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College Student Health Survey Report

HEALTH AND HEALTH-RELATED BEHAVIORS  
Minnesota Postsecondary Student Veterans



Minnesota  
STATE COLLEGES  
& UNIVERSITIES

**BOYNTON**  
HEALTH SERVICE

UNIVERSITY OF MINNESOTA



# HEALTH AND HEALTH-RELATED BEHAVIORS

## Minnesota Postsecondary Student Veterans



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## Introduction

**Q:** What do the following health conditions and health-related behaviors have in common?

- Health Insurance and Health Care Utilization
- Mental Health
- Tobacco Use
- Alcohol and Other Drug Use
- Personal Safety and Financial Health
- Nutrition and Physical Activity
- Sexual Health

**A:** They all affect the health and academic achievement of all students including military veterans returning to college.

In August 2009, when the Post-9/11 Veterans Educational Assistance Act of 2008 takes effect, more than 2 million veterans will have access to affordable college education benefits.<sup>1</sup> The bill's passage and subsequent influx of military veterans on college campuses present both a challenge and an opportunity for educational communities to serve veterans in their transition from service member to student.

For educational institutions to meet the needs of student veterans, awareness of the issues unique to this group must be identified. Over the past four years Boynton Health Service has worked with two- and four-year public and private postsecondary institutions to gather quality data that provide insights into the health and well-being of students attending these schools. In spring 2008, Boynton Health Service in partnership with Minnesota State Colleges and Universities conducted a comprehensive survey of a randomly selected group of college students attending 14 Minnesota two- and four-year public and private schools. To gather information specific to veterans attending college, all 1,900 veterans enrolled at and identified by these 14 institutions and the University of Minnesota (1,901 veterans) were also invited to complete the survey.

This report presents the health and health-related behavior data collected from veterans attending the 15 colleges and universities that participated in the spring 2008 College Student Health Survey. Boynton Health Service and Minnesota State Colleges and Universities administrators hope the information in this report will help identify issues pertinent to and affecting student veterans and assist college and university leaders in their efforts to develop programs to address the unique needs of veterans enrolled in their schools.

To date, limited information about the health of veterans and no information about the health of veterans enrolled in postsecondary institutions has been gathered. This report presents the results of the data collected from veterans and not Boynton Health Service's interpretation of the information. In many instances, comparison data based on the aggregate student population that also completed the 2008 College Student Health Survey is included. The general student data are included solely for comparison; the student data have been adjusted to account for the gender and age differences between the veterans and the student population. For unadjusted prevalence rates for the aggregate student population, please refer to the following report: *Health and Health-related Behaviors, Minnesota Postsecondary Students*.<sup>2</sup>

The information in this report highlights the health and health-related behaviors of veterans currently enrolled in a Minnesota college or university. These results should not be extrapolated to veterans not currently enrolled in a postsecondary institution. Veterans enrolled in a college or university may be at very different points in their transition back to civilian life and therefore may have prevalence rates that are not comparable to veterans not currently enrolled in a postsecondary institution. Finally, additional data analysis to examine whether veteran health profiles differ from those of the general student population is planned.



# Survey

## Methodology

In spring 2008, 14 two-year and four-year Minnesota postsecondary schools joined with the University of Minnesota Boynton Health Service to collect information from 25,077 undergraduate and graduate students about their experiences and behaviors in the following areas: health insurance and health care utilization, mental health, tobacco use, alcohol and other drug use, personal safety and financial health, nutrition and physical activity, and sexual health. In conjunction with this survey, 1,901 students attending one of these 14 schools or the University of Minnesota-Twin Cities and identified as veterans of the United States Armed Forces were also included in the survey. Because the survey responses were anonymous, the final veteran participation rate is based on self-reported veteran status.

As an incentive, veterans and all students who responded to the survey were entered into a drawing for gift certificates valued at \$3,000 (one), \$1,000 (one), and \$500 (two) at a variety of stores.

Participants were contacted through multiple mailings and e-mails:

- Postcards were sent to randomly selected students notifying them of their eligibility to participate in the survey.
- Students were e-mailed a link to the online survey.
- Reminder postcards and multiple e-mails were sent to all students to encourage participation.
- All students were sent a minimum of two invitations to participate in the survey.

### General Student Population Methodology Highlights

- **25,077** students from 14 Minnesota colleges and universities were randomly selected to participate in this survey.
- **8,118** completed the survey.
- **32.4%** of the students responded.

### Veterans Methodology Highlights

- **1,901** veterans attending 15 Minnesota colleges and universities were identified to participate in this survey.
- **813** completed the survey.
- **42.8%** of the veterans responded.



2008 College Student Health Survey Postcard

You have been randomly selected to participate in the 2008 College Student Health Survey administered by the University of Minnesota. The information you provide does a great service! It will be used to direct health resources for college students across the state of Minnesota.

**How does this work?**  
Survey must be completed by noon March 14, 2008. Just for completing the survey you will be entered into a drawing for the \$3,000 grand prize!

**To begin, go to [www.bhs.umn.edu/healthsurvey](http://www.bhs.umn.edu/healthsurvey) and enter the username and password you see on the right hand side of this card!**  
Upon entering the survey, you will be asked to change your password.

**What are the prizes?**  
Four lucky students will win gift certificates to any combination of the following stores: Target, Best Buy, Macy's, Home Depot, IKEA, The Apple Store, Tiffany & Co., Sports Authority, Scheels, or Cabela's!  
One Grand Prize: \$3,000  
One 2nd Place Prize: \$1,000  
Two 3rd Place Prizes: \$500

**Who do I contact with questions?**  
Katherine Lust, Survey Administrator  
(612) 624-6214 • [klust@bhs.umn.edu](mailto:klust@bhs.umn.edu)

**UNIVERSITY OF MINNESOTA**  
Boynton Health Service  
410 Church Street S.E., N217  
Minneapolis, MN 55455

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For more information, visit [www.bhs.umn.edu/healthsurvey](http://www.bhs.umn.edu/healthsurvey)

# Survey

## Analysis Summary

The information presented in this report documents the prevalence of various diseases, health conditions, and health-related behaviors across seven areas:

- Health Insurance and Health Care Utilization
- Mental Health
- Tobacco Use
- Alcohol and Other Drug Use
- Personal Safety and Financial Health
- Nutrition and Physical Activity
- Sexual Health

The prevalence of a disease, health condition, or health-related behavior is defined as the total number of occurrences in a population (in this case, veterans attending college) at a given time, or the total number of occurrences in the population divided by the number of individuals in that population.

Prevalence is useful because it measures how common a disease, health condition, or health-related behavior is. For example, the 2008 College Student Health Survey asked all students if they had ever been diagnosed with depression within their lifetime. For the purpose of this illustration, if 8,118 students completed the survey and 1,936 of them reported they had been diagnosed with depression within their lifetime, then the lifetime prevalence of depression among this population of students would be approximately 24.0% ( $1,936/8,118$ ).

The results presented in this report are the actual rates reported among the veterans who participated in the survey. In addition, comparison survey data collected from the general student population have been included. *However, the comparison data do not reflect the actual rates reported among the student population. Instead, the comparison data are adjusted to correct for the differences in age and gender between veterans and the student population.* The veteran survey sample comprises approximately 25% females and 75% males, with an average age of 29.5 years, while the aggregate student survey sample comprises approximately 69% females and 31% males, with an average age of 26.3 years. The student population survey sample was adjusted to reflect the gender and age distribution of the veteran survey sample. This adjustment creates a more accurate comparison group for viewing the veteran data.

As noted previously, the student population survey results presented in this report are adjusted results; they are not the prevalence rates of the student population. For the unadjusted prevalence rates for the student population, please refer to the following report: Health and Health-related Behaviors, Minnesota Postsecondary Students.<sup>2</sup>

# Results

## Health Insurance and Health Care Utilization

This section examines the areas of health insurance, health services utilization, and preventive care. Recent research indicates that most young adults in the United States, ages 18 to 24 years old, report good health. The majority of young adults in Minnesota (89.0%) and nationwide (84.2%) report excellent, very good, or good health.<sup>3</sup> At the same time, young adults have relatively low rates of enrollment in health insurance and low rates of preventive care utilization. Among individuals under age 65, 18- to 24-year-olds are the least likely to have health insurance: in Minnesota 77.4% report some kind of health care insurance, and nationwide the number is 71.9%.<sup>3,4</sup> More young males (31.1%) than young females (25.1%) lack health insurance coverage.<sup>4</sup> Among all age groups, young adults (70.8%) are least likely to identify a regular place for medical care.<sup>4</sup>

Information related to health care access among veterans is severely limited. Himmelstein published a study in 2007 documenting that in 2004, 1,768,377 United States veterans had no health insurance and were not being cared for within the Veterans Administration.<sup>5</sup> According to his study, 12.7% of working-age veterans lack health coverage.<sup>5</sup> Among these uninsured veterans, 51.4% had no regular source of care (compared to 8.9% of insured veterans) and 26.5% reported failing to get needed care because of the cost (compared to 4.3% of insured veterans).<sup>5</sup>

Veterans who completed the 2008 College Student Health Survey report an overall uninsured rate of **18.6%**, which is higher but not statistically different than the overall uninsured rate obtained from the adjusted aggregate data from all students who completed the survey (**17.5%**). Female veterans have a higher uninsured rate compared to all females who completed the survey (**18.4%** vs. **12.4%**, respectively,  $p < 0.05$ ).

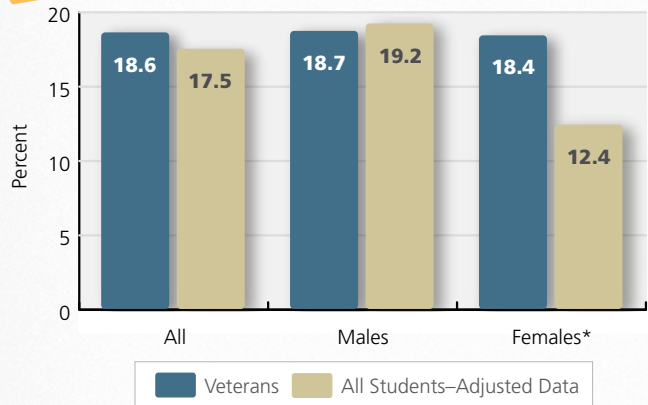
Veterans ages 25-29 report the highest uninsured rate. The highest uninsured rate obtained from the adjusted aggregate data from all students who completed the 2008 College Student Health Survey also occurs among those ages 25-29. Veterans ages 20-24 report a higher uninsured rate than all students within the same age group (**16.4%** vs. **11.8%**, respectively,  $p < 0.05$ ).

Slightly more than one-half (**50.6%**) of all veterans report having a spouse, and **12.0%** of these veterans report that their spouse is uninsured. The adjusted aggregate data indicate that slightly less than one-half (**48.8%**) of all students report having a spouse, and **13.2%** of these students report that their spouse is uninsured.

Almost one-third (**32.0%**) of veterans who completed the survey report having dependent children. Of these dependent children, **7.3%** lack health insurance. In comparison, the adjusted aggregate data show that **29.9%** of all students report having dependent children, and **7.6%** of these dependent children lack health insurance.

### Health Insurance Status—Uninsured

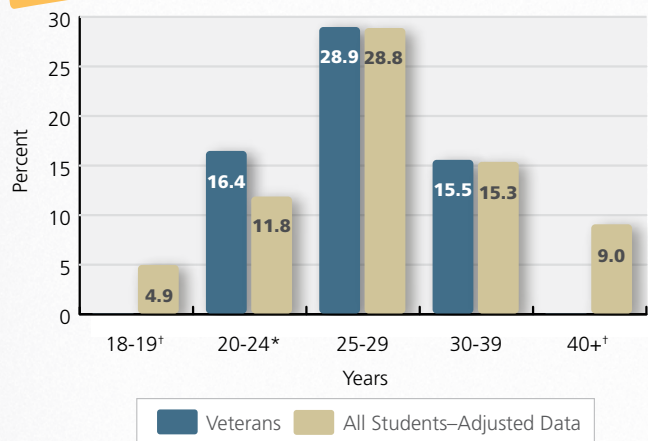
Veterans and All Students by Gender



\*Statistically significant.

### Health Insurance Status—Uninsured

Veterans and All Students by Age Group

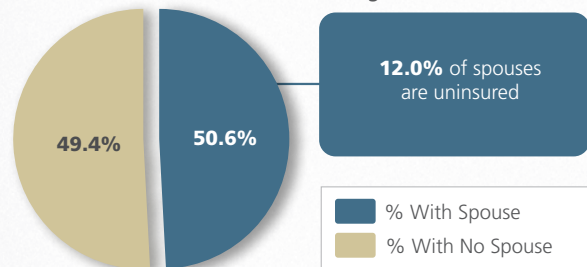


\*Statistically significant. †Insufficient data for veterans.

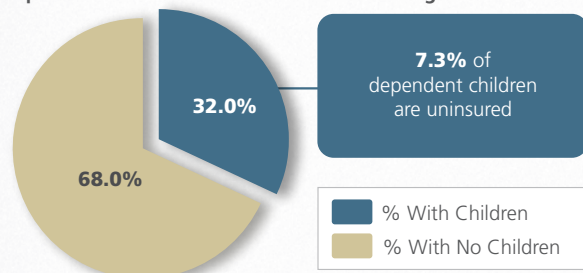
### Spouse and Dependent Health Care Coverage

Veterans

#### Marital Status and Health Care Coverage

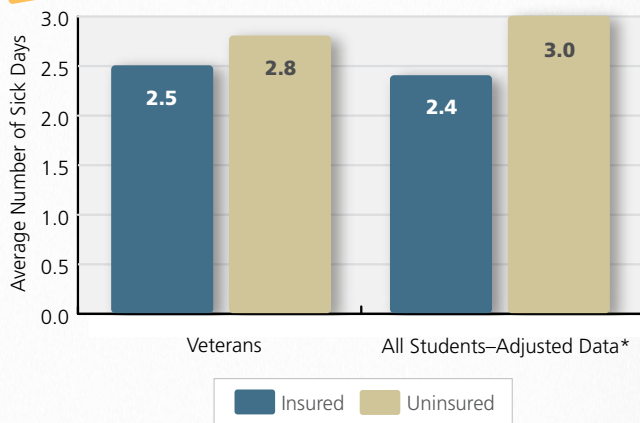


#### Dependent Children and Health Care Coverage



## Health Insurance and Number of Sick Days—Past 30 Days

Veterans and All Students



\*Statistically significant.

## Health Care Utilization by Location

Veterans (Includes Only Those Students Who Report Obtaining a Service)

Question asked: Where do you obtain the following health care services while in school?

Health Care Service (Percent of veterans who obtained service)	Percent					
	School Health Service	Student Counseling Service	Hospital	Community Clinic	HMO	Private Practice
Routine Doctor's Visit (88.7%)	8.3	0.1	22.6	36.2	11.8	25.5
Dental Care (86.5%)	4.1	0.3	6.1	22.3	7.1	61.0
Mental Health Service (27.9%)	4.4	6.2	26.0	19.4	8.8	35.7
Testing for Sexually Transmitted Infections (42.3%)	9.6	0.3	23.0	36.0	9.6	22.4
Treatment for Sexually Transmitted Infections (24.8%)	10.4	0.0	23.8	34.7	10.4	19.3
Testing for HIV (45.5%)	5.7	0.0	25.9	32.4	8.9	27.3
Emergency Care (83.3%)	2.2	0.0	81.5	8.0	4.6	8.7

Number of sick days is a measure of health-related quality of life. Sick days reflect a personal sense of poor or impaired physical or mental health, or the inability to react to factors in the physical and social environments.<sup>3</sup>

Among veterans who completed the survey, those with health insurance report on average **0.3** fewer sick days in the past 30 days than those without health insurance. The adjusted aggregate survey data obtained from all students show that those with health insurance report significantly fewer sick days in the past 30 days than those without health insurance ( $p < 0.0001$ ).

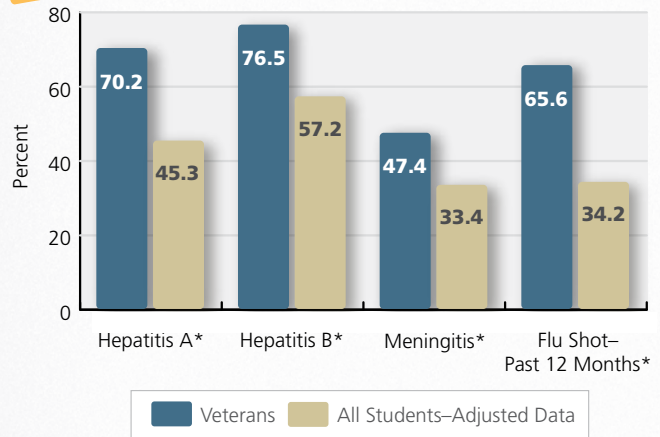
Among veterans who completed the 2008 College Student Health Survey, the primary locations for obtaining many health care services appear to be a community clinic and private practice. Among veterans who obtain the services, approximately one-tenth used their school's health service for routine doctor's visits (**8.3%**), testing for sexually transmitted infections (**9.6%**), and treatment for sexually transmitted infections (**10.4%**).

Examination of the adjusted aggregate data from all students who completed the survey shows that the primary locations for obtaining many health care services are also a community clinic and private practice.

Analysis of the adjusted aggregate data shows that, compared to all students who completed the 2008 College Student Health Survey, veterans who completed the survey report obtaining flu shots and immunizations for hepatitis A, hepatitis B, and meningitis at higher rates ( $p < 0.0001$ ).

### Immunization Status

Veterans and All Students



\*Statistically significant.

Compared to male veterans who completed the 2008 College Student Health Survey, female veterans report more days of poor physical health, more days of poor mental health, and more days when poor physical and/or mental health affected daily activities. Similar results were found in the adjusted aggregate data from all students who completed the survey.

### Average Number of Days Affected by Illness

Veterans and All Students by Gender

Illness	Average Number of Days Affected—Past 30 Days		p-value	Average Number of Days Affected—Past 30 Days		p-value
	Males	Females		Males	Females	
Poor Physical Health	2.8	4.6	<0.001	3.1	4.0	<0.0001
Poor Mental Health	4.2	6.1	<0.001	4.2	6.0	<0.0001
Poor Physical and/or Mental Health Affected Daily Activities	2.3	3.2	<0.05	2.4	3.0	<0.0001

■ Veterans ■ All Students—Adjusted Data

### Diagnosed With Acute Condition—Lifetime and Past 12 Months

Veterans and All Students

Acute Condition	Percent Who Report Being Diagnosed Within Lifetime		p-value	Percent Who Report Being Diagnosed Within Past 12 Months		p-value
	Veterans	All Students—Adjusted Data		Veterans	All Students—Adjusted Data	
Chlamydia	5.8	3.6	<0.05	1.2	0.8	ns
Gonorrhea	1.7	1.3	ns	0.1	0.1	ns
Hepatitis A	0.1	0.3	ns	0.0	0.2	ns
Lyme Disease	0.9	0.9	ns	0.0	0.1	ns
Mononucleosis	8.3	8.7	ns	0.5	0.6	ns
Pubic Lice	3.3	3.3	ns	0.0	0.1	ns
Strep Throat	41.4	41.0	ns	4.0	5.3	ns
Syphilis	0.2	0.2	ns	0.0	0.1	ns
Urinary Tract Infection	16.8	14.1	<0.05	4.3	3.9	ns
Diagnosed With at Least One of the Above Acute Conditions	53.2	49.9	ns	9.5	9.7	ns

■ Veterans ■ All Students—Adjusted Data

<sup>ns</sup> Not statistically significant.

### Diagnosed With Chronic Condition—Lifetime and Past 12 Months

Veterans and All Students

Acute Condition	Percent Who Report Being Diagnosed Within Lifetime		p-value	Percent Who Report Being Diagnosed Within Past 12 Months		p-value
	Veterans	All Students—Adjusted Data		Veterans	All Students—Adjusted Data	
Alcohol Problem	9.5	7.5	<0.05	2.0	1.8	ns
Allergies	33.4	37.9	<0.05	8.8	10.0	ns
Asthma	9.8	14.4	<0.001	1.3	2.9	<0.01
Cancer	1.5	1.5	ns	0.4	0.3	ns
Diabetes Type I	0.2	1.0	ns	0.3	0.3	ns
Diabetes Type II	1.2	1.0	ns	0.6	0.5	ns
Genital Herpes	2.5	1.6	ns	0.8	0.4	ns
Genital Warts/Human Papilloma Virus	8.0	4.5	<0.001	1.5	0.8	ns
Hepatitis B	0.4	0.5	ns	0.0	0.2	ns
Hepatitis C	0.6	0.5	ns	0.0	0.2	ns
High Blood Pressure	7.7	9.0	ns	3.6	4.4	ns
High Cholesterol	11.6	10.9	ns	5.5	5.1	ns
HIV/AIDS	0.2	0.3	ns	0.0	0.0	ns
Drug Problems (Other Than Alcohol)	3.5	4.6	ns	0.1	0.9	<0.05
Obesity	7.0	7.9	ns	4.5	3.9	ns
Tuberculosis	0.7	0.9	ns	0.4	0.1	ns
Diagnosed With at Least One of the Above Chronic Conditions	55.4	57.6	ns	21.7	21.9	ns

■ Veterans ■ All Students—Adjusted Data

<sup>ns</sup> Not statistically significant.

Veterans who completed the 2008 College Student Health Survey were asked to report if they have been diagnosed with selected infectious acute illnesses within the past 12 months and within their lifetime.

The acute condition diagnosed most frequently within veterans' lifetimes is strep throat. Overall, **53.2%** of veterans report being diagnosed with at least one acute condition within their lifetime, and **9.5%** report being diagnosed with at least one acute condition within the past 12 months.

The adjusted aggregate survey data obtained from all students show that **49.9%** report they have been diagnosed with at least one acute condition within their lifetime, and **9.7%** report being diagnosed with at least one acute condition within the past 12 months.

Chronic conditions are ongoing health concerns for veterans and all students. Surveillance of these conditions provides a picture of longer term health care needs for college students.

The most common chronic condition diagnosed in veterans who completed the 2008 College Student Health Survey is allergies. More than one-half (**55.4%**) of all veterans report being diagnosed with at least one chronic condition within their lifetime, and approximately one-fifth (**21.7%**) report being diagnosed with at least one chronic condition within the past 12 months.

The adjusted aggregate survey data obtained from all students show that **57.6%** report being diagnosed with at least one chronic condition within their lifetime, and **21.9%** report being diagnosed with at least one chronic condition within the past 12 months.





# Results

## Mental Health

This section examines areas related to the mental and emotional status of college and university students. Recent research shows that young adults in the United States have relatively high rates of mental health problems compared to other age groups. Based on the results of the National Comorbidity Survey Replication Study using the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders-IV criteria, 53.8% of 18- to 29-year-olds have been diagnosed with a mental disorder within their lifetime, and 38.0% of 18- to 29-year-olds have been diagnosed with a mental disorder within the previous year.<sup>7</sup> Among all age groups, 18- to 25-year-olds have the highest lifetime prevalence of serious psychological distress, i.e., mental illness that results in functional impairment (17.7%), and the highest past year prevalence of major depressive episode (9.0%).<sup>8</sup> The lifetime prevalence of major depressive episode for 18- to 25-year-olds is 15.0%.<sup>8</sup> More than one in ten (10.8%) young adults between the ages of 18 and 25 have received treatment for a mental health problem in the previous year.<sup>8</sup>

As a group, veterans may face an even greater challenge in making the adjustments necessary to succeed in college. For some veterans there may be some lingering psychological issues related to their military service, which affect their mental well-being. A recent Department of Defense Task Force report documented that among U.S. troops returning from Iraq and Afghanistan, nearly 40.0% of soldiers, one third of Marines, and one half of National Guard members report symptoms of psychological problems.<sup>9</sup> Some veterans choose to struggle with their mental health issues in isolation due to concern over the stigma associated with disclosing mental health symptoms and asking for help within the military culture.<sup>10</sup> Offering resources to all students struggling with mental health problems is important, whether or not these students are veterans. However, the unique life experiences of veterans require colleges to think critically about the types of programs and services they offer and whether they meet the particular needs of veterans.

A report published in 2006 presents the results of a population-based analysis of 303,905 Army and Marine troops who completed a Post-Deployment Health Assessment between May 2003 and April 2004.<sup>11</sup> The report documented that 19.1% of Operation Iraqi Freedom (OIF) veterans and 11.3% of Operation Enduring Freedom (OEF) veterans reported some mental health issue (e.g., anxiety, depression, and post-traumatic stress disorder) and 9.8% of OIF veterans and 4.7% of OEF veterans reported symptoms of post-traumatic stress disorder.<sup>11</sup> In addition, the mental health symptoms that many soldiers experience often increase three or four months after their return.<sup>12</sup>

For veterans who completed the 2008 College Student Health Survey, depression, anxiety, and post-traumatic stress disorder are the most frequently reported mental health diagnoses within their lifetime. The adjusted aggregate data show that compared to all students who completed the survey, veterans have similar diagnosis rates for most mental health conditions within their lifetime. However, male and female veterans report being diagnosed with post-traumatic stress disorder at higher rates than all male and female students who completed the survey, and female veterans have a higher rate of bipolar disorder diagnosis than all female students.

### Diagnosed Mental Health Condition—Lifetime

Veterans and All Students by Gender

Mental Health Condition	Percent of Males Who Report Being Diagnosed Within Lifetime		p-value	Percent of Females Who Report Being Diagnosed Within Lifetime		p-value
	Veterans	All Students—Adjusted Data		Veterans	All Students—Adjusted Data	
Anorexia	0.3	0.5	ns	2.4	2.8	ns
Anxiety	10.6	13.0	ns	27.7	24.3	ns
Attention Deficit Disorder	7.3	7.2	ns	6.8	5.5	ns
Autism	0.0	0.3	ns	0.0	0.1	ns
Bipolar Disorder	1.5	2.1	ns	5.8	2.6	<0.05
Bulimia	0.2	0.4	ns	2.4	2.7	ns
Depression	15.9	17.9	ns	37.4	32.7	ns
Obsessive-Compulsive Disorder	0.5	1.1	ns	4.4	2.5	ns
Panic Attacks	4.0	4.6	ns	11.2	12.4	ns
Post-Traumatic Stress Disorder	9.1	2.8	<0.0001	14.1	5.4	<0.0001
Seasonal Affective Disorder	1.5	2.4	ns	3.9	5.0	ns
Social Phobia/Performance Anxiety	2.8	3.9	ns	5.3	3.9	ns

■ Veterans ■ All Students—Adjusted Data

ns Not statistically significant.

The most frequently reported mental health diagnoses within the past 12 months for veterans who completed the survey are depression, anxiety, and post-traumatic stress disorder. Compared to all male students who completed the survey, male veterans have similar diagnosis rates for most mental health conditions within the past 12 months. However, male veterans report a higher rate of post-traumatic stress disorder diagnosis compared to all male students who completed the survey. Female veterans report being diagnosed with anxiety, bipolar disorder, depression, and post-traumatic stress disorder within the past 12 months at higher rates than all female students.

### Diagnosed Mental Health Condition—Past 12 Months

Veterans and All Students by Gender

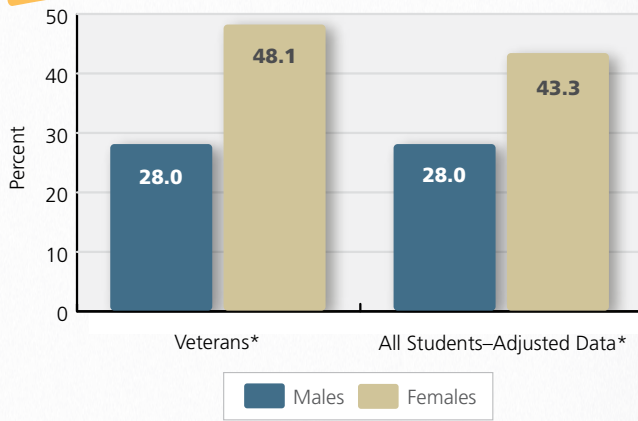
Mental Health Condition	Percent of Males Who Report Being Diagnosed Within Past 12 Months		p-value	Percent of Females Who Report Being Diagnosed Within Past 12 Months		p-value
	Veterans	All Students—Adjusted Data		Veterans	All Students—Adjusted Data	
Anorexia	0.3	0.3	ns	0.0	0.5	ns
Anxiety	5.1	6.2	ns	16.2	10.5	<0.05
Attention Deficit Disorder	1.4	1.6	ns	2.0	1.7	ns
Autism	0.0	0.1	ns	0.0	0.0	ns
Bipolar Disorder	0.3	0.6	ns	3.0	0.9	<0.05
Bulimia	0.0	0.0	ns	0.5	0.7	ns
Depression	5.6	6.0	ns	17.6	11.1	<0.01
Obsessive-Compulsive Disorder	0.2	0.4	ns	2.5	1.1	ns
Panic Attacks	1.9	2.0	ns	6.1	4.7	ns
Post-Traumatic Stress Disorder	3.8	1.2	<0.0001	7.1	1.5	<0.0001
Seasonal Affective Disorder	0.7	1.2	ns	2.0	2.4	ns
Social Phobia/Performance Anxiety	1.0	2.1	ns	3.1	1.7	ns

■ Veterans ■ All Students—Adjusted Data

ns Not statistically significant.

### Diagnosis of Any Mental Health Condition—Lifetime

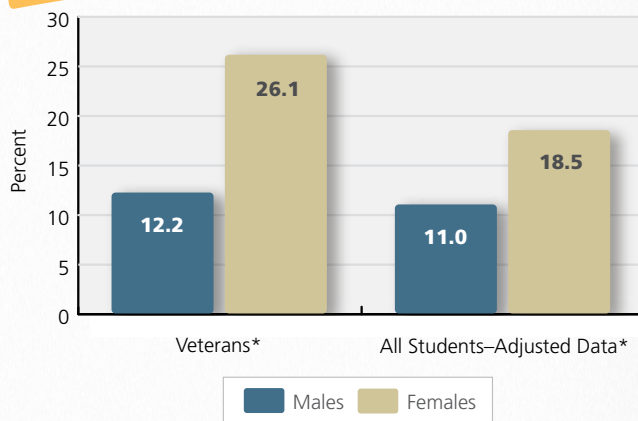
Veterans and All Students by Gender



\*Statistically significant.

### Diagnosis of Any Mental Health Condition—Past 12 Months

Veterans and All Students by Gender



\*Statistically significant.

Among all veterans, **33.1%** report being diagnosed with at least one mental health condition within their lifetime. Female veterans report a higher rate of being diagnosed with a mental health condition within their lifetime compared to male veterans ( $p < 0.0001$ ). The adjusted aggregate survey data show that female veterans have a higher but not statistically different rate of being diagnosed with any mental health condition within their lifetime compared to all female students.

Female veterans report a higher rate of being diagnosed with a mental health condition within the past 12 months compared to male veterans ( $p < 0.0001$ ). The adjusted aggregate data show that female veterans have a higher rate of being diagnosed with any mental health condition within the past 12 months compared to all female students who completed the 2008 College Student Health Survey ( $p = 0.01$ ).

The most commonly experienced stressors among veterans who completed the 2008 College Student Health Survey are the death of someone close to them, excessive credit card debt, and lack of health care coverage. A total of **45.1%** of veterans report experiencing one or two stressors within the past 12 months, and **22.7%** report experiencing three or more stressors over that same time period. The adjusted aggregate data from all students who completed the survey show that **42.4%** of all students report experiencing one or two stressors within the past 12 months, and **25.5%** report experiencing three or more stressors within that same time period.

### Mental Health Stressors

Veterans and All Students

Stressor Experienced Within Past 12 Months	Percent		p-value
Getting Married	4.8	4.1	ns
Failing a Class	10.8	11.4	ns
Serious Physical Illness of Someone Close to You	14.4	15.3	ns
Death of Someone Close to You	18.9	20.0	ns
Being Diagnosed With a Serious Physical Illness	3.3	3.1	ns
Being Diagnosed With a Serious Mental Illness	5.8	3.3	<0.001
Divorce or Separation From Your Spouse	2.8	2.1	ns
Termination of Personal Relationship (Not Including Marriage)	14.5	12.5	ns
Attempted Suicide	0.2	0.7	ns
Being Put on Academic Probation	5.8	7.6	ns
Excessive Credit Card Debt	18.6	17.6	ns
Excessive Debt Other Than Credit Card	14.3	17.0	<0.05
Being Arrested	1.8	2.1	ns
Being Fired or Laid Off From a Job	6.0	7.4	ns
Roommate/Housemate Conflict	11.3	14.9	<0.01
Parental Conflict	7.0	10.0	<0.01
Lack of Health Care Coverage	16.2	16.2	ns
Issues Related to Sexual Orientation	1.1	2.0	ns
Not Applicable (None of the Above Happened to Me)	30.9	30.7	ns
Report Experiencing One or Two of the Above Stressors	45.1	42.4	ns
Report Experiencing Three or More of the Above Stressors	22.7	25.2	ns

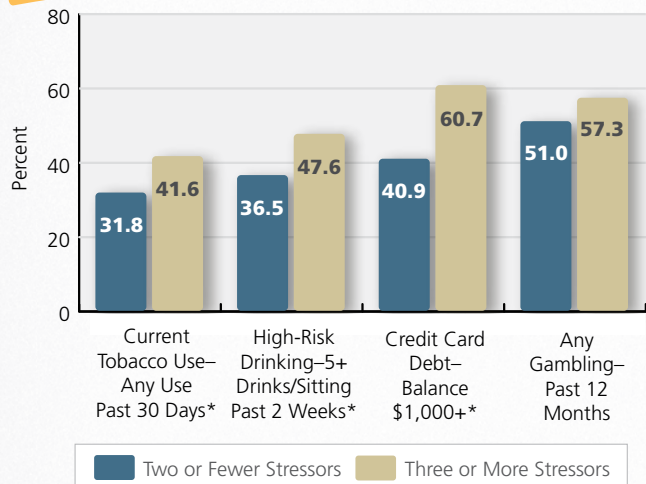
■ Veterans ■ All Students—Adjusted Data

<sup>ns</sup> Not statistically significant.

Over the same 12-month period, veterans who experienced three or more stressors tend to have significantly higher rates of current tobacco use ( $p < 0.05$ ), high-risk drinking ( $p < 0.01$ ), and credit card debt ( $p < 0.0001$ ) compared to veterans who experienced two or fewer stressors. The adjusted aggregate data obtained from all students who participated in the survey show the same relationship exists between reported number of stressors experienced and engagement in risk-taking behavior.

### Mental Health Stressors and Risky Behavior—Past 12 Months

Veterans

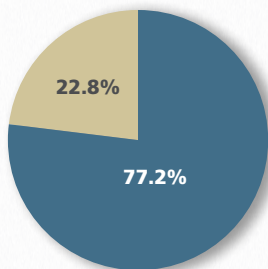


\*Statistically significant.

## Ability to Manage Stress—Past 12 Months

Veterans

In an attempt to measure effectiveness in managing stress, veterans were asked to rate their stress level and their ability to manage stress, each on a scale of 1 to 10. The reported stress level is then divided by the reported ability to manage stress. Any result greater than 1 means a veteran is not effectively managing his or her stress.



Managed Stress (Index ≤1) Unmanaged Stress (Index >1)

## Stress and Mental Health—Acute and Chronic Condition Diagnosis

Veterans

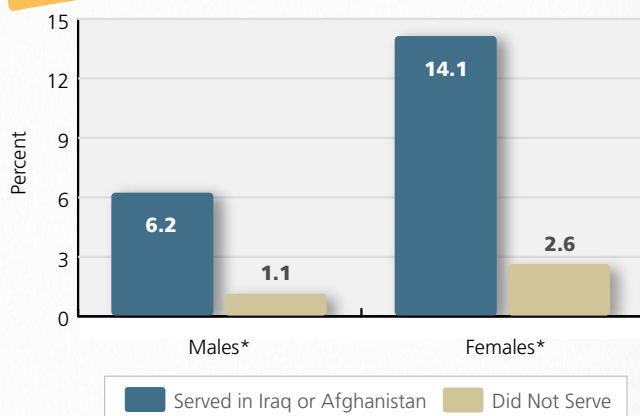
Diagnosed Within the Past 12 Months	Percent		p-value
Any Chronic Condition	19.9	27.5	<0.05
Any Acute Condition	8.0	14.3	0.01
Anxiety	5.5	16.0	0.0001
Depression	6.0	17.5	0.0001
Obsessive-Compulsive Disorder	0.5	1.7	ns
Panic Attacks	1.5	7.7	0.0001
Social Phobia/ Performance Anxiety	0.8	3.9	<0.01

Managed Stress (Index ≤1) Unmanaged Stress (Index >1)

ns Not statistically significant.

## Post-Traumatic Stress Disorder Diagnosis—Past 12 Months

Veterans by Operation Iraqi Freedom and Operation Enduring Freedom Service Status and Gender



\*Statistically significant.

More than one-fifth (**22.8%**) of veterans who completed the 2008 College Student Health Survey report they are unable to manage their stress level. Additional analysis shows that **20.3%** of male veterans and **30.0%** of female veterans report they are unable to manage their stress level.

The adjusted aggregate survey data show that **22.5%** of all students report they are unable to manage their stress level.

Unmanaged stress levels are associated with rates of diagnosis for various health conditions. For example, **16.0%** of veterans with unmanaged stress levels report being diagnosed with anxiety within the past year compared to only **5.5%** of veterans with managed stress levels reporting the same diagnosis ( $p=0.0001$ ). The adjusted aggregate data show the same type of relationship between ability to manage stress and various health conditions among all students.

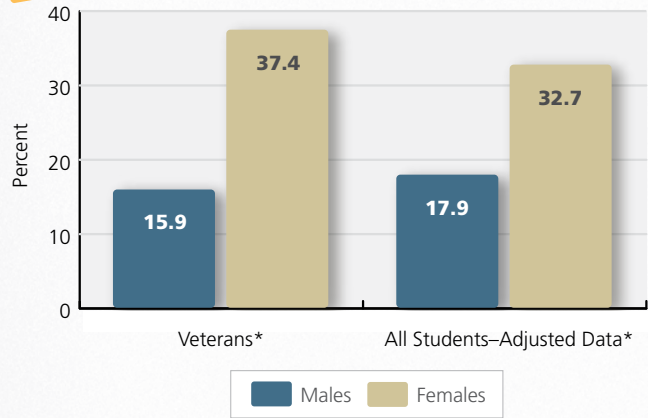
Differences in reported rates of post-traumatic stress disorder diagnosis exist among veterans. For both males and females, veterans who served in either Iraq or Afghanistan have higher past-12-month diagnosis rates of post-traumatic stress disorder compared to veterans who did not serve in Iraq or Afghanistan ( $p<0.01$ ).

Among all veterans, **49.4%** report they served in Iraq or Afghanistan.

Among veterans who completed the 2008 College Student Health Survey, females report being diagnosed with depression within their lifetime at more than two times the rate of males ( $p=0.0001$ ). The adjusted aggregate survey data show that female veterans report being diagnosed with depression within their lifetime at a higher but not statistically different rate than all female students.

### Depression Diagnosis—Lifetime

Veterans and All Students by Gender

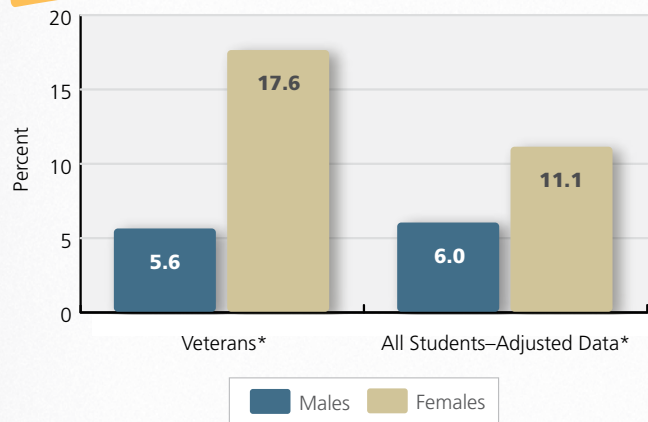


\*Statistically significant.

Female veterans report being diagnosed with depression within the past 12 months at more than three times the rate of male veterans ( $p<0.0001$ ). Analysis of the adjusted aggregate data from the 2008 College Student Health Survey shows that female veterans report being diagnosed with depression within the past 12 months at a higher rate than all female students ( $p=0.01$ ).

### Depression Diagnosis—Past 12 Months

Veterans and All Students by Gender

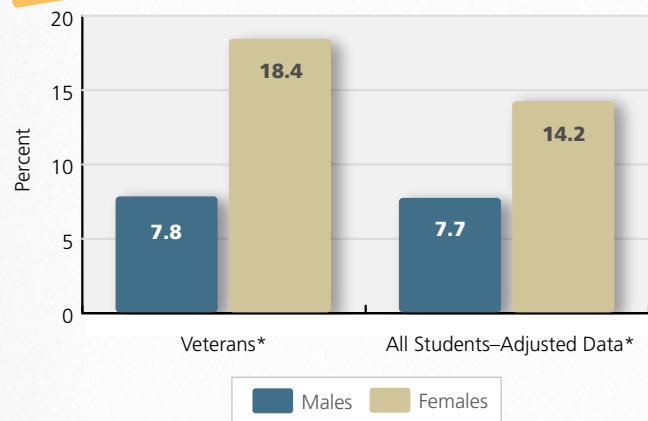


\*Statistically significant.

Overall, **10.5%** of veterans who completed the 2008 College Student Health Survey report they currently are taking medication for depression. Female veterans report using medication for depression at more than two times the rate of male veterans ( $p<0.0001$ ), which correlates with the higher depression diagnosis rates found among female veterans compared to male veterans. According to the adjusted aggregate survey data, this same gender difference is seen among all students.

### Currently Taking Medication for Depression

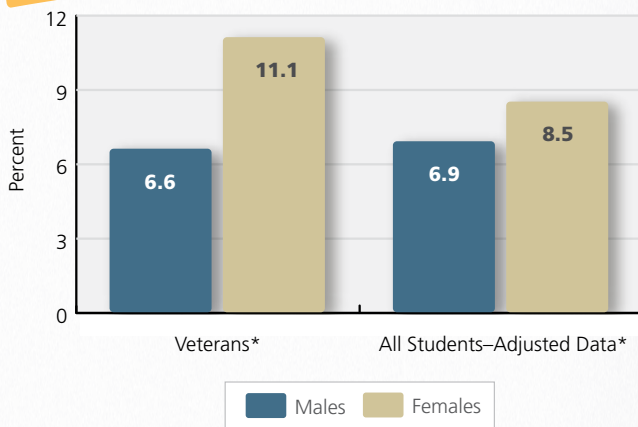
Veterans and All Students by Gender



\*Statistically significant.

### Currently Taking Medication for Mental Health Problems Other Than Depression

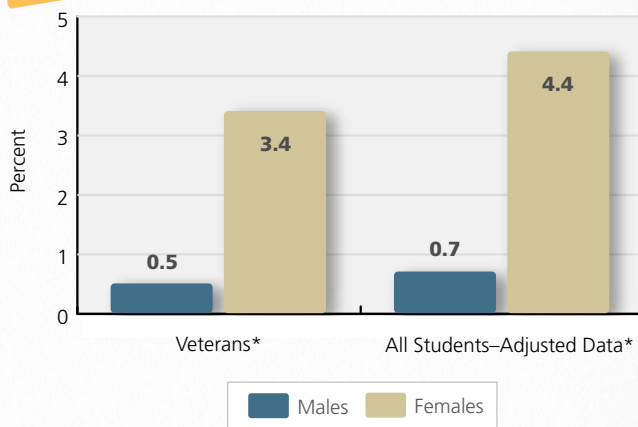
Veterans and All Students by Gender



\*Statistically significant.

### Eating Disorder Diagnosis-Lifetime

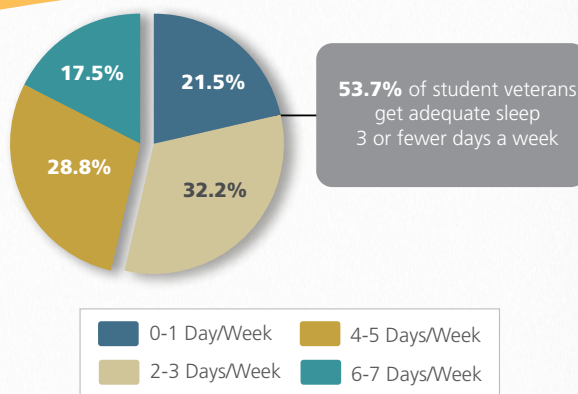
Veterans and All Students by Gender



\*Statistically significant.

### Number of Days of Adequate Sleep—Past Seven Days

Veterans



Female veterans report a higher rate of medication use for mental health problems other than depression than male veterans ( $p < 0.05$ ). The rate among female veterans is higher but not statistically different than the rate among all female students, according to the adjusted aggregate survey data. Overall, **7.8%** of veterans report being on medication for a mental health problem other than depression.

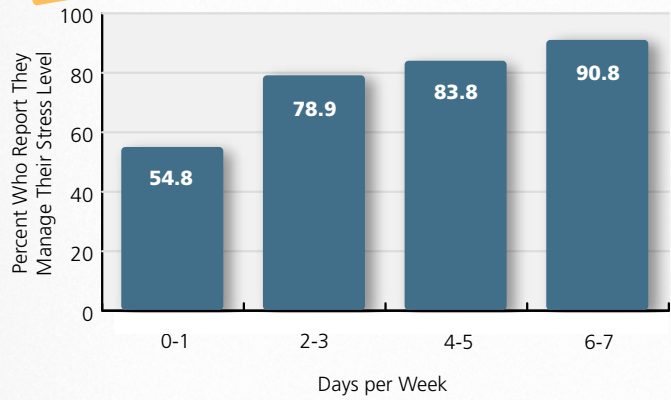
Among veterans who completed the 2008 College Student Health Survey, **0.5%** of males and **3.4%** of females report being diagnosed with anorexia and/or bulimia within their lifetime ( $p < 0.01$ ). The adjusted aggregate data obtained from all students who participated in the survey show that **0.7%** of all males and **4.4%** of all females report being diagnosed with anorexia and/or bulimia within their lifetime ( $p < 0.0001$ ).

More than half (**53.7%**) of all veterans report they received enough sleep so they felt rested when they woke up in the morning on three or fewer days over the previous seven days. The adjusted aggregate data show that **52.0%** of all students who completed the 2008 College Student Health Survey report they received adequate sleep on three or fewer days over the previous seven days.

Receiving adequate sleep appears to affect veterans' ability to manage their stress level. Only **54.8%** of veterans who report receiving 0-1 day/week of adequate sleep also report the ability to manage their stress, whereas **90.8%** of veterans who report 6-7 days/week of adequate sleep also report the ability to manage their stress ( $p < 0.0001$ ). A similar association between sleep and stress is seen in the adjusted aggregate survey data from all students.

### Adequate Sleep and Stress

Veterans





# Results

## Tobacco Use

Recent research shows that current cigarette use by Americans of all ages peaks among young adults ages 21 to 25 at 40.2%, and 18- to 20-year-olds are not far behind at 35.6%.<sup>8</sup> Approximately one in three (30.9%) full-time college students smoked cigarettes at least one time in the previous year, one in five (19.2%) smoked cigarettes at least one time in the previous 30 days, and one in ten (9.2%) smoke cigarettes daily.<sup>13</sup> Among young adults ages 18 to 25, 5.2% used smokeless tobacco in the previous month.<sup>8</sup> Current cigarette smokers are more likely to use other tobacco products, alcohol, or illicit drugs than nonsmokers.<sup>8</sup> Among all current smokers, 42.5% have tried to quit and have stopped smoking for at least one day in the preceding 12 months.<sup>14</sup> Of the 15 million college students in the United States, an estimated 1.7 million will die prematurely due to smoking-related illnesses.<sup>15</sup> Clearly, the current level of tobacco use among college students poses a major health risk.

Several studies have documented higher rates of tobacco use among veterans compared to the civilian population. According to the Department of Veterans Affairs (VA) National Smoking and Tobacco Use Cessation Program directive, the prevalence of smokers in the VA is 33.0% compared to 23.0% in the general population.<sup>16</sup> A National Survey on Drug Use and Health report estimates that 18.1% of veterans smoke cigarettes on a daily basis, compared to 14.3% of nonveterans.<sup>17</sup> In a study of U.S. military personnel serving in the first Gulf War, 7.0% of respondents indicated they started smoking for the first time and 56.0% of preexisting regular smokers stated they increased consumption while deployed.<sup>18</sup>

The *current tobacco use* rate for all veterans who completed the 2008 College Student Health Survey is higher but not statistically different than the current tobacco use rate among all students who completed the survey (**34.0%** vs. **31.5%**, respectively). Male veterans report a higher rate of current tobacco use compared to female veterans (**36.9%** vs. **25.6%**, respectively,  $p < 0.05$ ).

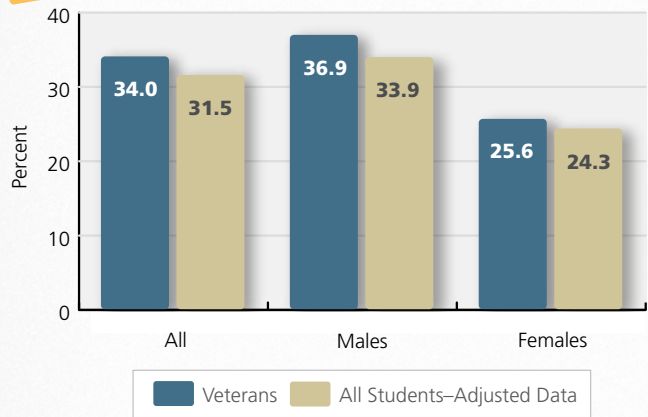
**Definition:**  
**Current Tobacco Use**

Any tobacco use in the past 30 days. Tobacco use includes both smoking and smokeless tobacco.

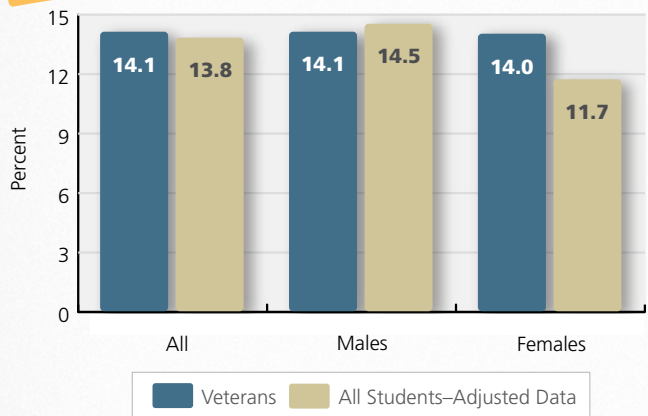
The daily tobacco use rate for all veterans who completed the 2008 College Student Health Survey is higher but not statistically different than the daily tobacco use rate among all students who completed the survey (**14.1%** vs. **13.8%**, respectively). The daily tobacco use rates are similar for male and female veterans (**14.1%** vs. **14.0%**, respectively).

Overall, **12.8%** of male veterans report using smokeless tobacco during the past 30 days compared to **1.0%** of female veterans ( $p < 0.0001$ ). Analysis of the adjusted aggregate data from the 2008 College Student Health Survey shows that for both males and females, veterans and all students report using smokeless tobacco at similar rates.

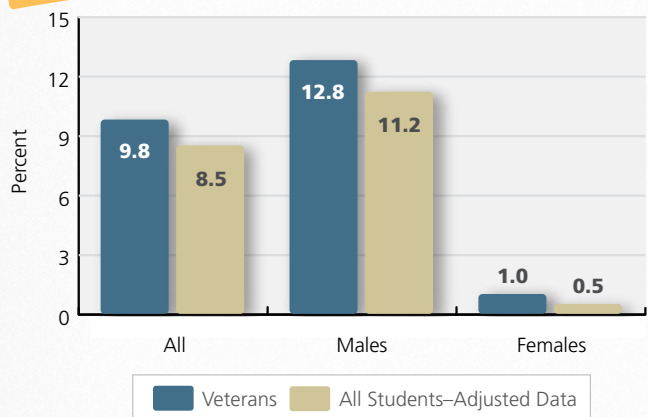
**Current Tobacco Use**  
Veterans and All Students by Gender



**Daily Tobacco Use**  
Veterans and All Students by Gender

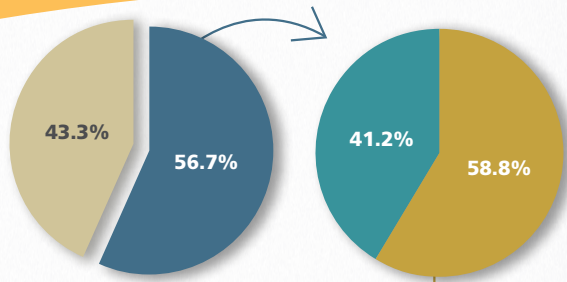


**Current Smokeless Tobacco Use**  
Veterans and All Students by Gender



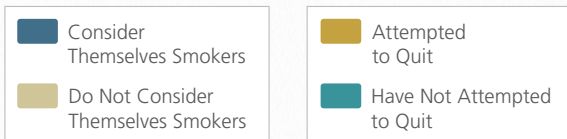
### Quit Attempts—Past 12 Months

Veterans: Current Cigarette Users



3.6 = Average Number of Quit Attempts

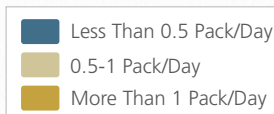
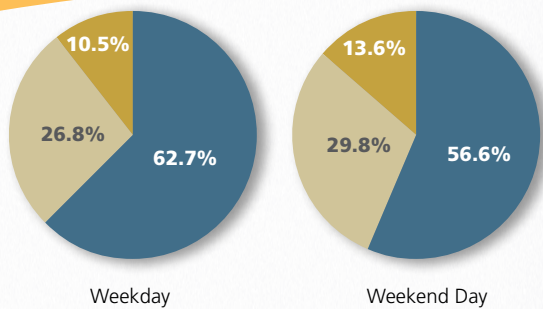
1-30 = Range of Quit Attempts



Among those who report using smoking tobacco in the past 30 days, **43.3%** of veterans compared to **42.1%** of all students who completed the survey do not consider themselves smokers. Among those who do consider themselves smokers, **58.8%** of veterans compared to **53.8%** of all students made at least one attempt to quit smoking over the past 12 months. These veterans made an average of **3.6** quit attempts during that same 12-month period, while all students who consider themselves smokers made an average of **4.4** quit attempts.

### Number of Cigarettes Smoked

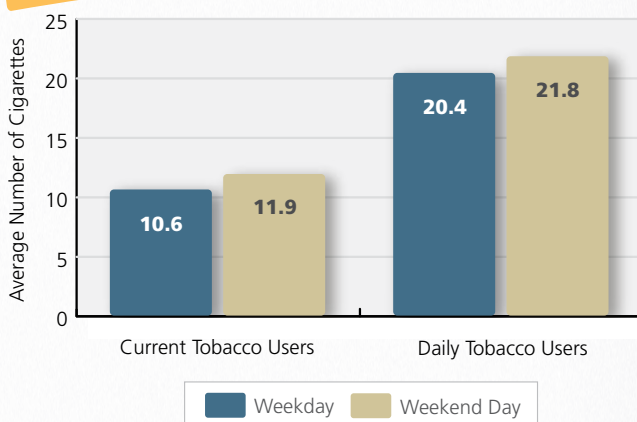
Veterans: Current Tobacco Users



Among veterans who report using tobacco over the past 30 days, the proportion who report smoking more than one pack of cigarettes per day increases from **10.5%** on a weekday to **13.6%** on a weekend day. The adjusted aggregate survey data from all students who currently use tobacco show that the proportion of students who report they smoke more than one pack of cigarettes per day increases from **11.8%** on a weekday to **15.3%** on a weekend day ( $p=0.001$ ).

### Average Number of Cigarettes Smoked

Veterans: Current vs. Daily Tobacco Users



The average number of cigarettes smoked by veterans who are current tobacco users increases from **10.6** per weekday to **11.9** per weekend day. For daily tobacco users, the average number increases from **20.4** per weekday to **21.8** per weekend day. The adjusted aggregate survey data from all students also shows an increase in the average number of cigarettes smoked on a weekday versus weekend day for both current and daily tobacco users.

Veterans who used tobacco in the past 30 days report the most common locations of their use are in a car, where they live, in bars/restaurants, and at private parties. The most common locations obtained from the adjusted aggregate data from all students who completed the 2008 College Student Health Survey are the same as those cited by the veterans.

### Location of Tobacco Use

Veterans and All Students: Current Tobacco Users

Location	Percent Who Indicate Use		p-value
Campus Events	19.9	16.7	ns
Bars/Restaurants	52.4	53.6	ns
In a Car	63.6	67.1	ns
Where I Live	62.3	64.5	ns
Private Party	44.2	50.0	ns
Work Site	35.5	42.3	<0.05
Residence Hall	1.7	5.7	<0.01
Fraternity/Sorority	2.2	2.9	ns
Other	27.3	31.9	ns

■ Veterans
 ■ All Students—Adjusted Data

<sup>ns</sup> Not statistically significant.

For veterans who are nonsmokers, bars/restaurants is the most commonly cited location for exposure to secondhand smoke. In a car is the most frequently reported location for exposure to secondhand smoke by veterans who are smokers. Less than one-half of all veterans (**44.0%**) report never being exposed to secondhand smoke. Adjusted aggregate data from all students who completed the survey show that **42.2%** report never being exposed to secondhand smoke.

### Exposure to Secondhand Smoke

Veterans

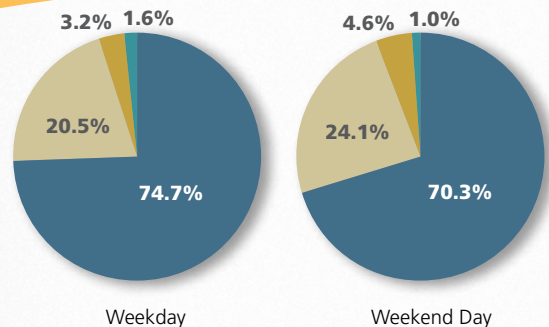
Location	Percent of Nonsmokers Who Indicate Exposure	Percent of Current Smokers Who Indicate Exposure
N/A—Never Exposed	51.1	26.4
Campus Events	4.0	4.8
Bars/Restaurants	19.3	33.3
In a Car	8.3	35.1
Where I Live	6.0	28.1
Private Party	14.6	32.9
Work Site	6.4	13.0
Residence Hall	1.0	0.9
Fraternity/Sorority	0.5	1.3
Other	18.4	20.8

For veterans who are nonsmokers, the hours of exposure to secondhand smoke increase but are not statistically different from a weekday to a weekend day (**25.3%** vs. **29.7%**, respectively).

The adjusted aggregate data from the 2008 College Student Health Survey show that the percentage of all nonsmokers who report they were exposed to secondhand also increases from a weekday to a weekend day (**25.8%** vs. **33.2%**, respectively,  $p < 0.0001$ ).

### Number of Hours Exposed to Secondhand Smoke

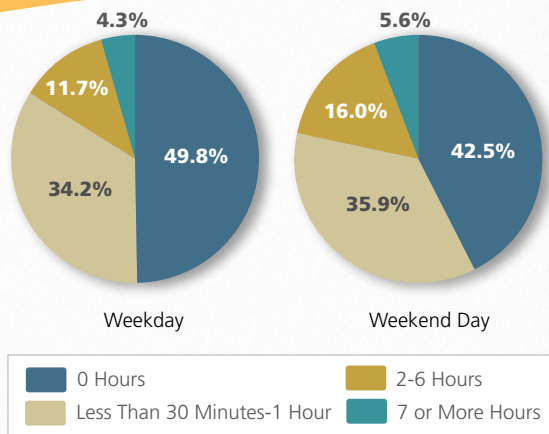
Veterans: Nonsmokers



■ 0 Hours
 ■ 2-6 Hours  
■ Less Than 30 Minutes-1 Hour
 ■ 7 or More Hours

### Number of Hours Exposed to Secondhand Smoke

Veterans: Current Smokers

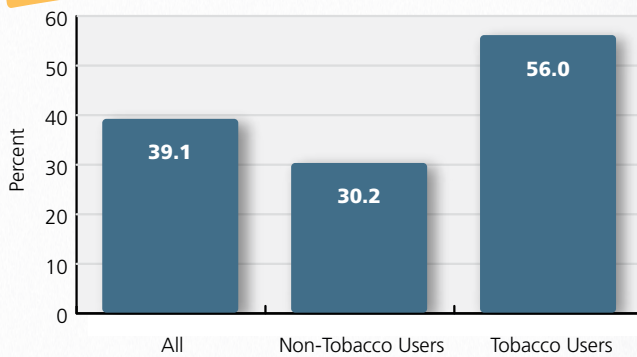


Among veterans who are current smokers, exposure to secondhand smoke increases from a weekday to a weekend day but the difference is not statistically significant (**50.2%** vs. **57.5%**, respectively).

The adjusted aggregate data from all students who completed the 2008 College Student Health Survey show a similar trend, with **50.9%** of smokers reporting exposure to secondhand smoke on a weekday and **62.6%** citing exposure on a weekend day ( $p < 0.0001$ ).

### Tobacco Use Status and High-Risk Drinking

Veterans



Veterans who use tobacco have a higher rate of *high-risk drinking* compared to veterans who are non-tobacco users (**56.0%** vs. **30.2%**, respectively,  $p < 0.0001$ ).

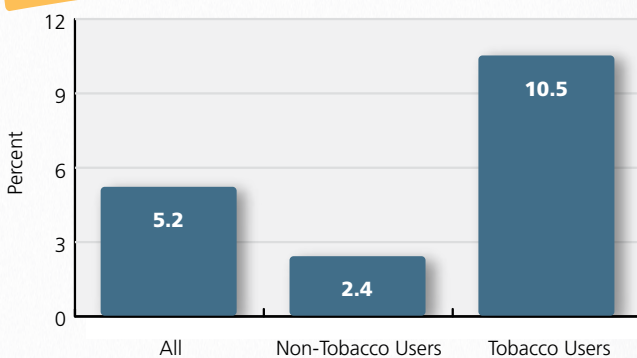
This same relationship between tobacco use and high-risk drinking is seen in the adjusted aggregate data from all students who completed the 2008 College Student Health Survey.

**Definition:**  
*High-Risk Drinking*

Consumption of five or more alcohol drinks at one sitting within the past two weeks for both males and females. A drink is defined as a bottle of beer, wine cooler, glass of wine, shot glass of liquor, or mixed drink.

### Tobacco Use Status and Current Marijuana Use

Veterans



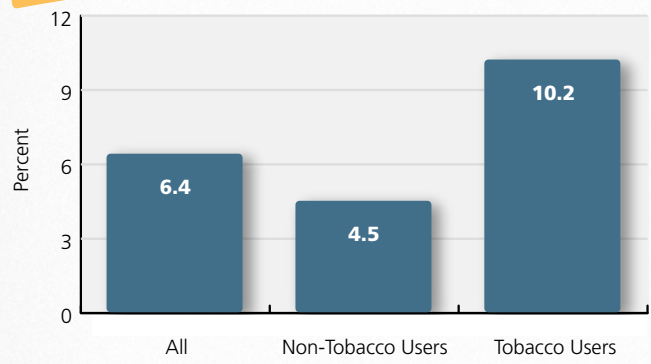
Similar to the relationship between high-risk drinking and tobacco use, the use of marijuana in the past 30 days is higher among veterans who are tobacco users (**10.5%**) compared to veterans who are non-tobacco users (**2.4%**) ( $p < 0.0001$ ).

A similar relationship between tobacco use and current marijuana use is seen in the adjusted aggregate data from all students who completed the survey.

The use of other illegal drugs is also associated with tobacco use. Veterans who are tobacco users use illegal drugs other than marijuana at more than twice the rate of non-tobacco users (**10.2%** vs. **4.5%**, respectively,  $p < 0.01$ ).

The relationship between tobacco use and other illegal drug use seen in the adjusted aggregate data from all students who completed the survey is similar to that seen among the veterans.

### Tobacco Use Status and Other Illegal Drug Use (Not Marijuana)—Past 12 Months Veterans



# Results

## Alcohol Use and Other Drug Use

American college students consume alcohol and other drugs at very high rates. More than four in five (84.7%) college students have consumed alcohol at least one time, and nearly seven in ten (65.4%) college students consume alcohol monthly.<sup>13</sup> Heavy or binge drinking (consuming five or more alcoholic beverages in a row in the previous two weeks) rates peak between ages 21 and 23 (49.3% at age 21, 48.9% at age 22, and 47.2% at age 23).<sup>8</sup> The rate of binge drinking is 36.2% among 18- to 20-year-olds and 46.1% among 21- to 25-year-olds.<sup>8</sup>

Approximately half (50.6%) of college students have used an illicit drug at least once in their lifetime, about one third (33.9%) have used an illicit drug at least once in the past year, and nearly one in five (19.2%) have used an illicit drug in the last month.<sup>13</sup> Marijuana is the illicit drug of choice for college students, with nearly half (46.9%) of students having used the drug at least once in their lifetime and almost one third (30.2%) having used it in the past year.<sup>13</sup> Among college students, 6.0% have used amphetamines, 5.1% have used cocaine, and 0.3% have used heroin in the previous year.<sup>13</sup>

The National Survey on Drug Use and Health, an annual survey sponsored by the Substance Abuse and Mental Health Services Administration, examined differences in alcohol and drug use among veterans and nonveterans in two separate reports released in November 2005. The rates of alcohol and marijuana use were higher among veterans compared to nonveterans. The report estimated a past-month alcohol use rate among veterans of 56.6%, compared to a rate of 50.8% among nonveterans, with 22.6% of veterans also reporting they consumed five or more drinks at one sitting over that same time period and 21.6% of nonveterans reporting having engaged in that same type of behavior.<sup>17</sup> The second report, which highlighted the use of marijuana and other illicit drugs, estimated the rates of marijuana use within the past 30 days to be 3.5% among veterans and 3.0% among nonveterans. The use of illicit drugs within the past 30 days was slightly lower among veterans than among nonveterans (1.7% vs. 1.9%, respectively).<sup>19</sup>

The rates for any use of alcohol in the past 12 months are similar for male and female veterans who completed the 2008 College Student Health Survey (**87.1%** vs. **87.9%**, respectively).

The rate for any use of alcohol within the past year is significantly higher among veterans (**87.3%**) compared to the adjusted aggregate data from all students who completed the survey (**82.5%**) ( $p < 0.001$ ).

**Definition:**

**Past-12-Month Alcohol Use**

Any alcohol use within the past year.

Among veterans who completed the 2008 College Student Health Survey, the rate for use of alcohol in the past 30 days is higher for males compared to females (**79.0%** vs. **70.5%**, respectively,  $p < 0.05$ ). Analysis of the adjusted aggregate data shows that veterans report a higher rate of alcohol use within the past 30 days compared to all students who completed the survey ( $p < 0.01$ ).

**Definition:**

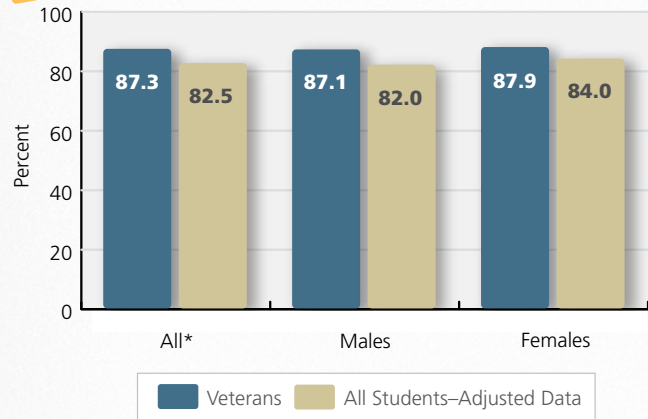
**Current Alcohol Use**

Any alcohol use within the past 30 days.

Male veterans who completed the 2008 College Student Health Survey consume more than two times the number of drinks per week than female veterans consume (**6.5** vs. **2.8**, respectively,  $p < 0.0001$ ). The adjusted aggregate survey data from all students shows the same gender difference, with male students consuming a higher average number of drinks per week than female students (**5.9** vs. **2.9**, respectively,  $p < 0.0001$ ).

**Alcohol Use—Past 12 Months**

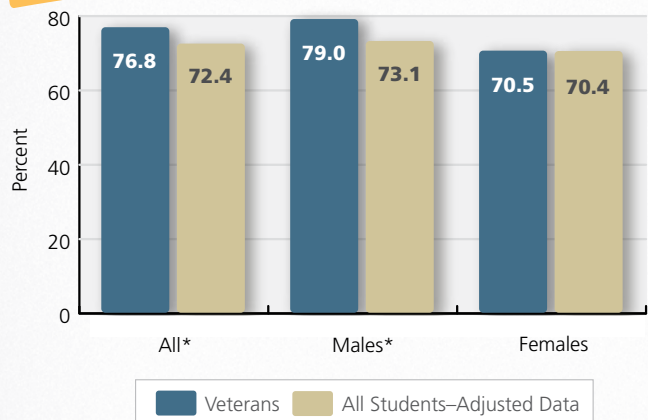
Veterans and All Students by Gender



\*Statistically significant.

**Current Alcohol Use**

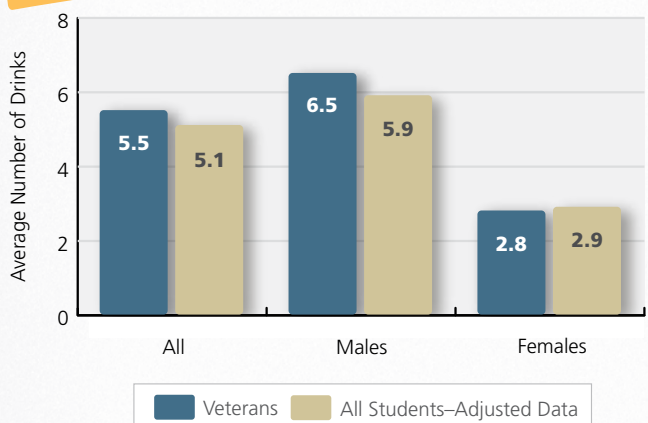
Veterans and All Students by Gender



\*Statistically significant.

**Average Number of Drinks per Week**

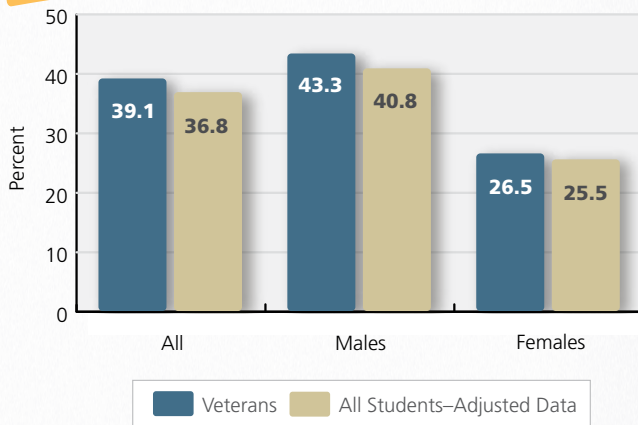
Veterans and All Students by Gender





### High-Risk Drinking

Veterans and All Students by Gender

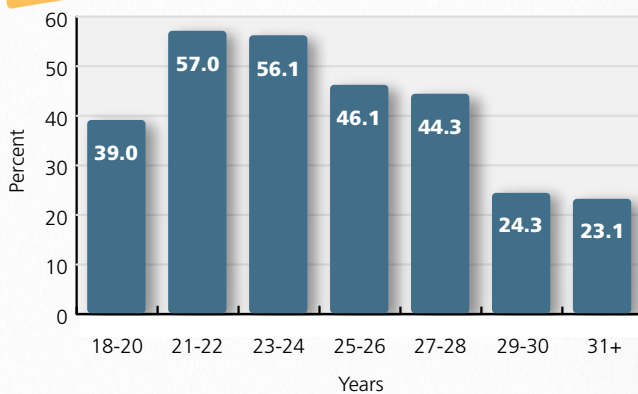


Male veterans report a higher rate of high-risk drinking compared to female veterans (**43.3%** vs. **26.5%**, respectively,  $p < 0.0001$ ). Among all students who completed the 2008 College Student Health Survey, males report a higher rate of high-risk drinking compared to females ( $p < 0.0001$ ).

The high-risk drinking rate among veterans is slightly higher but not statistically different than the reported rate obtained from the adjusted aggregate data from all students (**39.1%** vs. **36.8%**, respectively).

### High-Risk Drinking

Veterans by Age Group



Among veterans who completed the 2008 College Student Health Survey, the peak years for engaging in high-risk drinking are between ages 21 and 24. Among all students who completed the survey, the peak years for engaging in high-risk drinking are also between ages 21 and 24.

The blood alcohol content of a student on the most recent socializing/partying occasion was calculated based on answers to four different survey questions (gender, current body weight, amount of alcohol consumed, and time period of consumption). It should be noted that the BAC calculated in this study is an estimate. This information is self-reported, and students tend to underestimate the actual amount of alcohol they consume.

The average estimated blood alcohol content for both male and female veterans who completed the 2008 College Student Health Survey, based on the last time they partied/socialized, is **0.07**.

For both males and females, the average estimated BAC levels obtained from the adjusted aggregate data from all students who completed the survey are similar to those reported by the veterans.

The average estimated BAC levels for veterans range from **0.04** to **0.10**. Veterans ages 21-26 and 29-30 all report estimated BAC levels that exceed the legal driving limit of 0.08 for individuals of legal drinking age.

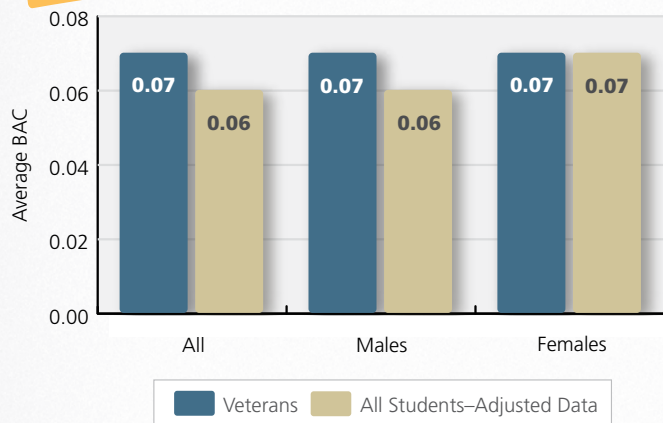
The adjusted aggregate data from all students who completed the 2008 College Student Health Survey show that the average estimated BAC level ranges from **0.03** to **0.09**.

## Blood Alcohol Content

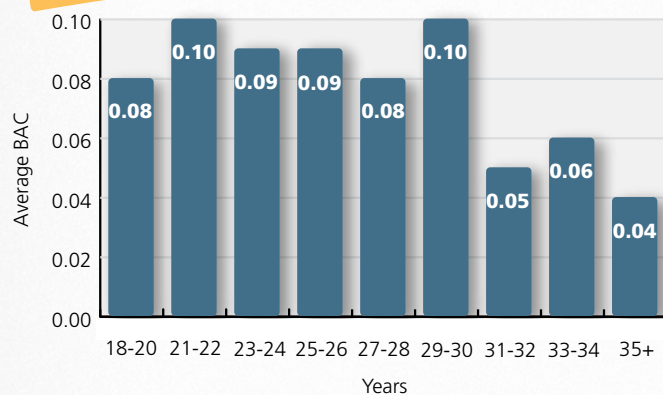
Blood alcohol content (BAC) measures the percentage of alcohol in a person's blood. The calculation of BAC is based on a simple formula that takes into account the following factors:

- Gender
- Current body weight
- Amount of alcohol consumed (number of drinks)
- Time period of consumption
- Concentration of alcohol in the beverage consumed (based on the alcohol content of one typical can of beer containing 4.5% alcohol)

## Average Estimated Blood Alcohol Content Veterans and All Students by Gender



## Blood Alcohol Content Veterans by Age Group



## Negative Consequences of Alcohol/Drug Use

Veterans and All Students

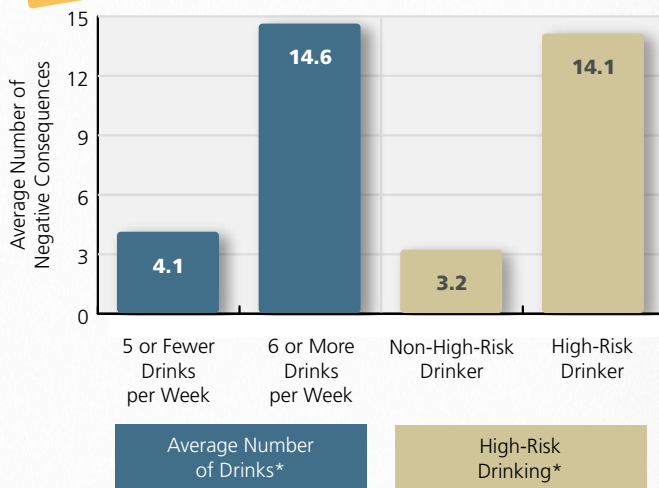
Negative Consequences Due to Alcohol/Drug Use	Percent of Survey Respondents		p-value
Had a Hangover	60.2	56.1	<0.05
Performed Poorly on a Test or Important Project	17.8	18.8	ns
Been in Trouble with Police, Residence Hall, or Other College Authorities	3.6	5.1	ns
Damaged Property, Pulled Fire Alarms, etc.	1.4	2.0	ns
Got Into an Argument or Fight	18.0	17.9	ns
Got Nauseated or Vomited	32.1	30.7	ns
Driven a Car While Under the Influence	21.9	21.9	ns
Missed a Class	17.4	19.0	ns
Been Criticized by Someone I Know	17.1	20.3	<0.05
Thought I Might Have a Drinking or Other Drug Problem	11.6	11.0	ns
Had a Memory Loss	19.5	19.3	ns
Done Something I Later Regretted	20.2	22.6	ns
Been Arrested for DW/DUI	1.5	1.3	ns
Have Been Taken Advantage of Sexually	1.4	1.7	ns
Have Taken Advantage of Another Sexually	0.4	0.5	ns
Tried Unsuccessfully to Stop Using	3.8	4.3	ns
Seriously Thought About Suicide	1.9	3.1	ns
Seriously Tried to Commit Suicide	0.0	0.5	ns
Been Hurt or Injured	4.7	7.4	<0.01

■ Veterans
 ■ All Students–Adjusted Data

ns Not statistically significant.

## Average Number of Negative Consequences

Veterans by Average Number of Drinks and High-Risk Drinking



\*Statistically significant.

More than one-fifth (**21.9%**) of all veterans report having driven a car while under the influence of alcohol or drugs. Among all veterans, **17.4%** report missing a class and **17.8%** report performing poorly on a test or project as a result of alcohol/drug use.

For the majority of the reported negative consequences, the difference in rates between veterans and the adjusted student data is not statistically significant.

A strong association exists between the average number of drinks veterans consumed per week and the total number of reported negative consequences they experienced over the past 12 months ( $p < 0.001$ ). An association also exists between engaging in high-risk drinking within the past two weeks and reported negative consequences ( $p < 0.001$ ).

The adjusted aggregate survey data from all students show the same relationships between average number of drinks consumed per week, engagement in high-risk drinking, and reported negative consequences.

Veterans were asked if they would call 911 when someone “passes out” due to alcohol/drug use and they are unable to wake the individual. In an example of a situation in which 911 must be called, **63.4%** of all veterans report they would be “very likely” to call for emergency assistance.

According to the adjusted aggregate survey data, **61.3%** of all students report they would be “very likely” to call for emergency assistance if they found someone passed out due to alcohol/drug use.

The rates for the negative consequences identified are generally three to five times higher among veterans who have engaged in high-risk drinking compared to veterans who have not engaged in high-risk drinking. Approximately two out of five (**43.2%**) veterans who have engaged in high-risk drinking have driven while intoxicated one or more times in the past 12 months.

Similar results are seen in the adjusted aggregate data from the 2008 College Student Health Survey, with **44.7%** of all students who engage in high-risk drinking behavior also reporting they have driven while intoxicated within the past 12 months.

The rate for any marijuana use within the past 12 months is **10.6%** for all veterans who completed the 2008 College Student Health Survey. This rate is lower than the past-12-month marijuana use rate reported among all students in the adjusted aggregate data ( $p < 0.0001$ ).

**Definition:**  
**Past-12-Month Marijuana Use**  
Any marijuana use within the past year.

### Likelihood of Calling 911 in an Alcohol/Drug-Related Situation

Veterans

Response	Percent		
	All Veterans	Did Not Use Alcohol Within the Past 30 Days	Did Use Alcohol Within the Past 30 Days
Very Likely	63.4	78.7	58.7
Somewhat Likely	20.2	13.8	22.2
Somewhat Unlikely	9.5	4.3	11.1
Very Unlikely	6.9	3.2	8.0

### High-Risk Drinking and Selected Consequences<sup>†</sup>

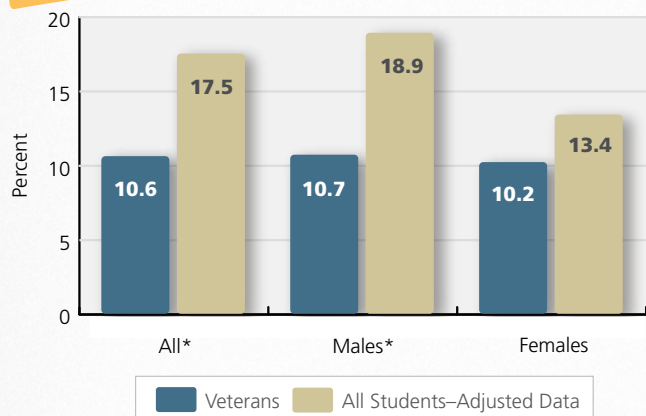
Veterans

Negative Consequences	Percent		
	All Veterans	Non-HRD	HRD
Driven While Intoxicated	21.9	8.3	43.2
Argument	18.0	8.5	32.8
Poor Test/Project	17.8	8.1	32.9
Missed Class	17.4	9.1	30.3
Been Taken Advantage of Sexually (Includes Males and Females)	1.4	1.4	1.3

<sup>†</sup> Note: The rate for high-risk drinking is based on behavior in the past two weeks while the rate for negative consequences is based on reported experiences within the previous 12-month period.

### Marijuana Use—Past 12 Months

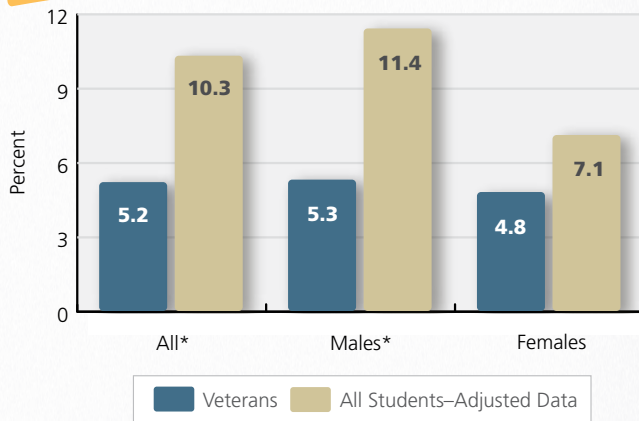
Veterans and All Students by Gender



\*Statistically significant.

## Marijuana Use—Current

Veterans and All Students by Gender



\*Statistically significant.

The *current marijuana use* rate is lower among veterans compared to the rate obtained from the adjusted aggregate data from all students who completed the 2008 College Student Health Survey (**5.2%** vs. **10.3%**, respectively,  $p < 0.0001$ ).

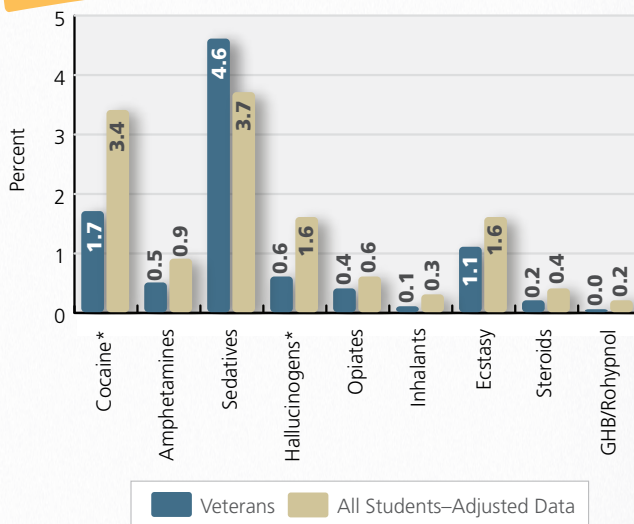
### Definition:

#### Current Marijuana Use

Any marijuana use within the past 30 days.

## Selected Drug Use—Past 12 Months

Veterans and All Students



\*Statistically significant.

The illicit drugs most commonly used by veterans are sedatives (**4.6%**), cocaine (**1.7%**), and ecstasy (**1.1%**). Among veterans, **6.4%** report having used at least one of the nine listed illicit drugs.

Veterans have lower rates of using all other drugs except sedatives compared to all students in the adjusted aggregate survey data. Among all students, **7.3%** report having used at least one of the listed illicit drugs within the past 12 months.



# Results

## Personal Safety and Financial Health

Though many efforts are made to reduce violence and victimization on campus, these unfortunate events still occur. Current data show that almost one in six (17.6%) women and one in 33 (3.0%) men in the United States have been victims of rape or attempted rape in their lifetime.<sup>20</sup> Based on estimates by the National Institute of Justice, 20.0% of American women experience rape or attempted rape while in college, but fewer than 5.0% of college rape victims report the incident to the police.<sup>21</sup>

Among females in the military the rates of exposure to sexual violence range from 43.0% for experiencing rape or attempted rape to 63.0% of females reporting they experienced physical sexual harassment.<sup>22</sup>

Financial health is another area of concern. More than four in five (83.0%) college students in the United States have at least one credit card, and nearly one half (47.0%) have four or more credit cards.<sup>23</sup> The average credit card debt per U.S. college student is \$2,327.<sup>23</sup> Unfortunately, research and statistics related to credit card use and credit card debt among veterans are lacking.

Gambling represents one possible obstacle to achieving and maintaining financial health. Gambling is a form of entertainment for many people. Approximately 68.0% of the U.S. adult population has gambled legally within the past year, and more than two fifths (41.9%) of college students report participating in some type of gambling activity in the previous school year.<sup>24,25</sup> However, for some individuals, gambling becomes a problem. Nationally, between 1.6% and 3.4% of the general population may experience a gambling problem within their lifetime.<sup>26</sup> The rates of problem gambling are even higher among veterans of a similar age, especially among veterans being treated for post-traumatic stress disorder.<sup>26</sup>

Based on data from the 2008 College Student Health Survey, female veterans report experiencing sexual assault within their lifetime at a higher rate than male veterans (**43.5%** vs. **7.4%**, respectively,  $p < 0.0001$ ). The rate for female veterans is significantly higher than the rate obtained from the adjusted aggregate data from all female students who completed they survey (**43.5%** vs. **29.8%**, respectively,  $p = 0.0001$ ).

Similar to the gender difference seen in the rates of sexual assault within their lifetime, the past-12-month rate for experiencing a sexual assault is higher among female veterans than among male veterans (**6.0%** vs. **2.2%**, respectively,  $p < 0.05$ ).

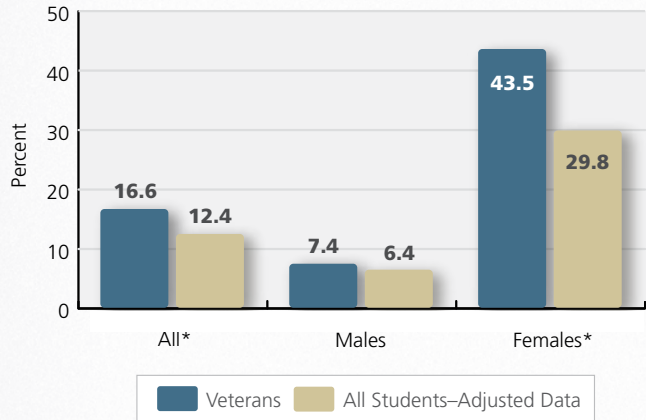
### Sexual Assault—Lifetime

Veterans and All Students by Gender

Sexual assault is defined as answering yes to at least one of the following two questions:

Within your lifetime, have you:

- Experienced actual or attempted sexual intercourse without your consent or against your will?
- Experienced actual or attempted sexual touching without your consent or against your will?



\*Statistically significant.

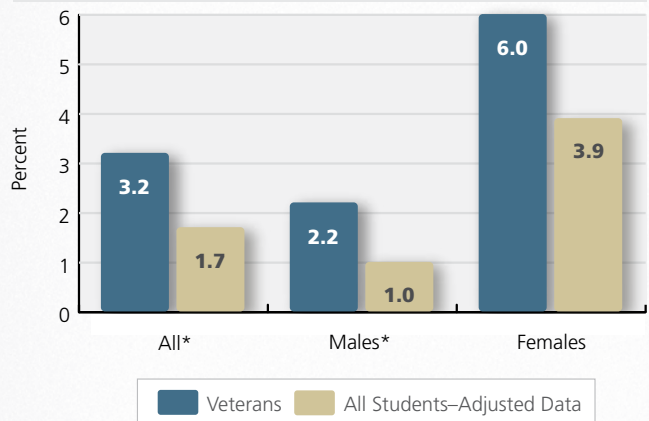
### Sexual Assault—Past 12 Months

Veterans and All Students by Gender

Sexual assault is defined as answering yes to at least one of the following two questions:

Within the past 12 months, have you:

- Experienced actual or attempted sexual intercourse without your consent or against your will?
- Experienced actual or attempted sexual touching without your consent or against your will?



\*Statistically significant.



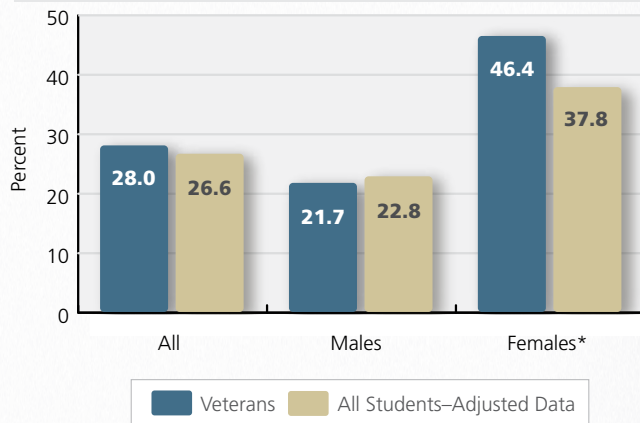
## Domestic Violence—Lifetime

Veterans and All Students by Gender

Domestic violence is defined as answering yes to at least one of the following two questions:

Within your lifetime, have you:

- Been slapped, kicked, or pushed by your significant other or spouse/partner?
- Been hurt by threats, “put-downs,” or yelling by your significant other or spouse/partner?



\*Statistically significant.

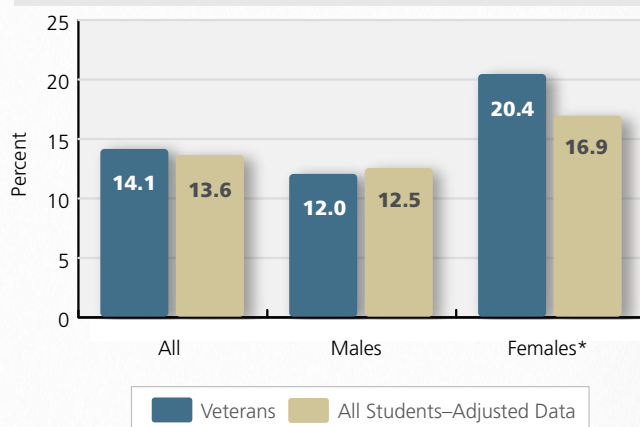
## Domestic Violence—Past 12 Months

Veterans and All Students by Gender

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\*Statistically significant.

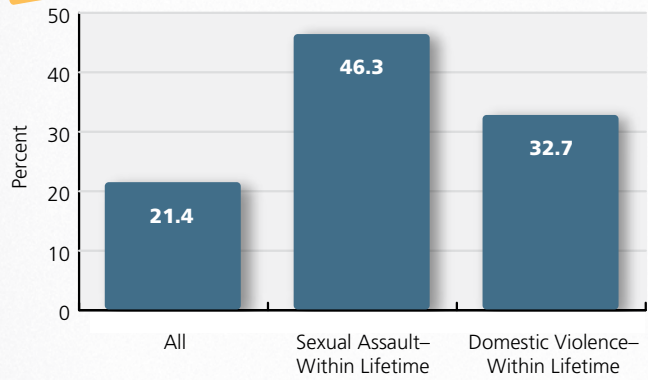
Based on data from the 2008 College Student Health Survey, female veterans report experiencing domestic violence within their lifetime at a higher rate than male veterans (**46.4%** vs. **21.7%**, respectively,  $p < 0.0001$ ).

The rate for female veterans is higher than the rate obtained from the adjusted aggregate data from all female students who completed the survey (**46.4%** vs. **37.8%**, respectively,  $p < 0.05$ ).

The past-12-month rate for experiencing a domestic violence is also higher among female veterans than among male veterans (**20.4%** vs. **12.0%**, respectively,  $p < 0.01$ ). Analysis of the adjusted aggregate data shows that female veterans report experiencing domestic violence at a higher rate than all female students who completed the survey (**20.4%** vs. **16.9%**, respectively,  $p < 0.0001$ ).

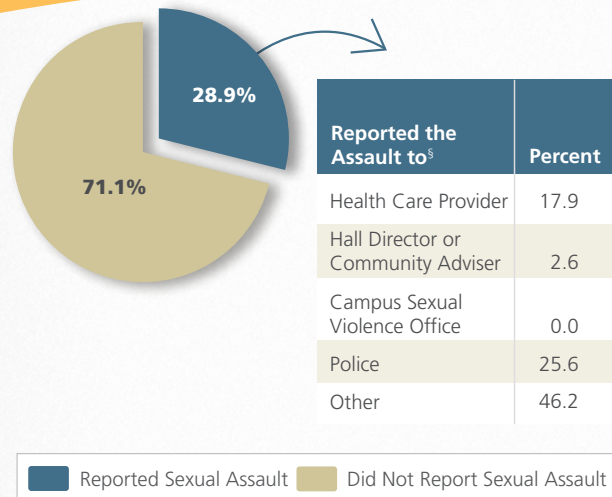
The rates of depression diagnosis within their lifetime are higher for both veterans who report being victims of sexual assault (**46.3%**) and veterans who report being victims of domestic violence (**32.7%**) than for all veterans (**21.4%**). This same relationship between experiencing sexual assault or domestic violence and depression diagnosis is seen in the adjusted aggregate data from all students who completed the 2008 College Student Health Survey data.

### Depression Rates—Lifetime Veterans by Sexual Assault/Domestic Violence



Of the veterans who indicate they have experienced a sexual assault within their lifetime (16.6%), only **28.9%** state they reported the incident. Of the veterans who reported the incident, **25.6%** reported it to the police and **17.9%** reported it to a health care provider.

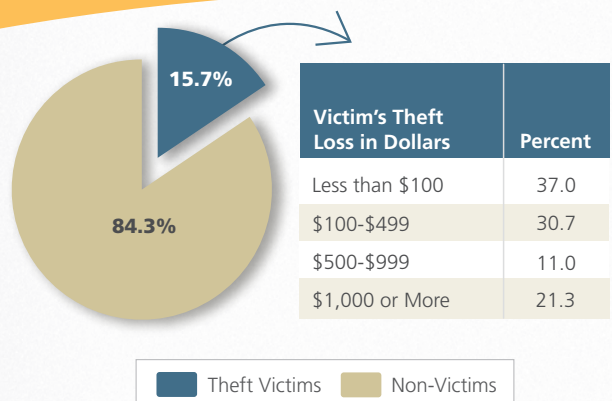
### Sexual Assault Reporting by Victims—Lifetime Veterans



<sup>§</sup> Note: Veterans may have reported incident to individuals in more than one category.

According to the adjusted aggregate survey data, among all students who report they have experienced a sexual assault within their lifetime (12.4%), only **29.2%** indicate they reported the incident.

### Victim of Theft—Past 12 Months Veterans

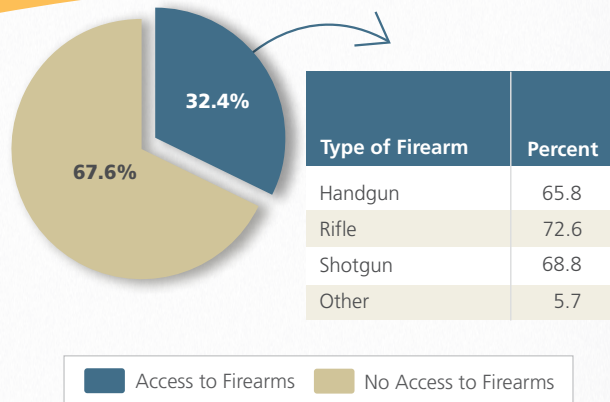


More than one in seven (**15.7%**) veterans who completed the 2008 College Student Health Survey report being a theft victim within the past 12 months. Of those who report experiencing a theft, **67.7%** cite the amount of the theft was \$499 or less.

According to the adjusted aggregate survey data, **15.1%** of all students indicate they were theft victims within the past 12 months.

## Access to Firearms

Veterans

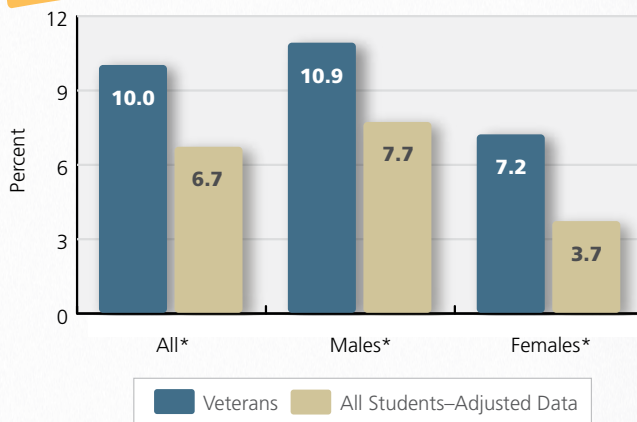


Nearly one-third (**32.4%**) of veterans report they have immediate access to a firearm, **36.3%** for males and **21.3%** for females. The adjusted aggregate survey data show that **18.5%** of all students report having immediate access to a firearm.

Among those who report having access to a firearm, veterans report a higher rate of access to a handgun compared to all students who completed the survey (**65.8%** vs. **46.4%**, respectively,  $p < 0.0001$ ).

## Physical Fight—Past 12 Months

Veterans and All Students by Gender



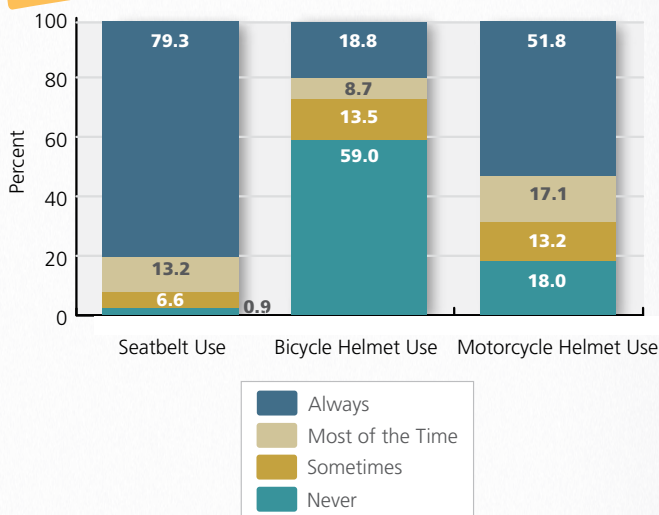
\*Statistically significant.

Male veterans are more likely to report having engaged in a physical fight over the past 12 months than female veterans but the difference is not statistically significant (**10.9%** vs. **7.2%**, respectively).

The rate of engaging in a physical fight within the past 12 months is higher among veterans than among all students in the adjusted aggregate survey data (**10.0%** vs. **6.7%**, respectively,  $p < 0.001$ ).

## Helmet and Seatbelt Use—Past 12 Months

Veterans



Among veterans who rode in a car, **92.5%** report wearing a seatbelt always or most of the time while in the car. Only approximately two-thirds (**68.9%**) of veterans who rode a motorcycle report they wear a helmet always or most of the time while on the motorcycle.

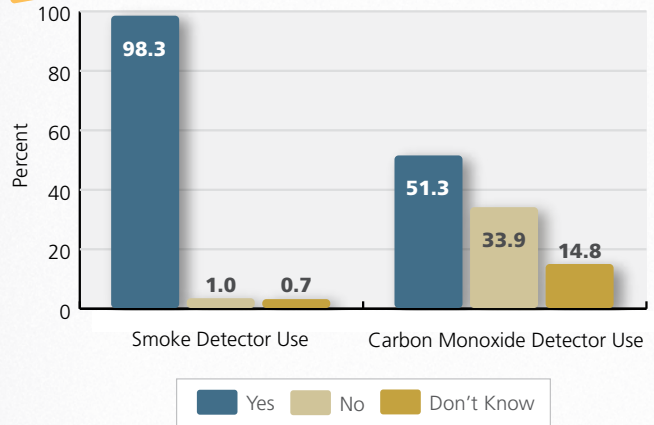
According to the adjusted aggregate survey data, **91.0%** of all students report wearing a seatbelt always or most of the time while in a car.

Nearly all (**98.3%**) veterans who completed the 2008 College Student Health Survey report having a smoke detector in their place of residence, whereas only **51.3%** of veterans report having a carbon monoxide detector.

According to the adjusted aggregate survey data, **97.3%** of all students report having a smoke detector in their place of residence, and **48.8%** of all students report having a carbon monoxide detector.

### Smoke Detector and Carbon Monoxide Detector Present in Residence

Veterans



More than two-fifths (**41.7%**) of veterans report experiencing at least one injury over the past 12 months. The injuries most commonly reported during this period are due to falls and miscellaneous causes.

Analysis of the adjusted aggregate data from the 2008 College Student Health Survey indicates that **38.9%** of all students report experiencing at least one injury over the past 12 months.

### Injuries Sustained—Past 12 Months

Veterans

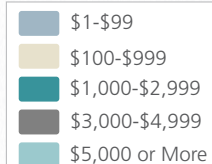
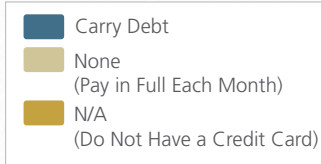
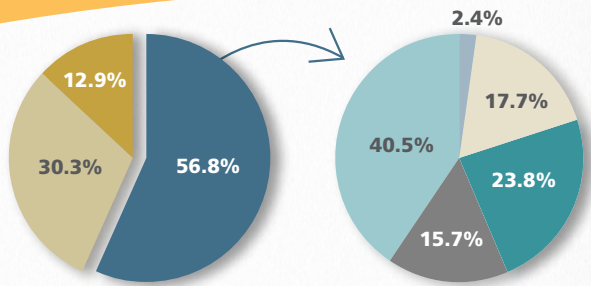
Type of Injury	Percent		p-value
Assaulted by Another Person (Nonsexual)	3.3	2.2	<0.05
Burned by Fire or a Hot Substance	5.9	5.4	ns
Motor Vehicle Related	3.1	2.4	ns
Team Sports	6.6	8.6	ns
Individual Sports	9.2	7.4	ns
Bicycle Related	2.0	1.4	ns
In-line Skating	0.5	0.6	ns
Skate Boarding	0.5	0.4	ns
Falls	9.5	10.4	ns
Other	17.6	14.6	<0.05
Not Applicable—I Was Not Injured	58.3	61.1	ns



<sup>ns</sup> Not statistically significant.

## Current Credit Card Debt

Veterans



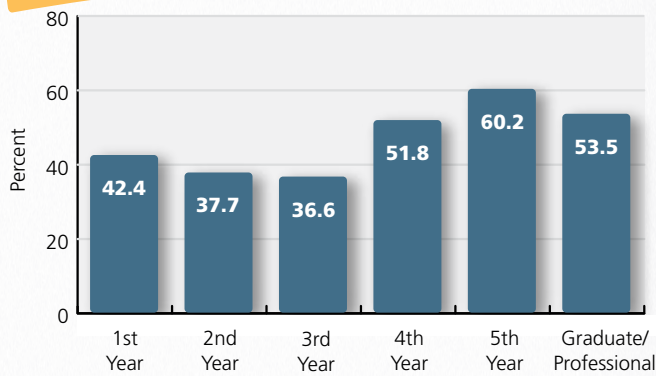
Almost three-fifths (**56.8%**) of all veterans report carrying some level of credit card debt over the past month, which is a rate similar to that found in the adjusted aggregate survey data among all students (**55.1%**). However, among those who report carrying some monthly credit card debt, veterans report a higher rate of carrying a debt of \$1,000 per month or more compared to all students (**80.0%** vs. **73.2%**, respectively,  $p < 0.01$ ).

### Definition: Current Credit Card Debt

Any unpaid balance at the end of the past month.

## High Credit Card Debt and Class Status

Veterans



The rate of *high credit card debt* for veterans who completed the 2008 College Student Health Survey ranges from **36.6%** among third-year students to **60.2%** among fifth-year students.

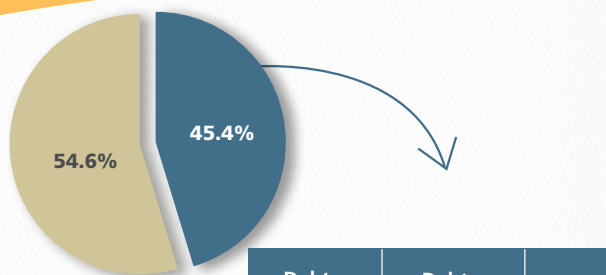
The adjusted aggregate data from all students who completed the survey shows that the rate of high credit card debt ranges from **33.3%** among second-year students to a high of **49.0%** among fifth-year students.

### Definition: High Credit Card Debt

A monthly debt of \$1,000 or more.

## Impact of Credit Card Debt

Veterans



	Debt = \$1,000 or More/Month	Debt = Less Than \$1,000/Month	p-value
Engage in Gambling—Past 12 Months	58.6%	47.2%	0.001
30+ Hours of Pay/Week	42.0%	25.0%	<0.0001



Veterans who carry high credit card debt work more hours for pay per week and have a higher rate of engaging in gambling than veterans who carry no or low credit card debt.

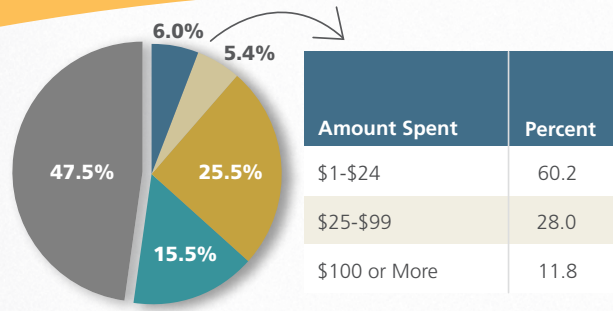
A similar trend exists among all students in the adjusted aggregate data, with lower rates of engaging in gambling and fewer hours worked for pay per week occurring among students who carry no or low credit card debt.

More than half (**52.5%**) of veterans who completed the 2008 College Student Health Survey report engaging in gambling over the past 12 months. According to the adjusted aggregate survey data, **51.6%** of all students report engaging in gambling over the past 12 months.

Among those who report gambling within the past 12 months, **11.8%** of veterans compared to **8.5%** of all students who completed the survey report spending \$100 or more per month ( $p < 0.05$ ).

### Gambling Frequency—Past 12 Months

Veterans



# Results

## Nutrition and Physical Activity

Research shows that young adults in the United States generally eat fewer fruits and vegetables but are more physically active compared to older adults.<sup>3,27</sup> Young adults between the ages of 18 and 24 (30.1%) are slightly less likely than all adults (32.6%) to eat fruits two or more times per day. Fewer young adults (20.9%) than all adults (27.2%) eat vegetables three or more times per day.<sup>27</sup> Young adults between the ages of 18 and 27 report consuming breakfast an average of 3.1 days per week and consuming fast food an average of 2.5 days per week.<sup>28</sup> The rate of obesity among young adults ages 18 to 29 is 17.7%.<sup>29</sup>

Nationwide, nearly all young adults between the ages of 18 and 24 (89.1%) report participating in at least one physical activity during the last month; by comparison, the participation rate for all adults is 76.1%.<sup>3</sup> Approximately three out of five (59.4%) 18- to 24-year-olds report engaging in at least 30 minutes of moderate physical activity five or more days per week or at least 20 minutes of vigorous physical activity three or more days per week; for all adults, the rate is 48.7%.<sup>3</sup> Young adults 18 to 24 (40.0%) also are more likely to engage in at least 20 minutes of vigorous physical activity three or more days per week than all adults (27.4%).<sup>3</sup>

Body mass index (BMI) is a common and reliable indicator of body fatness.<sup>17</sup> BMI is based on a mathematical formula that takes into account both a person's height and weight. BMI equals the weight in kilograms divided by the height in meters squared (BMI = kg/m<sup>2</sup>). The table to the right presents weight categories based on BMI ranges.

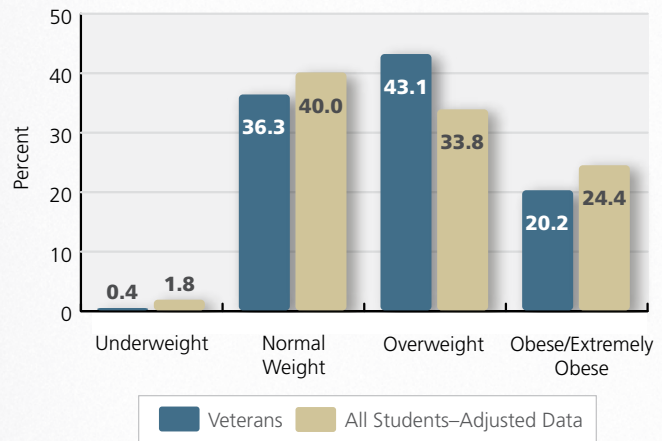
More than three-fifths (**63.3%**) of all veterans who completed the 2008 College Student Health Survey fall within the overweight and obese/extremely obese categories compared to **58.2%** of all students who completed the survey (p<0.01). Calculated BMI is based on self-reported height and weight.

The average body mass index for male veterans is **27.2** compared to **25.8** for female veterans (p<0.0001). Both these averages fall within the overweight category. Approximately two-thirds (**68.7%**) of male veterans and nearly one-half (**47.3%**) of female veterans fall within the overweight or obese/extremely obese categories.

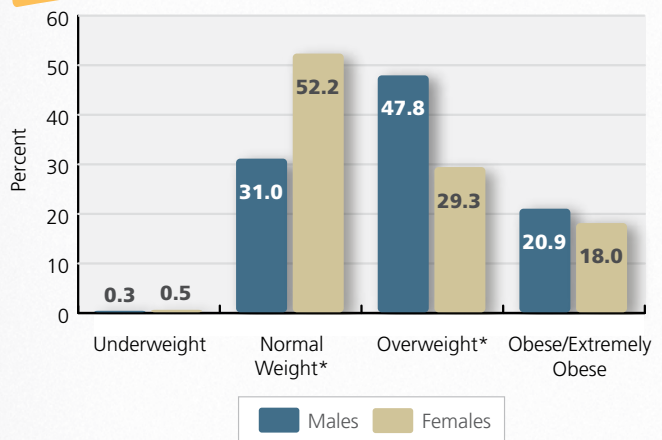
According to the adjusted aggregate survey data, the average BMI for all males is **27.3**, and the average BMI for all females is **26.4**.

### BMI Category Veterans and All Students

BMI Range	Weight Category
Less Than 18.5	Underweight
18.5 to 24.9	Normal Weight
25.0 to 29.9	Overweight
30.0 to 39.9	Obese
40.0 and Greater	Extremely Obese



### BMI Category Veterans by Gender

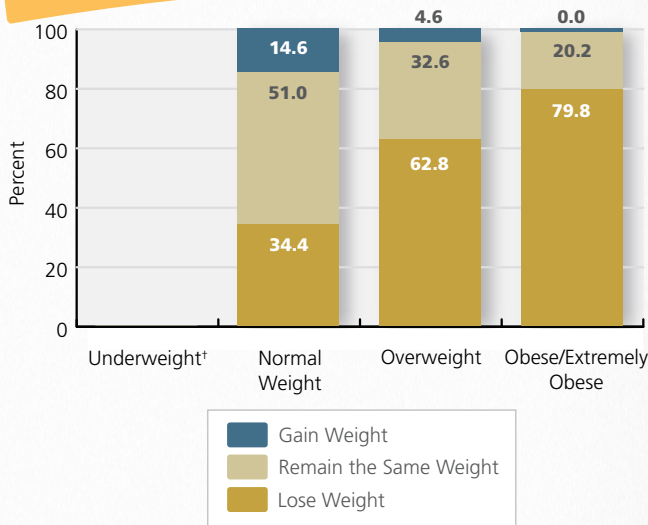


\*Statistically significant.



## Weight-Related Goals

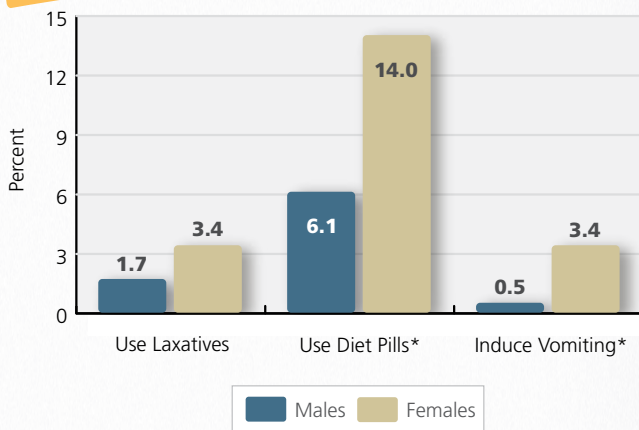
Veterans by BMI Category



† Insufficient data.

## Engagement in Weight-Related Behavior

Veterans by Gender



\*Statistically significant.

## Engagement in Weight-Related Behavior

Veterans by BMI Category

Behavior	Percent			
	Underweight†	Normal Weight	Overweight	Obese/Extremely Obese
Use Laxatives	–	1.7	2.0	3.1
Use Diet Pills	–	3.7	9.2	14.1
Induce Vomiting	–	0.7	1.2	1.8

† Insufficient data.

As BMI increases, the proportion of veterans who report they are attempting to lose weight also increases.

This same relationship between BMI and reported effort to lose weight also exists in the adjusted aggregate data from all students who completed the 2008 College Student Health Survey.

Veterans were asked to report their engagement in any of the following activities in an attempt to control their weight: laxative use, diet pill use, and induced vomiting.

Compared to male veterans, female veterans engage in diet pill use and induced vomiting at significantly higher rates. This same gender difference is also found among all students who completed the 2008 College Student Health Survey.

Veterans classified as obese/extremely obese report the highest rates of laxative use, diet pill use, and induced vomiting in order to control weight gain.

Analysis of the adjusted aggregate data from the 2008 College Student Health Survey shows that students classified as obese/extremely obese report the highest rates of laxative and diet pill use.

As with other weight-related behaviors, female veterans who completed the 2008 College Student Health Survey engage in binge eating at a higher rate than male veterans ( $p=0.0001$ ).

Examining the adjusted aggregate data from all students who completed the survey shows a similar gender difference in reported binge eating behavior.

The highest rate of reported binge eating behavior occurs among veterans classified within the obese/extremely obesity weight category.

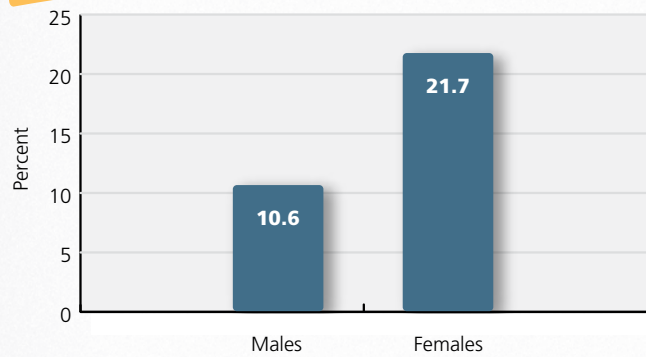
According to the adjusted aggregate survey data, the highest rate of reported binge eating behavior among all students who completed the 2008 College Student Health Survey also occurs among those with BMIs that place them within the obese/extremely obese weight category.

Veterans with BMIs that place them within the overweight category have the highest rate of never eating breakfast within the past seven days. The highest rates of fast food consumption and eating at a restaurant at least once a week within the past 12 months are found among veterans classified as obese/extremely obese.

The adjusted aggregate data show that among all students who completed the 2008 College Student Health Survey, students classified as underweight have the highest rate of never eating breakfast within the past seven days.

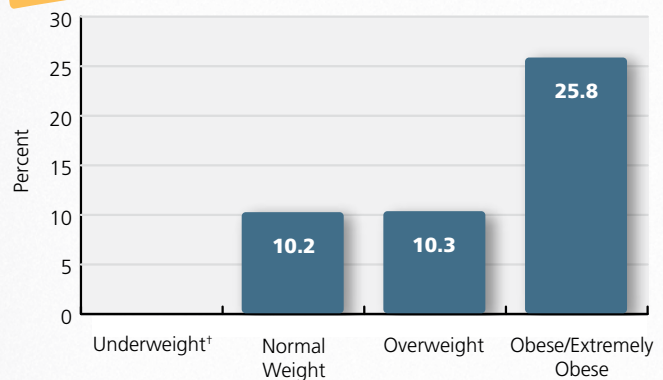
### Engagement in Binge Eating Behavior—Past 12 Months

Veterans by Gender



### Engagement in Binge Eating Behavior—Past 12 Months

Veterans by BMI Category



† Insufficient data.

### Meal Patterns

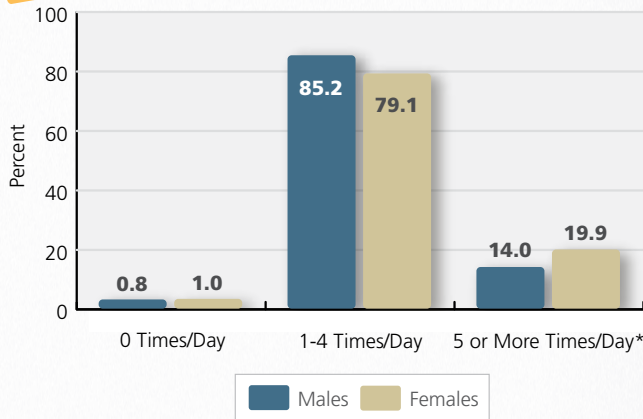
Veterans by BMI Category

Behavior	Percent			
	Underweight†	Normal Weight	Overweight	Obese/Extremely Obese
<b>Breakfast Consumption (Past 7 Days)</b>				
0 Days/Week	–	6.1	7.8	5.5
1-3 Days/Week	–	31.8	31.8	33.2
4-7 Days/Week	–	62.1	60.4	61.3
<b>Fast Food Consumption (Past 12 Months)</b>				
1-2 Times/Month or Less	–	57.5	50.7	39.3
Once/Week or More	–	42.5	49.3	60.7
<b>Eat at Restaurant (Past 12 Months)</b>				
1-2 Times/Month or Less	–	49.3	47.8	45.9
Once/Week or More	–	50.7	52.2	54.1

† Insufficient data.

### Fruit and Vegetable Consumption—Per Day

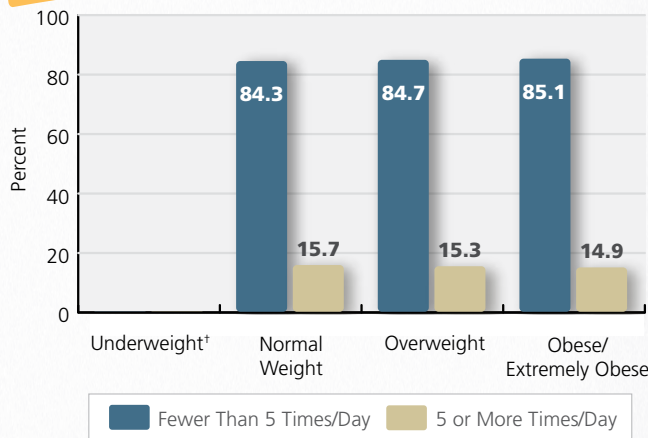
Veterans by Gender



\*Statistically significant.

### Fruit and Vegetable Consumption—Per Day

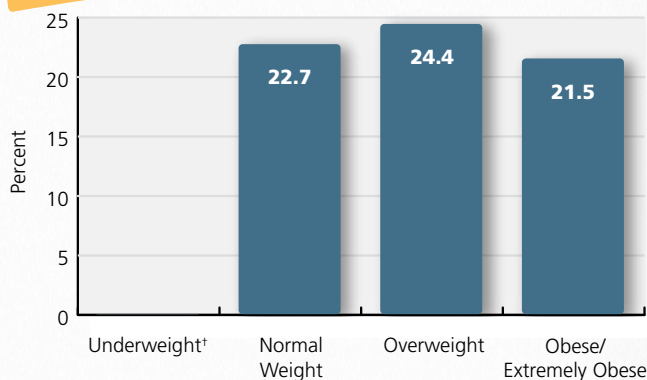
Veterans by BMI Category



† Insufficient data.

### Daily Consumption of Regular Soda

Veterans by BMI Category



† Insufficient data.

Only **15.4%** of all veterans consume fruits and vegetables five or more times per day. Male veterans consume fruits and vegetables on average **2.9** times per day, and female veterans consume them on average **3.3** times per day.

The adjusted aggregate survey data show that the average number of times per day fruits and vegetables were consumed is **2.9** times for all males and **3.0** times for all females.

Across all BMI categories, the majority of veterans (ranging from **84.3%** of normal weight veterans to **85.1%** of obese/extremely obese veterans) eat fruits and vegetables fewer than five times per day.

According to the adjusted aggregate survey data, the percentage of all students that eat fruits and vegetables fewer than five times per day ranges from **84.3%** among obese/extremely obese students to **90.8%** among underweight students.

Across all BMI categories, veterans report similar rates of daily consumption of regular soda. The number of students who consume regular soda on a daily basis does not reflect the actual quantity of soda consumed per day.

The adjusted aggregate survey data from all students shows that the rate of daily consumption of regular soda ranges from **22.3%** among normal weight students to **34.7%** among underweight students.

Students were asked several questions related to their physical activity level. The two survey questions that relate to recommendations outlined by the CDC (see CDC's recommendations listed at right) are:

*In the past seven days, how many hours did you spend doing the following activities?*

- *Strenuous exercise (heart beats rapidly)*
- *Moderate exercise (not exhausting)*

Based on their response to the two questions, students were classified into one of four physical activity levels (zero, low, moderate, or high). The moderate and high classifications meet the CDC's recommended level of physical activity.

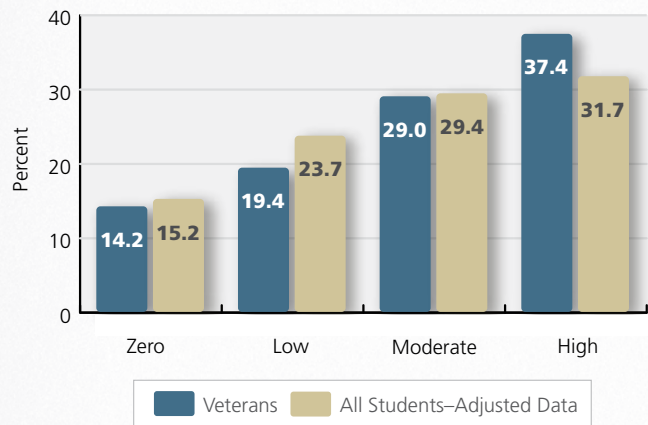
Approximately two-thirds (**66.4%**) of all veterans report levels of physical activity that place them in the moderate or high classification, meeting the CDC's recommendations, compared to only **61.1%** of all students who completed the survey ( $p < 0.01$ ).

## Physical Activity Level

Veterans and All Students

The Centers for Disease Control and Prevention's recommendations for adults are to:

- Engage in moderate-intensity physical activity for at least 30 minutes on five or more days of the week or
- Engage in vigorous-intensity physical activity for at least 20 minutes on three or more days per week.<sup>31</sup>

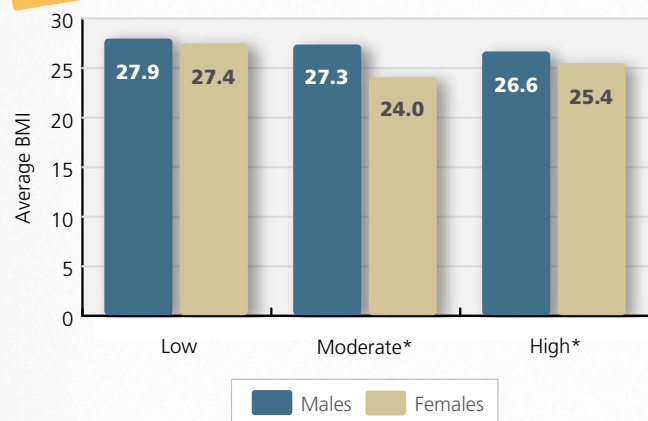


For male veterans, average BMI decreases as physical activity level increases. Female veterans who engage in a moderate or high level of physical activity have lower average BMIs than female veterans who engage in a low level of physical activity.

According to the adjusted aggregate data, average BMI for male and female students who completed the 2008 College Student Health Survey decreases as physical activity level increases.

## Average BMI

Veterans by Physical Activity Level and Gender



\*Statistically significant.

# Results

## Sexual Health

The majority of young adults in the United States are sexually active, with 68.1% of 18- to 19-year-old males, 75.2% of 18- to 19-year-old females, 84.4% of 20- to 24-year-old males, and 86.6% of 20- to 24-year-old females reporting they have had at least one sexual partner in the previous 12 months.<sup>32</sup> Among 20- to 24-year-olds, 52.7% of males and 30.9% of females who have had sexual contact in the previous year used a condom during their last sexual contact.<sup>32</sup> Due to a combination of behavioral, biological, and cultural reasons, sexually active young adults are at increased risk for acquiring sexually transmitted infections.<sup>33</sup> The higher prevalence of sexually transmitted infections (STIs) among young adults is the result of multiple barriers to quality STI prevention services, including lack of health insurance, inability to pay, lack of transportation, and concerns about confidentiality.<sup>33</sup>

Among 20- to 24-year-olds, 7.1% of males and 13.4% of females report having a sexually transmitted disease other than HIV within their lifetime.<sup>32</sup> The prevalence of chlamydia is 2.8% in females and 0.7% in males who are between the ages of 15 and 24.<sup>33</sup> Among all 15- to 24-year-olds, approximately 9.1 million cases of STIs and nearly 5,000 cases of HIV/AIDS are diagnosed annually.<sup>34</sup>

Choices relating to sexual behavior have the potential for significant, and often long-term, consequences. So important is the issue of sexual health, that in 2001, the U.S. Surgeon General listed “responsible sexual behavior” as one of the ten leading health indicators for the nation.<sup>6</sup>

Female veterans who completed the 2008 College Student Health Survey report a slightly higher but not statistically different rate of sexual activity within their lifetime compared to male veterans (**95.7%** vs. **94.2%**, respectively).

The adjusted aggregate data collected from all students who completed the survey show that **89.5%** of all students report engaging in sexual activity within their lifetime compared to **94.6%** among veterans ( $p < 0.0001$ ).

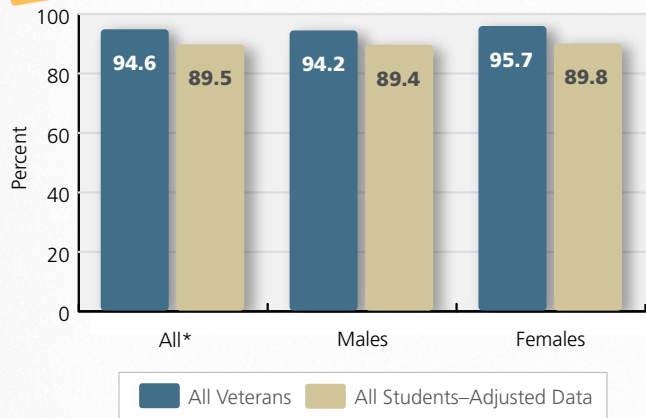
Female veterans who completed the survey report a slightly lower but not statistically different rate of sexual activity within the past 12 months compared to male veterans (**84.1%** vs. **87.3%**, respectively).

The adjusted aggregate data collected from all students who completed the 2008 College Student Health Survey shows that **82.1%** of all students report engaging in sexual activity within their lifetime compared to **86.5%** of veterans ( $p < 0.01$ ).

On average, veterans had **2.6** sexual partners over the past 12-month period compared to **2.1** sexual partners among all students who completed the 2008 College Student Health Survey ( $p < 0.05$ ). The average number of sexual partners is based on the experience of all veterans and students, both those who were sexually active and those who were not sexually active.

### Sexually Active–Lifetime

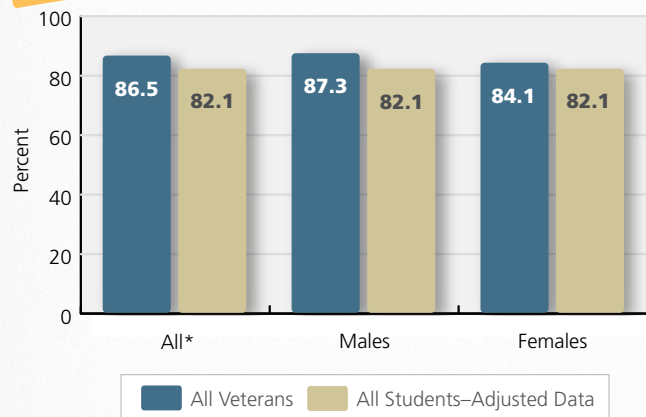
Veterans by Gender



\*Statistically significant.

### Sexually Active–Past 12 Months

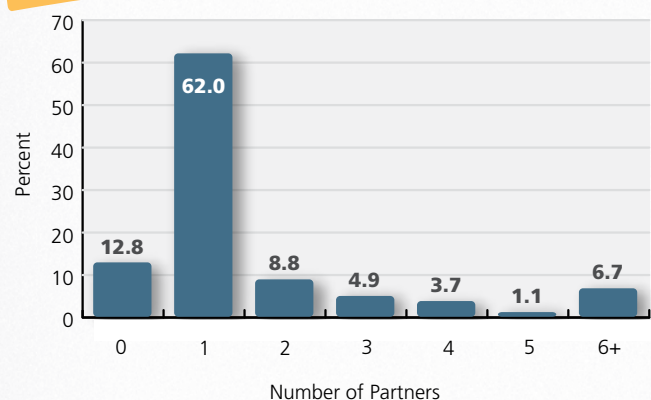
Veterans by Gender



\*Statistically significant.

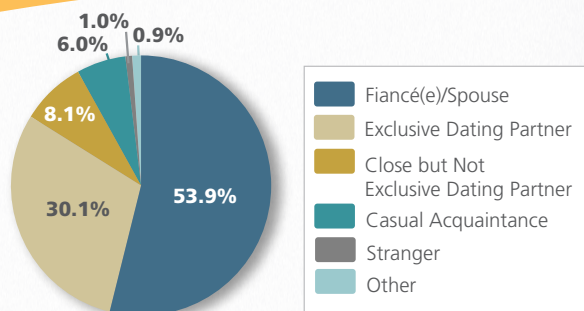
### Number of Sexual Partners–Past 12 Months

Veterans



### Most Recent Sexual Partner—Past 12 Months

Veterans, Sexually Active



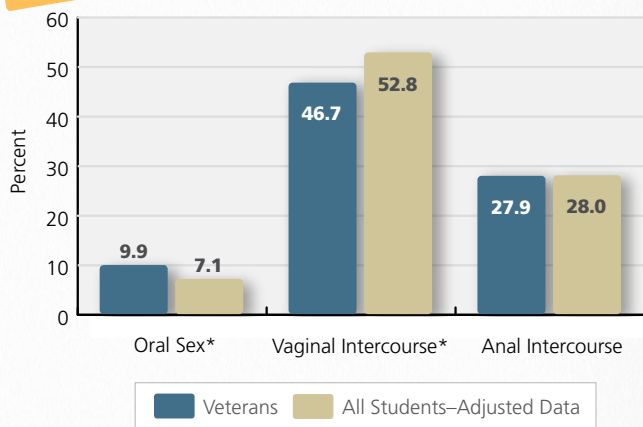
Among veterans who were sexually active within the past 12 months, more than four out of five (**84.0%**) report that their most recent sexual partner was either a fiancé(e)/spouse or an exclusive dating partner.

Similar to the data from veterans, the adjusted aggregate survey data show that **84.2%** of all students report their most recent sexual partner was either a fiancé(e)/spouse or an exclusive dating partner.

### Condom Use

Veterans, Sexually Active Within Lifetime

(Does not include those who are married or with a domestic partner.)



\*Statistically significant.

According to the adjusted aggregate data, the rate of condom use during last vaginal intercourse was higher among all sexually active students than among sexually active veterans ( $p < 0.05$ ). The rates of condom use during last anal intercourse are similar among all students and among all veterans. The rate of condom use during last oral sex is lower among all students compared to veterans ( $p < 0.05$ ).

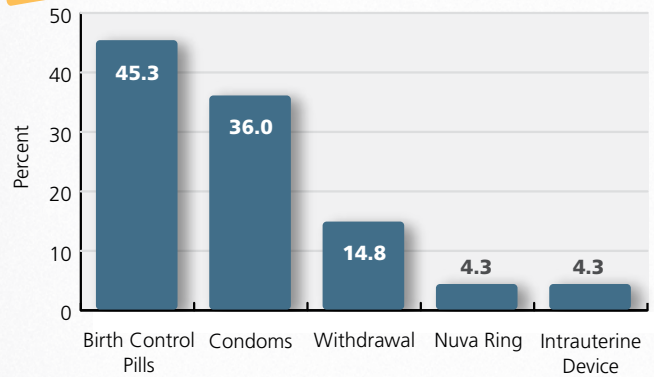
Of the 94.6% of veterans who report being sexually active within their lifetime, **95.0%** engaged in vaginal intercourse, **89.8%** engaged in oral sex, and **31.8%** engaged in anal intercourse.

The most common methods that veterans report using to prevent pregnancy the last time they engaged in vaginal intercourse are birth control pills (**45.3%**) and condoms (**36.0%**). The withdrawal method is reported by **14.8%** of veterans. Other methods of pregnancy prevention reported by veterans are identified in the table below.

The adjusted aggregate data from the 2008 College Student Health Survey shows that among all students, the most common methods used to prevent pregnancy the last time they engaged in vaginal intercourse are birth control pills (**44.0%**) and condoms (**42.1%**).

### Pregnancy Prevention Methods

Veterans



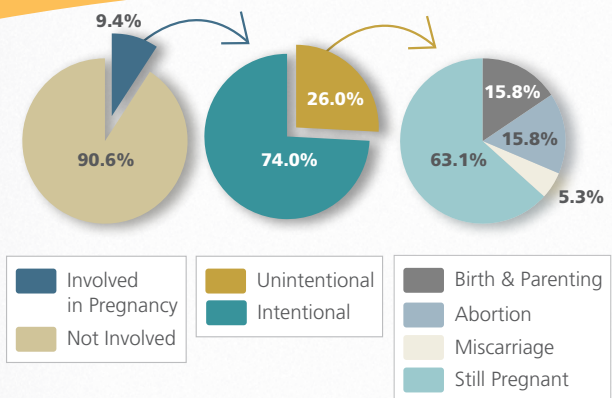
Type of Method	Percent Who Report Using Method
Fertility Awareness	2.6
Depo Provera	2.4
Diaphragm	1.1
Ortho Evra	1.0
Emergency Contraception	0.6
Sponge	0.2
Other	15.0
Don't Know/Can't Remember	2.7

A total of **9.4%** of veterans who completed the 2008 College Student Health Survey has been involved in a pregnancy within the past 12 months, which is similar to the **8.1%** of all students who completed the survey. Of those involved in a pregnancy, **26.0%** of veterans and **30.6%** of all students state it was unintentional.

Among the unintentional pregnancies reported by veterans, **15.8%** resulted in birth and parenting, **15.8%** resulted in abortion, and **5.3%** resulted in miscarriage. Among the unintentional pregnancies reported by all students who completed the survey, **26.3%** resulted in birth and parenting, **24.0%** resulted in abortion, **18.5%** resulted in miscarriage, and **0.3%** resulted in birth and adoption.

### Outcome of Unintended Pregnancy—Past 12 Months

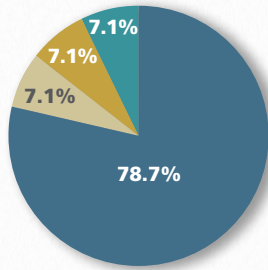
Veterans





### Emergency Contraception Use—Past 12 Months

Female Veterans, Sexually Active

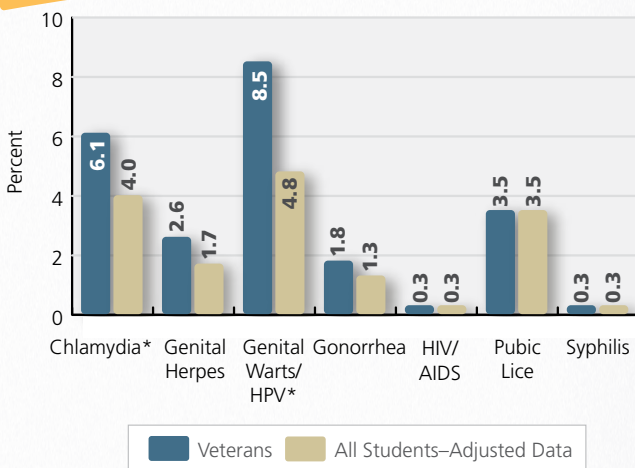


Within the past 12 months, **8.9%** of sexually active female veterans have used emergency contraception. Among those who used emergency contraception, **78.7%** have used it once within the past 12 months.

The adjusted aggregate survey data show similar use rates for female students: **9.3%** of all sexually active female students report having used emergency contraception within the past 12 months, and **72.3%** of those who have used emergency contraception used it one time.

### Sexually Transmitted Infections—Lifetime

Veterans and All Students, Sexually Active

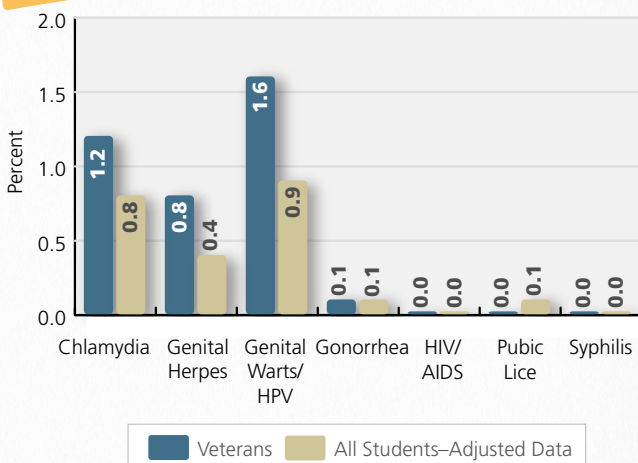


\*Statistically significant.

Among veterans who have been sexually active within their lifetime, **18.7%** report being diagnosed with a sexually transmitted infection within their lifetime compared to **12.4%** of all students who completed the survey ( $p < 0.0001$ ). Genital warts/human papilloma virus (**8.5%**) and chlamydia (**6.1%**) are the two most commonly diagnosed sexually transmitted infections among veterans.

### Sexually Transmitted Infections—Past 12 Months

Veterans and All Students, Sexually Active



Analysis shows that a total of **3.5%** of veterans who report having been sexually active within their lifetime also report having been diagnosed with a sexually transmitted infection within the past 12 months compared to **2.1%** of all students who completed the survey ( $p < 0.05$ ).



# Implications

## Healthy individuals make better students, and better students make healthier communities.

Results from the 2008 College Student Health Survey presented in this report document the health and health-related behaviors of veterans enrolled in the participating institutions. These data, therefore, offer a comprehensive look at the diseases, health conditions, and health-related behaviors that affect veterans attending Minnesota's postsecondary schools. Identifying these health-related issues is critical because the health of veterans attending Minnesota's colleges and universities affects their academic success.

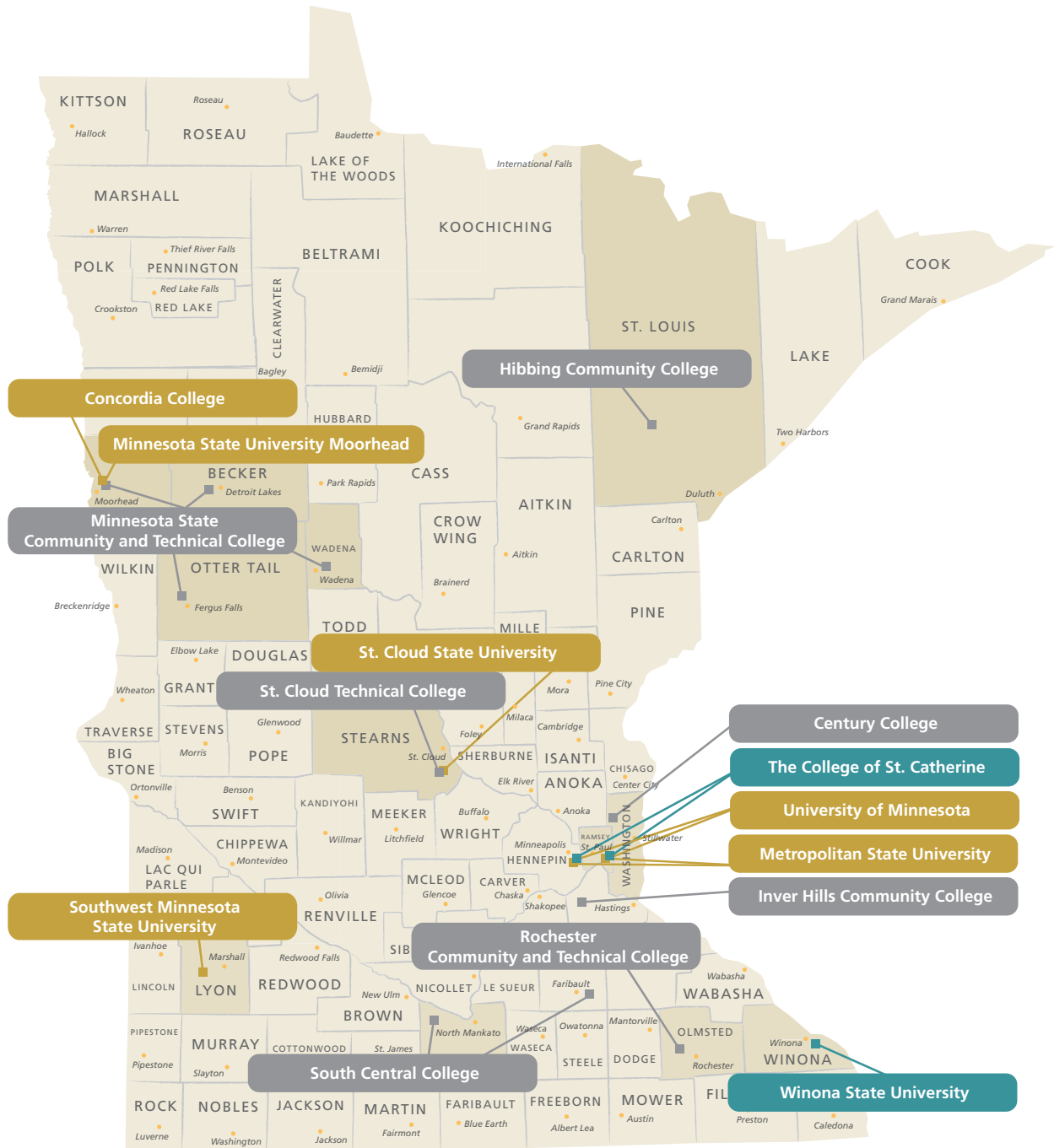
Veterans attending college may have completed their military service or they may be students who put their education on hold to serve and are now returning to school. In either situation, they differ from the traditional students who recently graduated from high school. Veterans attending college are often balancing work and family responsibilities, while trying to navigate the college environment. It is crucial for colleges and universities to serve our veterans by creating an environment that addresses their specific needs, not the least of which are the health and health-related behaviors affecting their ability to succeed.

Addressing the needs of veterans attending postsecondary institutions provides them a way to become leaders in their new civilian lives. Like many veterans of previous wars who became leaders of our country, this next generation of veterans, if given the opportunity for academic success, will also aspire to great leadership roles. Veterans developed leadership skills through their military training. What veterans lack is the educational degree that opens a myriad of leadership opportunities. The transition from military life to civilian life is challenging. Creating a college environment that supports veterans during the transition, through coordinating services to address the academic, financial, physical, and social needs of veteran students, will reduce the stress of the transition and help veterans succeed academically.



# Appendix 1

## Colleges and Universities Participating in the 2008 College Student Health Survey



Two-Year Schools	Location	Enrollment-Spring 2008*
Century College	White Bear Lake, MN	11,872
Hibbing Community College	Hibbing, MN	1,934
Inver Hills Community College	Inver Grove Heights, MN	7,644
Minnesota State Community and Technical College	Detroit Lakes, MN Fergus Falls, MN Moorhead, MN Wadena, MN	7,642
Rochester Community and Technical College	Rochester, MN	7,791
South Central College	Faribault, MN Mankato, MN	4,824
St. Cloud Technical College	St. Cloud, MN	5,053

\*Includes full-time and part-time students.

Four-Year Schools	Location	Enrollment-Spring 2008*
Concordia College	Moorhead, MN	2,801
Metropolitan State University	Minneapolis, MN St. Paul, MN	9,021
Minnesota State University Moorhead	Moorhead, MN	9,185
Southwest Minnesota State University	Marshall, MN	7,353
St. Cloud State University	St. Cloud, MN	19,671
University of Minnesota (Veterans Only)	Minneapolis, MN St. Paul, MN	362
Schools with Two-Year and Four-Year Programs	Location	Enrollment-Spring 2008*
The College of St. Catherine	Minneapolis, MN St. Paul, MN	4,907
Winona State University	Winona, MN	9,168

# Appendix 2

## 2008 College Student Health Survey Demographics Based on Student Response

	Veterans	All Students–Adjusted Data	All Students–Unadjusted Data
Average Age (Years)	29.5	29.3	26.3
Age Range (Years)	18-65	18-89	18-89
18-24 Years	31.7%	31.6%	60.8%
25 Years or Older	68.3%	68.4%	39.2%
Average GPA	3.32	3.33	3.32
<b>Class Status</b>			
First-Year Undergraduate	16.4%	14.1%	22.3%
Second-Year Undergraduate	19.0%	20.2%	21.2%
Third-Year Undergraduate	23.3%	20.9%	19.9%
Fourth-Year Undergraduate	17.4%	15.5%	15.0%
Fifth-Year Undergraduate	13.3%	15.5%	10.7%
Graduate or Professional	10.6%	13.8%	10.9%
<b>Gender</b>			
Male	74.4%	74.6%	30.8%
Female	25.5%	25.4%	69.0%
Transgender/Other	0.0%	0.0%	0.1%
Unspecified	0.1%	0.0%	0.1%
<b>Ethnic Origin</b>			
African American/Black	3.1%	6.0%	3.9%
American Indian/Alaskan Native	1.5%	1.3%	1.5%
Asian/Pacific Islander	3.7%	5.7%	5.0%
Latino/Hispanic	3.4%	2.3%	2.1%
Middle Eastern	0.2%	0.3%	0.4%
Caucasian/White	90.7%	85.6%	88.9%
Other	1.7%	2.0%	1.4%
<b>Current Residence</b>			
Residence Hall or Fraternity/Sorority	3.6%	5.5%	15.9%
Other	96.4%	94.5%	84.1%

# Glossary

***Current Alcohol Use***

Any alcohol use within the past 30 days.

***Current Credit Card Debt***

Any unpaid balance at the end of the past month.

***Current Marijuana Use***

Any marijuana use within the past 30 days.

***Current Tobacco Use***

Any use of tobacco in the past 30 days. Tobacco use includes both smoking and smokeless tobacco.

***High Credit Card Debt***

A monthly debt of \$1,000 or more.

***High-Risk Drinking***

Consumption of five or more alcohol drinks at one sitting within the past two weeks for both males and females. A drink is defined as a bottle of beer, wine cooler, glass of wine, shot glass of liquor, or mixed drink.

***Past-12-Month Alcohol Use***

Any alcohol use within the past year.

***Past-12-Month Marijuana Use***

Any marijuana use within the past year.





# References

1. American Council on Education. (2008). *ACE issue brief: Serving those who serve: Higher education and America's veterans*. Retrieved January 8, 2009, from [http://www.acenet.edu/Content/NavigationMenu/ProgramsServices/MilitaryPrograms/serving/Veterans\\_Issue\\_Brief\\_1108.pdf](http://www.acenet.edu/Content/NavigationMenu/ProgramsServices/MilitaryPrograms/serving/Veterans_Issue_Brief_1108.pdf).
2. Boynton Health Service. (2008). *Health and health-related behaviors, Minnesota postsecondary students*. Minneapolis, MN: Boynton Health Service, University of Minnesota.
3. Centers for Disease Control and Prevention. (2007). *Behavioral Risk Factor Surveillance System* [Survey data]. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved June 16, 2008, from <http://apps.nccd.cdc.gov/brfss>.
4. Schiller, J. S., Heyman, K. M., & Barnes, P. (2008). *Early release of selected estimates based on data from the January-September 2007 National Health Interview Survey*. Hyattsville, MD: National Center for Health Statistics. Retrieved June 16, 2008, from <http://www.cdc.gov/nchs/nhis.htm>.
5. Himmelstein, D. U., Lasser, K. E., McCormick, D., Bor, D. H., Boyd, J. W., & Woolhandler, S. (2007). Lack of health coverage among US veterans from 1987 to 2004. *American Journal of Public Health, 97*(12), 2199-2203.
6. U.S. Department of Health and Human Services. (2000). *Healthy People 2010: Understanding and improving health*. 2nd ed. Washington, D.C.: U.S. Government Printing Office.
7. Kessler, R. C., Chiu, W. T., Demler, O., Merikangas, K. R., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of twelve-month DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). *Archives of General Psychiatry, 62*(6), 617-627.
8. Substance Abuse and Mental Health Services Administration. (2007). *Results from the 2006 National Survey on Drug Use and Health: National findings*. Rockville, MD: Office of Applied Studies, NSDUH Series H-32, DHHS Publication No. SMA 07-4293.
9. Department of Defense Task Force on Mental Health. (2007). *An achievable vision: Report of the Department of Defense Task Force on Mental Health*. Falls Church, VA: Defense Health Board. Retrieved August 28, 2008, from <http://www.health.mil/dhb/mhtf/MHTF-Report-Final.pdf>.
10. American Psychological Association Presidential Task Force on Military Deployment Services for Youth, Families, and Service Members. (2007). *Military Deployment Services Task Force report: The psychological needs of U.S. military service members and their families: A preliminary report*. Retrieved August 28, 2008, from <http://www.apa.org/releases/MilitaryDeploymentTaskForceReport.pdf>.
11. Hoge, C., Auchterlonie, J. & Milliken, C. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *Journal of the American Medical Association, 295*(9), 1023-1032.
12. Grieger, T. A., Cozza, S. J., Ursano, R. J., Hoge, C., Martinez, P. E., Engel, C. C., & Wain, H. J. (2006). Post-traumatic stress disorder and depression in battle-injured soldiers. *American Journal of Psychiatry, 163*, 1777-1783.
13. Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2007). *Monitoring the Future national survey results on drug use, 1975-2006. Vol. II: College students and adults ages 19-45*. Bethesda, MD: National Institute on Drug Abuse, NIH Publication No. 07-6206.
14. Centers for Disease Control and Prevention. (2006, October 27). Tobacco use among adults—United States, 2005. *Morbidity and Mortality Weekly Report, 5*(42), 1145-1148.
15. Halperin, A. C. (2002, March). *State of the union: Smoking on US college campuses. A report for the American Legacy Foundation*. Washington, D.C. (unpublished, internal report).
16. Department of Veterans Affairs. (2003). *National Smoking and Tobacco Use Cessation Program*. VHA Directive 2003-042. Washington, DC: Department of Veterans Affairs. Retrieved August 29, 2008, from [http://www.publichealth.va.gov/documents/VHA\\_Directive\\_2003\\_042.pdf](http://www.publichealth.va.gov/documents/VHA_Directive_2003_042.pdf).
17. Substance Abuse and Mental Health Services Administration. (2005). *The National Survey on Drug Use and Health report: Alcohol use and alcohol-related risk behaviors among veterans*. Rockville, MD: Office of Applied Studies. Retrieved August 29, 2008, from <http://www.oas.samhsa.gov/2k5/vetsAlc/vetsAlc.htm>.
18. Forgas, L., Meyer, D., & Cohen, M. (1996). Tobacco use habits of naval personnel during Desert Storm. *Military Medicine, 161*, 165-168.
19. Substance Abuse and Mental Health Services Administration. (2005). *The National Survey on Drug Use and Health report: Substance use, dependence, and treatment among veterans*. Rockville, MD: Office of Applied Studies. Retrieved September 2, 2008, from <http://www.oas.samhsa.gov/2k5/vets.vets.htm>.
20. Tjaden, P. & Thoennes, N. (2006). *Extent, nature, and consequences of rape victimization: Findings from the National Violence Against Women Survey*. Washington, D.C.: National Institute of Justice, Report NCJ 210346.
21. Fischer, B. S., Cullen, F. T., & Turner, M. G. (2000). *The sexual victimization of college women*. Washington, D.C.: National Institute of Justice, Report NCJ 182369.
22. Fontana, A. & Rosenheck, R. (1998). Duty-related and sexual stress in the etiology of PTSD among women veterans who seek treatment. *Psychiatric Services, 49*, 658-662.
23. Nellie Mae. (2002). *Undergraduate students and credit cards: An analysis of usage rates and trends*. Retrieved June 16, 2008, from [http://www.nelliemae.com/pdf/ccstudy\\_2001.pdf](http://www.nelliemae.com/pdf/ccstudy_2001.pdf).

# References

24. LaBrie, R. A., Shaffer, H. J., LaPlant, D. A., & Wechsler, H. (2003). Correlates of college student gambling in the United States. *Journal of American College Health, 52*(2), 53–62.
25. National Research Council. (1999). *Pathological gambling: A critical review*. Washington D.C.: National Academy Press.
26. McCormick, R. (2007). *Position paper on gambling problems among veterans*. Retrieved on October 2, 2008, from <http://www.standup4vets.org/userfiles/file/9-17-07%20-%20Gambling%20Problem%20in%20Veterans%20-%20RM.pdf>.
27. Centers for Disease Control and Prevention. (2007, March 16). Fruit and vegetable consumption among adults—United States, 2005. *Morbidity and Mortality Weekly Report, 56*(10), 213–217.
28. Niemeier, H. M., Raynor, H. A., Lloyd-Richardson, E. E., Rogers, M. L., & Wing, R. R. (2006). Fast food consumption and breakfast skipping: Predictors of weight gain from adolescence to adulthood in a nationally representative sample. *Journal of Adolescent Health, 39*(6), 842–849.
29. Centers for Disease Control and Prevention. (2006, September 15). State-specific prevalence of obesity among adults—United States, 2005. *Morbidity and Mortality Weekly Report, 55*(36), 985–988.
30. Centers for Disease Control and Prevention. (2007). *About BMI for adults*. Retrieved June 18, 2008, from [http://www.cdc.gov/nccdphp/dnpa/bmi/adult\\_BMI/about\\_adult\\_BMI.htm#Interpreted](http://www.cdc.gov/nccdphp/dnpa/bmi/adult_BMI/about_adult_BMI.htm#Interpreted).
31. Centers for Disease Control and Prevention. (2008). *Physical activity for everyone*. Retrieved June 18, 2008, from <http://www.cdc.gov/nccdphp/dnpa/physical/everyone/recommendations/>.
32. Mosher, W. D., Chandra, A., & Jones, J. (2005). *Sexual behavior and selected health measures: Men and women 15-44 years of age, United States, 2002. Advance data from vital and health statistics (No. 362)*. Hyattsville, MD: National Center for Health Statistics.
33. Centers for Disease Control and Prevention. (2007, November). *Sexually transmitted disease surveillance, 2006*. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved June 16, 2008, from <http://www.cdc.gov/std/stats/toc2006.htm>.
34. Centers for Disease Control and Prevention. (2006, June 9). Youth risk behavior surveillance—United States, 2005. *Morbidity and Mortality Weekly Report Surveillance Summaries, 55*(SS-5), 1–108.



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