

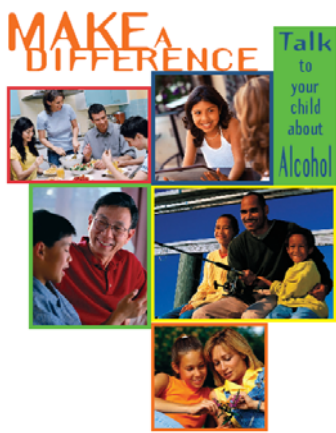


FLORIDA DEPARTMENT OF JUVENILE JUSTICE
OFFICE OF HEALTH SERVICES

EMPLOYEE HEALTH INITIATIVE:
APRIL IS ALCOHOL AWARENESS MONTH

To recognize the serious problem of alcohol abuse, April is designated "National Alcohol Awareness Month." At locations across the United States, people can be screened—**anonymously**—to see if their drinking habits may be risky.

NATIONAL CALL TO ACTION TO REDUCE AND PREVENT UNDERAGE DRINKING



U.S. Department of Health and Human Services
National Institutes of Health
National Institute on Alcohol Abuse and Alcoholism

In its first [Call to Action](#) against underage drinking, the U.S. Surgeon General's Office appealed to Americans to do more to stop America's 11 million current underage drinkers from using alcohol, and to keep other young people from starting. Acting Surgeon General Kenneth Moritsugu, M.D., M.P.H., laid out recommendations for government and school officials, parents, other adults and the young people.

"Too many Americans consider underage drinking a rite of passage to adulthood," said Dr. Moritsugu. **"Research shows that young people who start drinking before the age of 15 are five times more likely to have alcohol-related problems later in life. New research also indicates that alcohol may harm the developing adolescent brain. The availability of this research provides more reasons than ever before for parents and other adults to protect the health and safety of our nation's children."**

Although there has been a significant decline in tobacco and illicit drug use among teens, underage drinking has remained at consistently high levels. The 2005 National Survey on Drug Use and Health estimates there are 11 million underage drinkers in the United States. Nearly 7.2 million are considered binge drinkers, typically meaning they drank more than five drinks on occasion, and more than two million are classified as heavy drinkers.

Developed in collaboration with the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the Substance Abuse and Mental Health Services Administration (SAMHSA), the [Call to Action](#) identifies six goals:

- ❖ Foster changes in society that facilitate healthy adolescent development and that help prevent and reduce underage drinking.
- ❖ Engage parents, schools, communities, all levels of government, all social systems that interface with youth, and youth themselves in a coordinated national effort to prevent and reduce underage drinking and its consequences.
- ❖ Promote an understanding of underage alcohol consumption in the context of human development and maturation that takes into account individual adolescent characteristics as well as environmental, ethnic, cultural, and gender differences.
- ❖ Conduct additional research on adolescent alcohol use and its relationship to development.
- ❖ Work to improve public health surveillance on underage drinking and on population-based risk factors for this behavior.
- ❖ Work to ensure that policies at all levels are consistent with the national goal of preventing and reducing underage alcohol consumption.

"Alcohol remains the most heavily abused substance by America's youth," said Dr. Moritsugu. "This Call to Action is attempting to change the culture and attitudes toward drinking in America. We can no longer ignore what alcohol is doing to our children."

[Make a Difference - Talk to Your Child About Alcohol](#)

ALCOHOL AND THE DEVELOPING ADOLESCENT BRAIN



Underage Drinking
Research Initiative
NATIONAL INSTITUTE ON ALCOHOL
ABUSE AND ALCOHOLISM

It is evident that as humans move from childhood, through adolescence, and into adulthood, dramatic changes take place in their bodies and behavior. Many of the changes that occur during adolescence, such as an increased emphasis on social interactions with peers and a greater tendency to take risks and seek novel experiences, can be good things—helping teens gradually separate from their parents and eventually function as independent adults. But these same changes can also increase

the risk for harmful behaviors, including alcohol use. Until recently, what has been less evident is the extent of change in many parts of the brain that occurs during this period and how the process of brain maturation influence overall adolescent development.



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NEW UNDERSTANDING OF ADOLESCENT BRAIN DEVELOPMENT

Those who interact with children and adolescents are often struck by the ease with which they are able to learn a wide range of skills from speaking a foreign language to playing a musical instrument to mastering a sport to programming a computer. This facility for learning is due in large part to the tremendous adaptability (plasticity) of the developing brain. Imaging studies of normal brain development show an inverted U-shaped trajectory of change in gray matter volume; for girls, volume peaks at around age 8 1/2, while for boys it peaks at around age 10 1/2 (Lenroot et al., 2007). It has been postulated that the initial increase reflects an overproduction of synapses and that the subsequent thinning of cortical gray matter during adolescence may be due to a “use it or lose it” phenomenon, i.e., synapses that are not used are lost, whereas those that are used are reinforced. This may help explain the increase in processing efficiency as the brain matures, although more research will be needed to confirm this hypothesis.

Research has also shown that the brain is not fully physiologically mature until a person’s mid-twenties, and that maturational process in the brain do not occur uniformly throughout it (Gogtay et al., 2004). These differences in maturational timing can have important implications for behavior. Perhaps most important for understanding adolescent behavior is the maturational gap between the limbic system and the prefrontal cortex. Early in adolescence, developmental changes in the limbic system result in alterations in the control of emotions and motivation. This occurs well before the cognitive systems involving the prefrontal cortex that are responsible for self-regulation, planning, and reasoning become sufficiently mature to exert control over the impulsive and emotional reactions generated in the limbic system. The emotional intensity characteristic of adolescence may in part be explained by the uneven timing in development across these regions of the brain.

- ❖ **POTENTIAL VULNERABILITIES ARISING FROM ALCOHOL EXPOSURE TO THE DEVELOPING ADOLESCENT BRAIN**
The remarkable plasticity of the brain during adolescence, which confers significant advantages in terms of learning, may also make the teen brain particularly vulnerable to the effects of alcohol and other drugs (Spear 2000;Teicher et al. 1995). Recent research indicates that adolescent alcohol consumption may affect cognitive functioning and/or change the developing brain in ways that increase the risk for future dependence.
- ❖ **COGNITIVE FUNCTIONING**
Studies using animal models (rodents) indicate that alcohol has a greater adverse impact on learning and memory-related brain functions in adolescents compared to adults (e.g., see White and Swartzwelder 2005).
- ❖ **FUTURE DEPENDENCE**
Early alcohol use in humans is correlated with future alcohol dependence. Forty percent of people who report drinking before the age of 15 also describe their drinking behavior at some point in their lives in a manner consistent with a diagnosis of alcohol dependence.
- ❖ **DIFFERENTIAL SENSITIVITY OF THE ADOLESCENT BRAIN TO ALCOHOL MAY CONTRIBUTE TO RISK**
Research in animals suggests that adolescents may be more sensitive to the social stimulating effects of alcohol and less sensitive to its intoxicating and sedating effects than adults (see Spear and Varlinskaya 2005).
- ❖ **WHAT TO DO NOW?**
The accumulating evidence showing that alcohol can adversely affect the developing brain is compelling. Given how pervasive drinking and binge drinking are among adolescents, the prevention and reduction of underage drinking must be a priority for everyone. Continuing research will determine the magnitude and nature of the adverse effects of alcohol on the developing brain and the extent to which they resolve over time. [Start Talking Before they Start Drinking](#)



ALCOHOL USE BEFORE AGE 13 LINKED WITH VIOLENT BEHAVIORS

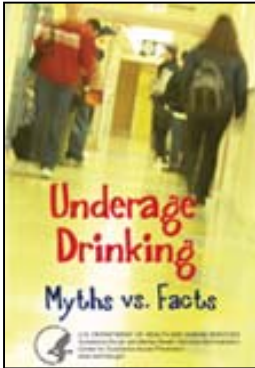
The relationship between early alcohol use initiation and violent and suicidal behaviors is the subject of a new study conducted by researchers from Georgia State University’s Institute of Public Health, according to a [news release](#). The researchers analyzed data on 7th-graders taken from a 2004 survey of violence among public school students in a community defined as “high-risk” because of high levels of poverty, unemployment, serious crimes, and single-parent households.

- ❖ Among the results were that **35 percent of the 7th-graders had started drinking before age 13** (“preteen alcohol use initiators”). The youths who began drinking early were three times more likely than non-drinking peers to attempt suicide, and were more likely to be victims of dating and peer violence.
- ❖ Author Monica Swahn states, “Since early alcohol use was strongly associated with both dating violence victimization and suicide attempts, prevention efforts that delay or reduce adolescents’ alcohol use may prevent these forms of violence as well.
- ❖ A number of evidence-based strategies, such as enforcing minimum legal drinking age laws and increasing excise taxes on alcohol, are available but not fully implemented to prevent and reduce alcohol use among minors.
- ❖ Increased support of these strategies will be necessary to prevent alcohol abuse and the many health problems associated with its use among young people.” The study appears in the February issue of *Pediatrics* (Vol. 121, pp. 297-305) (see [abstract](#)).



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SUICIDAL BEHAVIORS AND ALCOHOL USE AMONG ADOLESCENTS



The National Institute on Alcohol Abuse and Alcoholism (NIAAA) funded the research summarized below on [Suicidal Behaviors and Alcohol Use Among Adolescents: A Developmental Psychopathology Perspective](#).

- ❖ Suicide is the third leading cause of death among teens in America. Studies have shown that teen suicide is associated with depression, hopelessness, impulsivity, and alcohol and other drug use. This study explored the contribution of various risk factors, including alcohol use and binge drinking, to suicide attempts.
- ❖ The study measured motives for drinking, percentage of friends who use alcohol, and binge drinking. Other risk factors measured included depressive symptoms, temperament (e.g., rigidity, persistence, distractibility), delinquency (e.g., destroyed public property, hit a teacher, was suspended), and stressful life events (e.g., failing one or more subjects, having an acne problem, or breaking up with a boyfriend or girlfriend). These life events may not seem particularly stressful to adults, but are often

- ❖ magnified in importance by adolescents' heightened self-consciousness, acute sensitivity to rejection, and emotional fluctuations.
- ❖ The main results of the study were that a difficult temperament, drinking to cope, low family supports, and a higher percentage of friends who drink predicted current depression, stressful life events, and binge drinking. These three factors, in turn, predicted suicidal behavior. Of particular importance is that binge drinking was a significant predictor of an actual suicide attempt. This and other studies demonstrate that teen suicidal behaviors are influenced by a broad range of factors, with alcohol and other substance use among the prominent influences, along with depressive symptoms, psychosocial factors, and stressful events. Interventions to address these factors need to be multifaceted, from early detection and treatment of depression, to improving problem-solving and coping skills, to controlling youths' access to firearms.

CLICK ON LINKS BELOW FOR MORE RESOURCES

- ❖ [Interview about Alcohol and the Teen Brain on ABC News](#)
- ❖ [The Adolescent Brain: A Work In Progress](#)
- ❖ [Adolescent Directory On Line, Indiana University](#)
- ❖ [Alcohol and the Adolescent Brain, Duke University](#)
- ❖ [Deciphering the Adolescent Brain, Harvard Medical School](#)
- ❖ [Inside the Teen Brain, PBS Interview with Dr. Jay Giedd](#)
- ❖ [Research Briefs](#) are one-page summaries of notable findings from research on children and alcohol. (Leadership to Keep Children Alcohol Free)
- ❖ [How Does Alcohol Affect the World of a Child?](#) is a statistical brochure for lay audiences that distill the most current research findings about early alcohol use and its effects. (Leadership to Keep Children Alcohol Free)
- ❖ [Keep Kids Alcohol Free: Strategies for Action](#) describes the public and private application of three science-based prevention applications for preventing alcohol use by children ages 9-15 and ways these strategies can be applied in the home, the school, and the community. Informative online "e-sources" that highlight prevention strategies in action are also included. (Leadership to Keep Children Alcohol Free)

FREE ONLINE ALCOHOL SCREENING

If you suspect that you might have a drinking problem, or you know someone who abuses alcohol, please contact [SAMHSA's National Clearinghouse for Alcohol and Drug Information \(NCADI\)](#) at 1-800-729-6686 or find a screening site located near you.



Sources for this article:

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration; National Institute of Health; National Institute on Alcohol Abuse and Alcoholism; Alcohol Free Children Organization - Research; <http://family.samhsa.gov/>; STOP Underage Drinking - SAMHSA; Michael Windle, Ph.D., Director, Center for the Advancement of Youth Health and the Comprehensive Youth Violence Center, University of Alabama at Birmingham - Windle M. 2004. Suicidal behaviors and alcohol use among adolescents: a developmental psychopathology perspective. Alcohol Clin Exp Res 28(5) Supplement: 29S-37S.