

investigator. “But even in the upper grades a slowdown is occurring, and we believe the declines are likely to end very soon.”

The Monitoring the Future (MTF) study surveys nationally representative samples of approximately 50,000 8th-, 10th-, and 12th-grade students each year in about 400 secondary schools.

The study is supported through a series of investigator-initiated, competitive research grants made to the University of Michigan by the National Institute on Drug Abuse (NIDA). The authors of the forthcoming report on the 2005 findings are Johnston, Patrick O’Malley, Jerald Bachman, and John Schulenberg—all psychologists and research professors at U-M’s Institute for Social Research.

“In the 30 years that this study now spans, we have seen some wide fluctuations in the smoking habits of American young people,” Johnston said. “And we have been keenly aware that these changes will have long-lasting impacts on the eventual health and longevity of each of these successive classes of young people. That’s because a class cohort of students (the graduating class of 1976, for example) that has a higher rate of smoking in adolescence tends to carry that higher rate of smoking with them into adulthood. In technical terms, this is called a ‘cohort effect’ because the differences between birth or class cohorts persist over much or all of the life course.”

Among high school seniors, rates of current (past 30-day) smoking peaked in 1976, with nearly 40 percent of that graduating class saying that they had smoked one or more cigarettes during the prior 30 days. Smoking then declined among successive classes through the remainder of the 1970s to about 30 percent of the Class of 1980 saying they did so.

Then, for more than a decade the smoking rate among successive 12th-grade classes remained remarkably constant given that adult smoking rates declined during that historical period. But in the first half of the 1990s, teen smoking took off, increasing on the order of one-half by the mid-1990s among younger teens, and by about one-third among 12th graders.

Eighth and 10th graders reached their recent peak rates in 1996, while 12th graders did so a year later.

Since those peaks were reached nine years ago, a number of things have happened, including a very visible discussion in the 1990s by White House officials, federal agencies, and Congress on whether the tobacco industry was actively trying to hook kids.

A master settlement agreement was reached between the state attorneys general and the major tobacco manufacturers; certain types of cigarette advertising, including the Joe Camel campaign and billboard advertising were stopped; and a large, national anti-smoking ad campaign, as well as a number of state-level campaigns, were launched. Finally, a substantial increase in the price of cigarettes took place, in part due to increases in state cigarette taxes but also due to the tobacco companies’ attempt to cover the costs of the tobacco settlement.

It is likely that all of these factors contributed to the dramatic fall in teen smoking that has occurred since the mid-1990s, the investigators said. Thirty-day smoking rates have fallen from their recent peaks in the mid-1990s by 56 percent, 51 percent, and 37 percent among 8th, 10th, and 12th graders, respectively.

At present about 1 in 11 8th graders (9.3 percent) indicate smoking in the prior 30 days, as well as 1 in every 7 10th graders (14.9 percent), and nearly 1 in 4 12th graders (23.2 percent).

“Although the recent decreases in smoking have more than offset the substantial rise in teen smoking during the early 1990s, the current rates are still far higher than parents and the public health community would like to see,” Johnston noted. “And considerable evidence is accumulating that the downturn in teen smoking may stall at about these still unacceptable levels.”

According to the investigators, a number of signs point to an end of the decline in teen smoking. In addition to the fact that the 8th graders’ 30-day smoking rate held steady this year (after declining more slowly in the previous few years), they note that the declines in use in the upper grades also have decelerated considerably.

Furthermore, the rise in the proportion of students seeing smoking as dangerous leveled this year in both 8th and 10th grades; the previous increase in disapproval of smoking leveled in 8th grade this year; and the decline in the perceived availability of cigarettes ended among 10th graders two years ago. None of these changes bodes well for future progress in reducing smoking among youth.

There is also evidence in the study that the proportion of secondary school students being exposed to anti-smoking ads is in decline and that fewer of today’s students judge such ads to be having a deterrent effect on them compared with earlier classes.

All three grades surveyed show a decline over the past two years in recalled weekly exposure to anti-smoking spots during recent months. There was also a decline over the past year (or two, for 12th graders) in the proportion of respondents saying that they felt that the ads made them less likely to smoke.

“Insofar as these anti-smoking ad campaigns have had their intended effects—and there is growing evidence that they have—the pullback that is now occurring in the funding of such campaigns at both the national and state levels is not a favorable development,” Johnston concluded.

Fortunately, the proportion of 8th graders reporting that they have ever tried smoking cigarettes continues to decline, although this could reflect shifts in behaviors and intentions that actually occurred several years earlier. The initiation rate among 8th graders has dropped by nearly half since its recent peak in 1996. In 1996 49 percent of 8th graders reported having tried cigarettes, compared with only 28 percent in 2004 and 26 percent in 2005. (The 2-percentage-point decline in the last year, although small, is statistically significant.)

“Among the facts that we would like to share with young people who are thinking about taking up smoking are these: In 2005 about half of all 10th and 12th graders said that they strongly dislike being near people who are smoking; and 75 percent to 80 percent of them say that they personally prefer to date nonsmokers,” Johnston said.

“It is clear that there is a high social price to be paid for any teen becoming a smoker today, and that’s all in addition to the serious costs in terms of one’s eventual health and length of life. And, of course, the other fact they should know is that once the smoking habit is established, most people find it terribly difficult to quit. Even though many teenage smokers say they expect to quit, most fail to do so. That’s the reason for those big, long-lasting cohort differences.”

Smokeless tobacco

Questions about the use of smokeless or “spit” tobacco, which includes both snuff and chewing tobacco, have been included in the study for many years. The trends in this form of tobacco use have been fairly parallel to those for cigarettes, with current (past 30-day) use reaching a recent peak in the mid-1990s, followed by a substantial decline after that.

Eighth graders exhibited a decline of about one half in their past 30-day prevalence of smokeless tobacco use between 1994 and 2003, falling from 7.7 percent to 3.3 percent, where it remained in 2005. (Because this is primarily a male behavior, the rates among males are considerably higher than the averages shown here.)

Likewise, 30-day prevalence of use among 10th graders had fallen by half, from 10.5 percent in 1994 to 4.9 percent in 2004, before increasing slightly in 2005. Twelfth graders’ use fell by nearly half, from 12.2 percent in 1995 to 6.5 percent in 2002, before rising some to 7.6 percent by 2005.

“It thus appears that the substantial decline in smokeless tobacco use by American teens from the mid-1990s to the early 2000s has ended, and may even be at the beginning of a turnaround,” concluded Johnston.

Perceived risk associated with smokeless tobacco use appears to have played an important role in the decline in use. Perceived risk rose fairly steadily in all three grades from 1995 through 2004 before showing a slight turnaround in all three grades in 2005.

“A decade ago young people started to get the word about mouth and throat cancer associated with using spit tobacco, and I think it turned many away from it,” Johnston said. “But it is possible that a new wave of young people are going to have to hear that same message if we are to be successful at keeping usage rates low.”

Disapproval of using smokeless tobacco also had been rising since 1996 in the two grades in which the question is asked—grades 8 and 10—but leveled off in the past two years. “A rise in disapproval often starts a year after an increase in perceived risk is observed for a drug, which is what we saw here as well,” Johnston said. “I think a reasonable interpretation of the dynamic is

that young people eventually become more disapproving of using a drug after they have come to see its use as dangerous.”

Kreteks and bidis

In 2000 a single question was introduced into the study about the use of bidis, small flavored cigarettes imported from India, because of rising concern at the time about their growing use. In 2001 a single question was introduced for similar reasons about the use of kreteks, clove-flavored cigarettes imported from Indonesia.

Relatively low prevalence rates were observed for both types of specialty cigarettes in the initial years of measurement, and since then use has declined substantially and fairly steadily in all grades. Therefore, the investigators conclude that both kreteks and bidis constituted short-term fads that have not caught on with mainstream American youth.

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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 2005 the 31st such class surveyed. Surveys of 8th and 10th graders were added to the design in 1991, making the 2005 nationally representative samples the 15th such classes surveyed. The sample sizes in 2005 are 17,258 8th graders located in 146 schools, 16,711 10th graders located in 127 schools, and 15,378 12th graders located in 129 schools, for a total of 49,347 students in 402 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. (2006). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2005*. (NIH Publication No. [yet to be assigned].) Bethesda MD: National Institute on Drug Abuse.

FIGURE 1
Cigarettes: Trends in 30-Day Use, Risk, Disapproval, and Availability
 Eighth, Tenth, and Twelfth Graders

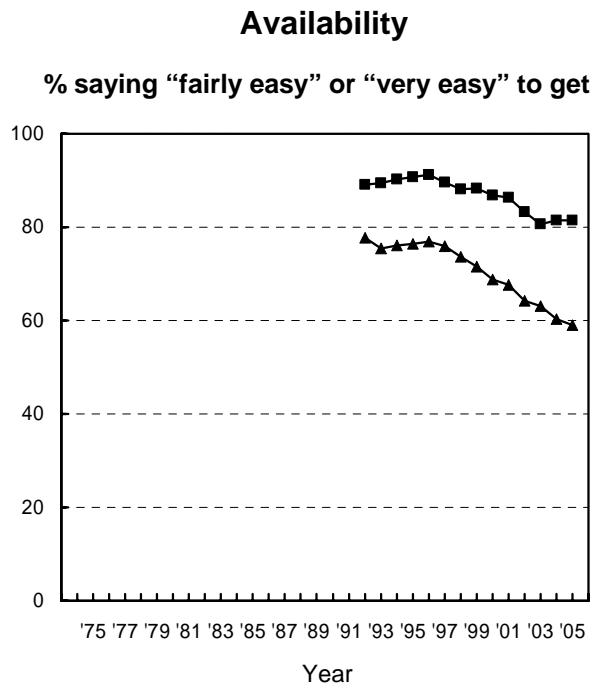
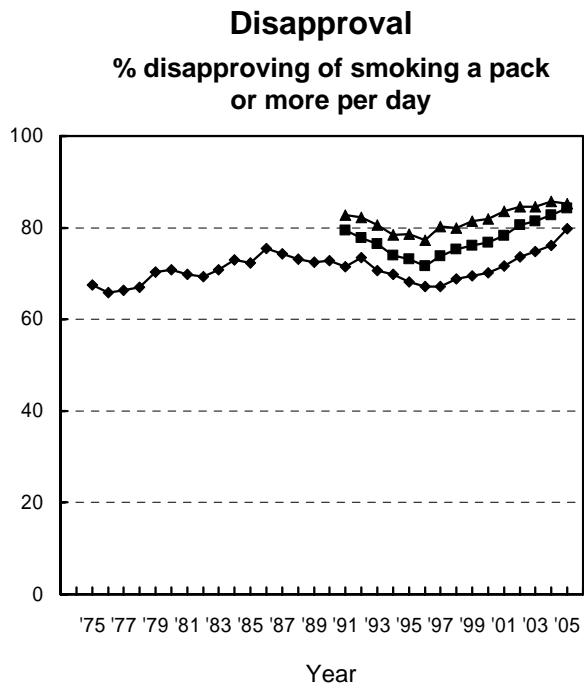
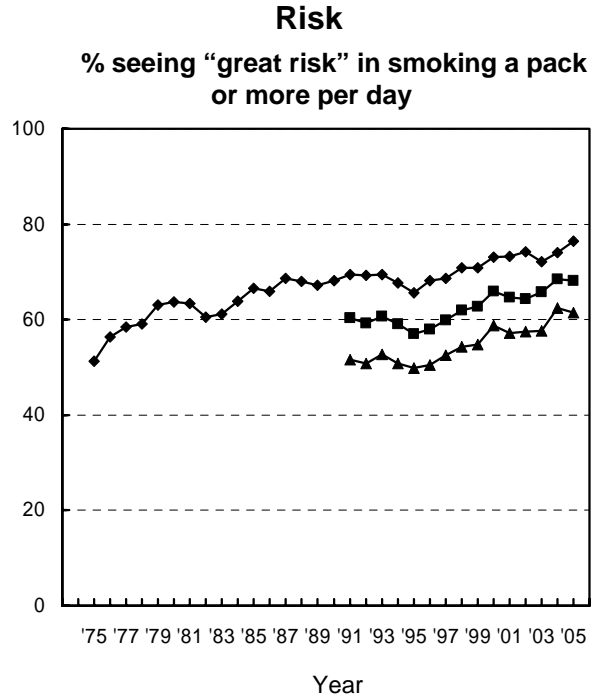
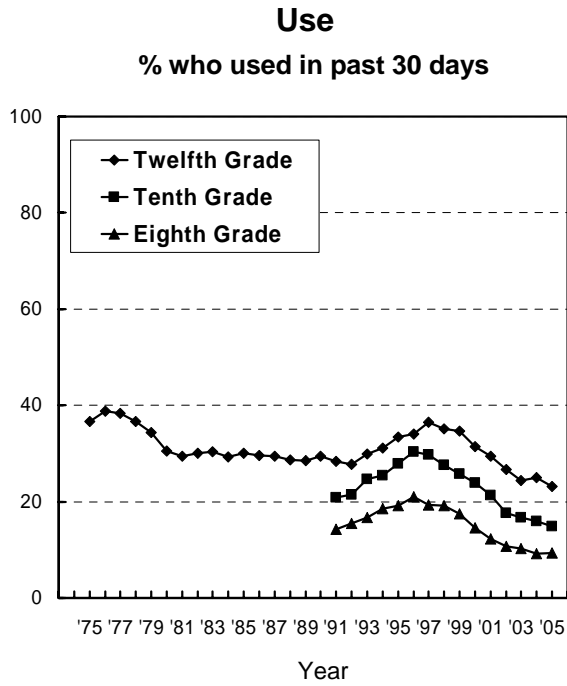


FIGURE 2
Smokeless Tobacco: Trends in 30-Day Use, Risk, and Disapproval
 Eighth, Tenth, and Twelfth Graders

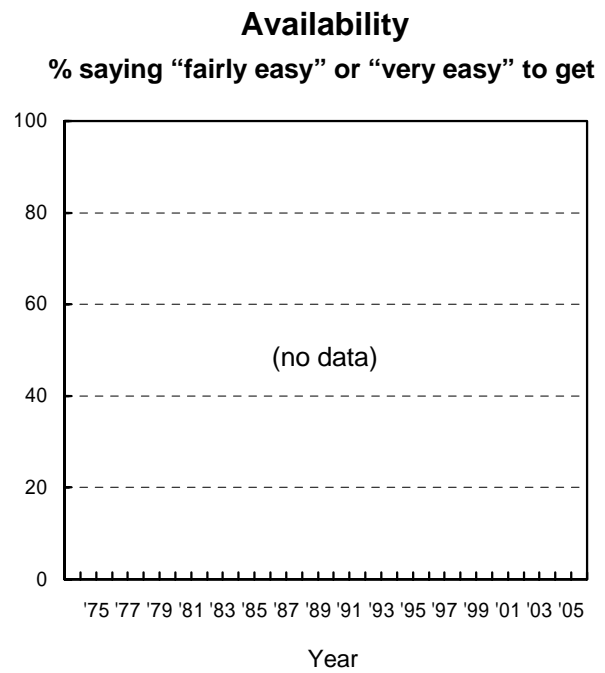
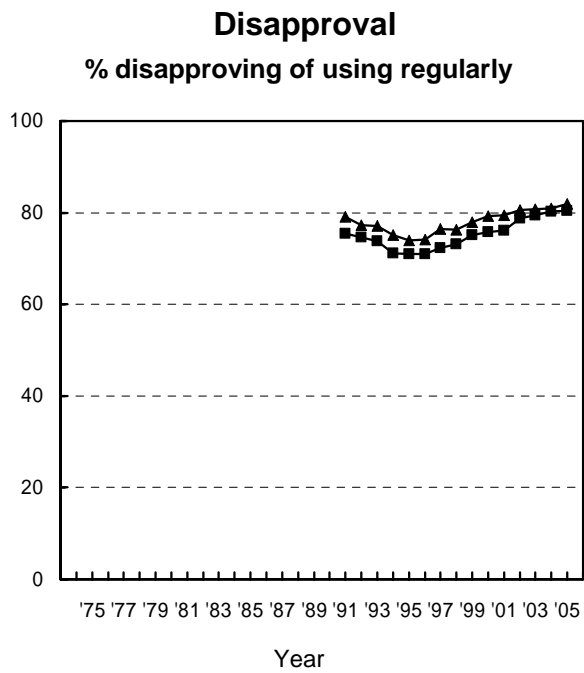
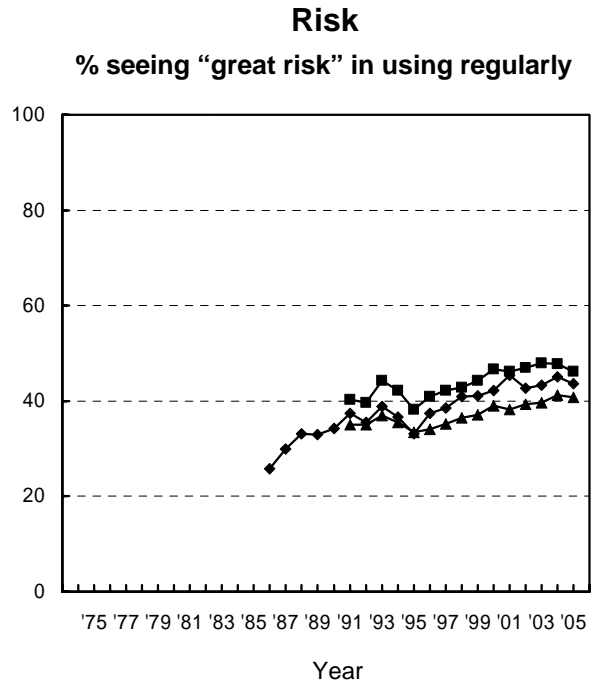
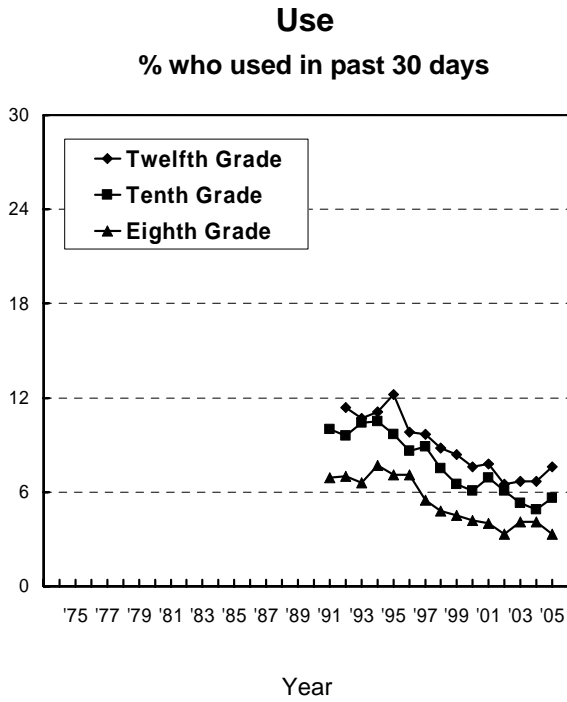


TABLE 1
Trends in Prevalence of Use of Cigarettes for Eighth, Tenth, and Twelfth Graders



| | <u>1975</u> | <u>1976</u> | <u>1977</u> | <u>1978</u> | <u>1979</u> | <u>1980</u> | <u>1981</u> | <u>1982</u> | <u>1983</u> | <u>1984</u> | <u>1985</u> | <u>1986</u> | <u>1987</u> | <u>1988</u> | <u>1989</u> | <u>1990</u> |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Lifetime | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12th Grade | 73.6 | 75.4 | 75.7 | 75.3 | 74.0 | 71.0 | 71.0 | 70.1 | 70.6 | 69.7 | 68.8 | 67.6 | 67.2 | 66.4 | 65.7 | 64.4 |
| Thirty-Day | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12th Grade | 36.7 | 38.8 | 38.4 | 36.7 | 34.4 | 30.5 | 29.4 | 30.0 | 30.3 | 29.3 | 30.1 | 29.6 | 29.4 | 28.7 | 28.6 | 29.4 |
| Daily | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12th Grade | 26.9 | 28.8 | 28.8 | 27.5 | 25.4 | 21.3 | 20.3 | 21.1 | 21.2 | 18.7 | 19.5 | 18.7 | 18.7 | 18.1 | 18.9 | 19.1 |
| 1/2 Pack+ per Day | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12th Grade | 17.9 | 19.2 | 19.4 | 18.8 | 16.5 | 14.3 | 13.5 | 14.2 | 13.8 | 12.3 | 12.5 | 11.4 | 11.4 | 10.6 | 11.2 | 11.3 |
| Approx. Ns: | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12th Grade | 9,400 | 15,400 | 17,100 | 17,800 | 15,500 | 15,900 | 17,500 | 17,700 | 16,300 | 15,900 | 16,000 | 15,200 | 16,300 | 16,300 | 16,700 | 15,200 |

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

'—' indicates data not available.

Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 1 (cont'd)
Trends in Prevalence of Use of Cigarettes for Eighth, Tenth, and Twelfth Graders

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | '04-'05 change |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------|
| Lifetime | | | | | | | | | | | | | | | | |
| 8th Grade | 44.0 | 45.2 | 45.3 | 46.1 | 46.4 | 49.2 | 47.3 | 45.7 | 44.1 | 40.5 | 36.6 | 31.4 | 28.4 | 27.9 | 25.9 | -2.0 s |
| 10th Grade | 55.1 | 53.5 | 56.3 | 56.9 | 57.6 | 61.2 | 60.2 | 57.7 | 57.6 | 55.1 | 52.8 | 47.4 | 43.0 | 40.7 | 38.9 | -1.7 |
| 12th Grade | 63.1 | 61.8 | 61.9 | 62.0 | 64.2 | 63.5 | 65.4 | 65.3 | 64.6 | 62.5 | 61.0 | 57.2 | 53.7 | 52.8 | 50.0 | -2.8 s |
| Thirty-Day | | | | | | | | | | | | | | | | |
| 8th Grade | 14.3 | 15.5 | 16.7 | 18.6 | 19.1 | 21.0 | 19.4 | 19.1 | 17.5 | 14.6 | 12.2 | 10.7 | 10.2 | 9.2 | 9.3 | +0.1 |
| 10th Grade | 20.8 | 21.5 | 24.7 | 25.4 | 27.9 | 30.4 | 29.8 | 27.6 | 25.7 | 23.9 | 21.3 | 17.7 | 16.7 | 16.0 | 14.9 | -1.0 |
| 12th Grade | 28.3 | 27.8 | 29.9 | 31.2 | 33.5 | 34.0 | 36.5 | 35.1 | 34.6 | 31.4 | 29.5 | 26.7 | 24.4 | 25.0 | 23.2 | -1.8 |
| Daily | | | | | | | | | | | | | | | | |
| 8th Grade | 7.2 | 7.0 | 8.3 | 8.8 | 9.3 | 10.4 | 9.0 | 8.8 | 8.1 | 7.4 | 5.5 | 5.1 | 4.5 | 4.4 | 4.0 | -0.3 |
| 10th Grade | 12.6 | 12.3 | 14.2 | 14.6 | 16.3 | 18.3 | 18.0 | 15.8 | 15.9 | 14.0 | 12.2 | 10.1 | 8.9 | 8.3 | 7.5 | -0.7 |
| 12th Grade | 18.5 | 17.2 | 19.0 | 19.4 | 21.6 | 22.2 | 24.6 | 22.4 | 23.1 | 20.6 | 19.0 | 16.9 | 15.8 | 15.6 | 13.6 | -1.9 s |
| 1/2 Pack+ per Day | | | | | | | | | | | | | | | | |
| 8th Grade | 3.1 | 2.9 | 3.5 | 3.6 | 3.4 | 4.3 | 3.5 | 3.6 | 3.3 | 2.8 | 2.3 | 2.1 | 1.8 | 1.7 | 1.7 | -0.1 |
| 10th Grade | 6.5 | 6.0 | 7.0 | 7.6 | 8.3 | 9.4 | 8.6 | 7.9 | 7.6 | 6.2 | 5.5 | 4.4 | 4.1 | 3.3 | 3.1 | -0.2 |
| 12th Grade | 10.7 | 10.0 | 10.9 | 11.2 | 12.4 | 13.0 | 14.3 | 12.6 | 13.2 | 11.3 | 10.3 | 9.1 | 8.4 | 8.0 | 6.9 | -1.1 s |
| Approx. Ns: | | | | | | | | | | | | | | | | |
| 8th Grade | 17,500 | 18,600 | 18,300 | 17,300 | 17,500 | 17,800 | 18,600 | 18,100 | 16,700 | 16,700 | 16,200 | 15,100 | 16,500 | 17,000 | 16,800 | |
| 10th Grade | 14,800 | 14,800 | 15,300 | 15,800 | 17,000 | 15,600 | 15,500 | 15,000 | 13,600 | 14,300 | 14,000 | 14,300 | 15,800 | 16,400 | 16,200 | |
| 12th Grade | 15,000 | 15,800 | 16,300 | 15,400 | 15,400 | 14,300 | 15,400 | 15,200 | 13,600 | 12,800 | 12,800 | 12,900 | 14,600 | 14,600 | 14,700 | |

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

'—' indicates data not available.

Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 2
Trends in Availability and Attitudes about Smoking One or More Packs
of Cigarettes per Day, for Eighth, Tenth, and Twelfth Graders



| | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Perceived Risk^a | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12th Grade | 51.3 | 56.4 | 58.4 | 59.0 | 63.0 | 63.7 | 63.3 | 60.5 | 61.2 | 63.8 | 66.5 | 66.0 | 68.6 | 68.0 | 67.2 | 68.2 |
| Disapproval^b | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12th Grade | 67.5 | 65.9 | 66.4 | 67.0 | 70.3 | 70.8 | 69.9 | 69.4 | 70.8 | 73.0 | 72.3 | 75.4 | 74.3 | 73.1 | 72.4 | 72.8 |
| Availability^c | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Approx. Ns: | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10th Grade | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12th Grade | 2,800 | 2,900 | 3,100 | 3,800 | 3,300 | 3,200 | 3,600 | 3,600 | 3,300 | 3,300 | 3,300 | 3,000 | 3,300 | 3,300 | 2,800 | 2,600 |

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
 '—' indicates data not available.
 Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 2 (cont'd)
Trends in Availability and Attitudes about Smoking One or More Packs of Cigarettes per Day, for Eighth, Tenth, and Twelfth Graders

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | '04-'05 change |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
| Perceived Risk^a | | | | | | | | | | | | | | | | |
| 8th Grade | 51.6 | 50.8 | 52.7 | 50.8 | 49.8 | 50.4 | 52.6 | 54.3 | 54.8 | 58.8 | 57.1 | 57.5 | 57.7 | 62.4 | 61.5 | -0.9 |
| 10th Grade | 60.3 | 59.3 | 60.7 | 59.0 | 57.0 | 57.9 | 59.9 | 61.9 | 62.7 | 65.9 | 64.7 | 64.3 | 65.7 | 68.4 | 68.1 | -0.4 |
| 12th Grade | 69.4 | 69.2 | 69.5 | 67.6 | 65.6 | 68.2 | 68.7 | 70.8 | 70.8 | 73.1 | 73.3 | 74.2 | 72.1 | 74.0 | 76.5 | +2.5 |
| Disapproval^b | | | | | | | | | | | | | | | | |
| 8th Grade | 82.8 | 82.3 | 80.6 | 78.4 | 78.6 | 77.3 | 80.3 | 80.0 | 81.4 | 81.9 | 83.5 | 84.6 | 84.6 | 85.7 | 85.3 | -0.5 |
| 10th Grade | 79.4 | 77.8 | 76.5 | 73.9 | 73.2 | 71.6 | 73.8 | 75.3 | 76.1 | 76.7 | 78.2 | 80.6 | 81.4 | 82.7 | 84.3 | +1.6 |
| 12th Grade | 71.4 | 73.5 | 70.6 | 69.8 | 68.2 | 67.2 | 67.1 | 68.8 | 69.5 | 70.1 | 71.6 | 73.6 | 74.8 | 76.2 | 79.8 | +3.6 s |
| Availability^c | | | | | | | | | | | | | | | | |
| 8th Grade | — | 77.8 | 75.5 | 76.1 | 76.4 | 76.9 | 76.0 | 73.6 | 71.5 | 68.7 | 67.7 | 64.3 | 63.1 | 60.3 | 59.1 | -1.2 |
| 10th Grade | — | 89.1 | 89.4 | 90.3 | 90.7 | 91.3 | 89.6 | 88.1 | 88.3 | 86.8 | 86.3 | 83.3 | 80.7 | 81.4 | 81.5 | +0.1 |
| Approx. Ns: | | | | | | | | | | | | | | | | |
| 8th Grade | 17,500 | 18,600 | 18,300 | 17,300 | 17,500 | 17,800 | 18,600 | 18,100 | 16,700 | 16,700 | 16,200 | 15,100 | 16,500 | 17,000 | 16,800 | |
| 10th Grade | 14,800 | 14,800 | 15,300 | 15,800 | 17,000 | 15,600 | 15,500 | 15,000 | 13,600 | 14,300 | 14,000 | 14,300 | 15,800 | 16,400 | 16,200 | |
| 12th Grade | 2,600 | 2,700 | 2,800 | 2,600 | 2,600 | 2,400 | 2,600 | 2,500 | 2,300 | 2,100 | 2,100 | 2,200 | 2,400 | 2,400 | 2,500 | |

^aThe question text was: How much do you think people risk harming themselves (physically or in other ways) if they smoke one or more packs of cigarettes per day? Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar. The percentage saying "great risk" is shown. For 8th and 10th graders: Beginning in 1999, perceived risk data based on two of four forms; N is two-thirds of N indicated.

^bThe question text was: Do you disapprove of people smoking one or more packs of cigarettes per day? Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. For 8th and 10th graders, there was another category— "Can't say, drug unfamiliar"— which was included in the calculation of these percentages. The percentage saying they "disapprove" or "strongly disapprove" is shown. For 8th and 10th graders: Beginning in 1999, disapproval data based on two of four forms; N is two-thirds of N indicated.

^cThe question text was: How difficult do you think it would be for you to get cigarettes, if you wanted some? Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, (5) Very easy, and (8) Can't say, drug unfamiliar (included in the calculation of these percentages). The percentage saying cigarettes are "fairly easy" or "very easy" to get is shown. In 1992 only, availability data based on one of two forms; N is one-half of N indicated. The question was not asked of the 12th graders.

TABLE 3
Trends in Prevalence of Use of Smokeless Tobacco for Eighth, Tenth, and Twelfth Graders

| | 1975-85 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | '04-'05 change |
|--------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------|
| Lifetime | | | | | | | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | 22.2 | 20.7 | 18.7 | 19.9 | 20.0 | 20.4 | 16.8 | 15.0 | 14.4 | 12.8 | 11.7 | 11.2 | 11.3 | 11.0 | 10.1 | -0.9 |
| 10th Grade | — | — | — | — | — | — | 28.2 | 26.6 | 28.1 | 29.2 | 27.6 | 27.4 | 26.3 | 22.7 | 20.4 | 19.1 | 19.5 | 16.9 | 14.6 | 13.8 | 14.5 | +0.6 |
| 12th Grade | — | 31.4 | 32.2 | 30.4 | 29.2 | — | — | 32.4 | 31.0 | 30.7 | 30.9 | 29.8 | 25.3 | 26.2 | 23.4 | 23.1 | 19.7 | 18.3 | 17.0 | 16.7 | 17.5 | +0.8 |
| Thirty-Day | | | | | | | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | 6.9 | 7.0 | 6.6 | 7.7 | 7.1 | 7.1 | 5.5 | 4.8 | 4.5 | 4.2 | 4.0 | 3.3 | 4.1 | 4.1 | 3.3 | -0.8 |
| 10th Grade | — | — | — | — | — | — | 10.0 | 9.6 | 10.4 | 10.5 | 9.7 | 8.6 | 8.9 | 7.5 | 6.5 | 6.1 | 6.9 | 6.1 | 5.3 | 4.9 | 5.6 | +0.7 |
| 12th Grade | — | 11.5 | 11.3 | 10.3 | 8.4 | — | — | 11.4 | 10.7 | 11.1 | 12.2 | 9.8 | 9.7 | 8.8 | 8.4 | 7.6 | 7.8 | 6.5 | 6.7 | 6.7 | 7.6 | +0.9 |
| Daily | | | | | | | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | 1.6 | 1.8 | 1.5 | 1.9 | 1.2 | 1.5 | 1.0 | 1.0 | 0.9 | 0.9 | 1.2 | 0.8 | 0.8 | 1.0 | 0.7 | -0.3 |
| 10th Grade | — | — | — | — | — | — | 3.3 | 3.0 | 3.3 | 3.0 | 2.7 | 2.2 | 2.2 | 2.2 | 1.5 | 1.9 | 2.2 | 1.7 | 1.8 | 1.6 | 1.9 | +0.3 |
| 12th Grade | — | 4.7 | 5.1 | 4.3 | 3.3 | — | — | 4.3 | 3.3 | 3.9 | 3.6 | 3.3 | 4.4 | 3.2 | 2.9 | 3.2 | 2.8 | 2.0 | 2.2 | 2.8 | 2.5 | -0.2 |
| Approx. Ns: | | | | | | | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | 17,500 | 18,600 | 18,300 | 17,300 | 17,500 | 17,800 | 18,600 | 18,100 | 16,700 | 16,700 | 16,200 | 15,100 | 16,500 | 17,000 | 16,800 | |
| 10th Grade | — | — | — | — | — | — | 14,800 | 14,800 | 15,300 | 15,800 | 17,000 | 15,600 | 15,500 | 15,000 | 13,600 | 14,300 | 14,000 | 14,300 | 15,800 | 16,400 | 16,200 | |
| 12th Grade | — | 15,200 | 16,300 | 16,300 | 16,700 | 15,200 | 15,000 | 15,800 | 16,300 | 15,400 | 15,400 | 14,300 | 15,400 | 15,200 | 13,600 | 12,800 | 12,800 | 12,900 | 14,600 | 14,600 | 14,700 | |

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

'—' indicates data not available.

Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

For 8th and 10th graders: Data based on one of two forms for 1991–96 and on two of four forms beginning in 1997; N is one-half of N indicated.

For 12th graders: Data based on one form; N is one-fifth of N indicated in 1986–1988 and one-sixth of N indicated beginning in 1989.

The prevalence of use of smokeless tobacco was not asked of 12th graders in 1990 and 1991. Prior to 1990 the prevalence of use question on smokeless tobacco was located near the end of one 12th-grade questionnaire form, whereas after 1991 the question was placed earlier and in a different form. This shift could explain the discontinuities between the corresponding data.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 4
Trends in Attitudes about Regular Smokeless Tobacco Use for Eighth, Tenth, and Twelfth Graders

| | 1975-85 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | '04-'05 change |
|-----------------------------------|---------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------|
| Perceived Risk^a | | | | | | | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | 35.1 | 35.1 | 36.9 | 35.5 | 33.5 | 34.0 | 35.2 | 36.5 | 37.1 | 39.0 | 38.2 | 39.4 | 39.7 | 41.3 | 40.8 | -0.5 |
| 10th Grade | — | — | — | — | — | — | 40.3 | 39.6 | 44.2 | 42.2 | 38.2 | 41.0 | 42.2 | 42.8 | 44.2 | 46.7 | 46.2 | 46.9 | 48.0 | 47.8 | 46.1 | -1.8 |
| 12th Grade | — | 25.8 | 30.0 | 33.2 | 32.9 | 34.2 | 37.4 | 35.5 | 38.9 | 36.6 | 33.2 | 37.4 | 38.6 | 40.9 | 41.1 | 42.2 | 45.4 | 42.6 | 43.3 | 45.0 | 43.6 | -1.4 |
| Disapproval^b | | | | | | | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | 79.1 | 77.2 | 77.1 | 75.1 | 74.0 | 74.1 | 76.5 | 76.3 | 78.0 | 79.2 | 79.4 | 80.6 | 80.7 | 81.0 | 82.0 | +1.0 |
| 10th Grade | — | — | — | — | — | — | 75.4 | 74.6 | 73.8 | 71.2 | 71.0 | 71.0 | 72.3 | 73.2 | 75.1 | 75.8 | 76.1 | 78.7 | 79.4 | 80.2 | 80.5 | +0.2 |
| Approx. Ns: | | | | | | | | | | | | | | | | | | | | | | |
| 8th Grade | — | — | — | — | — | — | 17,500 | 18,600 | 18,300 | 17,300 | 17,500 | 17,800 | 18,600 | 18,100 | 16,700 | 16,700 | 16,200 | 15,100 | 16,500 | 17,000 | 16,800 | |
| 10th Grade | — | — | — | — | — | — | 14,800 | 14,800 | 15,300 | 15,800 | 17,000 | 15,600 | 15,500 | 15,000 | 13,600 | 14,300 | 14,000 | 14,300 | 15,800 | 16,400 | 16,200 | |
| 12th Grade | — | 3,000 | 3,300 | 3,300 | 2,800 | 2,600 | 2,600 | 2,700 | 2,800 | 2,600 | 2,600 | 2,400 | 2,600 | 2,500 | 2,300 | 2,100 | 2,100 | 2,200 | 2,400 | 2,400 | 2,500 | |

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

'—' indicates data not available.'

Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

^aThe question text was: How much do you think people risk harming themselves (physically or in other ways) if they use smokeless tobacco regularly? Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar. The percentage saying "great risk" is shown.

^bThe question text was: Do you disapprove of people using smokeless tobacco regularly? Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. For 8th and 10th graders, there was another category— "Can't say, drug unfamiliar"—which was included in the calculation of these percentages. The percentage saying they "disapprove" or "strongly disapprove" is shown. This question was not asked of 12th graders.