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Study website: www.monitoringthefuture.org

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<u>EDITORS</u>: Results of this year's Monitoring the Future survey are being released at a news conference to be held 10 a.m. Eastern Time at the National Press Club in Washington, D.C. by the National Institute on Drug Abuse, which sponsors the study, and the University of Michigan, which designed and conducted the study. Participating will be the Assistant Secretary for Health, Department of Health and Human Services (DHHS), Howard Koh; director of the White House Office of National Drug Control Policy (ONDCP), R. Gil Kerlikowske; the director of the National Institute on Drug Abuse (NIDA), Nora Volkow; and the study's principal investigator, Professor Lloyd Johnston. For further information, contact Johnston at (734) 763-5043.

Decline in teen smoking continues into 2012

ANN ARBOR--- The 2012 national survey results from the Monitoring the Future study show a continuation of the declines in teen smoking in all three grades under study—grades 8, 10, and 12. Based on annual surveys of 45,000 to 50,000 students, the researchers found that the percentage saying that they smoked at all in the prior 30 days fell for the three grades combined, from 11.7% to 10.6%—a statistically significant drop.

"A one percentage-point decline may not sound like a lot, but it represents about a 9% reduction in a single year in the number of teens currently smoking," observed Lloyd Johnston, the principal investigator of the study. "Such a reduction can translate eventually into thousands of premature deaths being prevented, as well as tens of thousands of serious diseases." More than 400,000 Americans per year are estimated to die prematurely as a result of their smoking cigarettes; and most smokers begin their habit in adolescence.

There was some evidence from the study that in 2010 the long-term decline in teen smoking might have come to a halt, but the decline resumed in 2011 and has continued into 2012 with statistically significant declines both years. An increase in the federal tax on tobacco products, instituted in 2009, may have contributed to this recent decline in smoking in this age group, according to the investigators.

The Monitoring the Future study, which has been tracking teen smoking in the United States for the past 38 years, found that between 2011 and 2012 the percentage of students reporting any cigarette smoking in the prior 30 days (called 30-day prevalence) has decreased among 8th

graders from 6.1% to 4.9% (a statistically significant decrease), among 10th graders from 11.8% to 10.8%, and among 12th graders from 18.7% to 17.1%. "While the improvement in the smoking numbers for just this one year is important, the longer term declines have been really striking," Johnston said. "Since teen smoking reached a peak around 1996-1997, the rates of current (past 30-day) smoking have fallen by about three fourths among 8th graders, two thirds among 10th graders, and half among 12th graders."

One reason that the current smoking rates have declined so sharply is that the proportion of students who *ever tried smoking* has fallen quite dramatically. In 1996, 49% of 8th graders had tried cigarettes, but by 2012 only 16% had done so, a two thirds drop in smoking initiation over the past 16 years. Further, the initiation of smoking is still falling significantly among 8th and 10th graders.

These estimates come from the study's national surveys of 45,000 to 50,000 students in about 400 secondary schools each year. The study was designed by and is directed by a team of research professors at the University of Michigan's Institute for Social Research, and since its inception has been funded through research grants from the National Institute on Drug Abuse—one of the National Institutes of Health.

Perceived Availability. Eighth- and 10^{th-}grade students are asked how difficult they think it would be for them to get cigarettes, if they wanted them. This *perceived availability* has shown substantial declines since 1996. The 8th graders have shown the sharpest decline—from 77% saying they could get cigarettes "fairly easily" or "very easily" in 1996 compared to 51% in 2012. Perceived availability among 10th graders fell from 91% to 73% over the same interval. "Although there has been some real progress made in reducing the availability of cigarettes to those who are underage—particularly to the youngest teens—it is clear that the majority of teens still think they can get cigarettes fairly easily," Johnston said.

Attitudes and Beliefs about Smoking. Nearly two-thirds of 8th graders and about three-quarters of 10th and 12th graders in 2012 say they see a great risk of harm to the user from pack-a-day smoking. These figures have increased substantially since the mid-1990s, when *perceived risk* was at its recent lowest levels; the 2012 figures are the highest ever recorded for all three grade levels. The percentages of 2012 teens saying that they personally *disapprove* of smoking are also at the highest levels seen in this study: 89%, 86%, and 84% for grades 8, 10, and 12 respectively.

Other attitudes toward smoking and smokers have changed in important ways, as well, during much of the period of decline in cigarette use. These changes included increases in preferring to date nonsmokers (currently around 80% of teens say they do), strongly disliking being around people who are smoking, thinking that becoming a smoker reflects poor judgment, and believing that smoking is a dirty habit. All of these negative attitudes about smoking and smokers rose to high levels by 2007, but they have either leveled or begun to reverse since then (Table 3).

Johnston said, "Future progress in lowering teen smoking rates is likely to depend on there being further changes in the external environment—changes such as raising cigarette taxes, further limiting where smoking is permitted, bringing back broad-based anti-smoking ad campaigns, and making quit-smoking programs more available."

Smokeless tobacco. The use of smokeless tobacco (which includes snuff, plug, dipping tobacco, chewing tobacco, and more recently "snus") also is assessed in the study. ("Snus" is singular, rhymes with "loose.") From the mid-1990s to the early 2000s, there was a substantial decline in smokeless tobacco use among teens—30-day prevalence fell by one third to one half in all grades—but the declines ended and a rebound in use developed from the mid-2000s through 2010. Since 2010, however, there have been modest declines in all three grades. (The two-year declines are not statistically significant at any grade level, nor are the one-year or two-year declines for the three grades combined.) Thirty-day prevalence rates are now down by nearly two thirds (64%) from their peaks in the mid-1990s among 8th graders, and by over one third among 10th and 12th graders (39% and 35%). Thirty-day prevalence of smokeless tobacco use in 2012 is 2.8%, 6.4%, and 7.9%, among 8th, 10th, and 12th graders, respectively. The rates in each of the three grades are considerably higher for boys (4.0%, 11.2%, and 13.5%) than for girls (1.5%, 1.9%, and 1.6%). Use continues to be particularly concentrated in the South and Midwest and in non-urban areas.

Perceived risk, which MTF has shown to be an important determinant of trends for many forms of substance use, including cigarette use, also appears to have played an important role in the decline of smokeless tobacco use. In all three grades, perceived risk for smokeless tobacco rose fairly steadily from 1995 through 2004, as use was falling. However, there was not a great deal of fall-off in perceived risk subsequently, between 2004 and 2010, suggesting that other factors may have led to the increases in smokeless tobacco use in that time interval. These factors might include increased promotion of these products, a proliferation of types of smokeless tobacco products available, and increased restrictions on places where cigarette smoking is permitted. The leveling in smokeless use since 2010 may be attributable, at least in part, to the 2009 increase in federal taxes on tobacco. Perceived risk declined significantly in 2012 among both 8th and 10th graders, however, which could portend a future rise in use.

Hookahs and small cigars. Two of the latest developments to raise public health concern are the smoking of tobacco by using hookah (pronounced "WHO-ka") water pipes, and the smoking of small cigars. The concern is that, as cigarette smoking continues to decline among adolescents, they will be enticed to smoke tobacco in these other forms, which still carry serious health risks. Questions about these forms of tobacco use in the prior 12 months (annual prevalence) were included in the survey of 12th graders for the first time in 2010, when 17.1% of 12th graders said that had used a *hookah* to smoke tobacco in the prior 12 months. This rate rose slightly to 18.5% in 2011 and then stabilized at 18.3% in 2012. Only 11% of 12th-grade students in 2012 reported smoking with a hookah more than two times during the year, suggesting a considerable amount of light or experimental use. Males had only a slightly higher annual prevalence rate than females—20% versus 17%.

Smoking *small cigars* is about as prevalent a behavior as hookah smoking, with 12th graders having an annual prevalence of 20% in 2012. This is unchanged from 2011 and below the first reading on these products in 2010 (23.1%). Only 12% of the 12th grade students in 2012 indicated use on more than two occasions during the year. There is a larger gender difference for this form of tobacco use than for hookah smoking, with an annual prevalence of 27% among males compared to 13% among females. "We will continue to monitor these two forms of

tobacco consumption to see if they represent a growing problem among youth, and we will be examining their use among young adults, as well," said Johnston.

Snus and Dissolvable Tobacco. In 2011 questions were introduced dealing with two more recent forms of tobacco use—snus and dissolvable tobacco. The question about *snus*—a moist form of snuff that is placed under the upper lip—asks on how many occasions in the past 12 month the student "…used snus (a small packet of tobacco that is put in the mouth)." Among 12^{th} graders in 2011, 7.9% reported having used snus in the last 12 months; this rate remained unchanged in 2012. The proportion using more than two times was 5.2% in 2012. Clearly, snus made some inroads among 12th graders, but that seems not to be continuing. In 2012 the question about use of snus was added to the questionnaires given to 8^{th-} and 10^{th} graders, and their annual prevalence rates are 2.4% and 6.9%. The pattern of use by subgroups of 12^{th-} grade students follows the pattern for all smokeless products generally, with use being much higher among males (14.1% versus 1.2% among females), noncollege-bound students (12.2% versus 6.6% among the college-bound), and those living in non-metropolitan areas (10.8% versus about 6.1% in large cities).

The question about *dissolvable tobacco* products asks on how many occasions in the past 12 month the student "... used dissolvable tobacco products (Ariva, Stonewall, Orbs)." These products, in the form of pellets, strips, or sticks actually dissolve in the mouth, unlike other forms of chewing tobacco. Among 12th graders in 2011 only 1.5% reported having used in the prior 12 months and in 2012 it was 1.6%. The question was introduced for the lower grades in 2012, and the annual prevalence rates there were 1.0% in grade 8 and 1.6% in grade 10. It appears that these products have not yet made significant inroads among secondary school students.

NOTE: Tables associated with this release may be accessed at: <u>http://monitoringthefuture.org/data/data.html</u>

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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, one of the National Institutes of Health. The lead investigators, in addition to Lloyd Johnston, are Patrick O'Malley, Jerald Bachman, and John Schulenberg—all research professors at the University of Michigan's Institute for Social Research. Surveys of nationally representative samples of American high school seniors were begun in 1975, making the class of 2012 the 38th such class surveyed. Surveys of 8th and 10th graders were added to the design in 1991, making the 2012 nationally representative samples the 22nd such classes surveyed. The 2012 samples total 45,449 students located in 395 secondary schools. The samples are drawn separately at each grade level to be representative of students in that grade in public and private secondary schools across the coterminous United States.

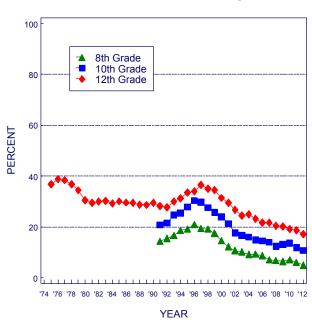
The findings summarized here will be published in a forthcoming volume: Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2013). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2012.* Ann Arbor, MI: Institute for

Social Research, the University of Michigan. The content presented here is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Drug Abuse, or the National Institutes of Health.

This year's findings on drug use are presented in a separate, companion press release to this one. <u>http://www.monitoringthefuture.org/pressreleases/12drugpr_complete.pdf</u>

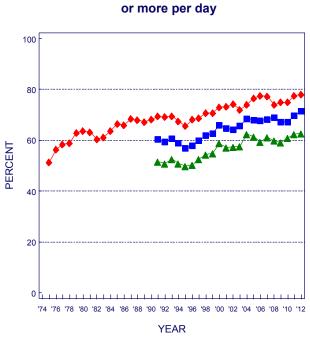
FIGURE 1 Cigarettes : Trends in 30-Day Use, Risk, Disapproval, and Availability

Grades 8, 10, and 12



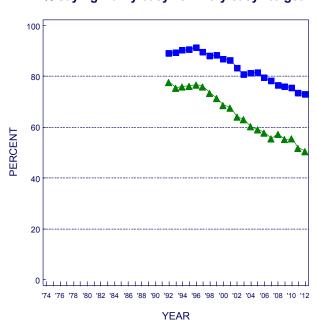
Use % who used in last 30 days

last 30 days

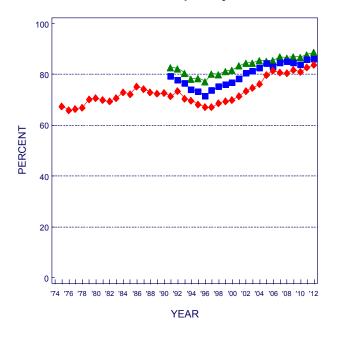


Risk % seeing "great risk" in smoking a pack

Availability % saying "fairly easy" or "very easy" to get



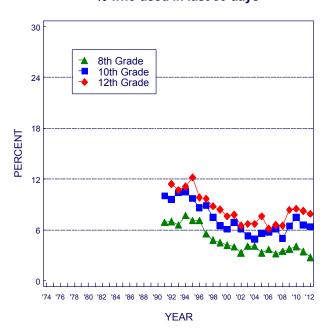
Disapproval % disapproving of smoking a pack or more per day



Source. The Monitoring the Future study, the University of Michigan.

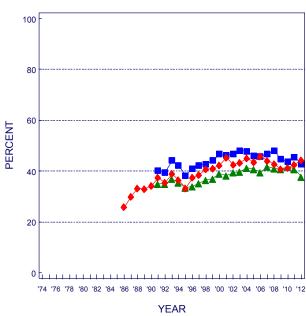
FIGURE 2 Smokeless Tobacco : Trends in 30-Day Use, Risk, and Disapproval

Grades 8, 10, and 12



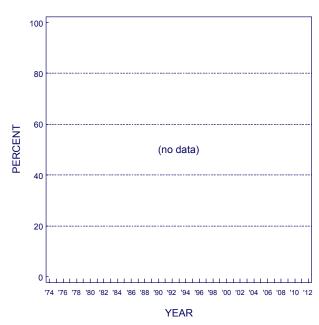
Use

% who used in last 30 days

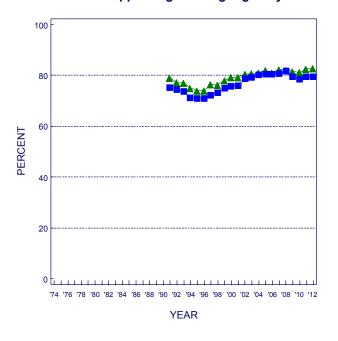


Risk % seeing "great risk" in using regularly

Availability % saying "fairly easy" or "very easy" to get



Disapproval % disapproving of using regularly



Source. The Monitoring the Future study, the University of Michigan.