f	58.0 (1.4)
Engage in a hobby	55.4 (1.6) ^{c-e}	58.8 (2.2) ^c	58.7 (1.3) ^c	64.1 (1.1) ^{a,b,d,f}	59.5 (1.1) ^{c,f}	62.4 (1.5) ^f	58.2 (1.0)
Get something to eat	43.4 (2.1)	44.9 (2.1)	42.7 (1.6)	46.0 (2.8)	43.4 (1.7)	47.7 (2.9)	44.1 (1.1)
Smoke marijuana/use other illegal drugs	3.0 (0.8) ^{c,d}	3.1 (0.6) ^{b-d}	1.3 (0.4) ^{a,e}	0.8 (0.6) ^{a,d,f}	0.9 (0.1) ^{a,d,f}	3.7 (0.8) ^{b-d}	2.4 (0.4)
Think of plan to solve problem	73.6 (2.4) ^{b-d}	78.3 (1.2) ^{b-d}	85.6 (0.9) ^{a,d,f}	86.7 (2.3) ^{a,d,f}	85.8 (0.5) ^{a,d,f}	75.6 (1.7) ^{b-d}	78.6 (1.4)
Consider hurting or killing myself	5.4 (0.4) ^{b-d}	5.9 (0.7) ^{b-d}	2.3 (0.4) ^{a,d,f}	2.3 (0.3) ^{a,d,f}	2.9 (0.2) ^{a,d,f}	5.6 (1.0) ^{b-d}	4.7 (0.3)

Note: Table displays the percentage of Reserve military personnel by Reserve component who “frequently” or “sometimes” engage in the indicated coping behavior when they feel pressured, stressed, depressed, or anxious. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Army Reserve at the 95% confidence level.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army National Guard at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Coping Behavior, Q96).

Table 6.9

BEHAVIORS FOR COPING WITH STRESS, BY GENDER

Coping Behavior	Gender		Total Reserve Component
	Male	Female	
Talk to friend/family member	64.4 (1.0) ^a	78.4 (2.0)	66.9 (1.1)
Light up a cigarette	19.1 (1.0)	20.8 (1.7)	19.4 (0.9)
Have a drink	24.9 (1.3)	24.6 (1.9)	24.9 (1.0)
Smoke a cigar or use smokeless tobacco	11.4 (0.9) ^a	3.6 (0.6)	10.0 (0.8)
Say a prayer	53.2 (1.6) ^a	70.0 (1.8)	56.2 (1.6)
Exercise or play sports	57.6 (1.6)	59.8 (1.9)	58.0 (1.4)
Engage in a hobby	58.3 (1.2)	57.6 (1.3)	58.2 (1.0)
Get something to eat	42.5 (1.1) ^a	51.8 (2.1)	44.1 (1.1)
Smoke marijuana/use other illegal drugs	2.5 (0.5)	2.1 (0.5)	2.4 (0.4)
Think of plan to solve problem	78.0 (1.5) ^a	81.7 (1.7)	78.6 (1.4)
Consider hurting or killing myself	4.5 (0.4)	5.6 (0.9)	4.7 (0.3)

Note: Table displays the percentage of Reserve military personnel by gender who “frequently” or “sometimes” engage in the indicated coping behavior when they feel pressured, stressed, depressed, or anxious. The standard error of each estimate is presented in parentheses. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aDifference between males and females is significant at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Coping Behavior, Q96).

problems among the general population and among returning Operation Iraqi Freedom combat troops (Hoge et al., 2004). It also is one of the most serious and may have serious consequences for mission readiness and recent attrition (Hoge et al., 2006). To better understand the consequences of Reserve component personnel experiencing anxiety symptoms, we examined the perceived levels of stress associated with civilian and military jobs and family among those from the entire Reserve component in need of anxiety evaluation (Figure 6.1).

Overall, both civilian work and family life were perceived as significantly more stressful than military work among those in need of further anxiety evaluation. Individuals in need of further anxiety evaluation reported much higher levels of stress associated with both civilian (44.1%) and military work (32.6%) and with family (44.7%) than those in the population as a whole.

6.6 Screening for Depression

We also included four items similar to those frequently used in psychiatric epidemiologic surveys to screen for

the presence of depressive symptoms and syndromes (see Chapter 2). One item asked, “In the past 12 months, have you had 2 weeks or more during which you felt sad, blue, or depressed, or lost pleasure in things that you usually cared about or enjoyed?” Two items screened for possible dysthymia by asking (a) “Have you had 2 or more years in a row in your entire life when you felt depressed or sad on most days, even if you felt okay sometimes?” and (b) “Have you felt depressed or sad much of the time in the past 12 months?” A fourth item asked about the number of days of depressed mood during the past week.

We combined screening items to develop a composite indicator of respondents’ probable need for further assessment for depression using clinical evaluation methods based on the brief scale developed by Rost, Burnam, and Smith (1993). Specifically, an individual had to meet two separate criteria to be categorized as needing further evaluation. The first was feeling depressed for at least a full day in the past week. The second criterion was either (1) experiencing depressive symptoms for 2 or more weeks in the past 12 months, or (2) feeling depressed at any time during the past 12

Table 6.10 PERCENTAGE MEETING SCREENING CRITERIA FOR GENERALIZED ANXIETY DISORDER (GAD) SYMPTOMS, PAST 30 DAYS, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS AND RESERVE COMPONENT

Sociodemographic Characteristics	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	11.0 (1.3) ^{a-c}	11.6 (1.7) ^{a-c}	6.2 (0.5) ^{b,d,f}	4.8 (0.4) ^{a,d,f}	6.0 (0.5) ^{d,f}	9.9 (1.0) ^{a-c}	9.5 (0.8)
Female	23.6 (2.9) ^{a-c,e}	16.7 (1.6) ^{a-d}	10.6 (1.0) ^{d,e}	7.1 (2.0) ^{d,e}	11.0 (0.9) ^{d,e}	+ (+)	16.4 (1.2)
Race/Ethnicity							
White, non-Hispanic	13.4 (1.6) ^{a-c}	10.9 (1.8) ^{a-c}	7.2 (0.6) ^{b,d,e}	5.2 (0.4) ^{a,c-f}	7.0 (0.8) ^{b,d,e}	9.9 (1.3) ^b	10.5 (0.9)
African American, non-Hispanic	8.5 (1.9) ^c	14.8 (2.3) ^{a-c,e,f}	8.8 (1.0) ^{b,c,e}	3.6 (2.1) ^{a,e}	6.2 (0.6) ^{a,e}	6.8 (2.8) ^e	10.2 (1.3)
Hispanic	14.4 (3.5) ^{a,b}	15.2 (2.6) ^{a-c}	6.2 (1.0) ^{d,e}	6.0 (2.0) ^{d,e}	7.0 (1.5) ^e	13.1 (4.1)	13.0 (1.5)
Other	10.8 (0.6) ^{a,b,e}	19.2 (4.3) ^{a,b,d}	5.0 (1.4) ^{c-e}	5.9 (1.5) ^{c-e}	12.5 (2.5) ^{a,b}	9.3 (4.8)	11.2 (1.9)
Education							
High school or less	15.5 (3.3) ^{a,b}	14.2 (2.1) ^{a,b}	8.1 (1.7) ^{d,e}	4.4 (1.5) ^{c-f}	9.1 (1.7) ^b	12.7 (2.9) ^b	13.8 (2.1)
Some college	10.7 (1.1) ^b	12.0 (1.5) ^{b,c}	8.8 (0.8)	6.6 (0.8) ^{d,f}	8.2 (0.8) ^e	9.3 (0.9) ^b	10.0 (0.6)
College graduate or higher	12.8 (2.2) ^{a-c}	13.1 (3.3) ^{a-c}	5.1 (0.8) ^{d,e}	3.3 (0.6) ^{c-e}	5.6 (0.5) ^{b,d,e}	9.0 (3.3)	9.2 (1.2)
Age							
24 or younger	10.8 (1.9) ^b	11.7 (1.3) ^b	9.2 (1.9) ^b	1.4 (1.0) ^{a,c-f}	10.8 (1.5) ^b	10.4 (1.4) ^b	10.4 (1.0)
25-34	13.0 (1.6) ^{a-c}	13.2 (2.0) ^{a-c}	8.3 (0.8) ^{d,e}	5.2 (1.6) ^{d,f}	8.4 (0.8) ^{d,e}	12.4 (3.0) ^b	11.3 (1.0)
35-44	11.5 (1.8) ^{a,c}	15.8 (3.3) ^{a-c,f}	6.4 (0.6) ^{d,e}	7.0 (2.2) ^e	5.9 (0.5) ^{d,e}	4.8 (3.3) ^e	10.0 (1.0)
45 or older	+ (+)	10.4 (4.0)	5.8 (1.0)	5.4 (1.1)	6.0 (0.5)	+ (+)	11.5 (5.0)
Marital Status							
Not married	12.7 (1.2) ^{a-c}	14.2 (2.0) ^{a-c}	8.5 (1.0) ^{b,d,e}	5.0 (1.1) ^{a,c-f}	8.9 (0.8) ^{b,d,e}	10.7 (1.4) ^b	11.7 (0.8)
Married	12.7 (3.8)	11.3 (2.6) ^{b,c}	6.3 (0.6)	5.4 (0.5) ^e	5.8 (0.5) ^e	8.7 (2.4)	9.7 (1.6)

(Table continued next page)

Table 6.10

PERCENTAGE MEETING SCREENING CRITERIA FOR GENERALIZED ANXIETY DISORDER (GAD) SYMPTOMS, PAST 30 DAYS, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS AND RESERVE COMPONENT (CONTINUED)

Sociodemographic Characteristics	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Pay Grade							
E1-E3	10.9 (1.8) ^a	12.3 (4.0)	6.4 (1.2) ^{c,d,f}	+ (+)	16.1 (4.4) ^a	11.2 (1.6) ^a	10.9 (1.4)
E4-E6	12.1 (0.8) ^{a-c}	13.2 (1.3) ^{a-c}	7.8 (0.6) ^{b,d,e}	5.8 (0.4) ^{a,c-f}	8.1 (0.5) ^{b,d,e}	11.6 (2.2) ^b	10.8 (0.6)
E7-E9	9.2 (3.5)	+ (+)	9.8 (1.9) ^b	4.1 (0.8) ^a	5.8 (0.6)	+ (+)	8.1 (1.8)
W1-W5, O1-O3	+ (+)	17.1 (3.8) ^{a-c}	8.3 (2.2) ^{b,e}	1.6 (1.5) ^{a,e}	4.5 (1.4) ^c	+ (+)	+ (+)
O4-O10	0.5 (0.5) ^{a-c,e}	8.9 (3.7) ^d	3.5 (0.8) ^d	5.2 (1.3) ^d	4.4 (0.9) ^d	+ (+)	4.6 (1.1)
Total	12.7 (1.2) ^{a-c}	12.8 (1.3) ^{a-c}	7.1 (0.4) ^{b,d-f}	5.2 (0.5) ^{a,c-f}	7.2 (0.5) ^{b,d-f}	10.2 (1.2) ^{a-c}	10.7 (0.7)

Note: Table displays the percentage of Reserve military personnel by Reserve component and sociodemographic characteristic who met screening criteria for generalized anxiety disorder (GAD) symptoms. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). The definition of need of further anxiety evaluation is given in Chapter 2. Refer to Section 2.5.1 for descriptions of sociodemographic variables. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

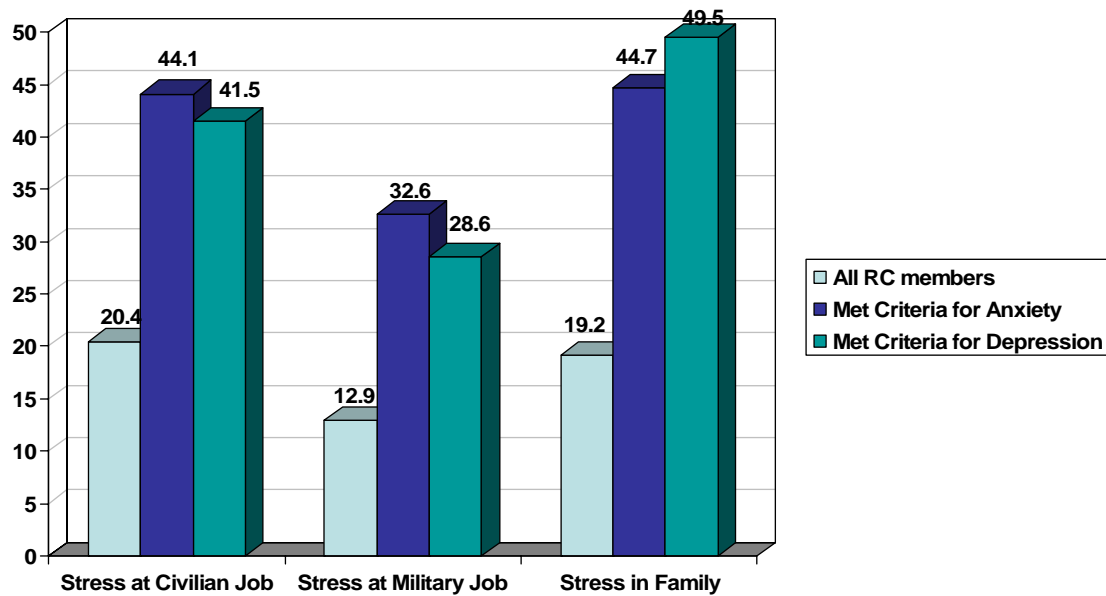
^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Screening for GAD Symptoms, Q100)

Figure 6.1 Percentage reporting high stress level^a in past 12 months among all Reserve component members compared with those meeting criteria for anxiety and depression symptoms



^aHigh stress level defined as those who reported “a lot” of stress (Q88, Q89, and Q90).

months and on most days for 2 or more years over the lifetime. Table 6.11 shows, by selected sociodemographic characteristics, the percentages of Reserve component personnel who met this composite screening criterion.

Overall, 18.8% of the total Reserve component scored as needing further evaluation for a depressive disorder. Consistent with findings on depression from major epidemiologic surveys of psychiatric disorders in the general civilian population of the United States, such as the Epidemiologic Catchment Area Study (Regier et al., 1990) and the National Comorbidity Survey (Kessler et al., 1994), a higher percentage of women than men responded to the depression screening questions in a direction suggestive of a need for more comprehensive evaluation for depression. The percentage of women who had a score suggestive of a need for further depression evaluation was 27.0% for the Reserve component as a whole and ranged from 16.2% of Air National Guard women to 34.6% of Army National Guard women. For men in the total Reserve component, 17.1% needed further assessment for depression, with percentages in specific components ranging from 11.3% (Navy Reserve) to 19.7% (Army National Guard).

Analysis of the apparent need for further depression evaluation by race/ethnicity shows a larger percentage of members of the Army National Guard and the Army and Marine Corps Reserve components of Hispanic ethnicity relative to Hispanic ethnic groups in the Navy and Air Force Reserve components. Educational attainment and pay grade were inversely related to the need for further assessment for depression. For the total Reserve component, as well as for each component, those who were less educated and had a lower rank were more likely to screen high for depression. Marital status also was related to the need for further depression evaluation. A spouse appeared to be a strong buffer; unmarried personnel (20.7%) scored considerably higher on the need for further depression evaluation than did married personnel (16.8%). This pattern was consistent across all components except the Army National Guard, where depressive symptoms were not related to marital status.

Depression is the most common mental health problem in the general population and, like anxiety, is associated with many symptoms that could reduce the military readiness of those it affects. These symptoms include disturbed sleep; fatigue; persistent physical problems (e.g., headaches); and difficulty concentrating,

Table 6.11

NEED FOR FURTHER DEPRESSION EVALUATION, PAST 7 DAYS, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS AND RESERVE COMPONENT

Sociodemographic Characteristics	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	19.7 (1.3) ^{a-c}	17.2 (1.6) ^{a,c}	11.3 (1.1) ^{d-f}	14.1 (2.1) ^{d,f}	12.3 (0.8) ^{d-f}	19.5 (1.4) ^{a-c}	17.1 (0.8)
Female	34.6 (3.2) ^{a-c}	30.2 (2.3) ^{a-c}	18.2 (0.9) ^{d,e}	16.2 (1.9) ^{d,e}	17.9 (1.9) ^{d,e}	+ (+)	27.0 (1.4)
Race/Ethnicity							
White, non-Hispanic	23.0 (1.9) ^{a-c}	19.5 (1.5) ^{a,c}	13.4 (1.1) ^{d-f}	15.6 (2.0) ^d	14.2 (1.1) ^{d-f}	19.2 (1.3) ^{a,c}	19.4 (1.0)
African American, non-Hispanic	14.4 (4.0)	22.4 (2.0) ^{a-c}	15.8 (1.8) ^{b,e}	6.4 (2.6) ^{a,c,e}	13.4 (1.3) ^{b,e}	+ (+)	16.8 (2.1)
Hispanic	24.4 (3.5) ^{a-c}	21.7 (2.4) ^{a-c}	10.3 (1.7) ^{d-f}	12.0 (3.3) ^{d-f}	12.0 (1.1) ^{d-f}	22.5 (3.7) ^{a-c}	20.6 (1.5)
Other	16.0 (0.6) ^{a-c}	+ (+)	7.1 (2.0) ^{d,f}	9.2 (1.7) ^{d,f}	10.9 (1.3) ^d	21.6 (6.0) ^{a,b}	13.8 (2.5)
Education							
High school or less	24.6 (2.7) ^{a-c}	21.0 (3.1) ^{a,c}	13.5 (1.9) ^{d-f}	14.8 (1.1) ^{d,f}	13.3 (2.0) ^{d-f}	24.1 (3.1) ^{a-c}	22.2 (1.9)
Some college	20.0 (1.4) ^{a,c}	21.8 (1.2) ^{a,c}	15.0 (1.4) ^{d-f}	16.5 (3.5)	14.6 (1.2) ^{d-f}	20.1 (1.7) ^{a,c}	19.0 (0.7)
College graduate or higher	20.6 (1.3) ^{a-c,f}	17.2 (4.4)	10.4 (0.6) ^{c,d}	11.2 (0.7) ^d	12.8 (1.0) ^{a,d}	11.4 (2.1) ^d	15.4 (1.3)
Age							
24 or younger	19.9 (2.5) ^{a,b}	21.3 (1.7) ^{a,b}	13.3 (1.5) ^{c-f}	10.9 (1.6) ^{c-f}	18.0 (1.7) ^{a,b}	22.8 (2.2) ^{a,b}	19.8 (1.3)
25-34	17.9 (1.9) ^c	23.3 (3.9) ^{a,c}	14.2 (1.5) ^e	17.1 (1.4) ^c	12.9 (1.4) ^{b,d,e}	14.8 (2.8)	18.2 (1.4)
35-44	23.8 (4.3) ^{a-c,f}	16.1 (2.8)	13.2 (1.3) ^d	12.4 (1.8) ^d	12.3 (1.3) ^d	11.1 (2.7) ^d	17.0 (1.7)
45 or older	+ (+)	18.8 (4.0) ^a	9.0 (1.0) ^{b,c,e}	16.3 (3.5) ^a	14.0 (1.4) ^a	+ (+)	21.2 (4.4)
Marital Status							
Not married	21.1 (2.5)	22.8 (1.4) ^{a,c}	17.1 (1.1) ^{e,f}	17.7 (2.7)	16.1 (0.9) ^{e,f}	22.7 (2.1) ^{a,c}	20.7 (1.1)
Married	22.0 (3.8) ^{a-c,f}	17.5 (2.2) ^{a,c}	10.2 (1.2) ^{d,e}	12.8 (1.9) ^d	11.8 (1.1) ^{d,e}	10.9 (2.9) ^d	16.8 (1.7)

(Table continued next page)

Table 6.11 NEED FOR FURTHER DEPRESSION EVALUATION, PAST 7 DAYS, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS AND RESERVE COMPONENT (CONTINUED)

Sociodemographic Characteristics	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Pay Grade							
E1-E3	15.7 (3.7) ^{e,f}	25.4 (3.0) ^d	18.0 (3.3)	+ (+)	24.6 (5.5)	24.6 (2.3) ^d	19.0 (2.4)
E4-E6	22.7 (1.0) ^{a-c,f}	19.8 (2.4) ^{a,c}	13.7 (0.7) ^{d,e}	16.5 (2.2) ^d	14.9 (0.7) ^{d,e}	16.7 (2.0) ^d	19.5 (0.8)
E7-E9	18.3 (6.3)	18.3 (5.3)	10.6 (2.1)	13.8 (2.9)	10.4 (2.1)	+ (+)	15.1 (2.3)
W1-W5, O1-O3	+ (+)	19.8 (3.0) ^{a-c}	7.8 (1.3) ^e	10.9 (2.7) ^e	11.0 (1.7) ^e	+ (+)	+ (+)
O4-O10	15.7 (4.6)	+ (+)	9.5 (1.2)	11.0 (1.9)	12.0 (1.4)	+ (+)	12.7 (1.9)
Total	21.7 (0.8) ^{a-c}	20.3 (1.5) ^{a-c}	12.8 (0.8) ^{d-f}	14.4 (1.9) ^{d-f}	13.7 (0.9) ^{d-f}	19.6 (1.5) ^{a-c}	18.8 (0.6)

Note: Table displays the percentage of Reserve military personnel by Reserve component and sociodemographic characteristic who are considered in need for further depression evaluation. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). The definition of need of further depression evaluation is given in Chapter 2. Refer to Section 2.5.1 for descriptions of sociodemographic variables. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Need for Further Depression Evaluation, Q97-Q99)

remembering, and making decisions. To better understand the consequences of personnel experiencing depressive symptoms, perceived levels of stress associated with work and family were examined among those in need of depression evaluation by Service (see Figure 6.1). Among personnel in need of further depression evaluation, high levels of stress were associated with civilian work by 41.5%, with military work by 28.6%, and with family by 49.9%. When these percentages are compared with those in Table 6.1, individuals in need of further depression evaluation reported much higher levels of stress associated with both work and family than those in the Guard and Reserve populations as a whole.

6.7 Screening for Posttraumatic Stress Disorder and Suicide Risk

The prevalence of PTSD and suicide risk has been an increasing concern among Guard and Reserve members, especially those activated for duty in Iraq. The PTSD Checklist-Civilian (PCL-C) screen was used to assess potential PTSD. Two additional measures assessed past-year suicidal ideation and suicide attempt. As shown in Table 6.12, 7.7% met screening criteria for probable PTSD in the past 30 days, 5.5% reported seriously considering suicide in the past year, and 1.8% reported a suicide attempt in the past year. Overall, Navy Reserve, Air Force Reserve, and Air National Guard personnel reported lower rates than the Army and Marine Corps components (although these differences were not always significant). Members of the Army National Guard were three times more likely to meet screening criteria for current PTSD and to have attempted suicide during the past year than members of the Air Force, Air Guard, or Navy Reserve. The Army National Guard had the highest rate of past-year attempted suicide of any Reserve component (2.7%). Members of the Army and Marine Corps Reserves were twice as likely to report PTSD symptoms and attempted suicide during the past year than members of the Navy, Air Guard and Air Force Reserves. There is some evidence that these Reserve component differences may be associated with the past psychological history of their personnel (i.e., significantly fewer Air Force Reserve personnel reported a pre-Service history of suicidal ideation or attempt than

those in the other components). Members of the Marine Corps Reserve also had the highest pre-Service history of suicidal ideation (10.4%) and were twice as likely as the Navy and Air Force components to have seriously considered suicide before joining the service.

In comparing the current (1-month) prevalence rate of positive PTSD screens with those in other military populations, using a similar definition, the observed rate of PTSD between Marine Corps Reserve (7.3%) and Army National Guard (10.5%) components was consistent with the 6.2% to 12.9% found among Army and Marine Corps active-duty personnel after deployment (Hoge et al., 2004). It should be noted, however, that the present rate is a population-based estimate for Reserve components as a whole and is based on a different sociodemographic distribution than that of combat infantry personnel.

To examine the correlates of those meeting screening criteria for PTSD symptoms, Table 6.13 shows the prevalence rates and adjusted odds ratios by selected sociodemographic characteristics. Among the categories of selected variables, Army National Guard had the highest prevalence rate (10.5%), followed by personnel with annual incomes from \$15,000 to \$19,999 (10.0%). Groups with prevalence rates between 9% and 10% included those with incomes from \$50,000 to \$74,999 (9.7%) and from \$20,000 to \$24,999 (9.3%), those who had deployed at least once in the past 24 months (9.2%), Hispanics (9.2%), those with incomes less than \$15,000 (9.1%), and women (9.1%). When adjusted for all other characteristics in the model, significant predictors of meeting screening criteria for PTSD included being in the Army National Guard, Army Reserve, or Marine Corps Reserve; being a woman; being white or Hispanic; and having either an annual household income less than \$35,000 or between \$50,000 and \$75,000. Deployment within the past 24 months was not a significant predictor in this model.

Table 6.12 **NEED FOR FURTHER POSTTRAUMATIC STRESS DISORDER (PTSD) EVALUATION, SUICIDAL IDEATION, AND SUICIDE ATTEMPTS, BY RESERVE COMPONENT**

Mental Health Measure	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Need Further PTSD Evaluation, Past 30 Days	10.5 (1.3) ^{a-c}	8.3 (1.3) ^{a-c}	3.3 (0.4) ^{d-f}	3.5 (0.4) ^{d-f}	3.1 (0.2) ^{d-f}	7.3 (1.0) ^{a-c}	7.7 (0.8)
Seriously Considered Suicide							
Past year	6.9 (0.6) ^{a-c}	5.6 (0.8) ^{b,c}	3.7 (0.5) ^d	2.9 (0.5) ^{d-f}	3.4 (0.4) ^{d-f}	5.9 (1.1) ^{b,c}	5.5 (0.4)
Not within past year, but since joining service	6.8 (0.6) ^{a,c}	7.3 (1.0) ^{a,c}	4.8 (0.4) ^{d-f}	4.8 (0.9)	4.5 (0.5) ^{d-f}	7.3 (1.2) ^{a,c}	6.3 (0.4)
Not within past year, but before joining service	7.8 (0.5) ^{a-c,f}	8.3 (1.4) ^c	5.7 (0.6) ^{d,f}	5.6 (0.9) ^{d,f}	5.2 (0.4) ^{d-f}	10.4 (1.0) ^{a-d}	7.4 (0.4)
Attempted Suicide							
Past year	2.7 (0.5) ^{a-c,e,f}	1.5 (0.4) ^{a,c,d}	0.6 (0.1) ^{d-f}	0.7 (0.2) ^{d,f}	0.7 (0.1) ^{d-f}	1.6 (0.3) ^{a-d}	1.8 (0.3)
Not within past year, but since joining service	2.4 (0.4) ^{a-c}	1.4 (0.4) ^b	1.1 (0.2) ^{b,d,f}	0.2 (0.2) ^{a,c-f}	0.9 (0.1) ^{b,d,f}	1.8 (0.2) ^{a-c}	1.6 (0.2)
Not within past year, but before joining service	4.0 (0.6) ^{a-c}	3.4 (0.4) ^{a-c}	1.7 (0.2) ^{b,d-f}	1.1 (0.1) ^{a,c-f}	1.9 (0.2) ^{b,d-f}	3.3 (0.4) ^{a-c}	3.1 (0.3)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported the mental illness/suicide response as indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Need for Further PTSD Evaluation, Q104; Suicidal Ideation, Q101; Suicide Attempt, Q102).

Table 6.13

SOCIODEMOGRAPHIC CORRELATES OF NEED FOR FURTHER PPOSTTRAUMATIC STRESS DISORDER (PTSD) EVALUATION, PAST 30 DAYS, TOTAL RESERVE COMPONENT

Sociodemographic Characteristics	Prevalence	Odds Ratio ^a	
		Adjusted	95% CI ^b
Reserve Component			
Army National Guard	10.5 (1.3)	3.43 ^c	(2.00, 5.88)
Army Reserve	8.3 (1.3)	2.81 ^c	(1.92, 4.10)
Navy Reserve	3.3 (0.4)	1.15	(0.86, 1.53)
Air National Guard	3.5 (0.4)	1.14	(0.82, 1.59)
Air Force Reserve	3.1 (0.2)	1.00	
Marine Corps Reserve	7.3 (1.0)	2.48 ^c	(1.35, 4.56)
Gender			
Male	7.3 (0.9)	1.00	
Female	9.1 (1.0)	1.41 ^c	(1.13, 1.75)
Race/Ethnicity			
White, non-Hispanic	8.0 (1.1)	1.97 ^c	(1.21, 3.18)
African American, non-Hispanic	6.1 (1.5)	1.24	(0.60, 2.58)
Hispanic	9.2 (1.1)	2.08 ^c	(1.32, 3.29)
Other	4.4 (1.2)	1.00	
Age			
24 or younger	8.3 (1.1)	0.76	(0.37, 1.57)
25-34	8.0 (1.1)	0.84	(0.44, 1.59)
35 or older	6.9 (1.8)	1.00	
Marital Status			
Not married	8.2 (0.8)	0.98	(0.62, 1.55)
Married	7.1 (1.6)	1.00	
Annual Household Income (in Dollars)			
Less than 15,000	9.1 (1.5)	2.65 ^c	(1.37, 5.16)
15,000 to 19,999	10.0 (1.8)	2.91 ^c	(1.48, 5.72)
20,000 to 24,999	9.3 (1.5)	2.63 ^c	(1.47, 4.70)
25,000 to 34,999	7.9 (1.4)	2.08 ^c	(1.14, 3.79)
35,000 to 44,999	6.7 (1.2)	1.63	(0.90, 2.97)
45,000 to 49,999	6.8 (1.3)	1.74	(0.97, 3.09)
50,000 to 74,999	9.7 (3.3)	2.76 ^c	(1.08, 7.02)
75,000 or more	3.8 (0.6)	1.00	
Deployed within Past 24 Months			
At least once	9.2 (0.8)	1.33	(0.84, 2.13)
Not within 24 months	6.7 (1.1)	1.00	
Total	7.7 (0.8)		

Note: Prevalence estimates are percentages among Reserve military personnel in each sociodemographic group that were considered in need of further PTSD evaluation in the past 30 days. The standard error of each estimate is presented in parentheses. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aOdds ratios were adjusted for Reserve component, gender, race/ethnicity, age, marital status, annual household income, and deployment within the past 24 months (Q147).

^b95% CI = 95% confidence interval of the odds ratio.

^cOdds ratio is significantly different from the reference group.

Source: 2006 Department of Defense Reserve Component Survey (PTSD, Q104; Deployment Recency, Q147).

6.8 *Mental Health and Productivity Loss*

The relationship between mental health indices and productivity loss also was examined. Table 6.14 presents the types of productivity loss reported by all personnel, by those who reported suicidal ideation in the past year, by those needing further depression evaluation, by those needing further anxiety evaluation, and by those meeting criteria for further PTSD evaluation. The last row in each productivity category shows the percentage who reported a given type of productivity loss on at least 1 day in the past 12 months. As shown, personnel experiencing any mental health problem were much more likely to experience productivity loss than those in the total Reserve component population on all of the measures. For example, those who had suicidal ideation were about three times as likely (20.9%) to be hurt on the job than those in the total population (6.9%). Similarly, those with suicidal ideation were more than twice as likely to have worked below normal performance (38.2% vs. 16.0%) or not come into work because of illness or injury (33.4% vs. 15.0%) compared with the total population. In addition, personnel reporting suicidal ideation reported more productivity loss than those needing further depression, anxiety, or PTSD evaluation, which varied relatively little. For example, 14.0% of those experiencing suicidal ideation reported being late for work by 30 minutes or more on 4 or more days in the past year, compared with 5.9% of those needing further depression evaluation, 6.0% of those meeting criteria for further anxiety evaluation, and 6.6% of those meeting criteria for further PTSD evaluation.

It is clear from these findings that psychological symptoms are fairly common among Guard and Reserve members and that these symptoms are associated with high levels of perceived stress and decreased productivity. Additional research is needed to fully understand the causes, outcomes, and treatment success of psychological disorders among military personnel. Depressive and anxiety disorders are complex illnesses and include different subtypes that respond best to different treatments (Clayton, 1998).

Fortunately, many cases can be treated successfully. Even major, chronic depression can be treated effectively with a combination of antidepressants (see Miller et al. [1998]) and cognitive behavioral therapy (see Fava, Rafanelli, Grandi, Canestrari, & Morphy [1998]). Such treatments have the potential to significantly improve the functioning of those suffering from psychological disorders and potentially decrease the risk of suicide among military personnel.

6.9 *Physical and Sexual Abuse*

Another important health concern among the Reserve components that parallels active-duty personnel is the prevalence of physical and sexual abuse. Tables 6.15 and 6.16 show the prevalence of physical and sexual abuse by time period and by Reserve component for each gender. An estimated 36.8% of all Reserve component men reported some type of past physical or sexual abuse. Almost one-third of this abuse occurred before the age of 18 (31.4%). An estimated 20.8% of the men reported being attacked, beaten, or mugged, and 10.5% reported unwanted sexual contact. About 8% reported some physical or sexual abuse since entering the service. The time period in which the abuse occurred was similar across Reserve components, although Army National Guard and Marine Corps Reserve personnel reported significantly more attacks/beatings/muggings before age 18 than other components.

More than half of all Reserve component women reported some type of physical or sexual abuse, the majority (41%) occurring before age 18, and about 15% occurring since entering the service. Women were significantly more likely than men to report unwanted sexual contact (38.6% vs. 10.5%). An estimated 29.2% of the women reported being physically punished or beaten by a parent, caretaker, or teacher, and 21.8% being attacked, beaten, or mugged.

6.10 *Selected Mental Health Issues*

Finally, we asked respondents several questions about mental health care. These included whether they had felt a need for counseling within the past 12 months

Table 6.14

MENTAL HEALTH AND PRODUCTIVITY LOSS IN THE PAST 12 MONTHS, TOTAL RESERVE COMPONENT

Productivity Loss/Number of Military Work Days Affected, Past 12 Months	Suicidal Ideation in Past Year	Need for Further Depression Evaluation, Past 7 Days	Met Screening Criteria for GAD^a Symptoms, Past 30 Days	Need for Further PTSD^b Evaluation, Past 30 Days	All Personnel^c
Sample	581	2,173	1,199	715	15,212
Late for Work by 30 Minutes or More					
0 days	64.3 (4.5) ^{d-f}	74.1 (2.0) ^g	75.7 (1.4) ^g	75.0 (4.0) ^g	81.0 (0.6)
1 day	10.2 (2.0)	12.1 (1.5)	10.6 (1.7)	9.4 (1.7)	10.1 (0.6)
2 or 3 days	11.5 (1.9) ^{d,e}	7.8 (1.0) ^g	7.8 (1.3) ^g	9.0 (1.9)	5.5 (0.3)
4 or more days	14.0 (4.3) ^{d-f}	5.9 (1.2) ^g	6.0 (1.7) ^g	6.6 (2.3) ^g	3.4 (0.5)
1 or more days	35.7 (4.5) ^{d-f}	25.9 (2.0) ^g	24.3 (1.4) ^g	25.0 (4.0) ^g	19.0 (0.6)
Left Work Early					
0 days	63.8 (4.2) ^{d,e}	76.1 (2.1) ^{f,g}	75.0 (2.0) ^g	70.9 (4.4) ^d	82.6 (0.8)
1 day	9.7 (3.6)	8.8 (1.2)	10.2 (1.7)	7.9 (1.7)	7.3 (0.4)
2 or 3 days	12.4 (2.2)	9.1 (1.1) ^f	9.0 (1.7) ^f	14.2 (2.9) ^{d,e}	6.7 (0.5)
4 or more days	14.1 (4.0) ^{d,f}	6.0 (0.9) ^g	5.8 (1.5)	7.0 (1.8) ^g	3.3 (0.4)
1 or more days	36.2 (4.2) ^{d,e}	23.9 (2.1) ^{f,g}	25.0 (2.0) ^g	29.1 (4.4) ^d	17.4 (0.8)
Hurt in an On-the-Job Accident					
0 days	79.1 (3.8) ^{d-f}	90.1 (1.2) ^g	90.7 (1.5) ^g	88.1 (2.0) ^g	93.1 (0.6)
1 day	7.4 (1.8)	5.3 (0.8)	6.3 (1.7)	4.8 (1.0)	4.3 (0.4)
2 or 3 days	4.0 (1.2) ^e	2.2 (0.5)	1.5 (0.4) ^g	3.0 (0.9)	1.4 (0.2)
4 or more days	9.4 (3.4) ^{d-f}	2.4 (0.6) ^g	1.5 (0.5) ^{f,g}	4.1 (1.4) ^{e,g}	1.3 (0.3)
1 or more days	20.9 (3.8) ^{d-f}	9.9 (1.2) ^g	9.3 (1.5) ^g	11.9 (2.0) ^g	6.9 (0.6)
Worked Below Normal Performance Level					
0 days	61.8 (4.0) ^{d-f}	72.1 (2.4) ^g	75.3 (2.0) ^g	73.1 (4.1) ^g	84.0 (0.4)
1 day	5.6 (1.0)	7.3 (1.2)	6.1 (1.5)	6.2 (1.8)	5.4 (0.3)
2 or 3 days	10.0 (2.7)	9.5 (1.3)	8.9 (1.4)	9.6 (2.0)	5.3 (0.3)
4 or more days	22.5 (2.7) ^{d-f}	11.0 (1.1) ^g	9.7 (1.8) ^g	11.0 (1.9) ^g	5.3 (0.4)
1 or more days	38.2 (4.0) ^{d-f}	27.9 (2.4) ^g	24.7 (2.0) ^g	26.9 (4.1) ^g	16.0 (0.4)

(Table continued next page)

Table 6.14 MENTAL HEALTH AND PRODUCTIVITY LOSS IN THE PAST 12 MONTHS, TOTAL RESERVE COMPONENT (CONTINUED)

Productivity Loss/Number of Military Work Days Affected, Past 12 Months	Suicidal Ideation in Past Year	Need for Further Depression Evaluation, Past 7 Days	Met Screening Criteria for GAD ^a Symptoms, Past 30 Days	Need for Further PTSD ^b Evaluation, Past 30 Days	All Personnel ^c
Did Not Come into Work because of Illness or Injury					
0 days	66.6 (3.9) ^{d-f}	76.3 (2.2) ^g	76.7 (1.9) ^g	77.1 (3.7) ^g	85.0 (0.6)
1 day	7.7 (1.9)	8.1 (1.1)	6.5 (1.6)	6.1 (1.3)	6.5 (0.4)
2 or 3 days	12.2 (3.0)	9.5 (1.2)	10.9 (2.0)	11.3 (2.5)	5.4 (0.3)
4 or more days	13.5 (3.7) ^{d-f}	6.1 (0.8) ^g	5.8 (1.3) ^g	5.5 (1.1) ^g	3.1 (0.3)
1 or more days	33.4 (3.9) ^{d-f}	23.7 (2.2) ^g	23.3 (1.9) ^g	22.9 (3.7) ^g	15.0 (0.6)

Note: Table displays the percentage of Reserve military personnel in the five groups of interest (all personnel, suicidal ideation, need for further depression evaluation, met criteria for GAD symptoms, and need for further PTSD who reported that the specified problem (e.g., late for work by 30 minutes or more) affected 0 days, 1 day, 2 or 3 days, 4 or more days, and 1 or more days. Sample sizes by group are also provided. The standard error of each estimate is presented in parentheses. The definitions of need for further depression and screening criteria for GAD symptoms are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aGAD is generalized anxiety disorder.

^bPTSD is posttraumatic stress disorder.

^cAny individuals with missing level of productivity loss are not included in these estimates.

^dEstimate is significantly different from need for further depression evaluation, past 7 days at the 95% confidence level.

^eEstimate is significantly different from met screening criteria for GAD symptoms, past 30 days at the 95% confidence level.

^fEstimate is significantly different from need for further PTSD evaluation, past 30 days at the 95% confidence level.

^gEstimate is significantly different from suicide ideation in past year at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Need for Further Depression Evaluation, Q97-Q99; Productivity Loss, Q86A-E; Suicidal Ideation, Q101A; Screening Criteria for GAD Symptoms, Q100).

Table 6.15 PREVALENCE OF PHYSICAL AND SEXUAL ABUSE AMONG MEN, BY RESERVE COMPONENT

Type and Time of Abuse	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Physically Punished/Beaten by Parent, Caretaker, Teacher							
Before age 18	27.0 (1.9) ^{a-c}	21.9 (1.6) ^d	22.3 (0.9) ^d	24.3 (0.9) ^c	21.1 (1.3) ^{d,e}	22.5 (1.8)	24.4(1.1)
Between age 18 and entering Service	0.5 (0.1)	0.5 (0.2)	0.4 (0.1)	+ (+)	0.6 (0.2)	1.0 (0.4)	0.4(0.1)
Since entering Service	0.7 (0.2)	0.2 (0.2)	0.6 (0.3)	+ (+)	0.5 (0.1)	1.4 (0.6)	0.5(0.1)
Total ever punished/beaten	27.7 (2.0) ^{a-c}	22.5 (1.6) ^d	23.2 (1.0) ^d	24.4 (0.9)	22.1 (1.2) ^d	23.7 (2.2)	25.1(1.1)
Other Attacked/Beaten/Mugged							
Before age 18	14.9 (1.1) ^{a-c,e}	10.0 (1.2) ^{d,f}	10.8 (0.7) ^{d,f}	11.6 (0.9) ^{d,f}	9.9 (0.3) ^{d,f}	16.8 (1.7) ^{a-c,f}	12.7(0.7)
Between age 18 and entering Service	4.3 (0.8)	3.7 (0.4)	4.6 (0.4) ^{c,e}	3.2 (0.6) ^b	3.6 (0.3) ^b	4.7 (0.9)	4.0(0.4)
Since entering Service	5.4 (0.8)	7.2 (0.9) ^{c,e}	5.4 (0.6)	4.9 (0.4) ^{a,f}	4.2 (0.3) ^{a,f}	6.9 (0.8) ^{c,e}	5.7(0.4)
Total ever attacked/beaten/mugged	22.3 (1.7) ^c	19.7 (1.2) ^c	19.6 (0.9) ^{c,f}	19.6 (1.4) ^c	16.6 (0.5) ^{a,b,d-f}	24.5 (2.2) ^{b,c}	20.8(0.9)
Unwanted Sexual Contact							
Before age 18	7.6 (1.3)	6.7 (1.2)	6.3 (0.4)	5.7 (1.0)	5.4 (0.4)	6.0 (1.4)	6.8(0.6)
Between age 18 and entering Service	1.2 (0.2)	0.8 (0.2) ^f	1.3 (0.2)	1.1 (0.3)	0.9 (0.3) ^f	1.6 (0.2) ^{a,c}	1.1(0.1)
Since entering Service	4.5 (1.9)	2.4 (0.5)	2.0 (0.5)	1.4 (0.2) ^f	1.6 (0.3)	2.3 (0.4) ^e	3.1(0.9)
Total unwanted sexual contact	12.7 (1.5) ^{b,c,e}	9.7 (1.5)	9.0 (0.7) ^d	7.9 (1.2) ^d	7.7 (0.5) ^d	9.5 (1.4)	10.5(0.8)
Any Abuse Experience							
Before age 18	34.4 (1.6) ^{a-c}	27.0 (2.0) ^{d,e}	30.0 (1.3) ^d	32.3 (1.4) ^{a,c}	27.8 (0.9) ^{d,e}	31.9 (2.3)	31.4(1.1)
Between age 18 and entering Service	5.6 (0.8)	4.5 (0.5)	5.5 (0.4) ^d	4.1 (0.5) ^b	4.6 (0.5)	5.9 (1.0)	5.1(0.4)
Since entering Service	9.3 (1.8) ^c	8.6 (1.0) ^{c,e}	6.9 (0.8) ^f	5.8 (0.4) ^{a,f}	5.6 (0.4) ^{a,d,f}	9.5 (0.9) ^{b,c,e}	8.2(0.9)
Total any abuse	38.7 (1.8) ^c	34.5 (2.1)	36.4 (1.6) ^c	37.0 (1.0) ^c	31.9 (0.9) ^{b,d-f}	39.0 (2.6) ^c	36.8(1.1)

(Table continued next page)

Table 6.15 **PREVALENCE OF PHYSICAL AND SEXUAL ABUSE AMONG MEN, BY RESERVE COMPONENT (CONTINUED)**

Note: Table displays the percentage of male military personnel by Reserve component who reported the type and time of physical or sexual abuse as indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Army Reserve at the 95% confidence level.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Air National Guard at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Abuse, Q103A-C).

Table 6.16

PREVALENCE OF PHYSICAL AND SEXUAL ABUSE AMONG WOMEN, BY RESERVE COMPONENT

Type and Time of Abuse	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Physically Punished/Beaten by Parent, Caretaker, Teacher							
Before age 18	27.7 (3.6)	28.6 (3.5)	26.0 (2.7)	24.7 (5.2)	23.0 (1.0)	+ (+)	27.0 (1.8)
Between age 18 and entering Service	0.1 (0.1) ^a	2.4 (1.2)	1.2 (0.4) ^b	1.0 (0.7)	1.2 (0.7)	+ (+)	1.2 (0.4)
Since entering Service	1.8 (1.2)	2.0 (1.3)	0.5 (0.2)	0.4 (0.3)	0.6 (0.2)	+ (+)	1.4 (0.6)
Total ever punished/beaten	29.5 (3.6)	31.9 (2.6) ^c	27.4 (2.6)	25.6 (5.9)	24.3 (1.0) ^d	+ (+)	29.2 (1.7)
Other Attacked/Beaten/Mugged							
Before age 18	14.9 (3.5) ^c	8.7 (2.2)	8.0 (1.4)	11.5 (2.1)	7.2 (0.7) ^b	+ (+)	10.7 (1.5)
Between age 18 and entering Service	3.1 (1.5) ^{a,c}	7.0 (1.3) ^e	7.9 (1.8) ^{b,e}	3.7 (0.6) ^{a,c,d}	6.6 (0.7) ^{b,e}	+ (+)	5.5 (0.7)
Since entering Service	8.2 (2.1)	7.5 (1.3)	5.2 (1.1)	4.5 (0.9)	6.2 (1.1)	+ (+)	7.0 (0.8)
Total ever attacked/beaten/mugged	25.2 (2.1) ^c	20.7 (2.3)	20.5 (3.3)	18.9 (2.8)	19.0 (1.8) ^b	+ (+)	21.8 (1.2)
Unwanted Sexual Contact							
Before age 18	23.6 (2.6)	22.0 (2.6)	20.9 (2.7)	28.8 (3.8)	21.4 (2.8)	+ (+)	23.1 (1.4)
Between age 18 and entering Service	7.9 (1.7)	9.0 (2.1)	9.4 (1.8)	6.5 (1.1)	8.9 (0.7)	10.4 (2.8)	8.4 (1.0)
Since entering Service	10.4 (1.7)	12.6 (1.5)	10.4 (1.9)	7.9 (2.7)	10.6 (1.1)	7.2 (3.4)	10.9 (0.9)
Total unwanted sexual contact	39.8 (3.6)	38.9 (2.4)	36.0 (4.6)	38.4 (2.9)	36.5 (2.9)	+ (+)	38.6 (1.5)
Any Abuse Experience							
Before age 18	41.8 (5.0)	41.6 (3.0)	39.0 (4.1)	43.6 (2.5) ^c	36.4 (1.2) ^c	+ (+)	41.0 (1.9)
Between age 18 and entering Service	9.8 (2.4) ^d	15.8 (1.7) ^{b,e}	13.7 (2.2)	10.1 (1.9) ^d	13.3 (1.2)	+ (+)	12.8 (1.1)
Since entering Service	15.4 (2.9)	17.6 (2.1) ^e	13.1 (2.1)	11.5 (2.0) ^d	14.8 (1.2)	+ (+)	15.4 (1.3)
Total any abuse	51.7 (5.5)	53.9 (2.8)	51.9 (5.3)	51.6 (3.2)	48.8 (1.2)	+ (+)	52.3 (2.1)

(Table continued next page)

Table 6.16 **PREVALENCE OF PHYSICAL AND SEXUAL ABUSE AMONG WOMEN, BY RESERVE COMPONENT (CONTINUED)**

Note: Table displays the percentage of female military personnel by Reserve Component who reported the type and time of physical and sexual abuse as indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army Reserve at the 95% confidence level.

^eEstimate is significantly different from the Air National Guard at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Abuse, Q103A--C).

and whether they had received such care. Personnel also were questioned about their perception of whether mental health counseling would have a detrimental effect on their career. Table 6.17 presents distributions across response categories, displayed separately for each component. Overall, 16.3% of personnel perceived a need for mental health counseling in the past year. As shown, the perceived need for mental health counseling was higher among Army Guard and Reservists than in other Reserve components. Compared with the 18% of Army Guard and Reserve members, roughly 12% to 15% of personnel in the other components indicated that they had perceived a personal need for counseling in the past 12 months. A reported 13.3% of personnel received mental health counseling; Marine Corps Reservists received less prescribed medication than other Service personnel for depression, anxiety, or sleeping problems. The small number of Marine Corps Reserve respondents resulted in unreliable prevalence estimates for other treatment questions. Unlike active-duty personnel, most Reserve component personnel received counseling from a civilian mental health professional (5.3%) or a general physician at a civilian facility (4.1%). Most of those seeking mental health counseling sought help for depression (6.2%) or family problems (5.8%). Army Guard and Reservists were significantly more likely to seek help for depression and anger or stress management than those in other components.

The perceived effect of mental health counseling on a military career is also shown in Table 6.17. Somewhat fewer personnel perceived that mental health counseling “definitely or probably would” damage a military career (41%) than personnel who perceived that it “definitely or probably would not” (59%). This pattern was fairly similar across the components. To determine whether the perception of negative repercussions is deterring some personnel from receiving mental health counseling, the opinions of those who perceived or indicated a need for this type of treatment were examined. If personnel who needed treatment and received it perceived more positive career outcomes, this would indicate that these fears are largely unwarranted. If, however, those who had received treatment perceived a greater threat to their career than those who had not, this would indicate that

they may have experienced negative career consequences as a result of their counseling.

Table 6.18 includes data only for those who perceived a need for mental health services, revealed a need for further anxiety or depression evaluation, reported suicidal ideation in the past 12 months, or met screening criteria for PTSD symptoms. Thus, this is a small subset of Guard and Reserve personnel. Within each group, respondents were divided into those who had received mental health care in the past 12 months and those who had not. As shown, among those who felt they needed counseling, a majority of both those who had received services (60.4%) and those who had not received mental health services (55.2%) responded that such services through the military “definitely would” or “probably would” damage a person’s military career. This pattern held for all groups with mental health symptoms. That is, among members who reported suicidal ideation or met screening criteria for further depression, anxiety, or PTSD evaluation, those who had not received mental health services were just as likely or less likely than those who had received these services to perceive them as damaging to their careers. This is in contrast to findings among active-duty personnel, in which personnel who had not received mental health care were more likely than those who had received such services through the military to respond that these services “probably or definitely would” be detrimental to their career (Bray et al., 2006).

Thus, it is possible that personnel who received services were generally more likely to believe that having done so would have a negative effect on their career than those who did not receive such services. However, among the personnel needing further depression or PTSD evaluation who did receive services, less than half perceived that this would not damage their career (e.g., 27.4% of those who received anxiety evaluation, 29.4% of those who received PTSD evaluation). In other words, there was still strong concern even among those who received services that it would damage their career.

It is quite possible that the fear of negative career consequences is preventing some members from seeking mental health counseling. In recent years, the military

Table 6.17 SELECTED MENTAL HEALTH ISSUES, PAST 12 MONTHS, BY RESERVE COMPONENT

Mental Health Measure	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Perceived Need for Mental Health Counseling	18.1 (2.2) ^{a,b}	18.4 (1.4) ^{a-d}	11.5 (1.0) ^{d-f}	13.8 (1.1) ^f	11.8 (0.8) ^{d-f}	15.2 (0.8) ^{a,b,f}	16.3 (0.9)
Receipt of Prescribed Medication for Depression, Anxiety, or Sleeping Problems, Past 6 Months	6.2 (0.8) ^{b,d}	9.5 (1.7) ^{a,b,d}	4.5 (0.5) ^{d,f}	6.7 (1.2) ^{b,d}	4.1 (0.3) ^{c-f}	2.4 (0.6) ^{a-c,e,f}	6.5 (0.6)
Receipt of Mental Health Counseling							
From any counseling professional	14.8 (1.8) ^b	14.7 (1.5) ^{a,b}	10.8 (1.3) ^f	11.4 (1.3)	9.7 (0.7) ^{e,f}	+ (+)	13.3 (0.8)
From a military mental health professional	5.0 (0.9) ^{a-c}	4.1 (0.7) ^{a-c}	1.7 (0.3) ^{c,e,f}	0.8 (0.2) ^{a,b,e,f}	2.1 (0.2) ^{c,e,f}	+ (+)	3.6 (0.5)
From a general physician at a military facility	4.8 (0.9) ^{a-c}	3.9 (0.7) ^{a-c}	1.9 (0.4) ^{e,f}	1.7 (0.4) ^{e,f}	1.7 (0.2) ^{e,f}	+ (+)	3.5 (0.4)
From a military chaplain	4.0 (0.7) ^{a-c}	3.3 (0.6) ^{a,c}	1.6 (0.3) ^{e,f}	2.1 (0.1) ^{e,f}	2.3 (0.6) ^e	+ (+)	3.1 (0.3)
From a civilian mental health professional	5.4 (0.7)	5.8 (0.8)	5.5 (0.9)	5.4 (1.0)	4.8 (0.4)	+ (+)	5.3 (0.4)
From a general physician at a civilian facility	5.1 (0.8) ^b	4.0 (0.6)	3.4 (0.6)	3.6 (0.6)	2.7 (0.3) ^e	+ (+)	4.1 (0.4)
From a civilian pastoral counselor	3.9 (0.5) ^b	4.2 (0.8) ^b	3.6 (0.4) ^b	3.5 (0.8)	2.4 (0.3) ^{a,e,f}	+ (+)	3.8 (0.3)
From a self-help group (AA, NA)	2.7 (0.6) ^{a-c}	1.8 (0.6)	1.3 (0.2) ^e	1.0 (0.3) ^e	1.5 (0.1)	+ (+)	2.0 (0.3)
Concerns Sought Help For							
Depression	6.9 (1.0) ^{a-c}	8.4 (1.0) ^{a-c}	3.5 (0.5) ^{e,f}	4.4 (0.6) ^{e,f}	3.7 (0.4) ^{e,f}	+ (+)	6.2 (0.5)
Anxiety	4.8 (0.8)	6.1 (0.9) ^{a-c}	2.9 (0.5) ^f	3.1 (0.5) ^f	3.0 (0.5) ^f	+ (+)	4.5 (0.4)
Family problems	5.6 (0.6)	6.4 (0.9)	5.8 (0.7)	6.5 (0.6)	5.4 (0.5)	+ (+)	5.8 (0.4)
Substance use problems	1.1 (0.3)	1.4 (0.2) ^{a,b}	0.4 (0.2) ^f	+ (+)	0.6 (0.1) ^f	+ (+)	1.0 (0.2)
Anger or stress management	4.4 (0.8) ^{a-c}	4.2 (0.6) ^{a-c}	2.4 (0.5) ^{e,f}	1.7 (0.3) ^{e,f}	2.0 (0.1) ^{e,f}	+ (+)	3.5 (0.4)
Other	4.4 (0.5) ^{b,c}	4.4 (0.9)	3.5 (0.5)	2.7 (0.3) ^e	2.8 (0.4) ^e	+ (+)	4.1 (0.3)

(Table continued on next page)

Table 6.17

SELECTED MENTAL HEALTH ISSUES, PAST 12 MONTHS, BY RESERVE COMPONENT (CONTINUED)

Mental Health Measure	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Perceived Damage to Career							
Definitely would	17.7 (1.5) ^{c,d}	15.7 (1.3) ^{b,c}	14.9 (0.5) ^{b,c}	12.0 (0.9) ^{a,b,e,f}	19.3 (1.2) ^{a,c,d,f}	12.5 (1.2) ^{b,e}	16.2 (0.8)
Probably would	22.2 (1.2) ^{a-c,f}	26.3 (0.9) ^{d,e}	26.1 (1.3) ^{d,e}	28.6 (1.9) ^{d,e}	28.2 (1.1) ^{d,e}	21.6 (1.5) ^{a-c,f}	24.8 (0.7)
Probably would not	26.0 (2.1) ^{a,c}	28.5 (1.1) ^{a,c}	33.4 (1.0) ^{b,e,f}	34.8 (2.5) ^{b,e,f}	29.4 (0.5) ^{a,c}	31.0 (2.8)	28.9 (1.2)
Definitely would not	34.1 (2.4) ^{a-c}	29.5 (1.5) ^{a-c}	25.7 (1.0) ^{d-f}	24.7 (0.7) ^{d-f}	23.1 (1.7) ^{d-f}	34.9 (2.5) ^{a-c}	30.1 (1.3)

Note: Table displays the percentage of reserve military personnel by Reserve component who reported the mental health issues indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Perceived Need for Counseling Service, Q105; Receipt of Prescribed Medication, Q108; Receipt of Counseling, Q106A-F; Concerns Sought Help For, Q107; Perceived Damage to Career, Q109).

Table 6.18**PERCEIVED DAMAGE TO MILITARY CAREER FOR SEEKING MENTAL HEALTH SERVICES, BY SELECTED MENTAL HEALTH MEASURES**

Mental Health Measure	Sample	Perceived Damage to Career			
		Definitely Would	Probably Would	Probably Would Not	Definitely Would Not
Perceived Need for Mental Health Counseling, Past 12 Months	1,905				
Received mental health services		30.2 (2.8) ^{a,b}	30.2 (2.1) ^{a,b}	21.1 (2.2) ^{c,d}	18.4 (2.1) ^{c,d}
Did not receive mental health services		24.3 (2.4)	30.9 (3.0) ^b	24.4 (2.4)	20.4 (2.2) ^d
Suicidal Ideation, Past 12 Months	581				
Received mental health services		39.5 (4.8) ^{a,b,d}	28.9 (2.3) ^{a-c}	15.5 (3.2) ^{c,d}	16.1 (3.2) ^{c,d}
Did not receive mental health services		30.8 (3.7) ^a	26.8 (4.6)	17.9 (3.7) ^c	24.5 (5.1)
Need for Further Depression Evaluation, Past 7 Days	2,173				
Received mental health services		32.6 (2.3) ^{a,b}	31.1 (2.8) ^{a,b}	17.4 (1.7) ^{c,d}	18.9 (3.1) ^{c,d}
Did not receive mental health services		30.3 (4.7)	27.0 (2.4) ^b	23.5 (2.7)	19.2 (1.7) ^d
Met Screening Criteria for GAD^e Symptoms, Past 30 Days	1,199				
Received mental health services		41.4 (3.7) ^{a,b}	31.2 (4.1) ^{a,b}	11.6 (2.4) ^{c,d}	15.8 (3.0) ^{c,d}
Did not receive mental health services		32.8 (7.1)	18.8 (3.7)	17.9 (3.6) ^b	30.5 (4.2) ^a
Need for Further PTSD^f Evaluation, Past 30 Days	715				
Received mental health services		41.4 (3.3) ^{a,b,d}	29.2 (3.2) ^{a-c}	12.4 (1.8) ^{c,d}	17.0 (3.3) ^{c,d}
Did not receive mental health services		+ (+)	18.0 (4.7)	13.7 (3.7) ^b	24.1 (5.3) ^a

Note: Table displays the percentage of Reserve military personnel by mental health measure who reported that seeking mental health services “definitely would,” “probably would,” “probably would not,” or “definitely would not” damage their military careers. The standard error of each estimate is presented in parentheses. Percentage estimates within each row may not sum to 100 because of rounding. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the “probably would not” category for the perceived damage to career at the 95% confidence level.

^bEstimate is significantly different from the “definitely would not” category for the perceived damage to career at the 95% confidence level.

^cEstimate is significantly different from the “definitely would” category for perceived damage to career at the 95% confidence level.

^dEstimate is significantly different from the “probably would” category for the perceived damage to career at the 95% confidence level.

^eGAD is generalized anxiety disorder.

^fPTSD is posttraumatic stress disorder.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Perceived Damage to Career, Q109; Receipt of Mental Health Counseling Services, Q106; Perceived Need for Counseling, Q105; Need for Further Depression Evaluation, Q97-Q99; Screening Criteria for GAD Symptoms, Q100; Suicidal Ideation, Q101A).

has taken steps to reduce the stigma associated with receiving mental health care. One step in this process has been to increase awareness of the importance of mental fitness. Mental health has been recognized as an essential aspect of military readiness; recent directives have specified routine medical surveillance (including mental health screening) for active-duty Service members (DoD, 1997b) to monitor the health of this population and intervene when necessary. Under this policy, all Service members must be mentally fit to carry out their missions, and their mental health must be maintained, assessed, and protected. In addition, the rights of Service members referred for mental health evaluation are protected (DoD, 1997a; Litts & Roadman, 1997). Empirical evidence also suggests that mental health evaluation will not necessarily have a negative effect on one's military career. In a survey of 138 commanding and executive officers in the Navy and Marine Corps, the majority of these officers reported a neutral view of Service members who received mental health counseling (Porter & Johnson, 1994). Despite these efforts, it appears that more assurance is needed to combat the widely held concerns that seeking help will damage a career.

Personnel who are in need of mental health services but are reluctant to seek help likely are not performing at their optimal level on the job. Therefore, the resolution of this conflict (perhaps through education and assurance of anonymity) could increase the readiness of the U.S. military forces.

6.11 Summary

This chapter examined a variety of mental health issues among Reserve component personnel, including stress, coping mechanisms, symptoms of anxiety and depression, screening for PTSD and suicidal ideation, and perceptions and receipt of mental health counseling.

6.11.1 Levels and Sources of Stress

Higher percentages of Reserve component members rated their civilian jobs (20.4%) and their personal lives (19.2%) as more stressful than their military jobs (12.9%) (Table 6.1). When asked about the specific

sources of stress, Reserve component members reported the following:

- The most frequently indicated stressors for both men and women were being away from family (10.6%), problems with money (10.5%), and problems at their civilian job (10.4%) (Table 6.2).
- More women than men reported stress related to their civilian work and to personal and family problems. For example, women were more likely than men to report high stress related to problems at their civilian jobs (14.1% vs. 9.6%), finding daycare (6.4% vs. 3.2%), and family health problems (6.9% vs. 3.8%) (Table 6.2).
- Reserve component members were more likely to describe military work conflicts with family life (35.5%) than family life conflicts with military work (15.9%) (Table 6.3).
- More than 20% of female Reserve component members reported high levels of stress because of being a woman in the military (Table 6.4).
- Marine Corps Reservists had the highest prevalence of military work-related stress (21.6%) and were almost four times more likely to report high work stress than members of the Air National Guard (Table 6.5).

6.11.2 Stress and Productivity Loss

Compared with their less-stressed counterparts, personnel experiencing high levels of job-related or family-related stress showed a greater prevalence of productivity loss in each of the domains assessed (Table 6.6):

- Working below normal performance level was reported by 24.1% of the high-stress group, compared with 12.4% of the moderate/low-stress group. This difference was especially salient at the highest frequency (i.e., 4 or more days in the past year).
- Illness, injuries, and accidents in the workplace on 4 or more days in the past year were more than twice as common in the high-stress group (7.6%) as in the moderate/low-stress group (3.0%).

Beyond the issue of productivity loss, the Reserve components should consider the effect of other potentially negative outcomes of stress on military

functioning, including attrition; family dysfunction; morale; and medical treatment costs for substance abuse, health, and mental health problems.

6.11.3 Coping with Stress

The most commonly used strategies for coping with stress were using a problem-solving approach (78.6%); talking to a friend or family member (66.9%); and engaging in a hobby (58.2%), physical activity (58.0%), or prayer (56.2%). These encouraging findings are tempered somewhat by the finding that about one-quarter of members commonly used alcohol to cope with stress, daily pressures, and feelings of depression (Tables 6.8 and 6.9):

- More men than women reported using cigars or smokeless tobacco (11.4% vs. 3.6%), but unlike active-duty personnel, men were not more likely than women to use alcohol or cigarettes as coping behaviors. Women were more likely than men to talk to a friend or family member (78.4% vs. 64.4%) or to pray (70.0% vs. 53.2%) as a coping strategy. Women also were more likely than men to eat as a coping strategy (51.8% vs. 42.5%).
- An estimated 4.7% of Reserve component personnel had considered suicide as an option for dealing with stress and depression.

6.11.4 Mental Disorders and Suicidal Ideation

Consistent with findings from national psychiatric epidemiologic studies, the prevalence of anxiety and depression symptoms is substantial (10.7% and 18.8%, respectively) (Tables 6.10 and 6.11) and is consistent with the prevalences found in recent studies of Operation Enduring Freedom and Operation Iraqi Freedom combat personnel (Hoge et al., 2004). Also consistent with the literature, a greater percentage of women than men scored above the thresholds on the anxiety and depression screeners. Higher percentages of those who were less educated, unmarried, and in the lower enlisted pay grades endorsed screening items indicative of the need for further evaluation for anxiety and depression. Recognizing that screening procedures may cast a wide net, we examined results from screening instruments designed to measure probable PTSD and suicidal ideation (Tables 6.12 and 6.13):

- An estimated 7.7% of Reserve component members met screening criteria for PTSD in the past 30 days.
- Army National Guard members were at the highest risk for PTSD.
- Annual household income may be a more important correlate of PTSD than deployment.
- A small percentage of members had seriously considered or attempted suicide in the past year (5.5% and 1.8%, respectively).

There is a large body of research indicating a correlation between PTSD and suicide. Future reports from these data will examine the co-morbidities between PTSD, suicide risk, and other mental health indicators.

Because psychological problems can affect military readiness, we examined the relationships among stress, productivity, and mental health (Figure 6.1 and Table 6.14). These analyses revealed some potentially important findings:

- Substantial percentages of personnel in need of further evaluation for anxiety (GAD) experienced “a lot” of stress associated with civilian work (44.1%) and with family (44.7%), but less with military work (32.6%) (Figure 6.1). Similarly, personnel in need of further depression evaluation also indicated a lot of stress associated with civilian work (41.5%) and with family (49.5%), and less with military work (28.6%).
- Productivity loss was higher among personnel reporting suicidal ideation or in need of further evaluation for anxiety or depression than it was among those in the total population (Table 6.14). Those who had suicidal ideation were about three times more likely (20.9%) to be hurt on the job than those in the total population (6.9%). Similarly, more than one-quarter of those with suicidal ideation (38.2%), depressive symptoms (27.9%), and/or PTSD symptoms (26.9%) worked below their normal performance level, compared with 16.0% of all Reserve component members.

6.11.5 Physical and Sexual Abuse

More than half of female Reserve component members (52.3%) and more than one-third (36.8%) of male Reserve component members experienced some type of physical or sexual abuse (Tables 6.15 and 6.16). Most men reported being physically punished or beaten by a

parent, caretaker, or teacher such that they had been very frightened, thought they would be injured, or were injured (25.1%); 24.4% of this abuse occurred before age 18. Most women reported some lifetime experience of unwanted sexual contact (38.6%), 23.1% of which occurred before age 18 and 10.9% of which occurred after entering the Service. Air Force Reserve rates of men ever being attacked, beaten, or mugged were considerably lower than rates for men in the other components; few differences were observed by component for women.

6.11.6 Selected Mental Health Issues

Roughly 16% of personnel had perceived a need for mental health care in the 12 months prior to the survey,

and about 13% received this care (Table 6.17). Although it appears that the gap between the perceived need for treatment and receipt of treatment is small, the continued reluctance to receive treatment may be due to members who perceive probable or definite damage to a Service member's military career after receiving mental health counseling (Table 6.18). Although personnel who received care were only slightly more likely (60.4%) than those who did not receive services (55.2%) to believe that counseling would damage a military career, clearly a large portion in both groups believed it would be detrimental to one's career.

Chapter 7: Healthy Lifestyle and Disease Prevention

This chapter shows the prevalence of overweight, obese, and underweight members of the Reserve component. It also highlights the weight-loss history, as well as the reasons for weight gain, among Reserve component personnel. Leisure-time physical activity, frequency of food intake, and prevalence of dietary supplement intake are discussed. Prevalence of blood pressure screening, advice given, and actions taken to control high blood pressure, as well as prevalence of cholesterol screening, also are described. In certain cases, Reserve component personnel behaviors are compared with relevant *Healthy People 2010* objectives (U.S. Department of Health and Human Services [DHHS], 2000) and the *Dietary Guidelines for Americans, 2005* (DHHS & U.S. Department of Agriculture [USDA], 2005).

7.1 General Overview

This chapter presents findings from the 2006 Reserve component survey related to Body Mass Index (BMI) measures of overweight, obesity, and underweight; physical activity; diet; dietary supplement use; high blood pressure screening and control; and cholesterol screening among Reserve personnel. In 2000, new BMI cutoff points for all adults for determining overweight and underweight were incorporated into the *Healthy People 2010* (DHHS, 2000). These national standards were recently reaffirmed and presented in more detail as part of the *Dietary Guidelines for Americans, 2005* (DHHS & USDA, 2005). In this chapter, 2006 Reserve survey findings are compared with selected *Healthy People 2010* objectives. Below are the 2010 national targets addressed in the survey. (Note that the objectives in *Healthy People 2010* include different age groups as the basis for their objectives; therefore, the targets are based on different ages.)

- Increase the prevalence of adults who are at a healthy weight: target of 60% of adults aged 20 or older.
- Reduce the proportion of adults who are obese (BMI greater than or equal to 30.0): target of 15% of adults aged 20 or older.
- Reduce the proportion of adults who engage in no leisure-time physical activity: target of 20% of adults aged 18 or older.
- Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes a day: target of 30% of adults aged 18 or older.
- Increase the proportion of adults who engage in vigorous physical activity that promotes the development and maintenance of cardio-respiratory fitness 3 or more days per week for 20 or more minutes per occasion: target of 30% of adults aged 18 or older.
- Increase the proportion of persons aged 2 years or older who consume at least two daily servings of fruit: target 75%.
- Increase the proportion of persons aged 2 years or older who consume at least three daily servings of vegetables, with at least one-third of them being dark green or orange vegetables: target 50%.
- Increase the proportion of persons aged 2 years or older who consume at least six daily servings of grain products, with at least three being whole grains: target 50%.
- Reduce the proportion of adults with high blood pressure: target 16% of adults aged 20 or older.
- Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high: target 95% of adults aged 18 or older.
- Increase the proportion of adults with high blood pressure who are taking action (e.g., losing weight, increasing physical activity, reducing sodium intake) to help control their blood pressure: target 95% of adults aged 18 or older.
- Increase the proportion of adults who have had their cholesterol checked within the preceding 5 years: target 80% of adults aged 18 or older.

7.2 Measures of Overweight, Underweight, and Physical Activity

7.2.1 BMI Measures of Overweight and Obesity

Currently, overweight is defined as a BMI greater than or equal to 25 for adults. Obesity is defined as a BMI greater than or equal to 30 (Kuczmarski & Flegal, 2000). It is possible to have a BMI less than or equal to 30.0 and have excess body fat. Furthermore, muscled individuals with an accumulation of lean body mass and a BMI at or above 25 may be classified as overweight even though their percentage body fat is in a healthy range. Therefore, although the national standards for description and screening of overweight and obesity are based on BMI alone, additional factors should be used to confirm diagnosis and medically manage obesity. These factors include abdominal adiposity based on waist circumference; risk factors for obesity-related chronic disease such as diabetes; and other measures, such as skin fold measurements and bioelectrical impedance (Kuczmarski & Flegal, 2000).

Table 7.1 presents the prevalence of overweight personnel, by Reserve component, by gender and age. BMI is calculated from self-reported weight and height. A BMI greater than or equal to 25 is considered overweight. For both men and women, overweight is more prevalent in the older age groups. Among Reserve component personnel 24 years old and younger, 43.5% are overweight, and among those 45 and older, 78.4% are overweight. Overweight prevalence was lower among Reserve component women (40.6%) than Reserve component men (67.4%). Women 24 years or younger had the lowest overweight prevalence (27.8%). Of Army National Guard women, 30.4% were overweight, which is at least approximately 12% lower than all other components. In the 2003-2004 National Health and Nutrition Examination Survey (NHANES), 66.3% of all adults 20 years and older were overweight. More men (70.8%) than women (61.8%) were overweight (Ogden et al., 2006). In contrast to the civilian population, members of the Reserve component had a lower prevalence of obesity.

Table 7.2 presents the prevalence of obese personnel, by Reserve component, by gender and age. Obesity is defined as a BMI greater than or equal to 30. Guard and Reserve personnel almost reach the *Healthy People 2010* target of having only 15% of adults obese; the Reserve component personnel exceed this goal by 1 percentage point (16.3%). Obesity was lower among Reserve component women (9.2%) than Reserve component men (17.8%). Similar to overweight, obesity is more prevalent at older ages, both in men and women. In contrast, 32.2% of U.S. adults were obese in the 2003–2004 NHANES, with more men (31.1%) than women (33.2%) and a much higher percentage of both than Reserve component personnel (Ogden et al., 2006).

7.2.2 BMI Measures of Underweight

Table 7.3 presents the prevalence of underweight, by Reserve component, by gender and age. Underweight is defined as a BMI less than 18.5. Among members of the Guard and Reserves, 1.3% were underweight. Underweight was higher among Reserve component women (2.4%) than Reserve component men (1.1%). Because of such small numbers, it would be imprudent to make additional comparisons. In the 1999–2002 NHANES, 1.9% of 25- to 29-year-olds were underweight, 0.7% of 60- to 69-year-olds were underweight, and 2.4% of those 70 or older were underweight (Flegal et al., 2005). Still, these numbers are very small and should be interpreted cautiously.

7.2.3 Healthy Weight

Table 7.4 presents the prevalence of healthy-weight personnel, by Reserve component, by gender and age. Healthy weight is defined as 18.5 less than or equal to BMI less than 25.0. Overall, 36.0% of Guard and Reserve personnel were a healthy weight. Prevalence of healthy weight was lower among older members of the Reserve component. Healthy weight was higher among Reserve component women (57.0%) than Reserve component men (31.5%). Among women 24 years of age or younger, 70.3% were a healthy weight, and among men of the same age, 50.2% were a healthy weight. Only Reserve component women 24 years or

Table 7.1

PREVALENCE OF OVERWEIGHT^a PERSONNEL, BY RESERVE COMPONENT, BY GENDER AND AGE

Gender/Age Group	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Males							
24 or younger	48.7 (3.0)	45.7 (3.4)	46.8 (6.0)	52.7 (3.4) ^b	43.9 (2.3) ^c	+ (+)	47.6 (1.8)
25-34	71.6 (3.2)	69.6 (2.4)	64.3 (2.7) ^c	74.7 (1.1) ^{b,d,e}	69.0 (2.2) ^c	60.0 (6.8) ^c	70.2 (1.7)
35-44	79.8 (2.9)	70.6 (6.8)	77.4 (1.9)	78.2 (0.9)	79.2 (1.2)	+ (+)	77.6 (1.8)
45 or older	84.3 (4.1)	88.2 (5.3)	77.8 (2.4)	80.5 (0.9)	76.9 (2.6)	+ (+)	82.7 (2.1)
Total males	67.3 (1.8) ^{b,c}	64.1 (2.1) ^{b-d}	71.3 (1.7) ^f	74.0 (0.8) ^{f,g}	71.9 (1.0) ^{f,g}	+ (+)	67.4 (1.1)
Females							
24 or younger	21.7 (4.3) ^f	36.0 (5.4) ^g	25.9 (5.3)	+ (+)	32.4 (3.9)	+ (+)	27.8 (3.2)
25-34	30.4 (6.4) ^f	54.9 (5.1) ^{b-d,g}	37.4 (3.4) ^f	33.8 (7.1) ^f	40.4 (2.7) ^f	+ (+)	41.4 (3.3)
35-44	+ (+)	49.1 (5.0)	48.5 (2.2)	+ (+)	47.3 (2.5)	+ (+)	48.8 (2.9)
45 or older	+ (+)	58.1 (4.7)	49.8 (4.6) ^c	67.7 (5.8) ^d	54.4 (4.5)	+ (+)	58.0 (3.4)
Total females	30.4 (4.1) ^{b,d,f}	48.1 (2.3) ^g	43.1 (1.9) ^g	41.5 (4.4)	44.1 (1.8) ^g	+ (+)	40.6 (1.9)
Total							
24 or younger	43.4 (2.4)	43.5 (2.8)	41.6 (5.4)	46.2 (2.6)	39.8 (2.1)	+ (+)	43.5 (1.5)
25-34	66.7 (2.9) ^d	65.6 (1.4) ^{b,d}	58.4 (1.9) ^{c,f,g}	66.3 (3.3) ^d	61.0 (1.1) ^f	58.8 (6.5)	64.8 (1.4)
35-44	77.8 (2.8)	66.6 (5.5)	71.8 (1.7)	75.1 (2.0)	72.9 (1.3)	+ (+)	73.6 (1.7)
45 or older	82.3 (5.7)	80.2 (5.7)	72.0 (2.2) ^c	79.2 (1.2) ^{b,d}	71.4 (2.0) ^c	+ (+)	78.4 (2.5)
Total	62.3 (2.2) ^c	60.3 (1.7) ^{b-d}	65.5 (1.5) ^f	68.5 (2.3) ^{f,g}	64.9 (0.7) ^f	+ (+)	62.7 (1.1)

Note: Table entries are percentages of Reserve military personnel by Reserve component, gender, and age group who met the criteria for being overweight. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Overweight is defined in terms of the Body Mass Index (BMI). Definitions of BMI are given in Chapter 2. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aBMI ≥ 25.0.

^bEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^eEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

^gEstimate is significantly different from the Army National Guard at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Overweight, Q119 and Q120).

Table 7.2 PREVALENCE OF OBESE^a PERSONNEL, BY RESERVE COMPONENT, BY GENDER AND AGE

Gender/Age Group	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Males							
24 or younger	10.1 (2.0)	10.8 (2.0)	7.3 (2.4)	8.7 (1.6)	7.9 (1.5)	+ (+)	9.4 (1.1)
25-34	21.7 (3.8) ^{b-d}	21.7 (2.6) ^{b-e}	13.7 (1.4) ^{d,f,g}	10.1 (1.8) ^{d,f,g}	14.1 (1.4) ^{d,g}	5.5 (1.3) ^{b,c,e-g}	18.4 (2.1)
35-44	29.1 (2.6) ^{b,e}	22.7 (2.1) ^b	17.1 (1.6) ^{c,f,g}	26.8 (3.0) ^{b,e}	18.7 (1.7) ^{c,f}	+ (+)	23.7 (1.3)
45 or older	22.2 (4.7)	23.4 (3.7)	18.7 (1.9) ^c	25.2 (1.4) ^b	19.9 (2.4)	+ (+)	22.2 (1.9)
Total males	19.5 (2.1)	18.3 (1.6)	15.7 (1.2) ^c	19.0 (0.5) ^{b,e}	16.7 (1.0) ^c	+ (+)	17.8 (1.0)
Females							
24 or younger	5.6 (2.5) ^b	4.5 (1.4) ^b	0.4 (0.4) ^{f,g}	+ (+)	1.6 (0.7)	+ (+)	5.0 (1.3)
25-34	12.6 (3.1) ^{b,e}	13.4 (3.1) ^{b,e}	3.8 (1.5) ^{f,g}	9.7 (4.2)	3.8 (0.7) ^{f,g}	+ (+)	10.4 (1.7)
35-44	+ (+)	9.7 (2.3)	10.6 (1.6)	11.7 (3.5)	6.8 (1.4)	+ (+)	13.0 (2.5)
45 or older	+ (+)	12.4 (3.9) ^b	2.2 (1.2) ^{e,g}	+ (+)	10.0 (2.5) ^b	+ (+)	11.5 (2.4)
Total females	11.4 (1.9) ^{b,e}	9.6 (1.4) ^{b,e}	6.1 (1.1) ^{f,g}	10.1 (1.9) ^e	5.7 (1.0) ^{c,f,g}	+ (+)	9.2 (0.8)
Total							
24 or younger	9.2 (1.9)	9.4 (1.6) ^e	5.6 (1.7)	8.6 (2.3)	5.7 (0.8) ^g	+ (+)	8.5 (1.0)
25-34	20.6 (3.4) ^{b-d}	19.4 (2.1) ^{b-e}	11.5 (1.0) ^{d,f,g}	10.0 (1.4) ^{d,f,g}	11.2 (0.9) ^{d,f,g}	5.3 (1.3) ^{b,c,e-g}	16.9 (1.8)
35-44	29.3 (3.0) ^{b,e,g}	20.3 (1.7) ^{b,f}	15.9 (1.2) ^{c,f,g}	24.9 (3.3) ^{b,e}	16.4 (1.2) ^{c,f}	+ (+)	22.2 (1.3)
45 or older	21.9 (3.7)	20.5 (3.0)	15.3 (1.4) ^c	23.9 (1.3) ^{b,e}	17.5 (1.8) ^c	+ (+)	20.4 (1.5)
Total	18.4 (2.0) ^{b,e}	16.3 (1.2)	13.7 (0.9) ^{c,f}	17.5 (0.6) ^{b,e}	13.9 (0.7) ^{c,f}	+ (+)	16.3 (0.9)

Note: Table entries are percentages of Reserve military personnel by Reserve component, gender, and age group who met the criteria for being obese. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Obesity is defined in terms of the Body Mass Index (BMI). Definitions of BMI are given in Chapter 2. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aBMI \geq 30.0.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^eEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army National Guard at the 95% confidence level.

^gEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Obese, Q119 and Q120).

Table 7.3

PREVALENCE OF UNDERWEIGHT^a PERSONNEL, BY RESERVE COMPONENT, BY GENDER AND AGE

Gender/Age Group	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Males							
24 or younger	2.7 (0.9)	2.3 (1.2)	1.1 (0.8)	0.9 (0.6)	2.2 (0.5)	+ (+)	2.2 (0.5)
25-34	0.4 (0.3)	0.8 (0.7)	0.5 (0.3)	+ (+)	0.6 (0.2)	+ (+)	0.5 (0.2)
35-44	0.9 (0.9)	+ (+)	0.2 (0.1)	1.8 (0.9)	0.4 (0.1)	+ (+)	0.6 (0.4)
45 or older	0.9 (0.9)	+ (+)	0.7 (0.4)	1.5 (0.4)	0.7 (0.3)	+ (+)	0.8 (0.4)
Total males	1.4 (0.3) ^{b,c}	1.0 (0.4)	0.4 (0.1) ^d	1.1 (0.3)	0.7 (0.1) ^d	+ (+)	1.1 (0.1)
Females							
24 or younger	1.8 (1.1)	1.7 (1.0)	0.8 (0.8)	4.3 (2.9)	1.8 (1.2)	+ (+)	1.9 (0.7)
25-34	+ (+)	1.3 (0.6) ^b	5.5 (1.6) ^{e,f}	1.1 (1.0) ^b	2.2 (1.2)	+ (+)	+ (+)
35-44	+ (+)	+ (+)	0.7 (0.4)	+ (+)	0.6 (0.3)	+ (+)	0.3 (0.1)
45 or older	+ (+)	+ (+)	2.3 (0.6)	+ (+)	1.1 (0.7)	+ (+)	0.6 (0.2)
Total females	+ (+)	1.0 (0.3) ^b	2.4 (0.5) ^e	1.6 (0.5)	1.4 (0.6)	+ (+)	2.4 (1.1)
Total							
24 or younger	2.6 (0.7)	2.2 (1.0)	1.0 (0.6)	1.8 (0.4)	2.1 (0.4)	+ (+)	2.1 (0.4)
25-34	2.1 (1.6)	1.0 (0.5)	1.6 (0.4) ^f	0.3 (0.3) ^b	1.0 (0.3)	+ (+)	1.4 (0.7)
35-44	0.8 (0.8)	+ (+)	0.3 (0.1)	1.6 (0.8)	0.4 (0.1)	+ (+)	0.6 (0.3)
45 or older	0.9 (0.8)	+ (+)	1.0 (0.4)	1.4 (0.4)	0.8 (0.3)	+ (+)	0.7 (0.3)
Total	1.8 (0.4) ^{b,c}	1.0 (0.3)	0.8 (0.1) ^d	1.2 (0.3)	0.9 (0.1) ^d	+ (+)	1.3 (0.2)

Note: Table entries are percentages of Reserve military personnel by Reserve component, gender, and age group who met the criteria for being underweight. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Underweight is defined in terms of the Body Mass Index (BMI). Definitions of BMI are given in Chapter 2. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aBMI < 18.5.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Air National Guard at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Underweight, Q119 and Q120).

Table 7.4 PREVALENCE OF HEALTHY WEIGHT^a PERSONNEL, BY RESERVE COMPONENT, BY GENDER AND AGE

Gender/Age Group	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Males							
24 or younger	48.5 (3.5)	52.0 (3.7)	52.1 (5.4)	46.4 (3.6)	53.8 (2.1)	+ (+)	50.2 (2.0)
25-34	28.0 (3.0)	29.6 (2.2)	35.2 (2.8) ^b	25.2 (1.1) ^{c-e}	30.4 (2.1) ^b	40.0 (6.8) ^b	29.3 (1.6)
35-44	19.3 (2.8)	29.4 (6.8)	22.4 (1.8)	20.0 (1.4)	20.4 (1.2)	+ (+)	21.8 (1.8)
45 or older	14.7 (3.8)	11.8 (5.3)	21.5 (2.4)	18.0 (1.0)	22.4 (2.6)	+ (+)	16.5 (2.0)
Total males	31.3 (1.9) ^b	34.9 (2.2) ^{b-d}	28.2 (1.6) ^f	24.9 (0.9) ^{g,f}	27.3 (1.0) ^f	+ (+)	31.5 (1.1)
Females							
24 or younger	76.5 (4.8)	62.2 (5.7)	73.3 (5.5)	+ (+)	65.7 (4.5)	+ (+)	70.3 (3.4)
25-34	+ (+)	43.8 (5.3) ^{b-d}	57.1 (4.0) ^f	65.1 (6.4) ^f	57.4 (2.2) ^f	+ (+)	53.2 (3.4)
35-44	+ (+)	50.9 (5.0)	50.8 (2.2)	+ (+)	52.1 (2.2)	+ (+)	50.9 (2.9)
45 or older	+ (+)	41.9 (4.7)	47.8 (4.7) ^b	32.3 (5.8) ^c	44.6 (4.3)	+ (+)	41.4 (3.4)
Total females	64.8 (3.6) ^{c,d,f}	50.9 (2.3) ^g	54.5 (2.2) ^g	56.9 (4.8)	54.6 (1.9) ^g	+ (+)	57.0 (1.6)
Total							
24 or younger	54.1 (2.9)	54.3 (3.3)	57.5 (4.9)	52.0 (2.7)	58.1 (2.1)	+ (+)	54.3 (1.7)
25-34	31.3 (2.6) ^{c,d}	33.5 (1.3) ^{c,d}	39.9 (2.2) ^{f,g}	33.4 (3.1)	38.0 (1.2) ^{f,g}	41.2 (6.5)	33.8 (1.3)
35-44	21.4 (2.8) ^c	33.4 (5.5)	27.9 (1.7) ^g	23.3 (2.7)	26.7 (1.3)	+ (+)	25.8 (1.7)
45 or older	16.8 (5.6)	19.8 (5.7)	27.0 (2.3) ^b	19.4 (1.5) ^{c,d}	27.8 (2.0) ^b	+ (+)	20.9 (2.4)
Total	35.8 (2.1)	38.7 (1.9) ^{b-d}	33.7 (1.5) ^f	30.3 (2.5) ^f	34.2 (0.7) ^f	+ (+)	36.0 (1.2)

Note: Table entries are percentages of Reserve military personnel by Reserve component, gender, and age group who met the criteria for being overweight. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Healthy weight is defined in terms of the Body Mass Index (BMI). Definitions of BMI are given in Chapter 2. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^a18.5 ≤ BMI < 25.0.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

^gEstimate is significantly different from the Army National Guard at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Healthy Weight, Q119 and Q120).

younger were meeting the *Healthy People 2010* goal of 60% of adults at a healthy weight. Members of the Reserve component were not meeting the *Healthy People 2010* goal of 60% of adults at a healthy weight. In addition, because 66.3% of adults in the United States are overweight, Americans are definitely not meeting the *Healthy People 2010* goal of 60% at a healthy weight.

7.2.4 Weight Loss History and Reasons for Weight Gain and Weight Loss

Table 7.5 presents weight loss history, by Reserve component, by gender. Overall, only 34.5% of Reserve component members considered themselves overweight, although 62.7% were actually overweight. Despite the fact that there are greater nonresponses to this question and it is possible that some muscled individuals had a high BMI but were not overweight, there may have been overweight individuals that did not see themselves as overweight. Additionally, while, overall, only 34.5% of Reserve component personnel saw themselves as overweight, 47.8% were trying to lose weight. Differences exist between male and female weight loss histories: 48.7% of Reserve component women had a history of trying to lose weight before joining the military, and 76.2% tried to lose weight after joining the military. For men, the numbers are much smaller: 27.9% of Reserve component men tried to lose weight prior to joining the military, and 52.8% tried to lose weight after joining the military. The Air National Guard had the highest percentages trying to lose weight since joining the military: 59.3% of males, 81.7% of females, and 63.0% overall.

Table 7.6 presents reasons for weight gain in the past year, by Reserve component, by gender. The top three reasons for weight gain among those who responded were stress (35.5%), return home from deployment (31.0%), and medical profile (17.3%).

7.2.5 Leisure-Time Physical Activity

Healthy People 2010 provided examples of activities that are recognized as “moderate” and “vigorous,” as well as defining “vigorous” activities as those that use large muscle groups at 70% or more of maximum heart

rate for age. The *Dietary Guidelines for Americans, 2005* included definitions for these two levels of physical activity based on metabolic equivalents.

Moderate physical activity was defined in the survey as any activity that burns 3.5 to 7.0 kcal/min or the equivalent of 3 to 6 metabolic equivalents (METs) and results in achieving 60% to 73% of peak heart rate. Examples of moderate physical activity include walking briskly, mowing the lawn, dancing, swimming, or bicycling on level terrain. A person should feel some exertion but should be able to carry on a conversation comfortably during the activity.

Vigorous physical activity was defined as any activity that burns more than 7 kcal/min or the equivalent of 6 or more METs and results in achieving 74% to 88% of peak heart rate. Examples of vigorous physical activity include jogging, mowing the lawn with a nonmotorized push mower, chopping wood, participating in high-impact aerobic dancing, swimming continuous laps, or bicycling uphill. These definitions follow the *Dietary Guidelines for Americans, 2005* (DHHS & USDA, 2005).

In the *Dietary Guidelines for Americans, 2005*, the recommendations for nonbreastfeeding, nonpregnant adults are as follows:

- To reduce the risk of chronic disease—engage in at least 30 minutes of moderate-intensity physical activity on most days.
- To obtain greater health benefits—engage in physical activity or more vigorous intensity of longer duration.
- To help manage body weight gain—engage in approximately 60 minutes of moderate-to-vigorous intensity activity on most days.
- To sustain weight loss—engage in at least 60 to 90 minutes of daily moderate-intensity physical activity.

Table 7.5 **WEIGHT LOSS HISTORY, BY RESERVE COMPONENT, BY GENDER**

Weight Loss History	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Consider Yourself Overweight							
Males	31.4 (2.5) ^a	33.0 (1.9) ^a	34.2 (1.4)	38.4 (1.8) ^{b,c}	35.8 (0.7)	+ (+)	32.7 (1.3)
Females	38.9 (5.8)	46.2 (2.2)	41.1 (1.7)	47.6 (4.1)	44.2 (1.4)	+ (+)	43.1 (2.1)
Total	32.4 (2.7) ^{a,d}	36.2 (1.6)	35.7 (1.3)	40.0 (1.8) ^b	38.0 (0.8) ^b	+ (+)	34.5 (1.3)
Currently Trying to Lose Weight							
Males	41.7 (3.3) ^{a,e}	46.2 (1.8) ^{a,f}	49.2 (1.7) ^{b,f}	51.8 (1.0) ^{b,d,f}	46.8 (1.0) ^{a,f}	37.6 (3.0) ^{a,c-e}	44.8 (1.6)
Females	58.9 (7.0)	62.7 (3.3)	60.6 (1.5)	67.1 (5.2)	60.4 (3.6)	+ (+)	61.4 (2.6)
Total	44.1 (3.7) ^a	50.1 (2.2) ^f	51.6 (1.6) ^f	54.3 (1.2) ^{b,d,f}	50.3 (1.2) ^{a,f}	38.7 (2.8) ^{a,c-e}	47.8 (1.8)
History of Trying to Lose Weight Prior to Joining Military							
Males	28.1 (2.0) ^d	30.5 (2.1) ^{a,d}	27.7 (1.3) ^d	24.5 (1.0) ^c	23.9 (0.6) ^{b,c,e}	+ (+)	27.9 (1.1)
Females	50.1 (5.7)	47.0 (3.9)	49.8 (1.7)	54.0 (4.5)	44.5 (2.3)	+ (+)	48.7 (2.3)
Total	31.1 (2.1)	34.6 (2.5) ^d	32.2 (1.5)	29.4 (1.6)	29.2 (0.9) ^c	+ (+)	31.7 (1.2)
Tried to Lose Weight Since Joining the Military							
Males	48.8 (3.5) ^{a,d,e}	55.2 (2.4)	58.0 (1.8) ^b	59.3 (0.6) ^{b,d}	57.1 (0.7) ^{a,b}	+ (+)	52.8 (1.8)
Females	76.5 (4.4)	75.3 (2.8)	73.3 (1.7) ^a	81.7 (3.4) ^e	76.1 (1.8)	+ (+)	76.2 (1.7)
Total	52.7 (3.4) ^{a,d,e}	60.1 (2.8)	61.1 (1.6) ^b	63.0 (0.6) ^b	61.9 (0.6) ^b	+ (+)	57.0 (1.8)
Difficulty Meeting Service Weight and/or Body Fat Standards							
Males	23.0 (2.3)	24.9 (2.0) ^e	19.4 (1.6) ^{a,c}	24.3 (1.6) ^e	21.5 (0.6)	+ (+)	22.6 (1.1)
Females	32.4 (2.6) ^{a,e}	32.5 (1.9) ^{a,e}	22.2 (1.8) ^{b-d}	25.2 (2.2) ^{b,c}	28.5 (1.0) ^e	+ (+)	29.9 (1.1)
Total	24.3 (2.1)	26.7 (1.7) ^{d,e}	20.0 (1.5) ^{a,c,d}	24.4 (1.6) ^e	23.3 (0.6) ^{c,e}	+ (+)	24.0 (1.0)

Note: Table entries are percentages of Reserve military personnel by Reserve component who reported the weight loss history indicated. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Air National Guard at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Weight Loss History, Q118, Q121–Q123).

Table 7.6

REASONS FOR WEIGHT GAIN IN THE PAST YEAR, BY RESERVE COMPONENT, BY GENDER

Reason for Weight Gain ^a	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Medical Profile							
Males	17.0(2.3) ^b	18.1(1.6) ^b	14.5(1.3) ^b	21.9(4.4) ^b	15.0(1.4) ^b	8.0(1.5) ^{c-g}	16.8(1.3)
Females	14.3(3.9) ^d	25.4(3.8) ^{c,e,g}	16.6(1.7) ^d	16.0(6.2)	16.2(1.9) ^d	+(+)	18.8(2.5)
Total	16.5(2.3) ^b	20.6(2.5) ^{b,e}	15.1(1.1) ^{b,d}	20.3(5.0) ^b	15.4(1.3) ^b	8.4(1.8) ^{c-g}	17.3(1.5)
Return Home from Deployment							
Males	+(+)	34.0(4.7) ^{e,f}	19.0(1.8) ^{b,d}	20.4(1.7) ^{b,d}	26.9(4.0)	36.1(5.3) ^{e,f}	36.0(4.6)
Females	21.3(5.0) ^{e,f}	16.5(2.2) ^{e,f}	8.7(2.6) ^{c,d}	9.0(1.5) ^{c,d}	10.9(2.1)	+(+)	15.8(1.8)
Total	39.7(7.9) ^{e-g}	28.0(3.8) ^{e,f}	16.1(1.9) ^{b-d}	17.3(1.8) ^{b-d}	21.0(3.2) ^{b,c}	34.2(5.4) ^{e-g}	31.0(4.1)
Return Home from Annual Training							
Males	9.4(2.2) ^{b,e}	9.4(1.9) ^{b,e-g}	3.6(0.6) ^{b-d,g}	5.3(0.7) ^{b,d}	5.5(0.6) ^{b,d,e}	17.7(3.4) ^{c-g}	8.7(1.2)
Females	+(+)	8.2(1.8) ^f	4.5(1.0)	2.2(1.0) ^d	5.7(1.8)	+(+)	8.7(2.6)
Total	10.0(2.7) ^{e,f}	9.0(1.8) ^{b,e,f}	3.9(0.6) ^{b-d}	4.5(0.6) ^{b-d}	5.6(0.8) ^b	17.8(3.1) ^{d-g}	8.7(1.3)
Reassignment							
Males	2.6(0.7)	6.3(2.7)	3.2(0.9)	2.6(0.6)	3.0(0.3)	2.5(0.9)	3.5(0.8)
Females	4.6(2.0)	5.1(1.8)	1.7(0.8)	1.5(1.2)	2.2(0.4)	+(+)	3.9(0.9)
Total	2.9(0.7)	5.9(2.2)	2.8(0.8)	2.3(0.6)	2.7(0.2)	2.8(1.0)	3.6(0.7)
Change in Civilian Job							
Males	16.6(3.1) ^{b,e}	17.6(2.1) ^{b,e}	25.0(2.9) ^{c,d,g}	20.5(2.5) ^b	18.5(0.8) ^{b,e}	28.3(3.0) ^{c,d,f,g}	18.6(1.7)
Females	8.5(3.2) ^g	11.2(1.7) ^g	12.1(2.9)	16.7(3.3)	18.1(2.0) ^{c,d}	+(+)	11.8(1.4)
Total	15.2(2.5) ^b	15.4(1.7) ^{b,e}	21.3(2.2) ^d	19.5(1.4) ^b	18.4(0.9) ^b	27.6(2.9) ^{c,d,f,g}	16.9(1.3)
Marriage							
Males	9.9(1.1)	9.4(2.0)	7.5(1.0)	9.6(1.6)	9.9(0.8)	11.0(3.2)	9.6(0.7)
Females	9.8(2.9)	5.3(1.6)	8.0(1.2)	8.4(2.7)	7.8(1.3)	+(+)	7.7(1.2)
Total	9.9(1.2)	8.0(1.5)	7.6(0.7)	9.3(1.3)	9.1(0.8)	11.1(3.1)	9.1(0.7)
Divorce							
Males	3.1(0.9)	2.7(1.2)	3.5(0.9)	5.1(0.7) ^b	4.7(0.4) ^b	1.6(0.7) ^{f,g}	3.2(0.5)
Females	7.5(3.2)	6.2(1.6) ^g	3.6(1.0)	8.0(2.8)	2.4(0.4) ^d	+(+)	6.1(1.2)
Total	3.9(1.0)	3.9(1.0)	3.6(0.6) ^f	5.9(0.9) ^{b,e,g}	3.9(0.3) ^{b,f}	2.0(0.8) ^{f,g}	4.0(0.5)
Quit Smoking							
Males	6.1(1.5)	4.3(1.2) ^g	6.4(1.1)	6.7(1.1)	7.2(0.6) ^d	5.3(1.4)	5.8(0.8)
Females	7.4(2.6)	3.6(1.3)	3.5(1.1)	+(+)	6.6(1.6)	+(+)	5.7(1.1)
Total	6.4(1.2)	4.0(1.1) ^{f,g}	5.6(0.9)	6.9(0.9) ^d	7.0(0.6) ^d	5.9(1.3)	5.8(0.6)

(Table continued on next page)

Table 7.6 REASONS FOR WEIGHT GAIN IN THE PAST YEAR, BY RESERVE COMPONENT, BY GENDER (CONTINUED)

Reason for Weight Gain ^a	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Child Birth/Pregnancy							
Males	2.5 (0.6) ^{e,g}	5.3 (1.7)	5.8 (1.1) ^c	4.9 (1.9)	5.8 (1.4) ^c	3.2 (1.0)	3.9 (0.6)
Females	13.0 (3.6)	17.8 (3.5)	20.0 (1.7)	21.8 (4.1)	17.6 (1.3)	+ (+)	16.8 (1.8)
Total	4.4 (0.6) ^{d,e,g}	9.6 (1.6) ^{b,c}	9.8 (1.0) ^{b,c}	9.5 (2.9)	10.2 (1.0) ^{b,c}	4.5 (1.0) ^{d,e,g}	7.1 (0.5)
Stress							
Males	28.6 (4.1) ^{e-g}	32.5 (4.7)	41.2 (1.9) ^{b,c}	39.3 (1.7) ^{b,c}	40.3 (1.7) ^{b,c}	27.2 (2.7) ^{e-g}	32.1 (2.4)
Females	+ (+)	44.4 (3.7) ^f	47.4 (4.1)	59.3 (4.9) ^{d,g}	47.5 (2.1) ^f	+ (+)	45.7 (3.2)
Total	31.1 (4.5) ^{e-g}	36.6 (3.9)	42.9 (2.0) ^{b,c}	44.7 (2.3) ^{b,c}	43.0 (1.5) ^{b,c}	27.6 (2.9) ^{e-g}	35.5 (2.5)
Death of Family Member or Friend							
Males	3.4 (1.0) ^g	2.8 (0.5) ^g	3.6 (0.7) ^g	3.1 (0.7) ^g	6.1 (0.6) ^{b,c-f}	1.9 (0.9) ^g	3.4 (0.5)
Females	7.3 (2.7)	8.4 (1.0) ^f	7.7 (1.1) ^f	1.7 (1.0) ^{d,e,g}	7.3 (1.1) ^f	+ (+)	7.2 (1.0)
Total	4.1 (0.9) ^g	4.7 (0.6) ^{f,g}	4.8 (0.7) ^{f,g}	2.7 (0.5) ^{d,e,g}	6.6 (0.5) ^{b,c-f}	2.5 (1.0) ^g	4.3 (0.5)

Note: Table entries are percentages of Reserve military personnel by Reserve component who responded to Question 124 that they gained weight in the past year for one or more of the reasons noted in the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aPeople who did not gain weight in the past year were excluded from all estimates. Estimates are among those individuals that indicated one or more reasons for weight gain.

^bEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^cEstimate is significantly different from the Army National Guard at the 95% confidence level.

^dEstimate is significantly different from the Army Reserve at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Air National Guard at the 95% confidence level.

^gEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Reasons for Weight Gain, Q124).

Table 7.7 presents the prevalence and duration of involvement in moderate and vigorous leisure-time physical activity by Reserve component. Overall, 54.8% of Guard and Reserve personnel participated in moderate physical activity for at least 20 minutes, 3 or more days per week, while only 23.6% participated in moderate physical activity for at least 60 minutes, 3 or more days per week. Forty-seven percent of members of the Reserve component engaged in moderate leisure-time physical activity for at least 30 minutes, 3 or more days per week. This exceeds the *Healthy People 2010* goal of increasing the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes a day, with a target of 30% of adults 18 years or older. Only 37.1% of Reserve component members participated in vigorous activity for at least 20 minutes, 3 or more days per week. In addition, only 15.5% of Guard and Reserve personnel participated in vigorous activity for at least 60 minutes, 3 or more days per week. The Reserve component members exceeded the *Healthy People 2010* goal of 30% of adults engaging in vigorous physical activity 3 or more days per week for at least 20 minutes per occasion.

When examining combined prevalence and duration of activity, 59.3% of Reserve component members engaged in either moderate or vigorous physical activity for at least 20 minutes, 3 or more days per week, and 27.3% of Reserve component personnel engaged in moderate or vigorous activity for at least 60 minutes for 3 or more days per week. The members of the Reserve component fell short of the *Healthy People 2010* goal (by 20%) of reducing the proportion of adults who engage in no leisure-time physical activity to 20%. The Marine Corps Reserve had the highest prevalence of moderate and vigorous leisure-time physical activity, with 68% engaging in moderate or vigorous physical activity for at least 20 minutes, 3 or more days per week, and 36.4% engaging in moderate or vigorous physical activity for at least 60 minutes, 3 or more days per week. The Air National Guard and the Air Force Reserve engaged in the least amount of leisure-time physical activity. Both had between 57% and 58% engaging in moderate or vigorous physical activity for at least 20 minutes,

3 or more days per week and about 22% engaging in moderate or vigorous physical activity for at least 60 minutes, 3 or more days per week. The differences between the other Reserve components are less distinguishable; however, the Army's moderate or vigorous physical activity was almost as high as the Marine Corps' activities.

7.3 Food Intake and Use of Dietary Supplements

7.3.1 Food Intake

Table 7.8 presents the frequency of intake of food categories, by Reserve component, by gender. Members of the Guard and Reserves did not meet the *Healthy People 2010* guidelines for daily servings of fruit, vegetables, or grains. Overall, 34.5% of Reserve component members consumed fruit less than 3 times per week and 9.6% consumed fruit at least 3 times per day. Overall, 38.0% of Reserve component personnel consumed fruit less than 3 times per week and 7.7% consumed fruit 3 times or more per day. The Reserve component personnel did not meet the *Healthy People 2010* target of 75% consuming at least two daily servings of fruit per day. Among Reserve component members, 21.1% consumed vegetables less than 3 times per week and 11.3% consumed vegetables at least 3 times per day. Reserve component personnel did not meet the *Healthy People 2010* target of 50% of the population consuming at least three servings of vegetables per day. Additionally, 24.4% of Reserve component members consumed whole grains less than 3 times per week, and 11.8% consumed whole grains at least 3 times per day. Members of the Reserve component did not meet the *Healthy People 2010* goal of 50% of people consuming at least six daily servings of grain products, with at least three being whole grains. Regarding intake, 41.9% of Reserve component personnel consumed high-fat dairy products less than 3 times per week and only 7.0% consumed high-fat dairy products 3 times or more per day. Among members of the Reserve component, 38.6% consumed snack foods/sweets less than 3 times per week and only 7.5% consumed snack foods/sweets 3 times or more a day.

Table 7.7

PREVALENCE AND DURATION OF INVOLVEMENT IN MODERATE AND VIGOROUS LEISURE-TIME PHYSICAL ACTIVITY, BY RESERVE COMPONENT

Leisure-Time Physical Activity	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Moderate^a Physical Activity, Past 30 Days							
20 minutes or more for 3 or more days per week	54.5 (1.7) ^b	54.4 (1.5) ^b	55.6 (0.6) ^{b,c}	54.6 (0.8) ^{b,c}	52.0 (1.0) ^{b,d,e}	62.7 (1.9) ^{c-g}	54.8 (0.8)
30 minutes or more for 3 or more days per week	47.0 (1.2) ^{b,c}	47.7 (1.4) ^{b,c}	45.5 (0.8) ^b	45.5 (0.9) ^b	43.5 (1.2) ^{b,f,g}	55.1 (1.6) ^{c-g}	47.0 (0.6)
60 minutes or more for 3 or more days per week	24.8 (1.1) ^{b-e}	25.6 (1.1) ^{b-e}	20.3 (0.9) ^{b,f,g}	18.4 (0.8) ^{b,f,g}	18.0 (1.2) ^{b,f,g}	33.1 (2.3) ^{c-g}	23.6 (0.7)
Vigorous^h Physical Activity, Past 30 Days							
20 minutes or more for 3 or more days per week	37.1 (1.5) ^b	37.9 (1.0) ^{b,c}	38.1 (1.2) ^{b,c}	33.3 (2.5) ^b	34.4 (0.9) ^{b,d,g}	43.6 (1.6) ^{c-g}	37.1 (0.8)
30 minutes or more for 3 or more days per week	31.8 (1.2) ^{b,c}	32.8 (0.7) ^{b,c,e}	31.6 (1.0) ^{b,c}	27.5 (2.1) ^{b,g}	28.4 (1.0) ^{b,d,f,g}	38.5 (1.8) ^{c-g}	31.6 (0.7)
60 minutes or more for 3 or more days per week	17.4 (1.7) ^{c-e}	16.0 (1.3) ^{c-e}	12.4 (0.8) ^{b,f,g}	11.4 (0.8) ^{b,f,g}	11.6 (1.0) ^{b,f,g}	20.2 (2.2) ^{c-e}	15.5 (0.9)
Moderate or Vigorous Physical Activity, Past 30 Days							
20 minutes or more for 3 or more days per week	58.8 (1.8) ^b	59.5 (1.2) ^{b,c}	60.8 (0.8) ^{b,c,e}	57.6 (0.5) ^{b,d}	56.7 (0.8) ^{b,d,g}	68.0 (2.1) ^{c-g}	59.3 (0.8)
30 minutes or more for 3 or more days per week	51.3 (1.3) ^b	53.4 (1.2) ^{b,c,e}	51.0 (1.0) ^b	48.9 (0.7) ^{b,g}	48.2 (1.0) ^{b,g}	60.5 (2.1) ^{c-g}	51.7 (0.7)
60 minutes or more for 3 or more days per week	28.5 (1.2) ^{b-e}	29.7 (1.2) ^{b-e}	23.7 (0.9) ^{b,f,g}	21.6 (0.9) ^{b,f,g}	21.5 (1.1) ^{b,f,g}	36.4 (3.0) ^{c-g}	27.3 (0.7)

(Table continued on next page)

Table 7.7**PREVALENCE AND DURATION OF INVOLVEMENT IN MODERATE AND VIGOROUS LEISURE-TIME PHYSICAL ACTIVITY, BY RESERVE COMPONENT (CONTINUED)**

Note: Table displays percentage of Reserve military personnel by Reserve component who were involved in moderate or vigorous physical activity. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aModerate physical activity is defined in the survey as any activity that burns 3.5 to 7.0 kcal/min or the equivalent of 3 to 6 metabolic equivalents (METs) and results in achieving 60% to 73% of peak heart rate. Examples of moderate physical activity include walking briskly, mowing the lawn, dancing, swimming, or bicycling on level terrain. A person should feel some exertion but should be able to carry on a conversation comfortably during the activity.

^bEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^eEstimate is significantly different from the Air National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army National Guard at the 95% confidence level.

^gEstimate is significantly different from the Army Reserve at the 95% confidence level.

^hVigorous physical activity is defined as any activity that burns more than 7 kcal/min or the equivalent of 6 or more METs and results in achieving 74% to 88% of peak heart rate. Examples of vigorous physical activity include jogging, mowing the lawn with a nonmotorized push mower, chopping wood, participating in high-impact aerobic dancing, swimming continuous laps, or bicycling uphill. Definitions follow the *Dietary Guidelines for Americans, 2005* (DHHS & USDA, 2005).

Source: 2006 Department of Defense Reserve Component Survey (Leisure-Time Physical Activity, Q84 and Q85).

Table 7.8

FREQUENCY OF INTAKE OF FOOD CATEGORIES, BY RESERVE COMPONENT, BY GENDER

Food Category	Reserve Component							
	Army National Guard		Army Reserve		Navy Reserve		Air National Guard	
	< 3 Times per Week	≥ 3 Times per Day	< 3 Times per Week	≥ 3 Times per Day	< 3 Times per Week	≥ 3 Times per Day	< 3 Times per Week	≥ 3 Times per Day
Fruit^a								
Males	37.4 (2.0) ^{b,c}	8.7 (1.0)	41.0 (2.7) ^{b-d}	8.6 (1.3)	26.6 (1.7) ^{d-f}	9.8 (0.7) ^d	26.6 (1.3) ^{d-f}	8.7 (0.7)
Females	36.7 (3.8) ^{b-d}	11.5 (2.4)	27.2 (3.5)	16.3 (2.3)	27.8 (2.1) ^e	16.4 (1.2)	25.6 (1.5) ^e	14.9 (3.5)
Total	37.3 (1.5) ^{b-d}	9.1 (0.9)	37.7 (3.0) ^{b,c}	10.5 (1.4)	26.9 (1.3) ^{d-f}	11.2 (0.6) ^d	26.4 (1.0) ^{d-f}	9.7 (1.1)
Vegetables^g								
Males	25.3 (1.3) ^{b-d}	10.3 (1.0)	23.8 (2.4) ^{b-d}	10.4 (1.1)	14.6 (0.7) ^{d-f,h}	12.4 (1.0) ^{d,h}	13.3 (0.6) ^{d-f,h}	10.4 (0.6)
Females	23.2 (4.1) ^{b,c}	11.8 (3.3) ^b	15.8 (2.0)	19.6 (3.0)	13.0 (2.1) ^e	21.9 (1.0) ^{c,e}	10.2 (2.6) ^e	10.3 (4.3) ^b
Total	25.0 (1.2) ^{b-d}	10.5 (1.1) ^b	21.9 (2.2) ^{b-d}	12.7 (1.4)	14.3 (0.6) ^{b,e,f}	14.3 (0.8) ^{c-e}	12.8 (0.7) ^{d-f}	10.4 (1.0) ^b
Whole Grainsⁱ								
Males	28.2 (0.8) ^{b-d}	11.5 (1.1) ^d	23.2 (2.5) ^c	12.5 (1.3) ^{c,d}	20.4 (1.5) ^e	10.7 (0.6)	17.3 (1.6) ^{d-f}	9.6 (0.6) ^f
Females	26.3 (1.9) ^c	14.5 (3.0)	26.0 (2.4) ^c	12.8 (1.5)	22.7 (2.4)	14.8 (1.3)	18.7 (2.0) ^{e,f}	16.2 (1.2)
Total	27.9 (0.8) ^{b-d}	11.9 (0.8) ^d	23.9 (1.9) ^c	12.5 (1.0) ^d	20.8 (1.5) ^e	11.6 (0.6)	17.5 (1.4) ^{d-f}	10.7 (0.8)
Other Grains^j								
Males	25.9 (1.7) ^c	10.0 (1.1) ^{c,d}	26.6 (1.9) ^c	11.5 (1.3) ^{c,d}	25.5 (1.7) ^c	8.5 (0.8)	18.4 (2.8) ^{b,d-f}	7.3 (0.5) ^{e,f}
Females	24.3 (2.1) ^{b-d,f}	10.9 (2.2)	31.3 (2.6) ^e	10.4 (1.8)	33.5 (1.9) ^e	9.9 (1.1) ^d	31.3 (2.6) ^e	10.3 (3.0)
Total	25.6 (1.5)	10.1 (0.7) ^{c,d}	27.8 (1.7) ^c	11.2 (1.0) ^{c,d}	27.2 (1.5) ^c	8.8 (0.8) ^d	20.5 (2.9) ^{b,d,f}	7.8 (0.9) ^{e,f}
Dairy (1)^k								
Males	31.1 (2.6) ^c	10.9 (1.1)	30.3 (2.5)	13.6 (1.0) ^{b,d}	26.8 (1.3)	10.5 (0.9) ^f	21.3 (4.1) ^e	12.2 (1.9)
Females	30.5 (3.5)	11.7 (2.0)	28.7 (4.2)	14.4 (2.3)	24.6 (1.7)	16.4 (2.0)	21.2 (4.5)	11.7 (3.6)
Total	31.0 (2.6) ^c	11.0 (1.0) ^f	29.9 (2.7)	13.8 (0.9) ^{d,e}	26.4 (1.2)	11.7 (0.8)	21.3 (4.0) ^e	12.1 (1.6)
Dairy (2)^l								
Males	40.8 (1.8) ^{c,h}	7.7 (0.9) ^{b-d}	40.6 (1.3) ^{c,h}	7.8 (0.6) ^{b-d}	43.7 (1.0) ^{c,h}	5.6 (0.5) ^{e,f}	46.9 (1.0) ^{b,d-f,h}	5.2 (0.6) ^{e,f}
Females	39.5 (4.5)	5.3 (1.7)	45.6 (3.3)	9.5 (1.9) ^c	48.7 (1.7)	8.3 (0.9) ^c	45.5 (3.4)	3.9 (1.1) ^{b,f}
Total	40.7 (2.0) ^c	7.4 (0.7) ^{c,d}	41.8 (1.0) ^{b,c}	8.2 (0.6) ^{b-d}	44.7 (0.9) ^f	6.2 (0.5) ^f	46.6 (1.2) ^{e,f}	5.0 (0.4) ^{e,f}
Lean Protein^m								
Males	26.1 (1.5) ^{b-d,f,h}	10.5 (1.2) ^{c,d}	22.1 (0.8) ^{b,c,e}	11.3 (1.4) ^{c,d}	19.1 (1.1) ^{c,e,f}	8.8 (0.6)	15.9 (0.6) ^{b,d-f}	6.7 (1.4) ^{e,f}
Females	26.5 (3.4) ^{b-d}	6.9 (0.7) ^{b,f}	22.7 (3.6)	11.0 (1.5) ^e	17.9 (1.6) ^e	10.6 (1.4) ^e	18.6 (1.4) ^e	+ (+)
Total	26.2 (1.5) ^{b-d,f}	10.0 (1.0)	22.2 (1.1) ^{b-d,e}	11.2 (0.9) ^{c,d}	18.8 (0.9) ^{c,e,f}	9.2 (0.6)	16.3 (0.5) ^{b,d-f}	6.8 (1.9) ^f

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Table 7.8

FREQUENCY OF INTAKE OF FOOD CATEGORIES, BY RESERVE COMPONENT, BY GENDER (CONTINUED)

Food Category	Reserve Component							
	Army National Guard		Army Reserve		Navy Reserve		Air National Guard	
	< 3 Times per Week	≥ 3 Times per Day	< 3 Times per Week	≥ 3 Times per Day	< 3 Times per Week	≥ 3 Times per Day	< 3 Times per Week	≥ 3 Times per Day
Other Proteinⁿ								
Males	29.3 (1.1) ^h	11.1 (1.5) ^{b-d}	27.4 (0.8) ^{b,c,h}	9.7 (1.1) ^{b-d}	32.7 (1.8) ^{f,h}	6.1 (0.6) ^{c,e,f}	30.7 (1.5) ^{f,h}	3.8 (0.7) ^{b,e,f,h}
Females	38.1 (6.9)	4.9 (1.4)	43.1 (1.7)	7.9 (0.9) ^{b-c}	44.1 (2.5)	4.7 (1.0) ^f	44.6 (3.2)	1.9 (1.5) ^{d,f}
Total	30.5 (1.4) ^{b,h}	10.3 (1.3) ^{b-d}	31.2 (0.8) ^{b,h}	9.3 (0.9) ^{b-d}	35.1 (1.3) ^{e,f,h}	5.8 (0.5) ^{c,e,f}	33.0 (2.1) ^h	3.5 (0.8) ^{b,d-f,h}
Snack Foods/ Sweets^o								
Males	35.2 (1.3) ^f	7.6 (1.1)	43.4 (1.4) ^{b-e,h}	9.2 (1.2) ^c	37.4 (1.8) ^f	6.5 (0.9)	35.1 (2.3) ^f	6.1 (0.7) ^{f,h}
Females	42.7 (5.0)	4.4 (1.9)	47.7 (4.0)	8.5 (1.5)	46.9 (1.3) ^{c,d}	6.0 (0.8)	40.6 (2.6) ^b	7.3 (1.8)
Total	36.2 (1.4) ^f	7.2 (0.9)	44.4 (1.5) ^{b-e}	9.0 (1.0) ^{b,c}	39.4 (1.4) ^f	6.4 (0.7) ^f	36.0 (2.0) ^f	6.3 (0.6) ^f
Fast Food^p								
Males	45.4 (2.7)	6.0 (1.0) ^{b-d}	45.2 (2.2) ^b	8.2 (1.6) ^{b-d}	51.6 (2.4) ^{f,h}	3.8 (0.5) ^{e,f,h}	50.8 (2.0) ^h	3.2 (0.3) ^{e,f,h}
Females	52.1 (7.3) ^b	5.3 (1.8)	63.2 (4.5)	4.4 (0.9)	67.7 (2.8) ^{c,e}	2.7 (0.7)	60.1 (2.2) ^b	2.8 (2.0)
Total	46.3 (3.2) ^b	5.9 (0.8) ^{b-d}	49.6 (2.5)	7.3 (1.2) ^{b-d}	54.9 (2.4) ^{e,h}	3.6 (0.4) ^{e,f,h}	52.4 (2.0) ^h	3.1 (0.3) ^{e,f,h}

(Table continued on next page)

Table 7.8 FREQUENCY OF INTAKE OF FOOD CATEGORIES, BY RESERVE COMPONENT, BY GENDER (CONTINUED)

Food Category	Reserve Component				Total Reserve Component ^d	
	Air Force Reserve		Marine Corps Reserve		< 3 Times per Week	≥ 3 Times per Day
	< 3 Times per Week	≥ 3 Times per Day	< 3 Times per Week	≥ 3 Times per Day		
Fruit^a						
Males	33.6 (1.9) ^{b,c,f}	6.8 (0.9) ^b	+ (+)	+ (+)	35.5 (1.3)	8.5 (0.5)
Females	28.0 (1.9) ^e	14.3 (1.3)	+ (+)	+ (+)	30.2 (1.8)	14.5 (1.2)
Total	32.2 (1.8) ^{b,c,e}	8.7 (0.9) ^b	+ (+)	+ (+)	34.5 (1.1)	9.6 (0.5)
Vegetables^g						
Males	17.7 (0.5) ^{b,c,e,f,h}	8.7 (0.8) ^b	24.8 (1.6) ^{b-d}	7.9 (1.2) ^b	21.9 (1.0)	10.3 (0.5)
Females	15.8 (1.7)	17.8 (2.1)	+ (+)	+ (+)	17.4 (1.7)	16.3 (1.7)
Total	17.2 (0.5) ^{b,c,e,f}	11.0 (0.6) ^b	+ (+)	+ (+)	21.1 (1.0)	11.3 (0.6)
Whole Grainsⁱ						
Males	23.0 (1.0) ^{c,e}	8.8 (0.9) ^{e,f}	+ (+)	+ (+)	24.3 (0.9)	11.3 (0.6)
Females	24.0 (3.2)	12.9 (1.5)	+ (+)	+ (+)	24.7 (1.2)	14.0 (1.1)
Total	23.2 (1.4) ^{c,e}	9.8 (0.7) ^{e,f}	+ (+)	+ (+)	24.4 (0.8)	11.8 (0.4)
Other Grains^j						
Males	26.4 (1.6) ^c	6.7 (0.9) ^{e,f}	+ (+)	+ (+)	24.9 (1.1)	9.6 (0.6)
Females	35.4 (1.0) ^e	6.8 (0.6) ^b	+ (+)	+ (+)	30.0 (1.2)	10.0 (1.0)
Total	28.7 (1.4) ^c	6.7 (0.7) ^{b,e,f}	+ (+)	+ (+)	25.8 (1.0)	9.7 (0.5)
Dairy (1)^k						
Males	28.3 (1.3)	9.0 (1.1) ^f	25.1 (1.9)	11.5 (1.9)	28.9 (1.5)	11.5 (0.6)
Females	25.8 (3.1)	13.0 (1.4)	+ (+)	+ (+)	27.7 (1.8)	13.3 (1.1)
Total	27.6 (1.4)	10.0 (1.0) ^f	25.5 (1.9)	11.4 (1.8)	28.6 (1.5)	11.8 (0.5)
Dairy (2)^l						
Males	43.0 (1.3) ^{c,h}	5.5 (0.3) ^{e,f}	31.0 (2.4) ^{b-f}	7.5 (1.9)	41.4 (0.9)	7.0 (0.4)
Females	48.6 (2.0)	6.2 (1.2)	+ (+)	+ (+)	44.5 (1.9)	7.0 (0.8)
Total	44.4 (1.4)	5.7 (0.4) ^{e,f}	+ (+)	+ (+)	41.9 (0.9)	7.0 (0.3)
Lean Protein^m						
Males	20.3 (0.8) ^{c,e}	7.5 (0.6) ^{e,f}	19.9 (2.8) ^e	11.6 (2.1)	22.5 (0.8)	9.9 (0.7)
Females	17.1 (1.5) ^e	9.9 (1.8)	+ (+)	+ (+)	22.2 (1.6)	9.0 (0.7)
Total	19.5 (0.7) ^{c,e,f}	8.1 (0.8) ^f	20.3 (3.0)	11.2 (1.9)	22.5 (0.7)	9.7 (0.6)
Other Proteinⁿ						
Males	30.5 (1.8) ^h	5.5 (0.6) ^{e,f}	21.8 (1.0) ^{b-f}	9.0 (1.7) ^c	29.1 (0.6)	8.9 (0.9)
Females	45.3 (1.8)	6.3 (0.6) ^c	+ (+)	+ (+)	42.3 (2.3)	5.7 (0.6)
Total	34.2 (1.5) ^h	5.7 (0.5) ^{c,e,f}	23.2 (1.1) ^{b-f}	8.6 (1.6) ^c	31.4 (0.7)	8.3 (0.7)

(Table continued on next page)

Table 7.8

FREQUENCY OF INTAKE OF FOOD CATEGORIES, BY RESERVE COMPONENT, BY GENDER (CONTINUED)

Food Category	Reserve Component				Total Reserve Component ^q	
	Air Force Reserve		Marine Corps Reserve			
	< 3 Times per Week	≥ 3 Times per Day	< 3 Times per Week	≥ 3 Times per Day	< 3 Times per Week	≥ 3 Times per Day
Snack Foods/Sweets^o						
Males	36.8 (1.6) ^f	6.7 (0.5) ^h	34.2 (2.2) ^f	9.1 (1.0) ^{c,d}	37.3 (0.9)	7.7 (0.6)
Females	41.9 (1.9) ^b	8.0 (0.8)	+ (+)	+ (+)	44.7 (2.2)	6.7 (0.8)
Total	38.1 (1.5) ^f	7.0 (0.4)	+ (+)	+ (+)	38.6 (0.9)	7.5 (0.5)
Fast Food^p						
Males	49.7 (1.2) ^h	3.5 (0.2) ^{e,f,h}	42.7 (2.2) ^{b-d}	6.5 (0.8) ^{b-d}	46.8 (1.3)	5.8 (0.6)
Females	62.6 (3.0)	3.6 (0.6)	+ (+)	+ (+)	60.0 (3.0)	4.2 (0.7)
Total	53.0 (1.4) ^h	3.5 (0.2) ^{e,f,h}	43.7 (2.0) ^{b-d}	6.3 (0.7) ^{b-d}	49.2 (1.5)	5.5 (0.5)

Note: Table displays the percentage of Reserve military personnel by Reserve component and gender who reported intake of the food categories (fruit, whole grains, other grains, etc.) less than 3 times per week or 3 or more times per day. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aAll types: fresh, frozen, canned, or dried, or 100% fruit juices.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

^gAll types: fresh, frozen, canned, cooked, or raw.

^hEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

ⁱExamples given in the survey include rye, whole wheat, or heavily seeded bread; popcorn; brown or wild rice; whole wheat pasta or crackers; oatmeal; and corn tacos.

^jExamples given in the survey include white bread or rolls, plain pasta, white rice, and plain tortillas.

^kLow-fat dairy products; examples given in the survey include low- or reduced-fat milk (2%, 1%, 1/2%, or skim), yogurt, cottage cheese, low-fat cheese, frozen low-fat yogurt, and soy milk.

^lFull-fat dairy products; examples given in the survey include regular or whole milk, cheese, and ice cream.

^mExamples given in the survey include baked or broiled chicken breasts (no skin) or fish; baked or broiled lean pork, beef, and other seafood; eggs; natural peanut butter; nuts, cooked or dried beans, and other legumes; tofu; turkey- or chicken-based hot dogs, sausage, ground meat, or lunch meat products; and eggs.

ⁿExamples given in the survey include fried chicken, fried fish, regular ground beef, sausage, regular hot dogs, heavily marbled beef, lamb, ham, salami or lunch meats, and peanut butter with oil and sugar added.

^oExamples given in the survey include chips, pretzels, power bars, candy bars, other candy, cake, pie, and regular or diet soda.

^pExamples given in the survey include pizza; hot dogs; hamburgers; cheeseburgers; tacos; breakfast biscuits/croissants with sausage or bacon, cheese, etc.; fried chicken/fish, French fries; doughnuts; and hash brown potatoes.

^qIndividuals with missing intake of food categories (fruit, whole grains, other grains) less than 3 times per week or 3 or more times per day are not included in these estimates.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Frequency of Food Intake, Q113).

Women consumed fast food less often than men in the Reserve component.

7.3.2 Prevalence of Taking Dietary Supplements by Gender

Table 7.9 presents the prevalence of taking dietary supplements by Reserve component and by gender. Sixty percent of members of the Guard and Reserves took any dietary supplement. More Reserve component women (67.4%) took any dietary supplement compared with Reserve component men (58.4%). In the sample, women took more multiple vitamins and minerals, individual vitamins and minerals, antioxidants, weight-loss products, and joint health/arthritis and other supplements, and men took more body-building supplements, herbal supplements, and performance-enhancing products. Overall, 55.1% of Reserve component women and 46.2% of Reserve component men took multiple vitamins and minerals more than any other kind of dietary supplement.

7.3.3 Prevalence of Taking Dietary Supplements, by Age and Gender

Table 7.10 presents the prevalence of taking dietary supplements, by age and gender. A majority of the sample, regardless of age, gender, or component, used dietary supplements. Among the older age groups, the prevalence of taking dietary supplements was higher. Especially for multiple vitamins and minerals, 37.5% of those 24 years of age or younger took dietary supplements, while adults 45 or older, 61.5% took dietary supplements.

Female prevalence of taking dietary supplements is greater than male prevalence for each age group in both multiple vitamin and minerals as well as individual vitamins and minerals. However, the largest difference in gender is seen among people 45 years or older for individual vitamins and minerals where female prevalence is 62.3%, which is 20% higher than male prevalence (42.3%).

7.4 Blood Pressure and Cholesterol

7.4.1 Prevalence of Blood Pressure Screening and Awareness

While members of the Reserve component were asked about their blood pressure screening in the past 2 years, many did not respond; therefore, we do not show numbers that had a high nonresponse rate (Table 7.11). However, overall 87.6% of Reserve component members had a blood pressure screening. Reserve component personnel were slightly below the *Healthy People 2010* guideline target of 95% of adults having their blood pressure measured within the preceding 2 years. Blood pressure screening and awareness was more prevalent among the older age groups and among personnel with more education.

7.4.2 Prevalence of Advice Given and Actions Taken to Control High Blood Pressure

Table 7.12 presents the prevalence of advice given and actions taken to control high blood pressure, by Reserve component. Only 8.3% of Guard and Reserve personnel were told of high blood pressure within the last 2 years. Members of the Reserve component surpassed the *Healthy People 2010* goal of reducing the proportion of adults with high blood pressure (the target is 16%). Among recommendations given to probable hypertensives, exercise was advised most often (67.2%), followed by a decrease in salt intake (51.3%) and then a diet to lose weight (46.5%). Overall, 80.7% of probable hypertensives were advised to either change some behavior or prescribed medication. Actions being taken by probable hypertensives included exercise (65.3%), a diet to lose weight (48.6%), and a decrease in salt intake (45.7%). In addition, 36.2% of probable hypertensives were advised to stop smoking. Overall, 77.4% of Reserve component probable hypertensives were either changing a behavior or taking medication. These numbers fall short of the *Healthy People 2010* goal of 95% of people with high blood pressure taking action to control their high blood pressure, by about 20%.

Table 7.9

PREVALENCE OF TAKING DIETARY SUPPLEMENTS, BY RESERVE COMPONENT, BY GENDER

Type of Supplements Taken	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Multiple Vitamins and Minerals							
Males	42.9 (2.1) ^{a,b}	45.5 (2.0) ^{a,b}	53.5 (1.0) ^{c-e}	49.2 (2.6)	52.8 (0.6) ^{c-e}	44.1 (2.7) ^{a,b}	46.2 (1.0)
Females	51.9 (6.6)	53.9 (4.4)	62.6 (1.7) ^f	53.4 (3.6) ^a	58.6 (1.9)	+ (+)	55.1 (2.5)
Total	44.2 (2.3) ^{a,b}	47.6 (2.5) ^{a,b}	55.4 (0.9) ^{c,d,f}	49.9 (2.0) ^{a,b}	54.3 (0.6) ^{c,d,f}	+ (+)	47.8 (1.1)
Individual Vitamins and Minerals							
Males	29.7 (1.9) ^b	31.9 (1.8)	33.9 (1.2)	32.7 (2.7)	35.1 (1.2) ^c	+ (+)	31.4 (0.9)
Females	33.0 (2.7) ^{a,b}	40.5 (4.9)	48.5 (2.8) ^c	40.4 (3.5)	45.5 (2.8) ^c	+ (+)	40.0 (2.0)
Total	30.2 (1.8) ^{a,b}	34.0 (2.3)	36.9 (1.4) ^c	34.0 (2.6)	37.7 (1.0) ^c	+ (+)	33.0 (0.9)
Antioxidants							
Males	24.6 (1.8) ^{a,b,f}	26.6 (2.4)	30.7 (0.9) ^c	31.2 (2.2) ^c	30.0 (1.4) ^c	+ (+)	27.0 (1.0)
Females	27.4 (3.6)	30.9 (2.9)	33.5 (2.7)	32.0 (4.2)	30.7 (2.5)	+ (+)	30.3 (1.6)
Total	25.0 (1.8) ^{a,b,f}	27.7 (2.2)	31.3 (1.1) ^c	31.3 (1.6) ^c	30.2 (1.3) ^c	+ (+)	27.6 (0.9)
Body-Building Supplements							
Males	22.7 (2.2) ^b	23.0 (1.7) ^{b,f}	19.4 (0.8)	16.6 (2.3) ^d	17.4 (1.2) ^{c,d}	+ (+)	21.9 (1.2)
Females	17.0 (4.7) ^b	11.6 (2.2)	10.3 (1.0) ^b	10.0 (3.8)	7.3 (0.8) ^{a,c}	+ (+)	12.6 (1.7)
Total	21.9 (2.3) ^b	20.2 (1.6) ^b	17.5 (0.8) ^b	15.5 (2.3)	14.9 (0.7) ^{a,c,d}	+ (+)	20.2 (1.2)
Herbal Supplements							
Males	16.9 (1.6)	13.7 (1.5) ^{a,f}	17.9 (1.1) ^{b,d}	18.1 (1.5) ^{b,d}	14.5 (1.1) ^{a,f}	+ (+)	16.2 (0.8)
Females	20.3 (3.8) ^b	13.2 (3.1)	15.9 (2.4) ^b	13.8 (3.0)	9.0 (1.2) ^{a,c}	+ (+)	15.4 (1.7)
Total	17.4 (1.7) ^b	13.6 (1.6) ^a	17.5 (1.2) ^{b,d}	17.4 (1.4) ^b	13.1 (0.8) ^{a,c,f}	+ (+)	16.0 (0.9)
Weight Loss Products							
Males	15.8 (2.2) ^f	13.8 (0.5) ^{b,f}	12.1 (0.9)	9.9 (1.5) ^{c,d}	11.7 (0.6) ^d	+ (+)	14.0 (1.1)
Females	32.3 (3.9) ^{a,f,d,f}	19.5 (2.3) ^c	17.2 (1.0) ^c	18.2 (3.1) ^c	16.9 (1.3) ^c	+ (+)	23.0 (1.6)
Total	18.1 (2.0) ^{a,b,f}	15.2 (0.8) ^{b,f}	13.1 (0.7) ^c	11.3 (1.7) ^{c,d}	13.0 (0.5) ^{c,d}	+ (+)	15.6 (1.0)
Joint Health/Arthritis							
Males	15.1 (1.5)	12.8 (1.3)	14.2 (0.6)	12.9 (1.2)	14.1 (0.6)	+ (+)	14.1 (0.7)
Females	17.2 (3.7)	15.0 (1.3) ^b	12.3 (1.9)	11.3 (2.2)	11.0 (1.3) ^d	+ (+)	14.6 (1.3)
Total	15.4 (1.3)	13.4 (1.2)	13.8 (0.6)	12.6 (1.3)	13.4 (0.6)	+ (+)	14.2 (0.6)

(Table continued on next page)

Table 7.9 PREVALENCE OF TAKING DIETARY SUPPLEMENTS, BY RESERVE COMPONENT, BY GENDER (CONTINUED)

Type of Supplements Taken	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Performance-Enhancing Products							
Males	11.8 (1.7) ^{b,f}	9.7 (1.3) ^f	8.8 (0.7) ^f	5.8 (1.2) ^{a,c,d}	7.3 (0.9) ^c	+(+)	10.1 (0.9)
Females	13.6 (4.4) ^b	5.9 (1.7)	5.2 (1.5)	6.2 (2.1)	3.3 (0.6) ^c	+(+)	8.2 (1.6)
Total	12.0 (1.5) ^{a,b,f}	8.7 (0.9) ^b	8.0 (0.7) ^c	5.9 (1.3) ^c	6.3 (0.6) ^{c,d}	+(+)	9.7 (0.8)
Other Supplements							
Males	14.3 (1.8)	11.7 (1.3) ^a	14.9 (0.8) ^{d,f}	11.7 (1.4) ^a	12.9 (1.0)	+(+)	13.3 (0.9)
Females	17.5 (2.8)	18.1 (1.6) ^b	16.5 (2.5)	14.4 (4.1)	14.1 (1.2) ^d	+(+)	16.9 (1.2)
Total	14.7 (1.4)	13.2 (1.2)	15.2 (1.0)	12.2 (1.9)	13.2 (0.8)	+(+)	14.0 (0.7)
Any Supplement Use							
Males	55.7 (2.8) ^{a,b}	57.9 (1.7) ^{a,b}	63.8 (1.5) ^{c,d}	61.0 (2.7)	62.6 (0.7) ^{c,d}	+(+)	58.4 (1.2)
Females	65.0 (4.3)	66.0 (3.5)	73.1 (2.3)	67.2 (5.1)	71.3 (1.9)	+(+)	67.4 (1.8)
Total	57.0 (2.7) ^{a,b}	59.9 (1.6) ^{a,b}	65.7 (1.4) ^{c,d}	62.1 (2.4)	64.8 (0.8) ^{c,d}	+(+)	60.0 (1.1)

Note: Table displays the percentage of Reserve military personnel by Reserve component and gender who reported taking the indicated dietary supplement type on a regular basis at least once a week in the past 12 months. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^cEstimate is significantly different from the Army National Guard at the 95% confidence level.

^dEstimate is significantly different from the Army Reserve at the 95% confidence level.

^eEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^fEstimate is significantly different from the Air National Guard at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Dietary Supplements, Q114).

Table 7.10

PREVALENCE OF TAKING DIETARY SUPPLEMENTS, BY AGE AND GENDER

Type of Supplements Taken	Age Category				Total Reserve Component
	24 or younger	25-34	35-44	45 or older	
Multiple Vitamins and Minerals					
Males	35.5 (1.2) ^{a-c}	45.0 (2.0) ^{b-d}	50.9 (1.7) ^{a,c,d}	60.8 (3.4) ^{a,b,d}	46.2 (1.0)
Females	45.0 (3.0) ^{a-c}	56.5 (3.3) ^{b-d}	63.4 (3.3) ^{a,d}	65.0 (3.8) ^{a,d}	55.1 (2.5)
Total	37.5 (1.2) ^{a-c}	47.1 (1.6) ^{b-d}	52.6 (1.6) ^{a,c,d}	61.5 (2.9) ^{a,b,d}	47.8 (1.1)
Individual Vitamins and Minerals					
Males	28.2 (1.5) ^c	27.9 (1.6) ^{b,c}	32.6 (1.5) ^{a,c}	42.3 (3.7) ^{a,b,d}	31.4 (0.9)
Females	26.1 (2.2) ^{a-c}	39.9 (3.1) ^{c,d}	48.7 (4.4) ^{c,d}	62.3 (4.0) ^{a,b,d}	40.0 (2.0)
Total	27.8 (1.2) ^{b,c}	30.2 (1.4) ^{b,c}	34.9 (1.6) ^{a,c,d}	45.7 (3.0) ^{a,b,d}	33.0 (0.9)
Antioxidants					
Males	24.1 (1.6) ^b	25.9 (1.4) ^b	29.5 (1.5) ^{a,d}	29.9 (2.9)	27.0 (1.0)
Females	19.1 (2.1) ^{a-c}	30.6 (3.9) ^{c,d}	39.1 (3.5) ^d	45.0 (5.2) ^{a,d}	30.3 (1.6)
Total	23.1 (1.4) ^{a-c}	26.8 (1.4) ^{b,d}	30.8 (1.5) ^{a,d}	32.6 (2.8) ^d	27.6 (0.9)
Body-Building Supplements					
Males	27.7 (1.6) ^{b,c}	25.4 (2.6) ^{b,c}	18.8 (1.3) ^{a,c,d}	9.4 (1.1) ^{a,b,d}	21.9 (1.2)
Females	11.8 (1.2) ^c	18.1 (4.1) ^c	10.4 (2.3)	6.6 (1.8) ^{a,d}	12.6 (1.7)
Total	24.4 (1.5) ^{b,c}	24.0 (2.5) ^{b,c}	17.6 (1.2) ^{a,c,d}	8.9 (0.9) ^{a,b,d}	20.2 (1.2)
Herbal Supplements					
Males	17.7 (1.7)	16.5 (1.2)	16.0 (1.1)	13.0 (1.6)	16.2 (0.8)
Females	11.0 (1.3) ^b	18.2 (4.4)	17.6 (2.6) ^d	17.4 (5.0)	15.4 (1.7)
Total	16.3 (1.5)	16.8 (1.3)	16.2 (1.1)	13.8 (1.9)	16.0 (0.9)
Weight Loss Products					
Males	15.5 (1.5) ^{b,c}	16.8 (2.0) ^{b,c}	12.5 (1.1) ^{a,c,d}	8.4 (1.3) ^{a,b,d}	14.0 (1.1)
Females	20.2 (1.8)	27.3 (4.0)	25.7 (2.7)	17.4 (3.5)	23.0 (1.6)
Total	16.5 (1.3) ^c	18.8 (1.9) ^{b,c}	14.4 (1.0) ^{a,c}	10.0 (1.5) ^{a,b,d}	15.6 (1.0)
Joint Health/Arthritis					
Males	11.7 (1.4) ^{b,c}	13.8 (1.1) ^c	15.0 (0.9) ^d	17.9 (1.5) ^{a,d}	14.1 (0.7)
Females	8.3 (0.9) ^{b,c}	14.9 (4.0) ^c	13.4 (2.1) ^{c,d}	31.0 (3.4) ^{a,b,d}	14.6 (1.3)
Total	11.0 (1.2) ^{a-c}	14.0 (1.2) ^{c,d}	14.8 (0.8) ^{c,d}	20.2 (1.7) ^{a,b,d}	14.2 (0.6)
Performance-Enhancing Products					
Males	14.5 (1.5) ^{a-c}	11.6 (1.5) ^{b-d}	7.0 (0.6) ^{a,c,d}	4.2 (0.8) ^{a,b,d}	10.1 (0.9)
Females	7.2 (0.9)	12.6 (4.1)	5.6 (1.4)	5.0 (2.2)	8.2 (1.6)
Total	13.0 (1.3) ^{b,c}	11.8 (1.4) ^{b,c}	6.8 (0.5) ^{a,c,d}	4.4 (0.8) ^{a,b,d}	9.7 (0.8)
Other Supplements					
Males	13.9 (1.5)	14.6 (1.4)	12.2 (1.1)	12.2 (1.6)	13.3 (0.9)
Females	11.2 (1.7) ^c	16.9 (3.9) ^c	15.2 (2.3) ^c	33.5 (3.6) ^{a,b,d}	16.9 (1.2)
Total	13.3 (1.2)	15.0 (1.4)	12.6 (1.1)	15.8 (1.6)	14.0 (0.7)

(Table continued on next page)

Table 7.10

PREVALENCE OF TAKING DIETARY SUPPLEMENTS, BY AGE AND GENDER (CONTINUED)

Type of Supplements Taken	Age Category				Total Reserve Component
	24 or younger	25-34	35-44	45 or older	
Any Supplement Use					
Males	50.1 (2.1) ^{a-c}	55.7 (2.2) ^{b-d}	63.9 (1.3) ^{a,c,d}	69.8 (2.6) ^{a,b,d}	58.4 (1.2)
Females	56.0 (3.0) ^{a-c}	69.3 (2.8) ^{b,d}	77.4 (2.0) ^{a,d}	77.5 (3.6) ^d	67.4 (1.8)
Total	51.3 (1.9) ^{a-c}	58.3 (1.9) ^{b-d}	65.8 (1.2) ^{a,c,d}	71.2 (2.0) ^{a,b,d}	60.0 (1.1)

Note: Table displays the percentage of Reserve military personnel by age and gender who reported taking the indicated dietary supplement type on a regular basis at least once a week in the past 12 months. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible age category Reserve component pairings (e.g., 24 or younger vs. 25-34, 25-34 vs. 35-44). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the 25-34 age category at the 95% confidence level.

^bEstimate is significantly different from the 35-44 age category at the 95% confidence level.

^cEstimate is significantly different from the 45 or older age category at the 95% confidence level.

^dEstimate is significantly different from the 24 and younger age category at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Dietary Supplements, Q114).

7.4.3 Prevalence of Receipt of Cholesterol Screening

Table 7.13 presents the prevalence of receipt of cholesterol screening by Reserve component, by age. The lowest prevalence of cholesterol screening was among those 24 years old and younger (34.9%). Cholesterol screening was more prevalent with older age groups, peaking at 84.1% for those aged 45 years or older. Overall, 61.1% of Guard and Reserve personnel received cholesterol screening in the past 5 years. This falls short of the *Healthy People 2010* goal of 80% of adults having their cholesterol checked in the past 5 years, by about 20%. Among Navy Reserves, 77.3% received cholesterol screening within the past 5 years, a figure that is higher than any other Reserve component.

7.5 Summary

7.5.1 BMI Measures of Overweight and Obesity

This chapter presented data on the percentage of Reserve component personnel classified as overweight by BMI.

- In 2006, overall, 62.7% of Reserve component members were overweight using BMI greater than or equal to 25 criteria (Table 7.1).
- In 2006, overall, 16.3% of members of the Reserve component were obese using BMI greater than or equal to 30 criteria (Table 7.2).
- Overweight was lower among Reserve component women (40.6%) than Reserve component men (67.4%) (Table 7.1).
- Obesity was lower among Reserve component women (9.2%) than Reserve component men (17.8%) (Table 7.2).

7.5.2 Underweight

The prevalence of underweight among Reserve component personnel was examined using BMI less than 18.5.

- In 2006, 1.3% of Reserve component personnel were underweight (Table 7.3).
- Among Reserve component women, 2.4% were underweight, while among Reserve component men, 1.1% were underweight (Table 7.3).

Table 7.11

PREVALENCE OF BLOOD PRESSURE SCREENING AND AWARENESS, BY RESERVE COMPONENT, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristics	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	+ (+)	+ (+)	93.8 (0.8)	92.9 (1.3)	94.0 (0.5)	+ (+)	+ (+)
Female	+ (+)	90.5 (2.2)	93.9 (1.5)	94.8 (2.3)	94.0 (0.5)	+ (+)	89.1 (1.5)
Race/Ethnicity							
White, non-Hispanic	+ (+)	88.3 (2.0) ^{a,c}	96.1 (0.8) ^d	94.5 (0.6) ^d	95.2 (0.6) ²	+ (+)	+ (+)
African American, non-Hispanic	+ (+)	+ (+)	+ (+)	87.9 (2.8)	91.6 (1.7)	+ (+)	+ (+)
Hispanic	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Other	+ (+)	+ (+)	91.6 (3.8)	+ (+)	89.4 (1.4)	+ (+)	+ (+)
Education							
High school or less	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Some college	+ (+)	+ (+)	92.9 (1.1)	92.2 (1.2)	92.9 (0.8)	+ (+)	+ (+)
College graduate or higher	94.8 (1.1) ^a	95.6 (2.0)	97.8 (0.5) ^{e,f}	95.6 (1.5)	96.6 (0.3) ^f	86.9 (4.2) ^{a,c}	95.6 (0.7)
Age							
24 or younger	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
25-34	+ (+)	+ (+)	92.2 (1.2)	92.9 (1.8)	92.1 (0.7)	+ (+)	+ (+)
35-44	93.2 (2.1)	91.0 (2.9)	95.8 (0.6)	95.4 (1.3)	96.2 (0.6)	91.8 (3.8)	93.9 (0.9)
45 or older	95.7 (2.3)	96.0 (2.3)	98.2 (1.1)	97.3 (0.4)	97.6 (0.6)	+ (+)	96.6 (0.9)
Total	+ (+)	+ (+)	93.8 (0.8)	93.2 (1.4)	94.0 (0.4)	+ (+)	+ (+)

Note: Table displays the percentage of Reserve military personnel by Reserve component and sociodemographic characteristic who had their blood pressure checked in the 2 years prior to the survey and who indicated the result (result was “high,” “low,” “normal,” or “something else.”) The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

+Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Blood Pressure Screening and Awareness, Q127 and Q128; refer to Section 2.5.1 for descriptions of sociodemographic variables).

Table 7.12 PREVALENCE OF ADVICE GIVEN AND ACTIONS TAKEN TO CONTROL HIGH BLOOD PRESSURE, BY RESERVE COMPONENT

Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Told of High Blood Pressure within Last 2 Years^a	+ (+)	8.2 (1.0)	8.4 (1.0)	9.1 (1.3)	8.5 (0.4)	+ (+)	8.3 (0.5)
Advice Given to Probable Hypertensives^b							
Diet to lose weight	+ (+)	44.2 (2.5)	50.4 (3.7)	49.1 (2.0)	46.8 (4.0)	+ (+)	46.5 (3.2)
Decrease salt intake	47.3 (6.8) ^c	50.4 (5.9) ^{c,d}	58.7 (3.3) ^d	65.8 (2.3) ^{d,g}	50.7 (2.8) ^{c,d}	30.6 (6.1) ^{c,f,h}	51.3 (3.4)
Exercise	61.2 (5.4) ^c	68.7 (3.6) ^c	69.8 (2.9) ^c	84.2 (4.2) ^{e-h}	70.2 (2.5) ^c	+ (+)	67.2 (3.2)
Stop smoking	36.3 (3.2) ^{c,g,h}	28.0 (5.6) ^c	20.1 (2.9) ^e	15.3 (1.3) ^{e,f}	19.8 (2.5) ^e	26.3 (5.5)	27.8 (2.2)
Cut down on use of alcohol	18.0 (3.2)	23.7 (5.3) ^g	20.5 (3.4) ^g	13.1 (4.4)	12.4 (2.2) ^{f,h}	15.3 (5.4)	18.3 (2.0)
Take prescribed medication	29.0 (4.8) ^{c,d,g,h}	38.7 (5.5) ^d	44.0 (3.7) ^{d,e}	48.3 (2.5) ^{d,e}	45.4 (1.8) ^{d,e}	12.5 (5.2) ^{c,e-h}	36.4 (2.7)
Any of the above	73.1 (6.4) ^{c,h}	85.3 (1.7) ^c	87.7 (2.1) ^e	90.9 (1.6) ^{e,f}	84.3 (3.5)	+ (+)	80.7 (3.2)
Action Being Taken by Probable Hypertensivesⁱ							
Diet to lose weight	44.2 (7.2)	50.6 (5.4)	54.6 (2.8)	50.8 (3.7)	50.7 (3.0)	+ (+)	48.6 (3.4)
Decrease salt intake	35.0 (3.5) ^{c,g,h}	+ (+)	56.4 (2.9) ^{d,e}	56.2 (1.7) ^{d,e}	56.1 (2.2) ^{d,e}	26.2 (4.4) ^{c,g,h}	45.7 (3.4)
Exercise	52.9 (5.3) ^{c,f,g,h}	68.1 (3.2) ^{e,h}	78.3 (3.0) ^{e,f}	77.4 (3.9) ^e	72.3 (1.8) ^e	+ (+)	65.3 (3.4)
Stop smoking	28.7 (5.6) ^c	39.3 (3.6)	40.2 (3.1)	45.1 (2.9) ^e	39.3 (2.5)	+ (+)	36.2 (2.9)
Cut down on use of alcohol	21.8 (5.1) ^c	32.2 (4.1)	31.8 (1.9)	38.2 (2.8) ^{e,g}	25.8 (3.1) ^c	24.2 (7.4)	27.9 (2.6)
Take prescribed medication	21.2 (3.3) ^{c,g,h}	25.7 (4.2) ^{c,g,h}	38.4 (3.2) ^{e,f}	41.5 (3.0) ^{e,f}	41.8 (1.3) ^{e,f}	+ (+)	28.1 (2.5)
Any of the above	66.3 (7.8) ^{c,g,h}	81.7 (3.2)	86.0 (2.8) ^e	85.4 (1.5) ^e	86.9 (2.0) ^e	83.2 (6.4)	77.4 (3.9)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported the advice given and action taken to control high blood pressure as indicated by the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aRespondents in the Total Reserve component sample who had been told they had high blood pressure the last time they had their blood pressure checked within the past 2 years.

^bAdvice given by a health care provider, such as a doctor or other health professional. Estimates are among people who were told in last 2 years that they had high blood pressure; note this is not necessarily within the past 2 years.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

^gEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^hEstimate is significantly different from the Navy Reserve at the 95% confidence level.

ⁱPersonnel "taking action" are those who were advised by a health care provider to take a particular action to control high blood pressure and were following this advice at the time of the survey. Estimates are among people who were told in last 2 years that they had high blood pressure.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Blood Pressure within Past 2 Years, Q127; Informed of High Blood Pressure, Q128; Advice, Q129; Action Taken, Q130).

Table 7.13

PREVALENCE OF RECEIPT OF CHOLESTEROL SCREENING, BY RESERVE COMPONENT, BY AGE

Age Group/Recency	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Aged 24 or younger							
Within past 5 years	34.5 (3.5)	35.8 (2.2)	38.9 (4.8)	40.5 (2.4) ^a	33.1 (2.0) ^b	+ (+)	34.9 (1.8)
More than 5 years ago	2.4 (0.6) ^{a,b}	1.3 (0.8)	2.1 (1.6)	0.6 (0.2) ^c	0.9 (0.3) ^c	+ (+)	1.9 (0.4)
Never	37.8 (3.5) ^b	34.6 (3.6)	30.2 (4.6)	29.1 (1.2) ^{a,c}	37.1 (1.7) ^b	+ (+)	35.5 (2.1)
Don't know	25.4 (3.2)	28.3 (2.6)	28.8 (3.8)	29.9 (1.6)	28.9 (1.1)	+ (+)	27.7 (1.9)
Aged 25 to 34							
Within past 5 years	54.4 (3.0) ^{a,b,d}	60.8 (2.9) ^{d,e}	68.5 (1.8) ^{a,c,c,f}	64.9 (2.8) ^{c,e}	63.6 (1.7) ^{c,d,e}	47.3 (4.1) ^{a,b,d,f}	59.0 (1.7)
More than 5 years ago	3.3 (0.9)	2.7 (0.8)	3.0 (0.5) ^b	1.6 (0.3) ^{a,d}	3.3 (0.3) ^b	1.7 (0.9)	2.9 (0.5)
Never	19.2 (2.2) ^d	18.8 (3.0)	12.3 (1.9) ^{c,e}	17.3 (2.0) ^e	15.7 (0.7) ^e	25.5 (3.4) ^{a,b,d}	18.1 (1.3)
Don't know	23.2 (2.0) ^{a,b,d,f}	17.7 (1.5) ^c	16.2 (1.1) ^{c,e}	16.1 (2.1) ^{c,e}	17.4 (1.2) ^{c,e}	25.5 (3.8) ^{a,b,d}	20.0 (1.1)
Aged 35 to 44							
Within past 5 years	78.9 (3.4)	80.4 (3.1)	83.3 (1.6)	79.1 (3.6)	84.8 (1.5)	79.2 (4.9)	80.9 (1.5)
More than 5 years ago	2.8 (0.9) ^b	2.2 (0.9) ^b	3.9 (0.6)	7.0 (1.6) ^{c,f}	4.0 (0.9)	5.1 (2.8)	3.7 (0.6)
Never	5.7 (1.3)	6.2 (1.8)	5.8 (0.8) ^a	5.8 (1.2)	3.6 (0.3) ^d	+ (+)	5.5 (0.6)
Don't know	12.6 (2.5) ^d	11.1 (2.6)	7.0 (0.8) ^c	8.1 (1.0)	7.5 (1.0)	11.6 (4.0)	9.9 (1.0)
Aged 45 or older							
Within past 5 years	+ (+)	92.6 (2.1)	94.1 (0.8) ^b	91.5 (1.0) ^d	92.9 (0.6)	+ (+)	84.1 (5.0)
More than 5 years ago	3.4 (1.8)	1.6 (0.6)	1.4 (0.5)	1.8 (0.6)	2.0 (0.4)	+ (+)	2.3 (0.6)
Never	3.3 (2.1)	1.8 (1.3)	1.8 (0.6)	1.9 (0.6)	1.5 (0.2)	+ (+)	2.2 (0.7)
Don't know	+ (+)	3.9 (1.6)	2.7 (0.7) ^b	4.8 (0.7) ^d	3.5 (0.7)	+ (+)	11.4 (5.1)
Total^a							
Within past 5 years	53.5 (3.9) ^{a,b,d}	61.0 (1.9) ^{a,b,d}	77.3 (1.6) ^{b,c,f}	71.0 (1.9) ^{c,d,f}	74.4 (0.9) ^{c,f}	+ (+)	61.1 (2.2)
More than 5 years ago	2.9 (0.6)	1.9 (0.5)	3.1 (0.4)	3.2 (0.5)	2.9 (0.3)	+ (+)	2.7 (0.3)
Never	21.4 (2.3) ^{a,b,d}	19.1 (1.8) ^{a,b,d}	9.0 (0.9) ^{b,c,f}	12.4 (0.9) ^{c,d,f}	10.8 (0.4) ^{c,f}	+ (+)	17.8 (1.2)
Don't know	22.3 (1.9) ^{a,b,d}	18.0 (1.9) ^{a,b,d}	10.6 (0.8) ^{b,c,f}	13.5 (1.1) ^{c,d,f}	11.9 (0.7) ^{c,f}	+ (+)	18.4 (1.1)

Note: Table displays the percentage of Reserve military personnel by Reserve component and age group who received cholesterol screening within the recency categories noted in the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army National Guard at the 95% confidence level.

^dEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^eEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

^gIndividuals with missing cholesterol screening data are not included in these estimates.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Cholesterol Screening, Q131).

7.5.3 Weight Loss History, Reasons for Weight Gain, and Weight Loss

Reserves reported on their weight loss history, self-perception of weight, and their reasons for weight gain or weight loss.

- Overall, 34.5% of Reserve component members considered themselves overweight, although 62.7% were actually overweight (Tables 7.1 and 7.4).
- Among women, 48.7% had a history of trying to lose weight before joining the military and 76.2% tried to lose weight after joining the military (Table 7.4).
- Among men, 27.9% had a history of trying to lose weight before joining the military and 52.8% tried to lose weight after joining the military (Table 7.4).
- The top three reasons for weight gain in the past year were stress (35.5%), return home from deployment (31.0%), and medical profile (17.3%) (Table 7.5).

7.5.4 Leisure-Time Physical Activity

Reserve component personnel's leisure-time physical activity was compared with the standards set forth by *Healthy People 2010*.

- For the members of the Guard and Reserves, 47.0% met the *Healthy People 2010* objective of engaging in moderate leisure-time physical activity for 30 minutes (Table 7.6).
- Among Reserve component personnel, 37.1% engaged in 20 minutes of vigorous leisure-time physical activity for 3 or more days each week.

7.5.5 Food Intake

Healthy People 2010 recommends a healthful assortment of food types that include the eight categories in our survey. Members of the Reserve component were asked to report their intake of food in these categories, plus snacks and fast foods.

- Only 9.6% of Reserve component personnel consumed fruit 3 times or more per day (Table 7.7).
- Only 11.3% of Reserve component members consumed vegetables 3 times or more per day (Table 7.7).

- In 2006, 11.8% of Guard and Reserve personnel consumed whole grains 3 times or more per day, and 24.4% consumed whole grains fewer than 3 times a week (Table 7.7).
- In 2006, 7.5% of members of the Reserve component consumed snack foods/sweets 3 times or more a day, and 38.6% consumed snack foods/sweets fewer than 3 times a week (Table 7.7).
- Additionally, 5.5% of members of the Guard and Reserves consumed fast food 3 times or more per day, and 49.2% consumed fast food fewer than 3 times a week (Table 7.7).

7.5.6 Dietary Supplements

Reserve component members were asked how often they took various types of dietary supplements.

- Sixty percent of Reserve component personnel reported having taken dietary supplements at least once per week in the past 12 months (Table 7.8).
- In addition, Reserve component women (67.4%) were more likely than Reserve component men (58.4%) to have taken any supplement in the past 12 months (Table 7.9).
- Male Reserve component members took more body-building supplements, herbal supplements, and performance-enhancing products than female Reserve component personnel (Table 7.9).
- In 2006, any supplement use was more prevalent among the older age groups: 71.2% among those 45 years and older and only 51.3% among those 24 years and younger (Table 7.9).

7.5.7 Blood Pressure Screening and Awareness

Guard and Reserve personnel were about 7 percentage points below the *Healthy People 2010* objective target for blood pressure screening and awareness.

- Almost 88% of Reserve component members reported that they had their blood pressure checked within the 2 years prior to the survey and knew the result.

7.5.8 High Blood Pressure Advice or Interventions

Awareness of blood pressure status is important because high blood pressure does not usually have symptoms and can have long-term negative effects on health and well-being. Results of the 2006 Reserve component survey showed the following:

- About 8.3% reported being diagnosed as having high blood pressure in the past 2 years (Table 7.11).
- About 81% of members of the Guard and Reserves who had ever had high blood pressure had been advised to take one or more of the following actions to help lower their blood pressure: take blood pressure medication, diet to reduce weight, reduce sodium intake, or exercise. Recommendations to reduce salt in one's diet (51.3%) and to exercise (67.2%) were most common (Table 7.11).

7.5.9 Actions to Control High Blood Pressure

Being aware of one's blood pressure status is important, but more important are the actions taken to control high blood pressure.

- Among probable current hypertensives, 77.4% of personnel were taking one or more of these actions (Table 7.11). This is well below the *Healthy People 2010* target of 95% or more people with hypertension taking action to control their blood pressure. Exercising (65.3%) and dieting to lose weight (48.6%) were the most common actions taken within this group.

7.5.10 Cholesterol

Reserve component personnel that were 35 to 44 years of age and 45 years of age or older met the *Healthy People 2010* objective of 80% receipt of cholesterol measurement (Table 7.12).

- Approximately 61% of Reserve component members had their cholesterol checked within the preceding 5 years.
- Approximately 77% of Navy Reserves had their cholesterol checked within the past 5 years, higher than any other Reserve component.

Chapter 8: Safety and Other Health-Related Behaviors

This chapter reports findings on safety and other health-related behaviors and health promotion activities among National Guard and Reserve personnel. Injury prevention is examined, including factors such as the prevalence of seat belt use in motor vehicles, helmet use among motorcyclists and bicyclists, and use of hearing protection. Sexually transmitted infections (STIs) also are examined, as well as sleep habits and limitation of activity due to poor physical health. Data also will be presented regarding the relationship between various health behaviors and respondents' risk-taking and sensation-seeking characteristics. Finally, findings on oral health, pregnancy history and maternal health, and gambling behaviors are presented. Where appropriate, knowledge and behavior among Guard and Reserve personnel are compared with relevant *Healthy People 2010* objectives (U.S. Department of Health and Human Services [DHHS], 2000). In contrast to the total Guard and Reserve component-level information presented in Chapter 10, this chapter examines estimates for the Guard and Reserve components and includes more detailed information about attaining selected *Healthy People 2010* objectives.

8.1 Injuries and Injury Prevention

A major effort in injury prevention is to reduce injuries and fatalities resulting from motor vehicle accidents. In 2005, over 43,000 people were killed and 2.7 million people were injured in motor vehicle crashes (NHTSA, 2005b). Research demonstrates, however, that seat belt use is very effective in preventing injury and reducing the likelihood of death in motor vehicle accidents (Cummings et al., 2006; NHTSA, 2003). As of 2005, 50 states, Puerto Rico, and the District of Columbia had safety belt use laws (NHTSA, 2005a).

Injuries to motorcyclists and bicyclists are also of concern. For example, in 2005, motorcycle and bicycle fatalities accounted for 10% and 2%, respectively, of all traffic fatalities (NHTSA, 2005b). Motorcycle and bicycle helmet use, however, can decrease the risk of head injuries in a crash or fall (Hundley et al., 2004;

Sosin & Sacks, 1992). Specifically, motorcycle helmets have been shown to be 37% effective in preventing fatal injuries (NHTSA, 2004b). As of 2005, 47 states and the District of Columbia had laws requiring some (usually riders younger than age 20) or all motorcyclists to wear helmets (NHTSA, 2005b). Fewer states (only 20) had laws on bicycle helmet use, and these applied only to young riders (aged 16 or younger) (NHTSA, 2005a).

Hearing loss is an emerging health concern; hearing loss due to occupational and other exposures is one of the most common yet preventable injuries. Approximately 30 million workers are exposed to dangerous levels of noise on the job, and an additional 9 million are at risk for hearing loss from other sources, such as solvents and metals (National Institute for Occupational Safety and Health [NIOSH], 2001). In 2005, Service-connected hearing loss and auditory problems were the second most common reason for new Veterans Affairs awards for disability (Navy Environmental Health Center, 2007). The NIOSH recommends hearing protectors, such as ear plugs or ear muffs, when otherwise reducing or removing hazardous noise from a workplace is not feasible (Navy Environmental Health Center, 2007).

This section presents findings from the 2006 *Department of Defense Reserve Component Survey* related to the prevalence of unintentional injuries and behaviors that reduce the risk of injury, such as seat belt, helmet, and hearing protection use. As part of this discussion, the 2006 survey findings are compared with the following *Healthy People 2010* objectives:

- increase the use of safety belts to 92%
- increase the proportion of motorcyclists using helmets to at least 79%
- increase the use of hearing protection devices to 48.7%

8.1.1 Seat Belt Use

Table 8.1 shows the percentages of personnel who reported wearing seat belts always or nearly always

Table 8.1 PREVALENCE OF SEAT BELT USE, BY RESERVE COMPONENT, GENDER, AND AGE

Gender/Age Group	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Males							
24 or younger	74.7 (3.6) ^{a-d}	83.7 (2.6) ^{c,e}	87.6 (2.6) ^{e,f}	90.3 (2.0) ^{a,e,f}	84.7 (2.5) ^e	78.4 (3.1) ^{b,c}	79.1 (2.0)
25-34	83.0 (3.5) ^{b-d}	85.4 (2.6) ^{b-d}	91.8 (0.9) ^{a,e}	91.4 (1.4) ^{a,e}	94.7 (1.5) ^{a,e,f}	89.3 (1.7) ^d	86.3 (1.7)
35-44	92.9 (2.3)	94.0 (2.3)	94.7 (0.9)	95.7 (1.2)	95.9 (0.4)	+ (+)	94.1 (1.0)
45 or older	97.7 (1.1)	94.3 (2.9)	97.8 (0.8)	95.3 (1.0)	97.4 (0.5)	+ (+)	96.5 (0.8)
Total males	84.3 (2.7) ^{b-d}	88.1 (2.0) ^{b-d}	93.9 (0.7) ^{a,e,f}	93.5 (0.7) ^{a,e,f}	94.5 (0.8) ^{a,e,f}	81.9 (2.9) ^{b-d}	87.8 (1.3)
Females							
24 or younger	88.9 (2.8)	86.3 (2.1) ^{b,d}	93.4 (2.0) ^a	+ (+)	93.7 (1.1) ^a	+ (+)	88.3 (1.6)
25-34	98.1 (1.2)	95.7 (2.4)	95.8 (1.5)	+ (+)	95.9 (0.6)	+ (+)	96.8 (0.9)
35-44	+ (+)	+ (+)	95.2 (2.0) ^c	99.3 (0.5) ^b	98.5 (0.7)	+ (+)	96.9 (1.2)
45 or older	+ (+)	+ (+)	96.8 (2.4)	+ (+)	98.4 (0.9)	+ (+)	96.6 (1.6)
Total females	92.4 (1.7) ^d	93.1 (1.9)	95.5 (1.1)	95.5 (1.7)	96.8 (0.4) ^c	+ (+)	93.7 (0.8)
Total							
24 or younger	77.6 (2.7) ^{b-d}	84.3 (2.2)	89.1 (1.8) ^{e,f}	89.7 (2.4) ^{e,f}	87.8 (1.8) ^{e,f}	78.3 (3.0) ^{b-d}	81.0 (1.6)
25-34	84.9 (3.0) ^{b-d}	88.2 (2.4) ^d	92.7 (0.7) ^c	92.9 (1.3) ^c	95.0 (1.1) ^{a,e,f}	89.3 (1.6) ^d	88.3 (1.4)
35-44	93.1 (2.0)	94.6 (2.1)	94.8 (0.8)	96.1 (1.0)	96.4 (0.3)	+ (+)	94.5 (0.8)
45 or older	97.3 (1.2)	95.2 (2.4)	97.6 (1.0)	95.2 (0.9) ^d	97.6 (0.4) ^c	+ (+)	96.6 (0.7)
Total	85.4 (2.3) ^{b-d}	89.3 (1.9) ^{b-d,f}	94.2 (0.7) ^{a,e,f}	93.8 (0.7) ^{a,e,f}	95.1 (0.6) ^{a,e,f}	81.8 (2.9) ^{a-d}	88.8 (1.1)

Note: Table displays the percentage of reserve military personnel by Reserve component, gender, and age group who reported that they used seat belts "always" or "nearly always" when driving or riding in a car. Personnel who reported that they did not drive or ride in a car were excluded from these analyses. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Army Reserve at the 95% confidence level.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Seatbelt Use, Q74).

when they drove or rode in a car. Altogether, a high percentage of personnel in the total Reserve component used seat belts, although the rates varied somewhat by component and gender. Of the total DoD Reserve component, 88.8% reported regular seat belt use. Seat belt use among all DoD Reservists differed by gender, with women reporting regular seat belt use at a higher rate than men (93.7% vs. 87.8%). Air Force Reserve personnel reported higher rates of seat belt use (95.1%) compared with the other components. The overall Reserve rate, as well as those for men, did not meet the *Healthy People 2010* target of 92% overall seat belt use.

Civilian survey data show the highest rates of seat belt use occur in states with the most stringent seat belt laws (CDC, 2004). The high rates of seat belt use among active-duty military personnel probably reflect military regulations requiring personnel to use seat belts when they are driving or riding in motor vehicles on military installations. However, personnel in the Reserve component spend less time on military installations and are more likely to have similar rates as the civilian population. Comparison of civilian survey data on seat belt use with actual observation of people in motor vehicles, however, suggests that survey respondents may overreport their seat belt use (CDC, 2004). Indeed, a recent study of the civilian population in which seat belt use was observed found that 80% of front seat passengers (in all vehicles) wore seat belts (Glassbrenner, 2005), a rate lower than reported for the six Reserve components (88.8%). Because Reserve military personnel more closely mirror civilian drivers, readers are cautioned that these estimates of regular seat belt use among Reserve personnel may overestimate somewhat the percentages of personnel who actually use seat belts regularly.

Findings presented in Table 8.1 also indicate that age had an impact on regular seat belt use. Younger groups were less likely to report wearing a seat belt always or nearly always. Overall, of the total Reserve components, 79.1% of men aged 24 or younger reported regular seat belt use. The rates of seat belt use for men aged 24 or younger in the Army National Guard and the Marine Corps Reserve (74.7% and 78.4%) were well below the *Healthy People 2010* objective of 92%. The rates of

regular seat belt use among men aged 24 or younger in the Army Reserve and Air Force Reserve (83.7% and 84.7%) also fell below the *Healthy People 2010* objective. Air National Guardsmen and Navy Reservists had the highest rates of seat belt use among men in this age group (90.3% and 87.6%, respectively).

In contrast to the self-reported seat belt use behavior of these groups of young men, rates among men in older age groups met or exceeded the 92% objective in the total Reserve component. Across all components, men aged 35 or older met or exceeded the *Healthy People 2010* seat belt use objective of 92%.

In addition, the *Healthy People 2010* objective was exceeded for women 25 or older with the exception of female Army National Guard and Army Reserve personnel aged 24 or younger.

Findings for males 25 or older suggest that younger males who do not use seat belts regularly may eventually mature into the behavior of regular seat belt use. In the meantime, however, the males aged 24 or younger who reported not using seat belts routinely place themselves at increased risk of serious injury or death should they be involved in a serious motor vehicle crash. Given that males and younger respondents were more likely to be heavy alcohol users (as shown in Table 3.2), and that alcohol is commonly involved in motor vehicle fatalities (NHTSA, 2004a), young Reservists who do not wear seat belts and who also drink and drive would be further adding to their risk of serious injury or death in a motor vehicle crash. These findings suggest that the DoD and the Reserve components may want to consider additional efforts to encourage seat belt use among young males to bring the rates of seat belt use among this group more closely into line with the rates of seat belt use among other groups in the military and with the *Healthy People 2010* objective.

8.1.2 *Helmet Use*

Table 8.2 shows the percentages of motorcyclists and bicyclists who wore helmets always or nearly always when they rode a motorcycle or bicycle in the previous 12 months. The estimates of helmet use by motorcyclists

Table 8.2 PREVALENCE OF HELMET USE AND HEARING PROTECTION USE, PAST 12 MONTHS, BY RESERVE COMPONENT AND GENDER

Gender	N	Reserve Component					Total Reserve Component	
		Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve		Marine Corps Reserve
Helmet Use—Motorcycle^a								
Males	2,783	+ (+)	71.2 (2.8) ^b	+ (+)	78.2 (1.9) ^c	78.0 (4.8)	+ (+)	+ (+)
Females	643	+ (+)	59.5 (6.2) ^d	+ (+)	+ (+)	78.6 (5.5) ^c	+ (+)	+ (+)
Helmet Use—Bicycle^e								
Males	5,781	24.7 (3.7) ^{b,d,f}	29.4 (4.9)	36.6 (2.4) ^{g,h}	40.3 (2.6) ^{g,h}	37.2 (3.4) ^{g,h}	24.7 (4.1) ^{b,d,f}	30.2 (2.1)
Females	1,194	+ (+)	32.1 (4.7) ^d	40.4 (4.7)	+ (+)	45.1 (3.5) ^c	+ (+)	36.5 (3.3)
Hearing Protection Use—Weaponⁱ								
Males	11,484	70.9 (2.2) ^{d,f}	73.3 (4.9) ^f	52.2 (2.5) ^{b-d,g,h}	72.1 (2.7) ^{b,f}	63.6 (1.4) ^{b,f,g}	69.2 (2.9) ^f	69.1 (1.5)
Females	3,107	70.5 (6.6) ^{d,f}	60.5 (6.3) ^f	36.0 (3.2) ^{c,d,g}	52.0 (7.8)	49.4 (3.2) ^{f,g}	+ (+)	58.5 (3.3)
Hearing Protection Use—Otherⁱ								
Males	11,481	39.3 (2.7) ^{b,d,f}	39.6 (1.6) ^{b,d,f}	45.8 (1.7) ^{b-d,g,h}	59.7 (1.1) ^{c,d,f,h}	64.7 (1.6) ^{b,c,f-h}	37.5 (3.5) ^{b,d,f}	44.3 (1.6)
Females	3,111	29.3 (3.4) ^d	27.3 (1.7) ^d	25.7 (2.3) ^{b,d}	34.1 (3.5) ^f	42.2 (3.8) ^{e,f,g}	38.8 (7.5)	30.5 (1.5)

Note: Table displays the percentage of Reserve military personnel by Reserve component and gender who reported wearing helmets and using hearing protection “always” or “nearly always” in the past 12 months. Ns are unweighted counts of respondents in the Total Reserve component sample who rode a motorcycle or bicycle and reported hearing protection use in the past 12 months. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is computed among those who rode a motorcycle in the past 12 months.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is computed among those who rode a bicycle in the past 12 months.

^fEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^gEstimate is significantly different from the Army National Guard at the 95% confidence level.

^hEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

ⁱEstimate is among the total Reserve population.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Helmet Use for Motorcyclists, Q76; Helmet Use for Bicyclists, Q78; Hearing Protection While Firing a Weapon, Q79; Hearing Protection During Other Activities, Q80).

were based on personnel who rode a motorcycle at least once in the previous 12 months (unweighted N = 3,426).

Similarly, the estimates of helmet use by bicyclists were based on personnel who rode a bicycle at least once in the previous 12 months (unweighted N = 6,975).

Personnel who reported that they never rode a motorcycle or bicycle in the previous 12 months were excluded from these estimates.

Available data from the Army Reserve component show that male Army Reservists (71.2%) were more likely than female Army Reservists (59.5%) to wear motorcycle helmets. Air Force Reserve personnel had higher rates of motorcycle helmet use for both males and females. There were slightly higher rates among females (78.6%) than males (78.0%). Female rates for the Air Force Reservists met the *Healthy People 2010* objective of increasing helmet use to at least 79% of motorcyclists.

Progress in motorcycle helmet use also can be measured by comparing results to those of the regular military in 1995 (Bray et al., 1995b), 1998 (Bray et al., 1999), 2002 (Bray et al., 2003), and 2005 (Bray et al., 2006). The prevalence of helmet use by motorcyclists in the total DoD in 2005 discussed above represents a significant increase from previous years (71.0% in 1995, 75.9% in 1998, 82.1% in 2002, and 84.4% in 2005). Furthermore, self-reported rates of motorcycle helmet use for each gender group in each Service were higher than those reported in 2002. These results suggest that helmet-related injury prevention efforts in the military are yielding results. Given that some groups were still below the objective of 79% helmet use (e.g., males in the Army), however, some additional efforts may still be needed to encourage regular helmet use by motorcyclists in the military.

Rates of bicycle helmet use reported in 2006 (Table 8.2) are lower than would be anticipated. Of Reservists who reported riding a bicycle at least once in the previous 12 months, women (36.5%) were more likely than men (30.2%) to wear helmets. These rates represent a decrease in regular bicycle helmet use compared with regular military personnel in 2005 (56.3% for the total DoD) and a marked increase since 1995 (22.8% for the

total DoD) (Bray et al., 2006). The pattern of bicycle helmet use among the components was fairly consistent by gender. Among men, rates were highest in the Air National Guard (40.3%) and Air Force Reserve (37.2%) and lowest in the Marine Corps Reserve (24.7%) and Army National Guard (24.7%). Females in all components had higher rates of regular bicycle helmet use than their male counterparts.

8.1.3 Hearing Protection

Table 8.2 shows the percentages of Reserve personnel by gender who used hearing protection in the past year. Over half of the men (69.1%) and women (58.5%) always or nearly always wore hearing protection when firing a weapon. Thus, both men and women achieved the *Healthy People 2010* target of 48.7% of adults using hearing protection when exposed to loud noises. Findings varied across components and gender. Rates were highest among Army Reservists, Air National Guardsmen, and Army National Guardsmen (73.3%, 72.1%, 70.9%, respectively), compared with Marine Corps Reservists (69.2%), Air Force Reservists (63.6%), and Navy Reservists (52.2%). Among the women, Army National Guard personnel (70.5%) and Army Reserve personnel (60.5%) were more likely to use hearing protection when firing a weapon compared with Air National Guard (52.0%), Air Force Reserve (49.4%), and Navy Reserve (36.0%) personnel. High rates of hearing protection use may be partially explained by regulations requiring military personnel to use them when firing weapons.

Among personnel who were exposed to loud noises other than weapon fire, 44.3% of men always wore hearing protection and 30.5% of women always wore hearing protection. Male and female Air Force Reservists (64.7% and 42.2%) were more likely than members of the other components to wear hearing protection when exposed to loud noises. Neither the rates for men nor women exposed to loud noises other than weapon fire meet the *Healthy People 2010* objective of 48.7% of adults who use hearing protection devices when exposed to loud sounds or noise.

8.2 Sexually Transmitted Infections (STIs)

It has been estimated that more than half of all people will have an STI during their lifetime (Koutsky, 1997). In its latest report, the Centers for Disease Control and Prevention (CDC) estimates that approximately 19 million new STIs occur each year (CDC, 2005). According to the report, “direct medical costs associated with STIs in the United States are estimated at up to \$14.1 billion annually” (Chesson, et al., 2004). Because STIs affect a large proportion of the population, they have direct implications for the health and readiness of Guard and Reserve personnel.

This section presents findings on Guard and Reservists’ STI histories. Table 8.3 presents the prevalence of STIs among Guard and Reserve personnel during their lifetime and during the past 12 months. To estimate the prevalence of STIs, personnel were asked a “yes/no” question regarding whether they had ever had a sexually transmitted disease in the past 12 months and in their lifetime. To help make it clear for personnel what was meant by “sexually transmitted disease,” the following examples of STIs were provided: gonorrhea, syphilis, chlamydia, or genital herpes. In the examples of STIs, such diseases as hepatitis B or HIV/AIDS, for which sexual transmission is a major route of infection, were not specifically mentioned because important routes of nonsexual transmission also exist for these diseases.

As shown in Table 8.3, nearly 12% of personnel in the total Reserve Component reported having an STI at least once in their lifetime. Among men, the lifetime prevalence of STIs was approximately 10%; rates in men from the different components ranged from 7.6% in the Air National Guard to 11.9% in the Navy Reserve. Lifetime prevalence of STIs appeared to be higher among Guard and Reserve women compared with men. Lifetime STI prevalence for females was approximately 17% for the total Reserve component; rates in the different components ranged from 14.4% in the Air National Guard to 19.2% in the Army Reserve. A similar relationship in lifetime prevalence rates between men and women is seen in the civilian population and may reflect the greater efficiency of STI transmission from

male to female rather than from female to male in heterosexual intercourse (Fleming et al., 1997).

Nearly 3% of all personnel in the total Reserve Component reported having an STI in the past 12 months. Female personnel were more than twice as likely to have reported an STI in the past year than male personnel (5.8% vs. 2.1%, respectively). The Air National Guard had fewer STIs reported in the past 12 months (0.7%) than all other components.

8.3 Sleep Habits

Humans spend an estimated one-third of their lives sleeping (libraryjournal.com, 2005). Lack of sleep has been associated with a number of poor health outcomes, including interference with general activities of daily living, decreased immune function (Ozturk et al., 1999), mood disturbance (Dinges et al., 1997), decreased alertness, and an estimated 100,000 fatigue-related highway accidents per year (National Sleep Foundation, 2006). An estimated 40 million Americans have sleep disorders; as of April 2006, it was estimated that more than half of those with sleep disorders went undiagnosed and untreated (National Sleep Foundation, 2007).

The 2006 survey asked participants how many hours of sleep they got each night, on average, during the past 12 months. Table 8.4 presents the percentages of personnel who reported an average of 2 hours of sleep or less, 3 to 4 hours, 5 to 6 hours, and 7 hours or more of sleep per night.

An estimated 30% of all Reservists reported getting 7 or more hours of sleep on average per night, 59.1% reported getting 5 or 6 hours per night, 8.7% reported getting 3 to 4 hours, and 2.3% reported an average of 2 hours or less of sleep per night. Air Force Reserve and Air National Guard personnel reported getting more sleep per night than personnel from other components. Nearly 35% (34.7% and 34.8%) of Air Force Reserve and Air National Guard personnel reported an average of 7 or more hours of sleep per night, compared with 28.1% of Army Reservists, 28.2% of Army National Guard personnel, and 33.1% of Navy Reservists. Women generally reported getting more sleep per night than

Table 8.3

PREVALENCE OF SEXUALLY TRANSMITTED INFECTIONS, BY RESERVE COMPONENT AND GENDER

Gender/Time Period	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Males							
Lifetime	10.9 (1.9)	10.3 (0.9) ^a	11.9 (1.0) ^a	7.6 (0.5) ^{b-d}	11.7 (0.8) ^a	+ (+)	10.4 (0.9)
Past 12 months	2.6 (0.7) ^a	2.0 (0.6) ^a	1.8 (0.3) ^a	0.6 (0.2) ^{b-e}	2.2 (0.4) ^a	+ (+)	2.1 (0.4)
Females							
Lifetime	15.7 (3.5)	19.2 (2.8)	17.8 (1.8)	14.4 (2.1)	17.4 (1.5)	+ (+)	17.3 (1.4)
Past 12 months	7.8 (2.9) ^a	6.2 (0.9) ^{a,c}	3.5 (0.6) ^b	1.5 (0.9) ^{b,d,e}	4.0 (0.6) ^a	+ (+)	5.8 (1.0)
Total							
Lifetime	11.6 (1.6)	12.5 (0.9) ^a	13.1 (0.9) ^a	8.7 (0.5) ^{b-d}	13.2 (1.0) ^a	+ (+)	11.7 (0.7)
Past 12 months	3.4 (0.6) ^a	3.0 (0.6) ^a	2.1 (0.3) ^a	0.7 (0.3) ^{b-e}	2.6 (0.4) ^a	+ (+)	2.8 (0.4)

Note: Table displays the percentage of Reserve military personnel by Reserve component and gender reported having a sexually transmitted infection (STI) in their lifetime or in the past 12 months. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Air National Guard at the 95% confidence level.

^bEstimate is significantly different from the Army Reserve at the 95% confidence level.

^cEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Sexually Transmitted Disease: Q134).

Table 8.4

AVERAGE NUMBER OF HOURS OF SLEEP PER NIGHT IN PAST 12 MONTHS, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS

Characteristic/Group	Average Hours of Sleep per Night			
	2 Hours or Less	3 or 4 Hours	5 or 6 Hours	7 Hours or More
Reserve Component				
Army National Guard	3.5 (0.9) ^{a-c}	9.3 (1.4) ^{b-d}	58.9 (2.1) ^{a,c,d}	28.2 (2.0) ^{a,b,d}
Army Reserve	1.6 (0.5) ^{a-c}	11.4 (1.6) ^{b-d}	58.9 (1.4) ^{a,c,d}	28.1 (1.6) ^{a,b,d}
Navy Reserve	1.3 (0.5) ^{a-c}	6.4 (0.3) ^{b-d}	59.1 (0.7) ^{a,c,d}	33.1 (1.0) ^{a,b,d}
Air National Guard	0.8 (0.2) ^{a-c}	5.1 (0.8) ^{b-d}	59.4 (2.4) ^{a,c,d}	34.8 (1.7) ^{a,b,d}
Air Force Reserve	1.2 (0.2) ^{a-c}	5.6 (0.4) ^{b-d}	58.4 (1.0) ^{a,c,d}	34.7 (1.1) ^{a,b,d}
Marine Corps Reserve	+ (+)	+ (+)	+ (+)	+ (+)
Gender				
Male	2.2 (0.5) ^{a-c}	8.5 (0.7) ^{b-d}	60.0 (1.1) ^{a,c,d}	29.2 (1.1) ^{a,b,d}
Female	2.6 (0.5) ^{a-c}	9.2 (1.5) ^{b-d}	54.8 (1.1) ^{a,c,d}	33.4 (2.0) ^{a,b,d}
Age				
24 or younger	4.4 (1.0) ^{a-c}	8.2 (1.1) ^{b-d}	56.3 (1.9) ^{a,c,d}	31.0 (1.7) ^{a,b,d}
25-34	2.0 (0.6) ^{a-c}	9.5 (1.0) ^{b-d}	60.7 (1.2) ^{a,c,d}	27.9 (1.4) ^{a,b,d}
35-44	1.2 (0.3) ^{a-c}	8.3 (0.9) ^{b-d}	58.2 (1.6) ^{a,c,d}	32.2 (1.5) ^{a,b,d}
45 or older	0.3 (0.1) ^{a-c}	8.5 (1.3) ^{b-d}	63.3 (2.6) ^{a,c,d}	27.9 (2.4) ^{a,b,d}
Education				
High school or less	4.4 (0.9) ^{a-c}	9.5 (1.3) ^{b-d}	59.3 (2.0) ^{a,c,d}	26.9 (1.8) ^{a,b,d}
Some college	2.2 (0.5) ^{a-c}	10.1 (1.0) ^{b-d}	59.7 (1.1) ^{a,c,d}	27.9 (1.0) ^{a,b,d}
College graduate or higher	0.6 (0.2) ^{a-c}	5.4 (0.7) ^{b-d}	57.8 (1.1) ^{a,c,d}	36.2 (1.2) ^{a,b,d}
Pay Grade				
Enlisted	2.6 (0.5) ^{a-c}	9.4 (0.8) ^{b-d}	58.7 (0.8) ^{a,c,d}	29.3 (0.9) ^{a,b,d}
Officer	0.2 (0.1) ^{a-c}	4.3 (0.8) ^{b-d}	61.5 (2.7) ^{a,c,d}	34.0 (2.6) ^{a,b,d}
Total	2.3 (0.4) ^{a-c}	8.7 (0.7) ^{b-d}	59.1 (1.0) ^{a,c,d}	30.0 (1.0) ^{a,b,d}

Note: Table displays the percentage of Reserve military personnel by characteristic/group who reported their average hours of sleep per night in the past 12 months. The standard error of each estimate is presented in parentheses. Within each row, the percentages may not sum to 100 because of rounding. Pairwise significance tests were done between all possible average hours of sleep per night categories. Refer to Chapter 2 for descriptions of sociodemographic variables.

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the 3 to 4 hours category at the 95% confidence level.

^bEstimate is significantly different from the 5 to 6 hours category at the 95% confidence level.

^cEstimate is significantly different from the 7 or more hours category at the 95% confidence level.

^dEstimate is significantly different from the 2 hours or less category at the 95% confidence level.

+ Low precision

Source: 2006 Department of Defense Reserve Component Survey (hours of Sleep, Q132).

men. For those who had been deployed during the last 12 months, the increase in hours of sleep reported by Air National Guard and Air Force Reserve personnel may be related to aviation regulations requiring flight crews to rest.

Table 8.4 shows a relationship between age group and reported average number of hours of sleep per night. Fewer personnel aged 25 to 34 (27.9%) and 45 or older (27.9%) reported getting 7 or more hours of sleep per night than those aged 24 or younger (31.0%) and 35 to 44 (32.2%). Similarly, 4.4% of personnel aged 24 or younger reported getting 2 hours or less of sleep on average, while 0.3% of those aged 45 or older reported getting 2 hours or less of sleep per night on average. Reservists with at least a college education were more likely to report getting 7 or more hours of sleep per night (36.2%) compared with personnel with less than a high school education (26.9%) and some college (27.9%) education. Officers reported getting more sleep per night than enlisted personnel.

8.4 Poor Physical Health

In the 2006 survey, Reserve component personnel were asked how often poor physical health kept them from doing their usual activities, such as work or recreation, in the past 30 days. Table 8.5 displays the percentages of personnel who reported no limitations during the past month, those who had limited their usual activities less than once a week (1 to 3 days in the past month), and those who had limited their usual activities once a week or more (4 or more days in the past month).

In the total Reserve component, 82.0% of personnel aged 24 or younger had not limited their usual activities in the past month because of poor physical health; similar rates were seen across age groups. Among the individual components, Army National Guard, Army Reserve, and Navy Reserve personnel were more likely than Air National Guard, Air Force Reserve, and Marine Corps Reserve personnel to have been kept from their regular activities by poor physical health. For example, 3.2% of Air National Guard and Air Force Reserve personnel had been kept from their usual activities once a week or more in the past month, compared with 3.8%

of the Navy Reserve, 6.3% of the Army Reserve, and 7.3% of the Army National Guard. However, over 10% of Army National Guard, Army Reserve, and Marine Corps Reservists (10.7%, 11.7%, and 12.7%, respectively) were more likely to report poor physical health limiting usual activities at least once in the past month. Female personnel were more likely than male personnel to have limited their usual activities because of poor physical health.

Table 8.6 displays the percentages of total Reserve personnel who limited their usual activity because of poor physical health in the past month by selected health behaviors. Approximately 4% of personnel who regularly engaged in strenuous exercise had limited their usual activities once a week or more in the past month because of poor physical health, compared with 6% of personnel who had not regularly engaged in strenuous exercise. This finding illustrates the importance of exercise in health outcomes that may not be particularly apparent, such as limitation of activities as a result of poor physical health.

The associations between substance use and poor health limiting usual activities varied by substance. Heavy alcohol users were more likely to report poor physical health limiting their usual activities once a week or more within a month. Heavy (11.1%) and moderate (12.7%) drinkers were more likely to have had poor physical health limiting usual activities less than once a week compared with infrequent/light (8.5%) and moderate/heavy drinkers (9.6%). Illicit drug use and cigarette use were closely associated with physical health. For example, personnel who had used marijuana in the past year were more likely to have limited their usual activities because of poor physical health four or more days in the past month compared with personnel who had not used an illicit drug (18.4% vs. 4.4%). Similarly, personnel who had used any illicit drug except marijuana were more likely than nondrug users to have limited their usual activities because of poor physical health (18.0% vs. 4.4%). Heavy smokers were more likely to have limited their usual activities because of poor health once a week or more in the past month (10.8%) compared with those who had never smoked

Table 8.5

PREVALENCE OF LIMITED USUAL ACTIVITIES BECAUSE OF POOR PHYSICAL HEALTH, PAST MONTH, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS

Characteristic/Group	Poor Physical Health Limited Usual Activities		
	Never	Less Than Once a Week (1-3 Days) in Past 30 Days	Once a Week or More (4 or More Days) in Past 30 Days
Reserve Component			
Army National Guard	82.0 (1.4) ^{a,b}	10.7 (1.5) ^c	7.3 (1.0) ^c
Army Reserve	82.1 (1.1) ^{a,b}	11.7 (1.1) ^{b,c}	6.3 (0.8) ^{a,c}
Navy Reserve	88.0 (0.8) ^{a,b}	8.2 (0.7) ^{b,c}	3.8 (0.3) ^{a,c}
Air National Guard	88.4 (0.5) ^{a,b}	8.4 (0.5) ^{b,c}	3.2 (0.3) ^{a,c}
Air Force Reserve	89.1 (0.6) ^{a,b}	7.6 (0.5) ^{b,c}	3.2 (0.2) ^{a,c}
Marine Corps Reserve	83.9 (1.8) ^{a,b}	12.7 (1.4) ^{b,c}	3.4 (0.8) ^{a,c}
Male			
24 or younger	83.5 (1.7) ^{a,b}	10.3 (1.7) ^{b,c}	6.1 (0.8) ^{a,c}
25-34	86.7 (1.3) ^{a,b}	8.6 (1.0) ^{b,c}	4.6 (0.7) ^{a,c}
35-44	85.5 (1.1) ^{a,b}	9.1 (0.8) ^{b,c}	5.4 (0.7) ^{a,c}
45 or older	88.5 (1.7) ^{a,b}	7.3 (1.4) ^{b,c}	4.2 (0.9) ^{a,c}
Female			
24 or younger	75.9 (2.3) ^{a,b}	15.7 (1.7) ^c	8.4 (2.9) ^c
25-34	76.0 (1.7) ^{a,b}	14.5 (1.7) ^{b,c}	9.5 (1.2) ^{a,c}
35-44	78.3 (3.1) ^{a,b}	16.1 (3.4) ^{b,c}	5.7 (1.1) ^{a,c}
45 or older	76.1 (3.3) ^{a,b}	17.7 (3.1) ^{b,c}	6.3 (1.4) ^{a,c}
Total			
24 or younger	82.0 (1.4) ^{a,b}	11.4 (1.4) ^{b,c}	6.6 (1.0) ^{a,c}
25-34	84.7 (1.1) ^{a,b}	9.7 (0.9) ^{b,c}	5.6 (0.7) ^{a,c}
35-44	84.5 (1.1) ^{a,b}	10.0 (0.9) ^{b,c}	5.5 (0.6) ^{a,c}
45 or older	86.3 (1.8) ^{a,b}	9.1 (1.3) ^{b,c}	4.5 (0.9) ^{a,c}

Note: Table displays the percentage of Reserve military personnel by Reserve component, gender, and age group who reported they limited their usual activities because of poor physical health in the past month. The standard error of each estimate is presented in parentheses. Within each row, the percentages may not sum to 100 because of rounding. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible limitations of poor physical health (e.g., never vs. less than once a week, less than once a week vs. once a week or more).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the less than once a week category at the 95% confidence level.

^bEstimate is significantly different from the once a week or more category at the 95% confidence level.

^cEstimate is significantly different from the never category at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Poor Physical Health Past Month, Q83).

(5.0%), former smokers (4.6%), or current nonheavy smokers (5.9%).

Table 8.7 displays the percentages of total Reserve personnel who limited their usual activity because of poor physical health by perceived levels of stress and poor mental health. Personnel who perceived high levels of stress at work or in their family life were more likely to have limited activities because of poor physical health. Compared with personnel who perceived no stress at their civilian job, personnel who perceived “a lot” of stress at work were markedly more likely to have limited their usual activities once a week or more in the past month because of poor physical health (4.3% vs.

9.1%). Similarly, personnel who perceived “a lot” (15.0%) or “some” (12.2%) stress in their family life were more likely to have limited their usual activity because of poor physical health less than once a week during the past month than were personnel who reported no stress in their family life (5.9%).

Poor physical health was also associated with poor mental health. Among personnel who reported that poor *mental* health limited their usual activities once a week or more during the past month, 35% also reported limiting their usual activities once a week or more because of poor *physical* health. More than half (56.5%) of personnel who had limited their usual activities

Table 8.6

PREVALENCE OF LIMITED USUAL ACTIVITIES BECAUSE OF POOR PHYSICAL HEALTH, PAST MONTH, BY HEALTH BEHAVIORS

Health Behaviors	Poor Physical Health Limited Usual Activities		
	Never	Less Than Once a Week (1-3 Days)	Once a Week or More (4 or More Days)
Engaged in Strenuous Exercise 20 Minutes or More at Least 3 Days a Week			
Yes	88.2 (0.9) ^{a,b}	7.4 (0.7) ^{b,c}	4.4 (0.6) ^{a,c}
No	82.0 (1.1) ^{a,b}	11.8 (1.0) ^{b,c}	6.1 (0.6) ^{a,c}
Alcohol Drinking Level			
Abstainer	85.6 (1.4) ^{a,b}	9.6 (1.0) ^{b,c}	4.8 (0.7) ^{a,c}
Infrequent/light	86.3 (1.5) ^{a,b}	8.5 (1.2) ^{b,c}	5.2 (0.9) ^{a,c}
Moderate	83.4 (1.5) ^{a,b}	12.7 (1.2) ^{b,c}	3.9 (0.7) ^{a,c}
Moderate/heavy	84.8 (1.1) ^{a,b}	9.6 (1.1) ^{b,c}	5.6 (0.8) ^{a,c}
Heavy	81.0 (1.9) ^{a,b}	11.1 (1.5) ^c	7.9 (1.6) ^c
Past-Year Illicit Drug Use			
No drug use	86.0 (0.8) ^{a,b}	9.7 (0.7) ^{b,c}	4.4 (0.4) ^{a,c}
Marijuana	66.2 (2.7) ^{a,b}	15.4 (3.0) ^c	18.4 (4.0) ^c
Any illicit drug use except marijuana ^d	66.4 (2.8) ^{a,b}	15.6 (1.8) ^c	18.0 (3.4) ^c
Smoking Status			
Never smoked	85.7 (0.8) ^{a,b}	9.4 (0.7) ^{b,c}	5.0 (0.4) ^{a,c}
Former smoker	85.6 (1.3) ^{a,b}	9.8 (1.2) ^{b,c}	4.6 (0.8) ^{a,c}
Current smoker, not heavy	80.6 (1.5) ^{a,b}	13.5 (1.9) ^{b,c}	5.9 (1.2) ^{a,c}
Heavy smoker	77.9 (2.9) ^{a,b}	11.4 (2.1) ^c	10.8 (2.4) ^c

Note: Table displays the percentage of Reserve military personnel by health behavior who reported they limited their usual activities because of poor physical health in the past month. The standard error of each estimate is presented in parentheses. Within each row, the percentages may not sum to 100 because of rounding. Pairwise significance tests were done between all possible limitations of poor physical health (e.g., never vs. less than once a week, less than once a week vs. once a week or more).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the less than once a week category at the 95% confidence level.

^bEstimate is significantly different from the once a week or more category at the 95% confidence level.

^cEstimate is significantly different from the never category at the 95% confidence level.

^dEstimates are among those who reported nonmedical use of PCP/LSD/hallucinogens, cocaine, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

Source: 2006 Department of Defense Reserve Component Survey (Poor Physical Health Past Month, Q83).

because of poor mental health once a week or more in the past month had also limited their activities at least once because of poor physical health.

8.5 Risk Taking and Sensation Seeking

Risk-taking dispositions include a series of associated characteristics, such as impulsiveness, venturesomeness, and sensation seeking. *Impulsiveness* refers to acting impulsively without considering the possible risk of the action, and *venturesomeness* refers to engaging in risky behaviors even though the potential dangers of the action are known (Eysenck & Eysenck, 1978). *Sensation seeking* refers to the seeking of varied, novel, complex, and intense sensations and experiences (Zuckerman, 1994). Although these factors are correlated, they have been shown to be both conceptually and empirically

distinct (Cherpitel, 1999). In addition to substance use (Zuckerman & Kuhlman, 2000), these risk-taking dispositions have been linked with accidental injury (Cherpitel, 1993; Cherpitel, 1999), pathological gambling (Wolkowitz, Roy, & Doran, 1985), and risky sexual activity (Kahn, Kaplowitz, Goodman, & Emans, 2002).

8.5.1 Risk Taking

In the 2006 survey, Reserve personnel were asked about the degree to which a series of five questions about their tendency to take risks describes them (e.g., “I often act on the spur of the moment without stopping to think,” “I like to test myself every now and then by doing something a little chancy,” and “You might say I act impulsively”). Based on their responses to these

Table 8.7

PREVALENCE OF LIMITED USUAL ACTIVITIES BECAUSE OF POOR PHYSICAL HEALTH, BY PERCEIVED LEVEL OF STRESS AND POOR MENTAL HEALTH

Perceived Level of Stress	Poor Physical Health Limited Usual Activities		
	Never	Less Than Once a Week (1-3 Days)	Once a Week or More (4 or More Days)
Perceived Stress at Civilian Job			
A lot	78.5 (1.7) ^{a,b}	12.4 (1.3) ^c	9.1 (1.2) ^c
Some	81.3 (1.1) ^{a,b}	12.6 (1.1) ^{b,c}	6.1 (0.7) ^{a,c}
A little	87.4 (1.4) ^{a,b}	9.0 (1.2) ^{b,c}	3.7 (0.6) ^{a,c}
None at all	88.6 (0.8) ^{a,b}	7.1 (0.8) ^{b,c}	4.3 (0.7) ^{a,c}
Perceived Stress in Family Life			
A lot	76.1 (1.9) ^{a,b}	15.0 (1.9) ^{b,c}	8.9 (1.0) ^{a,c}
Some	81.8 (1.5) ^{a,b}	12.2 (1.1) ^{b,c}	6.0 (1.0) ^{a,c}
A little	86.8 (1.1) ^{a,b}	9.4 (0.9) ^{b,c}	3.8 (0.4) ^{a,c}
None at all	89.6 (0.7) ^{a,b}	5.9 (0.5) ^c	4.6 (0.6) ^c
Poor Mental Health Limited Usual Activities			
Never	88.2 (0.6) ^{a,b}	7.9 (0.5) ^{b,c}	4.0 (0.5) ^{a,c}
Less than once a week	58.6 (4.3) ^{a,b}	31.2 (4.3) ^{b,c}	10.2 (1.4) ^{a,c}
Once a week or more	43.5 (4.9) ^a	22.0 (3.1) ^{b,c}	34.5 (4.3) ^a

Note: Table displays the percentage of Reserve military personnel by perceived level of stress who reported they limited their usual activities because of poor physical health in the past month. The standard error of each estimate is presented in parentheses. Within each row, the percentages may not sum to 100 because of rounding. Pairwise significance tests were done between all possible limitations of poor physical health (e.g., never vs. less than once a week, less than once a week vs. once a week or more).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the less than once a week category at the 95% confidence level.

^bEstimate is significantly different from the once a week or more category at the 95% confidence level.

^cEstimate is significantly different from the never category at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Perceived Stress at Civilian Job, Q88; Perceived Stress in Family Life, Q90; Poor Mental Health Limited Usual Activities, Q87; Poor Physical Health Limited Usual Activities, Q83).

questions, personnel were classified as either low risk takers (19.9% of personnel), moderate risk takers (53.7% of personnel), or high risk takers (26.5% of personnel). The percentages of personnel characterized by different risk-taking levels who displayed selected health behaviors are shown in Table 8.8.

Reserve component personnel who were high risk takers were significantly more likely to engage in some forms of substance use than those who were low or moderate risk takers. Regarding alcohol use, 19.1% of high risk takers were abstainers, compared with 41.8% of low risk takers. In addition, nearly one-third of high risk takers reported heavy drinking, compared with 7.8% of low risk takers and 13.3% of moderate risk takers. Moderate risk takers (20.7%) were significantly more likely to report moderate drinking behavior than those who were low risk takers (16.5%) or high risk takers (14.8%).

Personnel who were classified as high risk takers were more likely to engage in illicit drug use and cigarette

smoking during the past year. An estimated 13.4% reported marijuana use in the past month, compared with 4.1% of moderate risk takers and 1.7% of low risk takers. Similarly, high risk takers were more likely to have used other drugs during the past year: 16.7% of high risk takers, 7.1% of moderate risk takers, and 5.5% of low risk takers reported using an illicit drug other than marijuana in the past 12 months. More than one-third (35.0%) of high risk takers reported that they were current smokers, compared with 16.0% of low risk takers.

Table 8.8 also presents personnel at different risk-taking levels and selected risk behaviors such as suicidal ideation, hospitalizations for unintended injuries, and not using seat belts. Among high risk takers, more than 1 in 10 (11.2%) had seriously considered suicide in the past year, and 9.8% reported seldom or never using seat belts, while 3.3% of low risk takers had considered suicide and 3.6% seldom or never used seat belts. High risk takers were significantly more likely to report seldom or never

Table 8.8

PREVALENCE OF SELECTED HEALTH BEHAVIORS, PAST 12 MONTHS, BY RISK TAKING AND SENSATION SEEKING DISPOSITION^a

Behavior	Risk-Taking/Impulsivity			Sensation Seeking		
	Low	Moderate	High	Low	Moderate	High
Alcohol Drinking Level						
Abstainer	41.8 (3.0) ^{b,c}	27.4 (2.0) ^{c,d}	19.1 (2.1) ^{b,d}	48.1 (4.4) ^{e,f}	31.0 (2.3) ^{f,g}	22.6 (2.0) ^{e,g}
Infrequent/light	18.3 (1.8) ^c	17.2 (1.2) ^c	9.2 (1.0) ^{b,d}	14.0 (1.8) ^e	20.4 (2.1) ^{f,g}	12.7 (0.8) ^e
Moderate	16.5 (1.5) ^b	20.7 (0.9) ^{c,d}	14.8 (1.4) ^b	12.3 (1.4) ^{e,f}	18.8 (1.5) ^g	19.3 (1.0) ^g
Moderate/heavy	15.8 (1.3) ^{b,c}	21.4 (1.4) ^{c,d}	26.1 (1.2) ^{b,d}	16.1 (2.3) ^f	18.9 (1.1) ^f	24.0 (1.0) ^{e,g}
Heavy	7.8 (1.1) ^{b,c}	13.3 (0.9) ^{c,d}	30.8 (1.5) ^{b,d}	9.5 (1.8) ^f	10.8 (1.1) ^f	21.5 (1.1) ^{e,g}
Past-Year Illicit Drug Use						
No drug use	94.1 (0.7) ^{b,c}	90.5 (0.7) ^{c,d}	78.5 (1.9) ^{b,d}	94.3 (1.0) ^{e,f}	91.6 (0.8) ^{f,g}	84.9 (1.4) ^{e,g}
Marijuana	1.7 (0.5) ^{b,c}	4.1 (0.4) ^{c,d}	13.4 (1.8) ^{b,d}	2.2 (0.8) ^f	2.6 (0.7) ^f	8.7 (1.1) ^{e,g}
Any illicit drug use except marijuana	5.5 (0.8) ^c	7.1 (0.7) ^c	16.7 (1.4) ^{b,d}	5.4 (1.0) ^f	7.1 (0.6) ^f	11.3 (1.1) ^{e,g}
Smoking Status						
Nonsmoker	70.2 (2.2) ^{b,c}	62.9 (1.4) ^{c,d}	52.5 (2.6) ^{b,d}	70.1 (3.9) ^f	65.7 (1.3) ^f	57.9 (1.6) ^{e,g}
Former smoker	13.8 (1.2)	15.3 (1.0) ^c	12.5 (1.0) ^b	12.2 (2.0)	16.0 (1.2)	13.7 (0.6)
Current smoker	16.0 (1.9) ^{b,c}	21.8 (1.2) ^{c,d}	35.0 (2.4) ^{b,d}	17.7 (2.6) ^f	18.3 (1.0) ^f	28.4 (1.6) ^{e,g}
Risk Behaviors						
Drinking and driving	4.2 (0.6) ^{b,c}	12.5 (1.0) ^{c,d}	30.2 (1.6) ^{b,d}	3.6 (0.7) ^{e,f}	10.5 (0.8) ^{f,g}	20.4 (1.3) ^{e,g}
Seriously considered suicide in past year	3.3 (0.8) ^c	3.5 (0.4) ^c	11.2 (0.7) ^{b,d}	4.9 (0.8)	3.7 (0.4) ^f	6.4 (0.5) ^e
Hurt in on-the-job accident 1+ days	5.6 (0.9) ^c	6.5 (0.6) ^c	8.7 (0.9) ^{b,d}	6.8 (1.3)	5.4 (0.6) ^f	7.7 (0.6) ^e
Hospitalized for unintentional injury	2.5 (0.7) ^c	1.5 (0.3) ^c	5.2 (0.8) ^{b,d}	3.0 (1.0)	2.0 (0.3) ^f	3.0 (0.3) ^e
Seldom or never used seat belts	3.6 (1.7) ^c	4.1 (0.5) ^c	9.8 (0.9) ^{b,d}	7.1 (2.7)	3.3 (0.5) ^f	6.4 (0.6) ^e
Seldom or never used motorcycle helmet	2.1 (0.5) ^{b,c}	4.5 (0.6) ^{c,d}	11.2 (1.1) ^{b,d}	2.0 (0.5) ^{e,f}	3.8 (0.7) ^{f,g}	7.6 (0.7) ^{e,g}
Seldom or never used hearing protection—firing a weapon	11.3 (1.5) ^b	8.0 (0.6) ^{c,d}	13.8 (1.9) ^b	15.6 (2.0) ^{e,f}	7.7 (0.9) ^{f,g}	10.5 (1.0) ^{e,g}
Seldom or never used hearing protection—other	22.3 (1.9) ^c	24.4 (1.6) ^c	34.1 (2.1) ^{b,d}	26.8 (2.9)	23.3 (1.6) ^f	28.2 (1.6) ^e
Total^h	19.9 (0.9) ^{b,c}	53.7 (0.8) ^{c,d}	26.5 (1.4) ^{b,d}	10.8 (0.7) ^{e,f}	31.5 (1.0) ^{f,g}	57.7 (1.1) ^{e,g}

Note: Table displays the percentage of Reserve military personnel by risk-taking disposition (risk-taking/impulsivity and sensation seeking) who reported the behavior indicated in the rows of this table. The standard error of each estimate is presented in parentheses.

^aRisk-taking disposition is based on an item and scoring algorithm from the National Alcohol Research Center's 1995 National Alcohol Survey. Respondents were categorized as low (not at all), moderate (a little), or high (some, quite a lot) based on four summed scores on two scales scored 1 to 4 (Cherpitel, 1999).

^bEstimate is significantly different from estimate for risk-taking/impulsivity moderate at the 95% confidence level.

^cEstimate is significantly different from estimate for risk-taking/impulsivity high at the 95% confidence level.

^dEstimate is significantly different from estimate for risk-taking/impulsivity low at the 95% confidence level.

(continued)

Table 8.8**PREVALENCE OF SELECTED HEALTH BEHAVIORS, PAST 12 MONTHS, BY RISK TAKING AND SENSATION SEEKING DISPOSITION^a (CONTINUED)**

^cEstimate is significantly different from estimate for sensation seeking moderate at the 95% confidence level.

^fEstimate is significantly different from estimate for sensation seeking high at the 95% confidence level.

^gEstimate is significantly different from estimate for sensation seeking low at the 95% confidence level.

^hThe total row presents the percentage of Reserve military personnel who fit into each level of risk taking/impulsivity and sensation seeking.

Source: 2006 Department of Defense Reserve Component Survey (Risk Taking Disposition, Q18; Drinking and Driving, Q36; Suicide Consideration Within Past Year, Q101; Hurt in on the Job Accident, Q86; Overnight Hospital Stays, Q73; Seat Belt Use, Q74; Motorcycle Helmet Use, Q76; Hearing Protection Use While Firing a Weapon, Q79; Hearing Protection Use Other Than While Firing a Weapon, Q80).

using a helmet when riding a motorcycle. Although risk-taking behavior may be an advantage in some military occupations, this advantage may be offset by risks that can negatively affect readiness in terms of potential injuries or loss of life.

As mentioned previously, military service-related hearing loss is becoming a significant concern to the U.S. Department of Veterans Affairs. Table 8.8 also presents information regarding respondents' risk-taking levels and use of hearing protection. Among those characterized as high risk takers, nearly 14% reported seldom or never using hearing protection when firing a weapon. Although this is significantly higher than moderate risk takers (8.0%), it is similar to the estimate seen among low risk takers (11.3%). Similarly, high risk takers were more likely to report seldom or never using hearing protection when undertaking activities other than firing a weapon (34.1% compared with 22.3% among low risk takers).

8.5.2 Sensation Seeking

In addition to items regarding risk taking, the 2006 survey included questions regarding respondents' sensation-seeking behavior (e.g., "I'm always up for a new experience," "I like to try new things just for the excitement," and "I like to experience new and different sensations"). Overall, an estimated 10.8% of personnel were classified as low sensation seekers, 31.5% were classified as moderate sensation seekers, and 57.7% were classified as high sensation seekers. This distribution differs from that regarding risk taking in that more than half of Reserve personnel were classified as high sensation seekers, whereas more than half of personnel were classified as moderate risk takers.

Sensation seeking was positively associated with substance use. Nearly half of all high sensation seekers in the Reserve component (45.5%) reported either moderate/heavy or heavy drinking levels, compared with 25.6% of low sensation seekers. A similar pattern was seen regarding past-year illicit drug use: 8.7% of high sensation seekers and 2.2% of low sensation seekers reported using marijuana in the past year; an additional 11.3% of high sensation seekers and 5.4% of low

sensation seekers reported use of other illicit drugs. Personnel high on sensation-seeking characteristics were also more likely to be current cigarette smokers (28.4% compared with 17.7%, respectively).

Some additional risk behaviors reported in Table 8.8 differed by sensation-seeking level, while others did not. For instance, high sensation seekers were more likely to report suicidal ideation in the past year (6.4%) than moderate sensation seekers (3.7%) but not low sensation seekers (4.9%). Similarly, workplace accidents, hospitalization for unintended injuries, seldom or never using seatbelts, and seldom or never using hearing protection during activities other than firing a weapon all were higher among high sensation seekers than moderate (but not low) sensation seekers.

8.6 Oral Health

Oral health and its relation to military readiness have become increasingly important in recent years. Respondents were asked a set of four questions pertaining to oral health issues. Table 8.9 presents survey findings on the recency of dental check-ups, dental work before deployment, tooth loss since joining the military, and reasons for the lack of dental check-ups. As shown, only 57.5% of all Reserve personnel had a dental check-up in the 12 months before the survey, with some notable differences among the components. The percentage of personnel receiving a dental check-up in the previous year ranged from a high of 78.1% in the Air National Guard to a low of 45.5% in the Army National Guard. Of all Reserve personnel, 28.5% were required to get dental work done in the past 12 months before they could be deployed at sea or in the field. The highest percentages were seen in the Air National Guard (32.0%) and the Army Reserve (29.2%); the Air Force and Navy Reserve had the lowest rates of needing predeployment dental work (22.2% and 23.5%).

Over one-quarter (28.1%) of all personnel had lost a permanent tooth since joining the military because of one or more of the following problems: gum disease, cavities, mouth injury, tooth crowding or braces, corrective jaw surgery, or some other reason. Cavities were more often the cause of oral problems (11.4%)

Table 8.9 SELECTED ORAL HEALTH ISSUES, BY RESERVE COMPONENT

Oral Health Measure	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Had a Dental Check-Up, Past 12 Months	45.5 (1.9) ^{a,e}	53.5 (2.1) ^{b,d,f}	75.7 (1.8) ^{a,e,f}	78.1 (1.8) ^{a,e,f}	77.9 (1.2) ^{a,e,f}	57.6 (2.9) ^{b,d,f}	57.5 (1.8)
Required to Get Dental Work Before Deployment, Past 12 Months^g	+ (+)	29.2 (1.5) ^{b,d}	23.5 (1.3) ^{a,c}	32.0 (3.0) ^{b,d}	22.2 (1.6) ^{a,c}	+ (+)	28.5 (2.2)
Tooth Loss Since Joining Military							
Due to gum disease	3.4 (0.6) ^{b,d}	2.8 (0.3) ^{b,d}	1.8 (0.3) ^{a,f}	2.3 (0.3)	2.0 (0.2) ^{a,f}	1.5 (1.0)	2.8 (0.3)
Due to dental cavities	12.7 (1.4) ^{b,c,e}	13.2 (1.2) ^{b,e}	7.8 (0.5) ^{a,d,f}	9.4 (0.7) ^{a,e,f}	9.9 (0.7) ^{a,b,e}	6.2 (1.0) ^{a,c,d,f}	11.4 (0.7)
Due to injury	4.7 (0.5) ^{b,e}	3.8 (0.7) ^{c,e}	2.4 (0.3) ^{e,f}	2.2 (0.3) ^{a,f}	2.6 (0.2) ^{e,f}	1.6 (0.2) ^{a,b,d,f}	3.7 (0.3)
Due to tooth crowding or braces	3.6 (0.7)	3.5 (0.5)	3.9 (0.5)	3.1 (0.1) ^d	3.8 (0.3) ^c	3.2 (1.0)	3.6 (0.3)
Due to corrective jaw surgery	1.0 (0.3) ^{c,e}	0.5 (0.2)	0.8 (0.2) ^e	0.2 (0.2) ^f	0.5 (0.1)	0.3 (0.1) ^{b,f}	0.7 (0.2)
Due to some other reason	6.4 (1.0) ^e	6.5 (0.9) ^{c,e}	6.1 (0.5) ^{c,e}	4.5 (0.2) ^{a,b,d,e}	5.9 (0.4) ^{c,e}	2.6 (0.3) ^{b,d,f}	5.9 (0.5)
Reasons for Not Having Dental Check-up^h							
Couldn't get time off from work	8.2 (0.9)	6.6 (1.4) ^{b,d}	12.9 (2.4) ^a	10.0 (1.2)	9.9 (0.8) ^a	+ (+)	8.2 (0.6)
Didn't have dental insurance	44.3 (3.4)	42.2 (2.2)	39.4 (2.8)	44.7 (1.8)	44.4 (2.0)	+ (+)	43.5 (1.9)
Do not have transportation	1.3 (0.5)	1.2 (0.3) ^c	0.9 (0.3)	0.3 (0.3) ^{a,d}	1.1 (0.3) ^c	+ (+)	1.2 (0.3)
Didn't think I needed any treatment	11.4 (1.4)	10.3 (1.2)	9.1 (1.6)	10.9 (1.1)	11.1 (1.3)	+ (+)	11.2 (0.8)
Don't like going to the dentist at this installation	0.7 (0.3) ^a	2.0 (0.5) ^{d,f}	1.0 (0.4)	1.8 (0.8)	0.9 (0.2) ^a	+ (+)	1.1 (0.2)
Don't like going to any dentists	10.6 (1.2)	12.5 (3.4)	10.1 (0.7)	10.8 (1.8)	10.5 (1.1)	+ (+)	10.9 (1.1)
Other reasons	23.6 (2.0)	25.2 (2.3)	26.5 (1.2) ^{c,d}	21.6 (0.9) ^b	22.1 (1.8) ^b	+ (+)	23.9 (1.2)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported the oral health measure indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Army Reserve at the 95% confidence level.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army National Guard at the 95% confidence level.

^gFor these estimates, only those who were last deployed in the past 12 months were considered (Total Reserve Component N = 6,974).

^hFor these estimates, only those who reported they did not have a dental check-up in the past 12 months were considered (Total Reserve Component N = 4,460).

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Dental Check-Up Past 12 Months, Q81; Required Dental Work Prior to Deployment, Q149; Tooth Loss, Q82; Reasons for Not Having Checkup, Q81).

compared with gum disease (2.8%), mouth injury (3.7%), tooth crowding or braces (3.6%), corrective jaw surgery (0.7%), or some other reason (5.9%). A somewhat higher proportion of Army National Guard personnel (12.7%) and Army Reserve personnel (13.2%) had suffered a tooth loss because of dental cavities.

Reasons for *not* having a dental check-up in the 12 months before the survey were plentiful. Table 8.9 shows that, of those 42.5% of personnel who did not have a dental check-up in the past 12 months, the most commonly reported reason was that they did not have dental insurance (43.5%). This response was fairly uniform across components. An estimated 24.0% failed to have a check-up because of some other reason. Of note, approximately 11.0% of respondents did not think they needed treatment, and 10.9% cited “don’t like going to any dentists” as reasons for not having a check-up.

These rates are troubling given the importance oral health has on overall health (U.S. DHHS, 2000). Military readiness can also be affected by poor oral health. Tooth problems can cause impaired duty performance, work loss, and restricted activity among military personnel (U.S. ACHPPM, 2006). Many of the respondents cited not needing any treatment (11.2%) as a reason for not having a dental check-up. However, among Army personnel, it is estimated that only about 23% of Army personnel do not have dental treatment needs (CDC, 2005).

Preventive oral health care should be stressed in this population. Because dental insurance is associated with regular check-ups, Reserve personnel should be encouraged to buy dental insurance. Reserve personnel should be made more aware of the benefits of regular annual check-ups and of recent advances in modern dentistry, including better pain management during dental exams and procedures.

8.7 Maternal and Infant Health

8.7.1 Pregnancy

Having a baby represents a significant life change; thus, it can have a direct impact on readiness among Guard

and Reserve personnel. Female participants were asked a series of questions geared toward characterizing their recent (past 5 years) pregnancy history, use of prenatal care, alcohol and tobacco use during pregnancy, and other maternal/infant health-related topics. As shown in Table 8.10, 12.5% of Guard and Reserve women reported that they had been pregnant within the past year or they were currently pregnant, and additional 2.0% reported that they may have been pregnant at the time of the survey but were unsure. Across all the components, 28.3% of Guard and Reserve women had been pregnant within the past 5 years, although some of these pregnancies may have occurred prior to military service. The percentage of women who were currently pregnant was highest in the Marine Corps Reserve (15.2%), nearly three times as high as the next highest component (Army Reserve, 5.9%). The Army National Guard had the highest percentage of women who had never been pregnant (52.9%). These differences in pregnancy by component may be related to differences in age and other sociodemographic characteristics among women across the components.

Regular prenatal care and the avoidance of substance use during pregnancy are important in ensuring maternal and infant health (American College of Obstetricians and Gynecologists [ACOG], 1994). Research studies consistently show that adequate prenatal care is associated with decreased infant mortality rates and improved birth outcomes (Stringer, 1998). For example, infants whose mothers received adequate prenatal care may be delivered later in the pregnancy, have higher birth weights, and have shorter hospital stays following birth (Amini, Catalano, & Mann, 1996). Similarly, babies of mothers who do not receive prenatal care while pregnant are three times more likely to have a low birth weight, and five times more likely to die than those born to mothers who get adequate prenatal care (NWHIC, n.d.). Use of substances during pregnancy, including tobacco and alcohol, has been linked to a variety of negative birth and developmental outcomes, such as prematurity, low birth weight, and congenital malformations (McGann & Spangler, 1997; National Institute on Drug Abuse [NIDA], 1995; Visscher, Bray, & Kroutil, 1999). Understanding factors that promote health among pregnant Guard and Reserve women also

Table 8.10 PREGNANCY HISTORY AMONG RESERVE COMPONENT WOMEN

Pregnancy History	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Never been pregnant	52.9 (7.5) ^{a,b}	37.0 (1.7) ^{b,c}	26.7 (1.1) ^{a,c-e}	41.5 (3.2) ^b	39.6 (2.2) ^b	41.2 (7.8)	41.7 (2.8)
May currently be pregnant ^f	1.8 (0.8)	2.7 (1.2)	1.1 (0.7)	2.7 (1.4)	0.7 (0.4)	6.0 (2.8)	2.0 (0.5)
Currently pregnant ^g	3.9 (1.0)	5.9 (2.0)	3.9 (0.9)	1.9 (1.5) ^h	2.9 (0.9) ^h	15.2 (6.1) ^{d,e}	4.4 (0.7)
Past year but not now	10.3 (3.3)	8.1 (1.1) ^{b,e}	5.4 (0.8) ^a	8.4 (2.4)	5.2 (0.7) ^a	+ (+)	8.1 (1.1)
1 to 2 years ago	4.7 (1.9)	6.1 (1.1)	5.2 (0.9)	6.6 (1.7)	4.5 (0.5)	5.8 (2.6)	5.4 (0.8)
2 to 5 years ago	9.0 (2.0)	12.6 (1.2) ^{e,h}	11.5 (1.5) ^h	9.5 (2.0)	8.6 (1.0) ^a	4.8 (3.0) ^{a,b}	10.4 (0.8)
More than 5 years ago ⁱ	17.4 (4.7) ^{a,b,d,e}	27.6 (2.2) ^{b,c,e}	46.1 (1.7) ^{a,c-e}	29.4 (2.6) ^{b,c,e}	38.5 (1.8) ^{a-d}	+ (+)	28.0 (2.0)

Note: Table displays the percentage of women in the military by Reserve component who indicated the pregnancy history response noted in the rows of the table. The standard error of each estimate is presented in parentheses. Estimates within each column may not sum to 100 because of rounding. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Army Reserve at the 95% confidence level.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Army National Guard at the 95% confidence level.

^dEstimate is significantly different from the Air National Guard at the 95% confidence level.

^eEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^fEstimate based on women who indicated that they may have been pregnant at the time of the survey but did not know for certain.

^gIncludes women who were pregnant at the time of the survey.

^hEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

ⁱIncludes women who were pregnant but do not remember exactly when.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Pregnancy History, Q166).

is of interest because pregnancy and the health of female personnel affect military readiness.

8.7.2 Use of Prenatal Care Services

According to the March of Dimes, women who receive regular prenatal care during pregnancy have healthier babies and are less likely to experience other serious pregnancy-related problems (March of Dimes, 2007). As shown in Table 8.11, nearly 88% of women received prenatal care during their first trimester. For all sociodemographic variables, women were more likely to have received prenatal care during their first trimester than during their second or third trimesters. Rates of receiving prenatal care during the first trimester were similar across race/ethnicity: both white non-Hispanic and African American non-Hispanic women reported approximately 88% receipt of first trimester prenatal care. Education appeared to play a role in prenatal care receipt: more women with some college or with a college degree or more reported receiving care during the first trimester than women with a high school education or less (though this relationship was not significant for women who were college graduates, due to a large standard error). Age did not appear to play a role in prenatal care during the first trimester, nor did marital status. More officers (92%) reported receiving first trimester care than enlisted personnel (86.5%).

8.7.3 Alcohol and Cigarette Use During Pregnancy

One of the *Healthy People 2010* objectives is to increase abstinence from alcohol use during pregnancy to 94% or more of women who were pregnant during the past 5 years. Data collected in 2006 among Guard and Reserve women inform us regarding progress toward this goal. As shown in Table 8.12, 17.2% of all Guard and Reserve women who were pregnant in the past 5 years reported using alcohol at least once during their most recent pregnancy (82.8% abstained). This percentage of abstinence is significantly less than that reported in the 2005 active-duty survey (94.9%). As the data indicate, the objective of 94% from *Healthy People 2010* was not reached by women in the Guard and Reserve in 2006.

To examine the rates of alcohol use during pregnancy further, we compared frequency of use among Guard and Reserve women by component, race/ethnicity, education, age group, marital status, pay grade, and receipt of prenatal care (table not shown). While no significant differences were noted among women from different race/ethnicity, education, marital status, pay grade (enlisted vs. officer), or prenatal care groups, some differences of note appeared when we looked at Reserve component and age group comparisons. (It must be noted here that many of the estimates resulting from these comparisons were suppressed because of small participant numbers, low statistical precision, or high nonresponse.)

For these comparisons, we looked at frequency of use according to the following categorizations: daily/almost daily, weekly/several times a month, once a month or less, at least once, and never. Some clear relationships were revealed across components. For instance, Army Reserve women were nearly twice as likely to have indicated use of alcohol at least once during their last pregnancy (20.6%) than Navy Reserve women (10.8%) and Air Force Reserve women (11.9%); estimates for Army National Guard and Marine Corps Reserve women were suppressed (as well as most estimates for Air National Guard women). Similarly, Army Reserve women were more likely to indicate alcohol use weekly or several times a month than Air National Guard and Air Force Reserve women (7.4%, 0.6%, and 0.4%, respectively). Fewer Navy Reserve women (6.7%) reported using alcohol once a month or less during their last pregnancy than Air Force Reserve women (11.1%). Age also showed a relationship with prenatal maternal use of alcohol: women aged 35 to 44 were more likely to have indicated using alcohol at least once (30.0%) during their last pregnancy than women aged 25 to 34 (16.5%).

These rates appear to be surprising when viewed in comparison to the rates of alcohol and cigarette use during pregnancy among active-duty women in 2006 (Bray et al., 2006). The overall rate of alcohol use (at least once) by active-duty women during their most recent pregnancy in the past 5 years was 5.1%; as reported previously, the rate among Guard and Reserve

Table 8.11**RECEIPT OF PRENATAL CARE DURING MOST RECENT PREGNANCY RESULTING IN A LIVE BIRTH, PAST 5 YEARS, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS**

Sociodemographic Characteristic of Women Who Were Pregnant in Past 5 Years	Trimester of First Prenatal Care Visit ^a	
	First	Second or Third
Reserve Component		
Army National Guard	81.0 (6.0) ^b	19.0 (6.0)
Army Reserve	88.9 (3.1) ^b	11.1 (3.1)
Navy Reserve	89.9 (2.0) ^b	10.1 (2.0)
Air National Guard	+ (+)	+ (+)
Air Force Reserve	90.6 (2.2) ^b	9.4 (2.2)
Marine Corps Reserve	+ (+)	+ (+)
Race/Ethnicity		
White, non-Hispanic	87.6 (2.8) ^b	12.4 (2.8)
African American, non-Hispanic	87.8 (2.8) ^b	12.2 (2.8)
Hispanic	+ (+)	+ (+)
Other	85.6 (6.2) ^b	14.4 (6.2)
Education		
High school or less	78.0 (6.2) ^b	22.0 (6.2)
Some college	89.7 (2.2) ^b	10.3 (2.2)
College graduate or higher	89.9 (3.4) ^b	10.1 (3.4)
Age		
24 or younger	84.7 (3.4) ^b	15.3 (3.4)
25-34	90.5 (2.8) ^b	9.5 (2.8)
35-44	84.8 (2.9) ^b	15.2 (2.9)
45 or older	+ (+)	+ (+)
Marital Status		
Not married	86.4 (3.3) ^b	13.6 (3.3)
Married	90.2 (2.1) ^b	9.8 (2.1)
Pay Grade		
Enlisted	86.5 (2.5) ^b	13.5 (2.5)
Officer	92.0 (1.9) ^b	8.0 (1.9)
Total	87.2 (2.2) ^b	12.8 (2.2)

Note: Table displays the percentage of Reserve military women by sociodemographic characteristic who indicated their first prenatal care visit occurred in the first or second/third trimester. Only women who were pregnant in the past 5 years (Total Reserve Component N = 679) who had a live birth and who had at least one prenatal care visit for the last pregnancy were considered in these estimates. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Refer to Chapter 2 for descriptions of sociodemographic variables.

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aFirst trimester = months 1 to 3 of pregnancy; second trimester = months 4 to 6 of pregnancy; third trimester = month 7 or later.

^bEstimate is significantly different from the second or third trimester estimate at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Receipt of Prenatal Care During Most Recent Pregnancy, Past 5 Years, Q166 and Q167).

women was 17.2%. Because Guard and Reserve women are members of the U.S. general population (and not the active-duty population), we identified rates of alcohol use during pregnancy among pregnant women in the general population. According to the Substance Abuse and Mental Health Services Administration (SAMHSA Office of Applied Studies, 2007), an estimated 12.1% of women who were pregnant in 2004 or 2005 indicated

using alcohol at least once during their pregnancy. In light of the difference in time period (the current study looked at use during pregnancy in the past 5 years), the finding of 17.2% among Guard and Reserve women is reasonable. Rates as high as 58.7% in Australia (Colvin et al., 2007) and 23% in Norway (Alvik et al., 2006) have been reported.

Table 8.12

ALCOHOL AND CIGARETTE USE DURING MOST RECENT PREGNANCY RESULTING IN A LIVE BIRTH, PAST 5 YEARS, BY SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristics of Women Who Were Pregnant in Past 5 Years	Substance	
	Alcohol	Cigarettes
Reserve Component		
Army National Guard	21.4 (5.5)	24.2 (4.4)
Army Reserve	18.0 (3.2) ^a	12.0 (1.9)
Navy Reserve	10.1 (1.8)	10.7 (2.5)
Air National Guard	+ (+)	+ (+)
Air Force Reserve	10.2 (1.2)	13.5 (2.5)
Marine Corps Reserve	+ (+)	+ (+)
Race/Ethnicity		
White, non-Hispanic	16.1 (3.0)	18.0 (2.5)
African American, non-Hispanic	14.8 (3.7) ^a	8.4 (2.8)
Hispanic	+ (+)	+ (+)
Other	+ (+)	+ (+)
Education		
High school or less	+ (+)	33.5 (7.3)
Some college	15.2 (3.1)	14.6 (3.4)
College graduate or higher	17.8 (4.9) ^a	1.1 (0.6)
Age		
24 or younger	16.0 (4.0)	16.5 (2.9)
25-34	15.0 (3.0)	16.0 (2.5)
35-44	28.9 (5.9)	+ (+)
45 or older	+ (+)	+ (+)
Marital Status		
Not married	19.8 (3.3)	19.5 (2.7)
Married	11.4 (2.9)	11.0 (1.8)
Pay Grade		
Enlisted	16.5 (2.4)	17.3 (1.9)
Officer	+ (+)	+ (+)
Prenatal Care^b		
Any in first or second trimester	17.9 (2.9)	18.0 (2.1)
Third trimester or none	+ (+)	+ (+)
Total	17.2 (2.3)	15.6 (1.6)

Note: Table displays the percentage of women in the Reserve component by sociodemographic characteristic who indicated they used alcohol or cigarettes during their pregnancy. Only women who were pregnant in the past 5 years (Total Reserve Component N = 808) were considered in these estimates. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Refer to Chapter 2 for descriptions of sociodemographic variables.

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the cigarette use estimate at the 95% confidence level.

^bFirst trimester = months 1 to 3 of pregnancy; second trimester = months 4 to 6 of pregnancy; third trimester = month 7 or later.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Use During Most Recent Pregnancy, Past 5 Years, Q169; Cigarette Use During Most Recent Pregnancy, Past 5 Years, Q168).

A related *Healthy People 2010* objective states that the proportion of women who do not smoke during pregnancy should be greater than or equal to 99%. As shown in Table 8.12, Reserve component women did not achieve this objective: 15.6% of Guard and Reserve women who were pregnant during the past 5 years

reported smoking cigarettes during their last pregnancy; 84.4% abstained from smoking. Air National Guard women reported less cigarette use during pregnancy (0.7%) than their counterparts in the Army Reserve (4.6%) and Air Force Reserve (4.9%; data not shown). No differences were noted between women by

race/ethnicity, education, age, marital status, pay grade, or receipt of prenatal care (data not shown). Although no subgroups met the very strict 99% objective, non-Hispanic African American women and college graduates obtained a 90% or better level of not smoking at all during pregnancy.

Greater preventive efforts may be geared toward active-duty military women than women in the Reserve component and in the general population, thus resulting in lower levels of alcohol and cigarette use during pregnancy among active-duty women. If this is indeed the case, the active-duty military's efforts are clearly proving to be effective.

8.8 Gambling

8.8.1 Background and Significance

In recent years, there has been increasing interest and concern about pathological gambling in the military. Problems related to excessive gambling can affect the financial and psychological well-being of Guard and Reserve personnel and, thus, in turn, can have a negative effect on military readiness.

Several conceptualizations of the nature of pathological gambling behavior and its appropriate treatment are available, with excessive gambling often regarded as an impulse control disorder or addiction similar to drug dependence and alcoholism, but without the use of a psychoactive substance. Gamblers Anonymous (GA), for example, is a 12-step self-help program for pathological gamblers patterned after Alcoholics Anonymous (AA). The Brecksville Unit at the Cleveland Veterans Administration (VA) Hospital, the first inpatient treatment program for pathological gamblers, is a 30-day structured program whose treatment goals closely parallel those of many drug and alcohol treatment programs: complete abstinence from gambling, reduction of the urge to gamble, development of constructive substitutes for gambling, and restoration of social functioning (Custer, 1982; Lesieur, 1990; Russo, Taber, McCormick, & Ramirez, 1984). Additional treatments have included medications (Black et al., 2007; Dannon et al., 2006; Lowengrub et al.,

2006), cognitive-behavioral therapy (Dannon et al., 2006; Dowling, Smith, & Thomas, 2006; Petry et al., 2006), self-help workbooks (Hodgins et al., 2007), and others.

Pathological gambling appears as a diagnostic category in the fourth edition of the American Psychiatric Association's (APA's) *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)* (APA, 2000). At least five of the following diagnostic criteria must be met to identify the pathological gambler (without the behavior being attributed to a manic episode):

1. preoccupation with gambling
2. a need to gamble with increasing amounts of money to achieve the desired level of excitement
3. repeated, unsuccessful attempts to control, cut back on, or stop gambling
4. restlessness or irritability when unable to gamble
5. gambling as a way of escaping from problems
6. gambling losses, often followed by attempts to return another day to get even ("chasing" one's money)
7. lying to family members or others about the extent of one's gambling
8. commission of illegal acts, such as forgery, fraud, or theft, to finance gambling
9. jeopardizing or losing relationship, job, educational, or career opportunities because of gambling
10. relying on others to provide money to relieve a desperate financial situation caused by gambling

A number of studies have been conducted on the prevalence of pathological gambling in the general U.S. population. A recent study by Stucki and Rihs-Middel (2007) indicated the prevalence of current problem or pathological gambling to be between 3.0% and 3.3%. A 1994 survey study published in the *American Journal of Public Health* reported that the point prevalence of pathological gambling in the general population has been estimated to be as high as 1.4% (Volberg, 1994). A national study in 1975 by the Institute for Social Research at the University of Michigan for the Commission on the Review of National Policy Toward Gambling found that 61% of adults had placed some

kind of bet involving money in 1974, and 48% had placed a bet with someone other than a friend (Kallick, Suits, Dielman, & Hybels, 1979). The survey estimated the prevalence of compulsive or pathological gambling at approximately 0.7% overall, with a higher rate among males (1.1%) than among females (0.5%).

It should be noted that the estimates of problem and probable pathological gambling obtained from the above-mentioned surveys are not strictly comparable to estimates from the 2006 *Department of Defense Reserve Component Survey* because of methodological differences between studies, ranging from sampling procedures to design of the survey instruments. Nevertheless, this range of studies provides important background for discussion of gambling in the Guard and Reserve component.

8.8.2 Prevalence of Problem Gambling

Respondents in the 2006 Reserve survey were asked a series of 10 questions on problems related to gambling to assess the lifetime prevalence of gambling problems and the lifetime prevalence of pathological gambling in the military. Items on gambling-related problems correspond to the DSM-IV (APA, 1994) symptoms of pathological gambling. Specifically, respondents were asked whether they had ever had any of the following gambling-related problems:

- being increasingly preoccupied with gambling
- needing to gamble with increased amounts of money to achieve the desired level of excitement
- unsuccessful, repeated attempts to control, cut back, or stop gambling
- feeling restless or irritable when unable to gamble
- gambling to escape from problems
- going back to try to win back earlier gambling losses
- lying to others about the extent of their gambling
- breaking the law to pay for gambling losses
- having jeopardized or lost important relationships, a job, or career opportunities because of gambling
- borrowing money to relieve financial problems caused by gambling

An affirmative answer to three or more of these items was considered to indicate probable pathological gambling per Lesieur and Blume (1987). Answering affirmatively to five or more items was considered to indicate probable pathological gambling per DSM-IV-TR criteria (APA, 1994). Because definitions may change over time, Table 8.13 presents findings for one or more, three or more, and five or more problems.

Percentages of affirmative responses to each of the individual gambling items are shown in Table 8.13. Among all of the items, preoccupation with gambling was indicated most frequently (4.1%), followed by gambling to win back lost money (4.0%). The least reported item was breaking the law to pay for one's gambling (1.1%). Among all components, the Army National Guard reported the highest percentages of personnel who replied affirmatively to all of the ten items except for gambling to win back lost money (though these percentages were not always significantly different from those in other components). Of the individual gambling items, preoccupation with gambling was highest for both the Army National Guard and Army Reserve. For the remaining four components, the item regarding gambling to win back lost money was indicated most frequently. Air National Guard personnel reported the highest rates on this item (5.0%); this was significantly higher than the percentage of Navy Reservists responding affirmatively to the item (3.3%). Though the differences between the Army National Guard and other components were not always significant, these personnel may benefit from information and education about problematic gambling.

Nearly 2% of the total Guard and Reserve component indicated having five or more gambling-related problems. Among the components, Marine Corps Reserve personnel reported the highest percentage of having one or more problems associated with gambling (11.5%), whereas the Navy Reserve and Air Force Reserve both had the least indicating one or more problems (5.7%). A significantly higher percentage of Marine Corps Reservists reported three or more problems, as well as five or more problems, than any of the other components except for the Army National Guard. The Navy Reserve reported the lowest

Table 8.13 **GAMBLING BEHAVIOR, BY RESERVE COMPONENT**

Gambling Characteristics	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Preoccupied more and more	4.7 (0.8) ^{a,b}	3.4 (0.7)	2.8 (0.4) ^c	3.9 (0.6) ^b	2.5 (0.4) ^{c,d}	+ (+)	4.1 (0.4)
Need to gamble more to achieve excitement you desire	3.5 (0.9)	1.8 (0.4)	2.0 (0.4)	2.3 (0.3)	2.2 (0.3)	+ (+)	2.7 (0.4)
Cannot control, cut back, or stop	1.9 (0.7)	1.6 (0.3)	0.9 (0.2)	1.3 (0.2)	1.1 (0.2)	+ (+)	1.6 (0.3)
Restless or irritable when you tried to quit	2.3 (0.5) ^{a,b,e}	0.6 (0.2) ^{b-d}	1.0 (0.3) ^c	1.4 (0.4) ^e	1.1 (0.2) ^{c,e}	+ (+)	1.5 (0.3)
Escape from problems	2.1 (0.5)	1.6 (0.3)	1.2 (0.2)	1.2 (0.4)	1.3 (0.2)	+ (+)	1.8 (0.3)
Win back lost money	4.2 (1.1)	3.0 (0.9)	3.3 (0.4) ^d	5.0 (0.7) ^a	4.3 (0.5)	+ (+)	4.0 (0.5)
Lie to hide extent of gambling	2.1 (0.4) ^d	1.5 (0.4)	1.3 (0.3)	0.9 (0.3) ^c	1.3 (0.3)	+ (+)	1.7 (0.2)
Broke the law to pay	1.6 (0.5) ^{a,e}	0.4 (0.1) ^{b,c}	0.6 (0.2) ^c	0.6 (0.4)	0.8 (0.1) ^c	+ (+)	1.1 (0.2)
Jeopardized relationships and opportunities	1.5 (0.4) ^b	1.0 (0.4)	0.7 (0.2)	0.8 (0.4)	0.6 (0.1) ^a	+ (+)	1.2 (0.2)
Someone has relieved your financial situation caused by gambling	1.9 (0.5) ^{b,c}	0.6 (0.2) ^c	0.8 (0.2)	1.0 (0.4)	0.8 (0.1) ^a	+ (+)	1.3 (0.3)
1 or More Problems^f	7.2 (1.2) ^g	5.9 (1.1) ^g	5.7 (0.6) ^g	6.9 (0.8) ^g	5.7 (0.6) ^g	11.5 (0.8) ^{a-e}	6.8 (0.6)
3 or more Problems^h	3.3 (0.9)	2.3 (0.5) ^g	2.2 (0.4) ^g	2.3 (0.4) ^g	2.2 (0.4) ^g	5.1 (0.9) ^{a,b,d,e}	2.8 (0.4)
5 or More Problemsⁱ	2.5 (0.7) ^a	1.3 (0.3) ^g	0.8 (0.2) ^{c,g}	1.4 (0.3) ^g	1.2 (0.3) ^g	3.0 (0.5) ^{a,b,d,e}	1.8 (0.3)

Note: Table displays the percentage of Reserve military personnel by Reserve component who participated in placing bets or gambling. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^cEstimate is significantly different from the Army National Guard at the 95% confidence level.

^dEstimate is significantly different from the Air National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is among those respondents that answered five or more items.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hIndication of three or more problems was interpreted to suggest probable pathological gambling per Lesieur and Blume (1987). Estimate is among those respondents who answered five or more items.

ⁱIndication of five or more problems was interpreted to suggest probable pathological gambling per DSM-IV-TR (APA, 1994). Estimate is among those respondents who answered five or more items.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Gambling, Q137).

percentage with five or more problems (0.8%). These findings suggest that the Marine Corps Reserve should target problematic gambling as a significant issue. Disseminating information regarding problematic gambling as well as availability of gambling treatment options available from the VA may prove beneficial.

Although these data provide important information about gambling behaviors in Guard and Reserve personnel, they do have limitations. One limitation is that the data involve an assessment of only a subset of gambling-related behavior. Other measures might include the percentage of personnel who engaged in any kind of betting activity in their lifetime or in the past year, or the kinds of betting activities they engaged in, how often, and with whom. Consequently, we do not have a baseline measure of the prevalence of all types of gambling behavior among military personnel, regardless of whether that behavior was problematic.

An additional limitation of these data is that they are lifetime prevalence data; the questionnaire items regarding gambling asked about things ever happening to respondents. Therefore, of the estimated 1.8% of all personnel who had experienced five or more problems with gambling during their lifetime, only a subset may currently (i.e., in the past year) have been showing such signs. Additional study will be needed to explore the time period during which gambling-related problems occurred among military personnel.

8.9 Summary

8.9.1 Injuries and Injury Prevention

Seat Belt Use. Use of seat belts is an important injury prevention measure. Total DoD Reservists did not meet the *Healthy People 2010* objective of 92% for seat belt use, although many subgroups did (Table 8.1):

- Air Force personnel (95.1%) reported the highest rates of seat belt use. This met the *Healthy People 2010* objective of 92%.
- Overall, younger age groups in the total Reserve component did not meet the *Healthy People 2010* objective of seat belt use.

- Of the Reservists, females (93.7%) were more likely than males (87.8%) to report seat belt use always or nearly always. This pattern held in each age group and in each component.

Helmet Use. Helmet use is another important injury prevention measure (Table 8.2). Many of the Reserve components did not meet the *Healthy People 2010* objective for motorcycle helmet use, and only one subgroup did. The *Healthy People 2010* objective for bicycle helmet use was met for female Air Force Reservists.

- Among Reserve personnel who rode a motorcycle in the past 12 months, available data show that male Army Reservists (71.2%) were more likely than female Army Reservists to wear helmets (59.5%). Only the rate for female Air Force Reservists was above the *Healthy People 2010* objective of 79% or greater use of helmets among motorcyclists.
- Female Air Force Reserve personnel who rode a bicycle in the past 12 months reported higher rates of always or nearly always wearing a helmet. They were the only group who met the *Healthy People 2010* objective for this measure. Among men, rates were highest in the Air National Guard and the Air Force Reserve.

Hearing Protection. Hearing protection is of considerable concern among military populations because of its potential for compromising the readiness and effectiveness of the Guard and Reserve forces.

- Male Army Reservists and Air National Guardsmen reported the highest rates of wearing hearing protection. Female Army National Guard and Army Reservists reported higher prevalences than did the other components. Overall, males (69.1%) reported higher rates than women (58.5%).
- Wearing protection when exposed to loud noises other than weapon fire was more common among males than females as well. Male Air Force Reservists and female Air Force Reservists reported the highest hearing protection use. The rates for males overall do meet *Healthy People 2010* objectives.

8.9.2 Sexually Transmitted Infections

An estimated 19 million new STIs occur annually. Thus, STIs represent a potentially major issue in terms of readiness among Guard and Reserve component personnel.

Reserve component women indicated a higher lifetime and past-year prevalence of STIs than men. Lifetime prevalence of STIs was more than 1 in 10 personnel, whereas past-year prevalence was much lower, at 1 in 33 personnel (Table 8.3):

- Nearly 12% of Guard and Reserve personnel had ever had an STI. Lifetime prevalence rates for men in the total Reserve components and in individual Reserve components were comparable to the overall rate.
- Women had higher lifetime prevalence of STIs, with approximately 17% of Guard and Reserve women reporting ever having an STI. Among women, lifetime prevalence rates ranged from 14.4% in the Air National Guard and 15.7% in the Army National Guard to 19.2% in the Army Reserve.
- About 3% of personnel in the total Guard and Reserve component (2% of men and 6% of women) reported having an STI in the preceding year. Rates of past-year STIs differed across Reserve components, with the Air National Guard having significantly fewer STIs during the past year than all other components (with the exception of the Marine Corps Reserve, whose estimates were suppressed).

8.9.3 Sleep Habits

The 2006 survey asked personnel how many hours of sleep they got per night, on average, during the past 12 months (Table 8.4):

- In the total Reserve component, more than a quarter (30.0%) of personnel reported getting 7 or more hours of sleep on average per night, 59.1% reported getting 5 or 6 hours per night, 8.7% reported getting 3 to 4 hours, and 2.3% reported an average of 2 hours or less of sleep per night.
- Air National Guard and Air Force Reserve personnel get more sleep per night than personnel in the other components.

- Fewer personnel aged 25 to 34 (27.9%) and 45 or older (27.9%) reported getting 7 or more hours of sleep per night. Reservists with at least a college degree were more likely to report getting 7 or more hours of sleep per night. Officers reported more sleep per night than enlisted personnel reported.

8.9.4 Poor Physical Health

Reserve personnel were asked how often poor physical health kept them from doing their usual activities, such as work or recreation, in the past 30 days (Tables 8.5 and 8.6):

- Of the total Reserve components, 82.0% of personnel aged 24 or younger had not limited their usual activities in the past month because of poor physical health, and over 84.0% of personnel aged 25 or older had not limited their usual activities in the past month because of poor physical health.
- Among the individual components, Air National Guard and Air Force Reserve personnel were the least likely to have been kept from their regular activities by poor physical health at least once a week or more (3.2%), followed by the Marine Corps Reserve (3.4%) and the Navy Reserve (3.8%).
- Female personnel were more likely than male personnel to have limited their usual activities because of poor physical health at least once in the past month.
- Approximately 4% of personnel who regularly engaged in strenuous exercise had limited their usual activities once a week or more in the past month because of poor physical health, compared with 6.1% of personnel who had not regularly engaged in strenuous exercise (Table 8.6).
- Heavy (11.1%) and moderate (12.7%) drinkers were more likely to report poor health limiting usual activities once a week or more within a month. Drug users reported higher percentages of poor physical health limiting usual activities than nondrug users reported. Heavy smokers were more likely to have limited their usual activities because of poor health once a week or more in the past month (about 11%), compared with those who had never smoked (5.0%).
- Table 8.7 examines poor mental health as it relates to poor physical health. Overall, personnel reporting more stress were also more likely to report poor physical health that limited their usual activities. Higher percentages of those reporting that poor

mental health limited their usual activities also reported poor physical health limiting usual activities once a week or more.

8.9.5 Risk Taking and Sensation Seeking

The 2006 survey included five items geared toward classifying personnel in terms of risk-taking and four items geared toward categorizing them in terms of sensation seeking characteristics (Table 8.8):

- In the total Guard and Reserve component, personnel were classified as either low risk takers (19.9% of personnel), moderate risk takers (53.7% of personnel), or high risk takers (26.5% of personnel).
- Guard and Reserve personnel who were high risk takers were significantly more likely to engage in some forms of substance use than those who were low or moderate risk takers. An estimated 19.1% of high risk takers reported being alcohol abstainers, compared with 41.8% of low risk takers. Similarly, nearly one-third of high risk takers reported heavy drinking, compared with 7.8% of low risk takers.
- High risk takers were also more likely to have used illicit drugs in the past year; 13.4% of high risk takers had used marijuana in the past year, and 16.7% had used any other illicit drug. Only 1.7% of low risk takers indicated using marijuana, and 5.5% reported using any other illicit drug. More than twice as many high risk takers reported current cigarette smoking (35.0%) compared with low risk takers (16.0%).
- A significantly higher percentage of high risk takers reported other assorted risk behaviors compared with low risk takers. High risk takers reported more drinking and driving, suicidal ideation, on-the-job accidents, hospitalizations for unintended injuries, seldom using seat belts, seldom using a motorcycle helmet, and seldom using hearing protection during activities other than firing their weapon.
- Overall, an estimated 10.8% of personnel were classified as low sensation seekers, 31.5% were classified as moderate sensation seekers, and 57.7% were classified as high sensation seekers. This distribution differs from that regarding risk taking in that more than half of military personnel are high sensation seekers, whereas more than half of personnel are moderate risk takers.

- Nearly half of all high sensation seekers in the Guard and Reserves (45.5%) reported either moderate/heavy or heavy drinking levels, compared with 25.6% of low sensation seekers. Nearly six times as many high sensation seekers reported engaging in drinking and driving during the past year (20.4%) than low (3.6%) sensation seekers.
- Personnel categorized as high sensation seekers were more likely to report using marijuana or other illicit drugs during the past year than moderate and low sensation seekers. They were also more likely to be current smokers.
- High sensation seekers were more likely to report suicidal ideation in the past year (6.4%) than moderate sensation seekers (3.7%), but not low sensation seekers (4.9%). This same relationship was seen for on-the-job accidents, hospitalization for unintended injuries, seldom using seat belts, and seldom using hearing protection for activities other than firing their weapon.

8.9.6 Oral Health

- An estimated 57.5% of total Reserve component personnel had a dental check-up in the past 12 months. Of all Reserve personnel, about 30% were required to get dental work done in the past 12 months before they could be deployed at sea or in the field (Table 8.9).
- Approximately 11% of all personnel had lost a permanent tooth or teeth because of cavities since joining the military. Other reasons for tooth loss included gum disease, mouth injury, tooth crowding or braces, corrective jaw surgery, or some other problem.
- Of those personnel who did not have a dental check-up in the past 12 months, 43.5% did not because they did not have dental insurance. Approximately 24% of all personnel who did not have a dental check-up in the past 12 months did not because of other reasons (Table 8.9).

8.9.7 Maternal and Infant Health

- As shown in Table 8.10, 12.5% of Guard and Reserve women reported that they had been pregnant within the past year or they were currently pregnant, and additional 2.0% reported that they may have been pregnant at the time of the survey but were unsure. Across all the components, 30.3% of Guard and Reserve women had been pregnant within

the past 5 years. The Marine Corps Reserve had the highest percentage of women who were currently pregnant (15.2%), nearly three times as high as the next highest component (Army Reserve, 5.9%).

- Because a relatively high percentage of Guard and Reserve women had been pregnant during the past 5 years, healthy pregnancy can have a substantial impact on readiness. Nearly 88% of women received prenatal care during their first trimester (Table 8.11). Women in the Air Force Reserve appeared to be more likely than women in the other components to receive prenatal care in their first trimester. African American women were slightly less likely than those in other racial/ethnic groups to have received their first prenatal visit in the first trimester. College graduates, officers, and older women had a higher likelihood of receiving prenatal care early in pregnancy.
- As shown in Table 8.12, 17.2% of all Guard and Reserve women who were pregnant in the past 5 years reported using alcohol at least once during their most recent pregnancy (82.8% abstained). This percentage of abstinence is significantly less than that reported in the 2005 active-duty survey (94.9%), although it is similar to rates seen in the general population.
- Army Reserve women were nearly twice as likely to have indicated use of alcohol at least once during their last pregnancy (20.6%) as Navy Reserve women (10.8%) and Air Force Reserve women (11.9%). Women aged 35 to 44 were more likely to have indicated using alcohol at least once (30.0%) during their last pregnancy than women aged 25 to 34 (16.5%).
- An estimated 15.6% of Guard and Reserve women who were pregnant during the past 5 years reported smoking cigarettes during their last pregnancy; 84.4% abstained from smoking (Table 8.12).
- Air National Guard women reported less cigarette use during pregnancy (0.7%) than their counterparts in the Army Reserve (4.6%) and Air Force Reserve (4.9%). No differences were noted between women by race/ethnicity, education, age, marital status, pay grade, or receipt of prenatal care (data not shown).

8.9.8 Gambling

Problem gambling is an emerging concern for DoD. The Guard and Reserve study included a set of questions geared toward identifying persons who may be at risk for pathological gambling. Table 8.13 presents these items, by Reserve component.

- A preoccupation with gambling was the most commonly reported symptom (4.1%) among the total Reserve component, followed closely by gambling to win back lost money (4.0%). The least reported item was breaking the law to pay for one's gambling (1.1%).
- The Army National Guard reported the highest percentages of personnel who replied affirmatively to all of the ten items except for gambling to win back lost money (though these percentages were not always significantly different from those in other components).
- Both of the Army components (National Guard and Reserve) indicated preoccupation with gambling more frequently than any of the other gambling-related items. The remaining four components indicated gambling to win back lost money most frequently.
- Nearly 2% of the total Guard and Reserve component indicated having five or more gambling-related problems, indicative of problem gambling according to the DSM-IV-TR. Because the item asks about things ever happening, this 2% represents a lifetime measure and not a current diagnosis.
- A significantly higher percentage of Marine Corps Reservists reported three or more problems, as well as five or more problems, than any of the other components except for the Army National Guard. The Navy Reserve reported the lowest percentage with five or more problems (0.8%).

Chapter 9: Deployment and Job Satisfaction

In Chapter 9, we present findings of deployment-related issues and job satisfaction from the *2006 Department of Defense (DoD) Survey of Health Related Behaviors in the Reserve Component* (also called the *2006 Department of Defense Reserve Component Survey*). In Section 9.1, we discuss associations between mental health and deployment and deployment-related changes in substance use and interpersonal relations. In Section 9.2, we examine sociodemographic correlates, as well as rank, occupation, and Reserve component.

9.1 Deployment

As shown in Table 9.1, 37.8% of the total Reserve component surveyed in 2006 reported having been deployed at least once in the past 2 years. The Army National Guard reported the highest percentage of deployment during this time, at 46.9%. Not only were Army National Guard personnel the most likely to have deployed at least once during this time, but these deployments tended to be longer in duration than deployments by other Reserve components (General Accounting Office [GAO], 2006). Army National Guard personnel also were more likely to have been deployed twice than Army and Navy Reserve personnel, but less likely to have been deployed twice than Air National Guard and Air Force Reserve personnel. Air National Guard and Air Force Reserve personnel were more likely to have deployed three or more times in the past 2 years (6.7% and 8.1%, respectively), but these deployments tended to be shorter in duration than other Reserve components (GAO, 2006).

9.1.1 Stress, Mental Health and Deployment

Recent studies of Army and Marine Corps personnel returning from Iraq and Afghanistan have linked operational stress and mental health problems to exposure to ground combat operations during deployment (Hoge et al., 2004, 2006). The present data provide an assessment of the self-reported levels of

work and family stress and potential mental health problems in the Reserve component as a whole and among selected deployment-related subgroups. Table 9.2 displays the prevalence of stress and mental health issues by number of deployments (standardized by Reserve component, gender, age, enlisted/officer indicator, marital status, education, and race/ethnicity to the total Reserve component population). Generally speaking, the percentage of personnel who reported experiencing both work and family stress was higher among those who had deployed more than once in the past 2 years, compared with those who had not deployed or deployed only once, although these findings often were not statistically significant. Of note is the finding that the percentage of personnel who reported experiencing high family stress was significantly higher among those who had deployed three or more times in the past 2 years compared with those who had not deployed (26.0% vs. 18.6%). Those who had deployed more than once were also more likely to (a) meet screening criteria for needing further depression evaluation (20.5% vs. 17.7%) and report posttraumatic stress disorder (PTSD) symptoms (9.1% vs. 6.7%), (b) have limited usual activities because of poor mental health (2.7% vs. 1.2%), and (c) have admitted to suicidal ideation in the past year (7.2% vs. 4.2%).

When examined by theater of operation, as shown in Table 9.3, those personnel who had served in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) reported more military work and family stress than those who had served in any other operational theater and than those who had not served in any operational theater at all. Personnel who served in OIF/OEF were also more likely to meet screening criteria for needing further depression evaluation and to report PTSD symptoms. Personnel who served in any operational theater were more likely to have limited their usual activities because of poor mental health and admitted suicidal ideation/attempts in the past year than those who had not served in any

Table 9.1 DEPLOYMENT CHARACTERISTICS, BY RESERVE COMPONENT

Deployment Issue	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
How Many Times Have You Been Deployed in the Past 24 Months?							
1 time	38.9 (7.2) ^{a-c}	29.3 (3.0) ^{a-c}	15.2 (1.7) ^{b,d,e}	21.7 (0.8) ^{a,c-e}	17.6 (1.5) ^{b,d,e}	+(+)	29.7 (3.4)
2 times	5.0 (1.0) ^{a-c,e}	2.1 (0.4) ^{b-d}	2.1 (0.4) ^{b-d}	11.2 (0.9) ^{a,d,e}	9.0 (1.3) ^{a,d,e}	+(+)	5.0 (0.6)
3 or more times	3.0 (1.5) ^{b,c}	0.6 (0.2) ^{a-c}	1.6 (0.3) ^{b,c,e}	6.7 (0.6) ^{a,d,e}	8.1 (2.0) ^{a,d,e}	+(+)	3.1 (0.7)
Not deployed in past 24 months	53.1 (7.3) ^a	68.0 (2.9) ^{a,b}	81.2 (2.0) ^{b-e}	60.3 (1.3) ^{a,e}	65.3 (3.1) ^a	+(+)	62.2 (3.4)
When Were You Last Deployed?							
In the past 12 months	22.9 (4.2) ^{a,e}	8.9 (1.5) ^{b-d}	9.5 (1.7) ^{b-d}	25.3 (2.3) ^{a,e}	23.3 (2.2) ^{a,e}	+(+)	18.1 (2.0)
Between 12 and 36 months ago	28.5 (3.4) ^{a,c}	30.7 (3.8) ^{a,c}	12.5 (0.8) ^{b-e}	23.3 (2.9) ^{a,c}	16.2 (1.2) ^{a,b,d,e}	+(+)	25.4 (1.7)
More than 36 months ago	11.8 (2.5) ^{a-c}	14.2 (0.6) ^{a-c}	24.9 (1.7) ^{b-e}	18.3 (0.9) ^{a,d,e}	19.9 (1.8) ^{a,d,e}	+(+)	15.3 (1.1)
I've never been deployed	36.8 (5.1) ^a	46.1 (3.0) ^b	53.1 (2.0) ^{b-d}	33.1 (1.9) ^{a,c,e}	40.6 (1.6) ^{a,b}	+(+)	41.1 (2.4)
Served with the Military in Which Areas?							
Operations Desert Shield/Desert Storm	11.3 (1.6) ^{a-c}	13.6 (1.2) ^{a-c}	25.8 (1.3) ^{d,e}	22.8 (1.5) ^{c-e}	29.0 (1.0) ^{b,d,e}	+(+)	16.1 (1.2)
Operation Just Cause	2.9 (0.8) ^{a,c}	1.7 (0.6) ^c	1.1 (0.1) ^{b-d}	2.3 (0.3) ^{a,c}	5.4 (0.8) ^{a,b,d,e}	+(+)	2.5 (0.4)
Operation Restore Hope	2.4 (0.8)	0.8 (0.4) ^{a-c}	2.0 (0.3) ^e	1.9 (0.4) ^e	3.0 (0.6) ^e	+(+)	2.0 (0.4)
Operation Uphold Democracy	1.2 (0.4) ^c	0.9 (0.3) ^{a,c}	1.7 (0.3) ^e	1.6 (0.4)	3.9 (1.1) ^{d,e}	+(+)	1.5 (0.2)
Operations Joint Endeavor/Joint Guard	4.9 (1.5) ^{b,c}	5.0 (0.9) ^{b,c}	4.2 (0.6) ^{b,c}	11.8 (1.4) ^{a,d,e}	11.3 (1.7) ^{a,d,e}	+(+)	6.1 (0.8)
Operation Safe Haven	0.6 (0.2)	0.1 (0.1) ^{a,c}	0.6 (0.1) ^{c,e}	0.4 (0.2) ^c	1.0 (0.1) ^{a,b,e}	+(+)	0.5 (0.1)
Operation Enduring Freedom	11.2 (2.3) ^{b,c,e}	17.9 (2.4) ^{b-d}	15.0 (1.7) ^{b,c}	24.6 (1.4) ^{a,c-e}	33.5 (3.1) ^{a,b,d,e}	+(+)	16.9 (1.4)
Operation Iraqi Freedom	38.1 (5.2) ^a	30.2 (3.5) ^a	20.9 (1.4) ^{b-e}	31.4 (3.7) ^a	34.5 (2.2) ^a	+(+)	33.5 (2.5)
Tsunami Relief	0.4 (0.2)	0.1 (0.1) ^{a,c}	0.9 (0.2) ^{b,e}	0.2 (0.2) ^{a,c}	1.2 (0.4) ^{b,e}	+(+)	0.5 (0.1)
Hurricane Relief	14.3 (4.1) ^{a,e}	2.0 (0.3) ^{b-d}	2.2 (0.4) ^{b-d}	11.7 (1.6) ^{a,e}	9.2 (3.2) ^{a,e}	+(+)	8.8 (1.7)
Other combat and/or peace-keeping mission	7.5 (1.3) ^{b,c}	5.1 (0.8) ^{a-c}	8.9 (0.9) ^{b,c,e}	12.5 (1.2) ^{a,d,e}	14.5 (1.4) ^{a,d,e}	+(+)	8.2 (0.7)
Homeland Security	14.2 (3.4) ^{a,e}	4.5 (0.7) ^{b-d}	5.0 (0.8) ^{b-d}	16.1 (2.7) ^{a,c,e}	8.2 (0.7) ^{a,b,e}	+(+)	10.0 (1.5)

(Table continued on next page)

Table 9.1 | **DEPLOYMENT CHARACTERISTICS, BY RESERVE COMPONENT (CONTINUED)**

Deployment Issue	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Other remote	6.0 (1.0) ^{a-c}	5.4 (0.4) ^{a-c}	8.8 (0.5) ^{d,e}	10.0 (1.0) ^{d,e}	10.4 (0.7) ^{d,e}	+ (+)	7.0 (0.5)
None/did not deploy	32.6 (4.9) ^a	43.4 (3.0) ^{b,c}	45.4 (1.9) ^{b-d}	34.7 (2.1) ^{a,e}	36.2 (1.7) ^{a,e}	+ (+)	37.6 (2.3)

Note: Table displays the percentage of Reserve military personnel by Reserve component reporting the number of times deployed in the past 2 years, recency of last deployment, and areas served. The standard error of each estimate is presented in parentheses. Column group estimates may not sum to 100 because of rounding. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Number of Times Deployed in Past 24 Months, Q147; Recency of Last Deployment, Q148; Areas Served, Q161).

Table 9.2 STRESS AND MENTAL HEALTH ISSUES, BY NUMBER OF DEPLOYMENTS

Stress/Mental Health	Number of Times Deployed in Past 24 Months					Total ^a
	1 Time	2 Times	3 Times	1+ Time	Not Deployed	
Stress at Civilian Job, Past 12 Months						
Unadjusted	19.9 (2.0)	24.8 (3.2)	21.1 (3.1)	20.6 (1.8)	20.9 (1.4)	20.8 (1.3)
Adjusted	19.9 (1.8)	25.5 (3.6)	21.0 (3.0)	20.8 (1.7)	20.8 (1.5)	21.8 (1.3)
Stress While Carrying out Military Duties, Past 12 Months						
Unadjusted	15.4 (1.3)	14.3 (2.3)	14.0 (3.5)	15.1 (1.0)	11.2 (2.1)	12.7 (1.4)
Adjusted	15.1 (1.3)	15.5 (2.5)	15.5 (3.7)	15.2 (1.1)	11.1 (2.1)	14.3 (1.3)
High Stress in Family, Past 12 Months						
Unadjusted	19.1 (0.9)	21.7 (2.8)	23.6 (2.9)	19.8 (0.8)	18.9 (1.0)	19.3 (0.7)
Adjusted	19.4 (0.9)	23.8 (3.3)	26.0 (3.5) ^b	20.5 (0.9)	18.6 (1.0) ^c	21.9 (1.2)
Need for Further Depression Evaluation						
Unadjusted	19.9 (1.0)	21.0 (2.5)	22.6 (3.1)	20.3 (1.0)	17.9 (0.8)	18.8 (0.6)
Adjusted	19.6 (1.0)	23.0 (2.7)	26.3 (3.7) ^b	20.5 (1.0) ^b	17.7 (0.8) ^{c,d}	21.7 (1.2)
Met Screening Criteria for GAD^e Symptoms, Past 30 Days						
Unadjusted	11.0 (0.9)	12.3 (1.6)	7.5 (1.8) ^d	10.9 (0.7) ^c	10.4 (1.2)	10.6 (0.8)
Adjusted	10.6 (0.9)	14.1 (2.1)	9.5 (2.3)	10.9 (0.8)	10.4 (1.1)	11.1 (0.9)
Limited Usual Activities for 11 or More Days in Past Month due to Poor Mental Health^f						
Unadjusted	2.4 (0.4) ^b	2.2 (1.0)	5.5 (2.5)	2.6 (0.4) ^b	1.3 (0.3) ^{d,g}	1.8 (0.3)
Adjusted	2.4 (0.3) ^b	2.8 (1.3)	6.9 (3.4)	2.7 (0.4) ^b	1.2 (0.3) ^{d,g}	3.3 (0.9)
Met Screening Criteria for PTSD^h Symptoms, Past 30 Days						
Unadjusted	8.8 (0.9)	9.8 (2.0)	12.1 (2.7) ^b	9.2 (0.8)	6.7 (1.1) ^c	7.7 (0.8)
Adjusted	8.3 (1.0) ^c	11.7 (2.6)	15.4 (3.3) ^{b,g}	9.1 (0.9) ^b	6.7 (1.0) ^{c,d}	10.5 (1.1)
Suicidal Ideation, Past Year						
Unadjusted	5.6 (0.5) ^{c,d}	9.6 (1.9) ^b	16.7 (3.8) ^{b,d,g}	7.0 (0.4) ^{b,c,g}	4.3 (0.5) ^{c,d,i}	5.3 (0.4)
Adjusted	5.6 (0.5) ^{c,d,i}	11.5 (2.3) ^{b,c,g}	19.5 (3.6) ^{b,g,i}	7.2 (0.5) ^b	4.2 (0.5) ^{c,d,g,i}	10.2 (1.1)

(Table continued on next page)

Table 9.2 | **STRESS AND MENTAL HEALTH ISSUES, BY NUMBER OF DEPLOYMENTS (CONTINUED)**

Stress/Mental Health	Number of Times Deployed in Past 24 Months					Total ^a
	1 Time	2 Times	3 Times	1+ Time	Not Deployed	
Attempted Suicide, Past Year						
Unadjusted	1.8 (0.4) ^d	4.3 (1.6)	3.5 (1.7)	2.2 (0.5) ^g	1.2 (0.2)	1.6 (0.2)
Adjusted	1.7 (0.4) ⁱ	5.1 (1.9) ^g	4.1 (2.2)	2.2 (0.5)	1.3 (0.2)	3.0 (0.7)

Note: Table displays the percentage of Reserve military personnel by number of times deployed in the past 24 months that reported the stress and mental health problems, as indicated in the rows of the table. The standard error of each estimate is presented in parentheses. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13). Pairwise significance tests were done between all possible times deployed (e.g., 1 time vs. 2 times, 3 times vs. 1 or more times). Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the deployment groups: 1 Time, 2 Times, 3 Times, 1+ Time, and Not Deployed. The main effects of Reserve component, gender, age group, enlisted/officer indicator, married/other, education, and race/ethnicity were used in this standardization process. Statistical significance of difference between the adjusted 1+ time estimate and the estimates in the 1 time, 2 times, and 3 times columns was not determined because of the overlap in the population. The statistical significance of the difference between the unadjusted estimates has been displayed.

^aIndividuals with missing deployment are not included in these estimates.

^bEstimate is significantly different from the estimate for not deployed at the 95% confidence level.

^cEstimate is significantly different from the estimate for 3 times at the 95% confidence level.

^dEstimate is significantly different from the estimate for 1 or more times at the 95% confidence level.

^eGAD is generalized anxiety disorder.

^fBased on respondents' perception of number of days when mental health limited usual activities.

^gEstimate is significantly different from the estimate for 1 time at the 95% confidence level.

^hPTSD is posttraumatic stress disorder.

ⁱEstimate is significantly different from the estimate for 2 times at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Number of Times Deployed in Past 24 Months, Q147; Stress at Civilian Job, Q88; Stress at Military Job, Q89; Stress in Family, Q90; Need for Further Depression Evaluation, Q97-Q99; Screening for GAD Symptoms, Q100; Poor Mental Health Limited Usual Activities, Q87; PTSD Symptoms, Q104; Suicidal Ideation, Q101A, Attempted Suicide, Q102A).

Table 9.3

STRESS AND MENTAL HEALTH ISSUES, BY THEATER OF OPERATIONS

Stress/Mental Health	Served in Operation Iraqi or Enduring Freedom	Served in Some Operation Other Than Iraqi or Enduring Freedom	Did Not Serve in Any Operation	Total ^a
Stress at Civilian Job, Past 12 Months				
Unadjusted	21.5 (2.0)	21.5 (1.5)	19.9 (1.4)	20.9 (1.3)
Adjusted	21.1 (1.7)	20.6 (1.6)	20.8 (1.8)	20.8 (1.0)
Stress While Carrying out Military Duties, Past 12 Months				
Unadjusted	16.4 (1.9) ^{b,c}	9.9 (1.2) ^d	10.3 (1.6) ^d	12.8 (1.4)
Adjusted	16.1 (1.5) ^{b,c}	10.0 (1.2) ^d	10.5 (2.0) ^d	12.2 (0.9)
High Stress in Family, Past 12 Months				
Unadjusted	20.9 (1.6)	17.7 (1.6)	18.6 (1.4)	19.4 (0.7)
Adjusted	21.9 (1.3) ^c	18.7 (1.4)	17.2 (1.2) ^d	19.2 (0.8)
Need for Further Depression Evaluation				
Unadjusted	21.2 (1.6) ^b	16.0 (1.0) ^d	17.8 (1.3)	18.8 (0.6)
Adjusted	21.4 (1.1) ^{b,c}	16.5 (1.0) ^d	17.3 (1.0) ^d	18.4 (0.6)
Met Screening Criteria for GAD^e Symptoms, Past 30 Days				
Unadjusted	12.7 (1.8)	9.3 (0.9)	9.3 (0.6)	10.7 (0.8)
Adjusted	12.8 (1.4) ^c	9.6 (1.0)	9.1 (0.8) ^d	10.5 (0.6)
Limited Usual Activities for 11 or More Days in Past Month Due to Poor Mental Health^f				
Unadjusted	1.8 (0.3)	2.4 (0.7)	1.4 (0.4)	1.8 (0.3)
Adjusted	2.1 (0.3) ^c	2.8 (0.7) ^c	1.1 (0.4) ^{b,d}	2.0 (0.3)
Met Screening Criteria for PTSD^g Symptoms, Past 30 Days				
Unadjusted	10.7 (1.8) ^{b,c}	6.5 (0.8) ^d	5.1 (0.9) ^d	7.7 (0.8)
Adjusted	10.5 (1.2) ^{b,c}	7.2 (1.2) ^d	4.9 (0.7) ^d	7.5 (0.6)
Suicidal Ideation, Past Year				
Unadjusted	5.9 (0.5) ^c	6.7 (1.0) ^c	4.0 (0.6) ^{b,d}	5.3 (0.4)
Adjusted	6.5 (0.6) ^c	7.9 (1.2) ^c	3.3 (0.5) ^{b,d}	5.9 (0.5)
Attempted Suicide, Past Year				
Unadjusted	1.4 (0.2) ^b	3.4 (1.0) ^{c,d}	0.9 (0.3) ^b	1.7 (0.2)
Adjusted	1.7 (0.3) ^{b,c}	4.2 (1.3) ^{c,d}	0.7 (0.2) ^{b,d}	2.2 (0.4)

Note: Table displays the percentage of Reserve military personnel by location of deployment that reported stress and mental health problems, as indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Column group estimates may not sum to 100 because of rounding. Definitions and measures of substance use are given in Chapter 2. Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the three theater of operations groups identified by the columns of this table. The main effects of Reserve component, gender, age group, enlisted/officer indicator, marital status, education, and race/ethnicity were used in this standardization process. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aIndividuals with missing deployment are not included in these estimates.

^bComparisons between this estimate and estimate for those in Some Operation Other than Iraqi and Enduring Freedom are statistically significant at the 95% confidence level.

^cComparisons between this estimate and estimate for those who Did Not Serve in Any Operation are statistically significant at the 95% confidence level.

^dComparisons between this estimate and estimate for Operation Iraqi and Enduring Freedom are statistically significant at the 95% confidence level.

^eGAD is generalized anxiety disorder.

^fBased on respondents' perception of number of days when mental health limited usual activities.

^gPTSD is posttraumatic stress disorder.

Source: 2006 Department of Defense Reserve Component Survey (Location of Deployment, Q161; Stress at Civilian Job, Q88; Stress at Military Job, Q89; Need for Further Depression Evaluation, Q97-Q99; Screening for GAD Symptoms, Q100; Limited Usual Activities, Q87; PTSD Symptoms, Q104; Suicidal Ideation, Q101A; Attempted suicide, Q102A).

operational theater. These findings demonstrate the significant relationship between the state of deployment and potential mental health issues in the general Reserve population. For some, results suggest that theater-specific deployments affect potential mental health problems in a differential manner than other types of deployment; for others, the deployment itself, rather than the specific theater, is a stronger correlate of mental health issues.

One factor implicated in the relation between mental health and deployment is social support. For example, in a study of deployment stressors among Gulf War veterans, interpersonal stressors were significantly associated with mental health outcomes and generally had a stronger effect on women's than men's emotional well-being (Vogt, Pless, King, & King, 2005). As shown in Table 9.4, 18.3% of deployed personnel in the past year reported more conflict and/or arguments with their spouse, fiancé, boyfriend, or girlfriend after deployment. This is in comparison to the 8.3% who reported arguing less or getting along better since deployment. Additionally, 17.2% reported a divorce or separation since deployment. Among the Reserve components, the Air National Guard had the least change in interpersonal relations due to deployment: 68.3% reported no change and only 7.9% reported a deployment-related divorce or separation. In contrast, over 20% of the Army National Guard and Marine Corps Reserves reported being divorced or separated since being deployed.

9.1.2 *Substance Use and Deployment*

Recent research has shown that alcohol misuse was higher among Soldiers after deployment in OIF/OEF than before deployment (Hoge et al., 2004). As shown in Table 9.5, compared with personnel who had not been deployed in the past 24 months, those who had been deployed one or more times had higher percentages of past-month heavy alcohol use, past-year illicit drug use except marijuana, past-year any illicit drug use, and possible alcohol dependence.

As shown in Table 9.6, similar to the estimates for mental health variables, there were significant

differences in substance use variables by operational theater. Personnel who had served in OIF/OEF were more likely to report past-year illicit drug use except marijuana, past-year any illicit drug use, and possible alcohol dependence than those who did not serve in any operational theater. Those who had served in a theater other than OIF/OEF were more likely to report any illicit drug use except marijuana and possible alcohol dependence than those who had not served in a theater.

Significant differences also emerged in reported past-30-day substance use by deployment recency. As shown in Table 9.7, personnel deployed in the past 12 months were significantly more likely to report past-30-day cigarette use, smokeless tobacco use, and illicit drug use, and past-year cigar and pipe use than those who had never been deployed and, in most cases, than those whose most recent deployment occurred more than 3 years ago. Personnel deployed in the past 12 months were also more likely to report past-30-day heavy alcohol use than those whose most recent deployment occurred more than 12 months ago. Interestingly, a significantly lower percentage of personnel whose most recent deployment occurred more than 3 years ago reported past-30-day heavy alcohol use than those who had never been deployed. In general, the percentage of personnel reporting past-30-day substance use tended to decrease as time since most recent deployment increased.

Table 9.8 shows the percentage of personnel reporting substance use change in the past year because of deployment. Of all personnel who were deployed in the past year, 14.0% began using or increased their use of alcohol since being deployed and 16.7% stopped or decreased their alcohol use since deployment. This pattern, in which a somewhat higher percentage of personnel reported stopping or reducing their alcohol use during or after deployment than the percentage who reported beginning or increasing it, held for all the Reserve components except for the Army National Guard. A total of 17.9% of Army National Guard personnel reported beginning or using more alcohol since deployment and 17.2% stopped or used less. The Marine Corps Reserve deployed personnel were

Table 9.4 DEPLOYMENT-RELATED CHANGE IN INTERPERSONAL RELATIONS, PAST 12 MONTHS, BY RESERVE COMPONENT

Relationship	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Relationship with Spouse, Fiancé, Boyfriend, or Girlfriend							
Argue more/more conflict since deployment	21.5 (2.8) ^{a,b}	25.5 (5.3) ^{a,b}	15.8 (2.7)	8.5 (3.5) ^{c,d}	12.3 (2.3) ^{c,d}	17.0 (3.0)	18.3 (2.2)
Get along about the same since deployment	46.4 (3.9) ^{a,b,e}	46.0 (5.8) ^{a,b}	58.8 (3.6) ^c	68.3 (3.9) ^{c,d,f}	59.6 (2.3) ^{c,d}	48.0 (6.0) ^a	52.1 (3.1)
Argue less/get along better since deployment	8.3 (1.6)	9.8 (2.0)	8.4 (1.7)	8.2 (2.3)	7.1 (0.5)	6.4 (2.3)	8.3 (1.0)
Does not have a spouse, fiancé, boyfriend, or girlfriend	23.7 (1.6) ^{a,e}	18.7 (3.3) ^f	17.0 (2.3) ^{c,f}	15.0 (3.6) ^{c,f}	21.0 (0.8) ^f	28.5 (3.1) ^{a,b,d,e}	21.3 (1.4)
Divorced or Separated from Spouse, Fiancé, Boyfriend, or Girlfriend Since Deployment							
Yes	22.5 (3.4) ^{a,b,e}	15.5 (3.7)	14.8 (0.7) ^{a-c,f}	7.9 (1.5) ^{c-f}	9.1 (0.7) ^{c,e,f}	21.0 (2.9) ^{a,b,e}	17.2 (2.0)
No	68.9 (3.2) ^{a,b,e}	75.3 (4.6) ^a	77.5 (1.9) ^{a,c,f}	86.2 (2.5) ^{b-f}	81.0 (0.8) ^{a,b,f}	63.6 (4.5) ^{a,b,e}	74.1 (2.2)
Does not have a spouse, fiancé, boyfriend, or girlfriend	8.6 (1.5) ^f	9.1 (2.2)	7.7 (1.4) ^f	5.9 (1.3) ^{b,f}	9.9 (0.9) ^{a,f}	15.5 (2.4) ^{a-c,e}	8.6 (0.9)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported a relationship change due to deployment, as indicated in the rows of the table. Only those personnel deployed in the past year were considered in these estimates. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Air National Guard at the 95% confidence level.

^bEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^cEstimate is significantly different from the Army National Guard at the 95% confidence level.

^dEstimate is significantly different from the Army Reserve at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Change in Relationship, Q157; Divorced or Separated, Q155).

Table 9.5 SUBSTANCE USE, BY NUMBER OF TIMES DEPLOYED, PAST 24 MONTHS

Substance Use	Number of Times Deployed in Past 24 Months ^a					Total
	1 Time	2 Times	3 Times	1+ Time	Not Deployed	
Past-30-Day Heavy Alcohol Use						
Unadjusted	18.7 (1.6) ^b	14.0 (1.6) ^{c,d}	22.5 (4.8)	18.3 (1.4) ^{b,e}	14.4 (1.2) ^d	15.9 (0.9)
Adjusted	17.9 (1.4) ^e	16.3 (1.7) ^f	25.4 (4.0) ^{b,e}	18.2 (1.1) ^e	14.5 (1.1) ^{c,d,f}	18.5 (1.2)
Past-Year Any Illicit Drug except Marijuana^g						
Unadjusted	10.5 (0.9) ^e	11.6 (2.5)	17.2 (4.2) ^e	11.2 (0.7) ^e	7.5 (0.9) ^{c,e,f}	8.9 (0.7)
Adjusted	10.4 (1.0) ^{e,f}	13.5 (2.7) ^e	20.1 (4.2) ^{c,e}	11.4 (0.8) ^e	7.3 (0.9) ^{b,c,d,f}	12.8 (1.3)
Past-Year Any Illicit Drug^h						
Unadjusted	13.2 (1.2) ^e	12.9 (2.5)	18.6 (4.6) ^e	13.6 (1.0) ^e	9.8 (1.0) ^{c,d,f}	11.2 (0.8)
Adjusted	13.0 (1.2) ^{e,f}	15.5 (2.6) ^e	21.7 (4.2) ^{c,e}	13.9 (1.0) ^e	9.6 (1.0) ^{b-d,f}	15.0 (1.3)
Possible Alcohol Dependence						
Unadjusted	3.3 (0.5) ^{e,f}	3.4 (1.3) ^f	8.3 (2.3) ^{b-e}	3.7 (0.5) ^{e,f}	2.0 (0.3) ^{c,d,f}	2.6 (0.3)
Adjusted	3.3 (0.6) ^{e,f}	4.7 (1.7) ^f	9.9 (2.4) ^{b,c,e}	3.9 (0.6) ^e	1.9 (0.3) ^{c,d,f}	4.9 (0.8)
Past-Year Cigarette Smoking						
Unadjusted	32.8 (2.3)	31.6 (3.2)	37.1 (4.3)	33.0 (1.9) ^e	29.2 (1.4) ^d	30.6 (1.4)
Adjusted	31.4 (1.9) ^f	33.6 (2.8)	39.6 (2.9) ^{c,e}	32.3 (1.6)	29.6 (1.4) ^f	33.5 (1.2)
Heavy Smoking						
Unadjusted	10.1 (1.3)	11.0 (1.4)	13.4 (2.9)	10.5 (1.2)	8.0 (0.9)	9.0 (0.8)
Adjusted	9.1 (1.0)	11.2 (1.5)	14.1 (3.3)	9.7 (1.0)	8.4 (1.1)	10.7 (1.0)

(Table continued on next page)

Table 9.5 SUBSTANCE USE, BY NUMBER OF TIMES DEPLOYED, PAST 24 MONTHS (CONTINUED)

Substance Use	Number of Times Deployed in Past 24 Months ^a				Not Deployed	Total
	1 Time	2 Times	3 Times	1+ Time		
Nicotine Dependence						
Unadjusted	6.4 (1.0)	5.4 (1.4)	7.0 (2.4)	6.3 (0.9)	5.1 (0.8)	5.6 (0.7)
Adjusted	5.7 (0.9)	5.3 (1.3)	7.7 (2.6)	5.8 (0.8)	5.4 (0.9)	6.0 (0.8)

Note: Table displays the percentage of Reserve military personnel in the substance use groups of interest (any illicit drug users, any illicit drug users except marijuana, possible alcohol dependence, past-year cigarette smokers, heavy smokers, and possible nicotine dependence). Estimates for each deployment group have been standardized by Reserve component, gender, age, education, and race/ethnicity to the total Reserve component distribution. Pairwise significance tests were done between all possible number of times deployed (1 time vs. 2 times vs. 3 times vs. 1 or more times). The standard error of each estimate is presented in parentheses. Definitions and measures of substance use are given in Chapter 2. Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the deployment groups: 1 time, 2 times, 3 times, 1+ time, and not deployed. The main effects of Reserve component, gender, age group, enlisted/officer indicator, married/other, education, and race/ethnicity were used in this standardization process. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13). Statistical significance of difference between the adjusted 1+ time estimate and the estimates in the 1 time, 2 times, and 3 times columns was not determined because of the overlap in the population. The statistical significance of the difference between the unadjusted estimates has been displayed.

^aIndividuals with missing deployment are not included in these estimates.

^bEstimate is significantly different from being deployed 2 times in the past 24 months at the 95% confidence level.

^cEstimate is significantly different from being deployed 1 time in the past 24 months at the 95% confidence level.

^dEstimate is significantly different from being deployed 1 or more times in the past 24 months at the 95% confidence level.

^eEstimate is significantly different from being deployed not deploying in the past 24 months at the 95% confidence level.

^fEstimate is significantly different from being deployed 3 times in the past 24 months at the 95% confidence level.

^gPercentage of respondents in the total Reserve component sample who reported any nonmedical use of PCP/LSD/hallucinogens, cocaine, methamphetamines, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics or inhalants.

^hPercentage of respondents in the total Reserve component sample who reported any nonmedical use of marijuana, PCP/LSD/hallucinogens, cocaine, methamphetamines, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

Source: 2006 Department of Defense Reserve Component Survey (Marijuana, Q66A, Q67A, and Q68A; Any Illicit Drug Use Except Marijuana, Q66B-J, Q67B-J, and Q69B-J; Any Illicit Drug Use, Q66A-J, Q67A-J, and Q68A-J; Possible Alcohol Dependence, Q39-Q42; Past-Year Cigarette Smoking, Q49; Heavy Smoking, Q50; Nicotine Dependence, Q53-Q58; Number of Times Deployed, Q147).

Table 9.6

SUBSTANCE USE, BY THEATER OF OPERATIONS

Substance Use	Ever Served in	Ever Served in	Did Not Serve in	Total ^a
	Operation Iraqi or Enduring Freedom	Some Operation Other Than Iraqi or Enduring Freedom		
Past-30-Day Heavy Alcohol Use				
Unadjusted	16.1 (1.8)	13.9 (1.4)	16.9 (1.7)	15.9 (0.9)
Adjusted	16.9 (1.4)	17.5 (1.6)	14.4 (1.1)	16.2 (0.8)
Past-Year Any Illicit Drug except Marijuana^b				
Unadjusted	9.8 (0.9) ^c	9.4 (1.2)	7.4 (0.9) ^d	8.8 (0.7)
Adjusted	10.4 (0.9) ^c	10.3 (1.4) ^c	6.6 (0.9) ^{d,e}	9.1 (0.6)
Past-Year Any Illicit Drug^f				
Unadjusted	12.6 (1.2) ^c	10.5 (1.2)	10.2 (1.0) ^d	11.2 (0.8)
Adjusted	13.5 (1.2) ^c	12.0 (1.4)	8.8 (1.0) ^d	11.4 (0.7)
Possible Alcohol Dependence				
Unadjusted	2.7 (0.4)	3.6 (1.1)	2.2 (0.5)	2.7 (0.3)
Adjusted	3.1 (0.5) ^c	4.9 (1.5) ^c	1.7 (0.4) ^{d,e}	3.2 (0.5)
Past-Year Cigarette Smoking				
Unadjusted	30.8 (1.8)	28.5 (1.9)	31.2 (1.8)	30.5 (1.4)
Adjusted	30.8 (1.6)	32.0 (1.9)	29.2 (1.9)	30.7 (1.0)
Heavy Smoking				
Unadjusted	9.7 (1.1)	8.9 (1.2)	7.8 (0.8)	8.8 (0.8)
Adjusted	9.3 (0.9)	9.7 (1.1)	7.9 (1.0)	9.0 (0.6)
Nicotine Dependence				
Unadjusted	6.1 (0.8)	5.4 (0.8)	4.8 (0.8)	5.5 (0.6)
Adjusted	5.7 (0.8)	5.5 (0.8)	5.1 (0.9)	5.4 (0.5)

Note: Table displays the percentage of Reserve military personnel by location of deployment that reported substance use, as indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Column group estimates may not sum to 100 due to rounding. Definitions and measures of substance use are given in Chapter 2. Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the three theater of operations groups identified by the columns of this table. The main effects of Reserve component, gender, age group, enlisted/officer indicator, married/other, education, and race/ethnicity were used in this standardization process. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aIndividuals with missing theater of operation are not included in these estimates.

^bRespondents in the total Reserve component sample who reported any nonmedical use of PCP/LSD/hallucinogens, cocaine, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^cComparisons between this estimate and estimate for those who did not serve in any operation are statistically significant at the 95% confidence level.

^dComparisons between this estimate and estimate for Operation Iraqi and Enduring Freedom are statistically significant at the 95% confidence level.

^eComparisons between this estimate and estimate for those in some operation other than Iraqi and Enduring Freedom are statistically significant at the 95% confidence level.

^fRespondents in the total Reserve component sample who reported any nonmedical use of marijuana, PCP/LSD/hallucinogens, cocaine, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

Source: 2006 Department of Defense Reserve Component Survey (Marijuana, Q66A, Q67A, and Q68A; Any Illicit Drug Use Except Marijuana, Past 12 Months, Q66B-J, Q67B-J, and Q69B-J; Any Illicit Drug Use, Past 12 Months, Q66A-J, Q67A-J, and Q68A-J; Possible Alcohol Dependence, Q39-Q42; Past-Year Cigarette Smoking, Q49; Heavy Smoking, Q50; Nicotine Dependence, Q53-Q58; Number of Times Deployed, Q147; Theater of Operations, Q161).

Table 9.7

SUBSTANCE USE, BY DEPLOYMENT REGENCY

Substance Use	Deployment Recency			
	Deployed in Past 12 Months	Deployed Between 12-36 Months Ago	Deployed More Than 36 Months Ago	Never Been Deployed
Past-30-day heavy alcohol use	20.3 (2.3) ^{a,b}	15.7 (1.6) ^{b,c}	11.4 (1.0) ^{a,c,d}	15.3 (1.5) ^b
Past-30-day any cigarette use	26.1 (1.9) ^{b,d}	23.2 (2.0)	19.7 (2.0) ^c	22.1 (1.4) ^c
Past-30-day smokeless tobacco use	13.4 (1.7) ^d	12.6 (2.3) ^d	9.8 (1.5)	8.7 (1.0) ^{a,c}
Past-year cigar and pipe use	24.3 (1.7) ^{b,d}	24.3 (2.7) ^d	19.0 (1.6) ^c	17.3 (1.3) ^{a,c}
Past-30-day illicit drug use	8.0 (1.0) ^{b,d}	6.9 (1.0) ^{b,d}	4.2 (0.8) ^{a,c}	4.6 (0.6) ^{a,c}

Note: Table displays the percentage of Reserve military personnel who reported substance use in the past month. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible deployment recency combinations. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the deployed between 12-36 months ago category at the 95% confidence level.

^bEstimate is significantly different from the deployed more than 36 months ago category at the 95% confidence level.

^cEstimate is significantly different from the deployed in past 12 months category at the 95% confidence level.

^dEstimate is significantly different from the never been deployed category at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Deployment Recency, Q148; Heavy Alcohol Use, Q19-Q22 and Q24-Q27; Any Cigarette Use, Past 30 Days, Q49-Q50; Smokeless Tobacco Use, Q61; Cigar or Pipe Use, Q62; Any Illicit Drug Use, Q66 and Q68).

significantly more likely than deployed personnel in the Army National Guard, Army Reserve, Navy Reserve, Air National Guard, and Air Force Reserve to use more alcohol since deployment. Of the military personnel who deployed in the past year, 10.7% began smoking cigarettes or increased their smoking since deploying. In contrast, 9.1% quit or reduced their cigarette use. Deployment-related changes in cigarette use varied by Reserve component similar to the deployment-related changes in alcohol use, with the exception of the Navy Reserve. That is, a larger percentage of Army National Guard and Navy Reserve personnel began or increased their cigarette smoking (15.2% and 10.2%, respectively) than stopped or reduced their smoking since deploying (9.2% and 8.1%, respectively), whereas the opposite was reported for the other Reserve components. Overall, Army National Guard personnel were more likely to increase their cigarette use since deployment than those in the Navy Reserve, Air National Guard, and Air Force Reserve.

A reported 8.4% of deployed personnel began using or used more smokeless tobacco since deploying and 7.3% began or increased their cigar use. Of all the Reserve components, the Army Reserve had the largest

percentage of new or increased smokeless tobacco users (14.3%).

9.2 Job Satisfaction in the Military

Job satisfaction may play a critical role in determining military readiness and retention. Given the increased reliance upon Reservists in conducting the Global War on Terror, with 531,000 being mobilized and 378,000 of those being deployed as of June 2006, the readiness and retention of Reservists has become increasingly important (GAO, 2006). While some studies investigating job satisfaction among the active-duty military population suggest that first-term personnel are less satisfied than mid-career personnel (GAO, 2001) and that greater satisfaction is predictive of intention to remain in the military (Lakhani, 1991), fewer have examined job satisfaction among Guard and Reserves. The first study to examine the differences in job satisfaction among active-duty versus Guard and Reserve personnel found active-duty respondents experienced lower job satisfaction than Guard and Reserve personnel. Furthermore, results indicated that both active-duty and Guard and Reserve personnel were less satisfied if they perceived job

Table 9.8

DEPLOYMENT-RELATED CHANGE IN SUBSTANCE USE, PAST 12 MONTHS, BY RESERVE COMPONENT

Deployment Problem	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Alcohol							
Began using since deployed	4.1 (1.1) ^{a,b}	2.3 (1.9)	3.2 (0.7) ^{a,b}	0.2 (0.2) ^{c,d,e}	0.5 (0.2) ^{c,d,e}	2.4 (0.7) ^{a,b}	2.7 (0.8)
Using more since deployed	13.8 (2.7) ^{a,b,d,e}	14.4 (2.5) ^{a,b,d,e}	5.7 (1.6) ^{c,e,f}	4.4 (1.5) ^{c,e,f}	5.3 (1.2) ^{c,e,f}	23.9 (3.4) ^{a-d,f}	11.3 (1.6)
Stopped using since deployed	2.3 (1.1)	0.6 (0.6) ^e	2.7 (1.2)	0.9 (0.6) ^e	1.1 (0.3) ^e	6.1 (2.5) ^{a,b,f}	1.9 (0.6)
Using less since deployed	14.9 (1.7)	21.5 (3.5) ^{a,b,d}	12.6 (2.1) ^f	10.4 (2.3) ^f	11.1 (1.6) ^f	24.0 (7.5)	14.8 (1.3)
No change	65.0 (4.2) ^{a,b}	61.3 (4.4) ^{a,b,d}	75.8 (3.9) ^{a,f}	84.1 (1.7) ^{c,d,f}	82.1 (2.0) ^{c,f}	+ (+)	69.3 (3.0)
Cigarettes							
Began using since deployed	5.0 (1.5) ^a	4.2 (2.1)	6.1 (1.0) ^{a,b}	0.7 (0.5) ^{b-e}	3.0 (1.0) ^{a,d4}	4.8 (1.7) ^a	4.1 (1.0)
Using more since deployed	10.2 (2.3) ^{a,b,d}	5.5 (2.2) ^a	4.1 (1.2) ^{a,c}	0.3 (0.3) ^{b-f}	1.6 (0.5) ^{a,c,e}	9.4 (3.8) ^{a,b}	6.6 (1.2)
Stopped using since deployed	3.9 (1.5)	3.8 (2.5)	6.2 (1.2) ^{a,b}	3.0 (0.3) ^{d,e}	2.5 (0.4) ^{d,e}	10.1 (3.3) ^{a,b}	4.0 (0.8)
Using less since deployed	5.3 (1.6)	7.5 (3.0)	1.9 (1.2)	3.3 (1.3)	4.6 (0.7)	8.5 (3.6)	5.1 (1.0)
No change	75.6 (3.3) ^{a,b}	78.9 (6.1) ^a	81.8 (1.7) ^{a,b,e}	92.7 (1.2) ^{b-f}	88.2 (1.6) ^{a,c,d,e}	67.3 (5.8) ^{a,b,d}	80.2 (2.6)
Smokeless Tobacco							
Began using since deployed	4.0 (1.7)	5.5 (2.9)	5.9 (1.7) ^{a,b}	0.6 (0.5) ^d	1.7 (0.9) ^d	2.2 (1.3)	3.4 (1.0)
Using more since deployed	6.5 (1.6) ^{a,b,d}	8.8 (3.7) ^{a,d}	0.5 (0.4) ^{b,c,e,f}	0.3 (0.2) ^{b,c,e,f}	2.5 (0.8) ^{a,c,d,e}	7.9 (2.3) ^{a,b,d}	5.0 (1.0)
Stopped using since deployed	5.0 (2.1) ^f	0.7 (0.7) ^{a,c-e}	3.2 (1.1) ^f	3.1 (0.4) ^{b,f}	1.5 (0.6) ^{a,e}	6.6 (2.0) ^{b,f}	3.7 (1.1)
Using less since deployed	4.3 (1.1) ^{a,b,d}	1.7 (1.3)	1.2 (0.2) ^c	0.7 (0.5) ^c	1.4 (0.8) ^c	+ (+)	3.5 (0.8)
No change	80.2 (2.5) ^{a,b,d,e}	83.4 (4.5) ^{a,b,e}	89.2 (1.3) ^{a-c,e}	95.2 (0.7) ^{b-f}	92.9 (0.7) ^{a,c-f}	65.3 (5.8) ^{a-d,f}	84.4 (2.1)
Cigars							
Began using since deployed	5.7 (1.6) ^{a,b}	4.3 (2.0)	5.5 (1.9) ^a	1.0 (0.7) ^{c,d}	1.5 (0.9) ^c	7.4 (3.2)	4.3 (1.0)
Using more since deployed	4.4 (1.5) ^{a,b}	3.2 (1.8)	1.7 (0.5) ^{a,e}	0.1 (0.1) ^{c-e}	0.6 (0.3) ^{c,e}	5.0 (1.4) ^{a,b,d}	3.0 (0.8)
Stopped using since deployed	3.5 (1.5)	1.8 (1.3)	1.9 (0.6)	2.2 (0.4)	1.2 (0.4) ^e	6.7 (2.7) ^b	2.8 (0.9)
Using less since deployed	6.7 (1.3) ^f	5.6 (1.9)	2.9 (1.7)	2.1 (0.8) ^c	3.9 (0.6)	8.7 (3.8)	5.4 (0.8)
No change	79.7 (2.7) ^{a,b,d}	85.2 (3.9) ^{a,e}	88.0 (3.2) ^{c,e}	94.5 (1.3) ^{c,e,f}	92.8 (1.0) ^{c,e}	72.2 (5.3) ^{a,b,d,f}	84.5 (2.2)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported a substance use change in the past year because of deployment, as indicated in the rows of the table. Only those personnel deployed in the past year were considered in these estimates. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic difference among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Air National Guard at the 95% confidence level.

^bEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^cEstimate is significantly different from the Army National Guard at the 95% confidence level.

^dEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^eEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Change in Substance Use, Q153).

pressures to be high and identified job-related issues to be a major problem (Sanchez, Bray, Vincus, & Bann, 2004).

9.2.1 Overall Job Satisfaction

In the Reserve component survey, respondents were asked questions geared toward identifying overall job satisfaction, as well as the likelihood that they would continue to stay in the Guard or Reserves if given the choice. Table 9.9 presents survey findings on the relationship between overall job satisfaction and age, gender, rank, and occupation. Table 9.10 presents findings concerning likelihood to stay in the Guard or Reserves if given the choice, likelihood of serving at least an additional 20 years, and overall satisfaction with work assignment.

As shown in Table 9.9, an estimated 77.3% of all personnel were satisfied or very satisfied overall with their work assignment. There was one notable difference in rates of satisfaction between males (77.7%) and females (75.5%), although this difference was not significant. A larger percentage of male personnel under age 24 reported being dissatisfied or very dissatisfied than older age groups. Male personnel under age 24 were less satisfied overall than personnel aged 25 or older, with a fairly linear increase in satisfaction with age. A slightly higher percentage of female personnel under age 24 reported being satisfied or very satisfied than personnel ages 25 to 34; otherwise, the same linear increase was observed.

Almost 89% of officers reported high job satisfaction compared with 75.3% of enlisted personnel. The enlisted job classification with the lowest percentage of satisfied or very satisfied personnel was service and supply handler (73.0%), whereas the officer job classification with the lowest percentage of satisfied or very satisfied personnel was general officer or executive (76.0%). Enlisted job categories ranged from 73.0% to 80.5% (craftsman) satisfied/very satisfied; officer job categories ranged from 76.0% to 97.1% (engineering or maintenance officer and scientist or professional) satisfied/very satisfied.

9.2.2 Measures of Job Satisfaction

Table 9.10 illustrates three job satisfaction measures—likelihood of choosing to stay in the Guard or Reserves, likelihood of choosing to serve in the military for at least 20 years, and overall satisfaction with work assignment—by Reserve component and for the total Reserve component. Overall, 61.2% indicated that they would be likely or very likely to choose to stay in the Guard or Reserves. Among the Reserve component, the Air National Guard had the highest percentage of personnel indicating that they would either likely or very likely choose to remain in the Guard or Reserves if given the choice (78.4%), while the Army Reserve had the lowest percentage for this measure (54.4%). The distribution for this measure is slightly different to that for the indicator addressing the likelihood of serving in the military for at least 20 years. The Navy Reserve had the highest percentage reporting likely or very likely (64.3%), followed by the Air National Guard (61.7%), the Air Force Reserve (55.6%), the Army National Guard (48.9%), and the Army Reserve (43.9%). As shown for the third measure of overall satisfaction with work assignments, the Air National Guard had the highest percentage of satisfaction (88.1%) and the Army National Guard had the lowest (74.5%).

9.3 Summary

This chapter investigated deployment and job satisfaction among Reserve and Guard personnel. Issues addressed included stress and mental health and deployment, substance use and deployment, and job satisfaction.

- The percentage of personnel who reported experiencing high family stress was significantly higher among those who had deployed three or more times in the past 2 years compared with those who had not deployed (26.0% vs. 18.6%). Also, those who had deployed more than once were more likely to (a) meet screening criteria for needing further depression evaluation (20.5% vs. 17.7%) and report posttraumatic stress disorder (PTSD) symptoms (9.1% vs. 6.7%), (b) have limited usual

Table 9.9

OVERALL JOB SATISFACTION, BY AGE GROUP, GENDER, RANK, AND OCCUPATION

Characteristic	Overall Satisfaction with Work Assignment	
	Satisfied/Very Satisfied	Dissatisfied/Very Dissatisfied
Gender and Age		
Males		
24 or younger	68.2 (2.1) ^a	31.8 (2.1)
25-34	73.2 (2.2) ^a	26.8 (2.2)
35-44	85.6 (1.2) ^a	14.4 (1.2)
45 or older	90.0 (2.2) ^a	10.0 (2.2)
Total males	77.7 (1.1) ^a	22.3 (1.1)
Females		
24 or younger	73.3 (2.2) ^a	26.7 (2.2)
25-34	71.9 (3.6) ^a	28.1 (3.6)
35-44	77.7 (2.9) ^a	22.3 (2.9)
45 or older	86.1 (4.5) ^a	13.9 (4.5)
Total females	75.5 (2.1) ^a	24.5 (2.1)
Rank and Occupation		
Enlisted		
Infantry, gun crew, or seamanship specialist	73.3 (2.2) ^a	26.7 (2.2)
Electronic equipment repairman	76.9 (5.5) ^a	23.1 (5.5)
Communications or intelligence specialist	76.5 (2.2) ^a	23.5 (2.2)
Health care specialist	76.1 (3.9) ^a	23.9 (3.9)
Other technical or allied specialist	79.5 (2.1) ^a	20.5 (2.1)
Functional support and administrative	77.1 (2.4) ^a	22.9 (2.4)
Electrical/mechanical	77.6 (3.1) ^a	22.4 (3.1)
Craftsman	80.5 (1.9) ^a	19.5 (1.9)
Service and supply handler	73.0 (2.5) ^a	27.0 (2.5)
Nonoccupational	73.2 (4.7) ^a	26.8 (4.7)
Missing occupation	+ (+)	+ (+)
Total enlisted	75.3 (1.3) ^a	24.7 (1.3)
Officer		
General officer or executive	76.0 (6.5) ^a	24.0 (6.5)
Tactical operations officer	89.3 (2.9) ^a	10.7 (2.9)
Intelligence officer	86.9 (5.3) ^a	13.1 (5.3)
Engineering or maintenance officer	97.1 (1.3) ^a	2.9 (1.3)
Scientist or professional (not involved with health care)	97.1 (1.7) ^a	2.9 (1.7)
Health care officer	86.9 (1.8) ^a	13.1 (1.8)
Administrator	88.3 (3.9) ^a	11.7 (3.9)
Supply, procurement, or allied officer	88.1 (5.6) ^a	11.9 (5.6)
Nonoccupational	+ (+)	+ (+)
Missing occupation	+ (+)	+ (+)
Total officer	88.7 (1.3) ^a	11.3 (1.3)
Total	77.3 (1.1)^a	22.7 (1.1)

Note: Table displays the percentage of Reserve military personnel by age group, gender, rank, and occupation that reported the job satisfaction measure, as indicated in the columns of the table. Refer to Section 2.5.1 for descriptions of sociodemographic variables. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the dissatisfied/very dissatisfied category at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Job Satisfaction, Q160; Current Military Job, Q162).

Table 9.10 | JOB SATISFACTION, BY RESERVE COMPONENT

Job Satisfaction Measure	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Would Choose to Stay in the Guard or Reserves							
Likely/very likely	57.1 (4.5) ^{a-c}	54.4 (2.2) ^{a-c}	74.6 (1.4) ^{d,e}	78.4 (2.7) ^{d,e}	72.9 (1.5) ^{d,e}	+ (+)	61.2 (2.4)
Neither likely or unlikely	17.1 (4.0)	15.2 (1.1) ^{a-c}	10.9 (0.8) ^e	9.6 (1.2) ^e	11.2 (0.8) ^e	+ (+)	14.7 (1.8)
Unlikely/very unlikely	25.8 (2.5) ^{a-c}	30.4 (2.1) ^{a-c}	14.4 (0.7) ^{d,e}	12.1 (1.6) ^{c-e}	16.0 (0.9) ^{b,d,e}	+ (+)	24.1 (1.5)
Would Choose to Serve in Military at Least 20 Years							
Likely/very likely	48.9 (2.7) ^{a-c}	43.9 (0.7) ^{a-c}	64.3 (1.2) ^{c-e}	61.7 (2.4) ^{c-e}	55.6 (0.6) ^{a,b,d,e}	+ (+)	50.4 (1.5)
Neither likely or unlikely	12.0 (1.6) ^{a-c}	13.0 (1.3) ^{a-c}	7.0 (0.5) ^{d,e}	7.9 (1.0) ^{d,e}	6.1 (0.4) ^{d,e}	+ (+)	10.9 (0.8)
Unlikely/very unlikely	26.2 (2.4) ^{a-c}	28.8 (1.4) ^{a-c}	11.3 (0.7) ^{d,e}	8.3 (1.5) ^{c-e}	11.7 (0.8) ^{b,d,e}	+ (+)	23.0 (1.5)
Already have 20+ years of service	12.9 (1.2) ^{a-c}	14.3 (1.3) ^{b,c}	17.5 (1.5) ^{b-d}	22.1 (1.8) ^{a,c-e}	26.6 (1.4) ^{a,b,d,e}	+ (+)	15.7 (0.8)
Overall Satisfaction with Work Assignment							
Satisfied/very satisfied	74.5 (1.3) ^{a-c}	74.6 (1.8) ^{a-c}	81.2 (0.9) ^{b-e}	88.1 (1.4) ^{a,c-e}	84.5 (0.6) ^{a,b,d,e}	+ (+)	77.3 (1.1)
Dissatisfied/very dissatisfied	25.5 (1.3) ^{a-c}	25.4 (1.8) ^{a-c}	18.8 (0.9) ^{b-e}	11.9 (1.4) ^{a,c-e}	15.5 (0.6) ^{a,b,d,e}	+ (+)	22.7 (1.1)

Note: Table displays the percentage of Reserve military personnel by Reserve component that reported the job satisfaction measure, as indicated in the rows of the table. Estimates within each column group may not sum to 100 due to rounding. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Job Satisfaction, Q158-Q160).

activities because of poor mental health (2.7% vs. 1.2%), and (c) have admitted to suicidal ideation in the past year (7.2% vs. 4.2%) (Table 9.2).

- Personnel who had served in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) reported more work and family stress than those who had served in any other theater and those who had not served in any theater. Personnel who served in OIF/OEF were also more likely to meet screening criteria for needing further depression evaluation and to report PTSD symptoms (Table 9.3).
- Compared with personnel who had not been deployed in the past 24 months, those who had been deployed one or more times had higher percentages of past-month heavy alcohol use, past-year illicit drug use except marijuana, past-year any illicit drug use, and possible alcohol dependence (Table 9.5).
- Guard and Reserve personnel who had served in OIF/OEF were more likely to report past-year illicit drug use except marijuana, past-year any illicit drug use, and possible alcohol dependence than those who did not serve in any operational theater (Table 9.6).
- Time since last deployment also impacted substance use. Overall, the percentage of personnel reporting past 30-day substance use tended to decrease as time since most recent deployment increased (Table 9.7).
- Personnel in Army components were less likely to stay in the Guard or Reserves than members of other components. An estimated 77.3% of all personnel were satisfied or very satisfied overall with their work assignment. Male personnel under age 24 were less satisfied overall than personnel aged 25 or older. A slightly higher percentage of female personnel under age 24 reported being satisfied or very satisfied than personnel aged 25 to 34 (Tables 9.9 and 9.10).

Chapter 10: Comparisons of Active-Duty and Reserve Component Personnel

This chapter presents selected comparisons between active-duty personnel and Reserve component personnel. Data for the active-duty population were drawn from the 2005 DoD Survey of Health Related Behaviors Among Active-Duty Personnel (Bray et al., 2006), the most recent data on the active force. Comparisons with Reserve component personnel were possible because the questionnaires for the active-duty and Reserve component surveys used the same or similar items. A limitation of these comparisons, however, is that the active-duty and Reserve component data were collected 1 year apart (active duty in 2005, Reserve component in 2006). Thus, the accuracy of these comparisons may vary to the extent that events in the year between surveys may have influenced behaviors reported in the Reserve component study.

Most tables presented in this chapter compare estimates of substance use, mental health, and other selected health behaviors for active-duty military personnel with estimates for two groups of Reserve component personnel: 1) Reserve components excluding Active Guard/Reserve Program and/or full-time National Guard Reservist (AGR/FTS/AR), and 2) the AGR/FTS/AR. The AGR/FTS/AR groups differ from regular Reserve personnel in that they serve full time and have many of the same privileges as active-duty personnel. They serve primarily as direct support to Reserve personnel (Veterans Affairs Services, 2004).

In addition, figures in this chapter present findings for individual military components. Estimates are compared for Army active duty and its Reserve components (Army National Guard and Reserve), Navy active duty and its Reserve component (Navy Reserve), Marine Corps active duty and its Reserve component (Marine Corps Reserve), and Air Force active duty and its Reserve components (Air National Guard and Reserve). The total DoD active duty is also contrasted with the combined DoD Guard and Reserves in the figures.

10.1 Comparisons of Sociodemographic Characteristics

Table 10.1 presents sociodemographic characteristics of active-duty and Reserve component personnel. Overall, the groups are similar with regard to gender and race/ethnicity. The majority of the active-duty personnel were male (85.2%) and white, non-Hispanic (64.4%). Similarly, Reserve component personnel excluding AGR/FTS/AR and the AGR/FTS/AR group were mainly male (82.5% and 82.5%, respectively) and non-Hispanic white (69.0% and 69.1%, respectively). Regarding education, active-duty personnel were more likely to have lower levels of education than the Reserve component personnel. For example, 33.9% of active-duty personnel had a high school education or less, compared with 25.8% and 16.0% of Reserve component excluding AGR/FTS/AR and AGR/FTS/AR groups, respectively.

There are some other notable differences in demographic composition among the active-duty and Reserve component personnel. Active-duty personnel were younger on average than Reserve component personnel. For example, 76.9% of the active-duty personnel were 34 or younger compared with 60.3% of the Reserve component personnel excluding AGR/FTS/AR and 36.7% for AGR/FTS/AR personnel. Additionally, significantly more active-duty (53.7%) and Reserve AGR/FTS/AR personnel (66.2%) were married than the Reserve component excluding AGR/FTS/AR personnel (48.0%). Across all three groups, the majority of personnel were in lower pay grades, E1-E6. AGR/FTS/AR had the largest percentages of E7-E9 senior enlisted (27.8% vs. 9.7% and 9.9%) and senior officers (13.8% vs. 6.3% and 7.0%) compared with active duty and the Reserve component excluding AGR/FTS/AR, respectively.

Table 10.1

SOCIODEMOGRAPHIC CHARACTERISTICS OF ELIGIBLE PARTICIPANT POPULATION FROM THE 2005 ACTIVE DUTY AND 2006 RESERVE COMPONENT SURVEYS

Sociodemographic Characteristic	Active Duty	Total Reserve Component, Excluding AGR/FTS/AR ^a	AGR/FTS/AR ^a
Gender			
Male	85.2 (0.7)	82.5 (1.6)	82.5 (2.2)
Female	14.8 (0.7)	17.5 (1.6)	17.5 (2.2)
Race/Ethnicity			
White, non-Hispanic	64.4 (1.2)	69.0 (3.5)	69.1 (4.9)
African American, non-Hispanic	17.6 (1.0)	14.4 (1.8)	14.3 (2.8)
Hispanic	8.8 (0.5)	11.0 (1.9)	10.5 (2.0)
Other	9.2 (0.6)	5.6 (1.8)	6.1 (2.5)
Education			
High school or less	33.9 (1.5) ^{b,c}	25.8 (2.0) ^{c,d}	16.0 (2.1) ^{b,d}
Some college	44.1 (1.3) ^b	47.9 (0.9) ^d	47.5 (2.6)
College graduate or higher	22.0 (1.7) ^c	26.2 (1.8) ^c	36.5 (3.4) ^{b,d}
Age			
24 or younger	40.9 (1.9) ^{b,c}	32.0 (2.1) ^{c,d}	9.2 (1.2) ^{b,d}
25-34	36.0 (1.0) ^{b,c}	28.3 (1.0) ^d	27.5 (3.1) ^d
35-44	19.7 (1.1) ^{b,c}	25.5 (1.1) ^{c,d}	39.8 (2.1) ^{b,d}
45 or older	3.4 (0.4) ^{b,c}	14.2 (0.9) ^{c,d}	23.5 (2.3) ^{b,d}
Marital Status			
Not married, unknown	46.3 (1.4) ^{b,c}	52.0 (1.9) ^{c,d}	33.8 (3.5) ^{b,d}
Married	53.7 (1.4) ^{b,c}	48.0 (1.9) ^{c,d}	66.2 (3.5) ^{b,d}
Pay Grade			
E1-E3	24.0 (1.7) ^c	19.6 (2.0) ^c	5.0 (1.2) ^{b,d}
E4-E6	49.6 (1.8) ^b	56.9 (1.9) ^{c,d}	46.0 (3.9) ^b
E7-E9	9.7 (0.8) ^c	9.9 (0.9) ^c	27.8 (1.8) ^{b,d}
W1-W5	1.0 (0.1)	1.0 (0.6)	1.7 (1.1)
O1-O3	9.4 (1.0) ^{b,c}	5.6 (0.6) ^d	5.7 (1.2) ^d
O4-O10	6.3 (0.8) ^c	7.0 (0.9) ^c	13.8 (2.9) ^{b,d}

Note: Table displays the percentage of active-duty and Reserve component personnel by sociodemographic characteristic. Percentages may not sum to 100 because of rounding. The standard error of each estimate is presented in parentheses.

^aAGR/FTS/AR refers to the Active Guard/Reserve Program and/or full-time National Guard/Reservist (Membership Category, Q2; Current Work Status, Q13).

^bEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR at the 95% confidence level.

^cEstimate is significantly different from the AGR/FTS/AR at the 95% confidence level.

^dEstimate is significantly different from active-duty personnel at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (refer to Section 2.5 for descriptions of sociodemographic variables). Active-duty estimates were computed from the 2005 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel.

10.2 Substance Use and Other Health Behaviors

This section provides estimates of substance use and other health behaviors for active duty, total Reserve component excluding AGR/FTS/AR, and AGR/FTS/AR groups. It presents unadjusted and adjusted values of measures for the three groups. The unadjusted estimates

show the actual rates for active-duty personnel, Reserve component personnel excluding AGR/FTS/AR, and AGR/FTS/AR personnel regarding substance use and other health behaviors. Unadjusted rates are informative in understanding the magnitude of the problem for each Service component and in developing plans to address it. However, they may be less useful when making comparisons across Services and components because

they do not take into account the demographic variation among the different branches. In contrast, adjusted estimates show rates that control for sociodemographic differences across the groups and are more appropriate for making comparisons among active-duty and Reserve component personnel. These estimates standardized the active-duty and Reserve component estimates to a common sociodemographic composition adjusting for differences in Service, gender, age group, rank, marital status, education, and race/ethnicity. For these adjustments, the six Reserve components were collapsed into four Services: Army (Army Reserve, Army National Guard), Navy (Navy Reserve), Marine Corps (Marine Corps Reserve), and Air Force (Air Force Reserve, Air Guard). This adjustment process is described in more detail in Appendix D. Discussion of the tables primarily focuses on the adjusted rates.

For the figures in this section, statistical testing was performed using pairwise significance tests between all possible individual Service and Reserve pairings; significance tests were also done between the total DoD, active duty, and the combined Guard/Reserve personnel. Reserve component estimates in these figures exclude full-time and/or activated Guard/Reservists. Even though each measure shows unadjusted and adjusted estimates, the discussion focuses primarily on the adjusted rates because they are more appropriate for the purpose of this chapter.

10.2.1 Substance Use Prevalence

Table 10.2 presents estimates for heavy drinking, binge drinking, past-30-day cigarette use, nicotine dependence, and past-year illicit drug use. Heavy alcohol use adjusted estimates show that active-duty personnel were significantly more likely to engage in heavy alcohol use (18.4%) than Reserve component personnel excluding AGR/FTS/AR (15.8%). Alcohol binge episodes followed a similar pattern. The active-duty binge drinking rate (44.1%) was significantly higher than the Reserve component excluding AGR/FTS/AR binge drinking rate (39.6%). For both measures Reserve component AGR/FTS/AR personnel did not significantly differ from active-duty personnel. Binge

drinking rates for Reservists reporting at least one binge episode before basic training found by Vander Weg et al. (2006) are slightly higher (46%) than those reported here.

For past-30-day cigarette use, adjusted estimates showed that active-duty personnel were significantly more likely to smoke cigarettes (32.5%) than Reserve component personnel excluding AGR/FTS/AR (22.6%) and AGR/FTS/AR personnel (23.4%). Nicotine dependence was also significantly higher in the active-duty population. Of the active-duty personnel, 8.4% were nicotine dependent compared with 5.1% among the Reserve component personnel excluding AGR/FTS/AR and 4.4% among Reserve component AGR/FTS/AR personnel.

Past-year illicit drug use adjusted rates were not statistically different among active-duty personnel (11.6%), Reserve component personnel excluding AGR/FTS/AR (10.7%) and Reserve component AGR/FTS/AR personnel (10.0%).

10.2.2 Substance Use and Deployment

Table 10.3 compares substance use for active-duty and Reserve component personnel excluding AGR/FTS/AR by deployment status in the past 36 months. AGR/FTS/AR groups were not included in this analysis. Adjusted estimates examine differences in substance use among persons who were deployed compared with those who were not deployed for heavy alcohol use, past-year illicit drug use (excluding marijuana), past-year illicit drug use (including marijuana), possible alcohol dependence, past-year cigarette use, heavy cigarette use, and nicotine dependence. As shown, heavy alcohol use was significantly higher for both active-duty and Reserve component personnel deployed at least once compared with their nondeployed colleagues (20.1% vs. 16.5% active duty, 17.9% vs. 13.9% Reserve component). Similarly, both active-duty and Reserve component personnel who had been deployed in the past 36 months were significantly more likely to report possible alcohol dependence than their counterparts who had not been deployed (3.2% vs. 2.2% active duty; 4.2% vs. 1.8% Reserve component).

Table 10.2

ACTIVE DUTY AND RESERVE COMPONENT COMPARATIVE ANALYSES FOR SUBSTANCE USE, UNADJUSTED AND ADJUSTED

Substance Use	Active Duty	Total Reserve Component, Excluding AGR/FTS/AR ^a	AGR/FTS/AR ^a
Heavy Alcohol Use^b			
Unadjusted	18.5 (1.0) ^c	16.7 (0.9) ^c	10.7 (1.3) ^{d,e}
Adjusted	18.4 (0.9) ^e	15.8 (0.8) ^d	15.8 (1.4)
Alcohol Binge Episode^f			
Unadjusted	44.5 (1.5) ^c	40.4 (1.7) ^c	34.5 (2.0) ^{d,e}
Adjusted	44.1 (1.4) ^e	39.6 (1.5) ^d	42.0 (2.3)
Past-30-Day Cigarette Use			
Unadjusted	32.2 (1.1) ^{c,e}	23.7 (1.3) ^{c,d}	20.0 (1.6) ^{d,e}
Adjusted	32.5 (1.0) ^{c,e}	22.6 (1.1) ^d	23.4 (2.0) ^d
Nicotine Dependence			
Unadjusted	7.6 (0.5) ^{c,e}	5.8 (0.7) ^d	4.3 (0.9) ^d
Adjusted	8.4 (0.5) ^{c,e}	5.1 (0.6) ^d	4.4 (0.8) ^d
Past-Year Any Illicit Drug Use^g			
Unadjusted	10.9 (0.7) ^c	12.0 (0.9) ^c	8.4 (0.7) ^{d,e}
Adjusted	11.6 (0.6)	10.7 (0.8)	10.0 (1.1)

Note: Table displays the percentage of active-duty and Reserve component personnel who reported substance use. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all three groups. Adjusted estimates have been standardized to correct for differences in the demographic distributions between the active-duty and the Reserve component population. The main effects of Service, gender, age group, enlisted/officer indicator, marital status, education, and race/ethnicity were used in this standardization process. The six Reserve components were collapsed into the four active service groupings of Army, Navy, Marine Corps, and Air Force for this standardization.

^aAGR/FTS/AR refers to the Active Guard/Reserve Program and/or full-time National Guard/Reservist (Membership Category, Q2; Current Work Status, Q13).

^bDefined as consuming five or more drinks on the same occasion at least once a week in the past 30 days.

^cEstimate is significantly different from the AGR/FTS/AR at the 95% confidence level.

^dEstimate is significantly different from the active-duty force at the 95% confidence level.

^eEstimate is significantly different from the total Reserve component, excluding AGR/FTS/AR, at the 95% confidence level.

^fDefined as having consumed five or more drinks (four for females) on the same occasion at least once during the past 30 days.

^gAny nonmedical use of marijuana, cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

Source: 2006 Department of Defense Reserve Component Survey (Heavy Alcohol Use, Q19–Q22 and Q24–Q27; Binge Episode, Q29; Any Cigarette Use, Q46; Nicotine Dependence, Q53–Q58; Any Illicit Drug Use, Q66–Q68). Active-duty estimates were computed from the 2005 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel.

Table 10.3

ACTIVE-DUTY AND RESERVE COMPONENT SUBSTANCE USE, BY DEPLOYMENT STATUS, UNADJUSTED AND ADJUSTED

Substance Use	Active Duty		Total Reserve Component, Excluding AGR/FTS/AR ^a	
	Deployed 1+ Time(s) ^b	Not Deployed	Deployed 1+ Time(s) ^b	Not Deployed
Past-30-Day Heavy Alcohol Use				
Unadjusted	20.0 (0.9) ^{c,d}	16.3 (1.8) ^e	17.9 (1.4)	14.2 (1.3) ^e
Adjusted	20.1 (1.0) ^{c,d}	16.5 (1.3) ^e	17.9 (1.0) ^d	13.9 (1.1) ^{e,f}
Past-Year Any Illicit Drug except Marijuana^g				
Unadjusted	9.9 (0.8) ^d	8.7 (0.6) ^f	11.1 (0.7) ^{c,d}	7.0 (0.9) ^{e,f}
Adjusted	10.9 (0.7) ^{c,d}	9.2 (0.5) ^{d,e}	10.1 (0.6) ^d	6.2 (0.8) ^{c,e,f}
Past-Year Any Illicit Drug^h				
Unadjusted	11.4 (1.0)	9.9 (0.6) ^f	13.5 (1.0) ^{c,d}	9.3 (1.0) ^f
Adjusted	12.4 (1.0) ^{c,d}	10.3 (0.5) ^{d,f}	12.6 (0.8) ^{c,d}	8.3 (0.8) ^{c,e,f}
Possible Alcohol Dependenceⁱ				
Unadjusted	3.3 (0.4) ^{c,d}	2.2 (0.3) ^{e,f}	3.8 (0.6) ^{c,d}	1.8 (0.3) ^{e,f}
Adjusted	3.2 (0.4) ^{c,d}	2.2 (0.3) ^{e,f}	4.2 (0.6) ^{c,d}	1.8 (0.3) ^{e,f}
Past-Year Cigarette Smoking				
Unadjusted	44.7 (1.2) ^{c,d,f}	38.9 (2.1) ^{d,f}	32.7 (2.0) ^{c,e}	29.0 (1.4) ^{c,e}
Adjusted	44.5 (1.1) ^{c,d,f}	39.6 (1.5) ^{d,f}	32.1 (1.7) ^{c,e}	28.9 (1.5) ^{c,e}
Heavy Smoking				
Unadjusted	12.2 (0.8) ^{c,d}	8.8 (1.1) ^e	10.1 (1.2)	8.1 (1.0) ^e
Adjusted	12.8 (0.7) ^{c,d,f}	9.9 (1.2) ^e	8.4 (0.9) ^e	7.6 (0.9) ^e
Nicotine Dependence				
Unadjusted	8.3 (0.5) ^{c,d,f}	6.4 (0.7) ^e	6.0 (0.9) ^e	5.2 (0.9) ^e
Adjusted	8.9 (0.5) ^{c,d,f}	7.2 (0.7) ^{d,f}	4.9 (0.7) ^{c,e}	4.7 (0.8) ^{c,e}

Note: Table displays the percentage of active-duty and Reserve component personnel by number of times deployed in the past 36 months. The standard error of each estimate is presented in parentheses. Definitions and measures of substance use are given in Section 2.5.3. Adjusted estimates have been standardized to correct for differences in the demographic distributions between the deployment groups, one or more time(s) and not deployed. Gender, age group, enlisted/officer indicator, marital status, education, and race/ethnicity were used in this standardization process. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aAGR/FTS/AR refers to the Active Guard/Reserve Program and/or full-time National Guard/Reservist (Membership Category, Q2; Current Work Status, Q13).

^bEstimates for deployed one or more time(s) may not agree with those reported in Table 9.5. The 2005 active-duty survey asked about the number of times respondents were deployed during the past 3 years, while the Reserve component survey asked about the number of times respondents were deployed during the past 2 years. To make the time periods comparable, we based estimates for deployed one or more time(s) on Q148, which asks about recency of last deployment and then we inferred deployment during the past 3 years. This same method was applied to active-duty study data for this table.

^cEstimate is significantly different from the active-duty sample, not deployed in the past 36 months, at the 95% confidence level.

^dEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, not deployed in the past 36 months, at the 95% confidence level.

^eEstimate is significantly different from the active-duty sample, deployed one or more times in the past 36 months, at the 95% confidence level.

^fEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, deployed one or more times in the past 36 months, at the 95% confidence level.

^gPercentage of respondents in the total Reserve component sample who reported any nonmedical use of PCP/LSD/hallucinogens, cocaine, methamphetamines, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^hPercentage of respondents in the total Reserve component sample who reported any nonmedical use of marijuana, PCP/LSD/hallucinogens, cocaine, methamphetamines, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

ⁱAUDIT score ≥ 20 .

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Dependence Symptoms, Q39–Q42; Marijuana, Q66A, Q67A, and Q68A; Any Illicit Drug Use Except Marijuana, Q66B–J, Q67B–J, and Q69B–J; Any Illicit Drug Use, Q66A–J, Q67A–J, and Q68A–J; Any Smoking, Past 30 Days, Q49 and Q50; Heavy Smoking, Q50; Nicotine Dependence, Q53–Q58; Last Time Deployed, Q148). Active-duty estimates were computed from the 2005 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel

Past-year illicit drug use was also significantly higher for deployed compared with nondeployed personnel. This finding held whether looking at any illicit drug use excluding marijuana or any illicit drug (including marijuana). It is notable that the deployed/not deployed differences were larger among Reserve component personnel than among active-duty personnel. For example, 12.4% of active-duty deployed personnel reported any illicit use in the past year compared with 10.3% of active-duty personnel who were not deployed, whereas 12.6% of Reserve component deployed personnel reported past year illicit drug use compared with 8.3% who were not deployed.

Adjusted estimates for tobacco use showed a somewhat different pattern between active-duty and Reserve component personnel who were deployed and those who were not deployed. Deployed active-duty personnel showed significantly higher rates than nondeployed personnel for past-year cigarette smoking (44.5% vs. 39.6%), heavy smoking (12.8% vs. 9.9%), and nicotine dependence (8.9% vs. 7.2%). In contrast, there were no significant differences between deployed and nondeployed Reserve component personnel on these measures (32.1% vs. 28.9% past-year cigarette use; 8.4% vs. 7.6% heavy cigarette use; 4.9% vs. 4.7% nicotine dependence). As noted in the section above, active-duty personnel were more likely than Reserve component personnel to report tobacco use.

Table 10.4 builds on Table 10.3 but presents substance abuse findings for active-duty and Reserve component personnel by theater of operations. Both unadjusted and adjusted estimates are presented, but as with other tables in this chapter, only adjusted estimates are discussed. Indicators are discussed for heavy alcohol use, illicit drug use, possible alcohol dependence, cigarette smoking, and nicotine dependence. As shown, active-duty personnel who served in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) were more likely to have higher rates of heavy alcohol use than those who did not serve in a theater. In contrast, Reserve component personnel did not show a statistically significant difference by theater. For illicit drug use, the patterns were similar between active-duty and Reserve component personnel, but the comparisons

that were significantly different varied slightly. Active-duty personnel who served in an operational theater besides OIF/OEF had higher use rates than those who did not serve in a theater, whereas Reserve component personnel who served in OIF/OEF and in other theaters had higher rates than those who did not serve in a theater. For possible alcohol dependence (AUDIT score greater than or equal to 20), active-duty personnel did not show any differences by theater. In contrast, Reserve component personnel who served in other theaters showed significantly higher rates of alcohol dependence than Reserve component personnel who served in OIF/OEF or did not serve in a theater.

For past-year cigarette smoking, active-duty personnel who served in OIF/OEF had higher rates than those who served in other theaters or who did not serve in a theater (44.3% vs. 40.3% and 40.5%). Among Reserve component personnel, those serving in other theaters (34.8%) had a significantly higher rate than those who did not serve in a theater (27.9%). Heavy smoking among active-duty personnel who served in OIF/OEF (12.9%) was significantly higher than among those who did not serve in a theater (10.0%), and Reserve component personnel serving in other theaters (9.9%) was higher than those not serving in any theater (6.8%). For nicotine dependence, active-duty personnel who served in OIF/OEF were significantly more likely to show dependence (9.1%) than those who did not serve in any theater (7.1%). Reserve component personnel who served in other theaters besides OIF/OEF were more likely to show dependence (6.2%) than those who did not serve in any theater (3.9%).

10.2.3 Substance Use among Individual Military Components

Figures 10.1 through 10.3 (drawn from Appendix tables B.16 through B.18) present various substance use measures by individual military component. The appendix tables present unadjusted and adjusted estimates, but our discussion here focuses just on adjusted estimates. Figure 10.1 shows adjusted estimates of heavy alcohol use by active duty and individual Reserve component, as well as overall totals. For heavy alcohol use, adjusted estimates indicate that Army

Table 10.4

ACTIVE-DUTY AND RESERVE COMPONENT COMPARATIVE ANALYSES FOR SUBSTANCE USE, BY THEATER OF OPERATIONS, UNADJUSTED AND ADJUSTED

Substance Use	Active Duty			Total Reserve Component, Excluding AGR/FTS/AR ^a		
	Served in Operation Iraqi or Enduring Freedom	Served in Other Theater ^b	Did Not Serve in Theaters	Served in Operation Iraqi or Enduring Freedom	Served in Other Theater ^b	Did Not Serve in Theaters
Past-30-Day Heavy Alcohol Use						
Unadjusted	19.9 (0.9) ^{c,d}	13.4 (2.0) ^{e,f}	19.0 (1.7) ^{c,d}	16.1 (1.8)	13.6 (1.8) ^{e,f}	16.6 (1.6)
Adjusted	20.2 (1.0) ^{f,h}	18.7 (1.9) ^h	16.5 (1.2) ^e	16.5 (1.3) ^e	18.3 (1.8)	14.2 (1.2) ^{c,e}
Past-Year Any Illicit Drug except Marijuanaⁱ						
Unadjusted	9.5 (0.8) ^{c,h}	7.8 (0.8) ^{e,f}	10.1 (0.8) ^{c,h}	9.8 (0.9) ^h	10.1 (1.5)	7.4 (0.8) ^{e-g}
Adjusted	10.7 (0.7) ^h	10.6 (0.9) ^h	9.5 (0.6) ^h	9.2 (0.7) ^h	10.7 (1.6) ^h	5.8 (0.7) ^{c-g}
Past-Year Any Illicit Drug^j						
Unadjusted	10.9 (1.0) ^c	8.9 (1.0) ^{e-g}	11.3 (0.9) ^c	12.6 (1.2) ^{c,h}	10.9 (1.6)	10.0 (0.8) ^g
Adjusted	12.1 (0.9) ^h	12.5 (1.1) ^{f,h}	10.3 (0.6) ^{c,h}	12.2 (1.0) ^h	12.3 (1.6) ^h	7.8 (0.7) ^{c-g}
Possible Alcohol Dependence^k						
Unadjusted	3.1 (0.4) ^c	1.6 (0.5) ^{e,f}	3.1 (0.4) ^c	2.7 (0.4)	4.1 (1.2)	2.2 (0.4)
Adjusted	3.1 (0.4) ^{d,h}	2.6 (0.7) ^d	2.4 (0.3) ^d	3.1 (0.4) ^{d,h}	7.1 (1.7) ^{c,e-h}	1.8 (0.3) ^{d,e,g}
Past-Year Cigarette Smoking						
Unadjusted	44.3 (1.4) ^{c,d,g,h}	32.7 (2.1) ^{e,f}	44.2 (2.0) ^{c,d,g,h}	30.8 (1.8) ^{e,f}	29.1 (2.3) ^{e,f}	30.6 (1.7) ^{e,f}
Adjusted	44.3 (1.2) ^{c,d,f-h}	40.3 (1.6) ^{d,e,g,h}	40.5 (1.5) ^{d,e,g,h}	30.8 (1.5) ^{c,e,f}	34.8 (2.3) ^{c,e,f,h}	27.9 (1.7) ^{c-f}
Heavy Smoking						
Unadjusted	12.3 (0.9) ^{c,h}	8.5 (0.8) ^e	10.0 (1.3)	9.7 (1.1)	9.5 (1.6)	7.7 (0.8) ^e
Adjusted	12.9 (0.8) ^{d,f-h}	11.2 (0.9) ^{g,h}	10.0 (1.3) ^{e,h}	8.3 (0.7) ^{c,e}	9.9 (1.4) ^{e,h}	6.8 (0.7) ^{c-f}
Nicotine Dependence						
Unadjusted	8.4 (0.6) ^{c,g,h}	5.9 (0.7) ^e	7.0 (0.8) ^h	6.1 (0.8) ^e	6.2 (1.0)	4.6 (0.7) ^{e,f}
Adjusted	9.1 (0.5) ^{d,f-h}	7.9 (0.8) ^{g,h}	7.1 (0.8) ^{e,g,h}	5.1 (0.6) ^{c,e,f}	6.2 (0.9) ^{e,h}	3.9 (0.6) ^{c-f}

Note: Table displays the percentage of active-duty and Reserve component personnel by location of deployment who reported substance use indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Column group estimates may not sum to 100 because of rounding. Definitions and measures of substance use are given in Section 2.5.3. Adjusted estimates have been standardized to correct for differences in the demographic distributions between the groups identified by the six columns in this table. Gender, age group, enlisted/officer indicator, marital status, education, and race/ethnicity were used in this standardization process.

^aAGR/FTS/AR refers to the Active Guard/Reserve Program and/or full-time National Guard/Reservist (Membership Category, Q2; Current Work Status, Q13).

(Table continued on next page)

Table 10.4 ACTIVE-DUTY AND RESERVE COMPONENT COMPARATIVE ANALYSES FOR SUBSTANCE USE, BY THEATER OF OPERATIONS, UNADJUSTED AND ADJUSTED (CONTINUED)

^bOther theater includes the following areas:

Operations Desert Shield or Desert Storm (e.g., the Persian Gulf)

Operation Just Cause (e.g., Panama)

Operation Restore Hope (e.g., Somalia)

Operation Uphold Democracy (e.g., Haiti)

Operations Joint Endeavor or Joint Guard (e.g., Bosnia)

Operation Safe Haven (e.g., Cuba)

Tsunami Relief (e.g., South Asia)

Other combat and/or peace-keeping mission

Other remote

Excludes hurricane relief (e.g., Louisiana, Texas, Mississippi) and Homeland Security (airport security and/or security for active-duty installations).

Respondents serving in Operation Iraqi or Enduring Freedom, as well as another theater, only appear in the Operation Iraqi or Enduring Freedom column.

^cEstimate is significantly different from the active-duty sample, served in other theater, at the 95% confidence level.

^dEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, served in other theater, at the 95% confidence level.

^eEstimate is significantly different from the active-duty sample, served in Operation Iraqi or Enduring Freedom, at the 95% confidence level.

^fEstimate is significantly different from the active-duty sample, did not serve in theaters, at the 95% confidence level.

^gEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, served in Operation Iraqi or Enduring Freedom, at the 95% confidence level.

^hEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, did not serve in theaters, at the 95% confidence level.

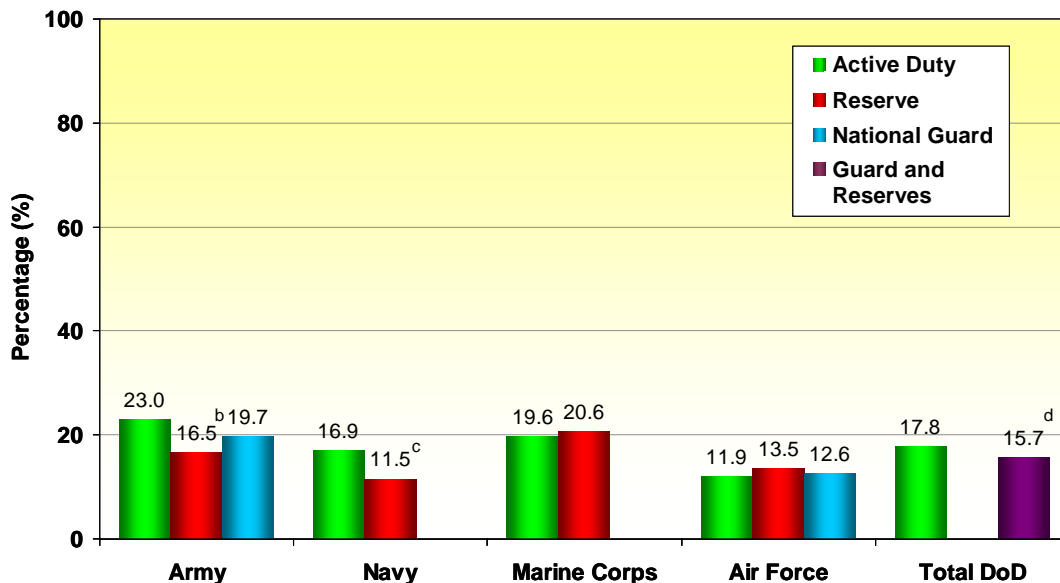
ⁱPercentage of respondents in the total Reserve component sample who reported any nonmedical use of PCP/LSD/hallucinogens, cocaine, methamphetamines, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^jPercentage of respondents in the total Reserve component sample who reported any nonmedical use of marijuana, PCP/LSD/hallucinogens, cocaine, methamphetamines, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^kAUDIT score \geq 20.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Dependence Symptoms, Q39–Q42; Marijuana, Q66A, Q67A, and Q68A; Any Illicit Drug Use Except Marijuana, Q66B–J, Q67B–J, and Q69B–J; Any Illicit Drug Use, Q66A–J, Q67A–J, and Q68A–J; Any Smoking, Past 30 Days, Q49 and Q50; Heavy Smoking, Q50; Nicotine Dependence, Q53–Q58; Last Time Deployed, Q148). Active-duty estimates were computed from the 2005 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel.

Figure 10.1 Heavy^a alcohol use, adjusted for sociodemographic differences



^aHeavy alcohol use is defined as 5 or more drinks per occasion at least once a week in past 30 days.

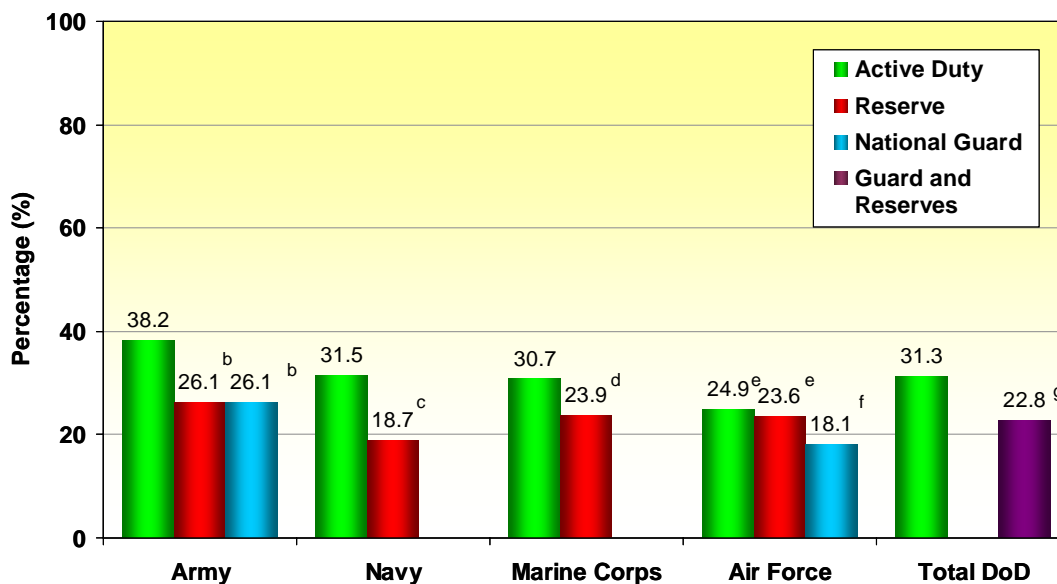
^bEstimate is significantly different from Army active duty at the 95% confidence level.

^cEstimate is significantly different from Navy active duty at the 95% confidence level.

^dEstimate is significantly different from total DoD active duty at the 95% confidence level.

Note: Data derived from Table B.16 in Appendix B.

Figure 10.2 Any^a cigarette smoking, adjusted for sociodemographic differences



^aAny cigarette smoking is defined as any cigarette use in past 30 days.

^bEstimate is significantly different from Army active duty at the 95% confidence level.

^cEstimate is significantly different from Navy active duty at the 95% confidence level.

^dEstimate is significantly different from Marine Corps active duty at the 95% confidence level.

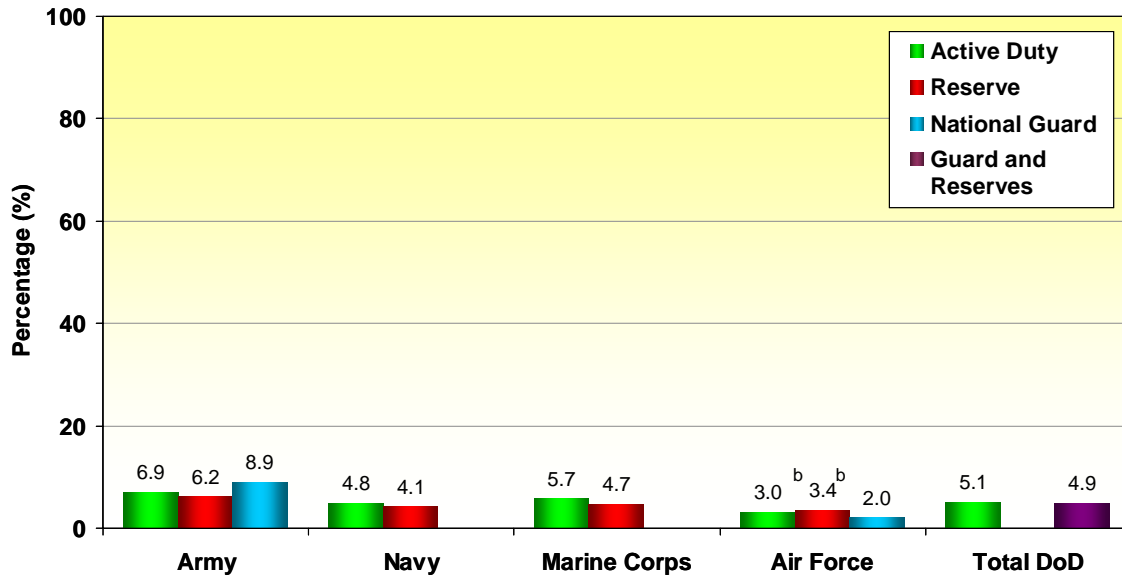
^eEstimate is significantly different from Air Force National Guard at the 95% confidence level.

^fEstimate is significantly different from Air Force active duty and Air Force Reserve at the 95% confidence level.

^gEstimate is significantly different from total DoD active duty at the 95% confidence level.

Note: Data derived from Table B.17 in Appendix B.

Figure 10.3 Illicit drug use,¹ adjusted for sociodemographic differences



^aIllicit drug use is defined as any illicit drug use in past 30 days.

^bEstimate is significantly different from Air Force National Guard at the 95% confidence level.

Note: Data derived from Table B.18 in Appendix B.

active-duty personnel were significantly more likely to drink heavily (23.0%) than Army Reserve personnel (16.5%). Army National Guard estimates of heavy alcohol use, however, were not significantly higher than Army Reserve estimates. Navy active-duty personnel followed a similar pattern. Navy active-duty heavy alcohol use (16.9%) was significantly higher than the Navy Reserve heavy alcohol use rate (11.5%). For Marine Corps personnel, active-duty heavy alcohol use rates did not significantly differ from the Marine Corps Reserve rates. Air Force Reserve rates (13.5%) were not significantly higher than Air Force National Guard (12.6%) and Air Force active duty (11.9%) rates. For total DoD, active duty prevalence of heavy alcohol use (17.8%) was significantly higher than the combined rate for Guard and Reserves (15.7%).

Cigarette use in the past 30 days is shown in Figure 10.2. As discussed previously, active-duty personnel are more likely than Reserve component personnel to report tobacco use. Adjusted estimates show that Army active-duty personnel were significantly more likely to report cigarette use (38.2%) than Army National Guard (26.1%) and Army Reserve (26.1%) personnel. Similarly, Navy and Marine Corps active-duty personnel (31.5%, 30.7%, respectively) were more likely to report

any cigarette smoking compared with their respective Reserve components (18.7%, and 23.9%, respectively).

Similarly, Air Force active-duty and Air National Guard personnel had significantly higher smoking rates (24.9% and 23.6%, respectively) than Air National Guard personnel (18.1%). Across the total DoD, active-duty personnel were significantly more likely (31.3%) to smoke cigarettes than Guard and Reserve personnel (22.8%).

Figure 10.3 shows illicit drug use during the past 30 days. Of note, the Army active-duty rate (6.9%) was not statistically different from the Army National Guard rate (8.9%) or Army Reserve rate (6.2%). The Navy active-duty rate (4.8%) was not significantly higher than the Navy Reserve rate (4.1%), and the Marine Corps active-duty rate (5.7%) was not significantly higher than the Marine Corps Reserve rate (4.7%). Air Force active-duty (3.0%) and Air Force Reserve rates (3.4%) were slightly but significantly higher than Air Force National Guard's rate (2.0%). Overall, differences among active duty and Guard and Reserves were not statistically significant.

10.3 Stress and Mental Health

This section compares stress and mental health indicators among active-duty and Reserve component personnel. As with the sections above, the tables also include unadjusted and adjusted estimates for the active duty sample and the Reserve component excluding AGR/FTS/AR and just the Reserve component AGR/FTS/AR groups. Unadjusted estimates are for descriptive purposes only. Adjusted estimates allow more meaningful comparisons between active-duty and Reserve component personnel because they have been standardized to provide comparable sociodemographic characteristics across the groups.

As mentioned previously, standardization of the estimates was performed using pairwise significance tests between all possible individual Service and Reserve pairings; a significance test was also conducted between the total DoD active duty, and the combined Guard and Reserves. Reserve component estimates exclude full-time and/or activated Guard/Reservists in these estimates. Even though each measure is shown unadjusted and adjusted, our discussion focuses on adjusted estimates.

10.3.1 Stress and Mental Health Prevalence

Adjusted estimates in Table 10.5 show that active-duty personnel were significantly more likely to report high work stress (33.2%) compared with the Reserve component personnel excluding AGR/FTS/AR and AGR/FTS/AR personnel (12.3% and 19.0%, respectively). In contrast, high family stress did not differ significantly among active-duty personnel (18.9%) and Reserve component personnel (18.9% for Reserve component excluding AGR/FTS/AR, 18.6% for AGR/FTS/AR). Women on active duty were significantly more likely to report that they experienced a “great deal” or a “fairly large amount” of stress as a woman (36.7%) compared with the Reserve component excluding AGR/TS/AR and the AGR/FTS/AR groups (21.0% and 27.9%, respectively).

Active-duty personnel were significantly more likely to need further evaluation for depression (23.2%) than

either of the Reserve component groups (17.5% and 19.0%), and more likely to have met screening criteria for Generalized Anxiety Disorder (GAD) symptoms than the Reserve component groups (13.1% vs. 10.1% and 8.5% respectively).

Of interest, there were no significant differences between active-duty personnel and Reserve component personnel in the likelihood of meeting screening criteria for posttraumatic stress disorder (PTSD) (7.1% active duty, 6.9% Reserve component excluding AGR/FTS/AR, and 6.1% AGR/FTS/AR).

Job satisfaction was lower among active duty than among Reserve component personnel. On average, 66.4% of active-duty personnel reported high satisfaction compared with 78.1% of Reserve component personnel excluding AGR/FTS/AR and 85.2% of AGR/TS/AR personnel. Figure 10.4 shows that the higher satisfaction was evident across all Reserve components relative to their active duty counterpart (except the Marine Corps Reserve whose estimate was suppressed).

Active-duty personnel were significantly more likely to have been deployed in the past year (29.9%) than Reserve component personnel excluding AGR/FTS/AR (18.8%), but about the same as AGR/FTS/AR personnel (24.9%).

10.3.2 Stress, Mental Health, and Deployment

Table 10.6 contrasts active-duty and Reserve component personnel excluding AGR/FTS/AR regarding stress and mental health indicators by deployment status during the past 36 months. As with the prior discussion above, our focus is on the adjusted estimates. As the table shows, active-duty personnel who were deployed were significantly more likely to report high stress while carrying out their military duties (35.4%) compared with those who were not deployed (30.3%). In contrast, although work stress was notably lower among Reserve component personnel than active-duty personnel, deployed Reserve component personnel did not have significantly higher stress rates than nondeployed persons (13.8% vs. 10.5%). Stress in the family showed

Table 10.5

ACTIVE-DUTY AND RESERVE COMPONENT COMPARATIVE ANALYSES FOR STRESS AND MENTAL HEALTH, UNADJUSTED AND ADJUSTED

Stress/Mental Health	Active Duty	Total Reserve Component, Excluding AGR/FTS/AR ^a	AGR/FTS/AR ^a
High Military Work Stress			
Unadjusted	32.5 (0.9) ^{b,c}	12.9 (1.3) ^{c,d}	18.4 (1.7) ^{b,d}
Adjusted	33.2 (0.9) ^{b,c}	12.3 (1.1) ^{c,d}	19.0 (1.8) ^{b,d}
High Family Stress			
Unadjusted	18.9 (0.5)	19.2 (0.7)	16.9 (1.6)
Adjusted	18.9 (0.5)	18.9 (0.6)	18.6 (1.7)
Need for Further Depression Evaluation			
Unadjusted	22.3 (0.8) ^{b,c}	18.8 (0.6) ^d	17.7 (1.9) ^d
Adjusted	23.2 (0.8) ^{b,c}	17.5 (0.5) ^d	19.0 (1.8) ^d
Met Screening Criteria for GAD^e Symptoms			
Unadjusted	12.7 (0.5) ^{b,c}	10.7 (0.7) ^{c,d}	8.0 (0.9) ^{b,d}
Adjusted	13.1 (0.5) ^{b,c}	10.1 (0.6) ^d	8.5 (1.0) ^d
Need for Further PTSD^f Evaluation			
Unadjusted	6.7 (0.5)	7.7 (0.8) ^c	5.4 (0.7) ^b
Adjusted	7.1 (0.6)	6.9 (0.6)	6.1 (0.8)
Stress as a Woman^g			
Unadjusted	35.5 (1.2) ^{b,c}	22.2 (1.0) ^d	27.2 (3.9) ^d
Adjusted	36.7 (1.2) ^{b,c}	21.0 (1.0) ^d	27.9 (3.7) ^d
Job Satisfaction^h			
Unadjusted	66.2 (1.6) ^{b,c}	77.3 (1.1) ^{c,d}	88.7 (1.3) ^{b,d}
Adjusted	66.4 (1.6) ^{b,c}	78.1 (0.9) ^{c,d}	85.2 (1.4) ^{b,d}
Deployment in Past Year			
Unadjusted	30.6 (2.5) ^{b,c}	18.1 (2.0) ^{c,d}	23.9 (2.0) ^{b,d}
Adjusted	29.9 (2.5) ^b	18.8 (1.9) ^{c,d}	24.9 (2.2) ^b

Note: Table displays the percentage of active-duty and Reserve component personnel who reported stress and mental health problems. The standard error of each estimate is presented in parentheses. Pairwise significance tests were conducted between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Definitions and measures of stress and mental health are given in Section 2.5.3. Adjusted estimates have been standardized to correct for differences in the demographic distributions between the active-duty and the Reserve component populations. Service, gender, age group, enlisted/officer indicator, marital status, education, and race/ethnicity were used in this standardization process and the six Reserve components were collapsed into the four active service groupings of Army, Navy, Marine Corps, and Air Force.

^aAGR/FTS/AR refers to the Active Guard/Reserve Program and/or full-time National Guard/Reservist (Membership Category, Q2; Current Work Status, Q13).

^bEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR at the 95% confidence level.

^cEstimate is significantly different from the AGR/FTS/AR at the 95% confidence level.

^dEstimate is significantly different from the active duty sample at the 95% confidence level.

^eGAD is Generalized Anxiety Disorder.

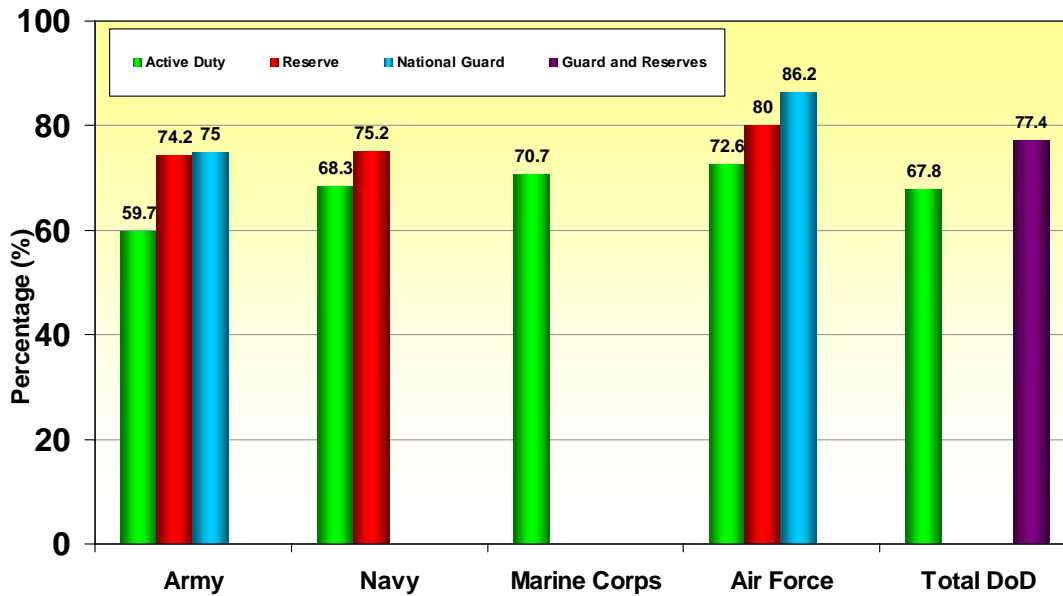
^fPTSD is posttraumatic stress disorder. Meeting screening criteria suggests a need for further evaluation, not a clinical diagnosis.

^gEstimate is among females. Refers to those who indicated a "great deal" or a "fairly large amount" of stress.

^hEstimate refers to personnel reporting that they were "satisfied" or "very satisfied" with their work assignment.

Source: 2006 Department of Defense Reserve Component Survey (High Military Work Stress, Q89; High Family Stress, Q90; Need for Further Depression Evaluation, Q97–Q99; Screening for GAD Symptoms, Q100; Serious Psychological Distress, Q97; PTSD Symptoms, Q104; Stress as a Woman, Q165; Job Satisfaction, Q160, Deployed in Past 24 Months, Q147). Active-duty estimates were computed from the 2005 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel.

Figure 10.4 Comparisons of job satisfaction,^a RC (2006) and AD (2005)



^aJob satisfaction defined as those who reported that they were satisfied or very satisfied with their work assignment. Estimates for Reserves and Guard are significantly different from the Active Duty at the 95% confidence level. Marine Corps Reserve estimate suppressed due to small sample or large variance.

Table 10.6 ACTIVE-DUTY AND RESERVE COMPONENT COMPARATIVE ANALYSES FOR STRESS/MENTAL HEALTH, BY DEPLOYMENT STATUS, UNADJUSTED AND ADJUSTED

Stress/Mental Health	Active Duty		Total Reserve Component, Excluding AGR/FTS/AR ^a	
	Deployed 1+ Time(s) ^b	Not Deployed	Deployed 1+ Time(s) ^b	Not Deployed
Stress while Carrying out Military Duties, Past 12 Months				
Unadjusted	34.2 (1.0) ^{c-e}	29.9 (1.4) ^{d-f}	14.4 (0.9) ^{c,f}	11.2 (2.3) ^{c,f}
Adjusted	35.4 (1.0) ^{c-e}	30.3 (1.3) ^{d-f}	13.8 (0.9) ^{c,f}	10.5 (2.0) ^{c,f}
High Stress in Family, Past 12 Months				
Unadjusted	19.9 (0.7) ^c	17.7 (0.8) ^{d,f}	19.9 (0.6) ^c	18.7 (1.2)
Adjusted	20.3 (0.7) ^c	17.6 (0.8) ^{d,f}	20.3 (0.7) ^c	18.1 (1.0)
Need for Further Depression Evaluation				
Unadjusted	22.6 (0.8) ^{d,e}	21.2 (1.2) ^e	19.9 (0.9) ^f	17.8 (0.9) ^{c,f}
Adjusted	24.0 (0.8) ^{c-e}	21.6 (1.0) ^{e,f}	19.1 (1.0) ^{e,f}	16.2 (0.7) ^{c,d,f}
Met Screening Criteria for GAD^g Symptoms, Past 30 Days				
Unadjusted	13.0 (0.6) ^d	12.0 (0.9)	10.9 (0.7) ^f	10.3 (1.3)
Adjusted	13.7 (0.6) ^{d,e}	12.2 (0.8) ^e	10.4 (0.7) ^f	9.5 (1.0) ^{c,f}
Limited Usual Activities for 11 or More Days in Past Month Because of Poor Mental Health^h				
Unadjusted	3.1 (0.3) ^e	2.5 (0.4) ^e	2.4 (0.4) ^e	1.2 (0.3) ^{c,d,f}
Adjusted	3.2 (0.3) ^e	2.5 (0.4) ^e	2.5 (0.4) ^e	1.2 (0.2) ^{c,d,f}
Need for Further PTSDⁱ Evaluation, Past 30 Days				
Unadjusted	7.2 (0.6) ^d	5.8 (0.7) ^d	9.0 (0.7) ^{c,f}	6.6 (1.2)
Adjusted	7.6 (0.6) ^c	6.1 (0.8) ^{d,f}	8.4 (0.7) ^{c,e}	5.9 (0.8) ^d

(Table continued on next page)

Table 10.6

ACTIVE-DUTY AND RESERVE COMPONENT COMPARATIVE ANALYSES FOR STRESS/MENTAL HEALTH, BY DEPLOYMENT STATUS, UNADJUSTED AND ADJUSTED (CONTINUED)

Stress/Mental Health	Active Duty		Total Reserve Component, Excluding AGR/FTS/AR ^a	
	Deployed 1+ Time(s) ^b	Not Deployed	Deployed 1+ Time(s) ^b	Not Deployed
Suicidal Ideation, Past Year				
Unadjusted	5.1 (0.4) ^d	4.6 (0.4) ^d	6.9 (0.4) ^{c,e,f}	4.1 (0.5) ^d
Adjusted	5.4 (0.4) ^{d,e}	4.5 (0.4) ^d	7.1 (0.5) ^{c,e,f}	3.8 (0.4) ^{d,f}
Attempted Suicide, Past Year				
Unadjusted	0.9 (0.1) ^d	0.6 (0.2) ^d	2.3 (0.4) ^{c,e,f}	1.1 (0.2) ^d
Adjusted	1.0 (0.1) ^d	0.6 (0.2) ^d	2.3 (0.5) ^{c,e,f}	0.9 (0.2) ^d

Note: Table displays the percentage of active-duty and Reserve component personnel by number of times deployed in the past 36 months who reported the stress and mental health issues indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Definitions are given in Section 2.5.3. Adjusted estimates have been standardized to correct for differences in the demographic distributions between the deployment groups, one or more times and not deployed. Service, gender, age group, enlisted/officer status, marital status, education, and race/ethnicity were used in this standardization process.

^aAGR/FTS/AR refers to the Active Guard/Reserve Program and/or full-time National Guard/Reservist (Membership Category, Q2; Current Work Status, Q13).

^bEstimates for deployed 1 or more times may differ with those in Table 9.9. The 2005 active-duty survey asked the number of times deployed during the past 3 years, while the Reserve component survey asked the number of times deployed during the past 2 years. To make the time periods comparable, we based estimates on Q148, which asks recency of last deployment and then inferred deployment during the past 3 years. This same method was applied to active-duty data for this table.

^cEstimate is significantly different from active-duty personnel, not deployed in the past 36 months, at the 95% confidence level.

^dEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, deployed one or more times in the past 36 months, at the 95% confidence level.

^eEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, not deployed in the past 36 months, at the 95% confidence level.

^fEstimate is significantly different from the active-duty sample, deployed one or more times in the past 36 months, at the 95% confidence level.

^gGAD is Generalized Anxiety Disorder.

^hBased on respondents' perception of number of days when mental health limited usual activities.

ⁱPTSD is posttraumatic stress disorder.

Source: 2006 Department of Defense Reserve Component Survey (Last Time Deployed, Q148; Stress at Military Job, Q89; Family Stress, Q90; Need for Further Depression Evaluation, Q97–Q99; Screening for GAD Symptoms, Q100; Limited Usual Activities, Q87; PTSD Symptoms, Q104; Suicidal Ideation, Q101A; Attempted Suicide, Q102A). Active-duty estimates were computed from the 2005 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel.

a similar pattern to stress at work in that deployed active-duty personnel reported significantly higher levels than nondeployed persons (20.3% vs. 17.6%), but the Reserve component personnel did not show significant differences. Of interest, Reserve component personnel showed the same general pattern as active-duty personnel on both stress indicators (i.e., the differences were in the same direction), but the differences were smaller for the Reserve component personnel and not significant.

Active-duty and Reserve component personnel showed similar patterns of results for need for further depression evaluation and met screening criteria for anxiety

symptoms. Deployed personnel showed significantly higher rates of depression than nondeployed personnel (24.0% vs. 21.6%, active duty; 19.1% vs. 16.2% Reserve component), but no differences in anxiety symptoms due to deployment (13.7% vs. 12.2% active duty; 10.4% vs. 9.5%).

Of interest, few active-duty or Reserve component personnel felt that poor mental health limited their activities 11 or more days in the past month. Among active-duty personnel there were no statistical differences among those who had been deployed and those who had not been deployed (3.2% vs. 2.5%), whereas for Reserve component personnel, those

deployed were significantly more likely to indicate limited activity than those not deployed (2.5% vs. 1.2%).

The association of deployment status and meeting screening criteria for PTSD symptoms was similar for active-duty and Reserve component personnel. Those who were deployed showed significantly higher rates of meeting criteria than those who were not deployed (7.6% vs. 6.1% active duty; 8.4% vs. 5.9% Reserve component).

There were notable differences by deployment status between active-duty and Reserve component personnel in reports of suicidal ideation and suicide attempts. Active-duty personnel showed no significant differences due to deployment (5.4% vs. 4.5% ideation; 1.0% vs. 0.6% attempts), whereas Reserve component personnel who were deployed were significantly more likely to report these behaviors than those not deployed (7.1% vs. 3.8% ideation; 2.3% vs. 0.9% attempts).

Table 10.7 contrasts active-duty and Reserve component personnel excluding AGR/FTS/AR regarding stress and mental health indicators by operational theater where they served. As the table shows, higher prevalences of stress and stress-related problems were associated with theater of operation. AGR/FTS/AR personnel were not included in this analysis.

Active-duty personnel who served in OIF/OEF reported a significantly higher prevalence of stress while carrying out military duties (34.9%) compared with those not serving in any theater (31.2%). In contrast, although Reserve component personnel overall showed lower work stress, those who had served in OIF/OEF in the past 36 months reported significantly higher stress while carrying out military duties (15.9%) than those in other theaters (10.0%) and those not serving in a theater (9.4%). For family stress, active-duty personnel showed no differences related to theater (19.8% OIF/OEF vs. 18.6% other vs. 18.5% none), but Reserve component personnel who served in OIF/OEF reported significantly higher family stress (21.5%) than those who did not serve in a theater (17.0%).

Theater of operation was not associated with the need for further depression evaluation or meeting screening criteria for anxiety symptoms for active-duty personnel (about 23% depression, about 13% anxiety), but it did differ significantly for Reserve component personnel.

Reserve component personnel who served in OIF/OEF were significantly more likely to report symptoms than those who did not serve in an operational theater (20.7% vs. 15.0% depression; 12.5% vs. 8.1% anxiety). Similarly, active-duty personnel did not show theater differences for poor mental health limiting normal activities 11 or more days in the past month (3.4% vs. 2.5%), whereas Reserve component personnel did. Even though the overall rates were similar to those of active-duty personnel, the rates for Reserve component personnel who served in OIF/OEF (1.9%) and other theaters (3.7%) were significantly higher than those who did not serve in a theater (1.1%).

Meeting screening criteria for symptoms of PTSD showed striking differences between active-duty and Reserve component personnel by theater where served. For PTSD symptoms, active-duty personnel showed no statistically significant differences by theater (7.5% OIF/OEF, 6.1% other, 6.7% none), whereas Reserve component personnel did. Reserve component personnel who served in OIF/OEF showed significantly higher rates of PTSD symptoms (10.1%) than active-duty personnel regardless of theater and higher rates than Reserve component personnel who served in no theater (4.2%), but not higher than Reserve component personnel who served in other theaters (8.2%).

Suicidal ideation and suicide attempts also showed striking differences between active-duty and Reserve component personnel by theater where served. Active-duty personnel showed no statistically significant differences by theater (4.5% to 5.3% ideation, about .7% to 1.1% attempts), but Reserve component personnel did. Suicidal ideation or thoughts were more likely to be reported by Reserve component personnel who served in OIF/OEF or in other theaters compared with those who did not serve (6.4% and 9.8%, vs. 3.1%). Suicide attempts were significantly higher among those who served in OIF/OEF (1.6%) and in theaters other than

Table 10.7 ACTIVE-DUTY AND RESERVE COMPONENT COMPARATIVE ANALYSES FOR STRESS AND MENTAL HEALTH, BY THEATER OF OPERATIONS, UNADJUSTED AND ADJUSTED

Stress/Mental Health	Active Duty			Total Reserve Component, Excluding AGR/FTS/AR ^a		
	Served in Operation Iraqi or Enduring Freedom	Served in Other Theater ^b	Did Not Serve in Theaters	Served in Operation Iraqi or Enduring Freedom	Served in Other Theater ^b	Did Not Serve in Theaters
Stress while Carrying Out Military Duties, Past 12 Months						
Unadjusted	33.7 (1.1) ^{c-f}	29.6 (1.6) ^{d-g}	32.4 (1.7) ^{d-f}	16.4 (1.9) ^{c,e-h}	9.3 (1.2) ^{c,d,g,h}	10.5 (1.6) ^{c,d,g,h}
Adjusted	34.9 (1.1) ^{d-f,h}	33.2 (1.7) ^{d-f}	31.2 (1.5) ^{d-g}	15.9 (1.6) ^{c,e-h}	10.0 (1.1) ^{c,d,g,h}	9.4 (1.4) ^{c,d,g,h}
High Stress in Family, Past 12 Months						
Unadjusted	19.4 (0.8) ^c	16.6 (1.0) ^{d,g,h}	19.8 (1.0) ^c	20.9 (1.6) ^c	17.7 (1.4)	18.5 (1.3)
Adjusted	19.8 (0.8) ^f	18.6 (1.2)	18.5 (1.0)	21.5 (1.2) ^f	19.2 (1.4)	17.0 (1.1) ^{d,g}
Need for Further Depression Evaluation						
Unadjusted	21.6 (0.9) ^{c,e,f}	18.0 (1.2) ^{g,h}	25.1 (1.6) ^{c,e,f}	21.2 (1.6) ^e	16.2 (1.1) ^{d,g,h}	17.5 (1.1) ^{g,h}
Adjusted	23.1 (0.8) ^{e,f}	21.8 (1.2) ^{e,f}	23.7 (1.5) ^{e,f}	20.7 (1.3) ^f	17.2 (1.3) ^{c,g,h}	15.0 (1.0) ^{c,d,g,h}
Met Screening Criteria for GADⁱ Symptoms, Past 30 Days						
Unadjusted	12.6 (0.7) ^{e,f}	10.6 (0.9) ^h	13.7 (0.8) ^{c,e,f}	12.7 (1.8)	9.4 (1.0) ^{g,h}	9.3 (0.6) ^{g,h}
Adjusted	13.3 (0.7) ^{e,f}	12.7 (1.0) ^f	12.9 (0.8) ^{e,f}	12.5 (1.4) ^f	10.1 (1.1) ^{g,h}	8.1 (0.5) ^{c,d,g,h}
Limited Usual Activities for 11 or More Days in Past Month Because of Poor Mental Health^j						
Unadjusted	3.2 (0.3) ^{c,d,f}	2.0 (0.3) ^g	3.0 (0.5) ^{d,f}	1.8 (0.3) ^{g,h}	2.8 (0.8) ^f	1.4 (0.4) ^{e,g,h}
Adjusted	3.4 (0.4) ^{d,f}	2.9 (0.5) ^f	2.5 (0.5) ^f	1.9 (0.3) ^{f,g}	3.7 (0.9) ^f	1.1 (0.3) ^{c-e,g,h}
Need for Further PTSD^k Evaluation, Past 30 Days						
Unadjusted	7.0 (0.7) ^c	4.4 (0.6) ^{d,e,g,h}	7.3 (0.9) ^c	10.7 (1.8) ^{c,e,f}	7.0 (1.0) ^{c,d}	5.0 (0.8) ^d
Adjusted	7.5 (0.7) ^{d,f}	6.1 (0.7) ^d	6.7 (0.9) ^{d,f}	10.1 (1.2) ^{c,f-h}	8.2 (1.1) ^f	4.2 (0.6) ^{d,e,g,h}
Suicidal Ideation, Past Year						
Unadjusted	4.9 (0.5)	3.7 (0.6) ^{d,e,h}	5.4 (0.5) ^c	5.9 (0.5) ^{c,f}	7.7 (1.4) ^{c,f}	3.9 (0.6) ^{d,e}
Adjusted	5.3 (0.5) ^{e,f}	5.2 (0.8) ^{e,f}	4.5 (0.5) ^{d,f}	6.4 (0.6) ^{f,h}	9.8 (1.7) ^{c,f-h}	3.1 (0.5) ^{c-e,g,h}
Attempted Suicide, Past Year						
Unadjusted	0.8 (0.1) ^{d,e}	0.6 (0.2) ^{d,e}	0.8 (0.2) ^{d,e}	1.4 (0.2) ^{c,g,h}	3.9 (1.3) ^{c,f-h}	1.0 (0.3) ^e
Adjusted	0.9 (0.1) ^e	1.1 (0.3) ^e	0.7 (0.2) ^{d,e}	1.6 (0.3) ^{e,f,h}	5.3 (1.8) ^{c,d,f-h}	0.7 (0.2) ^{d,e}

(Table continued on next page)

Table 10.7**ACTIVE-DUTY AND RESERVE COMPONENT COMPARATIVE ANALYSES FOR STRESS AND MENTAL HEALTH, BY THEATER OF OPERATIONS, UNADJUSTED AND ADJUSTED (CONTINUED)**

Note: Table displays the percentage of active-duty and Reserve component personnel by location of deployment who reported the stress and mental health issues indicated in the rows of this table. The standard error of each estimate is presented in parentheses. Column group estimates may not sum to 100 because of rounding. Definitions and measures of stress and mental health are given in Section 2.5.3. Adjusted estimates have been standardized to correct for differences in the demographic distributions between the three theater of operations groups identified by the columns of this table. Gender, age group, enlisted/officer status, marital status, education, and race/ethnicity were used in this standardization process. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aAGR/FTS/AR refers to the Active Guard/Reserve Program and/or full-time National Guard/Reservist (Membership Category, Q2; Current Work Status, Q13).

^bOther theater includes Operations Desert Shield /Desert Storm (e.g., the Persian Gulf), Operation Just Cause (e.g., Panama), Operation Restore Hope (e.g., Somalia), Operation Uphold Democracy (e.g., Haiti), Operations Joint Endeavor or Joint Guard (e.g., Bosnia), Operation Safe Haven (e.g., Cuba), Tsunami Relief (e.g., South Asia), Other combat and/or peace-keeping mission and Other remote assignments (this excludes hurricane relief and Homeland Security (airport security and/or security for active-duty installations). Respondents serving in Operation Iraqi or Enduring Freedom, as well as another theater, only appear in the Operation Iraqi or Enduring Freedom column.

^cEstimate is significantly different from the active-duty sample, served in other theater, at the 95% confidence level.

^dEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, served in Operation Iraqi or Enduring Freedom, at the 95% confidence level.

^eEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, served in other theater, at the 95% confidence level.

^fEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR, did not serve in theaters, at the 95% confidence level.

^gEstimate is significantly different from the active-duty sample, served in Operation Iraqi or Enduring Freedom, at the 95% confidence level.

^hEstimate is significantly different from the active-duty sample, did not serve in theaters, at the 95% confidence level.

ⁱGAD is Generalized Anxiety Disorder.

^jBased on respondents' perception of number of days when mental health limited usual activities.

^kPTSD is posttraumatic stress disorder.

Source: 2006 Department of Defense Reserve Component Survey (Location of Deployment, Q161; Stress While Carrying Out Military Duties, Q89; Need for Further Depression Evaluation, Q97–Q99; Screening for GAD Symptoms, Q100; Limited Usual Activities, Q87; PTSD Symptoms, Q104; Suicidal Ideation, Q101A; Attempted Suicide, Q102A).

OIF/OEF (5.3%) compared with those who did not serve in theaters (0.7%). Notably, the rate for those serving in other theaters was the highest of any Reserve component or active-duty personnel rate.

Hoge and colleagues (2006) also found higher prevalences of mental health problems among Army and Marine personnel returning from Iraq (19.1%) and Afghanistan (11.3%) than from other theaters (8.5%).

10.3.3 Mental Health among Individual Military Components

Adjusted estimates in Figure 10.5 examine stress at work and in family life among individual components. Army active-duty personnel were significantly more likely to have stress at work and in family life (46.3%) than Army National Guard (38.7%) and Army Reserve (38.7%) personnel. Navy active-duty rates (37.4%) were about the same as Navy Reserve rates (37.0%), as were Marine active-duty (44.2%) and Marine Reserve (42.0%) rates. However, Air Force Reserve rates were significantly higher (36.9%) than Air National Guard (30.7%). Air Force active-duty rates (34.9%) were also significantly higher than Air National Guard rates. Overall, active-duty personnel rates were significantly higher (40.7%) than Guard/Reserves (37.3%) personnel rates.

Figure 10.6 shows the need for further depression evaluation among military components. Army active-duty personnel were significantly more likely to need further screening for depression evaluation (27.7%) than Army National Guard (20.9%) or Army Reserve personnel (19.6%). Likewise, Navy active-duty (21.7%) and Marine Corps active-duty (24.2%) personnel were significantly more likely to need further depression evaluation compared with their Reserve counterparts (Navy Reserve, 14.0%; Marine Corps Reserve, 18.4%). The Air Force active-duty force (16.3%) was not significantly higher than the Air National Guard (15.0%) or Air Force Reserve (14.3%). Overall, the active-duty force (22.5%) was significantly higher than Guard/Reserves (17.0%).

Figure 10.7 shows rates of personnel in the individual components in need of further PTSD evaluation. As

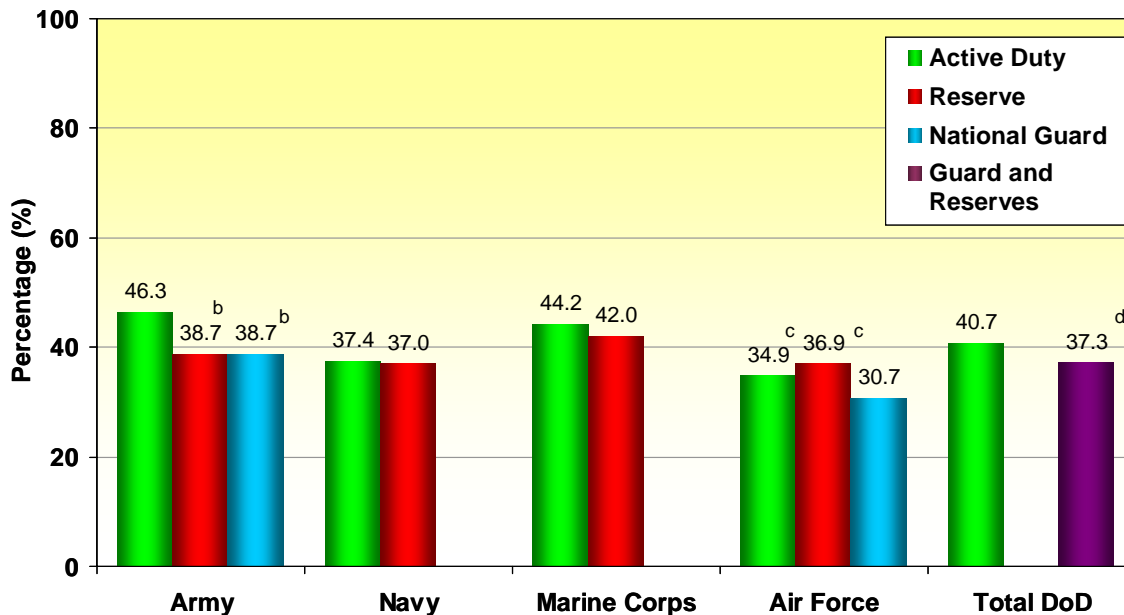
shown, there were no significant differences among personnel for active-duty Army (9.1%), Army National Guard (9.8%), or Army Reserve (8.5%). In contrast, the rate for active-duty Navy personnel (6.0%) was significantly higher than the rate for the Navy Reserves (4.2%). Rates for personnel in the active-duty Marine Corps (6.4%) and Marine Corps Reserve (6.7%) were not significantly different. Air Force active-duty (4.1%), Air National Guard (4.1%), and Air Force Reserve rates (3.7%) were not significantly different. Similarly, overall active-duty and Guard/Reserve rates were not significantly different (6.4% and 6.2%, respectively).

For suicidal ideation (Figure 10.8), there were no significant differences within the respective Reserve components. More specifically, Army National Guard adjusted rates were not significantly higher (6.5%) than the rates for the Army active-duty force (5.5%) or the Army Reserve (5.5%). The Navy active-duty force (5.2%) was similar to the Navy Reserve (4.7%); Marine Corps active-duty (5.1%) were not significantly higher than the Marine Corps Reserve (4.7%); and the Air Force active-duty force (3.8%), Air Force Reserve (4.1%), and Air National Guard component (3.2%) did not differ statistically. Total DoD active duty (4.9%) and Guard/Reserve (4.8%) estimates also were not significantly different.

10.4 Other Selected Health Behaviors

This section compares various health behaviors by military component. Tables include unadjusted and adjusted estimates for the active-duty sample and the Reserve component excluding AGR/FTS/AR and just the Reserve component AGR/FTS/AR groups. Measures examined include Body Mass Index (BMI) as a measure of overweight, levels of physical activity, fruit/vegetable intake, seat belt use, productivity loss, and dental check-ups. As discussed in previous sections, unadjusted estimates are for descriptive purposes only; therefore, adjusted estimates are discussed to allow more meaningful comparisons between active-duty and Reserve component personnel because they have been standardized to provide comparable sociodemographic

Figure 10.5 Stress at work or in family life,^a adjusted for sociodemographic differences



^aMilitary personnel who reported a great deal of stress at work or in family life in the past 12 months.

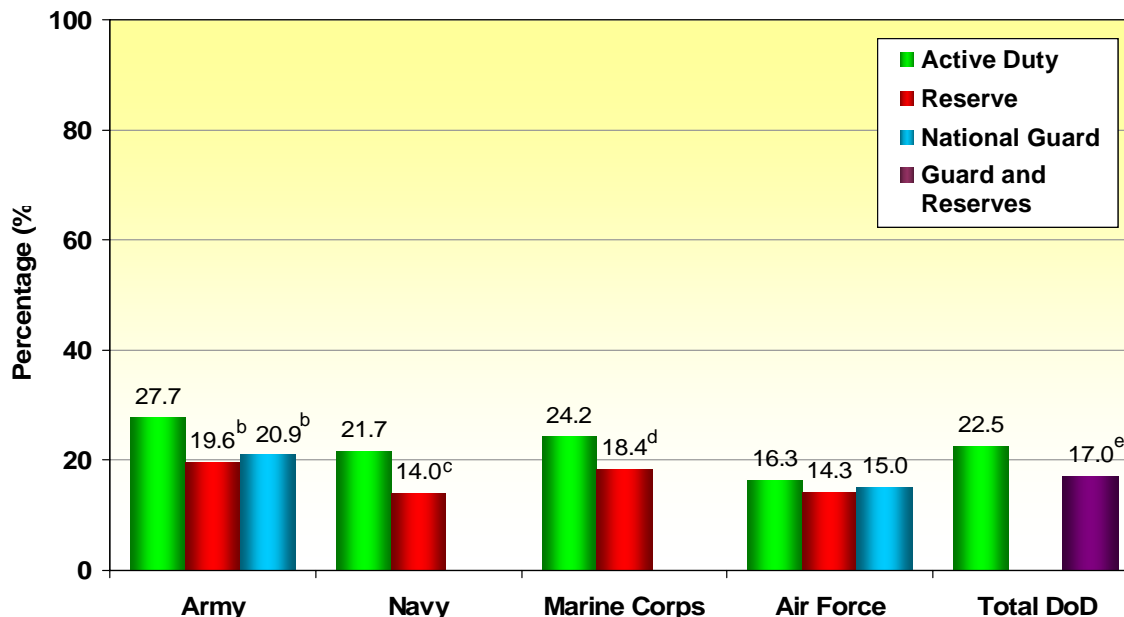
^bEstimate is significantly different from Army active duty at the 95% confidence level.

^cEstimate is significantly different from Air Force National Guard at the 95% confidence level.

^dEstimate is significantly different from total DoD active duty at the 95% confidence level.

Note: Data derived from Table B.20 in Appendix B.

Figure 10.6 Need for further depression evaluation,^a adjusted for sociodemographic differences



^aMilitary personnel exhibited symptoms in the past 7 days that would indicate a need for a depression evaluation.

^bEstimate is significantly different from Army active duty at the 95% confidence level.

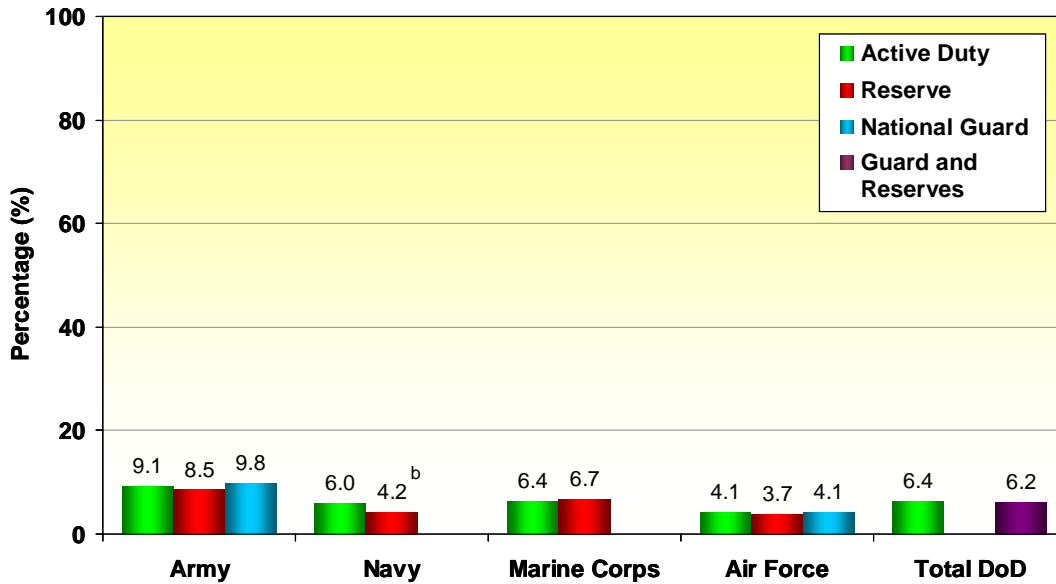
^cEstimate is significantly different from Navy active duty at the 95% confidence level.

^dEstimate is significantly different from Marine Corps active duty at the 95% confidence level.

^eEstimate is significantly different from total DoD active duty at the 95% confidence level.

Note: Data derived from Table B.21 in Appendix B.

Figure 10.7 Need for further PTSD evaluation,^a adjusted for sociodemographic differences

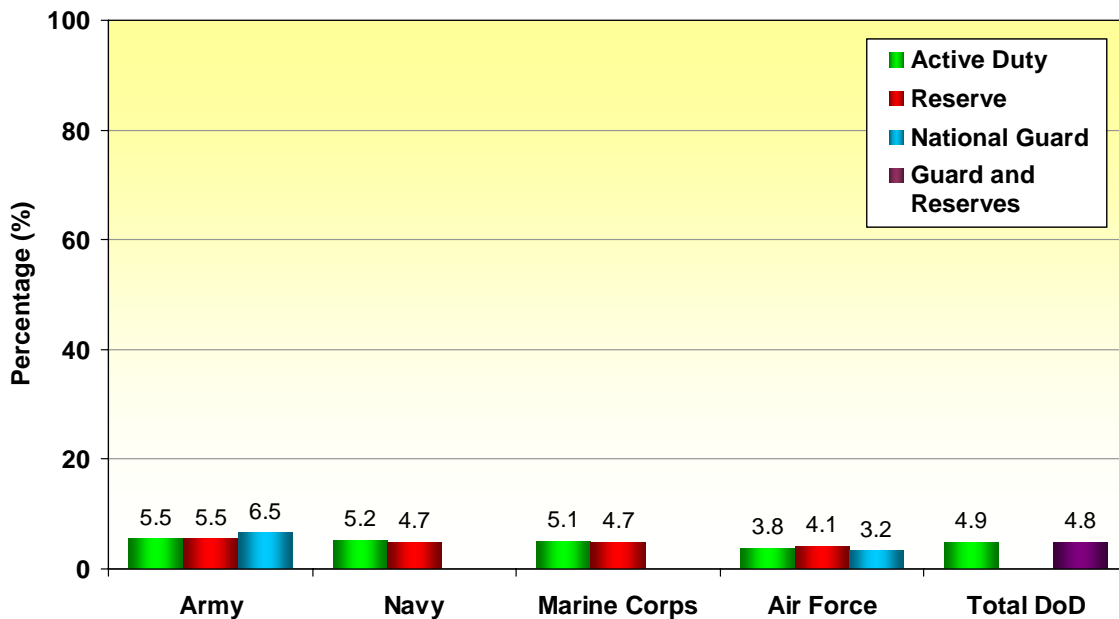


^aPersonnel meeting screening criteria suggests a need for further evaluation of Posttraumatic Stress Disorder; not a clinical diagnosis.

^bEstimate is significantly different from Navy active duty at the 95% confidence level.

Note: Data derived from Table B.22 in Appendix B.

Figure 10.8 Suicidal ideation,^a adjusted for sociodemographic differences



^aMilitary personnel who reported seriously considering suicide in the past 12 months.

Note: Data derived from Table B.23 in Appendix B.

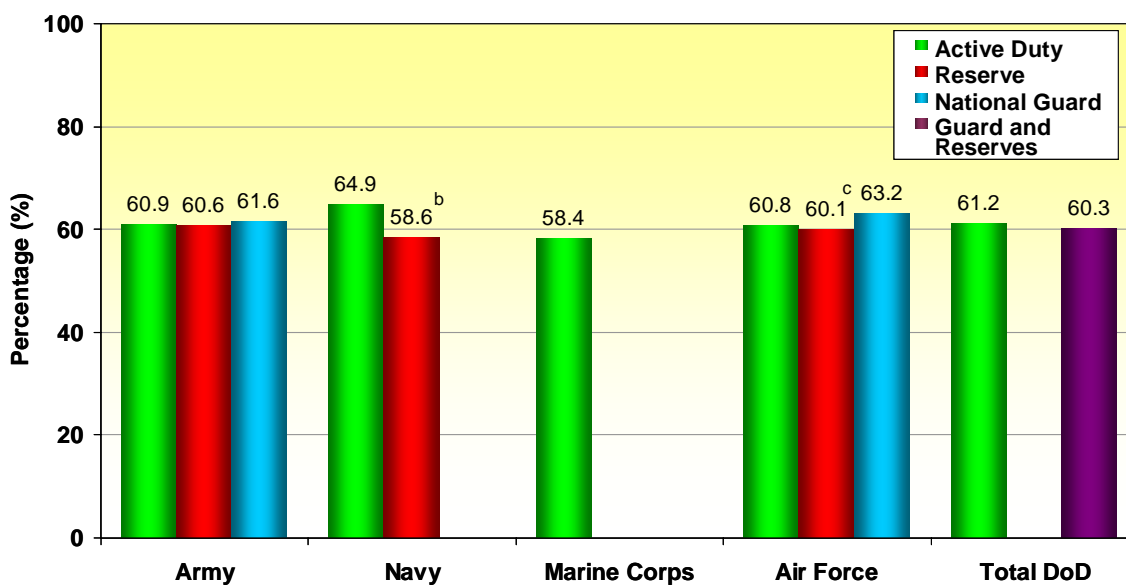
characteristics across the groups. Standardization in Figure 10.9 was performed using the same techniques used for the previous figures.

Table 10.8 shows that the percentage of overweight AGR/FTS/AR personnel (66.5%) is significantly higher than the percentages for the active-duty sample (62.1%) and Reserve component excluding AGR/FTS/AR (61.6%). Not surprisingly, active-duty personnel were more likely to report moderate (70.5%) and vigorous (57.7%) physical activity than the Reserve component excluding AGR/FTS/AR (54.2% and 36.7%) and AGR/FTS/AR groups (59.2% and 45.0%). However, Reserve component personnel excluding AGR/FTS/AR were more likely to report fruit intake (9.8%) than the active duty (7.6%) or AGR/FTS/AR group (7.3%). Reserve component excluding AGR/FTS/AR personnel (11.2%) also had a significantly higher prevalence of vegetable intake than the active duty (9.6%) or AGR/FTS/AR group (9.6%).

Active-duty personnel reported higher seat belt use than the Reserve component excluding AGR/FTS/AR group (92.2% vs. 88.7%) but was similar to the AGR/FTS/AR group (91.0%). Of note, AGR/FTS/AR personnel reported significantly higher productivity loss (42.0%) than active-duty personnel (36.0%) or Reserve component excluding AGR/FTS/AR personnel (20.7%).

Active-duty personnel were significantly more likely to report having received a dental check-up in the past 12 months (80.7%) compared with both Reserve component groups (59.2% and 65.1%, respectively). As noted earlier in Chapter 8 (see Table 8.9), the main reason Reserve component personnel noted for not having a yearly dental check-up was lack of dental insurance.

Figure 10.9 Overweight,¹ adjusted for sociodemographic differences



¹Overweight is defined as a BMI greater than or equal to 25.

^aEstimate is significantly different from Navy active duty at the 95% confidence level.

^bEstimate is significantly different from Air Force National Guard at the 95% confidence level.

+Low precision.

Note: Data derived from Table B.19 in Appendix B.

Table 10.8

SELECTED HEALTH BEHAVIORS, BY MILITARY POPULATION

Health Behavior	Active Duty	Total Reserve Component, Excluding AGR/FTS/AR ^a	AGR/FTS/AR ^a
BMI Measure of Overweight^b			
Unadjusted	60.5 (0.9) ^c	62.7 (1.1) ^c	73.2 (1.1) ^{d,e}
Adjusted	62.1 (0.9) ^c	61.6 (1.0) ^c	66.5 (1.4) ^{d,e}
Moderate Physical Activity^f			
Unadjusted	70.2 (0.8) ^{c,e}	54.8 (0.8) ^d	59.1 (2.7) ^d
Adjusted	70.5 (0.8) ^{c,e}	54.2 (0.7) ^{c,d}	59.2 (2.4) ^{d,e}
Vigorous Physical Activity^g			
Unadjusted	57.6 (1.0) ^{c,e}	37.1 (0.8) ^{c,d}	44.2 (3.2) ^{d,e}
Adjusted	57.7 (0.9) ^{c,e}	36.7 (0.8) ^{c,d}	45.0 (2.7) ^{d,e}
Fruit Intake^h			
Unadjusted	7.7 (0.3) ^e	9.6 (0.5) ^{c,d}	7.1 (0.9) ^e
Adjusted	7.6 (0.4) ^e	9.8 (0.5) ^{c,d}	7.3 (0.9) ^e
Vegetable Intakeⁱ			
Unadjusted	9.5 (0.4) ^e	11.3 (0.6) ^d	10.0 (0.9)
Adjusted	9.6 (0.5) ^e	11.2 (0.5) ^d	9.6 (1.0)
Seat Belt Use			
Unadjusted	91.8 (0.8) ^{c,e}	88.8 (1.1) ^{c,d}	94.7 (0.9) ^{d,e}
Adjusted	92.2 (0.7) ^e	88.7 (1.0) ^d	91.0 (1.3)
Productivity Loss^j			
Unadjusted	36.0 (0.7) ^e	20.9 (0.8) ^{c,d}	40.3 (2.7) ^e
Adjusted	36.0 (0.9) ^{c,e}	20.7 (0.9) ^{c,d}	42.0 (2.8) ^{d,e}
Had Dental Checkup, Past 12 Months			
Unadjusted	81.0 (1.1) ^{c,e}	57.5 (1.8) ^{c,d}	71.6 (1.9) ^{d,e}
Adjusted	80.7 (1.1) ^{c,e}	59.2 (1.4) ^{c,d}	65.1 (1.6) ^{d,e}

Note: Table displays the percentage of active-duty and Reserve component personnel who reported the health behaviors displayed in each row. Pairwise significance tests were conducted among all three military populations. The standard error of each estimate is presented in parentheses. Definitions and measures of health behaviors are given in Section 2.5.3. Adjusted estimates have been standardized to correct for differences in the demographic distributions between the active-duty and the Reserve component populations. Service, gender, age group, enlisted/officer status, marital status, education, and race/ethnicity were used in this standardization process. The six Reserve components were collapsed into the four active service groupings of Army, Navy, Marine Corps, and Air Force for this standardization. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aAGR/FTS/AR refers to the Active Guard/Reserve Program and/or full-time National Guard/Reservist (Membership Category, Q2; Current Work Status, Q13).

^bBMI \geq 25.0.

^cEstimate is significantly different from the AGR/FTS/AR at the 95% confidence level.

^dEstimate is significantly different from the active-duty sample at the 95% confidence level.

^eEstimate is significantly different from the total Reserve component excluding AGR/FTS/AR at the 95% confidence level.

^fPast 30 days, 20 minutes or more, for 3 or more days per week. Moderate physical activity is defined in the survey as any activity that burns 3.5 to 7.0 kcal/min or the equivalent of 3 to 6 metabolic equivalents (METs) and results in achieving 60% to 73% of peak heart rate. Examples of moderate physical activity include walking briskly, mowing the lawn, dancing, swimming, or bicycling on level terrain. A person should feel some exertion but should be able to carry on a conversation comfortably during the activity.

(Table continued on next page)

Table 10.8**SELECTED HEALTH BEHAVIORS, BY MILITARY POPULATION (CONTINUED)**

^gPast 30 days, 20 minutes or more, for 3 or more days per week. Vigorous physical activity is defined as any activity that burns more than 7 kcal/min or the equivalent of 6 or more METs and results in achieving 74% to 88% of peak heart rate. Examples of vigorous physical activity include jogging, mowing the lawn with a nonmotorized push mower, chopping wood, participating in high-impact aerobic dancing, swimming continuous laps, or bicycling uphill. Definitions follow the *Dietary Guidelines for Americans, 2005* (DHHS & USDA, 2005).

^hAll types: fresh, frozen, canned, or dried, or 100% fruit juices. Estimate is prevalence of three or more servings per day.

ⁱAll types: fresh, frozen, canned, cooked, or raw. Estimate is prevalence of three or more servings per day.

^jMilitary work days are considered when determining productivity loss. Participants responding “1 to 6 days in the past 12 months” to 2 or more (out of 5) productivity loss items or “7 or more days in the past 12 months” to 1 or more (out of 5) productivity loss items were considered to have “productivity loss.” Because active-duty personnel would have, on average, more military work days than Reserve personnel, they would have more opportunities for productivity loss. This should be considered when comparing active-duty and Reserve populations.

Source: 2006 Department of Defense Reserve Component Survey (Overweight, Q119–Q120; Leisure-Time Physical Activity, Q84 and Q85; Frequency of Food Intake, Q113; Seatbelt Use, Q74; Helmet Use for Motorcyclists, Q76; Helmet Use for Bicyclists, Q78; Productivity Loss, Q86; Dental Check-Up, Past 12 Months, Q81).

10.4.1 BMI Measure of Overweight among Individual Components

Figure 10.9 shows rates of overweight among the military components. As shown, Army rates of overweight for the active-duty sample (60.9%), National Guard (61.6%), and Reserve (60.6%) were nearly identical and not significantly different. In contrast, rates of overweight for Navy active-duty personnel were significantly higher (64.9%) than those for Navy Reserve personnel (58.6%). Active-duty Marine Corps personnel had a rate of (58.4%) but because of low precision, an estimate was not able to be computed for the Marine Corps Reserve. The Air National Guard (63.2%) rate was significantly higher than the Air Force Reserve (60.1%) rate. The Air Force active-duty rate for overweight (60.8%) was not significantly different than the rates for the other two Air Force components. Overall, the total active-duty force (61.2%) and total Guard/Reserve (60.3%) rates were not significantly different.

10.5 Summary

This chapter presents selected comparisons between active-duty and Reserve component personnel. Comparisons were possible because the questionnaires for the active-duty and Reserve component surveys used the same or similar items. A limitation of these comparisons, however, is that the active-duty and Reserve component data were collected a year apart

(active duty in 2005, Reserve component in 2006). Reserve component personnel were segmented into two groups: Reserve components excluding Active Guard/Reserve Program and/or full-time National Guard Reservist (AGR/FTS/AR) and the AGR/FTS/AR. The AGR/FTS/AR groups differ from regular Reserve personnel in that they serve full time and have many of the same privileges as active-duty personnel. Comparisons across components focus on estimates that have been adjusted to take into account demographic differences among the groups.

10.5.1 Sociodemographic Characteristics

Active-duty and Reserve component personnel had similar distributions of gender and race/ethnicity, but differed on education, age, marital status, and pay grade (Table 10.1):

- All components were largely male and white non-Hispanic.
- Active-duty personnel were more likely to have lower levels of education than Reserve component personnel.
- Active-duty personnel were younger on average than Reserve component personnel.
- Reserve component AGR/FTS/AR personnel were more likely to be married (66.2%) than were active-duty personnel (53.7%) or Reserve component excluding AGR/FTS/AR personnel (48.0%).
- AGR/FTS/AR had the largest percentages of E7-E9 senior enlisted (27.8% vs. 9.7% active duty, and

9.9% Reserve component without AGR/FTS/AR) and senior officers (13.8% vs. 6.3% active duty and 7.0% Reserve component without AGR/FTS/AR).

10.5.2 Substance Use

Substance use rates were generally higher among active-duty personnel compared with Reserve component personnel (Tables 10.2 through 10.4):

- Adjusted estimates showed that active-duty personnel were significantly more likely to engage in heavy alcohol use and binge drinking (18.4% and 44.1%, respectively) than Reserve component personnel excluding AGR/FTS/AR (15.8% and 39.6%, respectively). For both measures, Reserve component AGR/FTS/AR personnel did not significantly differ from active-duty personnel.
- Adjusted rates for past-30-day cigarette use and nicotine dependence were significantly higher for active-duty groups (32.5%, 8.4%) compared with Reserve component excluding AGR/FTS/AR (22.6%, 5.1%) and AGR/FTS/AR personnel (23.4%, 4.4%).
- Past-year illicit drug use adjusted rates were not statistically different among active-duty personnel (11.6%), Reserve component personnel excluding AGR/FTS/AR (10.7%), and Reserve component AGR/FTS/AR personnel (10.0%).
- Substance use was associated with deployment. After adjustment, heavy alcohol use was significantly higher for active-duty and Reserve component deployed personnel compared with their nondeployed colleagues (20.1% vs. 16.5% active duty, 17.9% vs. 13.9% Reserve component). Active-duty and Reserve component personnel who were deployed also reported significantly higher past-year illicit drug use than those not deployed (12.4% vs. 10.3% active duty, 12.6% vs. 8.3% Reserve component).
- Deployed active-duty personnel showed significantly higher rates than nondeployed personnel for past-year cigarette smoking (44.5% vs. 39.6%), heavy smoking (12.8% vs. 9.9%), and nicotine dependence (8.9% vs. 7.2%), whereas deployed and nondeployed Reserve component personnel showed no significant differences.

- Theater of operation was also associated with substance use. The general pattern was that active-duty or Reserve component personnel deployed either to OIF/OEF or to another theater tended to have higher rates of use in one or both theaters relative to those not deployed to a theater. This was true for illicit drug use and cigarette smoking. For heavy alcohol use, the pattern held for active-duty personnel, but Reserve component personnel did not differ by theater.

10.5.3 Stress and Mental Health

High stress and other mental health issues were more common among active-duty than Reserve component personnel (Tables 10.5 through 10.7):

- Adjusted rates showed that active-duty personnel were significantly more likely to report high work stress in their military job and higher stress as a woman (33.2%, 36.7%) than Reserve component personnel excluding AGR/FTS/AR (12.3%, 21.0%) and AGR/FTS/AR personnel (19.0%, 27.9%).
- Active-duty personnel were significantly more likely to need further evaluation for depression than either of the Reserve component groups (23.2% vs. 17.5% and 19.0%) and more likely to have met screening criteria for GAD symptoms than the Reserve component groups (13.1% vs. 10.1% and 8.5%).
- There were no significant differences between active-duty personnel and Reserve component personnel in the likelihood of needing further evaluation for PTSD symptoms (7.1% vs. 6.9% and 6.1%).
- Overall, 66.4% of active-duty personnel reported high job satisfaction compared with 78.1% of Reserve component personnel excluding AGR/FTS/AR and 85.2% of AGR/TS/AR personnel.
- Active-duty personnel were significantly more likely to have been deployed in the past year (29.9%) than Reserve component personnel excluding AGR/FTS/AR (18.8%), but about the same as AGR/FTS/AR personnel (24.9%)
- Deployment was related to perceived stress. Active-duty personnel who were deployed were significantly more likely to report high stress while carrying out their military duties and in their family life (35.4%, 20.3%) compared with those who were

not deployed (30.3%, 17.6%). Deployed Reserve component personnel's rates of perceived stress were not significantly higher than rates for nondeployed persons.

- Both active-duty and Reserve component deployed personnel showed significantly higher rates of depression symptoms than those not deployed (24.0% vs. 21.6%, active duty; 19.1% vs. 16.2% Reserve component).
- The association of deployment status and meeting screening criteria for PTSD symptoms was similar for active-duty and Reserve component personnel. Those who were deployed showed significantly higher rates of meeting the criteria than those who were not deployed (7.6% vs. 6.1% active duty; 8.4% vs. 5.9% Reserve component).
- There were notable differences in deployment status between active-duty and Reserve component personnel in reports of suicidal ideation and suicide attempts. Active-duty personnel showed no significant differences associated with deployment (5.4% vs. 4.5% ideation; 1.0% vs. 0.6% attempts), whereas Reserve component personnel who were deployed were significantly more likely to report these behaviors than those not deployed (7.1% vs. 3.8% ideation; 2.3% vs. 0.9% attempts).
- Theater of operation was also associated with stress and mental health. The general pattern was that whereas theater of operation was not associated with many of the measures for active-duty personnel, it was associated for Reserve component personnel. This was true for higher family stress, need for further depression evaluation, met screening criteria for anxiety symptoms, and poor mental health limiting normal activities.
- Similar findings held for the need for further PTSD evaluation. Reserve component personnel who served in OIF/OEF showed significantly higher rates of PTSD symptoms (10.1%) than any active-duty personnel and higher rates than those serving in no theater (4.2%). Likewise, for suicidal ideation and suicide attempts, active-duty personnel showed no statistically significant differences due to theater, but Reserve component personnel did. Suicide attempts were significantly higher among those who served in OIF/OEF (1.6%) and in theaters other than OIF/OEF (5.3%) compared with those who did not serve in theaters (0.7%).

10.5.4 Selected Health Behaviors

Active-duty personnel were more likely to report moderate and vigorous physical activity, higher seat belt use, and dental check-ups than Reserve component personnel (Table 10.8).

- Adjusted estimates show that AGR/FTS/AR personnel were significantly more likely to report overweight (66.5%) than active duty (62.1%) and Reserve component excluding AGR/FTS/AR (61.6%) personnel.
- Active duty were more likely to report moderate (70.5%) and vigorous (57.7%) physical activity than the Reserve component excluding AGR/FTS/AR (54.2% and 36.7%) and AGR/FTS/AR groups (59.2% and 45.0%).
- Reserve component personnel excluding AGR/FTS/AR were significantly more likely to report fruit (9.8%) and vegetable intake (11.2%) than active-duty personnel.
- Active duty personnel reported higher seat belt use than Reserve component excluding AGR/FTS/AR (92.2% vs. 88.7%), but was similar to AGR/FTS/AR (91.0%).
- AGR/FTS/AR personnel reported significantly higher rates of productivity loss (42.0%) than active duty (36.0%) and Reserve component excluding AGR/FTS/AR (20.7%).
- Active duty reported significantly higher rates of dental check-up in past 12 months (80.7%) than Reserve component excluding AGR/FTS/AR (59.2%) and AGR/FTS/AR (65.1%) personnel.

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Estimated Sampling Errors

The procedures and methodology used for the 2006 DoD Reserve Component Survey are described here to help the reader use the estimates of sampling errors that were calculated and printed for various proportions and means in this report. “Sampling errors” is the general term we use to describe the random sources of difference between an estimate based on a sample and the true value for the population. The difference arises because, as with most surveys, we observed only a sample rather than every member of the population. At the time of data collection for the 2006 survey, there were approximately 1.1 million officers and enlisted personnel in the six Reserve and National Guard components. Samples of 20,000 such military personnel generally clustered at a sample of 104 installations with Reserve or National Guard personnel (including 80 remote facilities receiving mailouts) provided close, but less than perfect, estimates of the responses that we would have obtained had we asked all officers and enlisted personnel to complete the survey.

A.1 Confidence Intervals and Significant Differences

For any particular percentage resulting from a sampling survey, it is not possible to know the exact amount of error that has resulted from sampling. It is possible, however, to establish estimated confidence intervals (i.e., ranges very likely to include the true population value). For example, let’s say that a table shows that 50.0% of Reserve component personnel reported a certain behavior with a standard error of 1.0%. It is possible to set up a 95% confidence interval, which means that 95% of the time a computed interval can be expected to include the true (population) percentage. As a general rule, the 95% confidence interval is formed by doubling the standard error (specifically, multiplying by 1.96), adding this result to the estimate to form the upper bound, and subtracting it from the estimate to form the lower bound. In this case, the lower and upper limits of the 95% confidence interval are approximately 48.0%

and 52.0%. A somewhat wider set of limits can be set up to indicate the 99% confidence interval.

It also is possible to construct a confidence interval for a difference between two estimated percentages from two samples. For example, let’s say that the difference for some measure between two Reserve components is 5.0%, and we have computed the 95% confidence limits for that difference as $\pm 3.0\%$ of that estimate. In other words, we can be 95% certain that the true difference between the Reserve components is somewhere between 2.0% and 8%. Because that range does not include 0%, the estimated difference is considered statistically significant (i.e., the whole range is higher than 0% and one estimate is considered greater than the other). If the range had included 0%, we would not have considered the difference significant.

A.2 Factors Influencing the Size of Confidence Intervals in This Report

From a statistical standpoint, the most straightforward types of samples are simple random samples. In such samples, the confidence limits for a percentage are simple functions of the percentage value and the size of the sample or subgroup on which it is based. For example, the 95% confidence interval for a proportion (p) can be approximated by $p \pm 1.96 \sqrt{p(1-p)/N}$. In a more complicated sample, such as the one we used in this survey, other factors also determine confidence limits. In this section, we discuss all of the factors, beginning with the basic ones and proceeding to those that are more complex.

A.2.1 Number of Cases (N)

All else equal, as the sample size of some subgroup increases, the precision of the resulting estimates will increase, and consequently the confidence interval will become narrower. This is because one of the factors in $1.96 \sqrt{p(1-p)/N}$ is $1/\sqrt{N}$ (i.e., the reciprocal of the square root of the size of the sample or the subgroup).

Thus, a sample of 400 will, all things being equal, have a confidence interval just half as wide as that for a sample of 100 because $1/\sqrt{400}$ is just about half of $1/\sqrt{100}$.

A.2.2 Percentage Size

Again, all else being equal, percentage values around 50% have the largest confidence intervals because $\sqrt{p(1-p)}$ (where p is a proportion between 0.0 and 1.0) is a factor affecting the size of the confidence interval. This factor will be only three-fifths as large for 10%, or 90% as large for 50%, because $\sqrt{0.1 \times 0.9}$ is $3/5 \times \sqrt{0.5 \times 0.5}$.

A.3 Design Effects in Complex Samples

Under simple random sampling, a confidence interval can be determined from the two factors we just described plus the appropriate constant for the confidence level desired (e.g., 1.96 for 95%). Where stratification, clustering, and differential weighting of responses are involved, as in this survey, all of these also influence sampling error. Stratification tends to increase precision, while clustering and weighting decrease it. The result is usually lower precision than would be obtained by the use of a simple random sample of the same size. Accordingly, using the simple formula generally underestimates the sampling error involved.

There are methods, however, to correct for this underestimation. Kish (1965, p. 258) defined a correction term known as the design effect (*DEFF*), where

$$DEFF = \frac{\text{Actual sampling variance}}{\text{SRS variance}} . \quad (\text{A.1})$$

If, therefore, the actual sampling variance for a proportion p is four times the value computed for a simple random sample of the same size N , *DEFF* is 4.0. Because a confidence interval is based on the square root of the variance, any confidence interval would have to be twice as wide as the corresponding interval from a simple random sample of the same size.

A simple way of using a *DEFF* value is to divide the actual sample or domain size by it and obtain the

effective N , the size of a simple random sample that would have resulted in the same degree of precision. For example, with a *DEFF* of 4.0 and an actual sample size of 4,000, the effective N is 1,000. The value of the effective N can be used in the simple formula $\sqrt{p(1-p)/N}$ to compute standard errors of estimates and confidence interval limits for proportions. It is therefore possible to use formulas and tables appropriate for simple random samples, regardless of the actual type of sample, by converting the sample size to the effective N .

Actually, every statistic derived from a complex sample has its own design effect, different from all others. In practice, however, *DEFF* values are generally computed only for a cross-section of the statistics, and averages are computed and applied to those of the same types. Often, a single average *DEFF* is used for all percentages.

In this study, we have computed standard errors for estimated proportions. We incorporated into our calculations the appropriate (sub)sample sizes, proportions, and correction for design effects.

A.4 Suppression Rule for Estimates

In this report, we suppressed unreliable estimates (indicated with a plus sign [+] in tables and figures). That is, we suppressed proportions and means that could not be reported with confidence because they were based on small sample sizes, were derived from questions that exhibited a large amount of item nonresponse, or had large sampling errors (i.e., low precision). The sample size restriction we used suppressed an estimate when the number of observations on which it was based (i.e., the denominator sample size) was fewer than 30 cases. The item nonresponse criterion employed was 20%, so that if any estimate was derived from a question that had a weighted item nonresponse rate of 20% or more, the estimate was suppressed. The large sampling error restriction had two parts, based on whether the estimate was a mean or a proportion.

For estimates expressed as means (e.g., average ounces of ethanol), we suppressed estimates with relative standard errors (*RSEs*) greater than 50% of the estimate.

The *RSE* is computed by dividing the standard error of the estimate by the estimate.

For estimates expressed as proportions (e.g., the proportion of heavy drinkers), we used a suppression rule based on the *RSE* of the natural log of the estimated proportion (p). Specifically, we suppressed estimates in tables and figures when

$$RSE[-\ln(p)] > 0.225 \text{ for } p \leq 0.5, \text{ and}$$

$$RSE[-\ln(1 - p)] > 0.225 \text{ for } p > 0.5.$$

Note that

$$RSE[-\ln(p)] = RSE(p) / [-\ln(p)] = SE(p) / [-\ln(p)],$$

where $SE(p)$ denotes the standard error of p , or the estimated proportion.

We chose to use this rule for proportions based on the natural log of the *RSE* rather than on the *RSE* itself because the latter has been observed to have some undesirable properties for proportions. Specifically, a rule based on the *RSE* of the estimate imposes a very stringent suppression requirement on small proportions but a very lax requirement on large proportions. That is, small proportions must have relatively large effective sample sizes to avoid being suppressed, whereas large proportions require much smaller sample sizes.

The rule based on the natural log of the *RSE* of the estimate is more liberal in allowing small proportions to avoid being suppressed, but more stringent with regard to suppression of large proportions. For example, under the rule based on the $RSE[-\ln(p)]$, percentages of about 1% would be suppressed unless they were based on an effective sample size of about 100 or more respondents, and percentages of 20% would be suppressed unless they were based on an effective sample size of about 30 respondents. Using a rule for proportions based on $RSE(p) > 0.50$ would require an effective sample size of 400 respondents for percentages of about 1% and an effective sample size of only 16 respondents for percentage estimates of about 20%.

Very small estimates (i.e., $< 0.05\%$) that were not suppressed under these rules, but that rounded to zero, also were suppressed and are shown as two asterisks (**) in the tables and figures.

Reference for Appendix A

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Appendix B

Supplemental Tables

Table B.1 DRINKING LEVEL, TOTAL RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Gender					
Male	27.7 (2.2) ^{a-d}	14.4 (0.8) ^{b-e}	18.1 (0.9) ^{a,c,e}	21.9 (1.1) ^{a,b,d,e}	18.0 (1.0) ^{a,c,e}
Female	32.7 (2.8) ^{a-d}	18.7 (1.6) ^{d,e}	18.8 (1.3) ^{d,e}	19.3 (2.1) ^{d,e}	10.5 (1.3) ^{a-c,e}
Race/Ethnicity					
White, non-Hispanic	26.3 (2.8) ^{a,b,d}	15.3 (1.1) ^{b,c,e}	18.4 (1.0) ^{a,c,e}	22.6 (1.1) ^{a,b,d}	17.4 (1.2) ^{c,e}
African American, non-Hispanic	40.0 (4.2) ^{a-d}	15.5 (1.9) ^{d,e}	18.7 (1.8) ^{d,e}	16.3 (2.2) ^{d,e}	9.5 (1.7) ^{a-c,e}
Hispanic	25.0 (1.4) ^{a,b}	13.4 (1.9) ^{c-e}	18.1 (1.8) ^e	21.9 (1.5) ^a	21.6 (1.9) ^a
Other	35.4 (2.1) ^{a-d}	16.5 (2.1) ^e	14.4 (1.9) ^e	18.3 (1.2) ^e	15.4 (2.7) ^e
Education					
High school or less	29.9 (2.0) ^{a-c}	14.1 (2.0) ^{d,e}	14.3 (1.3) ^{d,e}	17.1 (1.7) ^{d,e}	24.7 (1.5) ^{a-c}
Some college	27.5 (2.0) ^{a,b,d}	14.4 (0.8) ^{b,c,e}	18.5 (1.1) ^{a,c,e}	22.8 (1.2) ^{a,b,d}	16.7 (1.1) ^{c,e}
College graduate or higher	29.2 (3.1) ^{a,b,d}	17.6 (1.8) ^{b-e}	21.4 (1.2) ^{a,d,e}	23.0 (1.9) ^{a,d}	8.8 (1.1) ^{a-c,e}
Age					
24 or younger	27.7 (2.7) ^{a-c}	9.1 (0.8) ^{b-e}	15.8 (0.8) ^{a,c-e}	19.9 (1.3) ^{a,b,d,e}	27.5 (1.9) ^{a-c}
25-34	26.4 (2.9) ^{a,d}	14.3 (1.0) ^{b,c,e}	19.2 (1.5) ^{a,c}	22.9 (1.5) ^{a,b,d}	17.2 (1.2) ^{c,e}
35-44	29.3 (1.9) ^{a-d}	19.3 (1.5) ^{d,e}	20.5 (1.2) ^{d,e}	22.2 (1.2) ^{d,e}	8.7 (1.1) ^{a-c,e}
45 or older	33.5 (3.5) ^{b-d}	23.1 (5.0) ^d	17.4 (1.8) ^{d,e}	20.4 (2.2) ^{d,e}	5.6 (1.2) ^{a-c,e}
Marital Status					
Not married	25.8 (2.1) ^{a,b}	12.1 (0.9) ^{b-e}	16.1 (0.8) ^{a,c-e}	23.1 (1.3) ^{a,b}	22.8 (1.2) ^{a,b}
Married	31.2 (2.9) ^{a-d}	18.3 (1.8) ^{d,e}	20.4 (1.3) ^{d,e}	19.8 (1.2) ^{d,e}	10.3 (0.9) ^{a-c,e}
Pay Grade					
E1-E3	34.8 (3.6) ^{a-c}	7.6 (1.1) ^{b-e}	17.3 (1.5) ^{a,d,e}	16.0 (2.1) ^{a,d,e}	24.3 (2.4) ^{a-c}
E4-E6	27.5 (2.1) ^{a-d}	14.5 (0.7) ^{b-e}	17.5 (1.0) ^{a,c,e}	22.1 (0.8) ^{a,b,d,e}	18.4 (1.3) ^{a,c,e}
E7-E9	31.2 (2.9) ^{a,b,d}	18.8 (2.5) ^{d,e}	19.1 (2.1) ^{d,e}	24.4 (2.3) ^d	6.5 (1.2) ^{a-c,e}
W1-W5, O1-O3	19.5 (3.7) ^d	+ (+)	18.2 (2.7) ^d	25.4 (3.7) ^d	7.4 (1.8) ^{b,c,e}
O4-O10	24.5 (3.1) ^d	22.8 (2.5) ^d	25.2 (2.2) ^d	23.3 (2.1) ^d	4.2 (1.3) ^{a-c,e}
Current Military Job					
Infantry, gun crew, or seamanship specialist	21.9 (2.8) ^{a,b}	12.5 (1.1) ^{c-e}	14.2 (1.6) ^{c-e}	24.9 (1.8) ^{a,b}	26.5 (2.7) ^{a,b}
Electronic equipment repairman	36.2 (3.2) ^{a-d}	9.8 (1.1) ^{b-e}	19.2 (2.7) ^{a,e}	16.6 (2.3) ^{a,e}	18.2 (4.1) ^{a,e}
Communications/intelligence specialist	32.1 (6.1) ^a	12.1 (1.6) ^{b-e}	18.8 (2.5) ^a	18.4 (2.7) ^a	18.5 (2.7) ^a
Health care specialist	24.2 (3.1) ^a	14.8 (1.7) ^{b,c,e}	24.1 (3.3) ^{a,d}	22.4 (2.3) ^{a,d}	14.5 (2.1) ^{b,c}
Other technical specialist	38.8 (4.0) ^{a-d}	12.6 (2.1) ^e	16.2 (2.8) ^e	18.3 (2.2) ^e	14.1 (2.3) ^e
Functional support and administration	30.7 (3.2) ^{a,b,d}	16.8 (1.8) ^{d,e}	20.9 (2.0) ^{d,e}	22.4 (2.4) ^d	9.3 (1.5) ^{a-c,e}

(Table continued on next page)

Table B.1

DRINKING LEVEL, TOTAL RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Electrical/mechanical equipment repairman	24.3 (3.4)	15.6 (1.8) ^c	17.7 (2.2) ^c	25.2 (1.7) ^{a,b,d}	17.3 (2.4) ^c
Craftsman	27.9 (2.6) ^{a,d}	18.6 (2.2) ^{d,e}	20.0 (3.0) ^d	22.9 (1.9) ^d	10.5 (1.4) ^{a-c,e}
Service and supply handler	32.4 (2.1) ^{a-d}	15.5 (1.6) ^e	16.1 (1.8) ^e	17.5 (1.4) ^e	18.5 (2.2) ^e
Nonoccupational enlisted	38.6 (7.2) ^{a-c}	13.2 (2.5) ^e	13.0 (2.9) ^e	16.3 (3.6) ^e	18.9 (4.3)
Officer	23.1 (3.4) ^d	25.8 (4.6) ^d	20.1 (2.1) ^d	24.1 (2.2) ^d	6.9 (1.2) ^{a-c,e}
Deployed Within Past 24 Months					
At least once	25.8 (2.7) ^{a,b,d}	14.9 (0.9) ^{c-e}	17.5 (1.7) ^{c,e}	23.4 (1.0) ^{a,b,d}	18.3 (1.4) ^{a,c,e}
Not within 24 months	30.2 (1.8) ^{a-d}	16.2 (0.9) ^{b,c,e}	18.8 (0.9) ^{a,d,e}	20.4 (1.4) ^{a,d,e}	14.4 (1.2) ^{b,c,e}
Total	28.6 (2.0) ^{a-d}	15.2 (0.7) ^{b,c,e}	18.2 (0.8) ^{a,c,e}	21.4 (1.0) ^{a,b,d,e}	16.7 (0.9) ^{c,e}

Note: Table displays the percentage of Reserve military personnel by sociodemographic characteristic who were classified in the drinking levels, as indicated in the columns of this table. Estimates within each row may not sum to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., abstainer vs. infrequent/light, infrequent/light vs. moderate). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from infrequent/light drinking level at the 95% confidence level.

^bEstimate is significantly different from moderate drinking level at the 95% confidence level.

^cEstimate is significantly different from moderate/heavy drinking level at the 95% confidence level.

^dEstimate is significantly different from heavy drinking level at the 95% confidence level.

^eEstimate is significantly different from abstainer at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Drinking Levels, Q19–22 and Q24–27).

Table B.2 DRINKING LEVEL FOR THE ARMY NATIONAL GUARD, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Gender					
Male	27.1 (3.5) ^{a,b}	13.8 (1.3) ^{c-e}	16.4 (1.6) ^{c,e}	20.9 (2.2) ^a	21.9 (1.4) ^{a,b}
Female	29.9 (6.4) ^a	12.6 (2.5) ^{b,c}	18.5 (2.6) ^a	22.7 (5.3)	16.3 (2.9)
Race/Ethnicity					
White, non-Hispanic	24.9 (4.4)	14.7 (1.9) ^{d,e}	16.1 (1.8) ^{d,e}	22.2 (2.1) ^{a,b}	22.2 (1.7) ^{a,b}
African American, non-Hispanic + (+)	+ (+)	11.5 (3.6)	18.5 (2.2)	15.4 (5.0)	10.4 (3.9)
Hispanic	23.7 (2.9) ^a	9.6 (2.0) ^{b-e}	20.7 (3.9) ^a	20.8 (3.2) ^a	25.1 (4.1) ^a
Other	34.0 (0.8) ^{a,b,d,e}	11.6 (0.4) ^{c-e}	11.0 (0.6) ^{c-e}	19.9 (0.6) ^{a-c,e}	23.4 (0.6) ^{a-d}
Education					
High school or less	30.3 (2.9) ^{a,b,d}	15.3 (3.1) ^{c,e}	12.1 (1.7) ^{c,e}	15.0 (2.4) ^{c,e}	27.3 (2.7) ^{a,b,d}
Some college	25.5 (3.8) ^a	12.7 (1.1) ^{b-e}	19.2 (2.3) ^a	23.0 (2.5) ^a	19.6 (1.6) ^a
College graduate or higher	27.0 (5.6) ^e	12.7 (3.0) ^{b,d}	19.3 (3.0) ^a	28.7 (3.9) ^{a,e}	12.3 (2.6) ^{c,d}
Age					
24 or younger	29.2 (4.9) ^{a,b}	7.4 (1.1) ^{b-e}	15.1 (1.5) ^{a,c,e}	18.9 (2.2) ^{a,e}	29.4 (3.6) ^{a,b,d}
25-34	26.9 (5.2) ^a	12.8 (1.4) ^{c-e}	17.7 (2.6)	21.1 (2.7) ^a	21.4 (1.9) ^a
35-44	24.3 (3.0) ^e	19.1 (2.8)	19.7 (2.9)	24.2 (2.5) ^e	12.7 (2.2) ^{c,d}
45 or older	29.1 (7.5) ^e	+ (+)	13.4 (3.9)	22.8 (5.8) ^e	7.6 (2.8) ^{c,d}
Marital Status					
Not married	26.1 (4.1) ^{a,b}	9.4 (1.3) ^{c-e}	14.3 (1.6) ^{c-e}	22.7 (2.6) ^{a,b,e}	27.4 (2.2) ^{a,b,d}
Married	28.9 (4.6) ^e	18.6 (3.8)	19.6 (2.5)	19.6 (2.7) ^e	13.2 (1.4) ^{c,d}
Pay Grade					
E1-E3	38.5 (5.8) ^{a,b,d}	5.9 (1.7) ^{b-e}	16.4 (2.4) ^{a,c}	14.4 (3.4) ^{a,c,e}	24.9 (4.3) ^{a,d}
E4-E6	25.6 (3.7) ^a	13.6 (1.0) ^{c-e}	16.2 (1.7) ^{d,e}	21.2 (1.8) ^{a,b}	23.4 (1.7) ^{a,b}
E7-E9	22.3 (5.1) ^e	15.8 (5.0) ^d	17.1 (4.7) ^d	35.8 (4.1) ^{a,b,e}	9.0 (1.7) ^{c,d}
W1-W5, O1-O3 + (+)	+ (+)	+ (+)	16.7 (5.0) ^d	28.9 (7.7) ^{b,e}	7.4 (3.2) ^d
O4-O10	24.0 (6.5) ^e	20.5 (4.4) ^e	28.5 (7.4) ^e	23.3 (7.0) ^e	3.8 (1.9) ^{a-d}
Current Military Job					
Infantry, gun crew, or seamanship specialist	21.1 (3.7) ^b	12.6 (1.5) ^{d,e}	12.9 (2.2) ^{c-e}	24.2 (2.3) ^{a,b}	29.2 (3.8) ^{a,b}
Electronic equipment repairman	36.4 (5.5) ^a	9.7 (2.4) ^c	+ (+)	+ (+)	+ (+)
Communications/intelligence specialist	+ (+)	10.5 (2.0) ^{b,e}	18.9 (4.0) ^a	13.7 (3.2) ^e	23.6 (4.4) ^{a,d}
Health care specialist	+ (+)	11.9 (3.6) ^d	+ (+)	22.1 (5.7) ^a	19.7 (5.8)
Other technical specialist	43.9 (7.4) ^{a,b,d,e}	10.5 (3.9) ^c	7.8 (3.3) ^{c,d}	21.0 (5.3) ^{b,c}	16.8 (5.4) ^c
Functional support and administration	25.6 (6.7) ^{a,e}	10.8 (2.5) ^{c,d}	23.6 (6.4) ^e	30.9 (6.2) ^{a,e}	9.1 (2.4) ^{b-d}
Electrical/mechanical equipment repairman	17.9 (4.5)	17.4 (3.8) ^d	15.7 (4.1)	26.7 (3.6) ^a	22.3 (4.2)

(Table continued on next page)

Table B.2

DRINKING LEVEL FOR THE ARMY NATIONAL GUARD, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Craftsman	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Service and supply handler	28.5 (4.1) ^a	13.0 (3.3) ^c	16.9 (4.8)	19.2 (3.2)	22.5 (4.0)
Nonoccupational enlisted	+ (+)	9.6 (3.8)	+ (+)	+ (+)	+ (+)
Officer	16.4 (6.6)	+ (+)	17.8 (4.6)	25.8 (5.3) ^e	10.5 (2.8) ^d
Deployed Within Past 24 Months					
At least once	25.7 (3.8) ^a	14.4 (0.6) ^{c,e}	16.1 (2.9)	21.9 (1.6) ^a	21.9 (1.3) ^a
Not within 24 months	29.2 (3.8) ^{a,b}	13.3 (2.2) ^{c,e}	17.1 (1.7) ^c	21.0 (3.9)	19.4 (2.4) ^a
Total	27.5 (3.3) ^{a,b}	13.6 (1.0) ^{b,e}	16.7 (1.5) ^{a,c,e}	21.1 (2.3) ^a	21.1 (1.3) ^{a,b}

Note: Table displays the percentage of Reserve military personnel in the Army National Guard by sociodemographic characteristic who were classified in the drinking levels, as indicated in the columns of this table. Estimates within each row may not sum to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., abstainer vs. infrequent/light, infrequent/light vs. moderate). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from infrequent/light drinking level at the 95% confidence level.

^bEstimate is significantly different from moderate drinking level at the 95% confidence level.

^cEstimate is significantly different from abstainer at the 95% confidence level.

^dEstimate is significantly different from moderate/heavy drinking level at the 95% confidence level.

^eEstimate is significantly different from heavy drinking level at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Drinking Levels, Q19–22 and Q24–27).

Table B.3 DRINKING LEVEL FOR THE ARMY RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Gender					
Male	24.9 (2.8) ^a	17.0 (1.7) ^b	19.5 (1.5)	21.1 (1.5)	17.4 (2.3)
Female	38.1 (5.6) ^{c-e}	21.5 (3.4) ^e	16.0 (3.2) ^b	14.7 (2.2) ^{b,e}	9.7 (1.2) ^{a,b,d}
Race/Ethnicity					
White, non-Hispanic	24.8 (3.7)	18.0 (2.6)	20.1 (1.9)	19.9 (2.0)	17.1 (2.7)
African American, non-Hispanic	35.8 (2.6) ^{a,c-e}	18.2 (1.3) ^{b,e}	19.5 (4.4) ^b	17.1 (3.1) ^{b,e}	9.5 (2.6) ^{a,b,d}
Hispanic	26.6 (1.7) ^{c,e}	17.8 (6.0)	13.7 (3.9) ^{b,d}	22.1 (2.2) ^c	19.8 (2.2) ^b
Other	36.5 (6.5) ^{c-e}	19.0 (5.1)	13.8 (5.2) ^b	18.8 (3.2) ^b	11.9 (2.9) ^b
Education					
High school or less	26.7 (3.8) ^a	13.0 (1.1) ^{b,d,e}	18.4 (2.7)	19.7 (2.9) ^a	22.2 (2.1) ^a
Some college	26.5 (2.9) ^{a,c}	17.9 (2.3) ^b	17.2 (1.5) ^b	21.8 (2.5)	16.6 (2.9)
College graduate or higher	31.7 (5.6) ^{d,e}	22.7 (4.1) ^e	21.5 (2.4) ^e	15.7 (3.2) ^{b,e}	8.4 (2.4) ^{a-d}
Age					
24 or younger	25.6 (2.9) ^{a,c}	12.0 (1.5) ^{b-e}	17.4 (1.0) ^{a,b,e}	19.7 (1.9) ^a	25.3 (3.2) ^{a,c}
25-34	22.4 (3.8)	17.8 (3.0)	20.3 (2.4)	23.3 (3.0) ^e	16.2 (2.8) ^d
35-44	34.5 (3.3) ^{c-e}	24.2 (3.6) ^e	17.9 (2.0) ^{b,e}	17.2 (2.5) ^{b,e}	6.2 (2.0) ^{a-d}
45 or older	34.9 (5.3) ^{d,e}	24.0 (3.4) ^e	19.9 (4.6) ^e	16.0 (3.7) ^{b,e}	5.2 (2.1) ^{a-d}
Marital Status					
Not married	27.0 (3.2) ^{a,c}	14.9 (1.6) ^{b,d}	17.2 (1.3) ^{b,d}	21.9 (1.6) ^{a,c}	19.1 (2.3)
Married	28.9 (2.7) ^{c-e}	22.2 (2.5) ^e	20.7 (1.6) ^{b,e}	16.6 (1.6) ^{b,e}	11.6 (2.0) ^{a-d}
Pay Grade					
E1-E3	34.0 (4.7) ^{a,c,d}	9.4 (1.7) ^{b,c,e}	21.2 (2.7) ^{a,b}	14.6 (2.6) ^b	20.8 (2.8) ^a
E4-E6	25.2 (2.6) ^{a,c}	16.4 (1.5) ^{b,d}	17.3 (1.4) ^{b,d}	22.7 (0.9) ^{a,c,e}	18.4 (1.9) ^d
E7-E9	36.3 (8.2) ^{d,e}	22.1 (6.2)	21.8 (5.6) ^e	14.4 (5.2) ^{b,e}	5.4 (3.4) ^{a,c,d}
W1-W5, O1-O3	25.2 (3.8) ^e	27.6 (7.2) ^e	17.1 (3.4)	22.4 (5.1) ^e	7.7 (3.6) ^{a,b,d}
O4-O10	26.6 (5.4) ^{d,e}	36.8 (5.5) ^{c-e}	20.6 (3.5) ^{a,d,e}	12.0 (2.1) ^{a-c,e}	4.0 (2.2) ^{a-d}
Current Military Job					
Infantry, gun crew, or seamanship specialist	19.0 (3.0) ^d	13.2 (3.2) ^d	19.8 (3.9)	28.4 (2.0) ^{a,b,e}	19.6 (1.7) ^d
Electronic equipment repairman + (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Communications/intelligence specialist	26.8 (7.2)	+ (+)	21.5 (3.2)	25.6 (7.3)	13.8 (4.9)
Health care specialist	23.4 (2.4) ^a	14.4 (2.3) ^{b,d}	22.4 (2.5) ^e	25.0 (1.4) ^{a,e}	14.8 (2.3) ^{c,d}
Other technical specialist + (+)	+ (+)	16.4 (4.5)	21.0 (7.2)	13.8 (3.0)	13.0 (2.7)
Functional support and administration	32.4 (6.6) ^e	20.3 (3.2) ^e	20.9 (3.0) ^e	17.3 (4.2) ^e	9.1 (3.4) ^{a-d}
Electrical/mechanical equipment repairman	25.2 (6.2)	16.1 (5.6)	21.7 (5.3)	21.6 (4.9)	+ (+)

(Table continued on next page)

Table B.3

DRINKING LEVEL FOR THE ARMY RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Craftsman	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Service and supply handler	31.6 (4.6) ^{c,d}	18.1 (3.8)	13.0 (2.6) ^b	14.4 (2.7) ^b	22.8 (4.1)
Nonoccupational enlisted	+ (+)	16.4 (5.6)	6.2 (2.8) ^d	14.5 (6.0) ^c	+ (+)
Officer	28.3 (3.8) ^{c,e}	31.6 (5.0) ^{c,e}	15.3 (2.5) ^{a,b,e}	18.4 (2.9) ^e	6.4 (1.9) ^{a-d}
Deployed Within Past 24 Months					
At least once	22.5 (3.4)	18.5 (2.8)	18.8 (2.9) ^d	23.8 (2.3) ^{c,e}	16.5 (2.4) ^d
Not within 24 months	29.7 (2.4) ^{a,c-e}	19.1 (1.5) ^b	18.9 (2.0) ^b	17.7 (1.4) ^b	14.6 (2.4) ^b
Total	28.0 (2.9) ^{a,c-e}	18.1 (1.4) ^b	18.7 (1.3) ^b	19.6 (1.3) ^{b,e}	15.6 (2.0) ^{b,d}

Note: Table displays the percentage of Reserve military personnel in the Army Reserve component by sociodemographic characteristic who were classified in the drinking levels, as indicated in the columns of this table. Estimates within each row may not sum to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., abstainer vs. infrequent/light, infrequent/light vs. moderate). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from infrequent/light drinking level at the 95% confidence level.

^bEstimate is significantly different from abstainer at the 95% confidence level.

^cEstimate is significantly different from moderate drinking level at the 95% confidence level.

^dEstimate is significantly different from moderate/heavy drinking level at the 95% confidence level.

^eEstimate is significantly different from heavy drinking level at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Drinking Levels, Q19–22 and Q24–27).

Table B.4 DRINKING LEVEL FOR THE NAVY RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Gender					
Male	29.2 (2.5) ^{a,b}	16.6 (1.2) ^{b-e}	23.1 (0.9) ^{a,b}	22.7 (1.5) ^{a,b}	8.4 (0.7) ^{a,c-e}
Female	34.9 (1.9) ^{a,b,d,e}	20.6 (1.1) ^{b,c}	22.2 (0.9) ^{b,c}	18.9 (1.7) ^{b,c}	3.4 (0.7) ^{a,c-e}
Race/Ethnicity					
White, non-Hispanic	26.6 (3.4) ^{a,b}	16.9 (1.1) ^{b-e}	25.0 (1.2) ^{a,b}	25.0 (1.7) ^{a,b}	6.5 (0.6) ^{a,c-e}
African American, non-Hispanic	45.3 (2.1) ^{a,b,d,e}	15.9 (3.8) ^c	16.1 (1.7) ^{b,c}	15.2 (1.5) ^{b,c}	7.5 (1.0) ^{c-e}
Hispanic	27.9 (1.5) ^{a,b,e}	16.6 (3.0) ^c	22.9 (2.5) ^b	20.4 (2.9) ^{b,c}	12.2 (1.3) ^{c-e}
Other	36.8 (4.8) ^{b,d,e}	23.2 (4.8) ^b	18.9 (3.4) ^{b,c}	13.3 (2.6) ^c	7.9 (1.4) ^{a,c,d}
Education					
High school or less	31.3 (2.5) ^{a,b,d,e}	13.1 (0.9) ^{c-e}	20.3 (2.1) ^{a-c}	20.9 (2.2) ^{a,c}	14.4 (1.7) ^{c,d}
Some college	34.1 (2.4) ^{a,b,d,e}	15.3 (0.9) ^{b-e}	21.4 (1.4) ^{a-c}	21.1 (2.2) ^{a-c}	8.2 (0.5) ^{a,c-e}
College graduate or higher	26.5 (2.9) ^b	20.9 (2.0) ^b	25.3 (1.7) ^b	23.1 (1.8) ^b	4.3 (0.5) ^{a,c-e}
Age					
24 or younger	36.1 (5.8) ^{a,b,d,e}	12.3 (1.9) ^c	19.3 (3.0) ^c	17.7 (3.4) ^c	14.6 (2.9) ^c
25-34	27.4 (2.9) ^{a,b}	14.7 (1.5) ^{b-e}	23.0 (1.4) ^{a,b,e}	25.8 (1.5) ^{a,b,d}	9.1 (1.1) ^{a,c-e}
35-44	30.3 (2.2) ^{a,b,d,e}	18.6 (1.5) ^{b-d}	24.1 (1.3) ^{a-c}	20.7 (1.6) ^{b,c}	6.4 (0.8) ^{a,c-e}
45 or older	32.4 (3.9) ^{b,d,e}	21.4 (2.4) ^b	21.8 (1.0) ^{b,c}	21.0 (2.0) ^{b,c}	3.4 (0.6) ^{a,c-e}
Marital Status					
Not married	29.1 (1.8) ^{a,b,d}	16.2 (1.2) ^{b,c,e}	19.8 (1.2) ^{b,c,e}	25.3 (1.1) ^{a,b,d}	9.7 (1.5) ^{a,c-e}
Married	30.9 (2.9) ^{a,b,e}	18.1 (1.4) ^{b-d}	25.1 (1.3) ^{a,b,e}	20.0 (1.3) ^{b-d}	6.0 (0.6) ^{a,c-e}
Pay Grade					
E1-E3	36.2 (4.6) ^{a,b,d,e}	13.9 (1.3) ^{c,d}	21.9 (3.2) ^{a-c}	17.6 (2.4) ^{b,c}	10.4 (2.5) ^{c-e}
E4-E6	32.5 (2.5) ^{a,b,d,e}	16.7 (1.0) ^{b-e}	20.9 (1.0) ^{a-c}	20.6 (1.5) ^{a-c}	9.2 (0.8) ^{a,c-e}
E7-E9	36.2 (4.1) ^{a,b,d,e}	19.4 (3.8) ^{b,c}	20.9 (2.7) ^{b,c}	19.5 (4.1) ^{b,c}	4.0 (1.1) ^{a,c-e}
W1-W5, O1-O3	20.6 (4.0) ^b	19.4 (3.4) ^b	22.3 (3.6) ^{b,e}	33.3 (4.3) ^{b,d}	4.3 (0.8) ^{a,c-e}
O4-O10	21.0 (3.1) ^b	20.1 (1.6) ^{b,d}	31.1 (2.7) ^{a,b}	25.7 (2.6) ^b	2.1 (0.6) ^{a,c-e}
Current Military Job					
Infantry, gun crew, or seamanship specialist	28.5 (3.9) ^{a,b}	16.0 (2.9) ^c	23.4 (4.3) ^b	22.2 (4.2) ^b	10.0 (2.5) ^{c-e}
Electronic equipment repairman	35.7 (4.3) ^{a,b,d,e}	14.4 (2.3) ^{b-d}	22.7 (2.2) ^{a-c}	19.0 (4.6) ^{b,c}	8.2 (2.0) ^{a,c-e}
Communications/intelligence specialist	31.9 (5.1) ^{a,b}	16.7 (4.6) ^c	18.9 (3.4) ^b	23.9 (1.9) ^b	8.7 (3.1) ^{c-e}
Health care specialist	35.0 (5.7) ^{a,b}	17.2 (3.0) ^{b,c}	22.1 (4.0) ^b	19.2 (4.1) ^b	6.6 (1.9) ^{a,c-e}
Other technical specialist	36.1 (7.8) ^{a,e}	15.1 (4.1) ^c	20.2 (5.7)	13.5 (4.2) ^c	15.1 (5.0)
Functional support and administration	36.0 (4.2) ^{a,b,d,e}	18.6 (3.4) ^{b,c}	22.0 (3.0) ^{b,c}	20.0 (3.8) ^{b,c}	3.4 (0.9) ^{a,c-e}
Electrical/mechanical equipment repairman	30.3 (3.4) ^{a,b,d}	15.0 (2.1) ^{c,e}	19.4 (2.5) ^c	23.1 (2.9) ^{a,b}	12.3 (2.8) ^{c,e}

(Table continued on next page)

Table B.4

DRINKING LEVEL FOR THE NAVY RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Craftsman	29.7 (5.4) ^b	17.8 (2.6)	18.8 (5.2)	21.2 (3.2) ^b	12.5 (1.8) ^{c,e}
Service and supply handler	38.9 (3.6) ^{a,b,d,e}	18.6 (2.4) ^{b,c}	19.6 (2.3) ^{b,c}	17.4 (2.9) ^{b,c}	5.5 (1.0) ^{a,c-e}
Nonoccupational enlisted	31.2 (5.5) ^{b,e}	16.5 (4.8) ^d	27.1 (4.2) ^{a,b}	17.3 (4.4) ^{b,c}	7.9 (2.0) ^{c-e}
Officer	21.1 (2.7) ^b	20.1 (1.7) ^{b,d}	29.2 (2.2) ^{a,b}	27.6 (2.8) ^b	2.0 (0.5) ^{a,c-e}
Deployed Within Past 24 Months					
At least once	24.6 (2.6) ^{a,b}	16.7 (1.6) ^{c,e}	20.3 (1.7) ^b	24.7 (1.5) ^{a,b}	13.7 (1.3) ^{c-e}
Not within 24 months	31.4 (2.5) ^{a,b,d,e}	18.1 (1.1) ^{b-e}	23.4 (0.8) ^{a-c}	21.7 (1.7) ^{a-c}	5.5 (0.6) ^{a,c-e}
Total	30.4 (2.3) ^{a,b,d,e}	17.4 (1.0) ^{b-e}	22.9 (0.7) ^{a-c}	21.9 (1.1) ^{a-c}	7.4 (0.6) ^{a,c-e}

Note: Table displays the percentage of Reserve military personnel in the Navy Reserve component by sociodemographic characteristic who were classified in the drinking levels, as indicated in the columns of this table. Estimates within each row may not sum to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., abstainer vs. infrequent/light, infrequent/light vs. moderate). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from infrequent/light drinking level at the 95% confidence level.

^bEstimate is significantly different from heavy drinking level at the 95% confidence level.

^cEstimate is significantly different from abstainer at the 95% confidence level.

^dEstimate is significantly different from moderate drinking level at the 95% confidence level.

^eEstimate is significantly different from moderate/heavy drinking level at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Drinking Levels, Q19–22 and Q24–27).

Table B.5 DRINKING LEVEL FOR THE AIR NATIONAL GUARD, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Gender					
Male	38.4 (8.0) ^{a,b}	11.8 (1.5) ^{c-e}	17.8 (2.7) ^{a,b,e}	21.7 (2.7) ^{a,b,d}	10.3 (1.7) ^{c-e}
Female	28.1 (4.3) ^b	19.5 (4.8) ^b	20.3 (3.2) ^b	24.4 (4.4) ^b	7.8 (1.9) ^{a,c-e}
Race/Ethnicity					
White, non-Hispanic	37.3 (8.2) ^{a,b}	12.4 (2.1) ^{c-e}	18.3 (3.1) ^{a,b,e}	22.4 (2.3) ^{a,b,d}	9.6 (1.4) ^{c-e}
African American, non-Hispanic	+ (+)	20.9 (5.3) ^b	18.4 (4.9) ^b	18.2 (2.7) ^b	5.7 (2.3) ^{a,d,e}
Hispanic	27.0 (3.0) ^{a,b}	10.5 (2.8) ^{c-e}	23.5 (4.0) ^a	27.9 (3.9) ^a	11.1 (5.3) ^c
Other	35.2 (5.6) ^{a,d,e}	16.1 (1.8) ^c	9.7 (2.3) ^{b,c,e}	18.2 (2.2) ^{c,d}	20.9 (4.0) ^d
Education					
High school or less	37.1 (2.0) ^{a,b,d,e}	11.3 (0.6) ^{c-e}	19.7 (3.0) ^{a-c}	19.4 (2.4) ^{a,c}	12.5 (2.6) ^{c,e}
Some college	34.3 (6.0) ^{a,b,d}	13.3 (1.8) ^{c-e}	16.7 (2.4) ^{a-c,e}	24.3 (0.6) ^{a,b,d}	11.3 (2.1) ^{c-e}
College graduate or higher	+ (+)	13.4 (4.0) ^{d,e}	19.9 (3.1) ^{a,b}	19.7 (5.5) ^{a,b}	6.8 (1.2) ^{d,e}
Age					
24 or younger	31.5 (5.3) ^{a,d,e}	9.4 (0.4) ^{b,c,e}	15.3 (3.2) ^{b,c}	20.1 (2.2) ^{a,c}	23.6 (3.5) ^{a,d}
25-34	+ (+)	12.0 (2.1) ^e	17.9 (4.9) ^e	24.3 (2.2) ^{a,b,d}	11.4 (1.3) ^e
35-44	37.7 (7.4) ^{a,b,d}	13.7 (2.3) ^{b-e}	20.0 (1.6) ^{a-c}	23.7 (3.8) ^{a,b}	4.9 (1.3) ^{a,b,d,e}
45 or older	43.1 (8.0) ^{a,b,d,e}	17.0 (5.4) ^{b,c}	18.2 (1.9) ^{b,c}	18.3 (1.1) ^{b,c}	3.4 (0.9) ^{a,b,d,e}
Marital Status					
Not married	24.7 (3.8) ^a	14.9 (1.9) ^{c,e}	19.4 (3.0)	24.3 (1.6) ^{a,b}	16.8 (2.0) ^e
Married	+ (+)	12.3 (2.6) ^{b,d,e}	17.1 (2.4) ^{a,b,e}	20.7 (3.3) ^{a,b,d}	5.8 (0.8) ^{a,d,e}
Pay Grade					
E1-E3	+ (+)	7.0 (2.3)	+ (+)	+ (+)	+ (+)
E4-E6	35.1 (6.4) ^{a,b}	12.0 (1.5) ^{c-e}	19.4 (3.0) ^{a,b}	22.6 (1.4) ^{a,b}	11.0 (2.2) ^{c-e}
E7-E9	38.5 (5.7) ^{a,b,d,e}	18.2 (4.6) ^{b,c}	17.3 (0.9) ^{b,c,e}	23.2 (2.0) ^{b-d}	2.9 (0.9) ^{a,b,d,e}
O1-O3	+ (+)	+ (+)	17.1 (4.5)	+ (+)	9.2 (2.7)
O4-O10	+ (+)	13.0 (4.3) ^{b,e}	15.7 (3.9) ^b	26.1 (7.4) ^{a,b}	2.1 (1.7) ^{a,d,e}
Current Military Job					
Infantry, gun crew, or seamanship specialist	+ (+)	+ (+)	+ (+)	+ (+)	21.5 (5.0)
Electronic equipment repairman	38.9 (4.5) ^{a,b,d,e}	9.9 (1.7) ^{c-e}	19.9 (1.6) ^{a-c}	21.8 (1.6) ^{a-c}	9.6 (1.2) ^{c-e}
Communications/intelligence specialist	+ (+)	12.1 (2.7) ^e	+ (+)	24.9 (3.1) ^{a,b}	8.6 (3.4) ^e
Health care specialist	27.2 (7.7)	18.1 (4.5)	27.9 (6.1) ^b	16.5 (2.5)	10.4 (4.2) ^d
Other technical specialist	40.7 (7.4) ^{a,b,d}	6.7 (3.0) ^{c-e}	20.0 (1.7) ^{a-c}	24.0 (3.8) ^{a,b}	8.5 (1.5) ^{c-e}
Functional support and administration	+ (+)	13.1 (4.0) ^e	19.5 (4.9)	20.6 (1.3) ^{a,b}	11.7 (3.4) ^e
Electrical/mechanical equipment repairman	+ (+)	14.0 (3.2) ^e	15.0 (4.7) ^e	23.8 (1.8) ^{a,b,d}	10.9 (2.0) ^e

(Table continued on next page)

Table B.5

DRINKING LEVEL FOR THE AIR NATIONAL GUARD, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Craftsman	+ (+)	18.4 (4.7)	22.4 (5.3)	14.2 (2.6)	+ (+)
Service and supply handler	43.5 (2.8) ^{a,b,d,e}	16.0 (1.4) ^{b,c}	16.9 (1.4) ^{b,c}	16.9 (1.0) ^{b,c}	6.7 (0.8) ^{a,b,d,e}
Nonoccupational enlisted	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Officer	+ (+)	15.9 (6.2)	16.8 (4.8) ^b	20.2 (5.8) ^b	4.8 (1.5) ^{d,e}
Deployed Within Past 24 Months					
At least once	38.5 (8.1) ^{a,b,d}	11.1 (2.7) ^{c-e}	17.4 (2.7) ^{a-c,e}	23.2 (2.2) ^{a,b,d}	9.8 (2.0) ^{c-e}
Not within 24 months	36.0 (6.6) ^{a,b,e}	14.9 (2.5) ^{b-e}	19.2 (2.9) ^{a,b}	20.7 (1.1) ^{a-c}	9.1 (1.3) ^{a,c-e}
Total	36.7 (7.4) ^{a,b}	13.1 (2.3) ^{c-e}	18.2 (2.7) ^{a,b,e}	22.1 (1.8) ^{a,b,d}	9.9 (1.5) ^{c-e}

Note: Table displays the percentage of Reserve military personnel in the Air National Guard by sociodemographic characteristic who were classified in the drinking levels, as indicated in the columns of this table. Estimates within each row may not sum to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., abstainer vs. infrequent/light, infrequent/light vs. moderate). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from infrequent/light drinking level at the 95% confidence level.

^bEstimate is significantly different from heavy drinking level at the 95% confidence level.

^cEstimate is significantly different from abstainer at the 95% confidence level.

^dEstimate is significantly different from moderate drinking level at the 95% confidence level.

^eEstimate is significantly different from moderate/heavy drinking level at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Drinking Levels, Q19–22 and Q24–27).

Table B.6 DRINKING LEVEL FOR THE AIR FORCE RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Gender					
Male	25.7 (1.2) ^{a-c}	16.8 (1.1) ^{b-e}	20.4 (1.0) ^{a,c-e}	27.0 (1.0) ^{a-c}	10.2 (0.7) ^{a,b,d,e}
Female	29.6 (1.5) ^{b,c,e}	25.2 (1.9) ^{c,e}	22.4 (1.8) ^{c,d}	17.9 (1.5) ^{a,c,e}	5.0 (0.9) ^{a,b,d,e}
Race/Ethnicity					
White, non-Hispanic	23.7 (1.1) ^{a,c,e}	18.7 (1.3) ^{c-e}	21.0 (1.2) ^{c,e}	27.5 (0.9) ^{a-d}	9.1 (0.7) ^{a,b,d,e}
African American, non-Hispanic	36.9 (1.7) ^{a-c,e}	19.6 (2.2) ^{c,d}	20.5 (1.3) ^{c-e}	16.4 (1.4) ^{b-d}	6.6 (1.0) ^{a,b,d,e}
Hispanic	24.3 (1.1) ^c	21.2 (1.7) ^c	22.3 (1.6) ^c	19.6 (1.8) ^c	12.7 (1.6) ^{a,b,d,e}
Other	38.7 (3.2) ^{a-c,e}	15.7 (3.9) ^d	19.2 (2.1) ^{c,d}	17.8 (3.9) ^{c,d}	8.5 (1.4) ^{b,d,e}
Education					
High school or less	31.5 (3.8) ^{a-c}	15.2 (1.9) ^{d,e}	15.1 (1.5) ^{d,e}	21.7 (2.3) ^{a-c}	16.6 (1.9) ^{d,e}
Some college	26.6 (0.8) ^{a-c}	17.0 (0.8) ^{b-e}	20.5 (0.7) ^{a,c-e}	24.8 (0.7) ^{a-c}	11.1 (0.7) ^{a,b,d,e}
College graduate or higher	25.6 (1.2) ^c	21.9 (1.8) ^c	22.7 (0.8) ^c	25.4 (1.6) ^c	4.5 (0.6) ^{a,b,d,e}
Age					
24 or younger	23.9 (1.2) ^{a-c}	12.8 (1.1) ^{b-e}	19.1 (1.3) ^{a,d,e}	24.7 (1.6) ^{a-c}	19.4 (1.5) ^{a,d,e}
25-34	23.4 (2.0) ^c	18.6 (1.6) ^{b,c,e}	22.8 (1.5) ^{a,c}	24.9 (1.8) ^{a,c}	10.3 (1.3) ^{a,b,d,e}
35-44	25.9 (1.4) ^{a,c}	20.2 (1.3) ^{c-e}	22.5 (1.0) ^c	25.1 (1.2) ^{a,c}	6.2 (1.0) ^{a,b,d,e}
45 or older	32.6 (1.6) ^{a-c,e}	20.8 (1.6) ^{c,d}	17.7 (0.8) ^{c-e}	23.9 (1.0) ^{b-d}	5.0 (0.8) ^{a,b,d,e}
Marital Status					
Not married	23.8 (0.9) ^{a-c}	17.6 (0.8) ^{c-e}	19.6 (0.9) ^{c-e}	26.1 (1.0) ^{a-c}	12.9 (1.1) ^{a,b,d,e}
Married	28.4 (1.3) ^{a-c,e}	19.9 (1.4) ^{c,d}	21.8 (0.9) ^{c,d}	23.8 (1.1) ^{c,d}	6.1 (0.6) ^{a,b,d,e}
Pay Grade					
E1-E3	31.4 (2.5) ^{a-c}	15.7 (2.4) ^d	15.1 (1.9) ^d	22.6 (4.5)	15.1 (1.6) ^d
E4-E6	27.3 (1.2) ^{a-c}	16.8 (0.7) ^{b-e}	19.9 (0.9) ^{a,c-e}	24.3 (0.9) ^{a-c}	11.6 (1.0) ^{a,b,d,e}
E7-E9	29.5 (1.9) ^{a-c}	20.2 (1.1) ^{c,d}	20.4 (1.1) ^{c-e}	23.3 (1.5) ^{b,c}	6.6 (1.2) ^{a,b,d,e}
O1-O3	21.5 (2.5) ^c	26.7 (5.8) ^c	24.9 (4.1) ^c	21.6 (3.0) ^c	5.3 (1.2) ^{a,b,d,e}
O4-O10	21.5 (1.1) ^{c,e}	21.5 (3.4) ^c	24.9 (1.8) ^c	29.7 (2.0) ^{c,d}	2.4 (0.6) ^{a,b,d,e}
Current Military Job					
Infantry, gun crew, or seamanship specialist	12.0 (3.4) ^{c,e}	19.3 (2.8)	22.6 (6.1)	26.0 (5.3) ^d	20.0 (2.6) ^d
Electronic equipment repairman	36.7 (5.4) ^{a,c,e}	11.2 (2.3) ^{d,e}	19.1 (4.7)	22.1 (2.8) ^{a,c,d}	10.8 (3.3) ^{d,e}
Communications/intelligence specialist	34.8 (3.2) ^{a-c,e}	20.0 (2.1) ^{c,d}	19.0 (5.0) ^{c,d}	17.7 (2.1) ^{c,d}	8.5 (1.5) ^{a,b,d,e}
Health care specialist	29.3 (4.2) ^c	21.7 (2.4) ^c	23.6 (2.8) ^c	19.4 (2.7) ^c	6.0 (1.8) ^{a,b,d,e}
Other technical specialist	31.4 (2.7) ^{a-c}	16.2 (3.7) ^d	16.8 (1.0) ^{c-e}	23.3 (3.3) ^{b,c}	12.4 (2.2) ^{b,d,e}
Functional support and administration	30.5 (2.1) ^{a-c}	21.6 (1.7) ^{c,d}	18.4 (1.4) ^{c-e}	24.6 (1.5) ^{b,c}	4.9 (1.2) ^{a,b,d,e}
Electrical/mechanical equipment repairman	24.0 (1.6) ^{a-c}	15.1 (1.4) ^{b,d,e}	22.1 (0.8) ^{a,c,e}	26.1 (1.6) ^{a-c}	12.6 (0.9) ^{b,d,e}
Craftsman	24.9 (1.5) ^{a-c}	18.4 (2.8) ^d	17.5 (1.0) ^{c-e}	27.7 (2.1) ^{b,c}	11.5 (1.7) ^{b,d,e}
Service and supply handler	29.9 (1.7) ^{a-c,e}	15.7 (2.3) ^d	19.1 (1.2) ^d	21.0 (1.6) ^{c,d}	14.3 (2.1) ^{d,e}

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Table B.6

DRINKING LEVEL FOR THE AIR FORCE RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Current Military Job (continued)					
Nonoccupational enlisted	26.3 (4.4) ^c	18.5 (3.2)	20.8 (3.4)	23.8 (3.4) ^c	10.7 (3.0) ^{d,e}
Officer	21.6 (0.9) ^{c,e}	23.1 (3.0) ^c	24.2 (2.2) ^c	28.4 (1.9) ^{c,d}	2.8 (0.3) ^{a,b,d,e}
Deployed Within Past 24 Months					
At least once	21.7 (0.9) ^{a,c,e}	16.2 (1.3) ^{b,d,e}	21.4 (1.6) ^{a,c,e}	30.0 (1.0) ^{a,d}	10.7 (1.6) ^{b,d,e}
Not within 24 months	29.2 (1.2) ^{a-c,e}	21.0 (1.2) ^{c,d}	20.5 (0.7) ^{c,d}	21.9 (1.1) ^{c,d}	7.5 (0.6) ^{a,b,d,e}
Total	26.6 (1.0) ^{a-c}	18.8 (1.0) ^{c-e}	20.9 (0.7) ^{c-e}	24.7 (0.9) ^{a-c}	8.9 (0.7) ^{a,b,d,e}

Note: Table displays the percentage of Reserve military personnel in the Air Force Reserve by sociodemographic characteristic who were classified in the drinking levels, as indicated in the columns of this table. Estimates within each row may not sum to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., abstainer vs. infrequent/light, infrequent/light vs. moderate). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from infrequent/light drinking level at the 95% confidence level.

^bEstimate is significantly different from moderate drinking level at the 95% confidence level.

^cEstimate is significantly different from heavy drinking level at the 95% confidence level.

^dEstimate is significantly different from abstainer at the 95% confidence level.

^eEstimate is significantly different from moderate/heavy drinking level at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Drinking Levels, Q19–22 and Q24–27).

Table B.7 DRINKING LEVEL FOR THE MARINE CORPS RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Gender					
Male	23.3 (4.1) ^a	7.4 (1.4) ^{b-e}	14.6 (1.2) ^{a,d,e}	23.9 (2.3) ^{a,c,e}	30.8 (2.3) ^{a,c,d}
Female	+ (+)	20.9 (5.2)	+ (+)	+ (+)	+ (+)
Race/Ethnicity					
White, non-Hispanic	21.7 (4.4) ^a	7.5 (1.4) ^{b-e}	15.2 (1.7) ^{a,d,e}	23.7 (2.6) ^{a,c,e}	31.9 (3.0) ^{a,c,d}
African American, non-Hispanic	+ (+)	+ (+)	12.8 (4.9)	19.5 (7.0)	25.4 (6.4)
Hispanic	21.6 (5.9) ^e	7.3 (2.0) ^{d,e}	11.5 (3.6) ^{d,e}	25.6 (2.8) ^{a,c,e}	34.0 (2.4) ^{a-d}
Other	29.9 (7.2)	14.3 (5.9)	19.3 (4.9)	23.9 (5.4)	12.6 (3.4)
Education					
High school or less	29.0 (4.8) ^{a,c}	8.2 (1.9) ^{b,d,e}	11.1 (1.2) ^{b,d,e}	21.1 (2.4) ^{a,c,e}	30.5 (4.0) ^{a,c,d}
Some college	24.2 (6.2) ^a	8.5 (1.6) ^{b-e}	15.3 (1.6) ^{a,d,e}	22.5 (3.2) ^{a,c,e}	29.4 (2.1) ^{a,c,d}
College graduate or higher	7.4 (2.4) ^{c-e}	5.3 (2.8) ^{c-e}	19.3 (4.7) ^{a,b,e}	33.9 (5.1) ^{a,b}	34.1 (3.6) ^{a-c}
Age					
24 or younger	23.0 (5.2) ^a	7.5 (1.6) ^{b-e}	13.7 (1.4) ^{a,d,e}	23.5 (2.8) ^{a,c,e}	32.3 (2.3) ^{a,c,d}
25-34	24.1 (3.8) ^a	8.9 (1.7) ^{b-e}	17.4 (2.9) ^{a,d}	25.4 (2.0) ^{a,c}	24.2 (2.3) ^a
35-44	+ (+)	+ (+)	17.3 (6.6)	23.7 (7.1)	+ (+)
45 or older	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Marital Status					
Not married	20.6 (4.0) ^{a,e}	7.3 (1.3) ^{b-e}	13.4 (1.0) ^{a,d,e}	23.4 (2.3) ^{a,c,e}	35.4 (2.6) ^{a-d}
Married	29.2 (5.6) ^a	9.9 (2.7) ^{b-d}	18.6 (3.6) ^a	25.3 (3.7) ^a	17.0 (3.0)
Pay Grade					
E1-E3	22.6 (4.2) ^{a,e}	7.4 (1.6) ^{b-e}	14.5 (1.4) ^{a,d,e}	21.8 (2.0) ^{a,c,e}	33.8 (2.0) ^{a-d}
E4-E6	27.3 (6.6) ^a	8.2 (1.8) ^{b,d,e}	12.3 (2.2) ^{d,e}	26.7 (3.0) ^{a,c}	25.5 (3.4) ^{a,c}
E7-E9	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
W1-W5, O1-O3	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
O4-O10	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Current Military Job					
Infantry, gun crew, or seamanship specialist	+ (+)	7.5 (1.5) ^{d,e}	8.9 (1.9) ^{d,e}	25.8 (6.2) ^{a,c}	26.9 (3.1) ^{a,c}
Electronic equipment repairman	33.2 (6.8) ^{a,c}	8.0 (3.2) ^{b,c,e}	5.3 (2.1) ^{a,b,d,e}	17.9 (4.1) ^{c,e}	35.6 (4.9) ^{a,c,d}
Communications/intelligence specialist	16.9 (4.4) ^e	14.5 (3.1) ^e	13.5 (3.5) ^e	19.6 (3.7)	35.5 (5.5) ^{a-c}
Health care specialist	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Other technical specialist	+ (+)	8.4 (3.1) ^{c,e}	24.5 (6.7) ^{a,d}	8.5 (4.3) ^c	21.2 (5.2) ^a
Functional support and administration	18.4 (5.6)	12.5 (3.7) ^{d,e}	15.9 (4.8)	23.8 (2.6) ^a	29.4 (4.0) ^a
Electrical/mechanical equipment repairman	10.3 (4.6) ^{d,e}	6.8 (3.4) ^{d,e}	16.4 (5.7) ^e	32.3 (7.4) ^{a,b}	34.2 (6.6) ^{a-c}

(Table continued on next page)

Table B.7

DRINKING LEVEL FOR THE MARINE CORPS RESERVE, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)

Sociodemographic Characteristic	Drinking Level				
	Abstainer	Infrequent/Light	Moderate	Moderate/Heavy	Heavy
Craftsman	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Service and supply handler	23.7 (4.1) ^a	8.5 (3.9) ^{b,d,e}	16.2 (3.1) ^e	21.9 (2.1) ^a	29.7 (4.8) ^{a,c}
Nonoccupational enlisted	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Officer	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
Deployed Within Past 24 Months					
At least once	16.0 (4.2) ^e	8.9 (1.8) ^{d,e}	17.9 (4.9) ^e	25.6 (4.4) ^a	31.5 (3.9) ^{a-c}
Not within 24 months	25.2 (5.7) ^a	9.2 (1.7) ^{b-e}	14.5 (2.6) ^{a,d,e}	22.3 (2.3) ^{a,c,e}	28.8 (3.4) ^{a,c,d}
Total	23.2 (4.1) ^a	8.0 (1.4) ^{b-e}	14.7 (1.2) ^{a,d,e}	23.8 (2.0) ^{a,c,e}	30.4 (2.1) ^{a,c,d}

Note: Table displays the percentage of Reserve military personnel in the Marine Corps Reserve by sociodemographic characteristic who were classified in the drinking levels, as indicated in the columns of this table. Estimates within each row may not sum to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible drinking-level combinations (e.g., abstainer vs. infrequent/light, infrequent/light vs. moderate). Definitions and measures of substance use are given in Chapter 2. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from infrequent/light drinking level at the 95% confidence level.

^bEstimate is significantly different from abstainer at the 95% confidence level.

^cEstimate is significantly different from moderate drinking level at the 95% confidence level.

^dEstimate is significantly different from moderate/heavy drinking level at the 95% confidence level.

^eEstimate is significantly different from heavy drinking level at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Alcohol Drinking Levels, Q19–22 and Q24–27).

Table B.8 HEAVY ALCOHOL USE, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	21.9 (1.4) ^{a-d}	17.4 (2.3) ^{a-d}	8.4 (0.7) ^{d-f}	10.3 (1.7) ^{d-f}	10.2 (0.7) ^{d-f}	30.8 (2.3) ^{a-c,e,f}	18.0 (1.0)
Female	16.3 (2.9) ^{a-c,f}	9.7 (1.2) ^{a,c,e}	3.4 (0.7) ^{b,e,f}	7.8 (1.9) ^{a,e}	5.0 (0.9) ^{e,f}	+ (+)	10.5 (1.3)
Race/Ethnicity							
White, non-Hispanic	22.2 (1.7) ^{a-d}	17.1 (2.7) ^{a-d}	6.5 (0.6) ^{b-f}	9.6 (1.4) ^{a,d-f}	9.1 (0.7) ^{a,d-f}	31.9 (3.0) ^{a-c,e,f}	17.4 (1.2)
African American, non-Hispanic	10.4 (3.9) ^d	9.5 (2.6) ^d	7.5 (1.0) ^d	5.7 (2.3) ^d	6.6 (1.0) ^d	25.4 (6.4) ^{a-c,e,f}	9.5 (1.7)
Hispanic	25.1 (4.1) ^{a-c}	19.8 (2.2) ^{a,c,d}	12.2 (1.3) ^{d-f}	11.1 (5.3) ^{d,e}	12.7 (1.6) ^{d-f}	34.0 (2.4) ^{a-c,f}	21.6 (1.9)
Other	23.4 (0.6) ^{a,c,d,f}	11.9 (2.9) ^e	7.9 (1.4) ^{b,e}	20.9 (4.0) ^{a,c}	8.5 (1.4) ^{b,e}	12.6 (3.4) ^e	15.4 (2.7)
Education							
High school or less	27.3 (2.7) ^{a-c}	22.2 (2.1) ^{a-c}	14.4 (1.7) ^{d-f}	12.5 (2.6) ^{d-f}	16.6 (1.9) ^{d-f}	30.5 (4.0) ^{a-c}	24.7 (1.5)
Some college	19.6 (1.6) ^{a-d}	16.6 (2.9) ^{a,d}	8.2 (0.5) ^{c-f}	11.3 (2.1) ^{d,e}	11.1 (0.7) ^{a,d,e}	29.4 (2.1) ^{a-c,e,f}	16.7 (1.1)
College graduate or higher	12.3 (2.6) ^{a,c,d}	8.4 (2.4) ^d	4.3 (0.5) ^{b,d,e}	6.8 (1.2) ^{a,d}	4.5 (0.6) ^{d,e}	34.1 (3.6) ^{a-c,e,f}	8.8 (1.1)
Age							
24 or younger	29.4 (3.6) ^{a,c}	25.3 (3.2) ^a	14.6 (2.9) ^{b,d-f}	23.6 (3.5) ^{a,d}	19.4 (1.5) ^{d,e}	32.3 (2.3) ^{a-c}	27.5 (1.9)
25-34	21.4 (1.9) ^{a-c}	16.2 (2.8) ^{a,d}	9.1 (1.1) ^{d-f}	11.4 (1.3) ^{d,e}	10.3 (1.3) ^{d,e}	24.2 (2.3) ^{a-c,f}	17.2 (1.2)
35-44	12.7 (2.2) ^{a-c,f}	6.2 (2.0) ^e	6.4 (0.8) ^e	4.9 (1.3) ^e	6.2 (1.0) ^e	+ (+)	8.7 (1.1)
45 or older	7.6 (2.8)	5.2 (2.1)	3.4 (0.6)	3.4 (0.9)	5.0 (0.8)	+ (+)	5.6 (1.2)
Marital Status							
Not married	27.4 (2.2) ^{a-d,f}	19.1 (2.3) ^{a,c-e}	9.7 (1.5) ^{b,d-f}	16.8 (2.0) ^{a,d,e}	12.9 (1.1) ^{d-f}	35.4 (2.6) ^{a-c,e,f}	22.8 (1.2)
Married	13.2 (1.4) ^{a-c}	11.6 (2.0) ^{a-c}	6.0 (0.6) ^{d-f}	5.8 (0.8) ^{d-f}	6.1 (0.6) ^{d-f}	17.0 (3.0) ^{a-c}	10.3 (0.9)

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Table B.8

HEAVY ALCOHOL USE, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Pay Grade							
E1-E3	24.9 (4.3) ^{a,c}	20.8 (2.8) ^{a,d}	10.4 (2.5) ^{d,f}	+ (+)	15.1 (1.6) ^{d,e}	33.8 (2.0) ^{a,c,f}	24.3 (2.4)
E4-E6	23.4 (1.7) ^{a,c}	18.4 (1.9) ^{a,c}	9.2 (0.8) ^{d,f}	11.0 (2.2) ^{d,f}	11.6 (1.0) ^{d,f}	25.5 (3.4) ^{a,c}	18.4 (1.3)
E7-E9	9.0 (1.7) ^{a,b}	5.4 (3.4)	4.0 (1.1) ^e	2.9 (0.9) ^{c,e}	6.6 (1.2) ^b	+ (+)	6.5 (1.2)
W1-W5, O1-O3	7.4 (3.2)	7.7 (3.6)	4.3 (0.8)	9.2 (2.7)	5.3 (1.2)	+ (+)	7.4 (1.8)
O4-O10	3.8 (1.9)	4.0 (2.2)	2.1 (0.6)	2.1 (1.7)	2.4 (0.6)	+ (+)	4.2 (1.3)
Total	21.1 (1.3) ^{a-d,f}	15.6 (2.0) ^{a-e}	7.4 (0.6) ^{d,f}	9.9 (1.5) ^{d,f}	8.9 (0.7) ^{d,f}	30.4 (2.1) ^{a-c,e,f}	16.7 (0.9)

Note: Table displays the percentage of Reserve military personnel in each Reserve component by sociodemographic characteristic who were classified as heavy alcohol users. Estimates may not add to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component combinations (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (XX, Q#). Refer to Chapter 2 for descriptions of sociodemographic variables.

Table B.10 ANY ILLICIT DRUG USE, PAST 12 MONTHS,^a BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	13.9 (1.7) ^{b-d}	12.6 (2.3) ^{b-d}	5.8 (0.4) ^{e-g}	5.0 (0.2) ^{e-g}	5.6 (0.5) ^{e-g}	10.6 (2.0) ^{b-d}	11.0 (1.0)
Female	24.1 (2.9) ^{b-d,f}	14.8 (2.1) ^{c-e,g}	13.1 (1.8) ^{c,e,g}	5.6 (0.5) ^{b,d-g}	9.8 (1.3) ^{c,e-g}	26.4 (4.9) ^{b-d,f}	16.2 (1.3)
Race/Ethnicity							
White, non-Hispanic	16.6 (1.8) ^{b-d}	14.0 (1.7) ^{b-d}	7.1 (0.6) ^{c,e,f}	5.2 (0.4) ^{b,e-g}	6.6 (0.9) ^{e,f}	10.9 (2.4) ^c	12.5 (1.1)
African American, non-Hispanic	8.4 (1.9)	11.5 (2.9)	8.9 (1.1) ^d	6.7 (2.2)	6.5 (0.6) ^b	11.8 (4.1)	9.3 (1.3)
Hispanic	17.2 (4.3) ^{b-d}	15.4 (2.6) ^{b-d}	6.8 (1.1) ^{e,f}	4.4 (1.8) ^{e-g}	7.0 (1.4) ^{e,f}	12.5 (3.4) ^c	14.1 (1.9)
Other	10.2 (0.3) ^{c,d}	+ (+)	6.8 (1.8) ^c	2.6 (0.5) ^{b,d,e}	7.7 (1.2) ^{c,e}	+ (+)	7.1 (1.6)
Education							
High school or less	16.5 (2.4) ^{b-d}	16.3 (2.4) ^{b-d}	6.7 (1.1) ^{c,e-g}	0.8 (0.8) ^{b,d-g}	7.0 (1.9) ^{c,e-g}	14.1 (2.4) ^{b-d}	14.7 (1.5)
Some college	16.2 (1.5) ^{b-d}	14.2 (2.8) ^{c,d}	9.5 (0.7) ^{c-e}	6.2 (0.5) ^{b,e-g}	7.2 (0.7) ^{b,e,f}	11.4 (2.3) ^c	12.8 (1.0)
College graduate or higher	10.9 (2.3) ^{b-d}	8.7 (1.9)	5.4 (0.7) ^e	4.9 (0.5) ^e	6.0 (0.9) ^e	5.8 (2.5)	7.8 (0.9)
Age							
24 or younger	20.1 (2.7) ^{b-d,g}	17.4 (2.7) ^{c,d}	11.3 (2.1) ^{c,e}	3.9 (1.1) ^{b,d-g}	8.5 (1.2) ^{c,e,f}	12.7 (1.9) ^{c,e}	16.9 (1.5)
25-34	14.0 (2.4) ^{b-d}	15.6 (2.8) ^{b-d,g}	8.2 (1.1) ^{c,e,f}	4.3 (0.6) ^{b,d-g}	7.6 (1.0) ^{c,e,f}	8.4 (2.0) ^{e,f}	12.1 (1.4)
35-44	11.5 (1.7) ^{b-d}	7.6 (2.0)	6.6 (0.5) ^{d,e}	5.9 (0.8) ^e	4.8 (0.4) ^{b,e}	+ (+)	8.1 (0.8)
45 or older	10.1 (2.4)	6.4 (2.0)	5.9 (1.5)	6.2 (0.8)	7.8 (1.5)	+ (+)	7.8 (1.0)
Marital Status							
Not married	19.4 (2.1) ^{b-d,g}	17.6 (2.8) ^{b-d}	8.8 (1.3) ^{e,f}	6.5 (0.6) ^{e-g}	8.5 (1.0) ^{e,f}	12.5 (2.2) ^{c,e}	15.8 (1.2)
Married	10.4 (1.6) ^{b-d}	7.6 (1.4) ^c	6.5 (1.0) ^{c,e}	4.3 (0.4) ^{b,e,f}	5.3 (0.5) ^e	6.9 (1.4)	7.9 (0.8)
Pay Grade							
E1-E3	17.7 (4.3) ^c	18.9 (3.8) ^{b,c}	9.8 (1.4) ^{c,f}	3.6 (2.3) ^{b,e-g}	10.5 (4.1)	12.8 (1.8) ^c	16.1 (2.3)
E4-E6	17.3 (1.4) ^{b-d,g}	15.0 (2.1) ^{b-d}	8.8 (0.7) ^{c,e,f}	6.6 (0.3) ^{b,e,f}	7.3 (0.5) ^{e,f}	10.7 (2.2) ^e	13.6 (0.9)
E7-E9	6.1 (3.0)	1.8 (1.1) ^d	4.1 (0.7)	2.6 (0.8) ^d	5.8 (0.6) ^{c,f}	+ (+)	4.2 (1.1)
W1-W5, O1-O3	5.1 (2.4)	9.3 (3.1)	5.2 (1.8)	+ (+)	4.5 (1.3)	+ (+)	5.8 (1.6)
O4-O10	3.4 (1.9)	4.5 (2.3)	3.2 (0.6)	4.1 (1.1)	5.4 (1.5)	+ (+)	4.3 (0.8)

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Table B.10 ANY ILLICIT DRUG USE, PAST 12 MONTHS,^a BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Deployed Within Past 24 Months							
At least once	16.8 (1.1) ^{b-d,g}	14.7 (2.5) ^{b-d}	7.3 (1.0) ^{e,f}	5.7 (1.0) ^{e-g}	6.6 (0.4) ^{e,f}	11.0 (2.4) ^{c,e}	13.5 (1.0)
Not within 24 months	11.6 (2.1) ^{b-d}	12.1 (2.2) ^{b-d}	7.0 (0.6) ^{c,e,f}	4.8 (0.7) ^{b,e-g}	6.5 (1.3) ^{e,f}	10.4 (2.6) ^c	9.8 (1.0)
Total	15.3 (1.6) ^{b-d}	13.2 (2.1) ^{b-d}	7.3 (0.5) ^{c,e,f}	5.1 (0.2) ^{b,d-g}	6.7 (0.7) ^{c,e-g}	11.3 (2.0) ^{c,d}	12.0 (0.9)

Note: Table displays the percentage of Reserve military personnel in each Reserve component who were classified as any illicit drug users in the past 12 months, by sociodemographic characteristic. Estimates may not add to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve). Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aAny nonmedical use of marijuana, cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants.

^bEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^cEstimate is significantly different from the Air National Guard at the 95% confidence level.

^dEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use, Q66–68).

Table B.11 PATTERNS OF CIGARETTE SMOKING, PAST 30 DAYS, BY SMOKING LEVEL

Smoking Level	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Didn't smoke	68.1 (2.6) ^{a-c}	72.2 (2.2) ^{a-c}	83.4 (1.0) ^{c-f}	80.3 (1.3) ^{d-f}	79.4 (1.2) ^{a,d-f}	66.1 (2.9) ^{a-c}	72.8 (1.4)
½ pack or less/day (1-15 cigarettes)	18.5 (1.7) ^{a-c,f}	18.8 (1.5) ^{a-c,f}	11.8 (0.7) ^{c-f}	13.5 (1.6) ^{d-f}	13.9 (0.7) ^{a,d-f}	26.0 (2.0) ^{a-e}	17.3 (0.9)
About 1 pack/day (16-25 cigarettes)	9.1 (1.1) ^{a-c,f}	7.2 (1.0) ^{a,b,f}	3.7 (0.5) ^{d,e}	4.7 (0.6) ^{d,e}	5.0 (0.8) ^d	4.8 (0.6) ^{d,e}	7.0 (0.6)
About 1½ packs/day (26-35 cigarettes)	2.6 (0.5) ^{a-c}	1.3 (0.5)	0.8 (0.1) ^{c,d,f}	0.9 (0.1) ^{d,f}	1.3 (0.2) ^{a,d}	1.8 (0.4) ^{a,b}	1.8 (0.3)
About 2 or more packs/day (>36 cigarettes)	1.8 (0.4) ^{a-c,e}	0.5 (0.1) ^{d,f}	0.4 (0.1) ^{d,f}	0.6 (0.1) ^d	0.5 (0.2) ^{d,f}	1.3 (0.3) ^{a,c,e}	1.1 (0.2)

Note: Table displays the percentage of Reserve military personnel by Reserve component who reported the indicated smoking level in the past 30 days. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components. Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

Source: 2006 Department of Defense Reserve Component Survey (Smoking Level, Q50).

Table B.12 ANY CIGARETTE USE, PAST 30 DAYS, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	28.0 (2.6) ^{a-c}	25.1 (2.5) ^{a-c}	13.6 (0.7) ^{b-f}	17.1 (1.1) ^{a,d-f}	18.1 (1.0) ^{a,d-f}	28.1 (3.1) ^{a-c}	24.0 (1.4)
Female	29.3 (3.7) ^{a-c,e}	19.8 (2.7) ^d	16.7 (2.2) ^d	15.5 (3.6) ^d	20.0 (2.0) ^d	+ (+)	22.2 (1.6)
Race/Ethnicity							
White, non-Hispanic	30.8 (2.6) ^{a-c}	28.2 (2.6) ^{a-c}	16.4 (1.0) ^{c-f}	17.3 (1.7) ^{d-f}	21.0 (1.4) ^{a,d-f}	30.6 (3.4) ^{a-c}	26.3 (1.5)
African American, non-Hispanic	13.2 (3.6)	11.3 (3.2)	8.5 (1.8)	7.5 (1.4)	9.7 (1.5)	16.6 (4.6)	11.5 (1.7)
Hispanic	29.5 (2.8) ^{a,c,e}	22.7 (1.7) ^{a,c,d}	11.4 (2.1) ^{b,d-f}	22.9 (2.6) ^{a,c}	16.3 (1.5) ^{b,d-f}	26.3 (3.9) ^{a,c}	24.2 (1.8)
Other	26.8 (0.8) ^{a-c}	30.3 (4.8) ^{a-c}	12.2 (2.3) ^{d,e}	16.8 (2.7) ^{d,e}	14.7 (1.8) ^{d,e}	19.0 (4.1)	22.3 (2.2)
Education							
High school or less	35.5 (3.9) ^a	33.6 (3.3) ^a	23.8 (1.3) ^{d-f}	26.4 (4.3)	28.2 (3.5)	32.5 (3.4) ^a	33.6 (2.3)
Some college	26.6 (2.8) ^{a,b}	26.0 (2.8) ^{a,b}	17.3 (1.3) ^{c-f}	19.3 (1.1) ^{d-f}	23.3 (1.8) ^a	28.3 (2.9) ^{a,b}	24.6 (1.4)
College graduate or higher	17.9 (2.6) ^{a-c}	11.9 (2.3)	8.0 (0.8) ^{d,f}	10.0 (1.6) ^d	10.5 (1.2) ^d	18.9 (4.8) ^a	12.7 (1.0)
Age							
24 or younger	27.0 (3.4)	29.3 (3.6) ^b	22.5 (1.6) ^f	17.6 (3.5) ^{c,e,f}	27.7 (3.6) ^b	29.5 (2.7) ^{a,b}	27.3 (2.0)
25-34	31.1 (3.7) ^a	28.4 (3.1) ^a	16.9 (0.9) ^{b-e}	24.4 (1.9) ^a	23.4 (1.7) ^a	28.6 (6.1)	27.7 (1.8)
35-44	30.0 (2.9) ^{a-c,e,f}	17.7 (2.9) ^{b,d}	12.9 (1.0) ^{b,d}	9.4 (1.1) ^{a,c-f}	13.8 (1.1) ^{b,d}	17.7 (3.0) ^{b,d}	19.5 (1.6)
45 or older	20.9 (5.1) ^a	11.2 (3.7)	9.2 (1.4) ^{b-d}	16.2 (1.3) ^a	15.8 (1.4) ^a	+ (+)	15.6 (2.1)
Marital Status							
Not married	30.2 (3.1) ^{a-c}	28.3 (2.4) ^{a-c}	16.8 (1.1) ^{b-f}	22.4 (1.3) ^{a,d-f}	21.7 (1.7) ^{a,d-f}	29.3 (2.7) ^{a-c}	27.4 (1.5)
Married	25.8 (2.9) ^{a-c}	18.4 (2.6) ^a	12.7 (1.0) ^{c-f}	13.3 (1.5) ^{d,f}	16.2 (1.0) ^{a,d}	25.5 (5.2) ^{a,b}	19.9 (1.6)
Pay Grade							
E1-E3	28.3 (5.8)	29.8 (3.5) ^a	20.9 (1.5) ^{c-f}	+ (+)	24.7 (5.6)	31.9 (2.8) ^a	28.3 (3.1)
E4-E6	31.8 (3.0) ^{a-c}	27.6 (2.6) ^{a,b}	16.0 (0.8) ^{b-f}	18.5 (0.9) ^{a,c-e}	22.7 (1.2) ^{a,b,d}	24.8 (3.9) ^a	26.7 (1.6)
E7-E9	21.2 (3.6)	16.8 (6.7)	17.6 (3.2)	16.7 (2.5)	17.3 (1.8)	+ (+)	18.6 (2.1)
W1-W5, O1-O3	12.0 (5.2)	11.7 (2.8)	8.4 (1.5)	8.0 (3.9)	9.7 (2.2)	+ (+)	10.9 (2.4)
O4-O10	10.9 (2.3) ^{a,e}	4.0 (2.3) ^d	5.1 (1.0) ^d	+ (+)	7.9 (1.2)	+ (+)	6.8 (1.1)
Deployed Within Past 24 Months							
At least once	28.9 (2.6) ^{a-c}	25.4 (2.3) ^{a-c,f}	16.2 (0.8) ^{c-f}	16.7 (1.4) ^{d-f}	18.6 (0.7) ^{a,d-f}	33.2 (2.9) ^{a-c,e}	25.4 (1.6)
Not within 24 months	26.5 (3.5) ^{a-c}	22.3 (2.9) ^a	13.4 (0.8) ^{b-f}	16.9 (1.1) ^{a,d}	17.7 (1.6) ^{a,d}	23.4 (4.3) ^a	21.6 (1.3)
Total	28.2 (2.5) ^{a-c}	23.9 (2.4) ^{a-c}	14.3 (0.8) ^{c-f}	16.9 (1.1) ^{d-f}	18.5 (1.2) ^{a,d-f}	28.1 (2.9) ^{a-c}	23.7 (1.3)

Note: Table displays the percentage of Reserve military personnel in each Reserve component who smoked cigarettes in the past 30 days, by sociodemographic characteristic. Percentages may not add to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

(Table continued on next page)

Table B.12 | **ANY CIGARETTE USE, PAST 30 DAYS, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)**

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Army Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Any Cigarette Use, Q49–50).

Table B.13 HEAVY CIGARETTE USE, PAST 30 DAYS, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	13.1 (1.8) ^{a-d}	8.8 (1.5) ^a	4.4 (0.5) ^{e,f}	5.9 (0.8) ^e	7.2 (1.3) ^e	6.7 (1.1) ^e	9.7 (1.0)
Female	10.7 (1.0) ^{a-c,f}	5.9 (1.5) ^e	5.2 (1.1) ^e	6.1 (1.0) ^e	5.2 (0.8) ^e	+ (+)	7.4 (0.7)
Race/Ethnicity							
White, non-Hispanic	15.1 (2.1) ^{a-d}	11.7 (1.5) ^{a,b}	6.3 (0.5) ^{e,f}	6.4 (0.5) ^{e,f}	8.5 (1.1) ^e	8.3 (1.2) ^e	11.6 (1.1)
African American, non-Hispanic	4.2 (1.2) ^{a-c}	2.5 (0.8) ^{a,b}	0.1 (0.1) ^{c,e,f}	0.6 (0.5) ^{e,f}	1.7 (0.4) ^{a,e}	4.5 (2.7)	2.8 (0.5)
Hispanic	8.0 (2.6) ^{a,c}	3.8 (1.8)	1.5 (0.1) ^{b,e}	6.2 (1.7) ^{a,c}	1.4 (0.7) ^{b,e}	4.9 (2.8)	5.3 (1.2)
Other	9.9 (0.5) ^{a-d,f}	3.4 (2.5) ^e	3.3 (1.1) ^e	4.1 (1.0) ^e	3.6 (1.7) ^e	4.0 (2.2) ^e	5.7 (1.5)
Education							
High school or less	17.7 (2.5) ^{a,d}	13.7 (2.1)	9.7 (1.7) ^e	9.5 (4.6)	11.4 (3.2)	9.2 (1.7) ^e	15.2 (1.6)
Some college	12.2 (1.8) ^a	8.7 (1.6)	5.5 (0.9) ^{c,e}	8.0 (1.7)	8.9 (1.4) ^a	7.9 (1.6)	9.7 (0.9)
College graduate or higher	4.5 (1.4) ^{b,d}	2.4 (1.2)	2.0 (0.3) ^d	1.4 (0.2) ^{c,e}	2.8 (0.4) ^{b,d}	0.5 (0.6) ^{a,c,e}	2.8 (0.5)
Age							
24 or younger	12.5 (1.9) ^{a,b,d}	9.9 (2.0) ^{a,b}	4.5 (1.4) ^{d-f}	4.2 (0.7) ^{d-f}	8.2 (2.4)	8.4 (0.8) ^{a,b,e}	10.5 (1.1)
25-34	15.2 (3.0) ^{a,c,d}	8.5 (2.3)	5.6 (1.0) ^e	8.9 (1.9)	7.1 (1.4) ^e	4.6 (2.1) ^e	11.0 (1.6)
35-44	9.2 (2.0) ^{a-c}	7.2 (1.5) ^b	4.4 (0.5) ^e	2.8 (0.7) ^{c,e,f}	4.7 (0.6) ^{b,e}	+ (+)	6.4 (0.9)
45 or older	13.2 (2.7) ^{a,b,f}	4.3 (1.8) ^e	3.6 (1.2) ^{b,c,e}	7.4 (0.4) ^{a,e}	8.5 (1.7) ^a	+ (+)	8.3 (1.2)
Marital Status							
Not married	13.3 (1.8) ^{a,c,d}	9.1 (1.5) ^a	5.6 (0.8) ^{e,f}	8.5 (2.5)	6.5 (1.2) ^e	7.0 (0.9) ^e	10.3 (1.0)
Married	12.3 (1.6) ^{a-c,f}	6.9 (1.7) ^e	4.0 (0.7) ^{c,e}	4.4 (0.6) ^e	6.8 (1.2) ^{a,e}	7.1 (2.7)	8.3 (1.0)
Pay Grade							
E1-E3	13.7 (4.0) ^a	7.9 (1.9)	4.6 (1.1) ^{d,e}	+ (+)	8.3 (3.2)	9.5 (0.9) ^a	10.7 (2.0)
E4-E6	14.7 (2.1) ^{a-d}	10.6 (1.4) ^{a,b,d}	5.4 (0.7) ^{c,e,f}	6.3 (0.8) ^{e,f}	8.1 (1.2) ^{a,e}	5.0 (1.6) ^{e,f}	11.0 (1.2)
E7-E9	7.5 (2.5)	5.1 (2.5)	8.2 (2.4)	9.0 (1.6)	7.5 (1.4)	+ (+)	7.2 (1.1)
W1-W5, O1-O3	1.9 (1.1)	2.4 (1.8)	+ (+)	0.2 (0.2) ^c	3.1 (0.8) ^b	+ (+)	1.8 (0.7)
O4-O10	5.6 (3.3)	+ (+)	1.8 (0.6)	+ (+)	1.8 (0.7)	+ (+)	1.8 (0.7)
Deployed Within Past 24 Months							
At least once	13.5 (2.0) ^{a-d}	9.4 (2.5)	6.4 (0.9) ^e	4.8 (1.1) ^e	7.5 (1.0) ^e	7.1 (1.6) ^e	10.5 (1.2)
Not within 24 months	11.6 (2.4) ^{a-d}	7.1 (1.5)	4.2 (0.4) ^{b,e}	6.2 (0.7) ^{a,e}	6.0 (1.1) ^e	6.2 (1.1) ^e	8.0 (0.9)
Total	12.7 (1.5) ^{a-d,f}	8.1 (1.3) ^{a,e}	4.6 (0.4) ^{d-f}	5.9 (0.6) ^e	6.7 (1.1) ^e	7.1 (1.1) ^{a,e}	9.3 (0.9)

(Table continued on next page)

Table B.13 | **HEAVY CIGARETTE USE, PAST 30 DAYS, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)**

Note: Table displays the percentage of Reserve military personnel in each Reserve component who reported any heavy smoking in the past 30 days, by sociodemographic characteristic. Percentages may not add to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Heavy Cigarette Use, Q50).

Table B.14 CIGARETTE USE DURING PAST 30 DAYS, BY PAY GRADE

Pay Grade/ smoking Measure	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
E1-E3							
Any smoking	28.3 (5.8)	29.8 (3.5) ^a	20.9 (1.5) ^{b,c}	+ (+)	24.7 (5.6)	31.9 (2.8) ^a	28.3 (3.1)
Heavy smoking	13.7 (4.0) ^a	7.9 (1.9)	4.6 (1.1) ^{c,d}	+ (+)	8.3 (3.2)	9.5 (0.9) ^a	10.7 (2.0)
E4-E6							
Any smoking	31.8 (3.0) ^{a,e,f}	27.6 (2.6) ^{a,e}	16.0 (0.8) ^{b,f}	18.5 (0.9) ^{a,b,d,f}	22.7 (1.2) ^{a,d,e}	24.8 (3.9) ^a	26.7 (1.6)
Heavy smoking	14.7 (2.1) ^{a,c,e,f}	10.6 (1.4) ^{a,c,e}	5.4 (0.7) ^{b,d,f}	6.3 (0.8) ^{b,d}	8.1 (1.2) ^{a,d}	5.0 (1.6) ^{b,d}	11.0 (1.2)
E7-E9							
Any smoking	21.2 (3.6)	16.8 (6.7)	17.6 (3.2)	16.7 (2.5)	17.3 (1.8)	+ (+)	18.6 (2.1)
Heavy smoking	7.5 (2.5)	5.1 (2.5)	8.2 (2.4)	9.0 (1.6)	7.5 (1.4)	+ (+)	7.2 (1.1)
W1-W5, O1-O3							
Any smoking	12.0 (5.2)	11.7 (2.8)	8.4 (1.5)	8.0 (3.9)	9.7 (2.2)	+ (+)	10.9 (2.4)
Heavy smoking	1.9 (1.1)	2.4 (1.8)	+ (+)	0.2 (0.2) ^f	3.1 (0.8) ^e	+ (+)	1.8 (0.7)
O4-O10							
Any smoking	10.9 (2.3) ^{a,b}	4.0 (2.3) ^d	5.1 (1.0) ^d	+ (+)	7.9 (1.2)	+ (+)	6.8 (1.1)
Heavy smoking	5.6 (3.3)	+ (+)	1.8 (0.6)	+ (+)	1.8 (0.7)	+ (+)	1.8 (0.7)
Total Reserve							
Any smoking	28.2 (2.5) ^{a,e,f}	23.9 (2.4) ^{a,e,f}	14.3 (0.8) ^{b-d,f}	16.9 (1.1) ^{b-d}	18.5 (1.2) ^{a-d}	28.1 (2.9) ^{a,e,f}	23.7 (1.3)
Heavy smoking	12.7 (1.5) ^{a-c,e,f}	8.1 (1.3) ^{a,d}	4.6 (0.4) ^{b-d}	5.9 (0.6) ^d	6.7 (1.1) ^d	7.1 (1.1) ^{a,d}	9.3 (0.9)

Note: Table displays the percentage of Reserve military personnel by Reserve component and age group who smoked any cigarettes or were considered a heavy smoker in the past 30 days. The standard error of each estimate is presented in parentheses. Estimates have not been adjusted for sociodemographic differences among Reserve components.

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Army Reserve at the 95% confidence level.

^cEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^dEstimate is significantly different from the Army National Guard at the 95% confidence level.

^eEstimate is significantly different from the Air National Guard at the 95% confidence level.

^fEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Any smoking, Q49 and Q50).

Table B.15 ANY SMOKELESS TOBACCO USE, PAST 30 DAYS, BY SOCIODEMOGRAPHIC CHARACTERISTICS

Sociodemographic Characteristic	Reserve Component						Total Reserve Component
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve	
Gender							
Male	15.6 (2.7) ^{a-c}	11.6 (2.4) ^d	7.3 (0.8) ^{d,e}	7.5 (1.3) ^{d,e}	9.2 (0.9) ^{d,e}	22.5 (2.7) ^{a-c,f}	12.9 (1.3)
Female	4.6 (2.5)	0.7 (0.4)	0.7 (0.3)	+ (+)	0.6 (0.2)	+ (+)	2.1 (0.9)
Race/Ethnicity							
White, non-Hispanic	17.3 (2.2) ^{a-c}	13.6 (2.3) ^{a,b,d}	7.6 (0.9) ^{d,f}	7.2 (1.2) ^{d,f}	8.9 (0.7) ^{d,e}	24.9 (3.4) ^{a-c,f}	14.0 (1.3)
African American, non-Hispanic	2.3 (0.8)	1.6 (1.0)	1.8 (0.8)	1.4 (1.0)	2.1 (0.5)	+ (+)	2.4 (0.6)
Hispanic	10.9 (3.1) ^{a,c,f}	3.4 (1.0) ^{d,e}	3.0 (1.0) ^{d,e}	+ (+)	3.1 (1.4) ^{d,e}	14.8 (2.8) ^{a,c,f}	7.2 (1.3)
Other	4.4 (0.7) ^{c,d}	+ (+)	4.3 (1.4) ^d	3.5 (1.0) ^d	2.3 (0.6) ^{d,e}	10.3 (2.7) ^{a-c,e}	4.6 (1.1)
Education							
High school or less	14.3 (2.9)	13.7 (2.6) ^d	8.9 (1.7) ^d	13.4 (2.6) ^d	10.6 (1.9) ^d	21.7 (2.4) ^{a-c,f}	14.1 (1.8)
Some college	15.1 (2.6) ^{a-c}	9.2 (2.8) ^d	6.0 (1.2) ^{d,e}	5.4 (1.3) ^{d,e}	7.9 (1.0) ^{d,e}	21.8 (3.8) ^{a-c,f}	11.5 (1.4)
College graduate or higher	11.0 (2.9) ^{a,f}	4.8 (1.3) ^{d,e}	4.8 (0.7) ^{d,e}	5.9 (1.7) ^d	5.2 (0.8) ^d	22.1 (6.0) ^{a-c,f}	7.3 (1.0)
Age							
24 or younger	15.4 (2.5) ^b	12.0 (2.6) ^{b,d}	9.3 (2.7) ^d	6.0 (1.3) ^{c-f}	10.4 (1.5) ^{b,d}	20.4 (2.7) ^{a-c,f}	14.1 (1.5)
25-34	13.9 (2.7) ^a	8.4 (2.2) ^d	6.2 (0.8) ^{d,e}	7.7 (1.9) ^d	8.9 (1.3) ^d	16.5 (2.3) ^{a-c,f}	10.9 (1.4)
35-44	15.9 (3.2) ^{a-c}	9.8 (2.1)	6.7 (1.1) ^e	7.3 (1.4) ^e	6.4 (0.5) ^c	+ (+)	11.2 (1.3)
45 or older	7.1 (2.7) ^a	1.9 (0.8) ^c	1.6 (0.5) ^{b,c,e}	3.7 (0.8) ^a	4.3 (0.6) ^{a,f}	+ (+)	4.3 (0.9)
Marital Status							
Not married	14.1 (2.7) ^{a-d}	9.2 (2.0) ^d	5.7 (1.1) ^{d,e}	6.8 (1.7) ^{d,e}	7.0 (0.9) ^{d,e}	21.3 (2.3) ^{a-c,e,f}	11.6 (1.4)
Married	13.6 (2.7) ^{a-c}	9.1 (2.3) ^d	6.1 (0.7) ^{d,e}	6.3 (1.8) ^{d,e}	7.0 (0.6) ^{d,e}	23.5 (5.3) ^{a-c,f}	10.3 (1.3)
Pay Grade							
E1-E3	12.2 (3.5) ^d	8.6 (1.9) ^d	8.9 (2.1) ^d	10.8 (3.0) ^d	11.3 (3.3) ^d	22.2 (2.8) ^{a-c,e,f}	12.5 (1.9)
E4-E6	16.1 (3.3) ^{a-c}	9.7 (1.9) ^d	6.2 (0.7) ^{d,e}	7.4 (1.2) ^{d,e}	7.7 (0.9) ^{d,e}	17.8 (2.0) ^{a-c,f}	11.9 (1.5)
E7-E9	8.7 (4.5)	10.6 (4.7)	2.7 (1.4)	3.2 (0.7) ^c	5.8 (0.8) ^b	+ (+)	8.1 (1.9)
W1-W5, O1-O3	9.3 (4.2) ^b	9.5 (3.6) ^b	10.2 (2.9) ^b	0.9 (1.0) ^{a,c,e,f}	5.2 (1.2) ^b	+ (+)	8.3 (2.1)
O4-O10	+ (+)	2.0 (1.6)	3.2 (1.4)	5.1 (1.3)	5.9 (1.3)	+ (+)	6.5 (1.7)
Deployed Within Past 24 Months							
At least once	16.2 (3.6) ^{a-c}	12.3 (3.1) ^d	7.6 (1.1) ^{d,e}	6.7 (1.2) ^{d,e}	8.9 (0.9) ^{d,e}	24.2 (3.3) ^{a-c,f}	13.6 (1.9)
Not within 24 months	12.4 (1.9) ^{a-c,f}	7.3 (1.7) ^{d,e}	5.2 (0.6) ^{d,e}	6.3 (1.0) ^{d,e}	6.0 (0.7) ^{d,e}	18.7 (2.7) ^{a-c,f}	9.1 (0.9)
Total	14.1 (2.3) ^{a-d}	9.0 (1.9) ^d	5.9 (0.7) ^{d,e}	6.5 (1.1) ^{d,e}	7.1 (0.6) ^{d,e}	21.8 (2.6) ^{a-c,e,f}	11.0 (1.1)

Note: Table displays the percentage of Reserve military personnel in each Reserve component who reported using smokeless tobacco in the past 30 days, by sociodemographic characteristic. Percentages may not add to 100 due to rounding. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible Reserve component pairings (e.g., Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve).

Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

(Table continued on next page)

Table B.15 | **ANY SMOKELESS TOBACCO USE, PAST 30 DAYS, BY SOCIODEMOGRAPHIC CHARACTERISTICS (continued)**

^aEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^bEstimate is significantly different from the Air National Guard at the 95% confidence level.

^cEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^dEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^eEstimate is significantly different from the Army National Guard at the 95% confidence level.

^fEstimate is significantly different from the Army Reserve at the 95% confidence level.

+ Low precision.

Source: 2006 Department of Defense Reserve Component Survey (Heavy Cigarette Use, Q59 and Q61).

Table B.16

ESTIMATES OF HEAVY ALCOHOL USE UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,390	24.5 (2.1) ^{cdeghij}	23.0 (1.6) ^{cdefhij}
[b] National Guard	2,038	21.1 (1.3) ^{cdefghij}	19.7 (1.1) ^{ehij}
[c] Reserve	1,340	15.6 (2.0) ^{abefghij}	16.5 (1.8) ^{ach}
Total	6,768	21.4 (1.2)	19.7 (1.0)
Navy			
[d] Active duty	4,286	17.0 (1.4) ^{abefghij}	16.9 (1.3) ^{ahij}
[e] Reserve	2,885	7.4 (0.6) ^{abcdfgh}	11.5 (0.7) ^{abcdfg}
Total	7,171	15.1 (1.2)	14.2 (0.8)
Marine Corps			
[f] Active duty	3,181	25.4 (1.3) ^{bcdeghij}	19.6 (0.9) ^{ahij}
[g] Reserve	1,012	30.4 (2.1) ^{abcdefhij}	20.6 (1.7) ^{ehij}
Total	4,193	26.5 (1.2)	20.1 (1.0)
Air Force			
[h] Active duty	4,284	10.3 (1.3) ^{abcdefg}	11.9 (1.0) ^{abcdfg}
[i] National Guard	1,724	9.9 (1.5) ^{abcdfg}	12.6 (1.8) ^{abdfg}
[j] Reserve	5,056	8.9 (0.7) ^{abcdfg}	13.5 (1.1) ^{abdfg}
Total	11,064	10.0 (0.9)	12.7 (0.9)
Total DoD			
Active duty	15,141	18.5 (1.0)	17.8 (0.7) ^k
Guard and Reserves	14,055	16.7 (0.9)	15.7 (0.7)
Total	29,196	17.8 (0.7)	16.6 (0.6)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported heavy alcohol use. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.). A significance test was also done between the total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g., [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army active duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy active duty at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the total DoD, and Guard and Reserves at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Heavy Alcohol Use: 2005 Survey, Q20-Q23 and Q25-Q28; 2006 Survey, Q19-Q22 and Q24-Q27).

Table B.17 ESTIMATES OF ANY CIGARETTE SMOKING, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,619	38.2 (1.5) ^{bcdeghij}	38.2 (1.2) ^{bcdeghij}
[b] National Guard	2,156	28.2 (2.5) ^{ae^afij}	26.1 (2.4) ^{adei}
[c] Reserve	1,439	23.9 (2.4) ^{ade^afij}	26.1 (1.9) ^{adei}
Total	7,214	31.5 (1.6)	30.1 (1.1)
Navy			
[d] Active duty	4,563	32.4 (1.9) ^{acehij}	31.5 (1.4) ^{abceghij}
[e] Reserve	3,046	14.3 (0.8) ^{abcd^afhj}	18.7 (1.0) ^{abcd^afhj}
Total	7,609	28.8 (1.9)	25.1 (0.9)
Marine Corps			
[f] Active duty	3,335	36.3 (2.3) ^{bceghij}	30.7 (2.1) ^{aeg^ahij}
[g] Reserve	1,022	28.1 (2.9) ^{ae^afij}	23.9 (2.6) ^{adf}
Total	4,357	34.5 (1.9)	27.3 (1.7)
Air Force			
[h] Active duty	4,430	23.3 (1.8) ^{ade^afij}	24.9 (1.2) ^{ade^afi}
[i] National Guard	1,796	16.9 (1.1) ^{abcd^afhg}	18.1 (2.1) ^{abcd^afhj}
[j] Reserve	5,246	18.5 (1.2) ^{abcd^aefgh}	23.6 (1.3) ^{ade^afi}
Total	11,472	21.5 (1.4)	22.2 (1.0)
Total DoD			
Active duty	15,947	32.2 (1.1) ^k	31.3 (0.9) ^k
Guard and Reserves	14,705	23.7 (1.3)	22.8 (0.8)
Total	30,652	28.8 (1.0)	26.2 (0.7)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported heavy alcohol use. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.). A significance test was also done between the total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g., [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted “a” indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army active duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy active duty at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the total DoD, and Guard and Reserves at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Any Cigarette Smoking, Past 30 Days: 2005 Survey, Q49 and Q52; 2006 Survey, Q46 and Q49).

Table B.18 ESTIMATES OF ILLICIT DRUG USE, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,618	6.9 (0.5) ^{ehij}	6.9 (0.5) ^{eghij}
[b] National Guard	2,147	9.5 (1.3) ^{defhij}	8.9 (1.3) ^{defghij}
[c] Reserve	1,445	6.5 (1.1) ^{ehij}	6.2 (1.1) ^{hij}
Total	7,210	7.8 (0.6)	7.3 (0.6)
Navy			
[d] Active duty	4,543	4.6 (1.2) ^{bi}	4.8 (1.2) ^{bi}
[e] Reserve	3,028	3.3 (0.4) ^{abcfgi}	4.1 (0.5) ^{abi}
Total	7,571	4.4 (0.9)	4.4 (0.7)
Marine Corps			
[f] Active duty	3,331	6.2 (1.1) ^{behij}	5.7 (1.0) ^{bhij}
[g] Reserve	1,006	6.2 (1.2) ^{ehij}	4.7 (0.8) ^{abi}
Total	4,337	6.2 (0.9)	5.2 (0.7)
Air Force			
[h] Active duty	4,426	2.8 (0.4) ^{abcfgi}	3.0 (0.3) ^{abcfi}
[i] National Guard	1,799	1.9 (0.3) ^{abcdefghj}	2.0 (0.3) ^{abcdefghj}
[j] Reserve	5,258	3.1 (0.3) ^{abcfgi}	3.4 (0.4) ^{abcfi}
Total	11,483	2.7 (0.3)	2.8 (0.2)
Total DoD			
Active duty	15,918	5.0 (0.4)	5.1 (0.4)
Guard and Reserves	14,683	6.6 (0.8)	4.9 (0.3)
Total	30,601	5.7 (0.4)	5.0 (0.3)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported any illicit drug use in the past 30 days. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.). A significance test was also done between the total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g., [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army active duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy active duty at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the total DoD, and Guard and Reserves at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: 2005 Survey, Q70; 2006 Survey, Q68).

Table B.19

ESTIMATES OF OVERWEIGHT, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,398	58.9 (2.0) ^{deij}	60.9 (1.7) ^d
[b] National Guard	1,904	62.3 (2.2) ^{fi}	61.6 (1.5)
[c] Reserve	1,322	60.3 (1.7) ^{defij}	60.6 (1.7) ^d
Total	6,624	60.4 (1.3)	61.0 (1.0)
Navy			
[d] Active duty	4,341	64.8 (1.4) ^{acfh}	64.9 (1.1) ^{acfhj}
[e] Reserve	2,878	65.5 (1.5) ^{acfh}	58.6 (1.6) ^{di}
Total	7,219	64.9 (1.2)	61.8 (1.0)
Marine Corps			
[f] Active duty	3,177	54.8 (1.3) ^{bcdheij}	58.4 (1.5) ^{di}
[g] Reserve	841	+ (+)	+ (+)
Total	4,018	54.5 (1.5)	58.1 (2.2)
Air Force			
[h] Active duty	4,279	60.7 (1.1) ^{defij}	60.8 (1.3) ^d
[i] National Guard	1,656	68.5 (2.3) ^{abcfh}	63.2 (1.4) ^{efj}
[j] Reserve	4,888	64.9 (0.7) ^{acfh}	60.1 (0.9) ^{di}
Total	10,823	62.6 (1.1)	61.4 (0.8)
Total DoD			
Active duty	15,195	60.5 (0.9)	61.2 (0.8)
Guard and Reserves	13,489	62.7 (1.1)	60.3 (1.0)
Total	28,684	61.3 (0.7)	60.7 (0.7)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve Component who met the criteria for being overweight. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army active-duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.). A significance test was also done between the total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g., [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army active duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy active duty at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the total DoD, and Guard and Reserves at the 95% confidence level.

+ Low precision.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Overweight: 2005 Survey and 2006 Survey, Q119 and Q120).

Table B.20 LEVELS OF PERCEIVED STRESS AT WORK AND IN FAMILY LIFE, PAST 12 MONTHS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,439	46.3 (1.9) ^{bcdehij}	46.3 (2.0) ^{bcdehij}
[b] National Guard	1,982	38.9 (2.2) ^{afi}	38.7 (1.8) ^{afhi}
[c] Reserve	1,342	38.7 (2.8) ^{afi}	38.7 (2.4) ^{afi}
Total	6,763	42.0 (1.4)	41.2 (1.3)
Navy			
[d] Active duty	4,357	37.1 (1.5) ^{afgi}	37.4 (1.4) ^{afi}
[e] Reserve	2,842	34.7 (1.3) ^{afgi}	37.0 (1.4) ^{afi}
Total	7,199	36.6 (1.2)	37.2 (1.0)
Marine Corps			
[f] Active duty	3,217	45.2 (1.6) ^{bcdehij}	44.2 (1.6) ^{bcdehij}
[g] Reserve	922	43.5 (2.3) ^{dehij}	42.0 (2.6) ^{hi}
Total	4,139	44.9 (1.3)	43.1 (1.6)
Air Force			
[h] Active duty	4,306	35.3 (0.9) ^{afgi}	34.9 (0.8) ^{abfgi}
[i] National Guard	1,712	30.3 (1.1) ^{abcdefgij}	30.7 (1.1) ^{abcdefgij}
[j] Reserve	5,002	35.8 (1.0) ^{afgi}	36.9 (1.2) ^{afi}
Total	11,020	34.5 (0.8)	34.2 (0.7)
Total DoD			
Active duty	15,319	40.5 (1.0) ^k	40.7 (0.8) ^k
Guard and Reserves	13,802	37.4 (1.2)	37.3 (0.8)
Total	29,121	39.3 (0.8)	38.7 (0.6)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported high work and family stress in the past 12 months. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.). A significance test was also done between the total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g., [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army active duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy active duty at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the total DoD, and Guard and Reserves at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (2006 Survey: Stress at Civilian Job, Q88; Stress at Military Job, Q89; Stress in Family, Q90; Work Stress Interference, Q91; Family Stress Interference, Q92; 2005 Survey: Stress at Work, Q88; Stress in Family, Q89; Work Stress interference, Q90; Family Stress Interference, Q91).

Table B.21

NEED FOR FURTHER DEPRESSION EVALUATION, PAST 7 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCE, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,550	27.6 (1.5) ^{bcdeghij}	27.7 (1.3) ^{bcdeghij}
[b] National Guard	2,008	21.7 (0.8) ^{ae fhij}	20.9 (0.7) ^{ae fhij}
[c] Reserve	1,378	20.3 (1.5) ^{ae fhij}	19.6 (1.4) ^{ae fhij}
Total	6,936	24.0 (1.0)	22.7 (0.7)
Navy			
[d] Active duty	4,465	21.6 (0.9) ^{ae fhij}	21.7 (0.9) ^{ae ghij}
[e] Reserve	2,942	12.8 (0.8) ^{abcd fgh}	14.0 (1.0) ^{abcd fgh}
Total	7,407	19.9 (0.8)	17.9 (0.7)
Marine Corps			
[f] Active duty	3,297	25.4 (1.4) ^{bcdeghij}	24.2 (1.3) ^{bce ghij}
[g] Reserve	910	19.6 (1.5) ^{ae fhij}	18.4 (1.4) ^{ae f j}
Total	4,207	24.3 (1.2)	21.3 (1.0)
Air Force			
[h] Active duty	4,377	15.6 (0.7) ^{abcd efg}	16.3 (0.7) ^{abcd f}
[i] National Guard	1,737	14.4 (1.9) ^{abcd fgh}	15.0 (2.1) ^{ab d f}
[j] Reserve	5,093	13.7 (0.9) ^{abcd fgh}	14.3 (1.1) ^{abcd fgh}
Total	11,207	15.1 (0.6)	15.2 (0.8)
Total DoD			
Active duty	15,689	22.3 (0.8) ^k	22.5 (0.6) ^k
Guard and Reserves	14,068	18.8 (0.6)	17.0 (0.5)
Total	29,757	20.9 (0.6)	19.2 (0.4)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who were considered in need for further depression evaluation. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.). A significance test was also done between the total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g., [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army active duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy active duty at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the total DoD, and Guard and Reserves at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Need for Further Depression Evaluation: 2005 Survey, Q94-Q96; 2006 Survey, Q97-Q99).

Table B.22 | **NEED FOR FURTHER POSTTRAUMATIC STRESS DISORDER EVALUATION, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS**

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,551	9.3 (1.2) ^{dehij}	9.1 (1.1) ^{defhij}
[b] National Guard	2,014	10.5 (1.3) ^{defhij}	9.8 (0.8) ^{defghij}
[c] Reserve	1,379	8.3 (1.3) ^{ehij}	8.5 (1.3) ^{ehij}
Total	6,944	9.5 (0.8)	9.1 (0.7)
Navy			
[d] Active duty	4,478	6.2 (0.9) ^{abehij}	6.0 (0.8) ^{abehij}
[e] Reserve	2,954	3.3 (0.4) ^{abcdfg}	4.2 (0.5) ^{abcdfg}
Total	7,432	5.7 (0.7)	5.1 (0.5)
Marine Corps			
[f] Active duty	3,282	7.6 (0.5) ^{behij}	6.4 (0.5) ^{abehij}
[g] Reserve	903	7.3 (1.0) ^{ehij}	6.7 (1.0) ^{behij}
Total	4,185	7.5 (0.4)	6.5 (0.6)
Air Force			
[h] Active duty	4,346	3.7 (0.4) ^{abcdfg}	4.1 (0.4) ^{abcdfg}
[i] National Guard	1,717	3.5 (0.4) ^{abcdfg}	4.1 (0.5) ^{abcdfg}
[j] Reserve	5,076	3.1 (0.2) ^{abcdfg}	3.7 (0.3) ^{abcdfg}
Total	11,139	3.6 (0.3)	4.0 (0.3)
Total DoD			
Active duty	15,657	6.7 (0.5)	6.4 (0.4)
Guard and Reserves	14,043	7.7 (0.8)	6.2 (0.4)
Total	29,700	7.1 (0.4)	6.3 (0.3)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who were considered in need for further depression evaluation. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.). A significance test was also done between the total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g., [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army active duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy active duty at the 95% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the total DoD, and Guard and Reserves at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Need for Further PTSD Evaluation: 2005 Survey, Q102; 2006 Survey, Q104).

Table B.23

SUICIDE IDEATION, PAST 12 MONTHS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,559	5.6 (0.5) ^{ehij}	5.5 (0.5) ^{hi}
[b] National Guard	2,035	6.9 (0.6) ^{ehij}	6.5 (0.5) ^{eghij}
[c] Reserve	1,386	5.6 (0.8) ^{hij}	5.5 (0.8) ^{hi}
Total	6,980	6.1 (0.4)	5.8 (0.4)
Navy			
[d] Active duty	4,502	5.3 (0.6) ^{hij}	5.2 (0.5) ^{hi}
[e] Reserve	2,963	3.7 (0.5) ^{abf}	4.7 (0.7) ^b
Total	7,465	5.0 (0.5)	5.0 (0.4)
Marine Corps			
[f] Active duty	3,305	5.9 (0.8) ^{ehij}	5.1 (0.7)
[g] Reserve	916	5.9 (1.1) ^{hij}	4.7 (0.7) ^b
Total	4,221	5.9 (0.7)	4.9 (0.5)
Air Force			
[h] Active duty	4,398	3.5 (0.3) ^{abcdfg}	3.8 (0.4) ^{abcd}
[i] National Guard	1,745	2.9 (0.5) ^{abcdfg}	3.2 (0.7) ^{abcd}
[j] Reserve	5,141	3.4 (0.4) ^{abcdfg}	4.1 (0.5) ^b
Total	11,284	3.4 (0.2)	3.7 (0.3)
Total DoD			
Active duty	15,764	4.9 (0.3)	4.9 (0.3)
Guard and Reserves	14,186	5.5 (0.4)	4.8 (0.3)
Total	29,950	5.1 (0.2)	4.8 (0.2)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported suicidal ideation in the past 12 months. The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.). A significance test was also done between the total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g., [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army active duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy active duty at the 95...% confidence level.

^eEstimate is significantly different from the Navy Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the total DoD, and Guard and Reserves at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Suicidal Ideation: 2005 Survey, Q98; 2006 Survey, Q101).

Table B.24 PERCEIVED NEED FOR MENTAL HEALTH COUNSELING, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,520	21.1 (0.8) ^{defghij}	21.5 (0.7) ^{cdefghij}
[b] National Guard	1,962	18.1 (2.2) ^{ej}	17.9 (1.9) ^{ej}
[c] Reserve	1,364	18.4 (1.4) ^{egij}	17.6 (1.1) ^{agij}
Total	6,846	19.5 (1.0)	19.0 (0.8)
Navy			
[d] Active duty	4,454	17.4 (0.8) ^{agij}	17.8 (0.7) ^{agghij}
[e] Reserve	2,938	11.5 (1.0) ^{abcdfgh}	11.8 (1.0) ^{abcdfgh}
Total	7,392	16.3 (0.7)	14.8 (0.6)
Marine Corps			
[f] Active duty	3,278	15.5 (1.1) ^{aej}	16.1 (1.1) ^{aej}
[g] Reserve	890	15.2 (0.8) ^{acdej}	14.7 (0.9) ^{acdej}
Total	4,168	15.4 (0.9)	15.4 (0.7)
Air Force			
[h] Active duty	4,358	15.4 (1.1) ^{aej}	15.1 (1.1) ^{adej}
[i] National Guard	1,706	13.8 (1.1) ^{acd}	13.6 (1.3) ^{abcd}
[j] Reserve	5,064	11.8 (0.8) ^{abcdfgh}	11.5 (0.9) ^{abcdfgh}
Total	11,128	14.6 (0.8)	13.4 (0.7)
Total DoD			
Active duty	15,610	17.8 (0.6)	17.6 (0.5) ^k
Guard and Reserves	13,924	16.3 (0.9)	14.5 (0.6)
Total	29,534	17.2 (0.5)	15.8 (0.4)

Note: The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army Active Duty vs Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Naval Reserve, etc.). A significance test was also done between the Total DoD, Active Duty and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army Active Duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy Active Duty at the 95% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Active Duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force Active Duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the Total DoD, Guard and Reserves at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey.

Table B.25 RECEIPT OF MENTAL HEALTH COUNSELING (ANY COUNSELING PROFESSIONAL), BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,396	16.4 (1.2) ^{efhij}	16.9 (1.1) ^{efhij}
[b] National Guard	1,896	14.8 (1.8) ^j	14.5 (1.8) ^j
[c] Reserve	1,330	14.7 (1.5) ^{ej}	14.0 (1.3) ^j
Total	6,622	15.5 (0.9)	15.1 (0.8)
Navy			
[d] Active duty	4,288	14.8 (0.9) ^{ej}	15.1 (0.9) ^{ej}
[e] Reserve	2,819	10.8 (1.3) ^{acd}	11.0 (1.4) ^{ad}
Total	7,107	14.0 (0.8)	13.1 (0.8)
Marine Corps			
[f] Active duty	3,210	12.7 (1.2) ^{aj}	13.2 (1.3) ^{aj}
[g] Reserve	835	+ (+)	+ (+)
Total	4,045	12.5 (1.1)	12.2 (1.1)
Air Force			
[h] Active duty	4,272	13.3 (1.0) ^{aj}	13.2 (1.0) ^{aj}
[i] National Guard	1,660	11.4 (1.3) ^{ad}	11.0 (1.4) ^{ad}
[j] Reserve	4,899	9.7 (0.7) ^{abcdfh}	9.5 (0.8) ^{abcdfh}
Total	10,831	12.5 (0.7)	11.2 (0.7)
Total DoD			
Active duty	15,166	14.6 (0.6)	14.6 (0.5) ^k
Guard and Reserves	13,439	13.3 (0.8)	11.9 (0.6)
Total	28,605	14.1 (0.5)	13.0 (0.4)

Note: The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army Active Duty vs Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Naval Reserve, etc.). A significance test was also done between the Total DoD, Active Duty and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army Active Duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy Active Duty at the 95% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Active Duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force Active Duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the Total DoD, Guard and Reserves at the 95% confidence level.

+ Low precision.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey.

Table B.26 ESTIMATES OF OVERWEIGHT (BMI 25.0-29.9), UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,398	48.9 (1.7) ^b	50.3 (1.6) ^{bc}
[b] National Guard	1,904	43.9 (1.4) ^{achij}	43.4 (1.3) ^{adefhij}
[c] Reserve	1,322	44.0 (1.8) ^{ej}	44.3 (1.8) ^{af}
Total	6,624	46.1 (0.9)	46.0 (1.0)
Navy			
[d] Active duty	4,341	46.4 (1.3) ^{ej}	46.8 (1.1) ^b
[e] Reserve	2,878	51.8 (1.2) ^{bcdhf}	47.7 (1.2) ^b
Total	7,219	47.4 (1.1)	47.2 (0.9)
Marine Corps			
[f] Active duty	3,177	47.8 (1.4) ^{ej}	49.8 (1.5) ^{bc}
[g] Reserve	841	+ (+)	+ (+)
Total	4,018	47.8 (1.6)	49.7 (2.7)
Air Force			
[h] Active duty	4,279	47.2 (0.8) ^{bej}	47.0 (1.1) ^b
[i] National Guard	1,656	51.0 (1.9) ^{bcd}	47.4 (1.4) ^b
[j] Reserve	4,888	51.0 (0.7) ^{bcdhf}	47.9 (0.9) ^b
Total	10,823	48.4 (0.8)	47.4 (0.8)
Total DoD			
Active duty	15,195	47.6 (0.7)	48.5 (0.7)
Guard and Reserves	13,489	46.4 (0.9)	46.7 (1.1)
Total	28,684	47.1 (0.5)	47.4 (0.7)

Note: The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army Active Duty vs Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Naval Reserve, etc.). A significance test was also done between the Total DoD, Active Duty and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army Active Duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy Active Duty at the 95% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Active Duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force Active Duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the Total DoD, Guard and Reserves at the 95% confidence level.

+ Low precision.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey.

Table B.27

ESTIMATES OF OBESE (BMI 30+), UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,398	10.0 (0.9) ^{bcdefhij}	10.3 (0.9) ^{bcdhij}
[b] National Guard	1,904	18.4 (2.0) ^{aefhj}	17.9 (1.8) ^{aefhj}
[c] Reserve	1,322	16.3 (1.2) ^{afh}	16.4 (1.3) ^{aefj}
Total	6,624	14.3 (1.0)	14.9 (0.8)
Navy			
[d] Active duty	4,341	18.4 (0.9) ^{aefhj}	18.2 (0.8) ^{aefhij}
[e] Reserve	2,878	13.7 (0.9) ^{abdfi}	11.9 (0.8) ^{bcdfhi}
Total	7,219	17.5 (0.8)	15.0 (0.6)
Marine Corps			
[f] Active duty	3,177	7.0 (0.9) ^{abcdehij}	7.9 (1.0) ^{bcdehij}
[g] Reserve	841	+ (+)	+ (+)
Total	4,018	6.7 (0.8)	7.4 (1.0)
Air Force			
[h] Active duty	4,279	13.5 (0.5) ^{abcdfi}	13.8 (0.6) ^{abdefi}
[i] National Guard	1,656	17.5 (0.6) ^{aefhj}	15.7 (0.6) ^{adehij}
[j] Reserve	4,888	13.9 (0.7) ^{abdfi}	12.7 (0.7) ^{abcdfi}
Total	10,823	14.2 (0.5)	14.0 (0.4)
Total DoD			
Active duty	15,195	12.9 (0.5) ^k	12.5 (0.4)
Guard and Reserves	13,489	16.3 (0.9)	13.6 (0.6)
Total	28,684	14.2 (0.5)	13.2 (0.4)

Note: The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army Active Duty vs Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Naval Reserve, etc.). A significance test was also done between the Total DoD, Active Duty and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army Active Duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy Active Duty at the 95% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Active Duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force Active Duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the Total DoD, Guard and Reserves at the 95% confidence level.

+ Low precision.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey.

Table B.28 MODERATE OR VIGOROUS PHYSICAL ACTIVITY AT LEAST 20 MIN/DAY ON 3 OR MORE DAYS/WEEK, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS

Service ¹	N	Unadjusted	Adjusted
Army			
[a] Active duty	3,525	80.2 (1.4) ^{bcdegij}	80.0 (1.4) ^{bcdegij}
[b] National Guard	2,054	58.8 (1.8) ^{adefgh}	59.2 (1.5) ^{adefgh}
[c] Reserve	1,395	59.5 (1.2) ^{adefghj}	60.1 (1.1) ^{adefgh}
Total	6,974	68.1 (1.5)	66.4 (0.8)
Navy			
[d] Active duty	4,451	69.5 (1.8) ^{abcefhij}	70.0 (1.7) ^{abcefhij}
[e] Reserve	2,971	60.8 (0.8) ^{adefghj}	61.6 (0.9) ^{adefghj}
Total	7,422	67.8 (1.4)	65.8 (1.0)
Marine Corps			
[f] Active duty	3,281	80.4 (0.9) ^{bcdeg hij}	80.3 (0.9) ^{bcdeg hij}
[g] Reserve	959	68.0 (2.1) ^{abcefhij}	65.8 (2.2) ^{abcefhij}
Total	4,240	77.9 (0.9)	73.0 (1.2)
Air Force			
[h] Active duty	4,378	77.0 (0.9) ^{bcdefgij}	76.3 (0.9) ^{bcdefgij}
[i] National Guard	1,764	57.6 (0.5) ^{adefgh}	57.5 (0.8) ^{adefgh}
[j] Reserve	5,167	56.7 (0.8) ^{acdefgh}	57.5 (1.0) ^{adefgh}
Total	11,309	70.8 (1.4)	63.8 (0.6)
Total DoD			
Active duty	15,635	76.5 (0.8) ^k	76.6 (0.7) ^k
Guard and Reserves	14,310	59.3 (0.8)	60.3 (0.6)
Total	29,945	69.7 (0.8)	66.8 (0.4)

Note: The standard error of each estimate is presented in parentheses. Pairwise significance tests were done between all possible individual Service and Reserve component pairings (e.g., Army Active Duty vs Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Naval Reserve, etc.). A significance test was also done between the Total DoD, Active Duty and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

^aEstimate is significantly different from the Army Active Duty at the 95% confidence level.

^bEstimate is significantly different from the Army National Guard at the 95% confidence level.

^cEstimate is significantly different from the Army Reserve at the 95% confidence level.

^dEstimate is significantly different from the Navy Active Duty at the 95% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 95% confidence level.

^fEstimate is significantly different from the Marine Corps Active Duty at the 95% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 95% confidence level.

^hEstimate is significantly different from the Air Force Active Duty at the 95% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 95% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 95% confidence level.

^kEstimate is significantly different from the Total DoD, Guard and Reserves at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey.

Table B.29

ESTIMATES OF HEAVY ALCOHOL USE, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹	Unadjusted		Adjusted	
	Deployed 1+ Times ²	Not Deployed	Deployed 1+ Times ²	Not Deployed
Army				
[a] Active duty	24.3 (1.9) ^{cehij}	24.4 (3.5) ^{dehij}	23.3 (1.7) ^{hij}	21.9 (2.3) ^{dehij}
[b] National Guard	22.1 (1.4) ^{ehij}	18.9 (2.8) ^{eghij}	21.6 (1.4) ^{hi}	16.9 (2.5) ^e
[c] Reserve	15.9 (2.2) ^{afg}	14.7 (2.4) ^{egj}	18.0 (1.9) ^h	14.9 (2.1) ^e
Total	22.1 (1.1)	20.1 (2.1)	21.0 (1.0)	17.9 (1.4)
Navy				
[d] Active duty	20.1 (1.6) ^{efhij*}	11.6 (1.6) ^{ae fg}	19.6 (1.3) ^{hi*}	11.7 (1.4) ^a
[e] Reserve	12.5 (1.1) ^{abdfg*}	5.3 (0.6) ^{abcd fghij}	17.6 (1.6) ^{h*}	8.4 (0.8) ^{abcf gi}
Total	19.4 (1.4) [*]	9.5 (1.3)	18.6 (1.1) [*]	10.0 (0.8)
Marine Corps				
[f] Active duty	27.1 (2.0) ^{cdehij}	23.2 (2.5) ^{dehij}	21.0 (1.6) ^{hi}	17.1 (1.9) ^{ehj}
[g] Reserve	28.6 (3.1) ^{cehij}	30.4 (3.2) ^{bcdehij}	22.5 (3.0) ^{hi}	18.7 (2.4) ^{ehj}
Total	27.3 (1.8)	24.9 (2.2)	21.8 (1.7)	17.9 (1.6)
Air Force				
[h] Active duty	10.8 (1.4) ^{abdfg}	9.4 (1.3) ^{abefg}	12.3 (1.3) ^{abcdefg}	11.0 (1.0) ^{afg}
[i] National Guard	9.1 (2.1) ^{abdfg}	9.5 (1.1) ^{abefg}	12.1 (2.8) ^{abdfg}	11.8 (1.1) ^{ae fg}
[j] Reserve	10.4 (1.4) ^{abdfg}	7.4 (0.5) ^{abce fg}	15.7 (1.8) ^a	11.2 (1.0) ^{afg}
Total	10.5 (1.1)	9.1 (0.9)	13.4 (1.2)	11.3 (0.7)
Total DoD				
[k] Active duty	20.0 (0.9)	16.3 (1.8)	19.1 (0.8) [*]	15.4 (0.9)
[l] Guard and Reserves	17.9 (1.4)	14.2 (1.3)	17.9 (0.9) [*]	13.7 (0.8)
Total	19.3 (0.8) [*]	15.4 (1.2)	18.4 (0.7) [*]	14.4 (0.6)

(Table continued on next page)

Table B.29 ESTIMATES OF HEAVY ALCOHOL USE, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported heavy alcohol use. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active-duty and the Reserve component population. The main effect of Service, gender, age group, marital status, education, and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.), and
- Total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for deployed 1+ times may not agree with those reported in Chapter 10. The 2005 active-duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. To make the time period comparable, we based estimates for deployed 1+ times on Question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to active-duty study data for this table.

^aEstimate is significantly different from the Army active duty at the 99% confidence level.

^bEstimate is significantly different from the Army National Guard at the 99% confidence level.

^cEstimate is significantly different from the Army Reserve at the 99% confidence level.

^dEstimate is significantly different from the Navy active duty at the 99% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 99% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 99% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 99% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 99% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 99% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 99% confidence level.

^kEstimate is significantly different from the total DoD, active duty at the 99% confidence level.

^lEstimate is significantly different from the total DoD, Guard and Reserves at the 99% confidence level.

^{*}Estimate is significantly different from the not deployed at the 99% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Heavy Alcohol Use: 2005 Survey, Q20–Q23 and Q25–Q28; 2006 Survey, Q19–Q22 and Q24–Q27).

Table B.30 ESTIMATES OF ANY CIGARETTE SMOKING, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹	Unadjusted		Adjusted	
	Deployed 1+ Times ²	Not Deployed	Deployed 1+ Times ²	Not Deployed
Army				
[a] Active duty	39.1 (1.4) ^{bceghij}	36.3 (2.7) ^{cehij}	39.2 (1.0) ^{bcdeghij}	35.9 (2.2) ^{bcdefghij}
[b] National Guard	29.5 (2.8) ^{aeij}	25.7 (3.7) ^e	27.6 (2.6) ^{ae}	23.9 (3.3) ^a
[c] Reserve	23.6 (2.4) ^{ade}	23.1 (3.0) ^{ae}	26.2 (1.9) ^{ade}	24.9 (2.2) ^{aei}
Total	33.1 (1.6)	29.3 (2.3)	31.0 (1.2)	28.2 (1.6)
Navy				
[d] Active duty	34.0 (1.8) ^{cehij}	28.5 (2.7) ^{eij}	32.5 (1.5) ^{acehij}	28.0 (2.0) ^{aei}
[e] Reserve	15.2 (0.9) ^{abcdfgh}	13.5 (0.8) ^{abcdfgh}	18.6 (0.9) ^{abcdfghj}	18.3 (1.2) ^{acdfh}
Total	32.5 (1.8) [*]	23.6 (2.3)	25.6 (0.9)	23.1 (1.2)
Marine Corps				
[f] Active duty	37.7 (2.8) ^{cehij}	32.5 (2.4) ^{ehij}	32.2 (2.6) ^{eij}	26.7 (1.8) ^{aei}
[g] Reserve	28.6 (2.8) ^{aeij}	25.0 (3.9) ^e	27.4 (2.4) ^{ae}	20.0 (3.5) ^a
Total	36.5 (2.3)	30.7 (2.1)	29.8 (1.8) [*]	23.3 (2.0)
Air Force				
[h] Active duty	25.2 (2.0) ^{defij}	20.9 (1.7) ^{ae}	26.0 (1.5) ^{ade}	23.1 (1.1) ^{aei}
[i] National Guard	17.5 (1.6) ^{abdfgh}	16.1 (0.8) ^{adf}	19.1 (2.5) ^{adf}	17.1 (1.4) ^{acdfhj}
[j] Reserve	18.2 (0.8) ^{abdfgh}	17.8 (1.7) ^{adf}	23.3 (1.3) ^{ade}	22.7 (1.8) ^{ai}
Total	23.1 (1.7)	19.6 (1.2)	22.8 (1.1)	20.9 (0.9)
Total DoD				
[k] Active duty	33.9 (1.0) ^{l*}	29.0 (1.6) ^l	32.5 (1.0) ^{l*}	28.4 (1.0) ^l
[l] Guard and Reserves	25.0 (1.6) ^k	21.4 (1.4) ^k	23.7 (1.0) ^k	21.1 (1.0) ^k
Total	31.0 (1.0) [*]	25.6 (1.3)	27.2 (0.7) [*]	24.1 (0.8)

(Table continued on next page)

Table B.30 ESTIMATES OF ANY CIGARETTE SMOKING, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported cigarette use in the past 30 days. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active-duty and the Reserve component population. The main effect of Service, gender, age group, marital status, education, and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.), and
- Total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for deployed 1+ times may not agree with those reported in Chapter 10. The 2005 active-duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. To make the time period comparable, we based estimates for deployed 1+ times on Question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to active-duty study data for this table.

^aEstimate is significantly different from the Army active duty at the 99% confidence level.

^bEstimate is significantly different from the Army National Guard at the 99% confidence level.

^cEstimate is significantly different from the Army Reserve at the 99% confidence level.

^dEstimate is significantly different from the Navy active duty at the 99% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 99% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 99% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 99% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 99% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 99% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 99% confidence level.

^kEstimate is significantly different from the total DoD, active duty at the 99% confidence level.

^lEstimate is significantly different from the total DoD, Guard and Reserves at the 99% confidence level.

^{*}Estimate is significantly different from the not deployed at the 99% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Any Cigarette Smoking, Past 30 Days: 2005 Survey, Q49 and Q52; 2006 Survey, Q46 and Q49).

Table B.31 ESTIMATES OF ILLICIT DRUG USE, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹	Unadjusted		Adjusted	
	Deployed 1+ Times ²	Not Deployed	Deployed 1+ Times ²	Not Deployed
Army				
[a] Active duty	7.4 (0.8) ^{behij}	6.2 (0.3) ^{dehij}	7.8 (0.8) ^{behij*}	5.7 (0.3) ^{deghij}
[b] National Guard	11.2 (1.0) ^{adehghij*}	5.1 (1.4)	11.0 (0.8) ^{adehghij*}	4.5 (1.2)
[c] Reserve	6.8 (1.6) ⁱ	6.0 (1.1) ^{hij}	7.1 (1.7) ⁱ	5.4 (1.0) ⁱ
Total	8.7 (0.6) [*]	5.8 (0.6)	8.6 (0.7) [*]	5.2 (0.6)
Navy				
[d] Active duty	5.1 (1.6) ^b	3.1 (0.4) ^a	5.3 (1.6) ^b	3.1 (0.4) ^a
[e] Reserve	2.9 (0.7) ^{abf}	3.0 (0.5) ^a	3.5 (0.8) ^{ab}	3.7 (0.6) ^a
Total	5.0 (1.5)	3.0 (0.3)	4.4 (0.9)	3.4 (0.4)
Marine Corps				
[f] Active duty	7.3 (1.3) ^{ehij}	4.4 (0.8)	6.9 (1.2) ^{bhi*}	3.8 (0.7)
[g] Reserve	5.7 (1.8) ^b	5.0 (1.0)	5.0 (1.4) ^b	3.4 (0.7) ^a
Total	7.1 (1.1)	4.5 (0.7)	6.0 (0.9)	3.6 (0.5)
Air Force				
[h] Active duty	2.7 (0.6) ^{abf}	2.7 (0.4) ^{ac}	3.1 (0.6) ^{abf}	2.9 (0.4) ^a
[i] National Guard	1.3 (0.5) ^{abcfj}	2.4 (0.4) ^{ac}	1.4 (0.6) ^{abcfj}	2.3 (0.4) ^{ac}
[j] Reserve	3.4 (0.4) ^{abfi}	2.8 (0.5) ^{ac}	4.0 (0.6) ^{abi}	3.0 (0.5) ^a
Total	2.6 (0.4)	2.7 (0.3)	2.8 (0.4)	2.7 (0.3)
Total DoD				
[k] Active duty	5.6 (0.6)	4.1 (0.3)	5.8 (0.5) [*]	3.9 (0.2)
[l] Guard and Reserves	7.7 (0.8) [*]	4.5 (0.6)	5.3 (0.4) [*]	3.7 (0.3)
Total	6.3 (0.5) [*]	4.3 (0.3)	5.5 (0.4) [*]	3.8 (0.2)

(Table continued on next page)

Table B.31 ESTIMATES OF ILLICIT DRUG USE, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported any illicit drug use in the past 30 days. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active-duty and the Reserve component population. The main effect of Service, gender, age group, marital status, education, and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.), and
- Total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for deployed 1+ times may not agree with those reported in Chapter 10. The 2005 active-duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. To make the time period comparable, we based estimates for deployed 1+ times on Question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to active-duty study data for this table.

^aEstimate is significantly different from the Army active duty at the 99% confidence level.

^bEstimate is significantly different from the Army National Guard at the 99% confidence level.

^cEstimate is significantly different from the Army Reserve at the 99% confidence level.

^dEstimate is significantly different from the Navy active duty at the 99% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 99% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 99% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 99% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 99% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 99% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 99% confidence level.

^kEstimate is significantly different from the total DoD, active duty at the 99% confidence level.

^lEstimate is significantly different from the total DoD, Guard and Reserves at the 99% confidence level.

^{*}Estimate is significantly different from the not deployed at the 99% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: 2005 Survey, Q70; 2006 Survey, Q68).

Table B.32 ESTIMATES OF OVERWEIGHT, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹	Unadjusted		Adjusted	
	Deployed 1+ Times ²	Not Deployed	Deployed 1+ Times ²	Not Deployed
Army				
[a] Active duty	63.1 (1.5) ^{fij*}	53.6 (2.1) ^{deij}	62.4 (1.6)	58.9 (2.0)
[b] National Guard	68.6 (2.5) ^{f*}	56.4 (2.6)	64.8 (2.6)	59.2 (2.4)
[c] Reserve	68.3 (3.0) ^{f*}	55.6 (1.8) ^{deij}	66.7 (3.0) ^f	57.2 (2.2) ^d
Total	65.9 (1.4) [*]	55.1 (1.4)	64.6 (1.5) [*]	58.4 (1.3)
Navy				
[d] Active duty	66.2 (1.9) ^f	62.3 (1.7) ^{acfg}	65.5 (1.4) ^f	64.1 (1.5) ^{cegj}
[e] Reserve	70.1 (2.4) ^{fh}	64.1 (1.5) ^{acfgh}	60.5 (2.4)	57.9 (1.6) ^d
Total	66.5 (1.8)	62.9 (1.2)	63.0 (1.4)	61.0 (1.1)
Marine Corps				
[f] Active duty	55.7 (1.2) ^{abcdehij}	53.6 (2.1) ^{deij}	58.5 (1.3) ^{cd}	58.3 (2.3)
[g] Reserve	63.7 (6.5) [*]	46.2 (3.9) ^{dehij}	63.3 (5.0) [*]	54.4 (3.5) ^d
Total	56.7 (1.5) [*]	51.8 (1.8)	60.9 (2.6)	56.4 (2.1)
Air Force				
[h] Active duty	63.0 (1.0) ^{efij*}	58.2 (1.3) ^{eg}	61.0 (1.2)	60.5 (1.8)
[i] National Guard	69.3 (0.8) ^{afh}	68.3 (4.2) ^{acfg}	61.1 (1.4)	65.6 (3.0)
[j] Reserve	69.4 (1.3) ^{afh*}	62.0 (0.9) ^{acfg}	61.9 (1.2)	59.0 (1.2) ^d
Total	64.8 (0.9) [*]	60.5 (1.6)	61.3 (0.8)	61.7 (1.3)
Total DoD				
[k] Active duty	63.0 (0.8) ^{l*}	57.1 (1.1)	61.8 (0.8)	60.5 (1.0)
[l] Guard and Reserves	68.6 (1.4) ^{k*}	58.7 (1.4)	63.1 (1.3) [*]	58.9 (1.1)
Total	64.8 (0.8) [*]	57.8 (0.9)	62.6 (0.9) [*]	59.5 (0.8)

(Table continued on next page)

Table B.32 ESTIMATES OF OVERWEIGHT, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who met the criteria for being overweight. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active-duty and the Reserve component population. The main effect of Service, gender, age group, marital status, education, and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.), and
- Total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for deployed 1+ times may not agree with those reported in Chapter 10. The 2005 active-duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. To make the time period comparable, we based estimates for deployed 1+ times on Question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to active-duty study data for this table.

^aEstimate is significantly different from the Army active duty at the 99% confidence level.

^bEstimate is significantly different from the Army National Guard at the 99% confidence level.

^cEstimate is significantly different from the Army Reserve at the 99% confidence level.

^dEstimate is significantly different from the Navy active duty at the 99% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 99% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 99% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 99% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 99% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 99% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 99% confidence level.

^kEstimate is significantly different from the total DoD, active duty at the 99% confidence level.

^lEstimate is significantly different from the total DoD, Guard and Reserves at the 99% confidence level.

^{*}Estimate is significantly different from the not deployed at the 99% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Overweight: 2005 Survey and 2006 Survey, Q119 and Q120).

Table B.33

ESTIMATES OF PERSONNEL REPORTING HIGH LEVELS OF PERCEIVED STRESS AT WORK AND IN FAMILY LIFE, PAST 12 MONTHS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹	Unadjusted		Adjusted	
	Deployed 1+ Times ²	Not Deployed	Deployed 1+ Times ²	Not Deployed
Army				
[a] Active duty	46.9 (2.2) ^{behij}	45.6 (2.4) ^{dehij}	47.9 (2.2) ^{bdhi}	44.4 (2.3) ^{cdeghij}
[b] National Guard	38.1 (2.5) ^{afg}	40.3 (3.7) ⁱ	39.1 (2.4) ^{afg}	38.6 (3.8)
[c] Reserve	43.1 (3.0) ⁱ	35.5 (3.3)	43.6 (3.1) ^{i*}	34.8 (2.8) ^a
Total	43.1 (1.7)	41.2 (2.0)	43.6 (1.5)	39.3 (1.8)
Navy				
[d] Active duty	39.6 (1.8) ^{fgi*}	33.3 (1.9) ^a	40.3 (1.7) ^{afgi*}	33.0 (1.8) ^a
[e] Reserve	37.4 (2.0) ^{afg}	33.9 (1.6) ^a	40.4 (2.1) ^{gi}	36.0 (1.6) ^{ai}
Total	39.4 (1.7) [*]	33.5 (1.4)	40.4 (1.4) [*]	34.5 (1.2)
Marine Corps				
[f] Active duty	48.3 (1.8) ^{bdehij*}	39.3 (1.9) ^{hi}	47.6 (1.8) ^{bdhij*}	38.2 (1.7) ^{hi}
[g] Reserve	52.5 (3.5) ^{bdehij*}	37.3 (2.3) ⁱ	52.6 (4.0) ^{bdehij*}	34.8 (2.0) ^a
Total	48.8 (1.7) [*]	38.8 (1.5)	50.1 (2.2) [*]	36.5 (1.4)
Air Force				
[h] Active duty	36.7 (1.3) ^{afgi}	33.5 (1.2) ^{af}	36.9 (1.2) ^{afgi*}	32.6 (1.2) ^{af}
[i] National Guard	31.2 (1.5) ^{acdfghj}	29.1 (1.4) ^{abfgj}	32.5 (1.5) ^{acdefgj}	28.8 (1.5) ^{aejf}
[j] Reserve	38.1 (1.9) ^{afgi}	34.6 (0.7) ^{ai}	40.1 (2.0) ^{fgi*}	34.8 (0.8) ^{ai}
Total	36.0 (1.1)	33.0 (0.9)	36.5 (1.0) [*]	32.1 (0.7)
Total DoD				
[k] Active duty	42.4 (1.1) [*]	38.0 (1.5)	43.2 (0.9) [*]	37.0 (0.9)
[l] Guard and Reserves	38.9 (1.6)	36.2 (1.8)	41.4 (1.1) [*]	34.6 (0.9)
Total	41.2 (0.9) [*]	37.2 (1.1)	42.1 (0.8) [*]	35.6 (0.7)

(Table continued on next page)

Table B.33 ESTIMATES OF PERSONNEL REPORTING HIGH LEVELS OF PERCEIVED STRESS AT WORK AND IN FAMILY LIFE, PAST 12 MONTHS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported high work and family stress in the past 12 months. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active-duty and the Reserve component population. The main effect of Service, gender, age group, marital status, education, and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.), and
- Total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for deployed 1+ times may not agree with those reported in Chapter 10. The 2005 active-duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. To make the time period comparable, we based estimates for deployed 1+ times on Question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to active-duty study data for this table.

^aEstimate is significantly different from the Army active duty at the 99% confidence level.

^bEstimate is significantly different from the Army National Guard at the 99% confidence level.

^cEstimate is significantly different from the Army Reserve at the 99% confidence level.

^dEstimate is significantly different from the Navy active duty at the 99% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 99% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 99% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 99% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 99% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 99% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 99% confidence level.

^kEstimate is significantly different from the total DoD, active duty at the 99% confidence level.

^lEstimate is significantly different from the total DoD, Guard and Reserves at the 99% confidence level.

^{*}Estimate is significantly different from the not deployed at the 99% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (2006 Survey: Stress at Civilian Job, Q88; Stress at Military Job, Q89; Stress in Family, Q90; Work Stress Interference, Q91; Family Stress Interference, Q92; 2005 Survey: Stress at Work, Q88; Stress in Family, Q89; Work Stress interference, Q90; Family Stress Interference, Q91).

Table B.34

NEED FOR FURTHER DEPRESSION EVALUATION, PAST 7 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹	Unadjusted		Adjusted	
	Deployed 1+ Times ²	Not Deployed	Deployed 1+ Times ²	Not Deployed
Army				
[a] Active duty	26.1 (1.4) ^{ehij}	28.9 (1.5) ^{bcdehij}	27.1 (1.3) ^{eghij}	27.6 (1.5) ^{bcdeghij}
[b] National Guard	22.5 (1.3) ^{ehj}	20.6 (1.7) ^{aeij}	22.6 (1.3) ^{ehj}	18.9 (1.5) ^{aij}
[c] Reserve	21.2 (2.5) ^e	19.7 (1.4) ^{aeij}	21.4 (2.6) ^e	18.4 (1.2) ^{aij}
Total	24.0 (1.0)	23.7 (1.3)	23.7 (1.1)	21.6 (0.9)
Navy				
[d] Active duty	24.8 (1.4) ^{ehij*}	16.1 (0.8) ^{afij}	25.2 (1.3) ^{ehj*}	15.8 (0.9) ^{af}
[e] Reserve	10.4 (1.2) ^{abcdf}	13.2 (1.0) ^{abcfg}	11.5 (1.4) ^{abcdf}	14.7 (1.1) ^{af}
Total	23.7 (1.3) [*]	15.2 (0.7)	18.4 (1.0) [*]	15.2 (0.7)
Marine Corps				
[f] Active duty	25.4 (1.7) ^{ehj}	24.7 (2.2) ^{dehij}	24.6 (1.6) ^{ehj}	22.7 (2.0) ^{dehij}
[g] Reserve	17.3 (3.2)	22.0 (2.7) ^{ej}	17.9 (2.8) ^a	19.4 (2.5) ^a
Total	24.3 (1.6)	24.0 (1.8)	21.2 (1.6)	21.1 (1.7)
Air Force				
[h] Active duty	14.2 (1.1) ^{abdf}	16.3 (1.0) ^{afij}	15.5 (1.1) ^{abdf}	16.5 (0.9) ^{afij}
[i] National Guard	16.0 (2.9) ^{adf}	12.6 (1.0) ^{abcdfgh}	17.3 (3.1) ^a	12.6 (1.1) ^{abcfh}
[j] Reserve	14.6 (1.3) ^{abdf}	12.7 (0.8) ^{abcdfgh}	16.1 (1.6) ^{abdf*}	12.7 (1.0) ^{abcfh}
Total	14.6 (1.0)	15.1 (0.7)	16.3 (1.2) [*]	13.9 (0.6)
Total DoD				
[k] Active duty	22.6 (0.8)	21.2 (1.2)	23.1 (0.7) ^{l*}	20.6 (0.7) ^l
[l] Guard and Reserves	19.9 (0.9)	17.8 (0.9)	17.8 (0.9) ^k	16.1 (0.6) ^k
Total	21.7 (0.6)	19.7 (0.8)	19.9 (0.6) [*]	17.9 (0.5)

(Table continued on next page)

Table B.34 **NEED FOR FURTHER DEPRESSION EVALUATION, PAST 7 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)**

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who are considered in need for further depression evaluation. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active-duty and the Reserve component population. The main effect of Service, gender, age group, marital status, education, and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.), and
- Total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for deployed 1+ times may not agree with those reported in Chapter 10. The 2005 active-duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. To make the time period comparable, we based estimates for deployed 1+ times on Question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to active-duty study data for this table.

^aEstimate is significantly different from the Army active duty at the 99% confidence level.

^bEstimate is significantly different from the Army National Guard at the 99% confidence level.

^cEstimate is significantly different from the Army Reserve at the 99% confidence level.

^dEstimate is significantly different from the Navy active duty at the 99% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 99% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 99% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 99% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 99% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 99% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 99% confidence level.

^kEstimate is significantly different from the total DoD, active duty at the 99% confidence level.

^lEstimate is significantly different from the total DoD, Guard and Reserves at the 99% confidence level.

^{*}Estimate is significantly different from the not deployed at the 99% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Need for Further Depression Evaluation: 2005 Survey, Q94–Q96; 2006 Survey, Q97–Q99).

Table B.35 NEED FOR FURTHER POSTTRAUMATIC STRESS DISORDER EVALUATION, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹	Unadjusted		Adjusted	
	Deployed 1+ Times ²	Not Deployed	Deployed 1+ Times ²	Not Deployed
Army				
[a] Active duty	10.2 (1.2) ^{ehij}	7.9 (1.9) ^{ij}	10.1 (1.1) ^{fhij}	7.4 (1.8)
[b] National Guard	11.3 (0.9) ^{defhij}	9.8 (2.9)	11.1 (1.0) ^{defhij}	8.5 (1.9) ^{ij}
[c] Reserve	9.5 (1.7) ^{hij}	7.6 (1.1) ^{ehij}	10.1 (2.0) ^h	7.5 (1.1) ^{ej}
Total	10.4 (0.7)	8.5 (1.3)	10.5 (0.8)	7.8 (1.0)
Navy				
[d] Active duty	6.9 (1.1) ^{bh}	4.8 (0.7) ^j	6.7 (1.0) ^{bh}	4.6 (0.7)
[e] Reserve	4.3 (1.4) ^{ab}	2.9 (0.6) ^{cf}	5.3 (1.7) ^b	3.9 (0.8) ^c
Total	6.7 (1.0)	4.2 (0.5)	6.0 (1.0)	4.2 (0.5)
Marine Corps				
[f] Active duty	7.7 (0.8) ^{bhij}	6.7 (0.8) ^{ehij}	6.6 (0.7) ^{abh}	5.5 (0.8) ^j
[g] Reserve	9.0 (1.9) ^h	6.1 (1.8)	9.5 (1.7) ^h	5.1 (1.6)
Total	7.9 (0.7)	6.6 (0.7)	8.0 (1.0)	5.3 (0.9)
Air Force				
[h] Active duty	3.4 (0.4) ^{abcdfg}	4.1 (0.6) ^{cf}	3.9 (0.4) ^{abcdfg}	4.5 (0.6)
[i] National Guard	4.7 (0.5) ^{abcf*}	2.6 (0.6) ^{acf}	5.6 (0.8) ^{ab*}	2.9 (0.7) ^{bc}
[j] Reserve	4.1 (0.7) ^{abcf}	2.5 (0.3) ^{acdf}	5.3 (0.8) ^{ab}	2.9 (0.5) ^{bcf}
Total	3.7 (0.3)	3.6 (0.4)	4.9 (0.4) [*]	3.4 (0.3)
Total DoD				
[k] Active duty	7.2 (0.6)	5.8 (0.7)	6.8 (0.4)	5.5 (0.6)
[l] Guard and Reserves	9.0 (0.7)	6.6 (1.2)	7.8 (0.6) [*]	5.1 (0.5)
Total	7.8 (0.4)	6.1 (0.7)	7.4 (0.4) [*]	5.3 (0.4)

(Table continued on next page)

Table B.35 **NEED FOR FURTHER POSTTRAUMATIC STRESS DISORDER EVALUATION, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)**

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who are considered in need for further PTSD evaluation in the past 30 days. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active-duty and the Reserve component population. The main effect of Service, gender, age group, marital status, education, and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.), and
- Total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for deployed 1+ times may not agree with those reported in Chapter 10. The 2005 active-duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. To make the time period comparable, we based estimates for deployed 1+ times on Question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to active-duty study data for this table.

^aEstimate is significantly different from the Army active duty at the 99% confidence level.

^bEstimate is significantly different from the Army National Guard at the 99% confidence level.

^cEstimate is significantly different from the Army Reserve at the 99% confidence level.

^dEstimate is significantly different from the Navy active duty at the 99% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 99% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 99% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 99% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 99% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 99% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 99% confidence level.

^kEstimate is significantly different from the total DoD, active duty at the 99% confidence level.

^lEstimate is significantly different from the total DoD, Guard and Reserves at the 99% confidence level.

^{*}Estimate is significantly different from the not deployed at the 99% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Need for Further PTSD Evaluation: 2005 Survey, Q102; 2006 Survey, Q104).

Table B.36 SUICIDE IDEATION, PAST 12 MONTHS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹	Unadjusted		Adjusted	
	Deployed 1+ Times ²	Not Deployed	Deployed 1+ Times ²	Not Deployed
Army				
[a] Active duty	5.9 (0.7) ^{bh}	5.2 (0.8) ⁱ	6.2 (0.7) ^{bh}	7.4 (1.8)
[b] National Guard	9.0 (0.6) ^{acdefhij*}	4.3 (1.2)	9.1 (0.7) ^{acdefhij*}	8.5 (1.9) ^{ij}
[c] Reserve	6.0 (0.6) ^{bh}	5.2 (1.0) ⁱ	6.5 (0.8) ^{bh}	7.5 (1.1) ^{ej}
Total	7.0 (0.5) [*]	4.9 (0.6)	7.3 (0.4) [*]	7.8 (1.0)
Navy				
[d] Active duty	6.3 (0.6) ^{bhj*}	3.3 (0.8) ^f	6.4 (0.5) ^{bfn*}	4.6 (0.7)
[e] Reserve	4.0 (0.8) ^b	3.3 (0.4) ^{fi}	5.3 (1.1) ^b	3.9 (0.8) ^c
Total	6.1 (0.6) [*]	3.3 (0.6)	5.8 (0.6) [*]	4.2 (0.5)
Marine Corps				
[f] Active duty	4.5 (0.8) ^b	7.7 (1.4) ^{dehij}	4.0 (0.7) ^{bd}	5.5 (0.8) ^j
[g] Reserve	5.3 (1.8)	5.6 (0.9) ⁱ	4.9 (1.6)	5.1 (1.6)
Total	4.6 (0.7)	7.2 (1.1)	4.5 (0.9)	5.3 (0.9)
Air Force				
[h] Active duty	3.0 (0.5) ^{abcd}	3.9 (0.5) ^{fi}	3.4 (0.5) ^{abcd}	4.5 (0.6)
[i] National Guard	3.8 (1.2) ^b	1.8 (0.3) ^{acefghj}	4.8 (1.6)	2.9 (0.7) ^{bc}
[j] Reserve	4.0 (0.5) ^{bd}	3.1 (0.4) ^{fi}	5.5 (0.8) ^b	2.9 (0.5) ^{bcf}
Total	3.2 (0.4)	3.4 (0.3)	4.6 (0.6) [*]	3.4 (0.3)
Total DoD				
[k] Active duty	5.1 (0.4) ^l	4.6 (0.4)	5.0 (0.3)	5.5 (0.6)
[l] Guard and Reserves	6.9 (0.4) ^{k*}	4.1 (0.5)	6.0 (0.5) [*]	5.1 (0.5)
Total	5.7 (0.3) [*]	4.4 (0.3)	5.6 (0.3) [*]	5.3 (0.4)

(Table continued on next page)

Table B.36 SUICIDE IDEATION, PAST 12 MONTHS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE-DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Reserve military personnel in each Service and Reserve component who reported suicide ideation in the past 12 months. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active-duty and the Reserve component population. The main effect of Service, gender, age group, marital status, education, and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible individual Service and Reserve component pairings (e.g., Army active duty vs. Army National Guard, Army National Guard vs. Army Reserve, Army Reserve vs. Navy Reserve, etc.), and
- Total DoD, active duty, and the Guard and Reserves.

Reserve component estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between Service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for deployed 1+ times may not agree with those reported in Chapter 10. The 2005 active-duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. To make the time period comparable, we based estimates for deployed 1+ times on Question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to active-duty study data for this table.

^aEstimate is significantly different from the Army active duty at the 99% confidence level.

^bEstimate is significantly different from the Army National Guard at the 99% confidence level.

^cEstimate is significantly different from the Army Reserve at the 99% confidence level.

^dEstimate is significantly different from the Navy active duty at the 99% confidence level.

^eEstimate is significantly different from the Naval Reserve at the 99% confidence level.

^fEstimate is significantly different from the Marine Corps active duty at the 99% confidence level.

^gEstimate is significantly different from the Marine Corps Reserve at the 99% confidence level.

^hEstimate is significantly different from the Air Force active duty at the 99% confidence level.

ⁱEstimate is significantly different from the Air National Guard at the 99% confidence level.

^jEstimate is significantly different from the Air Force Reserve at the 99% confidence level.

^kEstimate is significantly different from the total DoD, active duty at the 99% confidence level.

^lEstimate is significantly different from the total DoD, Guard and Reserves at the 99% confidence level.

^{*}Estimate is significantly different from the not deployed at the 99% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Suicidal Ideation: 2005 Survey, Q98; 2006 Survey, Q101).

Table B.37 PAY GRADE AND ESTIMATES OF HEAVY ALCOHOL USE UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹ by Pay Grade	Unadjusted			Adjusted		
	Deployed 1+ Times ²	Not Deployed	Total	Deployed 1+ Times ²	Not Deployed	Total
Active Duty						
[a] E1–E3	30.8 (1.5) ^{bcdefijlm*}	21.9 (2.2) ^{bcdefijlm}	25.3 (1.6) ^{bcdefijklm}	21.0 (1.5) ^{defjm*}	15.2 (1.6) ^{b^flm}	18.1 (1.3) ^{bfjklm}
[b] E4–E6	22.1 (1.2) ^{acdefjlm*}	17.5 (1.7) ^{acdfjlm}	20.5 (1.0) ^{acdefjklm}	21.5 (1.2) ^{defjm}	19.4 (1.5) ^{afhijlm}	20.5 (1.1) ^{acdefijklm}
[c] E7–E9	11.2 (0.9) ^{abfhim*}	8.4 (1.2) ^{abfhim}	10.1 (0.8) ^{abfhijklm}	19.8 (1.6) ^{defjm}	17.5 (2.3) ^{flm}	18.6 (1.6) ^{dfjklm}
[d] W1–W5	9.1 (2.3) ^{abfhi}	7.7 (2.8) ^{abfhi}	8.8 (2.1) ^{abfhikm}	13.2 (3.1) ^{abc}	12.0 (3.9) ^f	12.6 (2.9) ^{b^cfk}
[e] O1–O3	10.8 (1.6) ^{abfhim}	12.1 (5.4) ^a	11.4 (2.6) ^{abfhikm}	13.6 (2.0) ^{abc^fi}	15.2 (4.1) ^f	14.4 (2.4) ^{b^ffk}
[f] O4–O10	4.1 (0.8) ^{abcdehij*}	1.5 (0.5) ^{abcdhil}	2.8 (0.6) ^{abcdehijl}	8.6 (2.1) ^{abc^ehij*}	4.0 (1.5) ^{abc^de^hi}	6.3 (1.5) ^{abc^de^hi^j}
[g] Total	20.0 (0.9) [*]	16.3 (1.8)	18.4 (1.0)	16.3 (1.0) [*]	13.9 (1.5) ⁿ	15.1 (1.2) ⁿ
Reserve and Guard						
[h] E1–E3	33.0 (6.1) ^{cdefjlm}	22.7 (3.0) ^{cdfijlm}	24.1 (2.8) ^{cdefijklm}	21.3 (4.2) ^{fm}	14.4 (1.6) ^{b^flm}	17.8 (2.4) ^{fk^lm}
[i] E4–E6	20.6 (1.8) ^{acdefjlm*}	14.4 (1.3) ^{acdfhjlm}	17.7 (1.4) ^{acdefjklm}	18.7 (1.3) ^{efjm*}	15.2 (1.1) ^{b^flm}	17.0 (1.0) ^{bfjklm}
[j] E7–E9	8.7 (1.4) ^{abfhim*}	4.2 (1.8) ^{abhi}	6.6 (1.3) ^{abc^fhik}	14.2 (2.0) ^{abc^fi}	10.6 (3.6) ^b	12.4 (2.1) ^{abc^fik}
[k] W1–W5	+ (+)	+ (+)	1.4 (1.4) ^{abcdehijl}	+ (+)	+ (+)	3.6 (1.9) ^{abcdehijl}
[l] O1–O3	11.3 (4.2) ^{abhi}	6.9 (2.0) ^{abfhi}	8.7 (2.0) ^{abfhikm}	13.6 (4.4)	8.6 (2.9) ^{b^chi}	11.1 (2.3) ^{ab^chik}
[m] O4–O10	4.9 (1.5) ^{abc^ehij}	2.7 (1.3) ^{abchi}	3.7 (1.3) ^{abcdehil}	10.4 (3.6) ^{abchi}	6.5 (3.0) ^{abchi}	8.5 (3.0) ^{abchi}
[n] Total	17.9 (1.4)	14.2 (1.3)	15.9 (0.9)	14.0 (1.2) [*]	9.5 (1.3) ^g	11.7 (1.0) ^g

(Table continued on next page)

Table B.37 PAY GRADE AND ESTIMATES OF HEAVY ALCOHOL USE UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Active Duty and Reserve Component military personnel by pay grade who reported heavy alcohol use. Heavy alcohol use is defined as consumption of five or more drinks on the same occasion at least once a week in the past 30 days. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active duty and the reserve component population. The main effect of service, gender, age group, married/other, education and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible pay grade pairings (e.g., E1-E3 vs E4-E6, E4-E6 vs. E7-E9, E7-E9 vs. W1-W5, etc.),
- Total Active Duty and Total Reserve and Guard Component

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between pay grades is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for Deployed 1+ Times may not agree with those reported in Chapter 10. The 2005 Active Duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. In order to make the time period comparable, we based estimates for Deployed 1+ Times on question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to Active Duty study data for this table.

^aEstimate is significantly different from Active Duty pay grade E1-E3 at the 95% confidence level.

^bEstimate is significantly different from Active Duty pay grade E4-E6 at the 95% confidence level.

^cEstimate is significantly different from Active Duty pay grade E7-E9 at the 95% confidence level.

^dEstimate is significantly different from Active Duty pay grade W1-W5 at the 95% confidence level.

^eEstimate is significantly different from Active Duty pay grade O1-O3 at the 95% confidence level.

^fEstimate is significantly different from Active Duty pay grade O4-O10 at the 95% confidence level.

^gEstimate is significantly different from Active Duty Total at the 95% confidence level.

^hEstimate is significantly different from Reserve and Guard pay grade E1-E3 at the 95% confidence level.

ⁱEstimate is significantly different from Reserve and Guard pay grade E4-E6 at the 95% confidence level.

^jEstimate is significantly different from Reserve and Guard pay grade E7-E9 at the 95% confidence level.

^kEstimate is significantly different from Reserve and Guard pay grade W1-W5 at the 95% confidence level.

^lEstimate is significantly different from Reserve and Guard pay grade O1-O3 at the 95% confidence level.

^mEstimate is significantly different from Reserve and Guard pay grade O4-O10 at the 95% confidence level.

ⁿEstimate is significantly different from Reserve and Guard Total at the 95% confidence level.

^{*}Estimate is significantly different from Not Deployed at the 95% confidence level.

+ Low precision.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Heavy Alcohol Use: 2005 Survey, Q20-Q23 and Q25-Q28; 2006 Survey, Q19-Q22 and Q24-Q27).

Table B.38 PAY GRADE AND ESTIMATES OF ANY CIGARETTE SMOKING, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹ by Pay Grade	Unadjusted			Adjusted		
	Deployed 1+ Times ²	Not Deployed	Total	Deployed 1+ Times ²	Not Deployed	Total
Active Duty						
[a] E1–E3	51.9 (2.4) ^{bcdefhijlm*}	41.4 (2.0) ^{bcdefhijlm}	45.6 (1.4) ^{bcdefhijlm}	46.2 (2.5) ^{bcdefhijlm*}	36.5 (1.8) ^{bcefghijlm}	41.3 (1.7) ^{bcdefhijlm}
[b] E4–E6	37.1 (1.1) ^{acdefijlm*}	30.8 (1.9) ^{acefijlm}	34.9 (1.3) ^{acdefhijlm}	35.8 (1.1) ^{acdefijlm*}	31.8 (1.8) ^{aefhilm}	33.8 (1.2) ^{acdefhijlm}
[c] E7–E9	23.8 (1.2) ^{abefijlm*}	20.6 (1.5) ^{abefilm}	22.6 (1.1) ^{abefilm}	28.1 (1.6) ^{abefijlm}	27.4 (2.0) ^{aefhilm}	27.8 (1.5) ^{abefijlm}
[d] W1–W5	19.5 (3.3) ^{abfim}	22.4 (5.7) ^{aefim}	20.1 (2.8) ^{abefilm}	21.5 (3.6) ^{abfim}	26.8 (6.1) ^{efim}	24.2 (3.5) ^{abefilm}
[e] O1–O3	13.5 (2.0) ^{abcfhim}	8.8 (2.0) ^{abcdfhij}	11.2 (1.4) ^{abcdfhijm}	19.0 (2.6) ^{abcfim}	13.5 (2.7) ^{abcdfij}	16.2 (1.9) ^{abcdfi}
[f] O4–O10	5.8 (0.9) ^{abcdehij*}	1.9 (0.5) ^{abcdehijlm}	3.9 (0.6) ^{abcdehijlm}	9.7 (1.8) ^{abcdehij*}	3.8 (1.0) ^{abcdehijlm}	6.8 (1.2) ^{abcdehijlm}
[g] Total	33.9 (1.0) ^{n*}	29.0 (1.6) ⁿ	31.8 (1.1) ⁿ	26.7 (0.9) ^{n*}	23.3 (1.4) ⁿ	25.0 (0.9) ⁿ
Reserve and Guard						
[h] E1–E3	35.1 (7.5) ^{ae fjlm}	26.4 (2.8) ^{ae fjlm}	27.6 (3.2) ^{ae fjlm}	28.5 (5.9) ^{afm}	20.8 (2.4) ^{abcfm}	24.7 (3.7) ^{abflm}
[i] E4–E6	28.7 (2.2) ^{abcdefjlm*}	23.4 (1.3) ^{abefilm}	26.3 (1.6) ^{abefilm}	25.1 (1.7) ^{abefjlm}	23.2 (1.1) ^{abceflm}	24.1 (1.2) ^{abceflm}
[j] E7–E9	18.5 (2.2) ^{abcfhim}	17.3 (3.8) ^{abefhm}	17.9 (2.2) ^{abefhilm}	19.5 (2.0) ^{abcfim}	23.5 (4.3) ^{aefm}	21.5 (2.5) ^{abcfm}
[k] W1–W5	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
[l] O1–O3	12.5 (3.5) ^{abchi}	10.7 (2.8) ^{abcfhi}	11.4 (1.4) ^{abcdfhijm}	15.1 (3.8) ^{abci}	14.1 (4.1) ^{abcfi}	14.6 (2.0) ^{abcdfhij}
[m] O4–O10	6.9 (1.9) ^{abcdehij}	6.9 (1.7) ^{abcdfhij}	6.9 (1.2) ^{abcdehijl}	11.0 (3.3) ^{abcdehij}	11.7 (2.8) ^{abcdfhij}	11.4 (2.3) ^{abcdfhij}
[n] Total	25.0 (1.6) ^{g*}	21.4 (1.4) ^g	23.1 (1.3) ^g	17.4 (1.5) ^g	16.5 (2.3) ^g	17.0 (1.6) ^g

(Table continued on next page)

Table B.38 PAY GRADE AND ESTIMATES OF ANY CIGARETTE SMOKING, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Active Duty and Reserve Component military personnel by pay grade who reported cigarette use. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active duty and the reserve component population. The main effect of service, gender, age group, married/other, education and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible pay grade pairings (e.g., E1-E3 vs E4-E6, E4-E6 vs. E7-E9, E7-E9 vs. W1-W5, etc.),
- Total Active Duty and Total Reserve and Guard Component

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between pay grades is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for Deployed 1+ Times may not agree with those reported in Chapter 10. The 2005 Active Duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. In order to make the time period comparable, we based estimates for Deployed 1+ Times on question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to Active Duty study data for this table.

^aEstimate is significantly different from Active Duty pay grade E1-E3 at the 95% confidence level.

^bEstimate is significantly different from Active Duty pay grade E4-E6 at the 95% confidence level.

^cEstimate is significantly different from Active Duty pay grade E7-E9 at the 95% confidence level.

^dEstimate is significantly different from Active Duty pay grade W1-W5 at the 95% confidence level.

^eEstimate is significantly different from Active Duty pay grade O1-O3 at the 95% confidence level.

^fEstimate is significantly different from Active Duty pay grade O4-O10 at the 95% confidence level.

^gEstimate is significantly different from Active Duty Total at the 95% confidence level.

^hEstimate is significantly different from Reserve and Guard pay grade E1-E3 at the 95% confidence level.

ⁱEstimate is significantly different from Reserve and Guard pay grade E4-E6 at the 95% confidence level.

^jEstimate is significantly different from Reserve and Guard pay grade E7-E9 at the 95% confidence level.

^kEstimate is significantly different from Reserve and Guard pay grade W1-W5 at the 95% confidence level.

^lEstimate is significantly different from Reserve and Guard pay grade O1-O3 at the 95% confidence level.

^mEstimate is significantly different from Reserve and Guard pay grade O4-O10 at the 95% confidence level.

ⁿEstimate is significantly different from Reserve and Guard Total at the 95% confidence level.

^{*}Estimate is significantly different from Not Deployed at the 95% confidence level.

+ Low precision.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Any Cigarette Smoking, Past 30 Days, 2005 Survey, Q52 and 53; 2006 Survey Q49 and Q50; refer to Section 2.5 for descriptions of sociodemographic variables).

Table B.39 PAY GRADE AND ESTIMATES OF ILLICIT DRUG USE, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹ by Pay Grade	Unadjusted			Adjusted		
	Deployed 1+ Times ²	Not Deployed	Total	Deployed 1+ Times ²	Not Deployed	Total
Active Duty						
[a] E1–E3	12.0 (1.5) ^{bcdefjlm*}	5.4 (0.7) ^{cefjm}	8.0 (0.9) ^{bcdefjlm}	12.5 (0.3) ^{bcdefhijlm*}	5.2 (0.1) ^{bcdefhijlm}	8.9 (0.2) ^{bcdefhijklm}
[b] E4–E6	5.6 (0.7) ^{acdefhim}	4.7 (0.5) ^{cefj}	5.3 (0.5) ^{acdefijm}	6.7 (0.2) ^{acdefhijlm*}	5.7 (0.1) ^{acdefhijlm}	6.2 (0.2) ^{acdefhijklm}
[c] E7–E9	2.4 (0.4) ^{abefhi}	2.5 (0.5) ^{abeij}	2.5 (0.3) ^{abefhi}	2.9 (0.1) ^{abdefhijlm*}	3.2 (0.1) ^{abdefhijlm}	3.0 (0.1) ^{abdefhijklm}
[d] W1–W5	1.4 (0.9) ^{abhi}	+ (+)	1.1 (0.7) ^{abhi}	1.2 (0.0) ^{abcefihijlm*}	50.0 (0.0) ^{abcefihijlm}	25.6 (0.0) ^{abcefihijklm}
[e] O1–O3	1.1 (0.5) ^{abchi}	1.0 (0.5) ^{abchi}	1.1 (0.3) ^{abchil}	1.2 (0.0) ^{abcdfhijlm*}	1.1 (0.0) ^{abcdfhijlm}	1.2 (0.0) ^{abcdfhijklm}
[f] O4–O10	0.9 (0.4) ^{abchi}	1.4 (0.5) ^{abhi}	1.1 (0.3) ^{abchil}	1.0 (0.0) ^{abcdehijlm*}	1.6 (0.0) ^{abcdehijlm}	1.3 (0.0) ^{abcdehijklm}
[g] Total	5.6 (0.6) ^{n*}	4.1 (0.3)	4.9 (0.4)	4.3 (0.1) ^{n*}	11.1 (0.1) ⁿ	7.7 (0.1) ⁿ
Reserve and Guard						
[h] E1–E3	15.4 (3.5) ^{bcdefjlm*}	5.9 (1.7) ^{efjl}	7.3 (1.6) ^{cdefjlm}	11.5 (0.3) ^{abcdefijlm*}	4.2 (0.1) ^{abcdefijlm}	7.9 (0.2) ^{abcdefijklm}
[i] E4–E6	8.8 (1.0) ^{bcdefjm*}	5.0 (0.6) ^{cefj}	7.0 (0.6) ^{bcdefjm}	7.6 (0.2) ^{abcdefhijlm*}	4.6 (0.1) ^{abcdefhijlm}	6.1 (0.2) ^{abcdefhijklm}
[j] E7–E9	3.3 (1.2) ^{ahi}	1.0 (0.3) ^{abchi}	2.2 (0.7) ^{abhi}	3.0 (0.1) ^{abcdehilm*}	0.9 (0.0) ^{abcdehilm}	2.0 (0.1) ^{abcdehijklm}
[k] W1–W5	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	28.2 (0.1) ^{abcdefhijlm}
[l] O1–O3	5.7 (2.6) ^{ah}	3.2 (1.8) ^h	4.2 (1.5) ^{aefh}	4.5 (0.1) ^{abcdefhijm*}	2.6 (0.1) ^{abcdefhijm}	3.5 (0.1) ^{abcdefhijklm}
[m] O4–O10	1.6 (0.7) ^{abhi}	2.4 (1.3) ^a	2.0 (0.6) ^{abhi}	1.3 (0.0) ^{abcdefhijl*}	2.3 (0.1) ^{abcdefhijl}	1.8 (0.0) ^{abcdefhijkl}
[n] Total	7.7 (0.8) ^{g*}	4.5 (0.6)	6.0 (0.6)	5.7 (0.1) ^{g*}	10.8 (0.1) ^g	8.2 (0.1) ^g

(Table continued on next page)

Table B.39 PAY GRADE AND ESTIMATES OF ILLICIT DRUG USE, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Active Duty and Reserve Component military personnel by pay grade who reported illicit drug use. Illicit drug use is defined as any nonmedical use of marijuana, cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active duty and the reserve component population. The main effect of service, gender, age group, married/other, education and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible pay grade pairings (e.g., E1-E3 vs E4-E6, E4-E6 vs. E7-E9, E7-E9 vs. W1-W5, etc.),
- Total Active Duty and Total Reserve and Guard Component

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between pay grades is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for Deployed 1+ Times may not agree with those reported in Chapter 10. The 2005 Active Duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. In order to make the time period comparable, we based estimates for Deployed 1+ Times on question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to Active Duty study data for this table.

^aEstimate is significantly different from Active Duty pay grade E1-E3 at the 95% confidence level.

^bEstimate is significantly different from Active Duty pay grade E4-E6 at the 95% confidence level.

^cEstimate is significantly different from Active Duty pay grade E7-E9 at the 95% confidence level.

^dEstimate is significantly different from Active Duty pay grade W1-W5 at the 95% confidence level.

^eEstimate is significantly different from Active Duty pay grade O1-O3 at the 95% confidence level.

^fEstimate is significantly different from Active Duty pay grade O4-O10 at the 95% confidence level.

^gEstimate is significantly different from Active Duty Total at the 95% confidence level.

^hEstimate is significantly different from Reserve and Guard pay grade E1-E3 at the 95% confidence level.

ⁱEstimate is significantly different from Reserve and Guard pay grade E4-E6 at the 95% confidence level.

^jEstimate is significantly different from Reserve and Guard pay grade E7-E9 at the 95% confidence level.

^kEstimate is significantly different from Reserve and Guard pay grade W1-W5 at the 95% confidence level.

^lEstimate is significantly different from Reserve and Guard pay grade O1-O3 at the 95% confidence level.

^mEstimate is significantly different from Reserve and Guard pay grade O4-O10 at the 95% confidence level.

ⁿEstimate is significantly different from Reserve and Guard Total at the 95% confidence level.

^{*}Estimate is significantly different from Not Deployed at the 95% confidence level.

+ Low precision.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: Past 30 Days, 2005 Survey, Q68 and Q70; 2006 Survey, Q66 and Q68).

Table B.40 PAY GRADE AND ESTIMATES OF OVERWEIGHT, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹ by Pay Grade	Unadjusted			Adjusted		
	Deployed 1+ Times ²	Not Deployed	Total	Deployed 1+ Times ²	Not Deployed	Total
Active Duty						
[a] E1–E3	48.9 (1.6) ^{bcdefijlm}	48.9 (1.6) ^{bcefhijlm}	48.9 (1.4) ^{bcdefhijlm}	59.8 (1.9) ^{ci}	61.7 (2.1) ^{fh}	60.8 (1.9) ^f
[b] E4–E6	63.0 (1.0) ^{acdfijlm*}	59.8 (1.5) ^{achjm}	61.9 (1.0) ^{acdfhijm}	63.3 (1.1) ^f	61.8 (1.6) ^{fh}	62.6 (1.2) ^f
[c] E7–E9	78.6 (1.0) ^{abefi*}	74.1 (2.0) ^{abefhil}	76.9 (1.0) ^{abefhil}	64.4 (1.5) ^{af}	60.9 (2.1) ^{fh}	62.6 (1.4) ^f
[d] W1–W5	72.1 (3.5) ^{abj}	+ (+)	71.5 (3.8) ^{abeh}	57.8 (3.4) ^{ij}	+ (+)	57.8 (5.2)
[e] O1–O3	63.9 (3.1) ^{acj*}	54.6 (2.3) ^{acfhijlm}	59.5 (2.4) ^{acdfhijlm}	62.4 (3.1) ^f	57.7 (2.9) ^f	60.1 (2.2) ^f
[f] O4–O10	69.2 (2.1) ^{abcj*}	61.2 (2.2) ^{acehjm}	65.3 (1.4) ^{abcehj}	55.6 (2.6) ^{bcej}	48.8 (2.5) ^{abcejlm}	52.2 (1.8) ^{abcejlm}
[g] Total	63.0 (0.8) ^{n*}	57.1 (1.1)	60.5 (0.9)	60.6 (1.2)	58.1 (1.9)	59.3 (1.3) ⁿ
Reserve and Guard						
[h] E1–E3	+ (+)	42.7 (2.1) ^{abcefijlm}	42.1 (1.8) ^{abcdefijlm}	+ (+)	54.4 (1.9) ^{abci}	53.3 (5.2) ⁱ
[i] E4–E6	67.3 (0.9) ^{abcj*}	61.8 (1.5) ^{acehjm}	64.7 (0.9) ^{abcehjm}	65.6 (1.2) ^{adf*}	60.9 (1.4) ^{fh}	63.3 (1.0) ^{fh}
[j] E7–E9	82.5 (3.2) ^{abdefi*}	71.5 (3.9) ^{abefhi}	77.4 (2.7) ^{abefhil}	69.4 (4.7) ^{df}	58.7 (4.6) ^f	64.0 (3.4) ^f
[k] W1–W5	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)
[l] O1–O3	72.6 (4.8) ^{ab}	64.7 (4.3) ^{aceh}	67.9 (3.2) ^{acehj}	65.4 (5.3)	62.7 (5.0) ^f	64.0 (3.7) ^f
[m] O4–O10	72.9 (4.6) ^{ab}	69.2 (3.1) ^{abefhi}	71.0 (3.1) ^{abehi}	60.9 (4.6)	57.4 (3.0) ^f	59.2 (2.9) ^f
[n] Total	68.6 (1.4) ^{g*}	58.7 (1.4)	63.1 (1.1)	64.4 (2.4)	63.1 (3.9)	63.7 (1.8) ^g

(Table continued on next page)

Table B.40 PAY GRADE AND ESTIMATES OF OVERWEIGHT, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Active Duty and Reserve Component military personnel by pay grade who were overweight. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active duty and the reserve component population. The main effect of service, gender, age group, married/other, education and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible pay grade pairings (e.g., E1-E3 vs E4-E6, E4-E6 vs. E7-E9, E7-E9 vs. W1-W5, etc.),
- Total Active Duty and Total Reserve and Guard Component

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between pay grades is easier to read. Thus, for example, any estimate with a superscripted “a” indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for Deployed 1+ Times may not agree with those reported in Chapter 10. The 2005 Active Duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. In order to make the time period comparable, we based estimates for Deployed 1+ Times on question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to Active Duty study data for this table.

^aEstimate is significantly different from Active Duty pay grade E1-E3 at the 95% confidence level.

^bEstimate is significantly different from Active Duty pay grade E4-E6 at the 95% confidence level.

^cEstimate is significantly different from Active Duty pay grade E7-E9 at the 95% confidence level.

^dEstimate is significantly different from Active Duty pay grade W1-W5 at the 95% confidence level.

^eEstimate is significantly different from Active Duty pay grade O1-O3 at the 95% confidence level.

^fEstimate is significantly different from Active Duty pay grade O4-O10 at the 95% confidence level.

^gEstimate is significantly different from Active Duty Total at the 95% confidence level.

^hEstimate is significantly different from Reserve and Guard pay grade E1-E3 at the 95% confidence level.

ⁱEstimate is significantly different from Reserve and Guard pay grade E4-E6 at the 95% confidence level.

^jEstimate is significantly different from Reserve and Guard pay grade E7-E9 at the 95% confidence level.

^kEstimate is significantly different from Reserve and Guard pay grade W1-W5 at the 95% confidence level.

^lEstimate is significantly different from Reserve and Guard pay grade O1-O3 at the 95% confidence level.

^mEstimate is significantly different from Reserve and Guard pay grade O4-O10 at the 95% confidence level.

ⁿEstimate is significantly different from Reserve and Guard Total at the 95% confidence level.

^{*}Estimate is significantly different from Not Deployed at the 95% confidence level.

+ Low precision.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Overweight: 2005 Survey, Q119-Q120; 2006 Survey, Q119-Q120).

Table B.41

PAY GRADE AND NEED FOR FURTHER POSTTRAUMATIC STRESS DISORDER EVALUATION, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹ by Pay Grade	Unadjusted			Adjusted		
	Deployed 1+ Times ²	Not Deployed	Total	Deployed 1+ Times ²	Not Deployed	Total
Active Duty						
[a] E1–E3	13.4 (1.6) ^{bcdefjlm*}	8.8 (1.3) ^{bcdefilm}	10.6 (1.0) ^{bcdefhijlm}	11.5 (0.3) ^{bcdefhijlm*}	7.1 (0.2) ^{bcdefhijlm}	9.3 (0.2) ^{bcdefhijklm}
[b] E4–E6	7.5 (0.7) ^{acdefim}	6.7 (0.8) ^{acdeflm}	7.2 (0.6) ^{acdefjlm}	7.7 (0.2) ^{acdefhijlm*}	7.1 (0.2) ^{acdefhijlm}	7.4 (0.2) ^{acdefhijklm}
[c] E7–E9	3.2 (0.7) ^{abfhim*}	1.0 (0.4) ^{abhi}	2.3 (0.4) ^{abfhijm}	4.3 (0.1) ^{abdefhijlm*}	1.4 (0.0) ^{abdefhijlm}	2.9 (0.1) ^{abdefhijklm}
[d] W1–W5	2.3 (1.0) ^{abhi}	1.2 (1.1) ^{abhi}	2.1 (0.8) ^{abhij}	2.6 (0.1) ^{abcefhijlm*}	1.5 (0.0) ^{abcefhijlm}	2.1 (0.1) ^{abcefhijklm}
[e] O1–O3	3.1 (0.9) ^{abhim*}	1.0 (0.6) ^{abhi}	2.1 (0.7) ^{abhij}	4.8 (0.1) ^{abcdfhijlm*}	1.4 (0.0) ^{abcdfhijlm}	3.1 (0.1) ^{abcdfhijklm}
[f] O4–O10	1.3 (0.5) ^{abchij}	0.7 (0.4) ^{abhi}	1.0 (0.3) ^{abchij}	2.2 (0.1) ^{abcdehijlm*}	1.3 (0.0) ^{abcdehijlm}	1.8 (0.0) ^{abcdehijklm}
[g] Total	7.2 (0.6) ⁿ	5.8 (0.7)	6.6 (0.5)	5.5 (0.1) ^{n*}	3.3 (0.1) ⁿ	4.4 (0.1) ⁿ
Reserve and Guard						
[h] E1–E3	14.5 (4.1) ^{cdefjm*}	6.0 (1.3) ^{cdeflm}	7.2 (1.3) ^{acdeflm}	9.9 (0.2) ^{abcdefijlm*}	3.9 (0.1) ^{abcdefijlm}	6.9 (0.2) ^{abcdefijklm}
[i] E4–E6	10.8 (0.9) ^{bcdefjlm*}	5.6 (0.9) ^{acdeflm}	8.4 (0.7) ^{cdefjlm}	9.4 (0.2) ^{abcdefhijlm*}	5.5 (0.1) ^{abcdefhijlm}	7.4 (0.2) ^{abcdefhijklm}
[j] E7–E9	4.5 (1.4) ^{afhim}	5.2 (2.3)	4.8 (1.0) ^{abcdefim}	5.2 (0.1) ^{abcdehilm*}	6.8 (0.2) ^{abcdehilm}	6.0 (0.2) ^{abcdehiklm}
[k] W1–W5	+ (+)	+ (+)	+ (+)	+ (+)	+ (+)	1.2 (0.0) ^{abcdefhijlm}
[l] O1–O3	5.0 (2.1) ^{aim}	1.3 (1.0) ^{abhi}	2.8 (1.0) ^{abhi}	6.2 (0.2) ^{abcdefhijm*}	1.6 (0.0) ^{abcdefhijm}	3.9 (0.1) ^{abcdefhijkm}
[m] O4–O10	0.5 (0.3) ^{abcchijl}	1.3 (0.4) ^{abhi}	0.9 (0.3) ^{abchij}	0.8 (0.0) ^{abcdefhijl*}	2.0 (0.1) ^{abcdefhijl}	1.4 (0.0) ^{abcdefhijkl}
[n] Total	9.0 (0.7) ^g	6.6 (1.2)	7.7 (0.8)	5.6 (0.1) ^{g*}	3.3 (0.1) ^g	4.5 (0.1) ^g

(Table continued on next page)

Table B.41 PAY GRADE AND NEED FOR FURTHER POSTTRAUMATIC STRESS DISORDER EVALUATION, PAST 30 DAYS, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Active Duty and Reserve Component military personnel by pay grade who needed further posttraumatic stress disorder evaluation. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active duty and the reserve component population. The main effect of service, gender, age group, married/other, education and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible pay grade pairings (e.g., E1-E3 vs E4-E6, E4-E6 vs. E7-E9, E7-E9 vs. W1-W5, etc.),
- Total Active Duty and Total Reserve and Guard Component

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Letters in square brackets (e.g. [a]) are row labels. These are included so that the statistical significance of differences between service groups is easier to read. Thus, for example, any estimate with a superscripted "a" indicates that estimate is significantly different from the estimate in the same column and in the row labeled [a].

²Estimates for Deployed 1+ Times may not agree with those reported in Chapter 10. The 2005 Active Duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. In order to make the time period comparable, we based estimates for Deployed 1+ Times on question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to Active Duty study data for this table.

^aEstimate is significantly different from Active Duty pay grade E1-E3 at the 95% confidence level.

^bEstimate is significantly different from Active Duty pay grade E4-E6 at the 95% confidence level.

^cEstimate is significantly different from Active Duty pay grade E7-E9 at the 95% confidence level.

^dEstimate is significantly different from Active Duty pay grade W1-W5 at the 95% confidence level.

^eEstimate is significantly different from Active Duty pay grade O1-O3 at the 95% confidence level.

^fEstimate is significantly different from Active Duty pay grade O4-O10 at the 95% confidence level.

^gEstimate is significantly different from Active Duty Total at the 95% confidence level.

^hEstimate is significantly different from Reserve and Guard pay grade E1-E3 at the 95% confidence level.

ⁱEstimate is significantly different from Reserve and Guard pay grade E4-E6 at the 95% confidence level.

^jEstimate is significantly different from Reserve and Guard pay grade E7-E9 at the 95% confidence level.

^kEstimate is significantly different from Reserve and Guard pay grade W1-W5 at the 95% confidence level.

^lEstimate is significantly different from Reserve and Guard pay grade O1-O3 at the 95% confidence level.

^mEstimate is significantly different from Reserve and Guard pay grade O4-O10 at the 95% confidence level.

ⁿEstimate is significantly different from Reserve and Guard Total at the 95% confidence level.

^{*}Estimate is significantly different from Not Deployed at the 95% confidence level.

+ Low precision.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Need for Further Depression Evaluation: 2005 Survey, Q94-Q96; 2006 Survey, Q97-Q99).

Table B.42 GENDER COMPARISON OF PAST YEAR ILLICIT DRUG USE, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED

Service ¹	Unadjusted			Adjusted		
	Deployed 1+ Times ²	Not Deployed	Total	Deployed 1+ Times ²	Not Deployed	Total
Active Duty						
[a] Male	11.5 (1.1) ^c	9.5 (0.7)	10.7 (0.8) ^c	12.3 (1.0) ^{e*}	9.8 (0.6) ^{bd}	11.0 (0.6) ^{de}
[b] Female	10.5 (1.0) ^c	11.3 (0.9) ^d	11.0 (0.7) ^c	11.6 (1.0) ^e	12.7 (1.1) ^{ad}	12.1 (0.7) ^{de}
[c] Total	11.4 (1.0)	9.9 (0.6)	10.7 (0.7)	12.0 (0.8) ^f	11.2 (0.6)	11.6 (0.5)
Reserve and Guard						
[d] Male	12.3 (0.9) ^{e*}	8.5 (1.0) ^{be}	10.3 (0.8) ^c	11.5 (0.7) ^{e*}	7.6 (0.8) ^{abe}	9.5 (0.7) ^{abe}
[e] Female	21.4 (3.2) ^{abd*}	12.4 (1.5) ^d	15.3 (1.2) ^{abd}	18.7 (2.7) ^{abd*}	11.4 (1.3) ^d	15.1 (1.4) ^{abd}
[f] Total	13.5 (1.0) [*]	9.3 (1.0)	11.2 (0.8)	15.1 (1.4) ^{c*}	9.5 (0.9)	12.3 (0.8)

(Table continued on next page)

Table B.42 GENDER COMPARISON OF PAST YEAR ILLICIT DRUG USE, UNADJUSTED AND ADJUSTED FOR SOCIODEMOGRAPHIC DIFFERENCES, BY ACTIVE DUTY MILITARY AND RESERVE COMPONENTS AND BY NUMBER OF TIMES DEPLOYED (continued)

Note: Table displays the percentage of Active Duty and Reserve Component military personnel by gender who reported past year illicit drug use. Illicit drug use is defined as any nonmedical use of marijuana, cocaine (including crack), hallucinogens, amphetamines/stimulants, tranquilizers, barbiturates/sedatives, heroin/other opiates, analgesics, or inhalants. The standard error of each estimate is presented in parentheses.

Adjusted estimates have been adjusted to correct for differences in the demographic distributions between the active duty and the reserve component population. The main effect of service, gender, age group, married/other, education and race/ethnicity were used in this standardization process.

Pairwise significance tests were done between:

- Deployed 1+ times and not deployed, within the unadjusted and adjusted columns,
- All possible gender pairings, and
- Total Active Duty and Total Reserve and Guard Component.

Reserve component estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

¹Estimates for Deployed 1+ Times may not agree with those reported in Chapter 10. The 2005 Active Duty study asked about the number of times respondents were deployed during the past 3 years, while the Guard/Reserve study asked about the number of times respondents were deployed during the past 2 years. In order to make the time period comparable, we based estimates for Deployed 1+ Times on question 148, which asks about recency of last deployment, and inferred deployment during the past 3 years. This same method was applied to Active Duty study data for this table.

^aEstimate is significantly different from Active Duty Males at the 95% confidence level.

^bEstimate is significantly different from Active Duty Females at the 95% confidence level.

^cEstimate is significantly different from Active Duty at the 95% confidence level.

^dEstimate is significantly different from Reserve and Guard Males at the 95% confidence level.

^eEstimate is significantly different from Reserves and Guard Females at the 95% confidence level.

^fEstimate is significantly different from Reserves and Guard at the 95% confidence level.

^{*}Estimate is significantly different from Not Deployed at the 95% confidence level.

Source: 2005 Department of Defense Survey of Health Behaviors among Military Personnel and 2006 Department of Defense Reserve Component Survey (Any Illicit Drug Use: Past 12 Months, 2005 Survey, Q68-Q70; 2006 Survey, Q66-Q68).

Calculation of Alcohol Summary Measures

This appendix provides details about the construction of two summary measures of alcohol use that are used throughout this report and were developed for the DoD Surveys of Health Related Behaviors Among Active Duty Military Personnel. Both of these measures combine information on quantity and frequency of alcohol consumption across three types of beverages: beer, wine, and liquor. First the drinking-level classification measure is described, followed by the average daily ounces of ethanol index.

C.1 Drinking-Level Classification Measure

The drinking-level classification scheme was adapted from Mulford and Miller (1960; also see Rachal et al., [1980]; Rachal, Hubbard, Williams, & Tuchfeld, [1976]) and used previously in the 1982, 1985, 1988, 1992, 1995, 1998, and 2002 DoD active duty surveys (Bray et al., 1983, 1986, 1988, 1992, 1995, 1999, 2003). The classification scheme used (a) the “quantity per typical drinking occasion” and (b) the “frequency of drinking” for the type of beverage (beer, wine, or liquor) with the largest amount of absolute alcohol consumed per day to fit individuals into 1 of the 10 categories resulting from all combinations of quantity and frequency of consumption.¹ The 10 categories describe whether individuals abstained, drank once a month, three to four times a month, or at least once a week and whether

¹ Calculations to identify the beverage with the largest amount of absolute alcohol consumed per day in the past 30 days were changed slightly compared with how this measure was calculated in the 1980 and 1982 active duty surveys. For the 1980 and 1982 active duty surveys, calculations for beer were based on reported consumption of beer only in 8-, 12-, and 16-ounce containers. For the 1985 and subsequent data, the algorithm for calculating the drinking-level index was modified slightly to take into account information about consumption of beer in 32-ounce containers in the 1985 to 1995 surveys and consumption of beer in 32- and 40-ounce containers in the 1998, 2002, and 2005 active duty surveys.

small, medium, or large amounts of alcohol were drunk during a typical drinking occasion.

The second step in forming the classification scheme was to combine the 10 quantity/frequency categories into five drinking levels: abstainers, infrequent/light drinkers, moderate drinkers, moderate/heavy drinkers, and heavy drinkers. The resulting five drinking levels and their definitions are presented in Table C.1.

C.2 Average Daily Ounces of Ethanol Index

The average daily ethanol consumption index used in this study combines measures of both the typical drinking pattern of an individual over the past 30 days and any episodes of heavier consumption during the past year. For all respondents, daily volume was computed separately for beer, wine, and liquor using parallel procedures. The first step in these calculations was to determine the frequency with which respondents consumed each beverage during the past 30 days (Questions 19, 22, and 25). Each frequency was computed in terms of the daily probability of consuming the given beverage. The response alternatives and corresponding frequency codes are listed in Table C.2.

The second step in computing the daily volume resulting from typical drinking days was to determine the typical quantity (Q_n) of each beverage that respondents consumed during the past 30 days, on days when they consumed the given beverage (Questions 21, 24, and 27). For quantities up through eight beers, glasses of wine, or drinks of liquor, the code used was the exact number that the respondent indicated on Questions 21, 24, and 27.

For larger quantities of each beverage for which the answer was a range, the value used was the midpoint of the range (e.g., 9 to 11 beers were coded as 10). The codes used for the highest quantity were 22 beers, 15 glasses of wine, and 22 drinks of liquor. The size of a

Table C.1**DRINKING-LEVEL CLASSIFICATION SCHEME**

Drinking-Level Group	Definition
Abstainer	Drinks once a year or less
Infrequent/light drinker	Drinks 1 to 4 drinks per typical drinking occasion 1 to 3 times per month
Moderate drinker	Drinks 1 drink per typical drinking occasion at least once a week, <i>or</i> 2 to 4 drinks per typical drinking occasion 2 to 3 times per month, <i>or</i> 5 or more drinks per typical drinking occasion once a month or less
Moderate/heavy drinker	Drinks 2 to 4 drinks per typical drinking occasion at least once a week <i>or</i> 5 or more drinks per typical drinking occasion 2 to 3 times per month
Heavy drinker	Drinks 5 or more drinks per typical drinking occasion at least once a week

Source: 2006 Department of Defense Reserve Component Survey.

Table C.2**FREQUENCY CODES FOR TYPICAL DRINKING DAYS**

Response Alternative ^a	Frequency Code (<i>F</i>)	Method of Calculation
28-30 days (about every day)	0.967	29/30
20-27 days (5-6 days a week, average)	0.786	5.5/7
11-19 days (3-4 days a week, average)	0.500	3.5/7
4-10 days (1-2 days a week, average)	0.214	1.5/7
2-3 days in the past 30 days	0.083	2.5/30
Once in the past 30 days	0.033	1/30
Didn't drink any beer/wine/liquor in the past 30 days	0.000	0/30

^aFrequency of consumption of given beverage during past 30 days.

Source: 2006 Department of Defense Reserve Component Survey.

glass of wine was specified as 4 ounces (i.e., a standard wine glass). Two additional questionnaire items were employed to account for variations in the size of beer containers (Question 20) and strength of drinks containing liquor (Question 26). Respondents indicated the size can or bottle of beer they usually drank (Question 20), with alternatives of 8-, 12-, 16-, 32-, or 40-ounce containers,² and the number of ounces of liquor in their average drink (Question 26), with

alternatives of 1, 1.5, 2, 3, 4, and 5 or more (coded as 5) ounces.

Using the measures described in the preceding paragraph, typical quantities for beer and liquor were determined by multiplying (a) the number of cans or drinks typically consumed by (b) the number of ounces of the given beverage they contained. Because we used the standard 4-ounce size for wine glasses, the typical quantity for wine was simply 4 times the number of glasses consumed on a typical day when the respondent drank wine. Once the typical quantity for each beverage was determined, it was multiplied by the code for the frequency of drinking that beverage. The resulting product constituted a measure of the average number of ounces of the given beverage consumed daily as a result of the individual's typical drinking behavior.

² As for the drinking-level index, the algorithm for calculating the ethanol index was modified beginning in 1998 to take into account information about consumption of beer in 32-ounce containers in the 1985 to 1995 active duty surveys and consumption of beer in 32- and 40-ounce containers in the 1998, 2002, and 2005 surveys. Thus, the trend data presented for average ounces of ethanol show slightly different estimates from those presented in prior active duty reports.

The final step in measuring typical volume was to transform the number of ounces of beer, wine, and liquor consumed daily to ounces of ethanol for each beverage. The transformations were made by weighting ounces of beer by 0.04, wine by 0.12, and liquor by 0.43. We determined these weights by using the standard alcohol content (by volume) of the three beverages. There was one exception to this weighting procedure. Because individuals consuming large quantities of wine on a regular basis may typically drink a “fortified” wine with a higher alcohol content than regular “table” wine, we included a question to measure the type of wine usually consumed by the respondent during the past 30 days (i.e., regular or fortified; see Question 23). If the respondent indicated fortified wine, the weight we used for ethanol content was 0.18 (rather than 0.12).

The procedures described above measure daily ethanol volume resulting from the individual’s typical drinking days. Many people who drink also experience “atypical” days during which they consume larger quantities of alcohol than what they usually consume. To the extent that the amounts consumed on those days are close to the individual’s typical volume, or that the number of atypical days is very small, the effect of such days on daily volume indices is minimal. As the quantity of alcohol consumed or the number of atypical days

becomes larger, however, these episodes of heavier drinking can have a considerable effect on the individual’s mean daily volume. Moreover, estimates of mean daily volume in the total population will be incomplete if they ignore the episodic heavier consumption by such individuals.

In light of the importance of accounting for the volume of alcohol consumed on atypical days, the frequency of consuming eight or more cans, glasses, or drinks of beer, wine, or liquor in the past year was also measured (Questions 31 and 22). Because the intention was to measure episodic behavior, the frequency questions pertained to the past year (rather than the past 30 days, the time period used to measure typical consumption). The quantity of ethanol consumed was coded on such atypical drinking days as 5 ounces (i.e., 10 cans, glasses, or drinks, each containing 0.5 ounce of ethanol). The response alternatives and corresponding frequency codes for these questions are listed in Table C.3. The sum of these three frequency codes (beer, wine, and liquor) constitutes the measure of the “frequency of heavy drinking” (i.e., days of atypical high consumption).

The volumes resulting from typical and atypical consumption days were combined in a straightforward manner. For each beverage, the number of days during

Table C.3

FREQUENCY CODES FOR ATYPICAL HIGH-CONSUMPTION DAYS

Response Alternative^a	Frequency Code (D)	Method of Calculation
About every day	338.0	6.5 × 52
5-6 days a week	286.0	5.5 × 52
3-4 days a week	182.0	3.5 × 52
1-2 days a week	78.0	1.5 × 52
2-3 days a month	30.0	2.5 × 12
About once a month	12.0	12
7-11 days in the past 12 months	9.0	9
3-6 days in the past 12 months	4.5	4.5
Once or twice in the past 12 months	1.5	1.5
Never in the past 12 months	0.0	0

^aFrequency of atypical high consumption for a given beverage during past year.

Source: 2006 Department of Defense Reserve Component Survey.

the past year on which the beverage was consumed was estimated by multiplying the likelihood of consuming it on a given day (F) by 365. We then partitioned this number into the number of days on which atypical high consumption occurred (D), according to the frequency codes in Table C.3, and the number of typical days, $365 \times F$, minus the number of atypical days. If the respondent typically consumed eight or more drinks of the given beverage (i.e., had a Qn greater than or equal to 5), the number of atypical days for that beverage was zero. If the number of atypical days was greater than or equal to the number of typical days, the term $(365 \times F - D)$ was set to zero. Each number of days was then multiplied by the ounces of ethanol consumed on such days (i.e., 5 for atypical days and the typical quantity Qn for typical days). We summed these products and then divided by 365. The resulting composite estimates refer to daily volume for the given beverage. The formula may be written as

$$AQnF = \frac{5D + Qn(365 \times F - D)}{365}, \quad (1)$$

where

$AQnF$ = average daily volume of ethanol consumed in the form of the given beverage,

D = number of atypical high consumption days for the given beverage (zero if Qn is greater than or equal to 5 for the given beverage),

Qn = volume of ethanol consumed on typical drinking days for the given beverage, and

F = probability of consuming the given beverage on a given day.

We then summed the composite volume measures for the three beverages to equal the total average daily volume measure. In so doing, we applied the following constraints: (a) the composite and total volume measures were not computed for individuals for whom any typical beverage-specific volume could not be calculated and (b) the maximum value permitted for the composite and total volume measures was 30 ounces of ethanol per day.

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Technical Discussion of Standardization Approach

Several tables in this report display unadjusted and adjusted estimates. (See, for example, Table 3.1 in Chapter 3). The unadjusted estimates are simply direct estimates computed from the weighted respondent data. The adjusted estimates refer to weighted estimates that have been further standardized so that the distribution of the subgroups under consideration across some set of variables equals the distribution of the entire sample over the same set of variables. In general, the subgroups under consideration for any table that displays adjusted estimates can be identified by the columns of the table. This appendix discusses the computation of the adjusted, or standardized, estimates.

D.1 Introduction

An integral part of many analyses in social science research is to measure any difference in an outcome measure between two or more groups of interest. For example, a researcher might be interested in examining the difference in alcohol use among personnel who belong to different U.S. military Reserve components (e.g., personnel in the Army National Guard vs. personnel in the Navy Reserve). When examining any potential difference between the subgroups of interest, it is often desirable to take into account other confounding factors, such as the sociodemographic characteristics of age, race/ethnicity, gender, marital status, and education. This approach is particularly desirable when both of the following are true:

1. One or more sociodemographic or other auxiliary characteristics is highly correlated with the outcome measure of interest.
2. The groups being compared have significantly different population distributions with respect to the sociodemographic/auxiliary characteristics under consideration.

Standardization is commonly used to account for differences in population composition that may have an effect on estimates of an outcome measure (Kalton,

1968; Konijn, 1973). When dealing with survey data, standardization can be thought of as creating an adjustment to the final sample weights so that the distribution of the reweighted sample in a group of interest equals some fixed distribution. This fixed distribution is often referred to as the **standardization population**. The standardization population can be obtained from some outside source or estimated from the entire sample, without regard to the group(s) being considered. The standardized estimate (sometimes referred to as the adjusted mean) can be interpreted as the estimate that would have been obtained if the group exhibited the same distribution as the standardization population in terms of the characteristics being controlled for, all else being equal (Little, 1982).

D.2 Direct Standardization

Consider the following example. Suppose we are examining survey data and are interested in comparing some outcome measure between males and females, as illustrated in Table D.1.

In the above example, the weighted survey data indicate that males are distributed across the three age groups by 12.0%, 50.0%, and 38.0%, respectively. In comparison, females are distributed across the three age groups by 25.0%, 25.0%, and 50.0%, respectively. The total population is distributed by 10.0%, 27.0%, and 63.0%, respectively. Our interest is in comparing the estimates between males and females.

First, note from Table D.1 that the direct survey estimates (i.e., the nonstandardized estimates) can be computed as follows:

$$0.435 = (0.120 \times 0.120) + (0.500 \times 0.500) + (0.380 \times 0.450)$$

$$0.708 = (0.250 \times 0.300) + (0.250 \times 0.750) + (0.500 \times 0.890).$$

Table D.1

EXAMPLE OF STANDARDIZATION

Age	Males		Females		Total
	Population Distribution	Estimate	Population Distribution	Estimate	Population Distribution
Nonstandardized Estimate					
24 or younger	12.0%	12.0%	25.0%	30.0%	10.0%
25-34	50.0%	50.0%	25.0%	75.0%	27.0%
35 or older	38.0%	45.0%	50.0%	89.0%	63.0%
Total	100.0%		100.0%		
Estimate		43.5%		70.8%	
Standardized Estimate					
24 or younger	10.0%	12.0%	10.0%	30.0%	
25-34	27.0%	50.0%	27.0%	75.0%	
35 or older	63.0%	45.0%	63.0%	89.0%	
Total	100.0%		100.0%		
Estimate		43.1%		79.3%	

The second part of Table D.1 illustrates the computation of a standardized estimate, where the standardization population is estimated from the total population distribution. In this case, we assume the distribution of both males and females across the three age groups is 10.0%, 27.0%, and 63.0%, respectively. The standardized estimates are then derived as follows:

$$0.431 = (0.100 \times 0.120) + (0.270 \times 0.500) + (0.630 \times 0.450)$$

$$0.793 = (0.100 \times 0.300) + (0.270 \times 0.750) + (0.630 \times 0.890)$$

This illustrates a standardization method commonly referred to as **direct standardization** (see, for example, Kalton [1968]). With direct standardization, suppose we want to incorporate k sociodemographic or other auxiliary variables into the standardization process. These k variables may be age, gender, education, and so forth. First, cells are defined by the complete cross-classification of the k standardizing variables. Then, means calculated for each cell are weighted by the proportions in the standardization population to calculate the standardized (or adjusted) overall mean—similar to the example in Table D.1.

Direct standardization offers many advantages:

- The standardization population can come from an outside source. In other words, the population does not need to be estimated from the entire sample distribution.

- Many software packages have options that enable computation of direct standardized estimates and their associated standard errors. For example, Stata 9 (StataCorp, 2007) and SUDAAN (Research Triangle Institute, 2004) compute standardized estimates and their associated standard errors, while also accounting for the complex design features of a study such as stratification, clustering, and unequal weighting.

However, direct standardization also has many disadvantages:

- The number of standardizing variables is limited by the sample size of the study. Specifically, the sample size in each cell of the cross-classification must be sufficiently large to adequately estimate the outcome measure under consideration within each cell.
- Often it is difficult to find standardized population estimates for each cell if the number of variables in the cross-classification is large. The entire sample can be used to estimate these cell percentages, but only if the cell sample size is adequately large.
- Depending on the outcome measure under consideration, the main effects of some potential standardization variables may be significant predictors of the outcome variable, but the interaction of the standardization variables may not be.
- In general, continuous variables cannot be used in direct standardization unless they are treated as categorical and the sample size is sufficient large in each cell.

D.3 Predictive Marginals

One very appealing approach to computing standardized estimates is to generate model-based standardized estimates, or predictive marginals. In what many consider a landmark paper, Graubard and Korn (1999) discuss the application and computation of the predictive marginals and their associated standard errors with survey data.

The predictive marginal approach is applicable when the standardization population can be estimated from the entire sample; therefore, this approach is not applicable when computing standardized estimates using a standardization population estimated from an outside source. However, the advantages of predictive marginals are numerous:

- Predictive marginals do not require one to cross a set of standardization variables, but instead apply a model-based approach to computing standardized estimates. However, if one were to include all the interaction terms associated with a set of standardization variables into an appropriate model, then the predictive marginal approach would reproduce the exact same results as direct standardization. For this reason, the **predictive marginals method is a generalization of the direct standardization approach and is equivalent when the correct model and interaction of a set of variables are used as explanatory variables.** This is illustrated below.
- Because predictive marginals do not require one to interact a set of categorical, standardization variables, more main effect and lower-order interaction terms can be included in the modeling process.
- Continuous variables can be included in the predictive marginals. In general, these cannot be considered in direct standardization because of the small sample size.
- Because this is a model-based approach, one could identify the set of predictors and associated interactions that are statistically significant and only include those in the predictive marginals.
- Predictive marginals can be computed from virtually any type of model, including linear regression models, logistics regression models, multinomial

logistic models, and even proportional hazards models.¹

- Both the STATA and SUDAAN statistical software packages compute predictive marginals, the standard error of predictive marginals, and the contrasts between marginals in all or most of their modeling procedures, while simultaneously accounting for the complex design features of a study, including unequal weighting, stratification, and clustering.
- Depending on how well the model under consideration fits the data, the predictive marginals approach to deriving standardized estimates often will yield more precise estimates than direct standardization.

To illustrate predictive marginals in the context of this discussion, suppose y_i is some outcome measure under consideration for person i , d_i is a 0/1 indicator that will equal 1 if person i belongs to a group under consideration and zero otherwise, and X_i is some vector of explanatory variables. The vector X_i can have continuous variables and any number of interaction terms. Suppose we use a regression technique to estimate the model parameters in a model defined by

$$y = f(d, X, \hat{\beta}),$$

where $\hat{\beta}$ are the estimated model parameters. The function f can include interaction terms between d and X . Then, the weighted predictive marginal for the group under consideration is

$$\bar{y} = \frac{1}{\sum_i w_i} \sum_i w_i f(d_i = 1, X_i, \hat{\beta}).$$

In other words, the predictive marginal for a group is found by computing a prediction from the model for every person, assuming every person belongs to the group and assuming every person retains the same values for the other explanatory variables (i.e., X_i).

¹ See Aragon-Logan, Brown, Shah, & Barnwell (2004) for a discussion of predictive marginals for Cox's proportional hazards model.

It is worth noting that predictive marginals can be computed for a specific value of d_i in the case where d_i is a continuous variable.

D.4 Comparing Direct Standardization and the Predictive Marginal Approach

Using data from the 2006 *Department of Defense Reserve Component Survey*, consider the outcome measure of whether a person reported an alcohol binge episode in the past 30 days. An alcohol binge episode is defined as the consumption of five or more drinks (four for females) on the same occasion at least once in the past 30 days. (This outcome measure is discussed in greater detail in Chapter 3 of this report.)

Table D.2 provides estimates of total Reserve component personnel who reported an alcohol binge episode in the past 30 days, by education level and demographic variables. This table also presents estimates of the population distribution. For example, 41.7% of those who reported some college education or less were 24 years old or younger. In comparison, 6.1% of those who reported being a college graduate or higher were 24 years old or younger. Within these two groups, the estimate of Reserve component personnel who reported an alcohol binge episode was 52.8% for those with some college or less who were 24 years old or younger. Similarly, the estimate of Reserve component personnel who reported an alcohol binge episode was 67.5% for those who were a college graduate or higher and were 24 years old or younger.

Although many of the differences are likely not statistically significant, the table suggests that the alcohol binge rate is lower for those who are a college graduate or higher, across all levels of the demographic variables exhibited in Table D.2, except for the 24 or younger age group. The table also suggests that the population distribution is fairly different across the age group levels between those with some college or less and those who are a college graduate or higher. The population distribution by race and gender is not extremely different between these groups.

Table D.3 compares the direct survey estimate of an alcohol binge episode with an estimate obtained via direct standardization and one obtained via the predictive marginals approach. Specifically, in Table D.3

- The **Direct Estimates** are the unadjusted, weighted survey estimates.
- The **Direct Standardization Estimates** are the estimates obtained when the two education groups are standardized by the cross-classification of age, race/ethnicity, and gender.
- The **Predictive Marginals (All Interactions)** are the predictive marginals associated with the two education groups that resulted from a logistic model with all main effects and interactions terms of education, age, race/ethnicity, and gender included in the model. As this table shows, and as noted in Section D.3, when all the interaction terms are included in the model, the predictive marginals are equivalent to the direct standardization estimates. Notice that, in this case, however, the standard errors of the predictive marginals are slightly higher, which is likely due to a model that does not fit the data very well.
- The **Predictive Marginals (Main Effects Only)** are the predictive marginals with only the main effects of age, race/ethnicity, and gender included in the model.

In this example, the direct standardization estimates for the college graduate or higher group (41.0%) is quite a bit larger than the direct estimate for the same group (29.1%). This indicates that a good portion of the difference in the direct estimates between the some college or less group (44.5%) and the college graduate or higher group (29.1%) is due to differences in the distribution of these populations across the demographic variables considered in this example. The predictive marginals (main effects only) lie in between the direct estimate and the direct standardization estimate and have a slightly larger standard error.

As noted in Section D.3, one benefit of the predictive marginals approach is that more significant main effect and lower-order interaction terms can be included in the standardization process. In Table D.4, the percentage of Reserve component personnel who reported an alcohol binge episode in the past 30 days is displayed by Reserve component.

Table D.2

PERCENTAGE OF RESERVE COMPONENT PERSONNEL WHO REPORTED AN ALCOHOL BINGE EPISODE^a IN THE PAST 30 DAYS

Characteristic	Some College or Less		College Graduate or Higher		Total	
	Population Distribution	Estimate	Population Distribution	Estimate	Population Distribution	Estimate
Total	100.0	44.5	100.0	29.1	100.0	40.4
Age						
24 or younger	41.7	52.8	6.1	67.5	32.3	53.6
25-34	28.7	45.3	26.3	37.9	28.0	43.5
35 or older	29.7	31.9	67.6	22.2	39.6	27.6
Race/Ethnicity						
White, non-Hispanic	67.6	45.4	75.6	32.6	69.7	41.8
African American, non-Hispanic	14.2	35.4	13.1	12.4	13.9	29.7
Hispanic	12.7	51.1	5.9	26.2	10.9	47.5
Other	5.5	40.6	5.4	22.9	5.5	36.1
Gender						
Male	83.6	46.3	79.4	32.1	82.5	42.7
Female	16.4	34.9	20.6	17.3	17.5	29.5

Note: Estimates exclude full-time and/or activated Guard/Reservists (Membership Category, Q2; Current Work Status, Q13).

^aDefined as consumption of five or more drinks (four for females) on the same occasion at least once in the past 30 days.

Source: 2006 Department of Defense Reserve Component Survey (Binge Episode, Q29).

Table D.3

PERCENTAGE OF RESERVE COMPONENT PERSONNEL WHO REPORTED AN ALCOHOL BINGE EPISODE^a IN THE PAST 30 DAYS, DIRECT ESTIMATES, STANDARDIZED ESTIMATES, AND PREDICTIVE MARGINALS

Estimate	Some College or Less	College Graduate or Higher
Direct Estimate		
Estimate	44.5	29.1
Standard error	1.7	2.1
Direct Standardization Estimate		
Estimate	42.1	41.0
Standard error	1.4	2.1
Predictive Marginals (All Interactions)		
Estimate	42.1	41.0
Standard error	1.6	2.7
Predictive Marginals (Main Effects Only)		
Estimate	41.9	35.8
Standard error	1.6	2.2

Note: Estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

^aDefined as consumption of five or more drinks (four for females) on the same occasion at least once in the past 30 days.

Source: 2006 Department of Defense Reserve Component Survey (Binge Episode, Q29).

Table D.4

PERCENTAGE OF RESERVE COMPONENT PERSONNEL WHO REPORTED AN ALCOHOL BINGE EPISODE^a IN THE PAST 30 DAYS, DIRECT ESTIMATES, STANDARDIZED ESTIMATES, AND PREDICTIVE MARGINALS, BY RESERVE COMPONENT

Estimate	Reserve Component					
	Army National Guard	Army Reserve	Navy Reserve	Air National Guard	Air Force Reserve	Marine Corps Reserve
Direct Estimate						
Estimate	47.4	37.7	26.6	29.5	31.0	59.3
Standard error	2.8	2.9	0.9	3.6	1.2	3.0
Direct Standardization Estimate						
Estimate	46.0	39.9	33.4	33.8	37.9	55.0
Standard error	2.4	1.8	1.7	2.2	1.4	1.6
Percentage of cells with sample size = 0	46.9	48.2	43.5	49.7	39.6	78.6
Percentage of cells with sample size < 5	77.3	81.0	71.6	80.2	65.6	93.0
Predictive Marginals (Main Effects Only)						
Estimate	45.0	38.2	32.2	32.2	37.0	47.5
Standard error	2.7	2.6	1.2	3.8	1.5	2.6
Percentage Difference Between Predictive Marginals and Direct Estimate						
	-5.19	1.39	21.28	9.27	19.26	-19.83
Percentage Difference Between Predictive Marginals and Direct Standardization Estimate						
	-2.25	-4.21	-3.53	-4.54	-2.59	-13.62

Note: Estimates exclude full-time and/or activated guard/reservists (Membership Category, Q2; Current Work Status, Q13).

^aDefined as consumption of five or more drinks (four for females) on the same occasion at least once in the past 30 days.

Source: 2006 Department of Defense Reserve Component Survey (Binge Episode, Q29).

The categorical variables considered in the direct standardization estimates and the predictive marginals were gender, age, enlisted/officer indicator, marital status, education, and race/ethnicity. These six categorical variables crossed with Reserve component yield a total of 2,304 cells. Because of this large number of cells, in this study we found that 78% of the cells had a sample size of five or less and 51% of the cells had a sample size of zero. A small sample size can adversely affect the direct standardization estimates and can seriously bias the resulting variance estimate.

Despite the large number of empty cells in the cross-classification, Table D.4 suggests that the direct standardization estimates are relatively close to the direct estimates and to the predictive marginals, at least for some Reserve components. In this example, the predictive marginals were derived from a fitted logistic model that included the main effects of the categorical variables only. All effects were statistically significant

predictors except for the enlisted/office indicator and education.

Table D.4 also shows that, for some Reserve components, the predictive marginal estimates are significantly different than the direct estimate and the direct standardization estimate. For example, for the Marine Corps Reserve component, the predictive marginal is 19.8% less than the direct estimate and 13.6% less than the direct standardization estimate. Higher item and total person nonresponse was exhibited among the Marine Corp Reserve in this study; therefore, the adverse effects of a large number of zero or near-zero cells in the cross-classification will be more pronounced for this Reserve group. From Table D.4, note that for the Marine Corps Reserve, 78.6% of the cells in the cross-classification used in the direct standardization estimates had a sample size of zero and 93.0% had a sample size less than 5. Because of the large number of cells with a small or zero sample size,

the predictive marginal is likely a more stable and less biased estimate.

D.5 Adjusted (Standardized) Estimates Presented in This Report

Adjusted or standardized estimates in this report were computed using the predictive marginals approach to use a greater number of main effect variables in the standardization process.

For most adjusted estimates presented in Chapters 2 through 9, a logistic model was considered for all outcome measures under consideration. The exception to this was the adjusted estimate for “average daily ounces of ethanol” in Table 3.1. This is a continuous variable and therefore a linear regression model was used. All models included the following explanatory variables:

- Reserve component
- gender
- age
- pay grade (enlisted or officer)
- marital status
- education
- race/ethnicity

There were no interaction terms considered in these models. In this case, the standardization population was estimated using the full reserve component study population, excluding full-time and/or activated Guard/Reservists.

For the adjusted estimates presented in Chapter 10, where results from the *2005 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel* study were pooled with the 2006 Reserve component study, logistic models were considered for all outcome measures under consideration. These models included the following explanatory variables:

- Service/Reserve component
- gender
- age

- pay grade (enlisted or officer)
- marital status
- education
- race/ethnicity

In these models, the six Reserve components were collapsed into the four Service groups: Army, Navy, Marine Corps, and Air Force.

There were no interaction terms considered in the Chapter 10 models. In this case, the standardization population was estimated using the pooled sample data from both the 2006 Reserve Component study and the 2005 Active Duty Study.

In all tables displaying adjusted estimates in this report, the adjusted estimates for the total column were found by taking the simple arithmetic average of the column estimates displayed in the table. The variance of the total estimate was found by taking the sum of the variances of column estimates. This is conceptually consistent in previously published studies of this same population. (See, for example, the *2005 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel* [Bray et al., 2006]).

References for Appendix D

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Technical Discussion of Multivariate Analyses

Multivariate logistic regression was used in this report to examine the independent relationships between different sociodemographic and other person-level characteristics with the binary outcome measures of heavy alcohol use, illicit drug use, cigarette smoking, high military work stress, and need for further posttraumatic stress disorder (PTSD) evaluation. Multiple logistic regression expresses the natural logarithm of the individual's odds (i.e., $\ln[p / 1 - p]$, where p represents the probability of an individual having the outcome of interest) of exhibiting the outcome behavior as a linear function of the independent variables.

When considering binary outcome variables, there are several reasons for using logistic regression instead of simple linear regression:

- Logistic regression assumes a more reasonable nonlinear relationship between the independent variables and the probability of the outcome.
- Logistic regression does not permit negative predicted probabilities or probabilities greater than one.
- Logistic regression makes the proper assumption that the error has a binomial rather than a normal distribution. (Note, however, that the methods used by the SUDAAN linear regression procedure do not depend on homoscedasticity.)

In its natural form, the parameters of a logistic model indicate the magnitude of change in the log odds due to a one-unit change in the independent variable. When the independent variable is a 0/1 indicator variable (e.g., no illicit drug use = 0, any illicit drug use = 1), the parameter indicates the difference in the log odds between the two categories for that independent variable. An estimated parameter that is not significantly different from 0 indicates that the associated independent variable is not significantly associated with the outcome measure, given the model being used; a significant negative estimated regression parameter indicates a negative relationship with the outcome probability; and a

significant positive estimated regression indicates a positive relationship with the outcome probability.

It is easier to interpret the parameters of a logistic regression model if the original parameters are exponentiated (i.e., $\exp[\beta]$), because the exponentiated parameters indicate the relative change in the odds for each unit increase in the associated independent variable. For a 0/1 indicator variable, the transformed parameter indicates the odds ratio of the outcome occurring for the category coded 1 to the odds of the outcome occurring for the category coded 0 (assuming that 0 is the reference category).

As discussed above, separate logistic regression models were fitted for heavy alcohol use in the past 30 days, any illicit drug use in the past 30 days, any illicit drug use in the past 12 months, cigarette smoking in the past 30 days, high military work stress in the past 12 months, and the need for further PTSD evaluation in the past 30 days. For each of the models, the outcome variable was modeled as a function of one or more of the following variables: Reserve component, gender, race/ethnicity, education, age group, marital status, pay grade, current military job, and deployment indicator in the past 24 months.

The SUDAAN LOGISTIC procedure (Research Triangle Institute, 2004) was used to estimate the necessary logistic modeling parameters and their respective standard errors. The results of the logistic regression analyses were expressed as odds ratios, or the odds of a comparison group (e.g., Army National Guard personnel) having the outcome of interest (e.g., heavy alcohol use) relative to the odds for the reference group (e.g., Marine Corps Reserve personnel). The odds ratios of the reference groups were expressed as 1.00. Odds ratios greater than 1.00 indicate a greater likelihood of the comparison group exhibiting the outcome of interest (e.g., heavy alcohol use) relative to the reference group, while odds ratios less than 1.00 indicate a lower

likelihood of the comparison group exhibiting the outcome of interest.

Also shown are 95% confidence intervals for the odds ratios based on these logistic regression models. For example, if the odds of a person being a heavy alcohol user in a comparison group (e.g., Army National Guard) were significantly different from the odds of a person in the reference group being a heavy alcohol user, then the odds ratio of the comparison group to the reference group (e.g., Army National Guard vs. Marine Corps Reserve) was significantly different from 1.00. An odds ratio that is significantly different from 1.00 (with an alpha of .05) will have a 95% confidence interval that does not include 1.00 in the possible range of values.

Reference for Appendix E

Research Triangle Institute. (2004). *SUDAAN Language Manual, Release 9.0*. Research Triangle Park, NC: Research Triangle Institute.

Appendix F

DoD's Liaison Officers

Table F.1 RESERVE COMPONENT SURVEY LIAISON OFFICERS

Army National Guard MAJ Dave Haupt COL Tammy Miracle	Air National Guard Lt Col Pete Balogh Lt Col Bruce Stewart	Army Reserves Ms. Marcela Bodkin COL Gerry Kitzhaber
CPT Arnold Arenas 1LT Wade Aubin SFC Avila COL Bennett G. Bowlin COL Mark Bruns 1SG Scott Buchanan MAJ Edson Cline COL Sylvia Crockett SFC Mark Cunningham SSG Dziekan MAJ Joann Foley LTC Paul Griffin LTC Griffith SFC Giness SSG Jerry Hagen COL Harry Haroldson SGT Linda Hesch COL Mike Johnson 2LT Amy King MAJ William Korsen MAJ David Laydon LTC Arnold Leeks SSG Lynch MAJ Jason Matsumura CW4 David Malone LTC Dan Manke SFC Miller CW4 Steve Missildine CPT William Mitchell MAJ Pascal SGT Popplewell Mr. Ryan Runk LTC Carol Seger SFC Soldner SGM Richard Turner CPT Mirtha Villareal SFC Watson CPT Nathaniel Williams COL Dana Yetton	Sgt Petra Abram SMSgt Doug Ackerman Sgt James Aschliman Lt Col Ralph Bernard Maj Earl Bittner Lt John Capra Lt Col Lester Carroll Sgt Barry Coleman Col Coln Sgt Daniel Condon Chief Donald Cyprain Cpt Audra Flanagan Cpt Hope Griggs Maj Paul Griggs Col Johnny Haikey Sgt Steve Hanson Maj Joye Haun Maj Brenda Hendrickson Sgt Eddie Hicks Sgt Jonathan Kadis Sgt Karl Kaneshiro Sgt Kraig Konietzko Chief Michael Koslow Sgt Chris Ledford Sgt Terry Libbert Lt Col Loretta Lombard Col Moore Lt Col Jill Nelson Lt Col John Newman Lt Col Mervin Oyafusa Lt Col Gregory Perry Col Chris Pope Gen Frank Scoggins Sgt Steve Smits Chief Birl Wiggins III	Mr. Michael Ames COL Jack Anderson MAJ Salvatore Barbara Mr. Christopher Barker Mr. Dan Berdemann Ms. Patrina Bermudes Ms. Janet Burdon Mr. D.B. Childs SSG Dudek SFC Jodi Gaston Ms. Lema Gilmore MAJ Richard Harrison SSG King COL Kielman MAJ Paul Kovarik MAJ Larry Lamb MAJ Lang Ms. Gyda Larry Mr. Lebron Ms. Gwyneth Lewis 1LT Sherrie Lucas MAJ Martin Ms. Faye Matthews Ms. Jennifer McLaughlin MAJ Kenneth Meyers CPT Morkes MSG David Moretti Mr. Clayton Morgan Mr. John Nayor Ms. Patsy Norman Mr. David Nyback SGT Powell Ms. Beatrice Real 1SG O'Reilly Ms. Charlotte Phillips SFC Pam Schmitt Ms. Juanita Section Mr. Sloan Mr. John Sorley Ms. Tanya Sparks MAJ Steven Sutton MAJ Eric Tauch CPT Stephen Trotter Ms. Kimberly Tyus LTC Warrick Mr. Dennis Wells SFC Karen Williams CPT Williams-Smith Ms. Kimberly Wings LTC Young CPT Timothy Zeisset

2006 DEPARTMENT OF DEFENSE SURVEY OF HEALTH RELATED BEHAVIORS AMONG THE GUARD AND RESERVE FORCE

Table F.1

RESERVE COMPONENT SURVEY LIAISON OFFICERS (continued)

Navy Reserves CDR Henry Buckley CDR Ted Graham CAPT Jack Reape LCDR Neil Smith	Marine Reserves Major Byron Lawson	Air Force Reserves Lt Col Alexander Alex Lt Col Stephanie Gass
PO2 Robert Bartholomew CDR Rita Becker CDR D.R. Bennett CDR M.T. Berta CDR Sybil Bradley Lcdr J.A. Daughety CDR P.D. Davis CDR Andrew Dipuccio CDR K.S. Emmel LT Earl Fountain CDR J.T. Garry CDR J. Hughes CDR M.R. Hunt CDR W.J. Intille CDR E.K. Issasson BMC Chris Lincoln CAPT I.C. McIntyre CDR J.H. Morris Lcdr Matt Olson CDR Riling CDR Robert Timby CDR D.J. Watkins CDR D.R. Will	LtCol John Augsburg HMC Beltz HMC Broomfield Capt Kenneth Casais Capt Dana Demer MSgt Thomas Evans SSgt Andrea Fitzgerald LtCol Hagan Maj Scot Jaworski HM1 Jones HM2 Darrick Kasey HM1 Chief McKeever Capt John Pomfret HM1 John Presto HM2 Howard Salter HM2 Paul Smith HM1 Daniel Velez LtCol Walker Capt Williams Capt Edwin Wunderlich	Maj Michael Auel Col Karen Baldi Col Dennis Brown Lt Col John Eliopolo Mr. Jay Evans Lt Col Chris Fellhoelter Mr. Paul Finch Lt Col Barbara Godsey Maj Charles Good Lt Col Larry Guenther 1st Lt James Harrison Mr. Harold Iverson Maj Kirsten James CMSgt Thrasher Jones Lt Col Patrick Kearney Maj Mike Keel Col Jorge Llambes Major CJ Lupo Ms. Vicki Majors Capt Jan Martin 1 st Lt Robert Mehan Col Pamela Milligan Maj Jennifer Mitchell Maj Patrick O'Neil Maj Raymond Porrata Ms. Marcia Riley Co Philip Shott Lt Col John Vallrugo

Note: Bolded names are Service liaison officers for each component. Names listed below are the points of contact who coordinated data collection field operations at participating centers/armories.

Appendix G

2006 Reserve Component Survey



2006 DEPARTMENT OF DEFENSE RESERVE COMPONENT SURVEY

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

- Most questions provide a set of answers. Read all the printed answers before marking your choice. If none of the printed answers exactly applies to you, fill in the response for the one answer that best fits your situation.
- Use only the pencil you were given.
- Fill in the response completely for your answer.
- Don't use other marks.



- Erase cleanly any answer you wish to change.
- Do not make stray marks of any kind anywhere in this booklet.
- For many questions, you should fill in only one response for your answer in the column below the question, as shown here:

EXAMPLE: How would you describe your health?

- Excellent
- Good
- Fair
- Poor

- When you are asked to give numbers for your answer, please enter your response as shown below:

EXAMPLE: During the past 30 days, how many full 24-hour days were you deployed at sea or in the field?

- Enter the number of days in the boxes. Use both boxes, ONE number to a box. Then, fill in the matching response below each box.

Days	
	5
0	0
●	1
2	2
3	3
	4
	●
	6
	7
	8
	9

Now, begin answering questions here.

1. In which component of the Military do you currently serve?

- Army National Guard (ARNG)
- Army Reserve (USAR)
- Naval Reserve (USNR)
- Air National Guard (ANG)
- Air Force Reserve (USAFR)
- Marine Corps Reserve (USMCR)

2. What is your membership category in the Reserve Component?

- Drilling unit Reservist/Traditional Guardsman
- Individual Mobilization Augmentee (IMA)
- Active Guard/Reserve Program (AGR/FTS/AR), in fulltime National Guard Duty

3. What is your pay grade?

- | <u>ENLISTED</u> | <u>OFFICER</u> |
|-----------------------------|------------------------------|
| <input type="radio"/> E1-E3 | <input type="radio"/> W1-W5 |
| <input type="radio"/> E4-E6 | <input type="radio"/> O1-O3 |
| <input type="radio"/> E7-E9 | <input type="radio"/> O4-O10 |

4. What is your highest level of education now?

- Did not graduate from high school
- GED or ABE certificate
- High school diploma
- Trade or technical school graduate
- Some college but not a 4-year degree
- 4-year college degree (BA, BS, or equivalent)
- Graduate or professional study but no graduate degree
- Graduate or professional degree

5. Are you male or female?

- Male
- Female

Continue on the following page . . .

PLEASE DO NOT WRITE IN THIS AREA



SERIAL #

6. How old were you on your last birthday?

Years	
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

7. How old were you when you joined the National Guard or Reserves?

Years	
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

8. What is your marital status?

- Married
- Living as married (living with fiancé, boyfriend or girlfriend but not married)
- Separated and not living as married
- Divorced and not living as married
- Widowed and not living as married
- Single, never married, and not living as married

9. Are you Spanish/Hispanic/Latino?

- No, not Spanish/Hispanic/Latino
- Yes, Mexican/Mexican-American/Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, other Spanish/Hispanic/Latino

10. What is your race? (Mark one or more races to indicate what you consider yourself to be.)

- White
- Black or African American
- American Indian or Alaska Native
- Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)
- Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian, Chamorro)

11. Is your spouse also in the National Guard, Reserves, or on active duty?

- I do not have a spouse
- Yes
- No

12. Do you have any children living with you?

- I have no children
- Yes
- No

13. Are you currently . . . ?

(Fill in one response for each line)

	Yes	No
Working part-time as a National Guard/Reservist (i.e., drilling weekends, Annual Training only, not currently activated)	<input type="radio"/>	<input type="radio"/>
Working full-time as a National Guard/Reservist (i.e., currently activated) . . .	<input type="radio"/>	<input type="radio"/>
Working full-time in a civilian job	<input type="radio"/>	<input type="radio"/>
Working part-time in a civilian job	<input type="radio"/>	<input type="radio"/>
Working as self-employed in own business or profession	<input type="radio"/>	<input type="radio"/>
Unpaid worker (volunteer)	<input type="radio"/>	<input type="radio"/>
In school	<input type="radio"/>	<input type="radio"/>
A homemaker, housewife, househusband . . .	<input type="radio"/>	<input type="radio"/>
Working multiple jobs	<input type="radio"/>	<input type="radio"/>
Working temporary job(s)	<input type="radio"/>	<input type="radio"/>

14. What was your annual household income from ALL sources last year? Please estimate your annual household income before taxes were taken out. As with all information you provide on this survey, your answer to this question will be kept confidential.

- Less than \$15,000
- \$15,000 to \$19,999
- \$20,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$44,999
- \$45,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 or more

15. What is the ZIP code or APO or FPO number for the post, base, ship, or other duty station where you spent most of your duty time during the past 12 months?

ZIP/APO/FPO				
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

17. The statements below are about some other things that happen to people. How many times in the past 12 months did each of the following happen to you?

NUMBER OF TIMES IN THE PAST 12 MONTHS

(Fill in one response for each line)

3 or more 2 1 0

- I had heated arguments with family or friends.
- I got into a loud argument in public.
- I had trouble on the job.
- I was involved in a motor vehicle accident while I was driving (regardless of who was responsible).
- I drove unsafely.
- I had health problems.
- I neglected my family responsibilities.
- I had serious money problems.
- I had trouble with the police (civilian or military).
- I found it harder to handle my problems.
- I had to have emergency medical help (for any reason).

18. Please indicate how much each statement below describes you.

(Fill in one response for each line)

Quite a Lot Some A Little Not at All

- I often act on the spur of the moment without stopping to think.
- I get a real kick out of doing things that are a little dangerous.
- You might say I act impulsively.
- I like to test myself every now and then by doing something a little chancy.
- Many of my actions seem to be hasty.
- I'm always up for a new experience.
- I like to try new things just for the excitement.
- I go for the thrills in life when I get a chance.
- I like to experience new and different sensations.

The next group of questions is about past and current use of alcoholic beverages—that is, beer, wine, and liquor. If the answers provided are more exact than you can remember, mark your best estimate. If you can't decide between two answer choices because you drink different amounts at different times, answer for the time you drank most often.

19. During the past 30 days, on how many days did you drink beer?

- 28-30 days (about every day)
- 20-27 days (5-6 days a week, average)
- 11-19 days (3-4 days a week, average)
- 4-10 days (1-2 days a week, average)
- 2-3 days in the past 30 days
- Once in the past 30 days
- Didn't drink any beer in the past 30 days

20. During the past 30 days, what size cans or bottles of beer did you usually drink? (Beer is most commonly sold and served in 12-ounce cans, mugs, bottles, or glasses in the U.S.)

- 8-ounce can, bottle, or glass
- Standard 12-ounce can, bottle, or mug
- 16-ounce ("tall boy") can, bottle, or mug (½ liter)
- Liter or quart (32-oz.) bottle or mug
- 40-ounce bottle (a "forty")
- Some other size
- Didn't drink any beer in the past 30 days

21. Think about the days when you drank beer in the past 30 days. How much beer did you usually drink on a typical day when you drank beer?

- 18 or more beers
- 15-17 beers
- 12-14 beers
- 9-11 beers
- 8 beers
- 7 beers
- 6 beers
- 5 beers
- 4 beers
- 3 beers
- 2 beers
- 1 beer
- Didn't drink any beer in the past 30 days

22. During the past 30 days, on how many days did you drink wine?

- 28-30 days (about every day)
- 20-27 days (5-6 days a week, average)
- 11-19 days (3-4 days a week, average)
- 4-10 days (1-2 days a week, average)
- 2-3 days in the past 30 days
- Once in the past 30 days
- Didn't drink any wine in the past 30 days

23. During the past 30 days, did you usually drink a regular wine or a fortified wine?

- Regular wine (also called "table" or "dinner" wine)
- Fortified wine (such as Thunderbird, Night Train, sherry, port, vermouth, brandy, Dubonnet, champagne, etc.)
- Wine cooler (such as Bartles & Jaymes, etc.)
- Didn't drink any wine in the past 30 days

24. Think about the days when you drank wine in the past 30 days. How much wine did you usually drink on a typical day when you drank wine? (The standard wineglass holds about 4 ounces of wine. The standard wine bottle holds about 6 glasses of wine.)

- 18 or more wineglasses (3 bottles or more)
- 15-17 wineglasses
- 12-14 wineglasses
- 9-11 wineglasses
- 8 wineglasses
- 7 wineglasses
- 6 wineglasses (about 1 bottle)
- 5 wineglasses
- 4 wineglasses
- 3 wineglasses (about ½ a bottle)
- 2 wineglasses
- 1 wineglass
- Didn't drink any wine in the past 30 days

25. During the past 30 days, on how many days did you drink liquor?

- 28-30 days (about every day)
- 20-27 days (5-6 days a week, average)
- 11-19 days (3-4 days a week, average)
- 4-10 days (1-2 days a week, average)
- 2-3 days in the past 30 days
- Once in the past 30 days
- Didn't drink any liquor in the past 30 days

26. During the past 30 days, about how many ounces of liquor did you usually have in your average drink? (The average bar drink, mixed or straight, contains a "jigger" or 1½ ounces of liquor.)

- 16 or more ounces (about 1 pint)
- 12-15 ounces
- 9-11 ounces
- 8 ounces (about 1/2 pint)
- 7 ounces
- 6 ounces
- 5 ounces
- 4 ounces
- 3 ounces (a "double")
- 2 ounces
- 1½ ounces (a "jigger")
- 1 ounce (a "shot")
- Didn't drink any liquor in the past 30 days

27. Think about the days when you drank liquor in the past 30 days. How much liquor did you usually drink on a typical day when you drank liquor?

- 18 or more drinks
- 15-17 drinks
- 12-14 drinks
- 9-11 drinks
- 8 drinks
- 7 drinks
- 6 drinks
- 5 drinks
- 4 drinks
- 3 drinks
- 2 drinks
- 1 drink
- Didn't drink any liquor in the past 30 days

28. During the past 30 days, what was the largest number of drinks you had on one occasion?

Enter the number of drinks in the boxes. Use both boxes, ONE number to a box. Then, fill in the matching response below each box.

NUMBER OF DRINKS	
<input type="text"/>	<input type="text"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>

29. During the past 30 days, on how many days did you have 5 or more drinks of beer, wine, or liquor on the same occasion (4 or more if you are a woman)? (By "drink," we mean a bottle or can of beer, a wine cooler or a glass of wine, a shot of liquor, or a mixed drink or cocktail. By "occasion," we mean at the same time or within a couple of hours of each other.)

- 28-30 days (about every day)
- 20-27 days (5-6 days a week, average)
- 11-19 days (3-4 days a week, average)
- 4-10 days (1-2 days a week, average)
- 2-3 days in the past 30 days
- Once in the past 30 days
- I drank during the past 30 days, but I never had 5 or more drinks on the same occasion
- Didn't drink in the past 30 days

30. On those days when you worked during the past 30 days, how often did you have a drink while you were working (on-the-job), during your lunch break, or during a work break?

- Every workday
- Most workdays
- About half of my workdays
- Several workdays
- 1 or 2 workdays
- I drank during the past 30 days, but not while working, during a lunch break, or during a work break.
- Didn't drink in the past 30 days

33. Please indicate on how many military workdays in the past 12 months these things ever happened to you. (The term "workday" refers to days when you were on military status, worked your military job or duty station, or were on quick-response/alert.)

(Fill in one response for each line)

I was hurt in an on-the-job accident because of my drinking.

I was late for my military job or left my military job early because of drinking, a hangover, or an illness caused by drinking.

I did not come to work at all because of a hangover, an illness, or a personal accident caused by drinking.

I worked below my normal level of performance because of drinking, a hangover, or an illness caused by drinking.

I was drunk while working at my military job.

I was called in during off-duty hours and reported to work feeling drunk.

Number of Workdays in the Past 12 Months			
2 or more	1	None	Don't Drink
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The next set of questions ask about your use of alcoholic beverages during the past 12 months, that is, since this time last year.

31. During the past 12 months, how often did you drink enough alcohol to feel drunk?

- Every day or nearly every day
- 3-4 times a week
- Once or twice a week
- 1-3 times a month
- 7-11 times in the past 12 months
- 3-6 times in the past 12 months
- Twice in the past 12 months
- Once in the past 12 months
- Never in the past 12 months
- Don't drink

32. If you drank enough alcohol to feel drunk in the past 12 months, how many drinks did it take for you to feel drunk? (Please specify the number of drinks to the right and fill in the matching response below each box.)

- Did not drink alcohol in the past 12 months.
- Did not drink enough alcohol in the past 12 months to feel drunk.

DRINKS TO FEEL DRUNK	
<input type="text"/>	<input type="text"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>

34. Here are some statements about things that happen to people while or after drinking, or because of using alcohol. How many times in the past 12 months did each of the following happen to you?

(Fill in one response for each line)

	Number of Times in Past 12 Months				
	3 or more	2	1	0	Don't Drink
I didn't get promoted at my military job because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got a lower score on my efficiency report or performance rating because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had an illness connected with my drinking that kept me from my military job for a week or longer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I received UCMJ punishment (Court Martial, Article 15, Captain's Mast, Office Hours, Letter of Reprimand) because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was arrested for driving under the influence of alcohol.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was arrested for a drinking incident not related to driving.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I spent time in jail, stockade, or brig because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was hurt in any kind of accident because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My drinking caused an accident where someone else was hurt or property was damaged.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got into a fight where I hit someone other than a member of my family when I was drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My spouse or live-in fiancé, boyfriend or girlfriend threatened to leave me or left me because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was asked to leave or did leave my spouse or live-in fiancé, boyfriend or girlfriend because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35. The statements below are about some other things that happen to people because of using alcohol. How many times in the past 12 months did each of the following happen to you?

(Fill in one response for each line)

	Number of Times in the Past 12 Months				
	3 or more	2	1	0	Don't Drink
I received detoxification treatment because of my drinking ("detoxes" often occur in a hospital or residential center, where you stay 24 hours a day, but they can also occur in an outpatient setting; people who go through detox are going through withdrawal).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had trouble on the job (civilian or military) because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had trouble with the police (civilian or military) because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found it harder to handle my problems because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had to have emergency medical help because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was hospitalized because of my drinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

36. In the past 12 months, did you . . .

(Fill in one response for each line)

	Yes, But Only 1 Time	Yes, 2 or 3 Times	Yes, More than 3 Times	No	Don't Drink
Drive a car or other vehicle when you had too much to drink?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ride in a car or other vehicle driven by someone who had too much to drink?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drive or ride in a boat, canoe, or other watercraft when you had too much to drink?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operate power tools or machinery when you had too much to drink?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

37. The following list includes some of the reasons people give for drinking beer, wine, or liquor. Please tell us how important each reason is to you, for your drinking.

(Fill in one response for each line)

	Very Important	Somewhat Important	Not at All Important	Don't Drink
As a way to celebrate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To relax	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be sociable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because it helps you enjoy a party	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To fit in with people you like	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because you feel more self-confident and sure of yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
So you won't feel left out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because it makes social gatherings more fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To forget about your problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To cheer up when you're in a bad mood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because your friends pressure you to drink	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
So that others won't kid/tease you about not drinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

38. The following list includes some of the reasons people give for limiting how much they drink. Please tell us how important each reason is to you for limiting (or being careful about) your drinking.

(Fill in one response for each line)

	Very Important	Somewhat Important	Not at All Important	Don't Drink
Drinking is bad for my health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It costs too much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family/friends get upset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It might interfere with my civilian or military career	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It goes against my basic values or beliefs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm afraid of becoming an alcoholic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It makes me do things I'm sorry for later	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It can make me feel sick	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drinking can get me in trouble with police	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It leads to losing control over my life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

39. How often do you have a drink containing alcohol?

- Four or more times a week
- Two to three times a week
- Two to four times a month
- Monthly or less
- Never

40. How many drinks containing alcohol do you have on a typical day when you are drinking?

- 10 or more
- 7 to 9
- 5 or 6
- 3 or 4
- 1 or 2
- Don't drink

41. For each question below, please indicate how often you do the following.

(Fill in one response for each line)

	Never	Less than Monthly	Monthly	Weekly	Daily or Almost Daily
How often do you have <u>six or more drinks</u> on one occasion?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often during the <u>last year</u> have you found that you were not able to stop drinking once you had started?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often during the <u>last year</u> have you failed to do what was normally expected of you because of drinking?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often during the <u>last year</u> have you needed a first drink in the morning to get yourself going after a heavy drinking session?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often during the <u>last year</u> have you had a feeling of guilt or remorse after drinking?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often during the <u>last year</u> have you been unable to remember what happened the night before because you had been drinking?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

42. For each question below, please indicate if you have experienced the following because of drinking.

(Fill in one response for each line)

	No	Yes, But Not in the Last Year	Yes, During the Last Year
Have you or someone else been injured as a result of your drinking?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has a relative or friend or a doctor or other health worker been concerned about your drinking or suggested you cut down?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The word "installation," as used in this questionnaire, refers to your post, camp, base, station, or other geographic duty location. Navy and Marines assigned to ships: The word "installation" refers to your ship when in home port. "Called to active duty" or "active duty" refers to Military duty in the continental U.S. or CONUS duty. The term "deployed" refers to deployment overseas or OCONOS. These do not include drilling weekends and Annual Training.

43. Please indicate how much you agree or disagree with each of the following statements.

(Fill in one response for each line)

	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know/No Opinion
It's hard to "fit in" in my unit/command if you don't drink.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drinking is part of being in my unit/command.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drinking is part of being in the Military.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drinking is just about the only recreation available on base.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At military-related parties or social functions, everyone is encouraged to drink.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At military-related parties or social functions, nonalcoholic beverages are always available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership is tolerant of off-duty alcohol intoxication or drunkenness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

44. How would you compare your usual drinking habits to your drinking habits on drill weekends, during Annual Training (Annual Training), and during active duty/deployment periods?

(Fill in one response for each line)

	Drink More Alcohol than Usual During These Times	Drink the Same Amount of Alcohol as Usual	Drink Less Alcohol than Usual During These Times	I Don't Drink Alcohol
Drill weekends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annual Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Active duty/deployment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

45. About how old were you when you first began to use alcohol once a month or more often?

Enter your age in the boxes. Use both boxes, ONE number to a box. Then, fill in the matching response below each box.

I have never used alcohol at least once a month.

YEARS	
<input type="text"/>	<input type="text"/>
<input type="radio"/> 0	<input type="radio"/> 0
<input type="radio"/> 1	<input type="radio"/> 1
<input type="radio"/> 2	<input type="radio"/> 2
<input type="radio"/> 3	<input type="radio"/> 3
<input type="radio"/> 4	<input type="radio"/> 4
<input type="radio"/> 5	<input type="radio"/> 5
<input type="radio"/> 6	<input type="radio"/> 6
	<input type="radio"/> 7
	<input type="radio"/> 8
	<input type="radio"/> 9

Now we would like to ask some questions about cigarettes and other tobacco products.

46. Have you smoked at least 100 cigarettes in your entire life? (That would be 5 packs or more in your entire life.)

Yes No

47. How old were you when you first started smoking cigarettes fairly regularly? (Smoking regularly means smoking at least one cigarette a day for 30 days or longer.)

Enter the age in the boxes. Use both boxes, ONE number to a box. Then, fill in the matching response below each box.

I have never smoked at least one cigarette a day for 30 days or longer.

YEARS	
<input type="text"/>	<input type="text"/>
<input type="radio"/> 0	<input type="radio"/> 0
<input type="radio"/> 1	<input type="radio"/> 1
<input type="radio"/> 2	<input type="radio"/> 2
<input type="radio"/> 3	<input type="radio"/> 3
<input type="radio"/> 4	<input type="radio"/> 4
<input type="radio"/> 5	<input type="radio"/> 5
<input type="radio"/> 6	<input type="radio"/> 6
	<input type="radio"/> 7
	<input type="radio"/> 8
	<input type="radio"/> 9

48. Have you started smoking cigarettes since joining the Military?

Yes No Don't smoke cigarettes

49. When was the last time you smoked a cigarette?

- Today
- During the past 30 days
- 5-8 weeks ago
- 2-3 months ago
- 4-6 months ago
- 7-12 months ago
- 1-3 years ago
- More than 3 years ago
- Never smoked cigarettes

50. Think about the past 30 days. How many cigarettes did you usually smoke on a typical day?

- About 2 packs or more a day (more than 36 cigarettes)
- About 1½ packs a day (26-35 cigarettes)
- About 1 pack a day (16-25 cigarettes)
- About ½ pack a day (6-15 cigarettes)
- 1-5 cigarettes a day
- Less than 1 cigarette a day, on the average
- Did not smoke any cigarettes in the past 30 days

51. During the past 12 months, did you make a serious attempt to stop smoking cigarettes; that is, did you go for a period of time without smoking?

- Yes, I did not smoke for 24 hours
- Yes, I did not smoke for at least a week
- No
- Didn't smoke cigarettes in the past 12 months
- Never smoked cigarettes

52. Are you seriously intending to quit smoking?

- Yes, in the next 30 days
- Yes, in the next 6 months
- No
- Don't smoke cigarettes

53. How soon after you wake up do you smoke your first cigarette?

- After 60 minutes
- 31-60 minutes
- 6-30 minutes
- Within 5 minutes
- Don't smoke cigarettes

54. Do you smoke more frequently during the first hours after awakening than during the rest of the day?

- Yes
- No
- Don't smoke cigarettes

55. Do you find it difficult to refrain from smoking in places where it is forbidden (e.g., in church, in cinema, etc)?

- Yes
- No
- Don't smoke cigarettes

56. Which cigarette would you hate most to give up?

- First one in the morning
- One later in the morning
- One at midday
- One in the afternoon
- One at the end of the duty day
- One in the evening
- One late at night
- One before bedtime
- Don't smoke cigarettes

57. How many cigarettes per day do you smoke?

- 10 or less
- 11 to 20
- 21 to 30
- 31 or more
- Don't smoke cigarettes

58. Do you smoke even if you are so ill that you are in bed most of the day?

- Yes
- No
- Don't smoke cigarettes

59. When was the last time you used chewing tobacco or snuff or other smokeless tobacco?

- During the past 30 days
- More than 1 month ago but within the past 6 months
- More than 6 months ago but within the past year
- More than 1 year ago but within the past 2 years
- More than 2 years ago
- Never used smokeless tobacco

60. Have you started using chewing tobacco, snuff, or other smokeless tobacco since joining the military?

- Yes
- No
- Don't use smokeless tobacco

61. During the past 12 months, how often on the average have you used chewing tobacco, snuff, or other smokeless tobacco?

- About every day
- 5-6 days a week
- 3-4 days a week
- 1-2 days a week
- 2-3 days a month
- About once a month
- 7-11 days in the past 12 months
- 3-6 days in the past 12 months
- Once or twice in the past 12 months
- Never in the past 12 months
- Never used smokeless tobacco

62. During the past 12 months, how often on the average have you smoked cigars or pipes?

- About every day
- 5-6 days a week
- 3-4 days a week
- 1-2 days a week
- 2-3 days a month
- About once a month
- 7-11 days in the past 12 months
- 3-6 days in the past 12 months
- Once or twice in the past 12 months
- Never in the past 12 months
- Never used cigars or pipes

63. How would you compare your usual tobacco use habits to your habits on drill weekends, during Annual Training, and during active duty/deployment periods?

(Fill in one response for each line)

	Use More than Usual During These Times	Use the Same Amount as Usual	Use Less than Usual During These Times	I Don't Use Tobacco
Drill weekends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annual Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Active duty/deployment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

64. Please indicate how much you agree or disagree with each of the following statements.

(Fill in one response for each line)

	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know/No Opinion
The number of places to buy cigarettes on military installations makes it easy to smoke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most of my friends in the Military smoke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smoking is part of being in the Military.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My spouse, live-in fiancé, boyfriend or girlfriend, or the person I date disapproves of my smoking (or would disapprove if I did smoke).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't like being around people when they're smoking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of tobacco is against my basic values or beliefs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

65. The following list includes reasons that people sometimes give for why they started smoking cigarettes regularly. If you have ever smoked cigarettes regularly, please tell us how important each reason was for you starting to smoke.

(Fill in one response for each line)

	Very Important	Somewhat Important	Not at All Important	Never Smoked Regularly
To fit in with my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To fit in with my military unit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To rebel against my parents or others in authority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To look "cool" or be "cool"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To help relieve stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To help me relax or calm down	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To relieve boredom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
So I wouldn't want to eat as much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To look or feel like an adult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because most people in my family smoked cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To prove I could handle it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be like someone I admired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To show I was tough	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To avoid gaining weight	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To help keep me awake or alert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The next set of questions is about use of drugs for nonmedical purposes. Below we list the types of drugs we are interested in, along with some of their most common trade and clinical names. Although some of the drugs listed below may be prescribed for medical reasons, the questions that follow refer to use of these drugs for nonmedical purposes. By nonmedical purposes, we mean any use of these drugs on your own—that is, either without a doctor's prescription, or in greater amounts or more often than prescribed, or for any reasons other than a doctor said you should take them, such as to get high, for thrills or kicks, to relax, to give insight, for pleasure, or curiosity about the drug's effect.

Please take your time and answer the questions as accurately as possible. Remember, **NO ONE** will ever link your answers with your identity.

DRUG TYPES	COMMON TRADE/CLINICAL NAMES
Marijuana or Hashish	Cannabis, THC, "pot," "weed," "chronic"
PCP, LSD or Other Hallucinogens	Phencyclidine (PCP or "angel dust"), LSD ("acid"), Mescaline, Peyote, Psilocybin, "mushrooms" (or "shrooms"), Ketamine ("K" or "Special K"), MDMA ("ecstasy"), MDA ("Adam"), MDEA ("Eve"), and Tryptamines (AMT, 5-MeO-DiPT, "Foxy")
Cocaine	Cocaine (including "crack")
Methamphetamine	Ice or crystal meth ("speed", "crank,"), Methamphetamine, Desoxyn, Methedrine
Amphetamines or Other Stimulants	Preludin, benzedrine, biphedamine, Cylert, Dextroamphetamine, Dexamyl, Dexedrine, Eskatrol, Ionamin, Obedrin-LA, Plegine, Pondimin, Pre-Sate, Ritalin, Sanorex, Tenuate, Tepanil, Voranil, Didrex, "uppers."
Tranquilizers or Other Depressants	Ativan, Meprobamate, Librium, Valium, Atarax, Equanil, Libritabs, Meprospan, Miltown, Serax, SK-Lygen, Thorazine, Tranxene, Verstran, Vistaril, Xanax, Halcion, Rohypnol ("rufies," R-2, Mexican Valium)
Barbiturates or Other Sedatives/Hypnotics	Seconal, Alurate, Amobarbital, Amytal, Buticaps, Butisol, Carbrital, Dalmane, Doriden, Eskabarb, Luminal, Mebaral, Methaqualone, Nembutal, Noctec, Noludar, Optamil, Parest, Pentobarbital, Phenobarbital, Placidyl, Quaalude, Secobarbital, Sopor, Tuinal, and GHB ("liquid ecstasy," "date rape drug"), "downers"
Heroin or Other Opiates	Heroin, Morphine, Opium
Analgesics or Other Narcotics	Darvon, Darvocet, Demerol, Percodan, Percocet, Tylox, Tylenol with Codeine, Codeine, Cough Syrups with Codeine, Dilaudid, Dolene, Dolophine, Leritine, Levo-Dromoran, Methadone, Propoxyphene, SK-65, Talwin, Oxycodone, OxyContin, Hydrocodone, Vicodin, Lorcet, Lortab, Phenaphen, Fentanyl
Inhalants	Lighter fluids, aerosol sprays (like Pam, deodorant, hair spray), glue, toluene, amyl nitrite, gasoline, poppers, locker room deodorizers, spray paints, paint thinner, halothane, ether or other anesthetics, nitrous oxide ("laughing gas"), correction fluids, cleaning fluids, degreasers, "whippets"
Anabolic Steroids	Testosterone, Methyltestosterone, "D-Ball," human growth hormone (HGH), or other drugs taken to improve or enhance physical strength/performance
Sexual enhancers	Viagra

66. When did you last use each type of drug listed below for nonmedical purposes/without a prescription or physician's approval?

LAST USED THIS TYPE OF DRUG

(Fill in one response for each line)

	1-30 Days Ago	1-12 Months Ago	More Than 1 Year Ago	Never Used
Marijuana or hashish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PCP, LSD or other Hallucinogens (e.g., ecstasy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cocaine (including crack)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methamphetamine (e.g., crystal meth, "speed")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amphetamines or other stimulants (e.g., "uppers")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tranquilizers or other depressants (e.g., Xanax, Valium, "ruffies")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Barbiturates or other sedatives/hypnotics (e.g., "downers," Quaaludes, GHB, prescription sleeping pills)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heroin or other Opiates (e.g., Morphine, Opium)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analgesics or other narcotics (e.g., prescription pain relievers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inhalants (e.g., aerosol sprays, gasoline, poppers, "whippets")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anabolic steroids (e.g., Testosterone)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual enhancers (e.g., Viagra)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

67. On the average, how often in the past 12 months have you taken each of the following drugs for nonmedical purposes/without a prescription or physician's approval?

NUMBER OF DAYS USED THIS TYPE OF DRUG IN PAST 12 MONTHS

(Fill in one response for each line)

	52 Days or More	25-51 Days	12-24 Days	6-11 Days	3-5 Days	1-2 Days	Never in Past Year
Marijuana or hashish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PCP, LSD or other Hallucinogens (e.g., ecstasy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cocaine (including crack)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methamphetamine (e.g., crystal meth, "speed")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amphetamines or other stimulants (e.g., "uppers")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tranquilizers or other depressants (e.g., Xanax, Valium, "ruffies")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Barbiturates or other sedatives/hypnotics (e.g., "downers," Quaaludes, GHB, prescription sleeping pills)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heroin or other Opiates (e.g., Morphine, Opium)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analgesics or other narcotics (e.g., prescription pain relievers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inhalants (e.g., aerosol sprays, gasoline, poppers, "whippets")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anabolic steroids (e.g., Testosterone)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual enhancers (e.g., Viagra)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

68. During the past 30 days, on about how many days did you use each of the following drugs for nonmedical purposes/without a prescription or physician's approval?

NUMBER OF DAYS USED THIS TYPE OF DRUG IN PAST 30 DAYS

(Fill in one response for each line)

	11 or More Days	4-10 Days	1-3 Days	Never in Past 30 Days
Marijuana or hashish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PCP, LSD or other Hallucinogens (e.g., ecstasy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cocaine (including crack)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methamphetamine (e.g., crystal meth, "speed")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amphetamines or other stimulants (e.g., "uppers")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tranquilizers or other depressants (e.g., Xanax, Valium, "rufies")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Barbiturates or other sedatives/hypnotics (e.g., "downers," Quaaludes, GHB, prescription sleeping pills)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heroin or other Opiates (e.g., Morphine, Opium)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analgesics or other narcotics (e.g., prescription pain relievers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inhalants (e.g., aerosol sprays, gasoline, poppers, "whippets")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anabolic steroids (e.g., Testosterone)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual enhancers (e.g., Viagra)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For the next three questions, we have defined a "random, unannounced drug test" as a drug test that you were not supposed to know about ahead of time.

69. When was the last time you had to give a urine sample for a random, unannounced military drug test?

- In the past 30 days
- 5-7 weeks ago
- 2-6 months ago
- 7-12 months ago
- 13 months to 3 years ago
- More than 3 years ago
- I've never given a urine sample for a random, unannounced drug test

70. Think about the last time you had to give a urine sample for a random, unannounced military drug test. How easy was it for you to predict that you were going to be tested?

- Very easy to predict
- Somewhat easy to predict
- Somewhat hard to predict
- Very hard to predict
- I've never given a urine sample for a random, unannounced drug test

71. If the Military stopped random, unannounced drug testing, how likely do you think you would be to use drugs?

- Very likely
- Somewhat likely
- Somewhat unlikely
- Very unlikely
- Definitely wouldn't use drugs

72. Would you ever consider using some way to circumvent the military drug testing process, such as diuretics, the "Urinator" or other such devices, masking agents such as "Clean"?

- Yes
- No

The next set of questions asks about injuries you may have sustained and your use of seatbelts, helmets, and hearing protection.

73. In the past 12 months, did you have any overnight hospital stays for treatment of an unintentional (accidental or overuse) injury?

- Yes, due to a car or motorcycle accident
- Yes, due to another cause
- No

74. How often do you use seat belts when you drive or ride in a car?

- Always
- Nearly always
- Sometimes
- Seldom
- Never
- Don't drive or ride in a car

75. In the past 12 months, how many times did you drive or ride on a motorcycle?

- 40 or more times
- 21-39 times
- 11-20 times
- 1-10 times
- Never in the past 12 months

76. In the past 12 months, how often did you wear a helmet when you drove or rode on a motorcycle?

- Always
- Nearly always
- Sometimes
- Seldom
- Never
- Didn't drive or ride on a motorcycle in the past 12 months

77. In the past 12 months, how many times did you ride a bicycle?

- 40 or more times
- 21-39 times
- 11-20 times
- 1-10 times
- Never in the past 12 months

78. In the past 12 months, how often did you wear a helmet when you rode a bicycle?

- Always
- Nearly always
- Sometimes
- Seldom
- Never
- Didn't ride a bicycle in the past 12 months

79. In the past 12 months, how often did you wear hearing protection when you fired a weapon?

- I did not fire a weapon in the past 12 months
- Always
- Nearly always
- Sometimes
- Seldom
- Never

80. In the past 12 months, how often did you wear hearing protection when exposed to a loud noise other than a weapon firing?

- I was not exposed to loud noise in the past 12 months
- Always
- Nearly always
- Sometimes
- Seldom
- Never

The next questions deal with dental treatment and general health behaviors.

81. During the past 12 months, what was the main reason you did not receive any dental treatment (including a dental check-up)?

- I have had dental treatment or a dental check-up in the past 12 months
- I could not get time off from work
- I did not have dental insurance
- I did not have transportation
- I didn't think I needed any treatment
- I don't like going to the dentist(s) at this installation
- I don't like going to any dentists
- Other

82. Since you joined the military, have you ever lost any permanent teeth (not counting wisdom teeth) because of...

	Yes	No
<i>(Fill in one response for each line)</i>		
Gum disease?	<input type="radio"/>	<input type="radio"/>
Cavities?	<input type="radio"/>	<input type="radio"/>
An injury to your mouth?	<input type="radio"/>	<input type="radio"/>
Tooth crowding or braces?	<input type="radio"/>	<input type="radio"/>
Corrective jaw surgery?	<input type="radio"/>	<input type="radio"/>
Some other reason?	<input type="radio"/>	<input type="radio"/>

83. During the past 30 days, how often did poor physical health keep you from doing your usual activities, such as work or recreation?

- 28-30 days (about every day)
- 20-27 days (5-6 days a week, average)
- 11-19 days (3-4 days a week, average)
- 4-10 days (1-2 days a week, average)
- 2-3 days in the past 30 days
- Once in the past 30 days
- Never in the past 30 days

84. During the past 30 days, for leisure-time physical activity, how often did you usually do each of the following?
 (Fill in one response for each line)

	About Every Day	5 or 6 Days a Week	3 or 4 Days a Week	1 or 2 Days a Week	1 or 3 Days per Month	Never in the Past Month
Moderate Physical Activity -Any activity that burns 3.5 to 7 kcal/min or the equivalent of 3 to 6 metabolic equivalents (METs) and results in achieving 60 to 73 percent of peak heart rate. Examples of moderate physical activity include walking briskly, mowing the lawn, dancing, swimming, or bicycling on level terrain. A person should feel some exertion but should be able to carry on a conversation comfortably during the activity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vigorous Physical Activity -Any activity that burns more than 7 kcal/min or the equivalent of 6 or more metabolic equivalents (METs) and results in achieving 74 to 88 percent of peak heart rate. Examples of vigorous physical activity include jogging, mowing the lawn with a nonmotorized push mower, chopping wood, participating in high impact aerobic dancing, swimming continuous laps, or bicycling uphill.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

85. During the past 30 days, when you did leisure time physical activity, how long did you usually do each of the following?
 (Fill in one response for each line)

	60 or More Minutes	30 or More Minutes	At Least 20 Minutes	Less than 20 Minutes	Never in the Past Month
Moderate Physical Activity -Any activity that burns 3.5 to 7 kcal/min or the equivalent of 3 to 6 metabolic equivalents (METs) and results in achieving 60 to 73 percent of peak heart rate. Examples of moderate physical activity include walking briskly, mowing the lawn, dancing, swimming, or bicycling on level terrain. A person should feel some exertion but should be able to carry on a conversation comfortably during the activity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vigorous Physical Activity -Any activity that burns more than 7 kcal/min or the equivalent of 6 or more metabolic equivalents (METs) and results in achieving 74 to 88 percent of peak heart rate. Examples of vigorous physical activity include jogging, mowing the lawn with a nonmotorized push mower, chopping wood, participating in high impact aerobic dancing, swimming continuous laps, or bicycling uphill.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The next questions ask about some things that affect people on their work days (military and civilian) and in their family lives.

86. Please indicate on how many military work days (days spent performing your military duties) in the past 12 months these things ever happened to you.

	NUMBER OF MILITARY WORK DAYS IN PAST 12 MONTHS								None
(Fill in one response for each line)	40 or More	21-39	12-20	7-11	4-6	3	2	1	
I was late for work by 30 minutes or more. ...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I left work early for a reason other than an errand or early holiday leave.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was hurt in an on-the-job accident.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I worked below my normal level of performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did not come to work at all because of an illness or a personal accident.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

87. During the past 30 days, how often did poor mental health keep you from doing your usual activities, such as work or recreation?

- 28-30 days (about every day)
- 20-27 days (5-6 days a week, average)
- 11-19 days (3-4 days a week, average)
- 4-10 days (1-2 days a week, average)
- 2-3 days in the past 30 days
- Once in the past 30 days
- Never in the past 30 days

88. During the past 12 months, how much stress did you experience at your civilian job?

- A lot
- Some
- A little
- None at all

89. During the past 12 months, how much stress did you experience while carrying out your military duties?

- A lot
- Some
- A little
- None at all

90. During the past 12 months, how much stress did you experience in your family life or in a relationship with your spouse, live-in fiancé, boyfriend or girlfriend, or the person you date seriously?

- A lot
- Some
- A little
- None at all

91. During the past 12 months, how much did stress at your civilian job interfere with your ability to perform your military job?

- A lot
- Some
- A little
- Not at all
- Had no stress at work in the past 12 months

92. During the past 12 months, how much did stress in your family life interfere with your ability to perform your military job?

- A lot
- Some
- A little
- Not at all
- Had no stress in the family in the past 12 months

93. Please indicate how much you agree or disagree with each of the following statements.

(Fill in one response for each line)

	Strongly Agree	Agree	Disagree	Strongly Disagree
The demands of my military work interfere with my home and family life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The amount of time my military job takes up makes it difficult to fulfill family responsibilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Things I want to do at home do not get done because of the demands my military job puts on me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My military job produces strain that makes it difficult to fulfill family duties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Due to military work-related duties, I have to make changes to my plans for family activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

94. Please indicate how much you agree or disagree with the following statements

(Fill in one response for each line)

	Strongly Agree	Agree	Disagree	Strongly Disagree
The demands of my family or spouse/partner interfere with military work-related activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have to put off doing things at my military work because of demands on my time at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Things I want to do at my military work do not get done because of the demands of my family or spouse/partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My home life interferes with my responsibilities at my military work such as getting to work on time, accomplishing daily tasks, and working overtime.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family-related strain interferes with my ability to perform military job-related duties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

95. **During the past 12 months, how much stress did you experience from each of the following?**

(Fill in one response for each line)

Being deployed at sea, in the field or on a remote (include combat-related experiences)

Amount of Stress in Past 12 Months

A Lot Some A Little None at All Not Applicable

Problems at my civilian job

Problems at my military job

Conflicts between my military and family responsibilities

Conflicts between my military and civilian job demands

Insufficient training for my military job

Being away from my family

Having a baby

Finding childcare/daycare

Death in the family

Divorce or breakup

Problems with money

Health problems that I had

Health problems that my family members had

Behavior problems in some of my children

Unexpected events/problems (i.e., hurricane, flood, home robbery)

96. **When you feel pressured, stressed, depressed, or anxious, how often do you engage in each of the following activities?**

(Fill in one response for each line)

Frequently Sometimes Rarely Never

Talk to a friend or family member

Light up a cigarette

Have a drink

Smoke a cigar or use smokeless tobacco

Say a prayer

Exercise or play sports

Engage in a hobby

Get something to eat

Smoke marijuana or use other illegal drugs

Think of a plan to solve the problem

Think about hurting myself or killing myself

97. Below is a list of ways you might have felt or behaved. Please indicate how often you felt this way during the past 7 days:

(Fill in one response for each line)

	Most or All of the Time (5-7 Days)	Occasionally or a Moderate Amount of Time (3-4 Days)	Some or a Little of the Time (1-2 Days)	Rarely or None of the Time (Less Than 1 Day)
I felt depressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sleep was restless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoyed life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had crying spells	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt sad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that people disliked me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

98. In the past 12 months, have you had 2 weeks or more during which you felt sad, blue, or depressed, or lost pleasure in things that you usually cared about or enjoyed?

Yes No

99. Have you had 2 or more years in a row in your entire life when you felt depressed or sad most days, even if you felt okay sometimes?

Yes No

↓
If yes, have you felt depressed or sad much of the time in the past 12 months?

Yes No

100. During the past 30 days, how often have you been bothered by the following?

(Fill in one response for each line)

	Not at All	Several Days	More than Half of the Days
Feeling nervous, anxious, on edge, or worrying a lot about different things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting tired very easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle tension, aches, or soreness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble falling asleep or staying asleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble concentrating on things, such as reading a book or watching TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming easily annoyed or irritable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling restless so that it is hard to sit still	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

101. Have you seriously considered suicide?

(Fill in one response for each line)

	Yes	No
Within the past year	<input type="radio"/>	<input type="radio"/>
Not within the past year but since joining the military	<input type="radio"/>	<input type="radio"/>
Not within the past year but before joining the military	<input type="radio"/>	<input type="radio"/>

If you are having any suicidal thoughts, please seek help immediately. We encourage you to contact your unit's chaplain or a mental health professional. If you are in the United States, you also could contact the counseling hotline: 1-800-784-2433 (1-800-SUICIDE: an anonymous, civilian hotline)

102. Have you ever attempted suicide? (Fill in one response for each line)

	Yes	No
Within the past year	<input type="radio"/>	<input type="radio"/>
Not within the past year but since joining the military	<input type="radio"/>	<input type="radio"/>
Not within the past year but before joining the military	<input type="radio"/>	<input type="radio"/>

103. The following questions ask about events that may be extraordinarily stressful or disturbing for almost everyone. Please indicate at what ages you experienced any of the following.

(Mark all that apply)

Happened Before 18 Years of Age	Happened Between Age 18 and Time Entered Military	Happened Since Entering the Military	Never Happened
---------------------------------	---	--------------------------------------	----------------

Were you ever physically punished or beaten by a parent, caretaker, or teacher so that: you were very frightened; or you thought you would be injured; or you received bruises, cuts, welts, lumps or other injuries?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

Not including any punishments or beatings you already reported above, have you ever been attacked, beaten, or mugged by anyone, including friends, family members, or strangers?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

Has anyone ever made or pressured you into having some type of unwanted sexual contact? By sexual contact we mean any contact between someone else and your private parts or between you and someone else's private parts.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

104. Below is a list of problems and complaints that people sometimes have in response to stressful experiences. Please indicate how much you have been bothered by each problem in the past month. (Fill in one response for each line)

Not at All	A Little Bit	Moderately	Quite a Bit	Extremely
------------	--------------	------------	-------------	-----------

Repeated, disturbing memories, thoughts or images of a stressful experience

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Repeated, disturbing dreams of a stressful experiences

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Feeling very upset when something reminded you of a stressful experience

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Having physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of a stressful experience

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Avoiding thinking about or talking about a stressful experience or avoiding having feelings related to it

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Avoiding activities or situations because they reminded you of a stressful experience

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Trouble remembering important parts of a stressful experience

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Loss of interest in activities you used to enjoy

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Feeling distant or cut off from other people

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Feeling emotionally numb or being unable to have loving feelings for those close to you

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Feeling as if your future somehow will be cut short

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Trouble falling or staying asleep

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Feeling irritable or having angry outbursts

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Having difficulty concentrating

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Being "superalert" or watchful or on guard

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Feeling jumpy or easily startled

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

For these next questions, "mental health professional" refers to a psychologist, psychiatrist, clinical social worker, or other mental health counselor.

105. At any time in the past 12 months, did you feel you needed counseling or therapy from a mental health professional (either military or civilian)?

- Yes No

106. In the past 12 months, did you receive counseling or therapy for mental health or substance abuse from the following?

(Fill in one response for each line)

	Yes	No
Mental health professional at a military facility (see the above box)	<input type="radio"/>	<input type="radio"/>
General medical doctor at a military facility	<input type="radio"/>	<input type="radio"/>
Military chaplain	<input type="radio"/>	<input type="radio"/>
Civilian mental health professional (see the above box)	<input type="radio"/>	<input type="radio"/>
General medical doctor at a civilian facility	<input type="radio"/>	<input type="radio"/>
Civilian pastor, rabbi, or other pastoral counselor	<input type="radio"/>	<input type="radio"/>
Self-help group (AA, NA)	<input type="radio"/>	<input type="radio"/>

107. For what concerns did you seek help in the past 12 months? (Mark all that apply.)

- Depression
- Anxiety
- Family problems
- Substance use problems
- Anger or stress management
- Other
- Did not seek help from a mental health professional in the past 12 months

108. Have you been prescribed medication for depression, anxiety, or sleeping problems by a doctor or other health professional in the past 6 months?

- Yes
 No

109. Do you think it would damage a person's military status to seek mental health counseling through the Military, regardless of the reason for seeking counseling?

- It definitely would damage a person's military status
- It probably would damage a person's military status
- It probably would not damage a person's military status
- It definitely would not damage a person's military status

The next questions ask about your religious or spiritual practices.

110. During the past 12 months, how many times did you attend religious/spiritual services? (Please do not include special occasions, such as weddings, christenings, funerals, or other special events in your answer.)

- 0 times
- 1-2 times
- 3-5 times
- 6-24 times
- 25-52 times
- More than 52 times

111. My religious/spiritual beliefs are a very important part of my life.

- Strongly disagree
- Disagree
- Agree
- Strongly agree

112. My religious/spiritual beliefs influence how I make decisions in my life.

- Strongly disagree
- Disagree
- Agree
- Strongly agree

113. In an average week, how often do you eat the following foods? (Note: Only a few examples of each category are listed to remind you of the types of foods-many more are possible.)

(Fill in one response for each line)

	1 or 2 Times per Week	3 to 6 Times per Week	1 or 2 Times per Day	3 or More Times per Day	Rarely or Never
Fruit: fresh, frozen, canned or dried, or 100% fruit juices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vegetables: fresh, frozen, canned, cooked or raw: dark green vegetables (broccoli, spinach, most greens), orange vegetables (carrots, sweet potatoes, winter squash, pumpkin), legumes (dry beans, chick peas, tofu), starchy vegetables (corn, white potatoes, green peas), and other (tomatoes, cabbage, celery, cucumber, lettuce, onions, peppers, green beans, cauliflower, mushrooms, summer squash, etc.) . . .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whole Grains: rye, whole wheat, or heavily seeded bread, popcorn, brown or wild rice, whole wheat pasta or crackers, oatmeal, corn tacos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Grains: white bread or rolls, plain pasta, white rice, plain tortillas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dairy (1): low or reduced fat milk (2%, 1%, ½% or skim), yogurt, cottage cheese, low fat cheese, frozen low fat yogurt, soy milk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dairy (2): regular or whole milk, cheese, ice cream	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lean Protein: baked or broiled chicken breasts (no skin) or fish, baked or broiled lean pork, beef and other seafood, eggs, natural peanut butter, nuts, cooked or dried beans, other legumes, tofu, turkey- or chicken-based hot dogs, sausage, ground meat, or lunch meat products, eggs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other protein: fried chicken, fried fish, regular ground beef, sausage, regular hot dogs, heavily marbled beef, lamb, ham, salami or lunch meats, peanut butter with oil and sugar added	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Snack foods/sweets: chips, pretzels, power bars, candy bars, other candy, cake, pie, regular or diet soda	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fast food: pizza, hot dogs, hamburgers, cheeseburgers, tacos, breakfast biscuits/croissants with sausage or bacon, cheese etc., fried chicken/fish, French fries, donuts, hash brown potatoes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

114. In the past 12 months, how often did you take any of the following supplements? (Note: only a few examples of each category are listed-many more are possible.)

(Fill in one response for each line)

	Two or More Times a Day	Once a Day	Every Other Day	Once a Week	Once a Month	Never in the Past 12 Months
Multiple vitamins and minerals with at least 6 nutrients in each product (such as Centrum, One-A-Day, Theragran M)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individual vitamins or minerals (such as calcium, iron, selenium, zinc, boron, vitamin E, vitamin C)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antioxidants (such as combinations of beta-carotene vitamin E, vitamin C)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Body-building supplements (such as amino acids, protein powders, Creatine, "Andro," weight gain products, testosterone, 100% Soy Protein, 100% Whey)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Herbal supplements (such as St. John's Wort, Ginkgo biloba, Echinacea, Ginseng, Saw Palmetto)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weight loss products (such as Chromium Picolinate, Ripped Fuel, caffeine, Dexatrim, Acutrim, Metabolife, Metabolite Plus, Xenadrine, Cortislim, Hydroxycut, Guarana/Mate)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joint health/arthritis products (such as Glucosamine, Chondroitin Sulfate, Flexion, SAME)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance-Enhancing Products (such as Choline/Alpha GPC, CoQ10, Glutamine, Hydroxymethyl Butyrate/MHB, NO2, Synephrine/Citrus aurantium, Tyrosine)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other supplements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

115. In the past 12 months, what were your reasons for taking the following supplements? (Mark all that apply.)

(Fill in one response for each line)

	Supplement my Diet/ Improve Overall Health	To Improve my Mental Health	To Improve my Cognitive Function (such as Memory and Concentration)	To Improve my Physical Performance	To Increase Muscle Mass	To Lose Weight	To Help with a Specific Health Problem	Did Not Take this Kind of Supplement in the Past 12 Months
Multiple vitamins and minerals with at least 6 nutrients in each product (such as Centrum, One-A-Day, Theragran M)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individual vitamins or minerals (such as calcium, iron, selenium, zinc, boron, vitamin E, vitamin C)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antioxidants (such as combinations of beta-carotene vitamin E, vitamin C)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Body-building supplements (such as amino acids, protein powders, Creatine, "Andro," weight gain products, testosterone, 100% Soy Protein, 100% Whey)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Herbal supplements (such as St. John's Wort, Ginkgo biloba, Echinacea, Ginseng, Saw Palmetto)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weight loss products (such as Chromium Picolinate, Ripped Fuel, caffeine, Dexatrim, Acutrim, Metabolife, Metabolite Plus, Xenadrine, Cortislim, Hydroxycut, Guarana/Mate)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joint health/arthritis products (such as Glucosamine, Chondroitin Sulfate, Flexion, SAME)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance-Enhancing Products (such as Choline/Alpha GPC, CoQ10, Glutamine, Hydroxymethyl Butyrate/MHB, NO2, Synephrine/Citrus aurantium, Tyrosine)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other supplements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

116. During the past 12 months, did you let any of the following conventional medical professionals know about your use of dietary supplements? (Mark all that apply.)

- I did not take supplements in the past 12 months
- Your Medical Doctor (M.D.)
- Your nurse practitioner or physician assistant
- Your psychiatrist
- Your dentist
- Other military health professional
- Other non-military health professional
- Indicated use of dietary supplements on a personal health record

117. Where do you receive most of your information about dietary supplements? Please select only one answer.

- Don't receive information
- Magazines
- TV programs/commercials
- Radio
- Newspapers
- Professional journals
- Books
- Internet sites
- Sales store associates
- Friends/family
- Health professionals (such as a physician, pharmacist, chiropractor, dietician, nurse, physician assistant)

118. In thinking about your weight, do you consider yourself to be:

- Overweight
- About the right weight
- Underweight

119. About how tall are you without shoes on?

Enter your height in the boxes. Use all three boxes, ONE number to a box. Then, fill in the matching response below each box.

FEET		INCHES	
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
		8	8
		9	9

120. About how much do you weigh without shoes on?

(WOMEN: If you are currently pregnant, please enter your usual weight before you became pregnant.)

Enter your weight in the boxes. Use all three boxes, ONE number to a box. Then, fill in the matching response below each box.

POUNDS		
0	0	0
1	1	1
2	2	2
3	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9

121. Are you currently trying to:

- Lose weight
- Gain weight
- Neither

122. How many times have you tried to lose weight? (Fill in one response for each line)

	1 Time	2 Times	3 or More Times	Never/ Not Applicable
Prior to joining the military	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Since joining the military	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

123. Do you have difficulty meeting your service weight and/or body fat standard?

- Yes
- No

124. If you gained weight in the past year, did any of the following trigger the weight gain? (Mark all that apply.)

- I did not gain weight in the past year
- A medical profile (required reduction in physical activity as a result of injury or medical problem)
- Return home from deployment
- Return home from annual training
- Reassignment
- Change in civilian job
- Marriage
- Divorce
- Quit smoking
- Child birth/pregnancy
- Stress
- Death of family member or friend

125. Did you pass your most recent physical fitness test?

- Yes
- No
- I've never had a physical fitness test/I was exempt from my last physical fitness test

126. When was the last time you were told by a doctor or other health professional that you have any of the following:

(Fill in one response for each line)

	Prior to Entering Military Service	Since Entering Military Service	Never Had Checked	Never Told Had a Problem	Don't Know/Don't Remember
High blood pressure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High blood sugar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High cholesterol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low HDL Cholesterol (good cholesterol)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High triglycerides (blood fat)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

127. When was the last time you had your blood pressure checked by a doctor or other health professional?

- Within the past 2 years
- More than 2 years ago
- Don't know/don't remember
- Never had my blood pressure checked

128. The last time you had your blood pressure checked, did the doctor or other health professional say your blood pressure was high, low, or normal?

- High
- Low
- Normal
- Something else
- Not told
- Don't know/don't remember
- Never had my blood pressure checked

129. Has a doctor or other health professional ever advised you to take any of the following actions to help lower your blood pressure?

(Fill in one response for each line)	Yes	No
Diet to lose weight	<input type="radio"/>	<input type="radio"/>
Cut down on salt or sodium in my diet	<input type="radio"/>	<input type="radio"/>
Exercise	<input type="radio"/>	<input type="radio"/>
Stop smoking	<input type="radio"/>	<input type="radio"/>
Cut down on my use of alcohol	<input type="radio"/>	<input type="radio"/>
Take prescribed blood pressure medicine	<input type="radio"/>	<input type="radio"/>

130. Are you currently taking any of the following actions to help lower your blood pressure?

(Fill in one response for each line)

To lower my blood pressure, I am currently:

	Yes	No
Dieting to lose weight	<input type="radio"/>	<input type="radio"/>
Cutting down on salt or sodium in my diet	<input type="radio"/>	<input type="radio"/>
Exercising	<input type="radio"/>	<input type="radio"/>
Not smoking	<input type="radio"/>	<input type="radio"/>
Cutting down on my use of alcohol	<input type="radio"/>	<input type="radio"/>
Taking prescribed blood pressure medication	<input type="radio"/>	<input type="radio"/>

131. When was the last time you had your cholesterol checked by a doctor or other health professional?

- Within the past 5 years
- More than 5 years ago
- Don't know/don't remember
- Never had my cholesterol checked

132. On average, how many hours of sleep did you get each night in the past 12 months?

- 7 hours or more
- 5 or 6 hours
- 3 or 4 hours
- 2 hours or less

133. During the past month, how would you describe the quality of your sleep?

- Very good
- Fairly good
- Fairly bad
- Very bad

134. Did you have a sexually transmitted disease, such as gonorrhea, syphilis, chlamydia, or genital herpes in:

(Fill in one response for each line)	Yes	No
the past 12 months	<input type="radio"/>	<input type="radio"/>
your entire life	<input type="radio"/>	<input type="radio"/>

135. Which of the following health care coverage do you have?

(Fill in one response for each line)	Yes	No
Your civilian employer's health care plan	<input type="radio"/>	<input type="radio"/>
Your school's health care plan	<input type="radio"/>	<input type="radio"/>
Your spouse/family member's civilian employer's health care plan	<input type="radio"/>	<input type="radio"/>
Your active duty military health care coverage (TRICARE/TRICARE Reserve Select)	<input type="radio"/>	<input type="radio"/>
Your spouse/family member's active duty/retired military health care coverage	<input type="radio"/>	<input type="radio"/>
Medicare, Medicaid, or other government sponsored coverage	<input type="radio"/>	<input type="radio"/>
Veteran's (VA) coverage	<input type="radio"/>	<input type="radio"/>
Other private coverage	<input type="radio"/>	<input type="radio"/>
I do not have medical insurance/health care coverage	<input type="radio"/>	<input type="radio"/>

136. Do you have medical check-ups other than that provided every 5 years (annually for aviators) by the National Guard or Reserves?

- Yes No

The following question deals with gambling, placing bets, or playing games for money. This would include buying lottery tickets or taking part in a sport pool.

137. The following statements describe some things connected with placing bets or gambling that happen to people. Please indicate whether any of these things has ever happened to you.

<i>(Fill in one response for each line)</i>	Yes	No
You found yourself more and more preoccupied with gambling	<input type="radio"/>	<input type="radio"/>
You needed to gamble with more and more money to achieve the excitement you desired	<input type="radio"/>	<input type="radio"/>
You have tried a number of times to control, cut back, or stop gambling but haven't been able to	<input type="radio"/>	<input type="radio"/>
You felt restless or irritable when you were unable to gamble or when you tried not to gamble	<input type="radio"/>	<input type="radio"/>
You found yourself gambling to escape from problems	<input type="radio"/>	<input type="radio"/>
After losing money gambling, you went back another day to try to win back your money	<input type="radio"/>	<input type="radio"/>
You lied to your family, employer, or other important people in your life to hide the extent of your gambling	<input type="radio"/>	<input type="radio"/>
You have broken the law to pay for your gambling	<input type="radio"/>	<input type="radio"/>
You jeopardized or lost relationships, a job, school opportunities, or career opportunities because of gambling	<input type="radio"/>	<input type="radio"/>
Someone provided you with money to relieve a desperate financial situation caused by gambling	<input type="radio"/>	<input type="radio"/>

This next set of questions deals mainly with your length of service, deployments, military job, and job satisfaction.

138. In all, how many years have you served in the National Guard or Reserve?

- Less than 6 months
- At least 6 months, but less than 1 year
- At least 1 year, but less than 2 years
- At least 2 years, but less than 3 years
- At least 3 years, but less than 4 years
- At least 4 years, but less than 5 years
- At least 5 years, but less than 10 years
- At least 10 years, but less than 20 years
- 20 or more years

139. Have you ever served on active duty in the Active Component (e.g., USAF, USN, USMC, USA)?

- Yes No

140. In the past 12 months, what is the total number of actual days you spent performing your military duty in the National Guard or Reserves? Do not include days spent in annual training.

- Less than 21 days
- At least 21 days, but less than 28 days
- At least 28 days, but less than 35 days
- At least 35 days, but less than 60 days
- At least 60 days, but less than 90 days
- More than 90 days

141. Have you been called to active duty in the past 24 months? This includes activations that started more than 24 months ago and continued into the past 24 months. Does not include days spent in annual training or prior active service.

- Yes No

142. Was at least one of your calls to active duty in the past 24 months longer than 30 consecutive days?

- Yes
- No
- I was not called to active duty in the past 24 months

143. In the past 24 months, did you volunteer for active duty for more than 30 consecutive days or were you ordered to active duty?

- I volunteered for active duty
- I was ordered to active duty
- I volunteered for and was ordered to active duty
- My calls to duty were less than 30 consecutive days
- I have not been called to active duty in the past 24 months

144. In the past 24 months, did you volunteer for your most recent call to active duty or were you ordered to active duty?

- I volunteered for active duty
- I was ordered to active duty
- I volunteered for and was ordered to active duty
- I have not been called to active duty in the past 24 months

145. Are you currently on active duty?

- Yes No

146. How many complete months have you been on active duty during the past 24 months?

Enter the number of months in the boxes. Use both boxes, ONE number to a box. Then fill in the matching response below each box.

- I have not been on active duty during the past 24 months.

MONTHS	
0	0
1	1
2	2
	3
	4
	5
	6
	7
	8
	9

147. How many times have you been deployed in the past 24 months?

- 1 time
- 2 times
- 3 or more times
- I was not deployed in the past 24 months

148. When were you last deployed?

- In the past 12 months
- Between 12 and 36 months ago
- More than 36 months ago
- I've never been deployed

149. In the past 12 months, were you required to get dental work done before you could be deployed at sea or in the field?

- Yes
- No
- I wasn't deployed in the past 12 months

150. During the past 12 months, I was unable to deploy because of the following reason(s):

(Fill in one response for each line)

	Yes	No
I was able to deploy	<input type="radio"/>	<input type="radio"/>
I wasn't deployed in the past 12 months	<input type="radio"/>	<input type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>
Pregnancy	<input type="radio"/>	<input type="radio"/>
Dental issue	<input type="radio"/>	<input type="radio"/>
No HIV test	<input type="radio"/>	<input type="radio"/>
Family situation	<input type="radio"/>	<input type="radio"/>
Injury	<input type="radio"/>	<input type="radio"/>
Illness/Medical Condition	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>

151. During the past 12 months, I returned early from deployment (before the rest of my unit) because of the following reason(s):

(Fill in one response for each line)

	Yes	No
I did not return early from deployment .	<input type="radio"/>	<input type="radio"/>
I wasn't deployed in the past 12 months	<input type="radio"/>	<input type="radio"/>
Pregnancy	<input type="radio"/>	<input type="radio"/>
Dental work or dental problems	<input type="radio"/>	<input type="radio"/>
Family situation	<input type="radio"/>	<input type="radio"/>
Injury	<input type="radio"/>	<input type="radio"/>
Illness/Medical Condition	<input type="radio"/>	<input type="radio"/>
Mental health problems	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>

152. Prior to your most recent call to active duty, how supportive was your employer of your need for time to prepare for activation?

- Very supportive
- Supportive
- Neither supportive nor unsupportive
- Unsupportive
- Very unsupportive
- I did not need to take time off work to prepare for my activation
- I have never been called to active duty

153. Comparing your alcohol, cigarette, smokeless tobacco, and cigar use before your last deployment to now, how has it changed?

(Fill in one response for each line)

	Used Before Last Deployment but Use More Now	Used About the Same as Before Last Deployment (and I Do Use)	Used Before Last Deployment but Use Less Now (but I do Still Use)	Used Before Last Deployment but Do Not Use Now	Did Not Use Before Last Deployment but Do Use Now	Did Not Use Before Last Deployment and Do Not Use Now	I Have Never Been Deployed
Alcohol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smokeless Tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cigars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

154. Comparing your alcohol, cigarette, smokeless tobacco, and cigar use before your last activation to now, how has it changed?

	Used Before Last Activation but Use More Now	Used About the Same as Before Last Activation (and I Do Use)	Used Before Last Activation but Use Less Now (but I do Still Use)	Used Before Last Activation but Do Not Use Now	Did Not Use Before Last Activation but Do Use Now	Did Not Use Before Last Activation and Do Not Use Now	I Have Never Been Activated
(Fill in one response for each line)							
Alcohol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smokeless Tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cigars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

155. Have you divorced or separated from your spouse, fiancé, boyfriend, or girlfriend since your last deployment?

- Yes
- No
- I do not have a spouse, fiancé, boyfriend, or girlfriend
- I have never been deployed

156. Have you married your fiancé, boyfriend, or girlfriend since your last deployment?

- Yes
- No
- I was married before my last deployment
- I do not have a spouse, fiancé, boyfriend, or girlfriend
- I have never been deployed

157. Comparing your relationship with your spouse, fiancé, boyfriend, or girlfriend before your last activation or deployment to now, how has it changed?

- We argue more/have more conflict
- We get along about the same
- We argue less/have less conflict/get along better
- I do not have a spouse, fiancé, boyfriend, or girlfriend
- I have never been deployed

158. Suppose that you have to decide whether to stay in the National Guard or Reserves. Assuming you could stay, how likely is it that you would choose to do so?

- Very likely
- Likely
- Neither likely nor unlikely
- Unlikely
- Very unlikely

159. If you could stay in the National Guard or Reserves as long as you want, how likely is it that you would choose to serve for at least 20 years?

- I already have 20 or more years of service
- Very likely
- Likely
- Neither likely nor unlikely
- Unlikely
- Very unlikely

160. All in all, how satisfied or dissatisfied are you with your military work assignment?

- Very satisfied
- Satisfied
- Dissatisfied
- Very dissatisfied

161. Did you serve with the Military in any of the following areas? (Mark all that apply.)

- Operations Desert Shield or Desert Storm (e.g., The Persian Gulf)
- Operation Just Cause (e.g., Panama)
- Operation Restore Hope (e.g., Somalia)
- Operation Uphold Democracy (e.g., Haiti)
- Operations Joint Endeavor or Joint Guard (e.g., Bosnia)
- Operation Safe Haven (e.g., Cuba)
- Operation Enduring Freedom (e.g., Afghanistan)
- Operation Iraqi Freedom (e.g., Iraq)
- Tsunami Relief (e.g., South Asia)
- Hurricane Relief (e.g., Louisiana, Texas, Mississippi)
- Other combat and/or peace-keeping mission
- Homeland Security (airport security and/or security for active duty installations)
- Other remote
- None/Did not deploy

JOB CATEGORIES

ENLISTED CATEGORIES	EXAMPLES
Infantry, Gun Crew, or Seamanship Specialist	Individual weapons specialists, crew-served artillery specialists, armor and amphibious crew, specialists in combat engineering and seamanship, air crew, and installation security personnel
Electronic Equipment Repairman	Specialists in the maintenance and repair of electronic equipment, such as radio, radar, sonar, navigation, weapons, and computers
Communications or Intelligence Specialist	Specialists in the operation and monitoring of radio, radar, sonar, and gathering and interpretation of intelligence
Health Care Specialist	Specialists in patient care and treatment, medical support, and related medical and dental services
Other Technical or Allied Specialist	Specialists in skills not classified elsewhere, such as photography, mapmaking, weather, ordnance disposal, laboratory analysis, and music
Functional Support and Administration	General administrative, clerical, and professional specialists, including administrative specialists in data processing, functional support specialists (in areas such as supply, transportation, and flight operations), chaplains' assistant, and public affairs specialists
Electrical/Mechanical Equipment Repairman	Specialists in the maintenance and repair of aircraft, automotive equipment, missile systems, marine engines and boilers, power-generating equipment, and other mechanical and electrical equipment
Craftsman	Metalworkers, construction workers, plumbers, electricians, heating and cooling specialists, lithographers, and other trades
Service and Supply Handler	Personnel in food service, operation of motor transport, shipping and receiving, law enforcement, laundry and dry cleaning
Non-Occupational	Includes officer candidates, authorizations for personnel in a student status, or personnel serving in duties of a special or otherwise undesigned nature

OFFICER CATEGORIES	EXAMPLES
General Officer or Executive	Includes all officers of General/Flag rank, all Marine Corps full Colonels, and all directors, planners, or executive not classified elsewhere
Tactical Operations Officer	Includes pilots and aircraft crews, such as navigators; infantry, artillery, armor, and close support officers; Naval ship commanders; missile systems officers and missile unit commanders; and combat and operations officers
Intelligence Officer	Includes strategic, general, and communications intelligence officers, and counterintelligence officers
Engineering or Maintenance Officer	Includes civil engineers and architects; electrical and electronic engineers; communications engineers and communications officers; aircraft maintenance officers and aeronautical engineers; weapons engineering and maintenance officers; missile maintenance officers; ground, aviation, and weapons safety officers; chemical engineers; and topographic engineers, and cartographic and aerial mapping officers
Scientist or Professional (not involved with health care)	Includes chemists, biological scientist, physicists, geologists, meteorologists, social or behavioral scientist, lawyers, chaplains, mathematicians and statisticians, and military college faculty members
Health Care Officer	Includes physicians, dentists, nurses, veterinarians, allied health officers, and health services administration officers
Administrator	Includes general administrative officers, manpower and personnel managers, comptrollers and accounting officers, data processing officers, public and internal information officers, police, Inspector General and technical inspection positions, morale and welfare officers, and officers engaged in the planning, management, and operation of training programs
Supply, Procurement, or Allied Officer	Includes officers in supply, procurement and production, transportation, food service, and related logistical activities
Non-Occupational	Includes law students, medical students, flight students, other trainees, and billet designators

162. Which category best describes your current military job? (If you need to, please refer to the above list of examples for different job categories.)

(Mark only one response in either the enlisted or officer category. Do not mark a response in more than one category.)

ENLISTED

OFFICER

- Infantry, Gun Crew, or Seamanship Specialist
- Electronic Equipment Repairman
- Communications or Intelligence Specialist
- Health Care Specialist
- Other Technical or Allied Specialist
- Functional Support and Administration
- Electrical/Mechanical Equipment Repairman
- Craftsman
- Service and Supply Handler
- Non-Occupational

- General Officer or Executive
- Tactical Operations Officer
- Intelligence Officer
- Engineering or Maintenance Officer
- Scientist or Professional (not involved with health care)
- Health Care Officer
- Administrator
- Supply, Procurement, or Allied Officer
- Non-Occupational

PLEASE DO NOT WRITE IN THIS AREA



SERIAL #

MALES PLEASE STOP HERE.
THANK YOU VERY MUCH FOR YOUR TIME, EFFORT, AND COOPERATION IN COMPLETING THIS QUESTIONNAIRE.

FEMALES, PLEASE CONTINUE WITH QUESTION 163.

163. When was the last time you had a Pap test or Pap smear to check for cancer of the cervix?

- Within the past year
- More than 1 year ago but within the past 2 years
- More than 2 years ago but within the past 3 years
- More than 3 years ago
- Don't know/don't remember
- Never had a Pap test

164. Have you had a hysterectomy or operation to remove your uterus?

- Yes
- No

165. In the past 12 months, how much stress did you experience as a woman in the Military?

- A great deal
- A fairly large amount
- Some
- A little
- None at all

166. To the best of your knowledge, when was the last time you were pregnant?

- Currently pregnant
- May be pregnant now but don't know for certain
- Within the past year but not now
- More than 1 year ago but within the past 2 years
- More than 2 years ago but within the past 5 years
- More than 5 years ago
- Never been pregnant

The next set of questions refers to the last time you were pregnant and did not have an abortion or miscarriage. If you are currently pregnant, please answer these questions for this pregnancy. "Pregnancy checkups" refer to checkups for weight, blood pressure, physical exams, procedures such as ultrasound, or other medical procedures related to pregnancy.

167. Think about your last pregnancy that resulted in a live birth (or your current pregnancy). How long after you became pregnant did you have your first pregnancy checkup?

- Within the first 3 months after becoming pregnant
- 4-6 months after becoming pregnant
- More than 6 months after becoming pregnant
- Did not have any pregnancy checkups or have not had first checkup
- Been pregnant but never had a live birth
- Never been pregnant

168. During your last pregnancy that resulted in a live birth (or your current pregnancy), about how often did you smoke a cigarette, even if one or two puffs?

- Daily
- Almost daily, or 3-6 days a week
- 1-2 days a week
- Several times a month (but less than once a week)
- Once a month or less (but at least once)
- Never smoked cigarettes during last (or current) pregnancy
- Been pregnant but never had a live birth
- Never been pregnant

169. During your last pregnancy that resulted in a live birth (or your current pregnancy), about how often did you drink alcoholic beverages (i.e., beer, wine, or liquor)?

- Daily
- Almost daily, or 3-6 days a week
- 1-2 days a week
- Several times a month (but less than once a week)
- Once a month or less (but at least once)
- Never drank alcohol during last (or current) pregnancy
- Been pregnant but never had a live birth
- Never been pregnant

THANK YOU VERY MUCH FOR YOUR TIME, EFFORT, AND COOPERATION IN COMPLETING THIS QUESTIONNAIRE.
PLEASE PLACE THE QUESTIONNAIRE IN THE BOX AS YOU LEAVE

