

# American College Health Association National College Health Assessment (ACHA-NCHA) Spring 2005 Reference Group Data Report (Abridged)

## The American College Health Association

**Abstract.** Assessing and understanding the health needs and capacities of college students is paramount to creating healthy campus communities. The American College Health Association-National College Health Assessment (ACHA-NCHA) is a survey instrument developed by the ACHA in 1998 to assist institutions of higher education in achieving this goal. The ACHA-NCHA contains approximately 300 questions assessing student health status and health problems, risk and protective behaviors, access to health information, impediments to academic performance, and perceived norms across a variety of content areas (eg, injury prevention; personal safety and violence; alcohol, tobacco, and other drug use; sexual health; weight, nutrition, and exercise; mental health). Twice a year, the ACHA compiles aggregate data from participating institutions in a reference group report for data comparison. Results from the Spring 2005 Reference Group ( $N = 54,111$ ) are presented in this article.

**Key Words:** American College Health Association-National College Health Assessment, assessment, college health, evidence-based, health behaviors, research, student learning, Web-based survey

According to the US Department of Education, there are more than 4,000 colleges and universities in the United States.<sup>1</sup> In fall of 2002, Title IV institutions in the United States enrolled 16.6 million students.<sup>2</sup> Of those, 86% were enrolled in undergraduate programs, 12% were enrolled in graduate programs, and 2% were enrolled in first-professional programs.

Since its inception in 1920, the American College Health Association (ACHA) has been dedicated to the health needs of students at colleges and universities. It is the principal leadership organization for the field of college health and provides services, communications, and advocacy to help its members advance the health of their campus communities.<sup>3</sup> Further information about the ACHA is available at [www.acha.org](http://www.acha.org).

In 1998, the ACHA initiated a work group to develop the ACHA-National College Health Assessment (ACHA-NCHA), a survey instrument designed to collect information on a broad range of students' health behaviors, health indicators, and perceptions. The development of the ACHA-NCHA was described in a previously published article.<sup>4</sup> From its inception in spring 2000 through the spring 2005 survey implementation, the ACHA has used the ACHA-NCHA to collect data from 244,203 college students at 395 institutions of higher education. Reliability and validity analyses of the ACHA-NCHA were described in a previously published article<sup>4</sup> and in an unpublished ACHA report.<sup>5</sup>

The ACHA-NCHA has ties to 2 other important documents distributed by the ACHA: *Standards of Practice for Health Promotion in Higher Education*<sup>6</sup> and *Healthy Campus 2010: Making It Happen*.<sup>7</sup> Standard 5 of the ACHA's *Standards of Practice* suggests that health promotion professionals in higher education conduct population-based assessments of students' health status, needs, and assets as a critical indicator of evidence-based practice.<sup>6</sup> The ACHA-NCHA supports the *Standards of Practice* by providing such a survey tool to create evidence-based approaches aimed at improving the health of college students. *Healthy Campus 2010* is a set of national health objectives that colleges and universities use to set goals for improving students' health.<sup>7</sup> By providing the necessary baseline data for many of the national objectives, the ACHA-NCHA supports *Healthy Campus 2010*, the ACHA companion document to *Healthy People 2010*.<sup>8</sup>

## METHODS

Seventy-eight US postsecondary institutions self-selected to participate in the Spring 2005 ACHA-NCHA. Students on those campuses completed 56,637 surveys. The ACHA-NCHA Spring 2005 Reference Group included data from

only those institutions that used random sampling techniques, which yielded a final data set consisting of 54,111 students on 71 campuses. The results for this reference group are presented in this article. Results from the spring 2003<sup>4</sup> and spring 2004<sup>9</sup> data collection periods were previously published.

Of the 71 campuses included in the Spring 2005 Reference Group, 38 were public colleges or universities and 33 were private institutions. The majority (67 of 71) were 4-year schools. Numbers of students enrolled in the participating schools varied—16 had fewer than 2,500 students; 7 had 2,500 to 4,999 students; 16 had 5,000 to 9,999 students; 15 had 10,000 to 19,999; and 17 schools had 20,000 or more students. Equally varied were the geographic locations of the reporting institutions—18 were in the Northeast, 14 were in the Midwest, 17 were in the South, and 22 were in the West. There was also variation in campus locations of participating institutions. Eleven schools were in urban areas with populations greater than 1,000,000; 19 schools were in urban areas with populations between 100,000 and 1,000,000; 24 schools were in suburban areas; 16 schools were in rural areas; and 1 school's self-described setting was "other."

Sampling strategies included a mix of randomized classrooms, randomized mailings, samples of all students (eg, all first-year students during orientation), and randomized Web-based surveying. The overall response proportion was 35.4%. Of the 71 schools in this reference group, 54 used the ACHA-NCHA Web version ( $n = 43,231$ , or 79.9% of the sample) and 17 used the ACHA-NCHA paper scan-form version of the survey ( $n = 10,880$ , or 20.1% of the sample). Researchers conducted a systematic evaluation to compare the ACHA-NCHA scan form with the Web-based ACHA-NCHA.<sup>10</sup> They observed statistically significant differences for every variable comparison because of the large size of the sample. They therefore evaluated the magnitude of the effect size using the contingency coefficient for crosstabulations and mean differences when conducting  $n$  tests. The results demonstrate, on average, a contingency coefficient of .05 among the 218 crosstabulations conducted and a mean difference of .33 among the 45  $t$  tests conducted. The evaluation indicated that the largest differences, albeit miniscule, were observed on 2 demographic and 4 perception variables. Online respondents were slightly younger, were more likely to live in campus housing, and estimated other student's alcohol use as higher than did those respondents who used the paper scan forms. Paper scan-form respondents estimated other students' cigarette use, Rohypnol (flunitrazepam) use, and their number of sexual partners as higher than did respondents who used the online version of the survey. Because the researchers observed so few meaningful differences in survey item comparisons, they combined data from paper and Web-based surveys in this report.

The ACHA scanned the paper surveys, hosted the ACHA-NCHA Web survey, and produced all reports for the participating institutions. The ACHA also compiled the Reference Group Report, the Executive Summary, and the

aggregate data set. Each participating campus was required to provide documentation of applicable institutional approval of survey research involving human subjects.

## RESULTS

This report offers information on a number of current and relevant health topics that affect the health and academic success of college students, such as substance use, sexual behaviors, weight and nutrition, violence, and physical and mental health. Several unique questions in the ACHA-NCHA provide data on health impediments to academic performance and sources and believability of health-related information. The ACHA-NCHA also provides insight into issues that affect the college student population that are not often captured, although they may influence students' health status (eg, hours spent working as volunteers, credit card debt). All percentages included in this report represent valid percentages.

### Demographic Characteristics

The Spring 2005 ACHA-NCHA contains a number of questions to obtain demographic information from college students. In addition, several questions are related to aspects of student life that may have an impact on health status, which are not often identified as typical health issues. The following are findings from these questions:

1. When asked if they had any kind of health insurance (including prepaid plans such as HMOs), 88.5% ( $n = 46,389$ ) of students responded "yes."

2. When asked how many hours a week they worked for pay or as volunteers, students reported the following: (1) 18.0% ( $n = 9,412$ ) worked between 1 and 9 hours a week for pay; (2) 18.8% ( $n = 9,849$ ) worked between 10 and 19 hours a week for pay; (3) 22.3% ( $n = 11,666$ ) worked 20 hours or more a week for pay; (4) 31.1% ( $n = 16,225$ ) volunteered between 1 and 9 hours a week; (5) 2.7% ( $n = 1,388$ ) volunteered between 10 and 19 hours a week; and (6) 1.3% ( $n = 668$ ) volunteered 20 hours or more a week.

3. Students with credit cards who were responsible for paying the balance described their credit-card debt during the past month as follows: (1) 70.9% ( $n = 36,782$ ) carried no credit-card debt in the past month, or paid the full amount; (2) 15.6% ( $n = 8,077$ ) carried between \$1 and \$999 in credit-card debt in the past month; (3) 4.4% ( $n = 2,262$ ) carried between \$1,000 and \$1,999 in credit-card debt in the past month; (4) 4.0% ( $n = 2,060$ ) carried between \$2,000 and \$3,999 in credit-card debt in the past month; (5) 2.1% ( $n = 1,084$ ) carried between \$4,000 and \$5,999 in credit-card debt in the past month; and (6) 3.1% ( $n = 1,616$ ) carried \$6,000 or more in credit-card debt in the past month.

See Table 1 for additional demographic characteristics. Table 2 lists the top 10 health impediments to academic performance, as reported by students.

### Health, Health Education, and Safety

In the Spring 2005 ACHA-NCHA survey, 8 questions addressed topics identified as health, health education, and

**TABLE 1. Demographic Characteristics of Participants (N = 54,111)**

Characteristic	Total	
	n	(%)
<b>Sex</b>		
Female	33,134	63.8
Male	18,777	36.2
<b>Age</b>		
18–20 years	25,387	48.3
21–29 years	23,268	44.3
≥ 30 years	3,902	7.4
<b>Year in school</b>		
1st year undergraduate	11,719	22.7
2nd year undergraduate	10,634	20.6
3rd year undergraduate	9,710	18.8
4th year undergraduate	7,987	15.5
5th year or more	2,418	4.7
Graduate	8,416	16.3
Adult special/other	738	1.4
Full-time student status	49,439	94.6
<b>Race or ethnicity</b>		
White, not Hispanic (includes Middle Eastern)	40,538	74.9
Black, not Hispanic	2,340	4.3
Hispanic or Latino	3,202	5.9
Asian or Pacific Islander	5,823	10.8
American Indian or Alaskan Native	530	1.0
Other	2,189	4.0
International student status	3,392	6.5
<b>Membership in a social fraternity or sorority</b>	4,495	8.6
<b>Current relationship status</b>		
Single	28,585	54.5
Married/domestic partner	4,141	7.9
Engaged/committed dating relationship	19,133	36.5
Separated	194	0.4
Divorced	362	0.7
Widowed	52	0.1
<b>Sexual orientation or gender identity</b>		
Heterosexual	48,846	93.1
Gay/lesbian	1,156	2.2
Bisexual	1,613	3.1
Transgender	57	0.1
Unsure	801	1.5
<b>Living situation</b>		
Campus residence hall	21,975	41.9
Fraternity or sorority house	817	1.6
Other university housing	3,718	7.1
Off-campus housing	19,029	36.3
Parent/guardian's home	4,517	8.6
Other	2,411	4.6

safety concerns. The questions asked students about their health status, health information sources, incidences of violence, incidences of sexual assault, and preventive measures against injury.

When asked to describe their general health status, students reported the following: 91.8% ( $n = 49,354$ ) said *good*, *very good*, or *excellent*; 6.9% ( $n = 3,737$ ) said *fair*; and 1.1% ( $n = 565$ ) said *poor*. Tables 3 and 4 display findings

related to health information received from students' colleges or universities as well as students' sources of health-related information and the believability of those sources.

When asked about seat belt use during the past school year, 73.2% of students ( $n = 38,999$ ) who rode in a car said they always wore a seat belt. When asked about helmet use during the past school year, students' responses indicated that 18.5% of students ( $n = 4,630$ ) who rode a bicycle said they always wore a helmet; 65.3% of students ( $n = 5,218$ ) who rode a motorcycle said they always wore a helmet; and 10.8% of students ( $n = 1,055$ ) who used in-line skates said they always wore a helmet.

When asked about physical fights and assaults, 6.9% of students ( $n = 3,688$ ) reported having been in a physical fight in the past school year, and 3.9% of students ( $n = 2,112$ ) reported having been physically assaulted (sexual assault not included) in the past school year. Tables 5 and 6 provide information on the types of sexual assaults and abusive relationships (ie, emotionally, physically, or sexually abusive) students reported experiencing in the past school year.

### Weight, Nutrition, and Exercise

In the Spring 2005 ACHA-NCHA survey, 5 questions examined weight, nutrition, and exercise. The following data are findings from this section. Overall, 7.0% of students ( $n = 3,718$ ) reported that they ate 5 or more servings of fruits and vegetables daily (the survey defined a serving as 1 medium-sized piece of fruit; half a cup of chopped, cooked, or canned fruits or vegetables; 3/4 cup of fruit or vegetable juice; a small bowl of salad greens; or half a cup of dried fruit).

In terms of physical activity, 43.6% of students ( $n = 23,143$ ) reported that they exercised vigorously for at least 20 minutes or moderately for at least 30 minutes on at least 3 out of the past 7 days, and 49.3% of students ( $n = 26,049$ ) reported that they exercised to strengthen or tone muscles at least 2 out of the past 7 days.

The mean estimated body mass index (BMI = weight in kg divided by height in  $m^2$ ) was 23.3  $kg/m^2$  for women ( $SD = 4.5$ ) and 24.6  $kg/m^2$  for men ( $SD = 4.4$ ). Both of these BMI values fall within the healthy weight range as defined by the National Institutes of Health.<sup>11</sup> Researchers calculated BMI based on the students' self-reported heights and weights. Tables 7, 8, and 9 provide results related to estimated BMI and BMI classifications, students' descriptions of their weight, and reported weight-loss behaviors.

### Sexual Behavior, Perceptions, and Contraception

The Spring 2005 ACHA-NCHA survey contains 13 questions about students' sexual behavior, their perceptions of their peers' sexual behavior, and contraception use. The following are highlights of findings from this section:

1. 29.5% of students ( $n = 15,616$ ) reported having ever been tested for HIV infection;
2. 62.7% of women ( $n = 20,581$ ) reported having had a routine gynecological examination in the past year;
3. 11.7% of sexually active women ( $n = 2,779$ ) reported

**TABLE 2. Top 10 Reported Health Impediments to Students' Academic Performance**

Rank	Health impediments	Total		Female		Male	
		n	%	n	%	n	%
1	Stress	16,452	31.6	11,427	35.0	4,737	25.8
2	Cold/flu/sore throat	13,842	26.5	9,259	28.3	4,332	23.5
3	Sleep difficulties	12,932	24.8	8,403	25.7	4,295	23.3
4	Concern for troubled friend or family member	9,414	18.1	6,549	20.1	2,670	14.5
5	Depression/anxiety disorder/SAD	8,467	16.3	5,964	18.3	2,345	12.8
6	Relationship difficulty	8,217	15.8	5,481	16.8	2,578	14.0
7	Internet use/computer games	7,387	14.2	3,567	10.9	3,705	20.1
8	Sinus infection/ear infection/bronchitis/strep throat	4,581	8.8	3,415	10.5	1,077	5.9
9	Death of a friend or family member	4,357	8.4	3,043	9.3	1,218	6.6
10	Attention Deficit Disorder	3,955	7.6	2,129	6.5	1,734	9.5
(tie)	Alcohol use	3,948	7.6	2,015	6.2	1,827	9.9

*Note.* Refers to question 44: "Within the past school year, have any of the following affected your academic performance? (received an incomplete, dropped a course, received a lower grade in a class, on an exam or on an important project)" Rank order of impediments to academic performance is based on total subjects. SAD = seasonal affective disorder. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

**TABLE 3. Reported Sources and Believability of Health-Related Information, by Rank Order**

Rank	Source of information	Used		Rank	Source of information	Believable	
		n	%			n	%
1	Parents	38,401	73.3	1	Health center medical staff	46,624	88.4
2	Internet/World Wide Web	36,662	69.9	2	Health educators	46,364	88.1
3	Friends	32,068	61.2	3	Parents	33,982	64.5
4	Health center medical staff	30,514	58.1	4	Faculty/coursework	33,737	64.3
5	Magazines	28,721	54.8	5	Leaflets, pamphlets, flyers	32,277	61.0
6	Leaflets, pamphlets, flyers	27,545	52.3	6	Campus newspaper articles	24,120	45.8
7	Health educators	26,251	50.1	7	Campus peer educators	23,470	44.8
8	Television	23,286	44.4	8	Resident assistants/advisors	18,156	34.7
9	Faculty/coursework	18,768	35.9	9	Friends	13,355	25.3
10	Campus newspaper articles	13,226	25.2	10	Magazines	12,349	23.4
11	Campus peer educators	8,893	17.0	11	Religious center	11,830	22.5
12	Resident assistants/advisors	8,481	16.2	12	Internet/World Wide Web	11,712	22.2
13	Religious center	4,830	9.2	13	Television	6,952	13.2

*Note.* Refers to questions 3 and 4: "Do you usually get health-related information from any of the following sources? (No, Yes)"; "Record the believability of each source of health information (Believable, Neither Believable nor Unbelievable, Unbelievable)."

having used emergency contraception within the past school year;

4. 2.0% of female students ( $n = 477$ ) who had had vaginal intercourse within the past school year reported having become pregnant unintentionally; and

5. 2.1% of male students ( $n = 272$ ) who had had vaginal intercourse within the past school year reported having gotten someone pregnant unintentionally.

Although 72.5% of students ( $n = 38,343$ ) reported having had 0 or 1 sexual (oral, anal, or vaginal) partners in the past

school year, 14.8% of students ( $n = 7,587$ ) thought the typical student at their school had had 0 or 1 sexual partners in the past school year. In addition, students reported the following sexual behaviors:

1. In the past 30 days, 48.2% of students ( $n = 24,788$ ) reported having had oral sex 1 or more times, although 95.2% of respondents ( $n = 48,530$ ) thought the typical student had had oral sex 1 or more times in the past 30 days;

2. 50.4% of students ( $n = 25,872$ ) reported having had vaginal intercourse 1 or more times in the past 30 days, but

**TABLE 4. Types of Information Students Reported Receiving From Their College or University**

Information type	Total	
	<i>n</i>	%
1. Alcohol and other drug use prevention	24,506	45.3
2. Sexual assault/relationship violence prevention	23,263	43.0
3. Sexually transmitted disease prevention	19,251	35.6
4. Physical activity and fitness	17,925	33.1
5. Dietary behaviors and nutrition	16,150	29.9
6. AIDS or HIV infection prevention	14,848	27.5
7. Pregnancy prevention	12,313	22.8
8. Tobacco use prevention	11,998	22.2
9. Violence prevention	11,039	20.4
10. Suicide prevention	7,525	13.9
11. Injury prevention and safety	7,207	13.3
None of the above	14,460	26.7

*Note.* Refers to question 2: "On which of the following health topics have you ever received information from your college or university? (select all that apply)"

**TABLE 5. Types of Sexual Assault Students Reported Experiencing in the Past School Year**

Sexual assault behavior	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Verbal threats for sex against your will	2,009	3.7	1,462	4.4	448	2.4
Sexual touching against your will	4,948	9.2	3,876	11.7	883	4.7
Attempted sexual penetration against your will	1,619	3.0	1,346	4.1	202	1.1
Sexual penetration against your will	858	1.6	664	2.0	148	0.8

*Note.* Refers to question 7: "Within the past school year, have you experienced . . . ? (No, Yes)" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

**TABLE 6. Types of Abusive Relationships Students Reported Experiencing in the Past School Year**

Type of abusive relationship	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Emotionally abusive	7,146	13.3	5,058	15.3	1,822	9.8
Physically abusive	1,082	2.0	730	2.2	295	1.6
Sexually abusive	876	1.6	618	1.9	218	1.2

*Note.* Refers to question 8: "Within the past school year, have you been in a relationship that was . . . ? (No, Yes)" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

**TABLE 7. Estimated Body Mass Index (BMI) and Classifications Based on Students' Reported Height and Weight<sup>10</sup>**

BMI category	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
< 18.5 Underweight	2,512	4.9	2,007	6.2	470	2.6
18.5–24.9 Healthy weight	33,544	65.3	22,321	69.0	10,785	58.9
25–29.9 Overweight	10,953	21.3	5,540	17.1	5,266	28.7
30–34.9 Class I obesity	2,912	5.7	1,579	4.9	1,288	7.0
35–39.9 Class II obesity	960	1.9	562	1.7	386	2.1
≥ 40 Class III obesity	481	0.9	338	1.0	131	0.7

*Note.* BMI = weight [in kg]/height squared [in m<sup>2</sup>]. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

**TABLE 8. Students' Reported Descriptions of Weight**

Responses	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Very underweight	398	0.8	161	0.5	218	1.2
Slightly underweight	5,495	10.4	2,562	7.8	2,741	14.8
About the right weight	28,027	53.0	17,405	53.0	9,776	52.9
Slightly overweight	17,062	32.2	11,327	34.5	5,245	28.4
Very overweight	1,932	3.7	1,389	4.2	487	2.6

*Note.* Refers to question 35: "How do you describe your weight?" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

**TABLE 9. Reported Types of Weight-Loss Behavior Engaged in by Students During the Past 30 Days**

Behavior	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Exercise to lose weight	29,485	54.5	20,516	61.9	8,119	43.2
Diet to lose weight	18,352	33.9	13,795	41.6	4,061	21.6
Vomit or take laxatives to lose weight	1,448	2.7	1,276	3.9	123	0.7
Take diet pills to lose weight	2,015	3.7	1,630	4.9	320	1.7

*Note.* Refers to question 37: "Within the last 30 days, did you do any of the following? (select all that apply)" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

96.1% of respondents (*n* = 48,915) thought the typical student had had vaginal sex 1 or more times in the past 30 days; and

3.54% of students (*n* = 2,759) reported having had anal intercourse 1 or more times in the past 30 days, whereas 59.8% of respondents (*n* = 30,291) thought the typical student had had anal sex 1 or more times in the past 30 days.

Tables 10, 11, and 12 provide results related to students'

contraception and condom use as well as reported incidence of sexually transmitted infection, disease, or complications.

### Alcohol, Tobacco, and Other Drug Use

The Spring 2005 ACHA-NCHA survey asked 11 questions about alcohol, tobacco, and other drug use. Responses indicated that although 60.2% of students (*n* = 32,318) reported they never used cigarettes, only 9.9% of students (*n* = 5294) thought the typical student never used cigarettes.

**TABLE 10. Reported Types of Contraception Students Used the Last Time They Engaged in Vaginal Intercourse**

Contraceptive method	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Birth-control pills	21,663	40.0	13,860	41.8	7,181	38.2
Condoms (male or female)	21,219	39.2	12,619	38.1	7,930	42.2
Withdrawal	7,815	14.4	4,984	15.0	2,578	13.7
Spermicide	1,579	2.9	842	2.5	685	3.6
Fertility awareness	1,535	2.8	991	3.0	507	2.7
Depo Provera	987	1.8	645	1.9	301	1.6
Diaphragm/cervical cap/sponge	256	0.5	131	0.4	116	0.6
Norplant	97	0.2	36	0.1	58	0.3
Other method	2,069	3.8	1,453	4.4	544	2.9
Nothing	2,027	3.7	1,135	3.4	794	4.2
Have not had vaginal intercourse	11,642	21.5	7,387	22.3	3,938	21.0
Did not answer or skipped question	4,315	8.0	1,924	5.8	1,722	9.2

*Note.* Refers to question 28: "If you have had vaginal intercourse, what method did you or your partner use to prevent pregnancy the last time? (select all that apply)" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

**TABLE 11. Reported Condom Use Among Sexually Active Students the Last Time They Had Sexual Intercourse**

Type of sexual activity	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Oral intercourse	1,449	3.7	760	3.1	605	4.3
Vaginal intercourse	19,838	53.3	11,796	50.7	7,418	57.9
Anal intercourse	3,144	28.3	1,497	23.2	1,555	36.1

*Note.* Refers to question 27: "If you are sexually active, did you use a condom the last time you had: oral sex, vaginal intercourse, anal intercourse? (Never, No, Yes, Don't Know/Don't Remember)" Students reporting "Never did this sexual activity" were excluded from the analysis. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

**TABLE 12. Reported Sexually Transmitted Infection (STI), Disease (STD), or Complication, Among Students in the Past School Year**

Type of STI/STD	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Genital warts/HPV	1,155	2.2	885	2.7	234	1.3
Genital herpes	580	1.1	422	1.3	138	0.8
Chlamydia	385	0.7	268	0.8	105	0.6
Pelvic inflammatory disease	165	0.3	120	0.4	35	0.2
HIV	143	0.3	64	0.2	69	0.4
Gonorrhea	110	0.2	41	0.1	61	0.3

*Note.* Refers to question 43: "Within the past school year, have you had any of the following? (No, Yes)" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

In addition, 15.2% of students ( $n = 8,109$ ) reported never using alcohol, but 2.5% of students ( $n = 1,336$ ) thought the typical student never used alcohol. Likewise, 61.8% of stu-

dents ( $n = 33,076$ ) reported they never used marijuana, although 16.8% of students ( $n = 8,926$ ) thought the typical student never used marijuana.

On February 5, 2004, the National Institute on Alcohol Abuse and Alcoholism's National Advisory Council defined *binge drinking* as a pattern of drinking alcohol that brings blood alcohol concentration (BAC) to 0.08% or above.<sup>12</sup> All 50 states and the District of Columbia have laws indicating that driving with a BAC of 0.08% or higher is illegal.<sup>13</sup> Variables on the ACHA-NCHA (the reported number of drinks consumed the last time students partied or socialized, as well as the number of hours during which they partied or socialized) allow for the calculation of an *estimated* BAC for the last drinking occasion, using a formula from the US Department of Transportation National Highway Traffic Safety Administration that uses reported sex, weight, and number of drinks consumed over the number of hours of drinking.<sup>14</sup> The estimated BAC for female students was 0.073% (*SD* = 0.081) and the estimated BAC for male stu-

dents was 0.073% (*SD* = 0.089). Excluding from the analysis students who do not drink and students who do not drive, 33.2% (*n* = 11,682) of the students reported that they drove after drinking any alcohol at all during the past 30 days. See Tables 13, 14, 15, and 16 for findings on students' alcohol and drug use, alcohol-related protective behaviors, and the consequences students reported as a result of their drinking.

### Mental and Physical Health

Four questions in the Spring 2005 ACHA-NCHA are related to students' mental and physical health. The following data are highlights from this section. The number of students who reported having been diagnosed with depression sometime in their lifetimes was 16.1% (*n* = 8,540). Of that percentage, 35.6% (*n* = 3,018) reported having been diagnosed in the past school year; 27.6% (*n* = 2,344) reported that they are currently

**TABLE 13. Number of Alcoholic Drinks Students Reported Consuming the Last Time They Partied**

Number of drinks	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
0	10,031	18.8	6,168	18.8	3,490	18.8
1-4	21,776	40.9	15,764	48.0	5,388	29.0
5-8	14,402	27.0	8,774	26.7	5,122	27.5
9 or more	7,065	13.3	2,103	6.4	4,601	24.7

*Note.* Refers to question 13: "The last time you partied/socialized, how many alcoholic drinks did you have?" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

**TABLE 14. Protective Behaviors Students Reported Always or Usually Engaging in When Drinking in the Past School Year**

Behaviors	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Eat before and/or during drinking	33,563	76.9	21,070	78.0	11,451	75.6
Use a designated driver	29,704	74.6	19,537	79.2	9,177	66.7
Keep track of how many drinks you were having	27,839	64.1	18,740	69.9	8,275	54.7
Avoid drinking games	18,185	42.0	12,042	44.9	5,612	37.2
Determine, in advance, not to exceed a set number of drinks	14,734	33.9	10,055	37.5	4,204	27.8
Alternate non-alcoholic with alcoholic beverages	12,579	29.0	8,617	32.0	3,550	23.6
Pace your drinks to 1 or fewer per hour	12,075	27.9	9,025	33.7	2,700	17.9
Have a friend let you know when you've had enough	11,138	26.0	7,868	29.7	2,822	18.8
Choose not to drink alcohol	10,672	23.4	7,434	26.2	2,875	18.4
Drink an alcohol look-alike (non-alcoholic beer, punch, etc.)	2,465	5.6	1,780	6.6	573	3.8

*Note.* Refers to question 17: "During the last school year, if you 'partied/socialized,' did you always or usually . . . ?" Students reporting "not applicable/don't drink" were excluded from the analysis. Because of missing data by sex, the sum of the female and male responses do not always equal the total.



**TABLE 15. Reported Substance Use Among Students in the Past 30 Days**

Substance	Never used		Not used in past month		Days of Use n (%)													
	n	%	n	%	1-2 days	3-5 days	6-9 days	10-19 days	20-29 days	All 30 days	n	%	n	%	n	%	n	%
Alcohol	8,109	15.2	6,543	12.2	9,961	18.6	10,303	19.3	9,152	17.1	7,256	13.6	1,858	3.5	333	0.6		
Cigarettes	32,318	60.2	9,457	17.6	3,350	6.2	1,475	2.7	1,018	1.9	1,369	2.5	1,559	2.9	3,146	5.9		
Smokeless tobacco	47,678	89.8	3,742	7.0	570	1.1	243	0.5	191	0.4	221	0.4	202	0.4	264	0.5		
Cigars	39,544	73.9	10,952	20.5	2,160	4.0	404	0.8	192	0.4	112	0.2	77	0.1	65	0.1		
Marijuana	33,076	61.8	11,262	21.0	3,473	6.5	1,576	2.9	1,077	2.0	1,206	2.3	1,086	2.0	752	1.4		
Amphetamines	48,561	90.6	3,349	6.3	556	1.0	331	0.6	231	0.4	220	0.4	130	0.2	197	0.4		
Cocaine	49,405	92.2	3,033	5.7	620	1.2	237	0.4	134	0.3	72	0.1	24	0.0	33	0.1		
Rohypnol, GHB, or Liquid X																		
(intentional use)	52,713	98.5	727	1.4	40	0.1	14	0.0	10	0.0	7	0.0	5	0.0	23	0.0		
Ecstasy (MDMA)*	40,057	93.3	2,672	6.2	166	0.4	21	0.0	9	0.0	6	0.0	2	0.0	11	0.0		

Note: Refers to question 9: "Within the past 30 days, on how many days did you use the following substances?"  
\* Ecstasy use was only measured among respondents using the ACHA-NCHA Web version (N = 43,231).

in therapy for depression, and 37.3% ( $n = 3,158$ ) reported that they were currently taking medication for depression. During the past school year, 1.5% ( $n = 796$ ) of students reported attempting suicide at least 1 time, and 10.2% ( $n = 5,415$ ) of students reported seriously considering attempting suicide at least once. For further data on students' reports of mental health difficulties in the past school year, see Table 17.

Several questions in the ACHA-NCHA asked students about issues of physical health, including incidence of infectious disease and preventive measures. Responses provided the following percentages: (1) 18.2% ( $n = 9,534$ ) reported using sunscreen daily; (2) 6.3% ( $n = 3,364$ ) reported getting enough sleep to wake feeling rested every day during the past week; (3) 27.4% ( $n = 14,577$ ) reported getting enough sleep to wake feeling rested on at least 5 of the past 7 days; (4) 76.9% ( $n = 40,613$ ) reported having had a dental examination and cleaning in the past year; (5) 89.1% ( $n = 46,809$ ) reported having their blood pressure checked within the past 2 years; (6) 46.7% ( $n = 24,513$ ) reported having their cholesterol checked in the past 5 years; and (7) 0.4% ( $n = 215$ )

reported having had hepatitis B or C within the past school year. The top 10 health problems reported by students within the past school year are shown in Table 18.

## DISCUSSION

### Limitations

Readers should consider several limitations in these data. First, the cross-sectional data collection may accurately describe patterns of association but not causality. Second, although researchers selected students randomly, they collected data at self-selected institutions rather than from a random sample of schools; therefore, the results cannot be generalized to college students nationally. Third, because institutions that were not members of ACHA were charged an additional fee to participate in the ACHA-NCHA, association member institutions are overrepresented in the sample and may represent another source of bias. It is also possible that those campuses that chose to participate in the ACHA-NCHA may have done so because of a perceived problem with student health or risk behaviors. Fourth, the

**TABLE 16. Reported Consequences Students Experienced After Drinking Alcohol in the Past School Year**

Consequences	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Did something you later regretted	16,181	37.2	9,488	35.3	6,080	40.1
Forgot where you were or what you did	13,226	30.4	7,402	27.6	5,307	35.1
Physically injured yourself	8,041	18.5	4,589	17.1	3,125	20.6
Had unprotected sex	6,536	15.1	3,621	13.5	2,626	17.4
Been involved in a fight	2,875	6.6	1,161	4.3	1,562	10.3
Physically injured another person	1,852	4.3	694	2.6	1,054	7.0
Had someone use force or threat of force to have sex with you	605	1.4	455	1.7	114	0.8

*Note.* Refers to question 18: "If you drink alcohol, within the last school year, have you experienced any of the following consequences of your drinking? (Not applicable/Don't drink, No, Yes)" Students reporting "Not applicable/Don't drink" were excluded from the analysis. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

**TABLE 17. Reported Number of Times Students Experienced Mental Health Difficulties in the Past School Year**

Mental health difficulty	0 times		1-4 times		5-8 times		9 or more times	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Felt things were hopeless	19,191	36.2	20,405	38.5	6,090	11.5	7,343	13.8
Felt overwhelmed by all you had to do	3,307	6.2	16,631	31.4	13,122	24.7	19,975	37.7
Felt exhausted (not from physical activity)	4,147	7.8	16,541	31.2	12,510	23.6	19,804	37.4
Felt very sad	10,194	19.3	23,559	44.5	8,702	16.4	10,482	19.8
Felt so depressed it was difficult to function	28,769	54.3	14,988	28.3	3,819	7.2	5,390	10.2
Seriously considered attempting suicide	47,628	89.8	4,221	8.0	551	1.0	64.3	1.2
Attempted suicide	52,097	98.5	633	1.2	78	0.1	85	0.2

*Note.* Refers to question 40: "Within the past school year, how many times have you . . . ?"

**TABLE 18. Top 10 Most Reported Health Problems Students Experienced in the Past School Year**

Rank	Health problem	Total		Female		Male	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1.	Back pain	24,868	47.6	16,335	50.0	7,998	43.8
2.	Allergy problems	24,644	46.9	16,154	49.3	7,884	42.8
3.	Sinus infection	15,742	30.2	10,972	33.6	4,420	24.2
4.	Depression	10,261	19.6	7,145	21.9	2,862	15.6
5.	Anxiety disorder	7,027	13.4	5,290	16.2	1,562	8.5
6.	Strep throat	6,919	13.3	4,669	14.3	2,086	11.4
7.	Asthma	5,954	11.4	4,083	12.5	1,725	9.4
8.	Ear infection	4,808	9.2	3,508	10.7	1,185	6.5
9.	Seasonal Affective Disorder (SAD)	4,628	8.9	3,335	10.2	1,202	6.6
10.	Bronchitis	4,248	8.1	3,074	9.4	1,087	6.0

*Note.* Refers to question 43: "Within the past school year, have you had any of the following? (No, Yes)" Rank order of reported health problems is based on total subjects. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

researchers instructed participating institutions to collect data from students in 1 of 3 ways—from all students, from randomly selected students, or from students in randomly selected classrooms. Furthermore, they gave the campuses the option of using the ACHA-NCHA as a paper survey or as an online-based survey, and some campuses offered students an incentive to participate in the survey. A consistent means to collect data did not exist for all campuses; therefore, the results should be interpreted with caution, given this variation in data collection methods.

This report is based on self-reported data and is subject to several sources of error. Participants who intentionally or unintentionally distorted their responses may represent a source of bias. Thus, recall bias and pressure to give socially desirable responses may represent sources of error. Self-report surveys are common in studies of this nature and are generally considered reliable. In addition, women are overrepresented and men are underrepresented in the ACHA-NCHA sample. In an effort to minimize the impact of this potential source of bias, data appear in total, as well as for female and male participants separately, when appropriate.

Finally, several items on the ACHA-NCHA ask about a student's experience "during the past school year." Because of differences among campus academic year start dates, and in the dates of ACHA-NCHA data collection, such items may be measuring a period of time ranging from 5 to 9 months. It is important to note this difference when comparing ACHA-NCHA data with similar items from other surveys that ask for a 12-month recall.

### Conclusion

Comprehensive data from the ACHA-NCHA Spring 2005 Reference Group expand college health professionals' understanding of the health needs and capacities of college

students. These data also challenge all professionals engaged in advancing the health of college students to use evidence-based approaches in planning college health initiatives. For further information, visit the ACHA-NCHA Web site ([www.acha-ncha.org](http://www.acha-ncha.org)). Since March 2005, results from the ACHA-NCHA have been, and shall continue to be, published regularly in the *Journal of American College Health*. The ACHA-NCHA survey instrument is available for use at postsecondary institutions for either a spring or fall sampling and analysis. A copy of the ACHA-NCHA scan form is available at [www.acha-ncha.org](http://www.acha-ncha.org).

### NOTE

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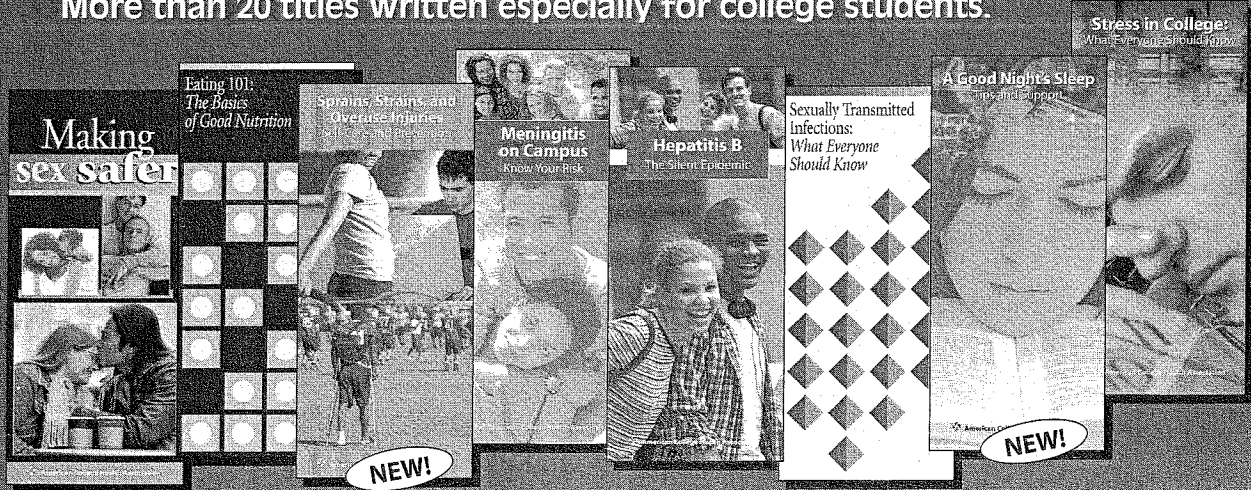
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