

Binge Drinking

Headline

Binge drinking among eighth, tenth, and twelfth graders declined modestly during the late 1990's and early 2000's, most notably amongst twelfth graders. However, these declines slowed in the mid 2000's, and did not change significantly between 2006 and 2007. ([Figure 1](#))

Importance

Alcohol use among youth is associated with a wide variety of risky behaviors and poor outcomes, including unprotected sexual intercourse, vulnerability to coerced sexual activity, the use of marijuana, and poor academic performance.^{1,2} In 2006, a third of all traffic deaths among youth ages 15 to 20 were alcohol-related.³ Alcohol use among adolescents is also related to an increased risk of alcohol dependence in adulthood. Binge drinking can contribute to many health disorders including cancer, liver, pancreatic and cardiovascular diseases, as well as a variety of gastrointestinal problems, neurological disorders and reproductive system disorders.⁴ Contextual risk factors associated with adolescent drinking include having alcoholic parents; a lack of parental support, monitoring, and communication; and having peers who drink.⁵

Trends

The percentage of adolescents in grades eight, ten, and twelve who report engaging in binge drinking (five or more drinks in a row in the previous two weeks) declined modestly during the late 1990's and early 2000's. By 2007, however, declines had slowed or stalled, with rates of 10 percent among eighth graders, 22 percent among tenth graders, and 26 percent among twelfth graders. ([Figure 1](#))

Differences by Gender

By twelfth grade, males are much more likely than females to binge drink (30 percent versus 22 percent, respectively, in 2006). This difference decreases in tenth grade, and is non-existent in eighth. For example, in 2006, 22 percent of tenth grade boys reported binge drinking, as compared with 20 percent of their female peers. Eighth grade boys and girls, however, were equally likely to drink heavily, with 11 percent reporting binge drinking within the previous two weeks. ([Table 1](#))

Differences by Race and Ethnicity⁶

White and Hispanic students are more likely than black students to engage in heavy drinking at all ages. This difference increases as students get older. For example, among twelfth graders in 2006, only 11 percent of black students reported binge drinking, compared with 30 percent of white students. ([Figure 2](#))

Differences by Age

Twelfth graders are more than twice as likely to report heavy drinking as eighth graders. In 2007, 26 percent of twelfth graders reported binge drinking, compared with 22 percent of tenth graders and 10 percent of eighth graders.⁷ ([Figure 1](#))

Differences by College Plans

Students who plan to complete four years or more of college are less likely than those who have no such plans to binge drink. This relationship is stronger among younger students, though it is still evident by grade 12. ([Figure 3](#))

State and Local Estimates

2007 estimates for binge drinking are available for high school students (grades 9-12) for select states and cities from the Youth Risk Behavior Survey (YRBS) at <http://apps.nccd.cdc.gov/yrbss/>

For 2005-2006, state estimates for binge drinking among youth ages 12-17 and 18-25 (within the prior month) are available from the National Household Survey on Drug Abuse at: <http://oas.samhsa.gov/2k6State/2k6state.pdf> (See Table B.1)

NOTE: Estimates of drug use from the National Household Survey of Drug Abuse (NHSDA), used to generate these state-level estimates, are generally lower than estimates generated by the Monitoring the Future Survey (MTF). Since the MTF was the source of the national estimates presented in this indicator, users should not make direct comparisons of estimates made from the two sources. For information on methodological differences in the surveys that may be causing these differences in estimates, see Harrison, L.D. (2001). Understanding the differences in youth drug prevalence rates produced by the MTF, NHSDA, and YRBS studies. *Journal of Drug Issues*, 31(3), pp. 665-694.

International Estimates

International estimates of lifetime and 30-day binge drinking incidence use are available from the European School Survey on Alcohol and Other Drugs (ESPAD) 2003 report, available at:

http://www.espad.org/documents/Espad/ESPAD_reports/The_2003_ESPAD_report.pdf

National Goals

Through its *Healthy People 2010* initiative, the federal government has set a national goal to reduce binge drinking among high school seniors from 32 percent in 1998 to 11 percent in 2010.

More information is available at:

<http://www.health.gov/healthypeople/document/html/objectives/26-11.htm>

Definition

Binge drinking is defined as having five or more drinks in a row at least once in the prior two-week period.

Data Source

Data for 2007: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (December 11, 2007). "Overall, illicit drug use by American teens continues gradual decline in 2007." University of Michigan News Service: Ann Arbor, MI. [Online]. Available: www.monitoringthefuture.org; accessed 02/15/08

Data for 2006: 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. Volume I: Secondary school students* (NIH Publication No. 07-6205). Bethesda, MD: National Institute on Drug Abuse. Tables D-90, D-91, D-92.
http://www.monitoringthefuture.org/pubs.html#monographs/vol1_2006.pdf

Data for 2005: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (2005). Tables D-69, D-70 & D-71: Trends in Two-Week Prevalence of Five or More Drinks in a Row by Subgroups for Eighth, Tenth, and Twelfth Graders. In *Monitoring the Future national survey results on drug use, 1975-2005: Volume I, Secondary School Students* (NIH Publication No. 06-5883) (pp.610-613). Bethesda, MD: National Institute on Drug Abuse. Also available:
http://www.monitoringthefuture.org/pubs/monographs/vol1_2005.pdf

Data for all other years: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (2005). Tables D-69, D-70 & D-71: Trends in Two-Week Prevalence of Five or More Drinks in a Row by Subgroups for Eighth, Tenth, and Twelfth Graders. In *Monitoring the Future national survey results on drug use, 1975-2004: Volume I, Secondary School Students* (NIH Publication No. 05-5727) (pp.606-603). Bethesda, MD: National Institute on Drug Abuse. Also available:
http://www.monitoringthefuture.org/pubs/monographs/vol1_2004.pdf

Raw Data Source

The Monitoring the Future Survey
<http://www.monitoringthefuture.org>

Approximate Date of Next Update

Unknown

¹ Monti, Peter, Tevyaw, Tracy, and Brian Borsari. "Drinking among Young Adults: Screening, Brief Intervention, and Outcome. *National Institute on Alcohol Abuse and Alcoholism: Focus on Young Adult Drinking*, 28 (4). Available at: <http://pubs.niaaa.nih.gov/publications/arh284/toc28-4.htm> Please note that some studies do not find an association between adolescent drinking and risky sexual behavior. For example, see Morrison, Diane M., Gillmore, Mary Rogers, Hoppe, Marilyn J., Gaylord, Jan, Leigh, Barbara C., and Damien Rainey. 2003. "Adolescent Drinking and Sex: Findings from a Daily Diary Study." *Perspectives on Sexual Reproductive Health*, 35 (4): 162-168. <http://www.agisa.org/journals/toc/psrh3504toc.html>.

² White, Helene and Kristina Jackson. "Social and Psychological Influences on Emerging Adult Drinking Behavior." *National Institute of Alcohol Abuse and Alcoholism: Focus on Young Adult Drinking*, 28 (4). Available at: <http://pubs.niaaa.nih.gov/publications/arh284/toc28-4.htm>

³ National Highway Traffic Safety Administration. "Young Drivers". Traffic Safety Facts, 2006 Data, Available at: <http://www.nhtsa.dot.gov>

⁴ U.S. Department of Health and Human Services. *Healthy People 2010. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols.* Washington, DC: U.S. Government Printing Office, November 2000. <http://www.health.gov/healthypeople/document/>

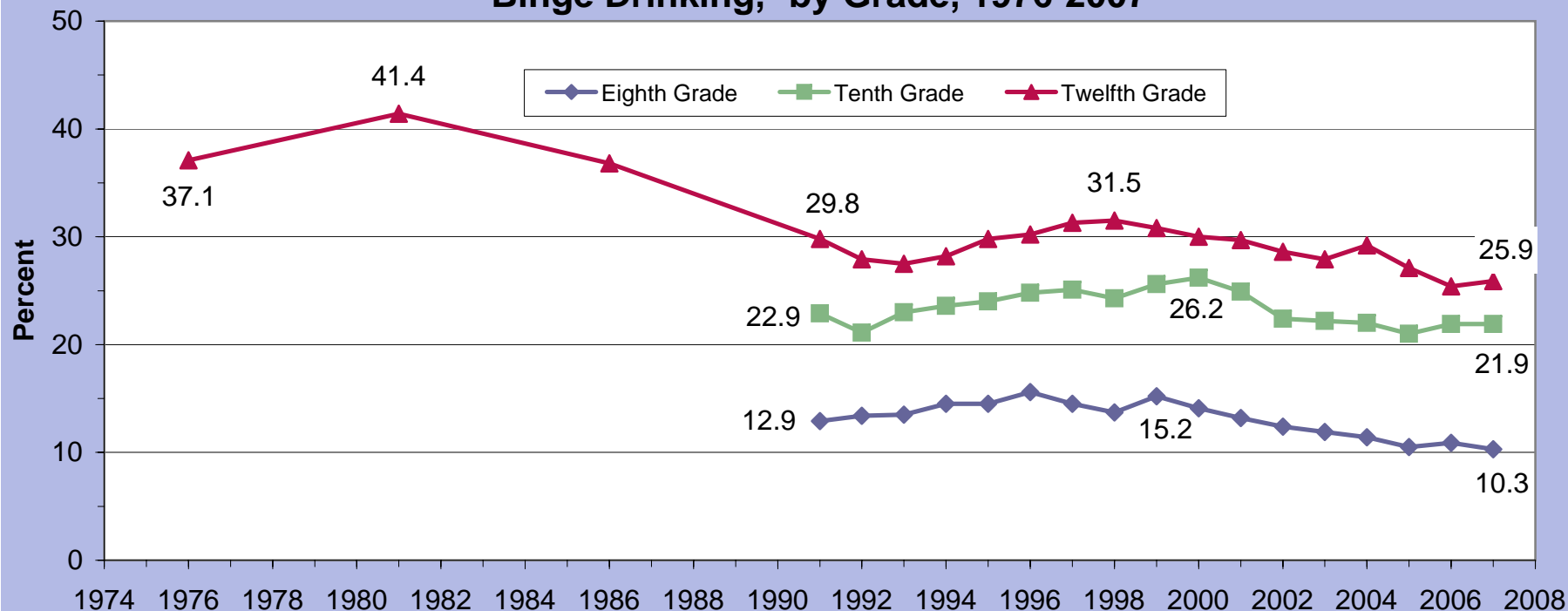
⁵ Samuel Kuperman, Grace Chan, John R Kramer, Laura Bierut, Kathleen K. Bucholz, Louis Fox, Victor Hesselbrock, John I. Numberger Jr, Theodore Reich, Wendy Reich, Marc A. Schuckit (2005) "Relationship of Age of First Drink to Child Behavioral Problems and Family Psychopathology" *Alcoholism: Clinical and Experimental Research* 29 (10), 1869–1876. National Institute on Alcohol Abuse and Alcoholism. 1997. "Youth Drinking: Risk Factors and Consequences." Alcohol Alert NO. 37. <http://pubs.niaaa.nih.gov/publications/aa37.htm>

⁶ Estimates for race and ethnicity are based on 2-year averages.

⁷ There is reason to believe that eighth graders over-report binge drinking. For more information please see *Monitoring the Future National Survey Results on Drug Use, 1975-2000. Volume 1: Secondary School Students* (NIH Publication No. 01-4924) Chapter 4, footnote 27.

Figure 1

Percentage of Students Who Report Binge Drinking,¹ by Grade, 1976-2007



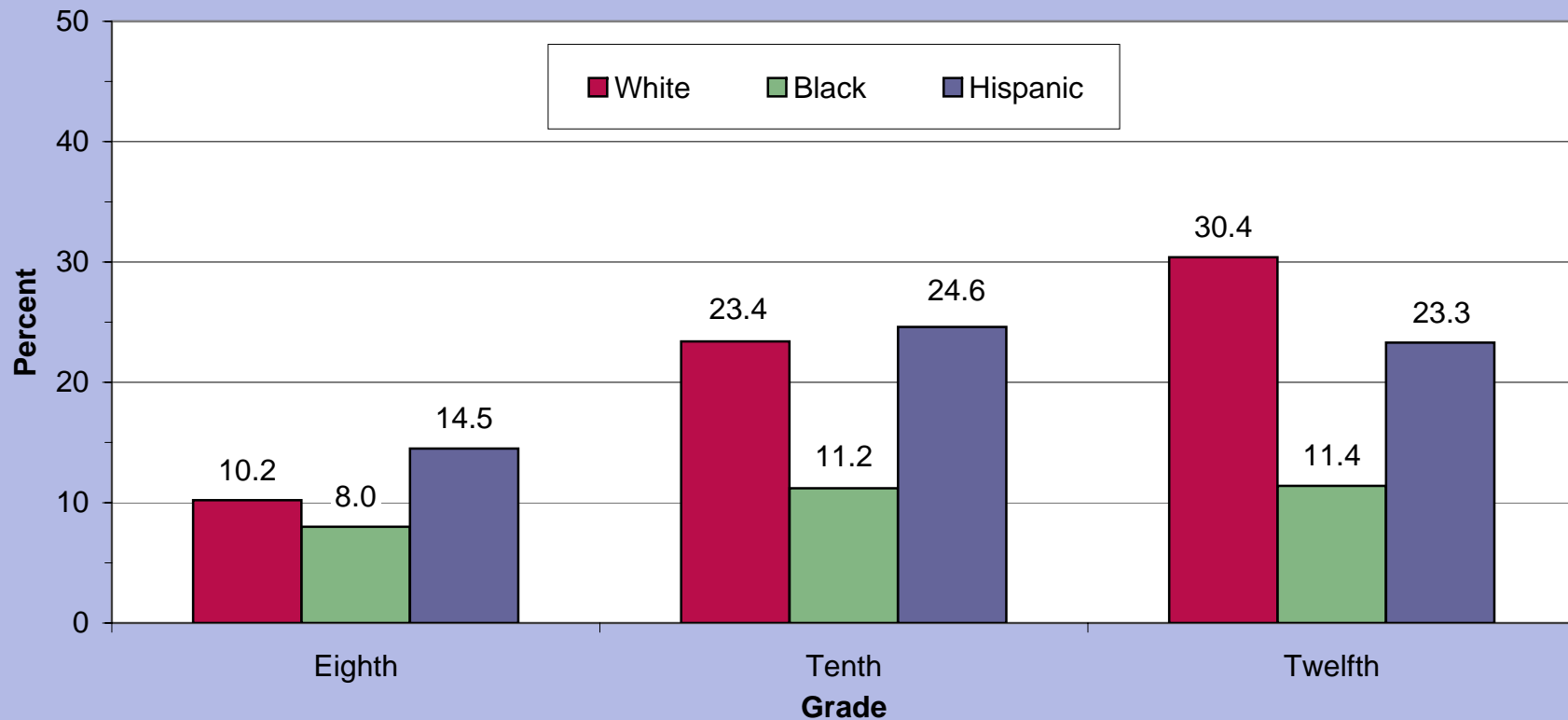
Note: There is reason to believe that eighth graders overreport binge drinking. For more information please see *Monitoring the Future national survey results on drug use, 1975-2000. Volume 1: Secondary school students* (NIH Publication No. 01-4924) Chapter 4 footnote 27.

¹ Binge drinking is defined as having five or more drinks in a row at least once in the prior two-week period.

Source: Data for 2007: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (December 11, 2007). "Overall, illicit drug use by American teens continues gradual decline in 2007." University of Michigan News Service: Ann Arbor, MI. [Online]. Available: www.monitoringthefuture.org; accessed 02/15/08. Data for 2006: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (December 21, 2006). Teen drug use continues down in 2006, particularly among older teens; but use of prescription-type drugs remains high. University of Michigan News and Information Services: Ann Arbor, MI. Available: http://www.monitoringthefuture.org/pubs/monographs/vol1_2006.pdf, tables D-70, D-71, D-72; accessed 1/11/2007. Data for 2005: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (2005). Tables D-69, D-70 & D-71: Trends in Two-Week Prevalence of Five or More Drinks in a Row by Subgroups for Eighth, Tenth, and Twelfth Graders. In *Monitoring the Future national survey results on drug use, 1975-2005: Volume I, Secondary School Students* (NIH Publication No. 06-5883) (pp.610-613). Bethesda, MD: National Institute on Drug Abuse. http://www.monitoringthefuture.org/pubs/monographs/vol1_2005.pdf.

Figure 2

Percentage of Students in Eighth,¹ Tenth, and Twelfth Grades Reporting Binge Drinking,² by Race and Hispanic Origin, 2006



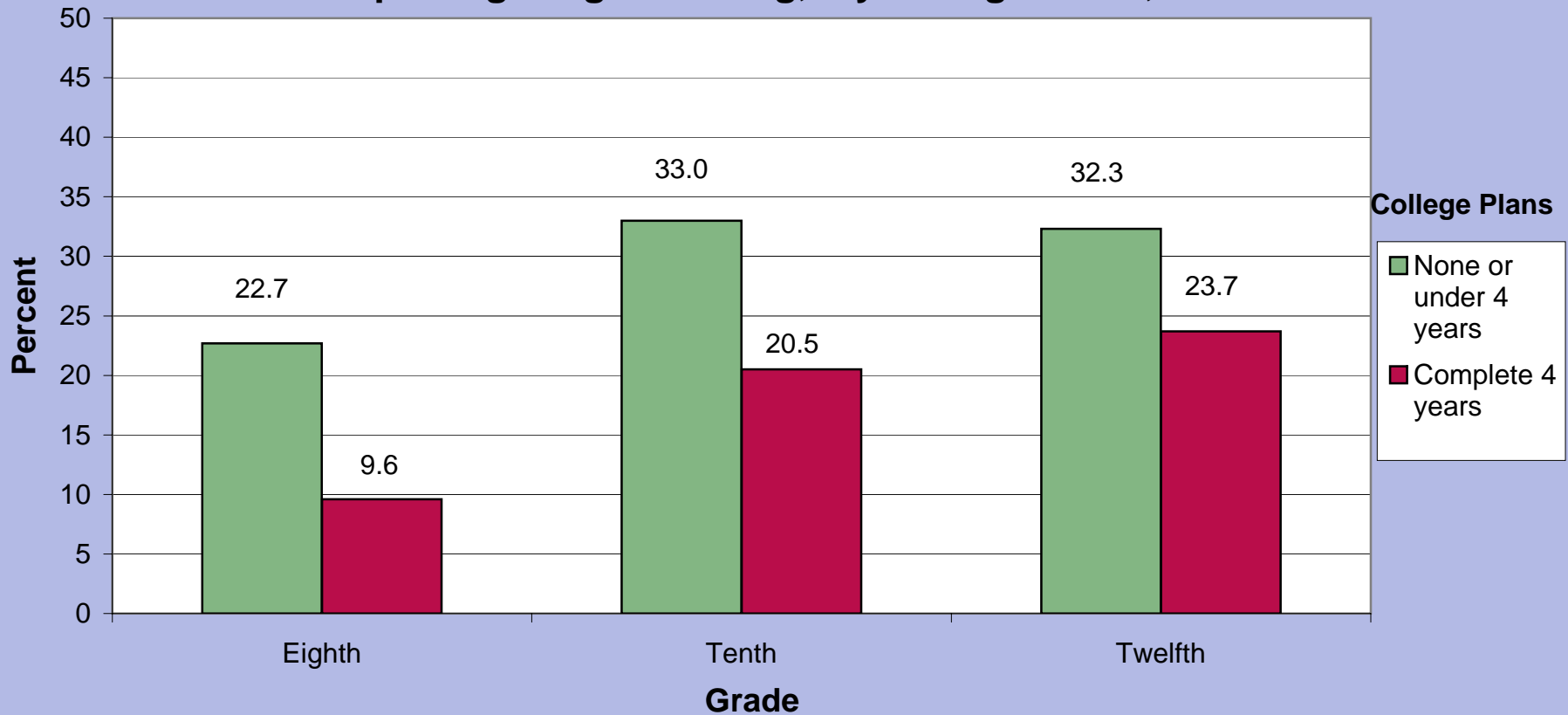
¹ There is reason to believe that eighth graders overreport binge drinking. For more information please see *Monitoring the Future national survey results on drug use, 1975-2000. Volume 1: Secondary school students* (NIH Publication No. 01-4924) Chapter 4 footnote 27.

² Binge drinking is defined as having five or more drinks in a row at least once in the prior two-week period.

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Figure 3

Percentage of Students in Eighth,¹ Tenth, and Twelfth Grades Reporting Binge Drinking,² by College Plans, 2006



¹ There is reason to believe that eighth graders overreport binge drinking. For more information please see Monitoring the Future national survey results on drug use, 1975-2000. Volume 1: Secondary school students (NIH Publication No. 01-4924) Chapter 4 footnote 27

² Binge drinking is defined as having five or more drinks in a row at least once in the prior two-week period.

Source: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (December 21, 2006). Teen drug use continues down in 2006, particularly among older teens; but use of prescription-type drugs remains high. University of Michigan News and Information Services: Ann Arbor, MI. Available: http://www.monitoringthefuture.org/pubs/monographs/vol1_2006.pdf, tables D-70, D-71, D-72



Table 1

Binge Drinking:¹ Percentage of Students in Grades 8, 10, and 12 who Report Having Had Five or More Drinks in a Row in the Previous Two Weeks, Selected Years 1976-2006

	1976	1981	1986	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Eighth Grade²	-	-	-	12.9	14.5	15.6	14.5	13.7	15.2	14.1	13.2	12.4	11.9	11.4	10.5	10.9	10.3
Gender																	
Male	-	-	-	14.3	15.1	16.5	15.3	14.4	16.4	14.4	13.7	12.5	12.2	10.8	10.2	10.5	
Female	-	-	-	11.4	13.9	14.5	13.5	12.7	13.9	13.6	12.4	12.1	11.6	11.8	10.6	10.8	
Race/Ethnicity (2-year average)³																	
White	-	-	-	-	13.9	15.1	15.1	14.1	14.3	14.9	13.8	12.7	11.8	11.3	10.8	10.2	
Black	-	-	-	-	10.8	10.4	9.8	9.0	9.9	10.0	9.0	9.4	10.4	9.8	8.2	8.0	
Hispanic	-	-	-	-	22.0	21.0	20.7	20.4	20.9	19.1	17.6	17.8	16.6	16.1	14.8	14.5	
Parental Education⁴																	
Less than high school	-	-	-	21.8	23.2	20.1	22.5	20.0	23.7	22.5	21.0	19.5	20.1	19.2	17.4	17.2	
Completed high school	-	-	-	15.1	17.8	18.4	16.2	16.4	19.6	18.7	16.6	15.2	15.7	14.9	13.6	13.0	
Some college	-	-	-	12.8	15.0	15.9	15.8	14.5	16.1	13.2	13.9	13.2	12.9	11.6	11.7	12.2	
Completed college	-	-	-	10.2	11.0	13.1	11.7	10.9	11.0	10.0	9.8	9.8	8.4	9.5	7.7	8.2	
Graduate school	-	-	-	9.8	10.5	12.1	10.6	10.7	11.2	11.0	8.1	8.8	8.3	7.2	6.0	7.4	
College Plans																	
None or under 4 years	-	-	-	24.4	29.2	29.9	30.3	30.5	33.9	29.3	29.6	28.1	27.7	25.1	25.1	22.7	
Complete 4 years	-	-	-	11.1	12.7	13.3	12.5	11.6	13.0	12.3	11.2	10.9	10.2	10.0	8.9	9.6	
	1976	1981	1986	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Tenth Grade	-	-	-	22.9	24.0	24.8	25.1	24.3	25.6	26.2	24.9	22.4	22.2	22.0	21.0	21.9	21.9
Gender																	
Male	-	-	-	26.4	26.3	27.2	28.6	26.7	29.7	29.8	28.6	23.8	23.2	23.8	22.0	22.9	
Female	-	-	-	19.5	21.5	22.3	21.7	22.2	21.8	22.5	21.4	21.0	21.2	20.2	19.9	20.9	
Race/Ethnicity (2-year average)³																	
White	-	-	-	-	25.4	26.2	26.9	27.0	27.2	28.1	27.4	25.5	24.5	24.0	23.5	23.4	
Black	-	-	-	-	13.3	12.2	12.7	12.8	12.7	12.9	12.6	12.4	12.1	11.6	11.0	11.2	
Hispanic	-	-	-	-	26.8	29.6	27.5	26.3	27.5	28.3	27.7	26.5	26.1	26.9	26.0	24.6	
Parental Education⁴																	
Less than high school	-	-	-	25.7	30.5	27.2	25.5	26.5	28.4	27.5	26.3	26.7	27.2	27.1	24.1	22.7	
Completed high school	-	-	-	26.0	26.7	27.8	26.1	27.9	28.7	29.4	27.4	25.1	24.3	24.4	23.6	25.4	
Some college	-	-	-	21.7	24.6	25.4	26.5	24.8	25.6	26.1	25.6	22.7	22.6	22.6	21.0	22.9	
Completed college	-	-	-	20.8	21.6	22.0	23.1	21.5	23.3	25.0	23.4	19.1	19.6	19.7	19.4	19.8	
Graduate school	-	-	-	22.4	19.0	24.0	24.0	21.5	24.9	24.6	23.1	20.6	19.9	20.4	19.4	20.3	
College Plans																	
None or under 4 years	-	-	-	33.0	37.5	38.2	39.4	38.2	39.3	39.3	40.2	34.3	34.2	32.9	34.0	33.0	
Complete 4 years	-	-	-	20.8	21.5	22.5	22.7	22.0	23.4	24.2	22.4	20.4	20.3	20.4	19.3	20.5	
	1976	1981	1986	1991	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Twelfth Grade	37.1	41.4	36.8	29.8	29.8	30.2	31.3	31.5	30.8	30.0	29.7	28.6	27.9	29.2	27.1	25.4	25.9
Gender																	
Male	47.9	51.6	46.1	37.8	36.9	37.0	37.9	39.2	38.1	36.7	36.0	34.2	34.2	34.3	32.6	28.9	
Female	25.9	30.8	28.1	21.2	23.0	23.5	24.4	24.0	23.6	23.5	23.7	23.0	22.1	24.2	21.6	21.5	
Race/Ethnicity (2-year average)³																	
White	-	44.9	40.3	34.6	32.3	33.4	35.1	36.4	35.7	34.6	34.5	33.7	32.4	32.5	32.5	30.4	
Black	-	17.1	16.4	11.7	14.9	15.3	13.4	12.3	12.3	11.5	11.8	11.5	10.8	11.4	11.3	11.4	
Hispanic	-	34.8	30.8	27.9	26.6	27.1	27.6	28.1	29.3	31.0	28.4	26.4	25.9	26.0	23.9	23.3	
Parental Education⁴																	
Less than high school	34.1	37.0	31.7	26.8	26.6	24.8	22.6	26.3	27.4	25.1	24.8	22.2	23.5	22.9	19.4	25.4	
Completed high school	41.1	43.2	37.9	29.9	31.2	28.6	30.4	30.3	30.8	29.2	30.2	28.5	27.6	28.8	28.3	25.8	
Some college	36.4	42.4	37.9	30.4	29.5	29.8	31.0	33.2	30.5	30.5	30.3	28.6	28.4	30.9	27.6	26.5	
Completed college	36.9	40.8	37.1	29.9	29.9	32.4	32.4	32.3	30.6	29.9	30.9	30.9	28.6	30.5	29.4	24.0	
Graduate school	34.5	39.3	36.7	30.6	30.7	33.1	34.9	32.4	34.2	32.7	28.6	30.6	28.7	27.8	25.2	26.3	
College Plans																	
None or under 4 years	41.8	46.7	41.3	34.4	35.2	33.9	36.2	36.3	35.4	35.7	35.9	34.0	34.5	34.6	34.3	32.3	
Complete 4 years	31.5	37.4	34.1	27.9	27.8	28.8	29.5	30.0	29.5	27.6	27.8	27.2	25.9	27.6	25.1	23.7	

"-" Indicates data not available.

¹ Binge drinking is defined as having five or more drinks in a row at least once in the prior two-week period.

² There is reason to believe that eighth graders overreport binge drinking. For more information please see Monitoring the Future national survey results on drug use, 1975-2000. Volume 1: Secondary school students (NIH Publication No. 01-4924) Chapter 4 footnote 27.

³ To derive percentages for each racial subgroup, data for the specified year and the previous year have been combined to increase subgroup sample sizes and thus provide the most stable estimates.

⁴ Parental education is calculated by the Institute of Social Research as the average of the mother's and father's education. Averages that fall between two levels were rounded up by Child Trends to reflect the attainment of the most educated parent.

Source: Data for 2007: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (December 11, 2007). "Overall, illicit drug use by American teens continues gradual decline in 2007." University of Michigan News Service: Ann Arbor, MI. [Online]. Available: www.monitoringthefuture.org; accessed 02/15/08.

Data for 2006: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (December 21, 2006). Teen drug use continues down in 2006, particularly among older teens; but use of prescription-type drugs remains high. University of Michigan News and Information Services: Ann Arbor, MI. Available: http://www.monitoringthefuture.org/pubs/monographs/vol1_2006.pdf, tables D-70, D-71, D-72; accessed 1/11/2008. Data for 2005: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (2005). Tables D-69, D-70 & D-71: Trends in Two-Week Prevalence of Five or More Drinks in a Row by Subgroups for Eighth, Tenth, and Twelfth Graders. In Monitoring the Future national survey results on drug use, 1975-2005: Volume I, Secondary School Students (NIH Publication No. 06-5883) (pp.610-613). Bethesda, MD: National Institute on Drug Abuse. Also available: http://www.monitoringthefuture.org/pubs/monographs/vol1_2005.pdf Data for 2004: Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (2005). Tables D-69, D-70 & D-71: Trends in Two-Week Prevalence of Five or More Drinks in a Row by Subgroups for Eighth, Tenth, and Twelfth Graders. In Monitoring the Future national survey results on drug use, 1975-2004: Volume I, Secondary School Students (NIH Publication No.05-5727) (pp.606-609). Bethesda, MD: National Institute on Drug Abuse. Also available: www.monitoringthefuture.org. Data for 2003: Monitoring the Future national survey results on drug use, 1975-2003. Volume 1: Secondary school students : (NIH Publication No. 04-5507). Bethesda, MD: National Institute on Drug Abuse. Tables 4-7, D-50, and D-51. Online. Available at http://www.monitoringthefuture.org/pubs/monographs/vol1_2003.pdf. Data for 1976-2002: Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2003). Monitoring the Future national survey results on drug use, 1975-2002. Volume I: Secondary school students (NIH Publication No. 03-5375). Bethesda, MD: National Institute on Drug Abuse. Tables D-50 and D-51.

