

# Consequences of Underage Alcohol Use

Alcohol—the most widely used drug among youth—causes serious and potentially life-threatening problems for this population.<sup>1</sup> Research indicates that drinking is associated with risk-taking and sensation-seeking behavior among adolescents. Alcohol has disinhibiting effects that may increase the likelihood of unsafe activities.<sup>2</sup>

## ALCOHOL-RELATED FATALITIES

- In 1997, 21 percent of the young drivers 15 to 20 years old who were killed in crashes were intoxicated.<sup>3</sup> For young drivers, alcohol involvement is higher among males than among females. In 1997, 25 percent of the young male drivers involved in fatal crashes had been drinking at the time of the crash, compared with 12 percent of the young female drivers involved in fatal crashes.<sup>4</sup>
- According to national data, drowning is the leading cause of injury-related death among adolescents and young adults. Factors contributing to youth drowning include alcohol which can severely affect a swimmer's coordination and judgment. Forty to 50 percent of young males who drown were drinking when they died, and an equal percentage of all diving accidents are alcohol related.<sup>5</sup>
- Approximately 240,000 to 360,000 of the nation's 12 million current undergraduates will ultimately die from alcohol-related causes.<sup>6</sup>

## PHYSICAL AND MENTAL HEALTH

- People who begin drinking before the age of 15 are four times more likely to develop alcohol dependence than those who wait until age 21. Each additional year of delayed drinking onset reduces the probability of alcohol dependence by 14 percent.<sup>7</sup>
- Adolescents who drink heavily assume the same long-term health risks as adults who drink heavily. This means they are at increased risk of developing cirrhosis of the liver, pancreatitis, hemorrhagic stroke, and certain forms of cancer.<sup>8</sup>
- Adolescents who use alcohol are more likely to become sexually active at an earlier age, to have sex more often, and to engage in unprotected sex, which places them at greater risk of HIV infection and other sexually transmitted diseases.<sup>9</sup>

## DID YOU KNOW?

- According to the Substance Abuse and Mental Health Services Administration (SAMHSA), 2.6 million young people do not know that a person can die of an overdose of alcohol.<sup>20</sup> Alcohol poisoning occurs when a person drinks a large quantity of alcohol in a short amount of time.
- The amount of alcohol in the bloodstream is called the blood alcohol concentration or BAC. BAC is measured in percentages. For example, a BAC of 0.10 percent means that a person has 1 part alcohol per 1,000 parts blood in the body. Most experts define a lethal dose of alcohol at about .40 to .50 percent; however, the level can be higher or lower for different individuals.<sup>21</sup>
- Impaired driving can occur with very low blood alcohol percentages. For most young people, even one drink can adversely affect driving skills.<sup>22</sup>
- For young drivers 15 to 20 years old, alcohol involvement is higher among males than among females. In 1997, 25 percent of the young male drivers involved in fatal crashes had been drinking at the time of the crash, compared with 12 percent of the young female drivers involved in fatal crashes.<sup>23</sup>



**SAMHSA**

- One study showed that students diagnosed with alcohol abuse were four times more likely to experience major depression than those without an alcohol problem.<sup>10</sup>
- Alcohol use among adolescents has been associated with considering, planning, attempting, and completing suicide. Research does not indicate whether drinking causes suicidal behavior, only that the two behaviors are correlated.<sup>11</sup>
- Drinking alcohol during pregnancy can lead to serious and permanent brain damage in the unborn child. This can result in mental retardation and severe emotional problems as the child grows up.<sup>12</sup>

## ACADEMIC PERFORMANCE

- A lower dosage of alcohol will damage a young brain compared to a fully mature brain, and young brains are damaged more quickly. Alcohol exposure during adolescence is linked with a reduced ability to learn compared with those not exposed until adulthood.<sup>13</sup>
- Alcohol is implicated in more than 40 percent of all college academic problems and 28 percent of all college dropouts.<sup>14</sup> At both 2- and 4-year colleges, the heaviest drinkers make the lowest grades.<sup>15</sup>
- High school students who use alcohol or other substances are five times more likely than other students to drop out of school or to believe that earning good grades is not important.<sup>16</sup>

## CRIME

- About half of college students who are victims of crime are drinking when they are victimized.<sup>17</sup>
- In a high percentage of serious crimes, alcohol is found in the offender, the victim, or both, and alcohol-related problems are disproportionately found in both juvenile and adult offenders.<sup>18</sup>
- Ninety-five percent of violent crime on college campuses is alcohol related, and 90 percent of college rapes involve alcohol use by the victim and/or assailant.<sup>19</sup>

## SOME GOOD NEWS

SAMHSA programs like Girl Power! and Planet Teen are helping young people learn how to make healthy choices.

- The laws are working. All states and the District of Columbia now have minimum drinking-age laws set at 21 years of age. The National Highway Traffic Safety Administration (NHTSA) estimates that these laws have reduced traffic fatalities involving drivers 18 to 20 years old by 13 percent. In 1997, an estimated 846 lives were saved by minimum drinking-age

laws. Fifteen states have set 0.08 g/dl as the legal intoxication limit, and all 50 states and the District of Columbia have zero tolerance laws for drivers under the age of 21 (it is illegal for drivers under age 21 to drive with BAC levels of 0.02 g/dl or greater).<sup>24</sup>

- Prevention programs are working. The rate of alcohol use among adolescents ages 12 to 17 fell from about 50 percent in 1979 to 21 percent in 1991 and has remained relatively stable since.<sup>25</sup>

## SOURCES

- <sup>1</sup> National Institute on Alcohol Abuse and Alcoholism, Youth Drinking: Risk Factors and Consequences, Alcohol Alert No. 37, July 1997. <sup>2</sup> National Institute on Alcohol Abuse and Alcoholism, Ninth Special Report to the U.S. Congress on Alcohol and Health, Bethesda, MD: U.S. Department of Health and Human Services, 1997. <sup>3</sup> National Highway Traffic Safety Administration, Young Drivers Traffic Safety Facts 1997, Washington, D.C.:U.S. Department of Transportation, 1997. <sup>4</sup> Ibid. <sup>5</sup> Office of the Inspector General, Report to the Surgeon General, Youth and Alcohol: Dangerous and Deadly Consequences, Washington, DC: U.S. Department of Education, 1992. <sup>6</sup> National Center on Addiction and Substance Abuse, Rethinking Rites of Passage: Substance Abuse on America's Campuses, Columbia University, New York, 1994. <sup>7</sup> Grant, B.F., The impact of a family history of alcoholism on the relationship between age at onset of alcohol use and DSM-IV alcohol dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey, Alcohol Health and Research World, Volume 22, 1998. <sup>8</sup> National Institute in Alcohol Abuse and Alcoholism, Alcohol Health and Research World, Volume 17, No. 2, 1993. <sup>9</sup> Office of the Inspector General, Report to the Surgeon General, Youth and Alcohol: Dangerous and Deadly Consequences, Washington, DC: U.S. Department of Education, 1992. <sup>10</sup> National Institute on Alcohol Abuse and Alcoholism, Youth Drinking: Risk Factors and Consequences, Alcohol Alert No. 37, July 1997. <sup>11</sup> Ibid. <sup>12</sup> National Institute on Alcohol Abuse and Alcoholism, Ninth Special Report to the U.S. Congress on Alcohol and Health, Bethesda, MD: U.S. Department of Health and Human Services, 1997. <sup>13</sup> Swartzwelder, H.S., Wilson, W.A., and Tayyeb, M.I., Age-dependent inhibition of long-term potentiation by ethanol in immature versus mature hippocampus, Alcoholism: Clinical Experimental Research, Volume 20, 1996. <sup>14</sup> National Center on Addiction and Substance Abuse, Rethinking Rites of Passage: Substance Abuse on America's Campuses, Columbia University, New York, 1994. <sup>15</sup> National Clearinghouse for Alcohol and Drug Information, Alcohol, Tobacco, and Other Drugs and the College Experience, Making the Link, 1995. <sup>16</sup> National Institute on Drug Abuse, National Survey Results on Drug Use from The Monitoring the Future Study, 1975-1997, Volume I: Secondary School Students, Rockville, MD: Department of Health and Human Services, 1998. <sup>17</sup> National Center on Addiction and Substance Abuse, Rethinking Rites of Passage: Substance Abuse on America's Campuses, Columbia University, N.Y., 1994. <sup>18</sup> National Institute on Alcohol Abuse and Alcoholism, Ninth Special Report to the U.S. Congress on Alcohol and Health, Bethesda, MD: U.S. Department of Health and Human Services, 1997. <sup>19</sup> National Center on Addiction and Substance Abuse, Rethinking Rites of Passage: Substance Abuse on America's Campuses, Columbia University, New York, 1994. <sup>20</sup> Office of Substance Abuse Prevention, Too many young people drink and know too little about the consequences, Rockville, MD: U.S. Department of Health and Human Services, 1991. <sup>21</sup> National Institute on Alcohol Abuse and Alcoholism, Drinking and Driving, Alcohol Alert No. 31, January 1996. <sup>22</sup> Ibid. <sup>23</sup> National Highway Traffic Safety Administration, Young Drivers Traffic Safety Facts 1997, Washington, DC:U.S. Department of Transportation, 1997. <sup>24</sup> Ibid. <sup>25</sup> Substance Abuse and Mental Health Services Administration, Summary of Findings from the 1998 National Household Survey on Drug Abuse, Rockville, MD: U.S. Department of Health and Human Services, 1999.

SAMHSA, a public health agency in the Department of Health and Human Services, is the Federal Government's lead agency for improving the quality and availability of substance abuse prevention, addiction treatment, and mental health services in the United States. Further information about SAMHSA is available on the Internet at [www.samhsa.gov](http://www.samhsa.gov).