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### **EMBARGOED FOR RELEASE AFTER 10 A.M. EST TUESDAY, DEC. 14, 2010**

**EDITORS:** Results of this year's Monitoring the Future survey are being released at a news conference to be held 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 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 principal investigator of the study, Lloyd Johnston. For further information, contact Johnston at (734) 763-5043.

## **Smoking stops declining and shows signs of increasing among younger teens**

ANN ARBOR, Mich.---The very substantial decrease in teen smoking that began in the mid-1990s has come to a halt among younger teens in the United States, and some evidence of a possible increase in their smoking was observed this year.

While the increase is not yet large enough to reach statistical significance, an increasing proportion of both 8<sup>th</sup> and 10<sup>th</sup> grade students this year said they smoked in the past 30 days or smoked daily in that period.

The Monitoring the Future study, which has been tracking teen smoking in the United States for the past 36 years, reports that past 30-day smoking among 8<sup>th</sup> graders increased from 6.5% in 2009 to 7.1% in 2010; among 10<sup>th</sup> graders it rose from 13.1% to 13.6%. These estimates come from the study's national surveys of some 46,000 students in nearly 400 secondary schools each year. The study 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 a series of research grants from the National Institute on Drug Abuse—one of the National Institutes of Health.

According to Lloyd Johnston, the study's principal investigator, smoking behavior among younger teens is particularly important because it is predictive of their smoking behavior as they become older teens and young adults. "Smoking is a habit that tends to stay with people for a long time, leading to ongoing differences between different graduating classes of students that persist into adulthood," he said. "Scientists call it a cohort effect, and it occurs largely because cigarette smoking is so addictive."

Peak smoking levels among teens were reached around 1996 among 8<sup>th</sup> and 10<sup>th</sup> graders and in 1997 among 12<sup>th</sup> graders. In the five or six years immediately following those peak levels, smoking among teens fell sharply. This likely was due in large part to increased public attention to the issue as well as to sharply rising prices, caused in part by new state sales taxes on cigarettes.

Negative publicity about the tobacco industry increased dramatically during that period, while the 1998 Master Settlement Agreement between states' attorneys general and the major cigarette companies generated its own consequences. These included the industry raising cigarette prices considerably to help them cover the costs of the settlement; reducing the nature and amount of advertising reaching youth, including ending the Joe Camel ad campaign; and funding a national anti-smoking advertising campaign aimed at youth.

After 2002 (or 2003 in the case of the 12<sup>th</sup> graders) the decline in teen smoking slowed considerably as funding was cut back substantially for national and state anti-smoking campaigns and as less public attention was paid to the issue generally. "In other words," Johnston concludes, "some of the factors that contributed to the earlier decline, by helping to shape young people's views of smoking were and are no longer occurring." Cigarette prices were not rising as dramatically, either, though they did continue to rise.

The proportion of students seeing a great risk associated with being a smoker leveled off during the past several years, according to the study's results, as has the proportion of teens saying that they disapprove of smoking or attach negative connotations to it.

Only high school seniors showed some modest further decline in smoking in 2010. None of their declines in use this year was significant: 30-day prevalence fell by 0.9 percentage points to 19.2%, and current daily smoking fell by 0.4 percentage points to 10.7%. As the study has previously demonstrated, cigarette smoking is generally characterized by cohort effects. Therefore, the investigators predict that the downturn in smoking among 12<sup>th</sup> graders will come to a halt within a year or two, because it already has ended among the younger cohorts who soon will be entering 12<sup>th</sup> grade.

All three grades now have rates of smoking that are far below their peak rates in 1996 or 1997. For example, 30-day prevalence is down by two thirds (66%) among 8<sup>th</sup> graders, by over half (55%) among 10<sup>th</sup> graders, and by nearly half (48%) among 12<sup>th</sup> graders.

"These are extremely important changes that will carry very substantial consequences for the health and longevity of this generation of young Americans," states Johnston. "But there are still significant proportions of teens putting themselves at risk for a host of serious diseases and a premature death because they are taking up cigarette smoking." Smoking in the prior 30 days is reported by 7%, 14%, and 19% of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders, respectively. Rates of daily smoking during the past 30 days are 3%, 7%, and 11% in the three grades, respectively. Based on the experience of previous 12<sup>th</sup>-grade classes, quite a number of the lighter smokers will become daily smokers after they leave high school.

One reason smoking has declined so sharply is that the proportion of students who ever *try smoking* has fallen dramatically. While 49% of 8<sup>th</sup> graders in 1996 had tried cigarettes, “only” 20% of the 8<sup>th</sup> graders in 2009 and 2010 indicated having ever done so, a 60% decline in smoking initiation over the past 14 years, though it too has halted.

“Future progress, if it occurs, is likely to be due to changes in the external environment—policy changes such as raising cigarette taxes, further limiting where smoking is permitted, bringing back broad-based anti-smoking ad campaigns and other prevention measures, and making quit-smoking programs more available,” Johnston said.

The *perceived availability* of cigarettes to under-age buyers, as measured by the percentage of 8<sup>th</sup> and 10<sup>th</sup> graders who say they could get cigarettes “fairly easily” or “very easily” if they wanted some, has declined substantially since 1996. (Twelfth graders are not asked the question.) The 8<sup>th</sup> graders showed the sharpest decline—from 77% in 1996 to 56% in 2007—about where it remained in 2010. Perceived availability among 10<sup>th</sup> graders fell from 91% in 1996 to 76% by 2009, where it remains today. Although availability has decreased appreciably for younger teens, it is clear that it is no longer decreasing; it is also clear that the majority of students in their teens still believe that they can get cigarettes fairly easily.

*Attitudes* toward smoking and smokers changed in important ways during the period of decline in cigarette use. These changes included increases in preferring to date nonsmokers, 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. (See Table 3.)

One of these attitudes, still widely held by young people, involves sex appeal. In 2010, the great majority of secondary school students said they “would prefer to date people who don’t smoke”—82%, 79%, and 73% of students in grades 8, 10, and 12, respectively. “I think this provides an important prevention message,” Johnston said, “and we hope that a lot of young people hear it. Smoking generally makes you less attractive to potential partners, not more so, as the tobacco industry’s advertising has been suggesting for so many years. And it’s true for both males and females.”

### **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 pronounced snoose, and rhymes with goose.) From the mid-1990s to the early 2000s, there was a substantial decline in smokeless tobacco use among teens—monthly prevalence fell by one third to one half—but the declines have not continued. In fact, significant increases have occurred over the past several years in all three grades. While so far modest in size, these changes show a clear rebound in use. Thirty-day prevalence of smokeless tobacco use in 2010 is 4.1%, 7.5%, and 8.5%, among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders, respectively. The rates are considerably higher for boys—6.3%, 13.0%, and 15.7%.

Perceived risk appears to have played an important role in the decline of smokeless tobacco use, as was true for cigarettes. In all three grades, perceived risk for smokeless tobacco rose fairly steadily from 1995 through 2004 before leveling. However, there has not been a great deal of fall-off in these measures since 2004, suggesting that other factors may be leading to the recent increases in use—quite possibly increased advertising of these products and a proliferation of types of smokeless tobacco available.

### **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. Questions about these forms of tobacco use were included in the survey of 12<sup>th</sup> graders for the first time in 2010. They yielded an annual prevalence rate of 17% for hookah smoking, with 6.5% of 12<sup>th</sup>-grade students smoking hookah more than five times during the year. Males had only a slightly higher prevalence rate than females—19.0% versus 15.2%.

Smoking small cigars is a more prevalent behavior, with 12<sup>th</sup> graders having an annual prevalence in 2010 of 23%, but with only 10% indicating use on more than five occasions during the year. There is a larger gender difference for this form of tobacco use, with an annual prevalence of 30% among males compared to 16% 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,” states Johnston.

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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 2010 the 36<sup>th</sup> such class surveyed. Surveys of 8<sup>th</sup> and 10<sup>th</sup> graders were added to the design in 1991, making the 2010 nationally representative samples the 20<sup>th</sup> such classes surveyed. The sample sizes in 2010 are 15,769 eighth graders in 147 schools, 15,586 tenth graders in 123 schools, and 15,127 twelfth graders in 126 schools, for a total of 46,482 students in 396 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. Schools are selected with probability proportionate to their estimated class size.

The findings summarized here will be published in the forthcoming volume: Johnston, L. D., O’Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2011). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2010*. Ann Arbor, MI: Institute for Social Research, The University of Michigan.

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