# Strategies for Success new pathways to drug abuse prevention

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## **CDC Study Indicates Thousands of Schools Have Random Testing Programs**

Just how many schools test students for drug use? Until recently, there has been very little national data on the prevalence of student drug testing. With no reliable mechanism to track random testing programs in public, private, and parochial schools, Federal estimates ranged from 500 to 2,000 and were based on the number of schools receiving U.S. Department of Education grants, results from surveys, and media reports. Then, in October 2007, the Centers for Disease Control and Prevention (CDC) released the results of a national survey, which contained questions related to student drug testing. Findings indicate that the number of schools conducting random testing may be closer to 4,000-more than double the highest estimates cited previously.

Every 6 years, the CDC conducts the School Health Policies and Programs Study (SHPPS) to gather data on the health and safety of students in public and private elementary, middle, and high schools across the country. The 2006 SHPPS is the largest and most comprehensive assessment of school health programs ever conducted in the United States, and it is the first one to include questions on student drug testing. SHPPS surveys teachers and administrators at the State, district, and school levels using computerassisted telephone interviews, selfadministered mail questionnaires, and computer-assisted personal interviews. Information was collected

from all 50 States and the District of Columbia and included 461 school districts and 1,025 elementary, middle, and high schools. The survey sample was weighted to represent an estimated 125,333 schools nationwide.

### What the Numbers Show

Out of an estimated 59,364 middle and high schools in the country, weighted survey results from the individual schools included in the SHPPS suggest that 11.4 percent of middle schools and 19.5 percent of high schools include some type of drug testing as part of their drugprevention programs. Approximately 7 percent of the public and private middle schools and high schools in the nation, or 4,200, conduct random student drug testing. Drugs Targeted by Schools Conducting SDT\*

Marijuana	86%	
Opiates (e.g., heroin, morphine)	78%	
Amphetamines (e.g., ecstasy)	77%	
Cocaine	75%	
PCP 714	%	
Alcohol 50%		
Steroids 27%		
Nicotine 16%		
% of Schools with SDT Programs		

\* 14.6% of all public and private middle schools and high schools
Source: School Health Policies and Programs Study (SHPPS)
2006, Centers for Disease Control and Prevention, 2007.

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#### CDC Study, from page 1

The study also shows that public and private schools test for similar drugs. Among the public and private middle and high schools that conduct drug testing, 86 percent reported testing for marijuana, 78 percent tested for opiates (such as heroin or morphine), 77 percent tested for amphetamines (such as methamphetamine or ecstasy), 75 percent tested for cocaine, 71 percent tested for PCP, 50 percent tested for alcohol, 27 percent tested for steroids, and 16 percent tested for nicotine.

As for methods of testing, SHPPS determined that urine tests were most popular and were used by 84 percent of schools that tested. Forty percent of the schools reported using breathalyzer (breath alcohol) tests, 15 percent reported using hair tests, 8 percent reported using saliva tests, and 3 percent reported using sweat tests.

Almost all the middle and high schools that test have procedures in place to inform students and families about drug-testing and drug-use policies and what happens if a student violates school policy.

Also encouraging is the SHPPS finding that 72.2 percent of middle and high schools provided alcohol- or other drug-use

treatment at schools through health services or mental health and social services staff, and 34.9 percent made arrangements for treatment through organizations or professionals outside of school.

# Drug Testing as Part of a Larger Prevention Effort

Considerable progress has been made against youth drug and alcohol use. Today, 860,000 fewer young people are using drugs than in 2001. Yet researchers responsible for SHPPS caution, "more schools need to promote a positive school climate and reduce violence, injuries, and the use of tobacco, alcohol, and other substances." As the survey indicates, thousands of schools are already conducting random student drug testing as part of ongoing efforts to promote a safe and healthy school environment. Information on how random student drug testing can contribute to these important goals is available at www.randomstudentdrugtesting.org. For more information on the CDC and the SHPPS survey, visit http://www.cdc.gov/ HealthyYouth/shpps/index.htm. A complete list of citations for this article is available at www.randomstudentdrugtesting.org.

## **Starting a Random Student Drug Testing Program**

Random student drug testing is a promising strategy to keep young people from using drugs. And, as the numbers show, more schools than ever are beginning to incorporate testing as part of their larger drug prevention programs. Still, for many schools, random drug testing remains uncharted territory, and often even those eager to implement a program find themselves wondering how to begin.

To start off on the right track, here are some key issues that should be considered when beginning a random student drug testing program.

**Gain Support and Consensus.** An important first step is to form a committee to help decide how and under what circumstances testing will take place. This committee will consider, among other points, the type of test, who will administer it, the test panel, and the consequences of a positive test.

**Map Out Key Components.** Once the logistics of testing have been worked out, a drug testing policy can be put into place. There are four main components to a random drug testing policy:

- A statement of need provides a clear rationale for testing. It describes the drugs that are being abused and which should be included in the testing program.
- An introduction or position statement builds on the statement of need and outlines what the school hopes to accomplish through the drug testing program.
- A list of key components of the random testing program outlines which students or student groups will be tested, what drugs will be targeted, how consent for testing will be obtained, how student confidentiality will be maintained, and what the consequences will be for a positive drug test.
- A list of students' rights.

**Determine Responses to a Positive Test.** Unfortunately, some students may test positive for drugs. The school's response to a positive test should be swift and unambiguous. For example, as a condition for returning to extra-curricular activities, some schools ask students who test positive to submit to ongoing drug testing, take drug awareness classes, join a drug awareness support group, or seek treatment for drug dependency.

**Prevention Efforts Do Not End with the Test Results.** Schools should strongly consider implementing a schoolsponsored student assistance program to support students and their families in finding appropriate community resources and accessing existing school-based support services. These programs also play an important role in helping students who have completed treatment to stay in recovery once they return to school. Studies have found that students who were referred through a student assistance program to behavioral health specialists had improved attendance, fewer discipline problems, and better performance in school.

**Obtain Funding.** Funding a random student drug testing program does not have to be an expensive undertaking, and resources are available from Federal, State, local, and private sources. For more information, see the article *Funding a Random Student Drug Testing Program*, on page 4.

**Obtain the Advice of Local Legal Counsel.** It is important to ensure that the program activities will not violate established principles of Federal, State, or local requirements related to implementing a random student drug testing program. Local legal counsel should review the proposed program for this purpose.





In his Recovery Month Proclamation of September 2007, the President stated his continued commitment to help the Nation's "young people make healthy choices throughout their lives and to encourage community- and family-based approaches to the challenges and risks facing today's youth."

Focusing on youth is effective. Since 2001, according to Monitoring the Future (2007), current youth use of any illicit drug has decreased by 24 percent; marijuana use has decreased 25 percent; and steroid use has decreased by a third. Alcohol use, including binge drinking, and cigarette smoking have decreased by 15 and 33 percent, respectively. These impressive results are the outcome of clear messages from family, school, community, and government that youth drug use is dangerous and not condoned.

Schools can play a central role in helping young people make healthy choices. Today, most students who begin using drugs are not targeted by an unknown drug dealer. The spread of drug use often closely mirrors the way a disease is spread—from student-to-student contact, multiplying rapidly as more and more students are affected. Random student drug testing can provide young people with a reason never to start using drugs, protecting them during a time when they are the most vulnerable to peer pressure and the adverse health effects of drug use. The ability of schools to tap into random testing's tremendous potential was affirmed by landmark Supreme Court decisions in 1995 and 2002.

By addressing the continuum of drug use from pre-initiation to drug dependency, random testing can stop the pipeline to addiction, help create a culture of disapproval toward drugs, and contribute to safer school environments. Random testing programs can also respond to emerging drug trends, such as the abuse of prescription drugs, which 12- and 13-year-olds are abusing more than marijuana. Schools can help address this serious and growing problem by adapting test panels to reflect current drug threats.

Issue III of *Strategies for Success* covers many of the building blocks of a testing program, including privacy issues, implementation, and funding. These topics are also addressed at Summits hosted by the Office of National Drug Control Policy. Information about upcoming Summits and presentations from previous Summits are available at <u>www.</u> randomstudentdrugtesting.org.

Random student drug testing can be an important component of a comprehensive prevention plan, protecting America's youth, and making schools safer places. Statistics on the scope and extent of random student drug testing are now available from the Centers for Disease Control and Prevention's School Health Policies and Programs Study, one of the first national studies to collect data on this topic. The study indicates that more than 4,000 schools nationwide are conducting random student drug testing.

We hope the resources presented in this newsletter are helpful in implementing strong and successful prevention programs. Though remarkable progress has been made to prevent drug and alcohol use by young people, there still is much work to be done. Parents and educators, schools and community coalitions, and others who work with young people all have unique opportunities to intervene and help reduce the spread of substance abuse.

John P. Walters, Director National Drug Control Policy Margaret Spellings U.S. Secretary of Education

## **Ensuring a Fair, Accurate Test**

### By Judge Karen Freeman-Wilson (ret.)

From the moment a testing sample is collected until its analysis in the lab to determine alcohol or drug use, the sample is closely monitored and protected under a set of procedures known as the "chain of custody." Below are some important points for ensuring the privacy and accuracy of the process as the sample moves along the chain. For descriptive purposes, examples are given for urinalysis as the testing method.

- Guard against tampering. There is an entire industry devoted to the sale of "clean" urine and other substances designed to "beat" drug tests, so steps must be taken to prevent tampering and safeguard the integrity of the sample. In the sample-collection room, blue dye may be placed in the toilets, and the water to the sink shut off or the faucets taped shut to lessen the risk of adulteration. At the lab, technicians check samples for signs of possible substitution or adulteration by substances that the student may have ingested or put in the specimen to "cleanse" it. (Tampering or adulteration is usually less of a concern in hair or saliva testing.)
- Label the sample. Once the sample is collected, the student seals and labels the container (name and date) and hands it directly to the person supervising the process.
- **Confirm sample identification.** The person supervising the process initials the sample in the presence of the student to verify receipt, confirm identification of the sample, and minimize the opportunity for misidentification.

- **Restrict access.** All samples are maintained in a secure place with limited access. Any individual who has access to any sample signs a log each time the sample is handled.
- Minimize participating staff. If the testing program is large enough, a vendor may provide on-site testing equipment. This is generally a more cost-effective approach that also provides faster results (within 10 minutes). All on-site testing should be performed in a secure location with a limited number of staff to minimize the risk of human error and make it easier to trace any problems that may arise in the testing process.
- **Provide safe delivery.** If an off-site laboratory is used, there must be a secure method for delivering the sample for analysis (either through verified mail or bonded/licensed courier). It is important to follow the transportation procedure outlined by the off-site laboratory to make sure the sample remains safely within the chain of custody from the collection site to the laboratory.
- **Document each step.** Carefully and consistently following the correct procedures will help protect the rights of the individual and the interests of the school.

Judge Karen Freeman-Wilson is former president and Chief Executive Officer of The National Association of Drug Court Professionals, and former Executive Director of The National Drug Court Institute.



Beginning in 2003, the Department of Education has conducted several discretionary grant competitions to help develop, implement, or expand mandatory or voluntary school-based random drug testing programs. Between 2003 and 2007, 87 grants were awarded that support student drug testing in more than 550 schools. In June 2008, 49 new student drug testing grants were awarded. Federal funds can be used to test students who participate in school-sponsored athletic programs and competitive, extracurricular activities; and those who, along with their parent or guardian, have given written consent to participate in a voluntary random drug testing program.

As awareness of drug testing has grown, more and more schools have implemented random testing programs, funding them from a variety of sources. Many find support from State grants or local businesses and civic organizations engaged in substance abuse prevention. Community anti-drug coalitions may also support random testing programs. Nelson County Schools in Bardstown, KY, has had success asking for donations from parents and community members to help support the cost of the drug testing kits. The county fiscal court also has donated money to the school district. Outreach to local organizations is important—and not just for funding. When schools work together with the communities they serve, young people hear a strong, unified message that drug use is unacceptable.

Sources of funding can be found online using key search words, e.g., drug prevention, youth protective factors, healthy choices, teen substance abuse, drug free youth. Alliances, consortia, and associations can be good resources with links to a wide variety of foundations. Many have searchable databases of grant opportunities of their member organizations. Listservs, such as the ONDCP Community Prevention Listserv, also announce grant opportunities. Other sources include revenue from Parent– Teacher Association fund-raising events, in-school vending machines, snack bars, and sales of school T-shirts, caps, and other merchandise.

### Helpful Links:

Community Prevention Listserv: https://puborder.ncjrs.gov/ Listservs/ONDCPComPrev/subscribe\_ONDCPcomprev.asp Council on Foundations: http://www.cof.org The Foundation Center: http://www.FoundationCenter.org

## **The Biology of Addiction: Voluntary Behavior and Genetics**

### **Bertha K. Madras, Ph.D.** Deputy Director, Demand Reduction Office of National Drug Control Policy

The brain is the repository of our humanity; our wisdom; and our ability to amuse, build, compose, compute, contemplate, create, design, draw, and learn. It enables us to discover colliding galaxies, the genetic code, and new medicines; to feel

disappointment, empathy, joy, motivation, pain, and pleasure; to remember; and to engage in justice, compassion, and mercy.

Addiction science is helping us to better understand how drug use jeopardizes this vital organ. For example, we know that certain drugs, such as cocaine, methamphetamine,

ecstasy, and alcohol, create toxic reactions in the brain, destroying nerve cells or nerve endings and compromising blood supply. Drugs can change cell structure, metabolism, circuitry, and brain signals. As addiction sets in, an entire set of behaviors, such as waking up, washing, eating, dressing, going to school, and focusing on commitments and goals, can become secondary as the brain focuses on a narrow drug-seeking path—despite adverse consequences. A brain that has adapted to a drug-centered existence but no longer has a steady drug supply can coast gradually or slide rapidly into withdrawal. Relapse to drug use can occur long after withdrawal symptoms have ceased, even years later.

Drug-induced brain changes are only some of the biological factors that drive drug use. Genetics also is a risk factor, albeit a very complex one. Genes may affect how quickly a drug is cleared from the body, how the body reacts to drugs, how difficult it is to quit, and the severity of the withdrawal process. Genes also may help to identify those people who are at higher risk for abusing drugs such as pain medications. By studying genes, we can begin

to understand how addiction emerges and how to develop medications and other strategies to help treat addiction.

There is good evidence from family, twin, and adoption studies suggesting that genetic and environmental factors play equal roles in the development of addiction. For example, siblings of abusers are more likely to use drugs. Likewise, adopted children with histories of

substance abuse in their biological families are more likely to become abusers themselves, even if the current environment is

devoid of drugs. Identical twins have a higher propensity to share drug histories than fraternal twins.

Among other research in the field of addiction science are studies scanning multiple genes at the same time—as many as 500,000

Adolescents are particularly vulnerable to the effects of drugs. gene snippets simultaneously—to seek genetic differences between nonaddicted and addicted populations. More than 100 candidate genes for addiction have emerged from this approach, along with a few intriguing principles. It appears that genes involved in susceptibility to addiction are not necessarily

unique to a single drug. This may help explain why some people abuse or become dependent on several drugs at the same time.

A number of treatment approaches such as cognitive behavioral therapy and medication-assisted therapy are effective in helping people override biology. Although recovery is possible, avoiding initiation is the key to preventing addiction in the first place. Random student drug testing is a drug abuse prevention strategy that can address both environmental and biological factors associated with drug use. Random testing sends a strong message to young people that drug use is dangerous; in addition, it can help promote a culture of disapproval toward drugs in the communities where it is employed. By giving students a reason to resist peer pressure to use drugs, the school norm becomes abstinence rather than use. Testing can identify adolescents who have started using drugs as well as students who already have become dependent on or addicted to drugs so that parents and counselors can intervene.

Adolescents are particularly vulnerable to the effects of drugs, and the earlier an adolescent begins using drugs, the more likely he

Avoiding initiation is the key to preventing addiction in the first place. or she will develop a substance abuse problem or the disease of addiction. As science makes headway in the field of addiction medicine, our understanding of the role that genetics plays in addiction will be further refined, and more effective treatment methods will be developed. Regardless of scientific progress, prevention is still the prescription.

A complete list of references for this article is available on http://www.randomstudentdrugtesting.org.

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## **Protecting Student Privacy**

Testing begins and ends with privacy. Schools that conduct random student drug testing typically maintain privacy by restricting how many people have access to vital information, such as the identity and medical history of the student providing the sample, and the test results. However, privacy can be maintained in very different ways. The following describes two approaches to protecting student privacy during the random drug testing process.

### **One approach**

At Hackettstown High School in Hackettstown, New Jersey, students selected for drug testing in the school's four-year-old testing program are called into the guidance

office. A student may be summoned to the office for a variety of reasons, so little attention is paid to the half-dozen students who are called in each week for testing. When the student arrives, the guidance counselor escorts him or her to the school nurse's office. The student then provides a urine sample, which is tested immediately with a chemical test kit for the presence of prohibited substances.

If the on-site test is negative, the sample is destroyed. The only people aware of the test and the result are the student, the guidance counselor, and the school nurse.

If a sample tests positive, it is sent to a laboratory for a confirming test. A chain-of-custody form accompanies the sample. At this point, the student's name is not disclosed, and the laboratory knows the student only by a code number. If the test is confirmed positive, the results are sent to a medical review officer, who learns the student's identity through the guidance counselor.

Next, the medical review officer contacts the student's family to determine whether the student might be taking prescription medication under a physician's direction, possibly resulting in a nonnegative test. If this turns out to be the case, the medical review officer notifies the school's guidance counselor that the testing result is negative. The officer does not explain why the result was ruled negative, nor does he or she give out any information about which prescription drug may have been involved.

### **Another approach**

In North Carolina's Winston-Salem/Forsyth County School District, school personnel play no role in the district's random student drug testing program, which began in 1998. Rather,



testing is conducted by a service agency hired by the district's Safe and Drug-Free Schools office. The contracting agency is a nonprofit organization that provides treatment and education services related to mental health and substance abuse.

With this approach, technicians from the service agency arrive at the school without

providing prior notice to the school. They randomly select students who are eligible for testing (students involved in athletics or other extracurricular activities, or who are voluntarily enrolled in the program). The agency collects the urine samples, establishes a chain-of-custody sequence, performs initial and confirmatory testing, and provides a medical review of results.

"The school knows the agency is there testing when the agency personnel show up, but the school is not involved in the process or know who is being tested," explained Mike Nesser, Program Specialist with the Winston-Salem/Forsyth County Schools Safe and Drug-Free School Office. "It takes a great deal of responsibility from school employees."

Samples are analyzed for seven compounds, and a separate steroid test may be administered to student athletes. Students are given the option of saliva testing if they cannot provide a urine sample, although in those cases the testing must be done off-site at the agency's facilities.

The service agency is responsible for contacting parents if more medical information is required or if any of the samples test positive. The agency also conducts counseling for students to assist them in recovery and in staying safe and drug free. At no time are the results, negative or positive, provided to school personnel. This way, said Nesser, school officials can spend more time educating students about the risks of alcohol and drug use.

Two school districts, two very different ways of ensuring privacy in drug testing. In both cases, access to the drug-testing information is limited to the student, his or her parents, and very few others. This policy allows the schools to ensure accurate, reliable results without jeopardizing students' privacy.



## **Changing Your Mind: Methamphetamine and MDMA in the Brain**

**Bertha K. Madras, Ph.D.** Deputy Director, Demand Reduction Office of National Drug Control Policy

## This is part of a series of articles on how specific drugs affect the brain and body.

Overall, youth are using drugs at a much lower rate today than in 2001. Some of the largest reductions are in the use of the amphetamine-type stimulants methamphetamine and MDMA, which is also known as ecstasy. Despite these declines, 259,000 people in the United States aged 12 or older reported using methamphetamine in 2006 for the first time. The number reporting MDMA use for the first time increased 40 percent between 2005 and 2006. Moreover, nearly one-third of these new users were under age 18 when they started using MDMA. Equally troubling is the small but steady decline since 2004 in beliefs among 8th and 10th graders that MDMA is harmful. After years of increased perception of risk for MDMA use, today's young people are not comprehending that MDMA is dangerous and potentially deadly.

### **Origins of Methamphetamine and MDMA**

Methamphetamine was originally made from ephedrine, a substance obtained from the Chinese plant Ma Huang. It was believed to enhance alertness and energy levels and was used by soldiers and pilots in the Second World War, particularly by the Axis powers. After the war, large supplies of methamphetamine stockpiled by the Japanese military became available to the general public, giving rise to the drug's global spread. It was banned in Japan in 1951. In the United States, it was classified as a Schedule II controlled substance in 1971. Although Schedule II drugs have an accepted medical use, they have a high potential for abuse, and may lead to severe psychological or physical dependence. This classification, the removal of injectable formulations of methamphetamine from the United States market, and a better appreciation for its high abuse potential led to a sharp reduction in abuse. A resurgence occurred in the 1980s. Today methamphetamine is considered a highly addictive drug of abuse that plagues regions of the country.

Scientists patented MDMA in 1912 as an intermediate chemical used in the synthesis of a drug intended to control bleeding from wounds. It was tested in the late 1920s to determine if it affected blood flow, but then subsequently faded from view until the 1970s, when a research scientist rediscovered the drug and used it for psychotherapy sessions. In the early 1980s, MDMA rose to prominence in trendy nightclubs, and then spread to rave clubs in major cities around the country and eventually mainstream society. In 1985, MDMA was classified as a Schedule I controlled substance. Schedule I drugs have no accepted medical use, no accepted safe use under medical supervision, and a high abuse potential.

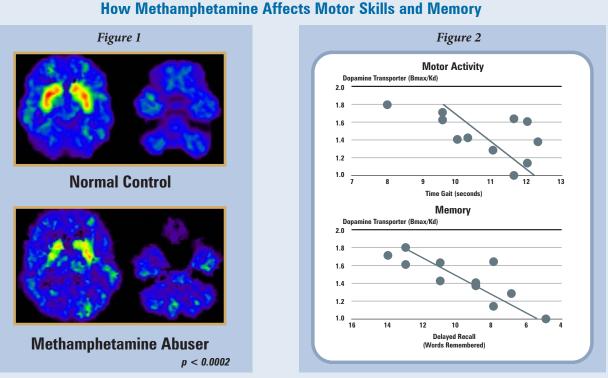
### Methamphetamine: Actions and Consequences

In small doses, methamphetamine is a powerful stimulant and increases wakefulness and physical activity. All forms of methamphetamine are dangerous, but smoking and injecting increase both the potential for becoming addicted and the risk of serious health effects because of how rapidly the drug enters the brain and the blood stream.

Methamphetamine affects many elements of brain activity, but it is best known for its effects on cells that produce special chemical messengers such as dopamine, norepinephrine, and serotonin that are passed from cell to cell to activate key brain areas. Dopamine, for example, promotes alertness, activity, increased awareness of new experiences, and pleasure and is involved in learning and memory. Methamphetamine causes dopamine to flood the reward areas of the brain. This can result in depletion of dopamine and a "crash" phase, which can trigger more drug use to regain the methamphetamine sensation and relieve the "crash."

A single dose and long-term use can both have serious consequences. Methamphetamine abuse can result in rapid or irregular heart rates and increased blood pressure. Repeated use of methamphetamine can cause paranoia, hallucinations, and delusion and lead to compromised brain function, including memory, information processing, motor skills, and language abilities. Methamphetamine also can cause heart attacks and stroke. Indeed, people under age 45 have nearly a four-timesgreater risk of heart damage if they use methamphetamine. Stroke-producing damage to small blood vessels in the brain adds to the risk of compromised brain function. In some cases, chronic abusers experience changes in the structure and function of brain areas associated with memory, emotion, depression, and anxiety. Overdoses can cause erratic surges in body temperature, leading to convulsions and even death .

Fortunately, methamphetamine abuse among young people is rare. Less than one percent of 12th graders reported using the



# Figure 1 shows methamphetamine-induced changes in brain nerve cells that produce dopamine. The loss of red color in the methamphetamine abuser's brain reflects the loss of a chemical found in nerve endings, the dopamine transporter. As indicated in figure 2, the greater the loss of this chemical, the greater the motor and memory deficits. Adapted from Volkow et al; Am J Psychiatry. 2001 Mar;158(3):377–82.

drug in the past 30 days. However, any methamphetamine use is dangerous during adolescence because the brain is still growing during this period. Drug use during this critical developmental time may lead to long-term changes in the brain's structure and function, resulting in impairments that might last a lifetime. In addition to the potential for brain damage, a recent survey of adults admitted to a hospital trauma center showed that methamphetamine abusers were more likely to have an injury or a violent injury, to attempt suicide, and to die from their injuries than people who did not test positive for methamphetamine.

### **MDMA: Actions and Consequences**

Like methamphetamine, MDMA affects nerve cells that produce dopamine, norepinephrine, and serotonin. Serotonin, which is stored and released by specialized nerve cells, is critical for sleep, mood, and experiences of pleasure. MDMA enters these nerve cells, releases a deluge of serotonin, and remains inside the cells for an extended period of time, eventually depleting the serotonin. A single dose or long-term use can create pleasant feelings and an ease with social attachments. It also suppresses the need to eat, drink, or sleep. MDMA can induce jaw clenching, increased anxiety, and detachment from self. It compromises cognitive performance, attention, and decisionmaking and can lead to elevated body temperature, dehydration, and even death.

The effects of MDMA do not wear off immediately, and in fact several days after its use, users report lethargy, irritability, depression, anxiety, and insomnia. Repeated use of MDMA is associated with sleep, mood, and anxiety disturbances; increased impulsiveness; memory deficits; and attention problems, which may last for 2 years after stopping use.

MDMA also is associated with long-term psychiatric effects, including depression, agitation, anxiety, psychotic symptoms, impulsive behaviors, sleep disturbances, panic attacks, and social phobias. Long-term effects of MDMA are not limited to brain function, as MDMA use is also associated with brain, heart, and liver toxicities. A major concern for early MDMA use is whether depletion of brain serotonin may give rise to mood disorders over a lifetime.

### **Combining Methamphetamine and MDMA**

More than 55 percent of the MDMA samples seized in 2006 in the United States tested positive for methamphetamine. Both drugs are dangerous but become even more so when mixed. Laboratory studies in animals indicate that methamphetamine/MDMA combinations damage both dopamine and serotonin systems, and that their effects on brain chemistry and behavior are greater than the effects of either drug alone.

Just a few years ago, much of the MDMA consumed in the United States was produced in Europe. Collaborations between the United States and European governments, as well as improved law enforcement operations and mass media efforts, effectively dismantled the European-United States MDMA trade. Unfortunately, United States and Canadian intelligence reports indicate that Canadian-based drug trafficking organizations are attempting to fill the supply void and have drastically increased their MDMA production and trafficking. In 2003, 568,220 dosage units of MDMA were seized in the ten Northern border States; 5,485,619 dosage units were seized in 2006. young people to once again be victimized by the rave culture, 'designer' drugs, or the myth that drug use is safe," said Director Walters in a January 2008 press release on methamphetamine-

### **Prevention Efforts**

Federal law enforcement officers are working with their Canadian counterparts to put greater pressure on Canadian MDMA producers through increased intelligence sharing and coordinated enforcement operations. Canadian officials are focusing their efforts on the importation of precursor chemicals used in drug production. At the same time, John Walters, Director of National Drug Control Policy for the United States, is urging public health officials around the Nation to reinvigorate their prevention efforts, to enhance educational outreach to youth, parents, school systems, emergency departments, medical examiners, poison control centers, and law enforcement agencies regarding

"We cannot allow our young people to once again be victimized by the rave culture, 'designer' drugs, or the myth that drug use is safe," said ONDCP Director John Walters. "Just as we must teach new generations of children to read, we must continue to educate new generations of young people on the harms of drug use." laced MDMA. "Just as we must teach new generations of children to read, we must continue to educate new generations of young people on the harms of drug use."

When schools implement random drug testing programs, they are not only providing students with a reason to say "no" to drugs. They are also helping to increase student awareness, underscoring the seriousness of the drug threat and the urgent need to combat it. Given the addiction potential and serious health consequences associated with methamphetamine and MDMA, such awareness is essential to maintaining the encouraging declines in use among middle- and high-school students and to helping them make healthy and safe decisions about future drug use.

the hazards of MDMA and methamphetamine, to shore up treatment systems to look for and address the unique and well known challenges of meth addiction. "We cannot allow our

A complete list of citations for this article is available at http:// www.randomstudentdrugtesting.org.

Wyth vs. Fact

## Myth

Drug tests are often inaccurate, leading to false-positive results for students who do not use drugs.

## Fact

A drug test result that wrongly indicates the presence of a drug or drugs is a false-positive. By design, the testing process minimizes inaccurate reporting of results. When testing protocols are followed, false-positives are extremely rare.

In many cases, schools conduct the initial test on site. If the initial test shows the sample is negative, no further testing is required. If the initial test shows the sample might be nonnegative, the sample is forwarded to a certified laboratory for detailed analysis.

These laboratories conduct sophisticated, highly accurate gas chromatographic and mass spectrometric analyses to identify compounds in the samples and rule out any false-positives. At this stage, even the presence of metabolites, which indicate prior drug use, does not automatically trigger a nonnegative result. Instead, results are forwarded to a medical review officer (MRO), usually a physician certified in drug testing. The MRO discusses the test results with the student and his or her family to establish if the student is taking any over-the-counter medication or medication prescribed by a physician. Then, and only then, does the MRO make a determination about the test result. By following these steps, schools and students can have confidence in the test results.

## A Message to Educators:

### WHEN IT COMES TO TEEN PRESCRIPTION DRUG ABUSE, PARENTS NEED EDUCATION AS WELL.

You care about your students. And you probably know them as well as anyone. That's why you should be aware that while teen drug use is down overall, one category is actually on the rise — the abuse of prescription drugs. In fact, there are more new abusers (12 and older) of prescription drugs — such as pain relievers, depressants, and stimulants — than there are of marijuana.<sup>1</sup> Between 1995 and 2005, the number of substance abuse treatment admissions for prescription pain relievers increased by more than 300%.<sup>2</sup> The bottom line is clear: Abusing prescription drugs can have serious consequences and ruin promising lives.

Most students use prescription drugs appropriately — to treat attention deficit hyperactivity disorder (ADHD), anxiety, and physical pain. There is, however, a growing trend of students using and sharing these drugs to get high, often in combination with other drugs or alcohol. Seventy percent of persons aged 12 and older who abuse pain relievers say they get them from a friend or relative.<sup>3</sup> Obtaining these drugs can be as easy as opening the family medicine cabinet, a friend's purse, or locker. And since there is no smoke or smell, prescription drug abuse can be hard to detect.

This problem can be prevented. And as a school professional, you play an important role. Learn to recognize the signs and symptoms of prescription drug abuse, and encourage parents, grandparents, and other adults to:

- Safeguard all drugs in their homes. Monitor quantities and control access.
- Set clear rules for teens about all drug use, including not sharing medicine and always following the medical provider's advice and dosages.
- Be a good role model by following these same rules with their own medicines.
- Properly conceal and dispose of old or unused medicines in the trash.
- Ask friends and family to safeguard their prescription drugs as well.

Watch for **Signs & Symptoms** of prescription drug abuse in your school:



## Constricted pupils, nausea and vomiting, and respiratory depression.

Anxiety and delusions, flushed skin, and chest pain with heart palpitations.

Slurred speech, dizziness, and respiratory depression.

For more information on prescription drug disposal guidelines, as well as the risks, signs, and symptoms of teen prescription drug abuse, visit **www.TheAntiDrug.com**, or call 1-800-788-2800.

#### Signed,

American Academy of Pediatrics	Lions Clubs International
American Association of School Administrators	National Association of School Nurses
American Medical Association	National Association of Secondary School Principals
American Pharmacists Association	
American School Counselor Association	National Education Association
American School Health Association	Partnership for a Drug-Free America
	РТА
A. 2006 National Survey on Drug Use and Health (September 2007).	

<sup>1</sup> SAMHSA, 2006 National Survey on Drug Use and Health (Septemb <sup>2</sup> Treatment Episode Data Set, SAMHSA, 1995-2005.

<sup>3</sup> SAMHSA, 2006 National Survey on Drug Use and Health (September 2007). Office of National Drug Control Policy



# Resources

#### Government Agencies and Services Office of National Drug Control Policy (ONDCP)

www.whitehousedrugpolicy.gov

Student Drug Testing (ONDCP) www.randomstudentdrugtesting.org

#### National Youth Anti-Drug Media Campaign

www.mediacampaign.org www.theantidrug.com www.laantidroga.com (Spanish) www.chinese.theantidrug.com www.korean.theantidrug.com www.filipino.theantidrug.com www.vietnamese.theantidrug.com www.freevibe.com www.abovetheinfluence.com

National Institute on Drug Abuse www.drugabuse.gov

#### Substance Abuse and Mental Health Services Administration (SAMHSA)

U.S. Department of Health and Human Services (HHS) Phone: 240-276-2130

http://www.samhsa.gov

## Center for Substance Abuse Prevention (CSAP)

HHS/SAMHSA Phone: 240-276-2420 http://www.samhsa.gov/centers/csap/csap.html http://www.toosmarttostart.samhsa.gov http://www.hablemos.samhsa.gov www.family.samhsa.gov

## Center for Substance Abuse Treatment (CSAT)

HHS/SAMHSA Phone: 240-276-2750 http://www.samhsa.gov/centers/csat/csat.html http://www.workplace.samhsa.gov www.findtreatment.samhsa.gov

**The Drug-Free Communities Program** *www.ondcp.gov/dfc/* 

#### Office of Safe and Drug-Free Schools

U.S. Department of Education Phone: 202-260-3954 http://www.ed.gov/about/offices/list/osdfs/index. html

### **Drug Testing Information**

State List of HHS-Certified Labs Current list of laboratories that meet minimum standards to engage in urine drug testing for Federal agencies. http://workplace.samhsa.gov/DrugTesting/ Level 1 Pages/CertifiedLabs.aspx

#### **College of American Pathologists**

Information about choosing a lab. *www.cap.org/* 

National Student Drug-Testing Coalition www.studentdrugtesting.org Visitors can click on the "Legislation" tab to view or download "Model Legislation for Student drug-testing Programs: State Bill and Insertion Language."

#### **Medical Review Officers**

American Society of Addiction Medicine www.asam.org

### **Grant Information**

U.S. Department of Education Phone: 1-800-USA-LEARN (1-800-872-5327)

School-Based Student Drug-Testing Programs www.ed.gov/programs/drugtesting/contacts.html

**Programs/Initiatives** www.ed.gov/about/offices/list/osdfs/programs. html#national

#### Grantmaking at ED www.ed.gov/fund/grant/about/grantmaking/index. html

Developing Competitive SAMHSA Grant Applications: Participants Manual SAMHSA

http://samhsa.gov/Grants/TA/index.aspx

### Surveys and Other Data Sources

Monitoring the Future www.monitoringthefuture.org Monitoring the Future is an ongoing study of the behaviors, attitudes, and values of American 8th

behaviors, attitudes, and values of American 8th, 10th, and 12th graders.

#### National Survey on Drug Use and Health (NSDUH)

https://nsduhweb.rti.org Formerly the National Household Survey on Drug Abuse, NSDUH measures the prevalence of drug and alcohol use among household members ages 12 and older.

#### Youth Risk Behavior Survey (YRBS)

www.cdc.gov/HealthyYouth/yrbs/index.htm YRBS is a component of the Youth Risk Behavior Surveillance System (YRBSS), maintained by the Centers for Disease Control and Prevention (CDC). The YRBSS has three complementary components: (1) national school-based surveys, (2) State and local school-based surveys, and (3) a national household-based survey.

#### **Other Organizations**

Drug-Free Schools Coalition, Inc. Phone: 908-284-5080 E-mail: drugfreesc@aol.com

National Student Assistance Association Phone: 800-257-6310 www.nsaa.us

Partnership for a Drug-Free America www.drugfree.org/

National Center on Addiction and Substance Abuse at Columbia University Phone: 212-841-5200 www.casacolumbia.org

#### The Core Institute

Center for Alcohol and Other Drug Studies Phone: 618-453-4420 E-mail: coreinst@siu.edu www.siu.edu/~coreinst

Recovery Network www.recoverynetwork.org

American Society of Addiction Medicine www.asam.org

American Public Health Association http://www.apha.org

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