The Minimum Legal Drinking Age Should Not Be Lowered

**Teens at Risk**, 2009


"Increasing the age at which people can legally purchase and drink alcohol has been the most successful intervention to date in reducing drinking and alcohol-related crashes among people under age 21."

In the following viewpoint, the U.S. Department of Health and Human Services (DHHS) breaks down the risks of alcohol consumption of young people under the age of 21. This viewpoint contends that the most successful way to prevent underage drinking is to keep the legal drinking age at 21. HHS estimates this minimum saves about 700 to 1,000 lives annually. HHS is the United States government's principal agency for protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves.

As you read, consider the following questions:

1. What was the average age of first use by adolescents in 2003, as stated in the viewpoint?
2. According to the authors, what are some of the health risks of adolescent drinking?
3. What did the New Zealand study show about how much the legal drinking age relates to drinking-related crashes?

Alcohol is the drug of choice among youth. Many young people are experiencing the consequences of drinking too much, at too early an age. As a result, underage drinking is a leading public health problem in this country.

Each year, approximately 5,000 young people under the age of 21 die as a result of underage drinking; this includes about 1,900 deaths from motor vehicle crashes, 1,600 as a result of homicides, 300 from suicide, as well as hundreds from other injuries such as falls, burns, and drownings.

Yet drinking continues to be widespread among adolescents, as shown by nationwide surveys as well as studies in smaller populations. According to data from the 2005 Monitoring the Future (MTF) study, an annual survey of U.S. youth, three-fourths of 12th graders, more than two-thirds of 10th graders, and about two in every five 8th graders have consumed alcohol. And when youth drink they tend to drink intensively, often consuming four to five drinks at one time. MTF data show that 11 percent of 8th graders, 22 percent of 10th graders, and 29 percent of 12th graders had engaged in heavy episodic (or "binge") drinking within the past two weeks.

Research also shows that many adolescents start to drink at very young ages. In 2003, the average age of first use of alcohol was about 14, compared to about 17 1/2 in 1965. People who reported starting to drink before the age of 15 were four times more likely to also report meeting the criteria for alcohol dependence at some point in their lives. In fact, new research shows that the serious drinking problems (including what is called alcoholism) typically associated with middle age actually begin to appear much earlier, during young adulthood and even adolescence.
Other research shows that the younger children and adolescents are when they start to drink, the more likely they will be to engage in behaviors that harm themselves and others. For example, frequent binge drinkers (nearly 1 million high school students nationwide) are more likely to engage in risky behaviors, including using other drugs such as marijuana and cocaine, having sex with six or more partners, and earning grades that are mostly Ds and Fs in school.

**Why Some Adolescents Drink**

As children move from adolescence to young adulthood, they encounter dramatic physical, emotional, and lifestyle changes. Developmental transitions, such as puberty and increasing independence, have been associated with alcohol use. So in a sense, just being an adolescent may be a key risk factor not only for starting to drink but also for drinking dangerously.

Research shows the brain keeps developing well into the twenties, during which time it continues to establish important communication connections and further refines its function. Scientists believe that this lengthy developmental period may help explain some of the behavior which is characteristic of adolescence—such as their propensity to seek out new and potentially dangerous situations. For some teens, thrill-seeking might include experimenting with alcohol. Developmental changes also offer a possible physiological explanation for why teens act so impulsively, often not recognizing that their actions—such as drinking—have consequences.

How people view alcohol and its effects also influences their drinking behavior, including whether they begin to drink and how much. An adolescent who expects drinking to be a pleasurable experience is more likely to drink than one who does not. An important area of alcohol research is focusing on how expectancy influences drinking patterns from childhood through adolescence and into young adulthood. Beliefs about alcohol are established very early in life, even before the child begins elementary school. Before age 9, children generally view alcohol negatively and see drinking as bad, with adverse effects. By about age 13, however, their expectancies shift, becoming more positive. As would be expected, adolescents who drink the most also place the greatest emphasis on the positive and arousing effects of alcohol.

Differences between the adult brain and the brain of the maturing adolescent also may help to explain why many young drinkers are able to consume much larger amounts of alcohol than adults before experiencing the negative consequences of drinking, such as drowsiness, lack of coordination, and withdrawal/hangover effects. This unusual tolerance may help to explain the high rates of binge drinking among young adults. At the same time, adolescents appear to be particularly sensitive to the positive effects of drinking, such as feeling more at ease in social situations, and young people may drink more than adults because of these positive social experiences.

Pinpointing a genetic contribution will not tell the whole story, however, as drinking behavior reflects a complex interplay between inherited and environmental factors, the implications of which are only beginning to be explored in adolescents. And what influences drinking at one age may not have the same impact at another. As Rose and colleagues show, genetic factors appear to have more influence on adolescent drinking behavior in late adolescence than in mid-adolescence.

Environmental factors, such as the influence of parents and peers, also play a role in alcohol use. For example, parents who drink more and who view drinking favorably may have children who drink more, and an adolescent girl with an older or adult boyfriend is more likely to use alcohol and other drugs and to engage in delinquent behaviors.
Researchers are examining other environmental influences as well, such as the impact of the media. Today alcohol is widely available and aggressively promoted through television, radio, billboards, and the Internet. Researchers are studying how young people react to these advertisements. In a study of 3rd, 6th, and 9th graders, those who found alcohol ads desirable were more likely to view drinking positively and to want to purchase products with alcohol logos. Research is mixed, however, on whether these positive views of alcohol actually lead to underage drinking.

**Health Risks**

Whatever it is that leads adolescents to begin drinking, once they start they face a number of potential health risks. Although the severe health problems associated with harmful alcohol use are not as common in adolescents as they are in adults, studies show that young people who drink heavily may put themselves at risk for a range of potential health problems.

Scientists currently are examining just how alcohol affects the developing brain, but it's a difficult task. Subtle changes in the brain may be difficult to detect but still have a significant impact on long-term thinking and memory skills. Add to this the fact that adolescent brains are still maturing, and the study of alcohol's effects becomes even more complex. Research has shown that animals fed alcohol during this critical developmental stage continue to show long-lasting impairment from alcohol as they age. It's simply not known how alcohol will affect the long-term memory and learning skills of people who began drinking heavily as adolescents.

Elevated liver enzymes, indicating some degree of liver damage, have been found in some adolescents who drink alcohol. Young drinkers who are overweight or obese showed elevated liver enzymes even with only moderate levels of drinking.

In both males and females, puberty is a period associated with marked hormonal changes, including increases in the sex hormones, estrogen and testosterone. These hormones, in turn, increase production of other hormones and growth factors, which are vital for normal organ development. Drinking alcohol during this period of rapid growth and development (i.e., prior to or during puberty) may upset the critical hormonal balance necessary for normal development of organs, muscles, and bones. Studies in animals also show that consuming alcohol during puberty adversely affects the maturation of the reproductive system.

**Preventing Underage Drinking Within A Developmental Framework**

Complex behaviors, such as the decision to begin drinking or to continue using alcohol, are the result of a dynamic interplay between genes and environment. For example, biological and physiological changes that occur during adolescence may promote risk-taking behavior, leading to early experimentation with alcohol. This behavior then shapes the child's environment, as he or she chooses friends and situations that support further drinking. Continued drinking may lead to physiological reactions, such as depression or anxiety disorders, triggering even greater alcohol use or dependence. In this way, youthful patterns of alcohol use can mark the start of a developmental pathway that may lead to abuse and dependence. Then again, not all young people who travel this pathway experience the same outcomes.
Children mature at different rates. Developmental research takes this into account, recognizing that during adolescence there are periods of rapid growth and reorganization, alternating with periods of slower growth and integration of body systems. Periods of rapid transitions, when social or cultural factors most strongly influence the biology and behavior of the adolescent, may be the best time to target delivery of interventions. Interventions that focus on these critical development periods could alter the life course of the child, perhaps placing him or her on a path to avoid problems with alcohol.

To date, researchers have been unable to identify a single track that predicts the course of alcohol use for all or even most young people. Instead, findings provide strong evidence for wide developmental variation in drinking patterns within this special population.

**Intervention Approaches**

Intervention approaches typically fall into two distinct categories: (1) environmental-level interventions, which seek to reduce opportunities for underage drinking, increase penalties for violating minimum legal drinking age (MLDA) and other alcohol use laws, and reduce community tolerance for alcohol use by youth; and (2) individual-level interventions, which seek to change knowledge, expectancies, attitudes, intentions, motivation, and skills so that youth are better able to resist the pro-drinking influences and opportunities that surround them.

Environmental approaches include:

- **Raising the Price of Alcohol**—A substantial body of research has shown that higher prices or taxes on alcoholic beverages are associated with lower levels of alcohol consumption and alcohol-related problems, especially in young people.

- **Increasing the Minimum Legal Drinking Age**—Today all States have set the minimum legal drinking at age 21. Increasing the age at which people can legally purchase and drink alcohol has been the most successful intervention to date in reducing drinking and alcohol-related crashes among people under age 21. The National Highway Traffic Safety Administration (NHTSA) estimates that a legal drinking age of 21 saves 700 to 1,000 lives annually. Since 1976, these laws have prevented more than 21,000 traffic deaths. Just how much the legal drinking age relates to drinking-related crashes is shown by a recent study in New Zealand. Six years ago that country lowered its minimum legal drinking age to 18. Since then, alcohol-related crashes have risen 12 percent among 18- to 19-year-olds and 14 percent among 15- to 17-year-olds. Clearly a higher minimum drinking age can help to reduce crashes and save lives, especially in very young drivers.

- **Enacting Zero-Tolerance Laws**—All States have zero-tolerance laws that make it illegal for people under age 21 to drive after any drinking. When the first eight States to adopt zero-tolerance laws were compared with nearby States without such laws, the zero-tolerance States showed a 21-percent greater decline in the proportion of single-vehicle night-time fatal crashes involving drivers under 21, the type of crash most likely to involve alcohol.

- **Stepping up Enforcement of Laws**—Despite their demonstrated benefits, legal drinking age and zero-tolerance laws generally have not been vigorously enforced. Alcohol purchase laws aimed at sellers and buyers also can be effective, but resources must be made available for enforcing these laws.

Individual-focused interventions include:
School-Based Prevention Programs—The first school-based prevention programs were primarily informational and often used scare tactics; it was assumed that if youth understood the dangers of alcohol use, they would choose not to drink. These programs were ineffective. Today, better programs are available and often have a number of elements in common: They follow social influence models and include setting norms, addressing social pressures to drink, and teaching resistance skills. These programs also offer interactive and developmentally appropriate information, include peer-led components, and provide teacher training.

Family-Based Prevention Programs—Parents' ability to influence whether their children drink is well documented and is consistent across racial/ethnic groups. Setting clear rules against drinking, consistently enforcing those rules, and monitoring the child's behavior all help to reduce the likelihood of underage drinking. The Iowa Strengthening Families Program (ISFP), delivered when students were in grade 6, is a program that has shown long-lasting preventive effects on alcohol use.

**Intervention Programs**

Environmental interventions are among the recommendations included in the recent National Research Council (NRC) and Institute of Medicine (IOM) report on underage drinking. These interventions are intended to reduce commercial and social availability of alcohol and/or reduce driving while intoxicated. They use a variety of strategies, including server training and compliance checks in places that sell alcohol; deterring adults from purchasing alcohol for minors or providing alcohol to minors; restricting drinking in public places and preventing underage drinking parties; enforcing penalties for the use of false IDs, driving while intoxicated, and violating zero-tolerance laws; and raising public awareness of policies and sanctions.

The following community trials show how environmental strategies can be useful in reducing underage drinking and related problems.

The Massachusetts Saving Lives Program—This intervention was designed to reduce alcohol-impaired driving and related traffic deaths. Strategies included the use of drunk driving checkpoints, speeding and drunk driving awareness days, speed-watch telephone hotlines, high school peer-led education, and college prevention programs. The 5-year program decreased fatal crashes, particularly alcohol-related fatal crashes involving drivers ages 15-25, and reduced the proportion of 16- to 19-year-olds who reported driving after drinking, in comparison with the rest of Massachusetts. It also made teens more aware of penalties for drunk driving and for speeding.

The Community Prevention Trial Program—This program was designed to reduce alcohol-involved injuries and death. One component sought to reduce alcohol sales to minors by enforcing underage sales laws; training sales clerks, owners, and managers to prevent sales of alcohol to minors; and using the media to raise community awareness of underage drinking. Sales to apparent minors (people of legal drinking age who appear younger than age 21) were significantly reduced in the intervention communities compared with control sites.

Communities Mobilizing for Change on Alcohol—This intervention, designed to reduce the accessibility of alcoholic beverages to people under age 21, centered on policy changes among local institutions to make underage drinking less acceptable within the community. Alcohol sales to minors were reduced: 18- to 20-year-olds were less likely to try to purchase alcohol or provide it to younger teens, and the number of DUI arrests declined among 18- to 20-year-olds.

Multicomponent Comprehensive Interventions—Perhaps the strongest approach for preventing underage
drinking involves the coordinated effort of all the elements that influence a child's life—including family, schools, and community. Ideally, intervention programs also should integrate treatment for youth who are alcohol dependent. Project Northland is an example of a comprehensive program that has been extensively evaluated.

Project Northland was tested in 22 school districts in northeastern Minnesota. The intervention included (1) school curricula, (2) peer leadership, (3) parental involvement programs, and (4) communitywide task force activities to address larger community norms and alcohol availability. It targeted adolescents in grades 6 through 12.

Intervention and comparison communities differed significantly in "tendency to use alcohol," a composite measure that combined items about intentions to use alcohol and actual use as well as in the likelihood of drinking "five or more in a row." Underage drinking was less prevalent in the intervention communities during phase 1; higher during the interim period (suggesting a "catch-up" effect while intervention activities were minimal); and again lower during phase 2, when intervention activities resumed.

Project Northland has been designated a model program by the Substance Abuse and Mental Health Services Administration (SAMHSA), and its materials have been adapted for a general audience. It now is being replicated in ethnically diverse urban neighborhoods.

### Stopping Problems Before They Develop

Today, alcohol is widely available and aggressively promoted throughout society. And alcohol use continues to be regarded, by many people, as a normal part of growing up. Yet underage drinking is dangerous, not only for the drinker but also for society, as evident by the number of alcohol-involved motor vehicle crashes, homicides, suicides, and other injuries.

People who begin drinking early in life run the risk of developing serious alcohol problems, including alcoholism, later in life. They also are at greater risk for a variety of adverse consequences, including risky sexual activity and poor performance in school.

Identifying adolescents at greatest risk can help stop problems before they develop. And innovative, comprehensive approaches to prevention, such as Project Northland, are showing success in reducing experimentation with alcohol as well as the problems that accompany alcohol use by young people.

### Further Readings

#### Books


**Periodicals**


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