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Web site of study: www.monitoringthefuture.org

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<u>EDITORS</u>: Results of this year's Monitoring the Future survey are released jointly by the National Institute on Drug Abuse, which sponsors the study, and by the University of Michigan, which designed and conducts the study, at a press conference to be held at the National Press Club in Washington, D.C. For further information on the study, contact the study's principal investigator, Lloyd D. Johnston, at (734) 763-5043.

Ecstasy use among American teens drops for the first time in recent years, and overall drug and alcohol use also decline in the year after 9/11.

ANN ARBOR, Mich.---This year's annual Monitoring the Future survey of American secondary school students provides much good news for the nation. Ecstasy use is finally beginning to decline among adolescents, the proportion using any illicit drug is also down, the proportion drinking alcohol has dropped, and the proportion reporting cigarette smoking continues to drop sharply. (The tobacco findings are discussed in a companion press release.)

Monitoring the Future, conducted at the University of Michigan Institute for Social Research and funded by the National Institute on Drug Abuse, has tracked substance use among American high school seniors for 28 years and among 8th-and 10th-graders for 12 years. In 2002, about 44,000 students in nearly 400 secondary schools across the country participated in the scientific survey, often described as the most reliable source of information on adolescent substance use.

Ecstasy use declines

According to social psychologist Lloyd Johnston, the study's principal investigator, and his colleagues and coauthors, Patrick O'Malley and Jerald Bachman, this year's downturn in ecstasy use was not entirely unexpected. "We have been saying for some time that the sharp rise in ecstasy use would not turn around until young people began to see this drug as more

dangerous," Johnston said. "Last year, more young people did report ecstasy use as being dangerous, and the rise in use slowed.

"However, the drug was still diffusing out to new communities last year, so the total number of users still continued to rise. This year, however, there was another sharp rise in the proportion of young people saying that ecstasy use is dangerous, and we finally began to see a decline in use." (See Figure 5.) Ecstasy use is down in all three prevalence periods measured (lifetime, annual, and 30-day) in all three grade levels. The one-year declines ranged from about one-tenth to nearly one-third. For example, among high school seniors annual use rates declined from 9.2 percent to 7.4 percent. For the three grades combined, the declines in both annual prevalence and 30-day prevalence were statistically significant, as were the annual and 30-day declines for 10^{th} -graders, specifically.

"We have found increases in the perceived risk of using a drug to be an important leading indicator of downturns in its use, and this has now proven to apply to ecstasy, as well," Johnston said. In 2000, only 38 percent of 12th-graders said there was a great risk of harm associated with trying ecstasy. That figure jumped to 46 percent in 2001 and again in 2002 to 52 percent. (See Tables 8-9 and Figure 5.) "These changes constitute unusually rapid changes in this belief and no doubt reflect the effects of media coverage of adverse events, as well as the efforts of the National Institute on Drug Abuse to document and disseminate information on the adverse consequences of using ecstasy," Johnston said.

Disapproval of ecstasy use rose sharply in all three grades this year indicating that peer norms against the use of this drug are strengthening (see Figure 5). The availability of ecstasy, as reported by the students, leveled off this year following several years of very steep increases in availability. (See Figure 5.)

Overall illicit drug use declines

Over the past several years, the proportions of older students reporting use of any of the illicit drugs had been holding fairly steady, while 8th-graders had been showing a gradual

decline. This year, the proportion of students reporting the use of any illicit drug in the prior 12 months (annual prevalence) declined at all three grade levels, significantly so in grades 8 and 10. (Similar decreases were observed in all three prevalence periods—lifetime, annual, and 30-day.) (See Tables 1-2 and Figure 1.)

"This is the first time since 1998 that we have seen a significant decline in overall illicit drug use among 10th-graders," Johnson said. At 12th-grade, none of this year's declines in use of any illicit drug (i.e., lifetime, annual, or 30-day) reached statistical significance and annual prevalence is only 1.4 percentage points below the recent peak rate in 1997, so rather limited progress has been made to date in that grade. The proportions of 8th-, 10th-, and 12th-grade students reporting that they used an illicit drug in the prior twelve months (annual prevalence) now stand at 18 percent, 35 percent, and 41 percent, respectively. The proportions saying they have ever used an illicit drug in their lifetime (lifetime prevalence) stand at 25 percent, 45 percent, and 53 percent.

Specific drugs showing a decline

Marijuana: Marijuana use also showed some decline in all prevalence periods for all grades in 2002, although only the 10th-grade declines in annual and 30-day prevalence rates reached statistical significance. At 8th-grade there has been slow but quite steady progress. For 8th-graders the annual prevalence of marijuana use in 2002 of 14.6 percent is down from the recent peak of 18.3 percent in 1996. At 30.3 percent in 2002, annual prevalence for 10th-graders is now somewhat below the recent 1997 peak of 34.8 percent; but 12th-graders are down only modestly, from the recent 1997 peak of 38.5 percent to 36.2 percent in 2002. (See Table 2 and Figure 2.)

While in the past a decrease in marijuana use has generally been preceded by an increase in perceived risk for that drug, this time there was no such increase in this belief. Nor has the proportion of students personally disapproving of marijuana use changed much in the last few years, although it is higher now than it was in 1996 or 1997—the recent low points among 8th-

and 10th-graders, respectively. There was a slight decline in perceived availability of marijuana in 2002. (See Figure 2.) "The fact that marijuana use fell, without a change in these underlying attitudes and beliefs about marijuana, may reflect some decrease in young people's motivation to use drugs generally," commented Johnston. "This would be consistent with the notion that September 11 had some impact on young people in this regard."

Illicit drugs other than marijuana: In all three grades the proportions of students using *any* illicit drug other than marijuana also fell in 2002 and did so for all three prevalence periods (lifetime, annual, and 30-day use), with one minor exception. (Twelfth-grade 30-day prevalence remained unchanged). The declines in annual prevalence were statistically significant in both 8th-and 10th-grades, with drops of 2.0 and 2.1 percentage points, respectively. The rate among 8th-graders is now one-third lower than it was in 1996, the recent peak year. Annual use is down about one-seventh, or 15 percent, from the same peak year among 10th-graders. In 2002 the proportion of students indicating that they had used any illicit drug other than marijuana during the past year stood at 9 percent, 16 percent, and 21 percent in grades 8, 10, and 12. At the peak more than two decades earlier (in 1981), some 34 percent of 12th-graders indicated such use. (See Tables 1-2.)

LSD: The use of LSD declined sharply and significantly at all three grades in 2002. This continues a drop that began in 1996. (See Table 2.) Perceived risk and disapproval generally have not been moving in ways that would help to explain this decline in use (although both did rise this year in 12th-grade only, for the first time), so the investigators believe part of the explanation may have been a shift to ecstasy use. (See Figure 4.) There has been some drop in the reported availability of LSD, including a significant drop in all grades this year, but whether this is a cause or a result of fewer students using the drug remains unclear.

Other hallucinogens: The use of hallucinogens other than LSD showed modest declines this year at all three grades in both lifetime and annual prevalence, although none of these changes reached statistical significance. This continued a gradual decline that began some years earlier in this general class of drugs. (See Tables 1-2.) Psilocybin from mushrooms ("shrooms") is the dominant substance used in this class of drugs.

Inhalants: Volatile inhalants---including such substances as glue, aerosols, and butane--constitute another class of drugs with declining use this year, continuing a much longer-term decline. All
three grades showed a drop in all prevalence periods, with one exception---there was no change in annual
prevalence at 12th-grade. (The declines in lifetime prevalence for both 8th- and 10th-graders were
significant, as was the decline in annual prevalence for 8th-graders.) The cumulative declines in inhalant
use are substantial: for instance, 8th-grade annual use declined from 12.8 percent in 1995 to 7.7 percent in
2002---a drop of 40 percent. In general, perceived risk has risen during that period (though there was
actually some decline in perceived risk in 2002, which could serve as a warning of increases in the
future). Disapproval also rose and remains at very high levels. (See Figure 3.) (Availability is not asked
because most of these substances are presumed to be universally available.) "The turnaround in inhalant
use and beliefs about its harmfulness corresponds exactly with the start of the Partnership for a Drug-Free
America's anti-inhalant ad campaign, so we are inclined to credit much of the improvement in inhalant
use to that intervention," said Johnston.

Amphetamines: The use of amphetamines showed some decline in grades 8 and 10, but not in grade 12. Among 8th-graders this is the continuation of a longer-term decline going on since 1996. Among 10th-graders it is the first evidence of a decline in recent years, although not large enough to reach statistical significance. Among 12th-graders the rate of amphetamine use remains at the recent peak level. (See Tables 2 and 4-7.)

Methamphetamine: Use continued a longer-term decline among 8th-graders but remained relatively stable in 2002 among 10th- and 12th-graders (after some modest declines in use in those grades over the prior two years). "It does not appear that methamphetamine use is getting any worse among youth, as some may have feared. If anything, it is declining some," concluded Johnston. (See Table 2.)

Drugs holding steady

The use of several drugs held fairly steady in 2002 among teens. These include heroin, narcotics other than heroin, cocaine and, for the most part, crack. Steroid use also held steady.

Heroin: By 2001 heroin use had finally dropped below recent peak levels in all grades. In 2002 overall use held steady, including use with and without a needle. Perceived risk for heroin, as well as disapproval, also held fairly steady this year. Over the past several years the perceived availability of heroin has declined some at all three grade levels. (See Table 2 and Figure 6.)

Other narcotics: The use of this class of drugs is reported only for 12th-graders. Their annual prevalence of use more than doubled between 1992 and 2000, rising from 3.3 percent to 7.0 percent. After 2000, use leveled and is still at 7.0 percent in 2002. (See Table 2.) Questions about two specific drugs in this category—Oxycontin and Vicodin—were included for the first time this year. Oxycontin has stirred considerable attention in the media in recent years as concern about its diversion through illegitimate channels has grown. Oxycontin—a prescription narcotic intended for the relief of pain—had annual prevalence rates in 2002 of 1 percent, 3 percent, and 4 percent in 8th-, 10th-, and 12th-grades, respectively. These numbers reflect only

use outside of medical supervision. "While not as high as some may have feared, these are not insignificant rates of use for a powerful and addictive narcotic drug," commented Johnston. Vicodin, another prescription narcotic, shows considerably higher annual prevalence rates: 3 percent, 7 percent, and 10 percent in 8th-, 10th-, and 12th-grades. (See Table 2.) No trend data are yet available for these two specific drugs.

Cocaine: The proportion of students in each of the three grades reporting any cocaine use has held quite steady over the past three years. These rates are much lower than they were during the height of the cocaine epidemic in the early to mid-1980s, and they are also down modestly from recent peaks reached in the mid-1990s. (See Tables 2 and 4-7.)

Steroids: The use of anabolic steroids, the majority of which occurs among males, remained flat in 2002 in all three grades, though at historically high levels. (Steroid use rose sharply in the prior several years.) Perceived risk and disapproval of the use of these drugs, which had fallen in recent years, remained fairly steady in 2002, as did perceived availability. (See Table 2 and Figure 8.)

Drugs increasing in use

With the turnaround in ecstasy use this year, there is rather little remaining evidence of increases in illicit drug use among American teens. The only two classes of drugs that show any sign of further, modest increase---at least among 12th-graders---are barbiturate sedatives and minor tranquilizers.

Alcohol use declines

Some important declines in adolescent alcohol use occurred in 2002. Some of them are continuations of a longer-term pattern, especially among 8th-grade students.

Any alcohol use: There were sizeable drops at all three grades in the proportion of students saying that they had any alcohol to drink in the past year and in the past 30 days. (These declines were statistically significant at grades 8 and 10.) The 30-day prevalence of alcohol use among 8th-graders has fallen from the recent 1996 high of 26 percent to 20 percent by 2002. Over just the one year from 2001 to 2002, 30-day prevalence among 10th-graders fell from 39 percent to 35 percent. (See Tables 1-2.)

"Among the younger students there was also a significant decline in the proportion who say they ever drank an alcoholic beverage at any time in their life," Johnston said.

Declines in drunkenness: There were also declines in all three grades in the proportions of students saying that they got drunk in the previous year and in the previous 30 days. These declines continue a gradual trend that has occurred over the last several years. The proportions of students in grades 8, 10 and 12 who say they were drunk at least once in the 30 days prior to the survey were 7 percent, 18 percent, and 30 percent in 2002. While high, these rates are all down by between 1 and 4 percentage points from the previous year. (See Table 2 and Figure 7.)

Cohort effects

Johnston observed that a somewhat unusual pattern of change has been occurring in recent years for drug use. "It is noteworthy that the resurgence of the drug epidemic that occurred in the 1990s was specific to adolescents; and only as they grew older did drug use also

rise among young adults. The upturn in use occurred first among the youngest students we follow – the 8th-graders – and then spread up the age spectrum. Such a spread of a behavior through generational replacement is called a cohort effect, and we observed such a cohort effect for drug use in the 1990s."

"In more recent years, we seem to be seeing another cohort effect---a reversal of the first one---with the 8th-graders being the first to show declines in drug use, albeit very gradual ones.

To some degree, at least, those declines seem to be working their way up the age spectrum, as the lower-using 8th-graders become the 10th-and eventually the 12th-graders."

The role of 9/11?

While it could be coincidental that smoking, drinking, and drug use all showed downturns in the year after the tragic events of 9/11, it is also possible that these events had an impact, according to Johnston. "A decline in use already was underway for a number of substances, including cigarettes, inhalants, LSD, and others. On the other hand, the downturn in alcohol use this year was striking, and overall illicit drug use began to decline for the first time across the board," he observed. "So, I think it quite possible that the tragedy of 9/11 had somewhat of a sobering effect on the country's young people. Maybe it helped some, at least, to clarify what is and is not important to them."

Johnston added one caution about the future relating to the looming possibility of another war. "In the Gulf War at the beginning of the 1990s, the nation's institutions took their eyes off the problem of drug abuse, which fell off the national radar screen for several years. That set the stage for the resurgence of the drug epidemic among adolescents that we saw in the 1990s, as a new generation of naïve youngsters entered adolescence hearing little about the consequences of drug use. I think we can learn from that mistake and should make every effort to avoid repeating it. This constellation of problems needs continuous and focused attention. Drug and alcohol use by our youth are problems that are not going to go away, nor can we wish them away; but they can be contained if we attend to them continuously and wisely. In particular, we need to

remember that the job of educating and persuading our youngsters is never done, because there are always new ones entering adolescence."

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Monitoring the Future has been funded under a series of competing, investigator-initiated research grants from the National Institute on Drug Abuse. Surveys of nationally representative samples of American high school seniors were begun in 1975, making the class of 2002 the 28th such class surveyed. Surveys of 8th- and 10th-graders were added to the design in 1991, making the 2002 nationally representative samples the 12th such classes surveyed. The sample sizes in 2002 are 15,500 8th-graders, 14,700 10th-graders, and 13,500 12th-graders, for a total of 43,700 students. They are located in 394 private and public secondary schools across the coterminous United States, selected with probability proportionate to size to yield nationally representative samples of students in each of the three grade levels.

The findings summarized here will be published in the forthcoming volume: Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (2003). *Monitoring the Future national results on adolescent drug use: Overview of key findings*, 2002. (NIH Publication No. [yet to be assigned].) Bethesda MD: National Institute on Drug Abuse.