

The Toll of Underage Drinking

Drunk driving, alcohol dependence, risky sexual behavior and health consequences.

Drunk Driving:

- Three teens are killed each day when they drink alcohol and drive.¹ At least six more die every day from other alcohol-related causes.²
- According to the National Highway Traffic Safety Administration, 6,002 young people ages 16-20 died in motor vehicle crashes in 2003. Alcohol was involved in 38% of these deaths.³
- In 2003, 3,571 young drivers ages 16-20 died in motor vehicle crashes. Of these, 1,131 - approximately 32% - had been drinking, and 26% were legally drunk at the time of the crash.⁴
- A survey of college students in 2001 revealed that, for students under age 21, 26% drove after drinking alcohol, more than 10% drove after consuming more than five drinks, and almost a quarter rode with a high or drunk driver at least once in the 30 days before the survey.⁵
- In the year 2000, only 7% of licensed drivers were ages 15 to 20. However, in that same year, they represented approximately 13% of drivers who had been drinking and were involved in fatal crashes.⁶

Alcohol Dependence:

- Americans who began drinking before the age of 15 are four times more likely to develop alcohol dependence than those who wait until the age of 21.⁷
- In November 2004, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) concluded that alcohol abuse and dependence are "developmental disorders."⁸
- An analysis published in the November 15, 2004 issue of *Biological Psychiatry* stated that the onset of alcohol dependence peaks by 18 years of age.⁹

Risky Sexual Behavior:

- It is estimated that teenage girls who binge drink are up to 63% more likely to become teen mothers.¹⁰
- In a poll of more than 11,700 college students from 128 colleges in the United States, researchers found that, compared to those who waited to drink until they were 19 or older, college students who got drunk for the first time before age 13 were twice as likely to say they had had unplanned sex because of drinking. They were more than twice as likely to say they had had unprotected sex because of drinking.¹¹
- In a study conducted by the Kaiser Family Foundation, 23% (5.6 million) of sexually active teens and young adults ages 15-24 in the United States reported having had unprotected sex because they were drinking or using drugs at the time. Twenty-four percent of teens ages 15-17 said that their alcohol and drug use led them to do more sexually than they had planned.¹²

Health Consequences:

- The Centers for Disease Control and Prevention (CDC) estimates that 4,554 underage deaths each year are due to excessive alcohol use.¹³
- Alcohol use plays a substantial role in all three leading causes of death among youth - unintentional injuries (including motor vehicle fatalities and drownings), suicides and homicides.¹⁴
- Those who begin drinking before the age of 14 are five times more likely than those who begin drinking after the age of 21 to be injured while under the influence of alcohol at some point during their lives.¹⁵
- Among young people, binge drinkers and heavy drinkers are more than twice as likely as non-drinkers to report having attempted to injure themselves or having contemplated or attempted to commit suicide.^{16,17}
- Research has also shown another specific link between heavy alcohol use and youth suicides. States that passed "zero tolerance" laws to reduce youth drinking-driving also experienced statistically significant reductions in suicide deaths among 15- to 20-year-olds, compared to states that did not pass such laws.¹⁸
- There is growing evidence to suggest that alcohol use prior to age 21 impairs crucial aspects of youthful brain development. In one recent study, heavy-drinking adolescents who had been sober for three weeks still scored 10 percent lower than non-drinking peers on tests requiring verbal and nonverbal recall and skills needed for map reading, geometry, and science.¹⁹

Social Consequences:

- The costs of youth drinking are an estimated \$53 billion annually, and include costs to society such as medical care costs and lost productivity, as well as costs to the young drinker such as pain and suffering and loss of income.²⁰
- A study that followed over 6,500 individuals found that, by the age of 23, those who were drinkers by seventh grade were:
 - more likely than non-drinkers to have "missed work for no good reason,"
 - more likely to be substance-users,
 - more likely to engage in criminal and violent behavior, and
 - between 1.7 and 2.3 times more likely to be weekly or binge drinkers, exhibit signs of alcohol dependence, and experience multiple alcohol problems.²¹

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¹National Highway Traffic Safety Administration, *Traffic Safety Facts 2003* (Washington, DC: National Center for Statistics and Analysis, U.S. Department of Transportation, 2005), table 79.

²Calculated using Alcohol-Related Disease Impact (ARDI) data, Centers for Disease Control and Prevention. Data include only deaths for ages 15 to 20. M. Stahre of the Centers for Disease Control and Prevention, e-mail to David H. Jernigan, PhD, 20 December 2005.

³National Highway Traffic Safety Administration, *Traffic Safety Facts 2003*, table 81.

⁴National Highway Traffic Safety Administration, *Traffic Safety Facts 2003*, table 79.

⁵H. Wechsler, J.E. Lee, T.F. Nelson, H. Lee, "Drinking and Driving Among College Students: The Influence of Alcohol-Control Policies," *American Journal of Preventive Medicine* 25, no. 3 (2003).

⁶National Highway Traffic Safety Administration, *Youth Fatal Crash and Alcohol Facts 2000* (Washington, DC: U.S. Department of Transportation, 2002).

⁷B.F. Grant, D.A. Dawson, "Age at onset of alcohol use and its association with DSM-IV alcohol abuse and dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey," *Journal of Substance Abuse* 9 (1997): 103-110.

⁸Team on Underage Drinking, National Institute on Alcohol Abuse and Alcoholism, *Alcohol Consumption by Children and Adolescents: An Interdisciplinary Overview* (Bethesda, MD: NIAAA, 2004).

- ⁹T.K. Li, B.G. Hewitt, and B.F. Grant, "Alcohol Use Disorders and Mood Disorders: A National Institute on Alcohol Abuse and Alcoholism Perspective," *Biological Psychiatry* 56, no. 10 (15 Nov 2004): 718-720.
- ¹⁰T.S. Dee, "The Effects of Minimum Legal Drinking Ages on Teen Childbearing," *The Journal of Human Resources* 36, no. 4 (2001): 824-838.
- ¹¹R. Hingson, T. Heeren, M.R. Winter, H. Wechsler, "Early Age of First Drunkenness as a Factor in College Students' Unplanned and Unprotected Sex Attributable to Drinking," *Pediatrics* 111 (2003): 34-41.
- ¹²The Henry J. Kaiser Family Foundation and The National Center on Addiction and Substance Abuse at Columbia University, "[Millions of Young People Mix Sex with Alcohol or Drugs – With Dangerous Consequences](#)," 6 February 2002.
- ¹³L.T. Midanik et al., "Alcohol-Attributable Deaths and Years of Potential Life Lost—United States, 2001," *MMWR Weekly* 53, no. 37 (24 Sept 2004): 866-870.
- ¹⁴National Center for Injury Prevention and Control, "[10 Leading Causes of Death, United States: 2002, All Races, Both Sexes](#)," in *WISQARS Leading Causes of Death Reports, 1999-2002* (cited 15 April 2005); National Research Council and Institute of Medicine, *Reducing Underage Drinking: A Collective Responsibility* (Washington, DC: National Academies Press, 2004), 60-61..
- ¹⁵R. Hingson., T. Heeren, T. Jamanka, and J. Howland, *Age of Drinking Onset and Unintentional Injury Involvement After Drinking* (Washington, DC: National Highway Traffic Safety Administration, 2001).
- ¹⁶J.C. Greenblatt, *Patterns of Alcohol Use Among Adolescents and Associations with Emotional and Behavioral Problems* (Rockville: Office of Applied Studies, SAMHSA, 2002).
- ¹⁷For this study, binge drinkers were defined as those who "consumed 5 or more drinks on at least one, but no more than 4 occasions," and "heavy drinkers" were defined as "those who consumed 5 or more drinks per occasion on 5 or more days" during the past month.
- ¹⁸C. Carpenter, "Heavy Alcohol Use and Youth Suicide: Evidence from Tougher Drunk Driving Laws," *Journal of Policy Analysis and Management* 23, no. 4 (2004): 831-842.
- ¹⁹See, e.g., Bernice Wuethrich, "Getting Stupid," *Discover* 22 no. 3 (March 2001); S.A. Brown, S.F. Tapert, E. Granholm, D.C. Delis, "Neurocognitive Functioning of Adolescents: Effects of Protracted Alcohol Use," *Alcoholism: Clinical and Experimental Research* 24, no. 2 (Feb 2000): 164-171.
- ²⁰D.T. Levy, T. Miller, and K.C. Cox, *Costs of Underage Drinking* (Calverton, MD: Pacific Institute for Research and Evaluation, 1999); National Research Council and Institute of Medicine, *Reducing Underage Drinking: A Collective Responsibility* (Washington, DC: National Academies Press, 2004), xv, 13.
- ²¹P.L. Ellickson, J.S. Tucker, D.J. Klein, "Ten-Year Prospective Study of Public Health Problems Associated With Early Drinking," *Pediatrics* 111, no. 5 (May 2003): 949-955.