

NIH News in Health

National Institutes of Health · Department of Health and Human Services · newsinhealth.nih.gov

September 2006

Discussing Drinking

A Back-to-School Conversation You Need to Have

As college students arrive on campus this fall, it's a time of new experiences, new friendships and making memories that will last a lifetime. Unfortunately for many, it can also be a time of excessive drinking and dealing with its aftermath—vandalism, violence, sexual aggression and even death. For those beginning their college experience, a rapid increase in heavy drinking over a relatively short period of time can cause serious problems with the transition to college. Alcohol abuse can also be a problem for high school students. Fall semester is a good time to sit down with your child to have a frank discussion about drinking.

We go through many changes in our teen years. Relationships change as our bodies and brains mature. Recent research has shown that the human brain continues to develop into a person's early 20's.

This period is also marked by taking risks. This can include risky drinking. And early drinking is associated with other risky behavior, such as academic failure, unsafe sexual behavior and drug use. Over the long-term, early drinking is associated with an increased risk of developing an alcohol use disorder at some time during the life span.

The consequences of excessive drinking by young people are more

significant, more destructive and more costly than many parents realize. According to the College Drinking Task Force report to NIH's National Institute on Alcohol Abuse and Alcoholism (NIAAA), drinking by 18- to 24-year old college students contributes to an estimated 1,700 student deaths, 599,000 injuries and 97,000 cases of sexual assault or date rape each year.

Students form their expectations about alcohol from their environment and from each other. As they face the insecurity and stresses of establishing themselves in a new social setting, environmental and peer influences combine to create a culture of drinking. This culture actively—or at least passively—promotes drinking through tolerance, or even unspoken approval, of college drinking as a rite of passage.

The transition to college can be difficult, with about 1 of 3 first-year students failing to enroll for their second year. **Anecdotal evidence** suggests that the first 6 weeks of the first semester are critical to a first-year student's academic success. Many students begin drinking heavily during these early days of college, and this can interfere with their successful

adaptation to campus life.

But parents can still play a major role in preventing alcohol problems. The time to start is before your child leaves for college. As the fall semester begins, prepare your college-age children by talking with them about the consequences of drinking. Stay

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Definitions

Anecdotal evidence

Evidence that's based not on carefully controlled scientific experiments, but on things that people notice around them.



Wise Choices Alcohol Poisoning

When you sit down to talk to your children about the dangers of alcohol abuse, take a few minutes to help them recognize the signs of alcohol poisoning. It could mean the difference between life and death for them or one of their friends.

What Is Alcohol Poisoning? Too much alcohol can shut down the parts of the brain that control breathing and the gag reflex, which prevents choking. Someone who drinks a fatal dose of alcohol will

eventually stop breathing. Even if someone survives an alcohol overdose, the experience can cause irreversible brain damage. Rapid binge drinking is especially dangerous because victims can continue drinking beyond a fatal dose before they lose consciousness.

A person who appears to be sleeping it off may still be in real danger. Blood alcohol levels can continue to rise even after someone's passed out, since alcohol in the stomach and intestine can continue to enter the bloodstream and circulate throughout the body.

What Should I Look For? Critical signs of alcohol poisoning include mental confusion, unconsciousness, vomiting, seizures, slow (fewer than 8 breaths per minute) or irregular (10 seconds or more between breaths) breathing and hypothermia (low body temperature, bluish skin color and paleness).

What Should I Do? Know the danger signals. If you suspect someone has alcohol poisoning, don't wait for all the critical signs to be present. If you suspect an alcohol overdose, call 911 immediately for help.



Definitions

Peer pressure

The feeling that someone your own age is pushing you toward making a certain choice.

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involved during the crucial early weeks of college. Inquire about campus alcohol policies, and ask your children about their roommates and living arrangements.

High school students can also come under pressure to drink from their peers at school. It's important to talk to your high school students about **peer pressure** and how to resist it. They need to know that alcohol can harm their judgment, coordination and reflexes. It can cause them to lose control, take chances



[www.collegedrinkingprevention.gov/
NIAAACollegeMaterials/parentBrochure.aspx](http://www.collegedrinkingprevention.gov/NIAAACollegeMaterials/parentBrochure.aspx)
www.collegedrinkingprevention.gov
www.TheCoolSpot.gov

and do things they never would do otherwise. In fact, alcohol is linked with an estimated 5,000 deaths in people under age 21 each year—more than all illegal drugs combined.

When you sit down to talk with your child about the consequences of drinking, discuss the penalties for underage drinking as well as how alcohol use can lead to date rape, violence and academic failure. Underage drinking has also been linked with deaths and injuries from burns, falls, alcohol poisoning and suicide.

Discuss drinking and driving. Mo-

tor vehicle crashes are the leading cause of death in people aged 15 to 20. Deadly crashes involving alcohol are twice as common in teens compared with people 21 and older.

Now's the time to talk to your children about the dangers of alcohol. Help prevent them from doing something that they—and you—might regret for the rest of their life. ■



Statistics

- More than three-fourths of 12th graders and two in five 8th graders have tried alcohol.
- Of the people who began drinking before age 14, 47% became alcohol dependent at some point later in their lives, compared with 9% of those who began drinking at age 21 or older.
- Drinking by 18- to 24-year old college students contributes to an estimated 1,700 student deaths, 599,000 injuries and 97,000 cases of sexual assault or date rape each year.

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Drugs are a Drag

Help Your Child Avoid Drugs of Abuse

Kids heading back to school need to keep healthy if they're going to do well in the classroom and on the playing field. That means sleeping well, eating right, getting exercise and avoiding drugs of abuse.

Drugs work by altering the chemistry of the brain. Drugs of abuse, such as nicotine, cocaine and marijuana, work by affecting the brain's signaling system. This system is made up of billions of cells called **neurons**, which send and receive messages to and from other neurons. Messages travel through neurons as electrical signals, which cause the release of a type of chemical at the neuron's end called a **neurotransmitter** to pass the signal on to other neurons.

Some drugs are similar in size and shape to neurotransmitters. This similarity allows them to attach to neurons and start a chemical chain reaction that leads to the release of large amounts of a neurotransmitter called dopamine. Others can block neurons from reabsorbing dopamine for re-use, allowing too much of the chemical to pool in the signaling area between neurons. Too much dopamine is what leads to the powerful high or "rush" that drugs can produce.

The first time someone abuses a drug, he or she may feel intense pleasure. Of course, drugs have other effects, too; a first-time smoker may cough and feel nauseated, while a first-time cocaine abuser might even have a heart attack or stroke.

The unusual amount of neurotransmitters in the brain begins to change



Definition

Neuron

Nerve cells that send and receive signals throughout the brain, creating our thoughts, actions and personalities.

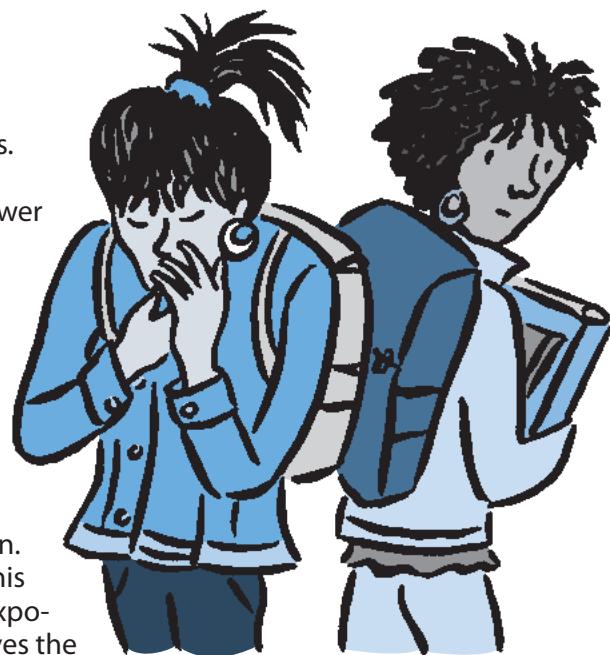
Neurotransmitter

A chemical released by a neuron to signal other neurons.

the brain in a number of ways. For example, the brain may compensate by producing fewer neurotransmitters. Neurons may become less sensitive to signals from other neurons. Some neurons may even die from the drug's toxicity.

Continued drug abuse also disrupts the brain circuits involved in reward, motivation and control, leading to the disease of addiction. No one knows how quickly this happens, but after enough exposure, an addicted person craves the drug like people crave food, water or air, linking it to their very survival. Eventually, natural "rewards" like friends and family lose out to compulsive drug-seeking and abuse.

That's why it's critical to prevent drug use before it ever starts. NIH's National Institute on Drug Abuse (NIDA) is testing many approaches designed to prevent drug abuse among different populations, espe-



cially young people. But prevention must start at home, with parents. One of NIDA's goals is to help parents understand the causes of drug abuse so they can help prevent it.

Explore NIDA's science-based materials on drug abuse for students, teachers and parents, and use them to help your children do their best—in school and in life. ■



www.drugabuse.gov, or call 301-443-1124

www.drugabuse.gov/drugpages/prevention.html



Wise Choices Is Your Child Abusing Drugs?

Signs that your child is abusing drugs may be obvious—like he or she is dizzy or has trouble walking; seems silly and giggly for no reason; has red, bloodshot eyes; or has a hard time remembering things that just happened. But you should also be aware of the following changes in your child's behavior, bearing in mind that these signs may reflect problems other than drug abuse:

- Withdrawal
- Depression
- Fatigue
- Hostility

- Carelessness with grooming
- Deteriorating relationships with family members and friends
- Changes in school or sports performance
- Increased absenteeism or truancy
- Lost interest in sports or other favorite activities
- Changes in eating or sleeping habits
- Unusual odor on clothes and in the bedroom
- Use of incense and air fresheners or room deodorizers

To find a drug treatment program, Call 1-800-662-HELP, or visit [www.findtreatment.samhsa.gov](http://findtreatment.samhsa.gov).

Health Capsules

Stay Skeptical about Genetic Testing

Earlier this year, we reported that one day you'll be able to visit your doctor, have some blood drawn and find out about many of your health risks for the next 5 or 10 years through a method called **genetic testing**. We cautioned, however, that we still have many things to learn about **genes** before that vision becomes a reality. Unfortunately, some unscrupulous marketers aren't willing to wait.

The U.S. Government Accountability Office (GAO) recently purchased genetic tests from 4 web sites and

[www.genome.
gov/10002335](http://www.genome.gov/10002335)

[www.gao.gov/cgi-bin/
getrpt?GAO-06-977T](http://www.gao.gov/cgi-bin/getrpt?GAO-06-977T)

[newsinhealth.nih.gov/
PastIssue/February2006/
docs/01features_01.htm](http://newsinhealth.nih.gov/PastIssue/February2006/docs/01features_01.htm)

created fictitious consumers to see what results they got. They submitted 12 samples taken from 2 people, telling the companies that they came from adults with various ages, weights and lifestyles.

The results from all the tests would mislead consumers, GAO concluded, by making predictions that are either medically unproven or so ambiguous they don't provide meaningful information.

The fictitious consumers that GAO created should have received the same recommendations when their genes came from the same person. Instead, they received a variety of different recommendations, depending on their fictitious lifestyles.

Some results recommended costly dietary supplements. One suggested "personalized" supplements costing well over \$1,000 a year. After examining the ingredients, however, GAO

Get Active for a Healthy Heart

Physical inactivity is one of several major heart disease risk factors you can do something about. A new NIH publication called *Your Guide to Physical Activity and Your Heart* has easy-to-understand information on the power of physical activity to keep you healthy.

Experts recommend that all adults should be moderately active for at least 30 minutes per day on most days of the week. They recommend at least 60 minutes per day to help manage body weight and prevent unhealthy weight gain.

Children and adolescents also need to be active for at least 60 minutes per day. So pry the kids off the couch and help yourself stay fit by doing enjoyable activities together.

The 44-page guide is full of practical tips, including simple ways you can incorporate physical activity into your everyday life, such as:

- Use the stairs instead of the eleva-



Definitions

Genes

Stretches of DNA, a substance you inherit from your parents, that define characteristics like height, eye color and how likely you are to get certain diseases.

Genetic Testing

Test that involves taking a sample from someone's blood, hair, skin or other body part, then examining the genes to look for signs they might be at risk for certain diseases or disorders.

found that the same vitamins and antioxidants could be found in any grocery store for about \$35 a year.

GAO's findings reinforce NIH's recommendations: Take only genetic tests recommended and given by trained medical professionals. ■



Featured Web Site

College Drinking: Changing the Culture

[www.collegedrinking-
prevention.gov](http://www.collegedrinking-prevention.gov)

Your one-stop resource for comprehensive research-based information on issues related to alcohol abuse and binge drinking among college students.
From NIH's National Institute on Alcohol Abuse and Alcoholism.

College DRINKING—Changing the Culture

State & Summaries	NCAA College Materials	Supporting Research	Other Alcohol Information	Special Features
College Presidents	College Parents	College Students	H.S. Administrators	H.S. Parents & Students

Special Features

- [College Alcohol Policies](#)
- [Interactive Body](#)
- [Alcohol Myths](#)
- [Calculators](#)
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Helpful Tools

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Welcome to College Drinking: Changing the Culture, created by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). This site is your one-stop resource for comprehensive research-based information on issues related to alcohol abuse and binge drinking among college students.

College Presidents

College Parents

College Students

H.S. Administrators

H.S. Parents & Students

In the News

[Aug. 4, 2005](#)
Alcohol-related arrests up at UNI last year

Associated Press

Stats & Summaries

[Journal of Drinking](#)

[Consequences](#)

[College Drinking](#)

[College Drinking Statistical](#)

[College Materials](#)

[A Call to Action: Changing the Culture of Drinking at U.S. Colleges](#)

[College Drinking Statistical](#)

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[Facts About Poisoning](#)

[FAQs on Alcohol Abuse and](#)

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Area 4, 2005

[Police prevent alcohol protests](#)

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Area 3, 2005

[Rape at U.S. Colleges Often Fueled by Alcohol](#)

[JAMA](#)

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