

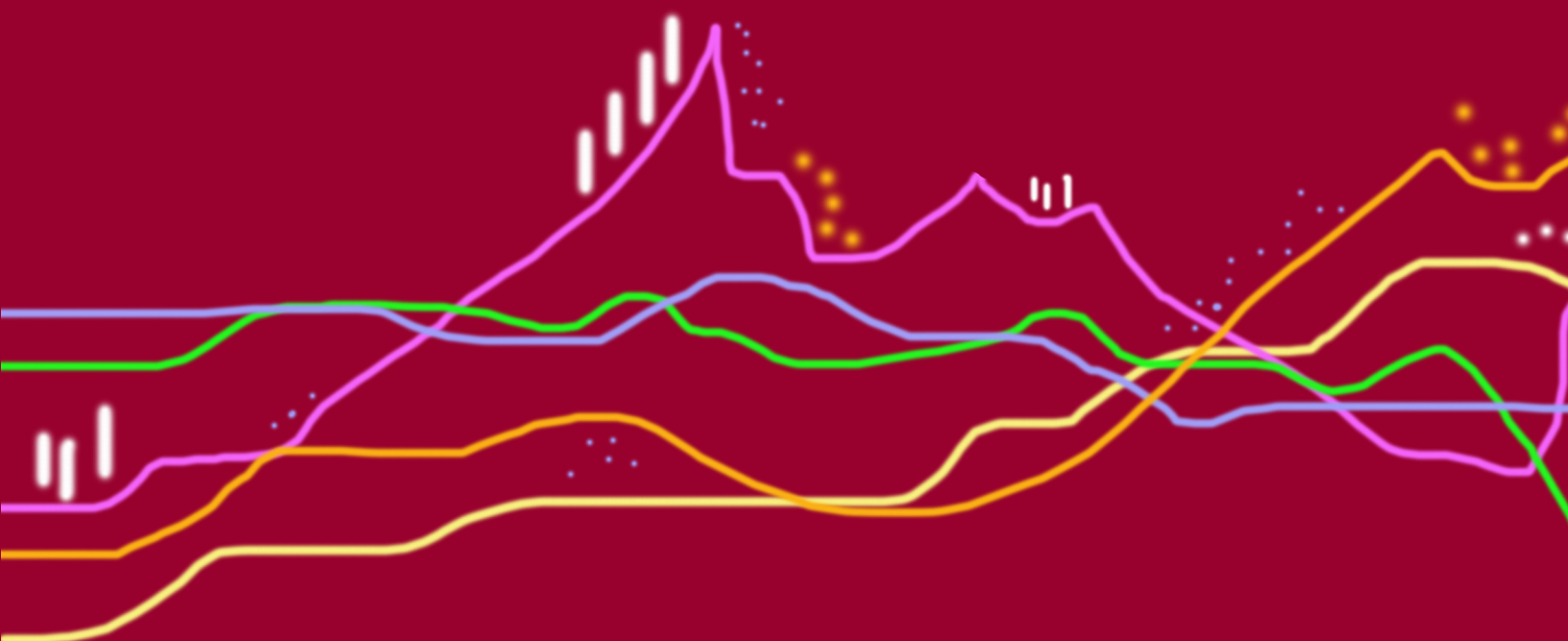
# MONITORING *the* FUTURE

NATIONAL SURVEY RESULTS  
ON DRUG USE  
1975–2017

## 2017 Overview

### Key Findings on Adolescent Drug Use

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Richard A. Miech  
Patrick M. O'Malley  
Jerald G. Bachman  
John E. Schulenberg  
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by

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The University of Michigan  
Institute for Social Research

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## Summary of Key Findings

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Monitoring the Future (MTF) is a long-term study of substance use and related factors among U.S. adolescents, college students, and adult high school graduates through age 55. It is conducted annually and supported by the National Institute on Drug Abuse. MTF findings identify emerging substance use problems, track substance use trends, and inform national policy and intervention strategies.

MTF is designed to detect age, period, and cohort effects in substance use and related attitudes. Age effects are similar changes at similar ages seen across multiple class cohorts; they are common during adolescence. Period effects are changes that are parallel over a number of years across multiple age groups (in this case, all three grades under study—8, 10, and 12). Cohort effects are similar changes among those of a similar age or grade in school, that are then maintained as the cohorts age. The key findings for 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders surveyed across the coterminous U.S. in 2017 are summarized below.

The analyses and associated tables that follow present substance use trends for all three grades separately, as well as trends in key attitudes, beliefs, and perceived availability. In a number of cases we provide insight into the age and cohort effects and secular trends that underlie trends in use and in key attitudes and beliefs.

An additional set of tables provides an overview of drug use trends for the three grades combined (Tables 1–4). This information gives a summary of the general nature of secular trends over the last several years, though it obscures any age or cohort effects that may be occurring. Also, for simultaneous trends that are in the same direction and magnitude across all three grades, these combined analyses provide greater statistical power to detect whether secular trends are statistically significant.

### Illicit Drugs Showing an Increase in Use in 2017

Annual *marijuana* prevalence rose by a significant 1.3 percentage points to 23.9% in 2017 based on data from the three grades combined.<sup>1</sup> (While increases were seen in all three grades separately, they did not reach statistical significance.) Annual prevalence stands at 10%, 26%, and 37% in grades 8, 10, and 12. Importantly, *daily marijuana* changed little this year, with rates at 1%, 3%, and 6% respectively.

The index of use of *any illicit drug*, which tends to be driven by marijuana—by far the most prevalent of the illicit drugs, also rose some in each of the three grades, although not enough to reach statistical significance. Data for the three grades combined also did not reach significance.

However, the annual prevalence of the index of *any illicit drug including inhalants* rose significantly for the three

grades combined (up 2.0 percentage points to 28.3%, ss), with sizeable increases in all three grades (up 2.3 percentage points in grade 8, ss).<sup>2</sup>

Eighth graders, who consistently have the highest prevalence for *inhalants*, accounted for all of the increase in inhalant use in 2017 (their annual prevalence was up by 0.9 percentage points to 4.7%, s) and all of the increase in the index including inhalants. Until 2017 inhalant use had been in a steady decline in all grades for roughly a decade or more, so this year's possible reversal of that trend bears watching.

### Illicit Drugs Showing Declines in Use in 2017

Relatively few drugs exhibited a significant decline in use in 2017, although the use of most drugs is well below the peak levels reached in recent years.

*Synthetic marijuana* use declined for the three grades combined—down 0.4 percentage points to 2.8% (s). Its use declined only in grades 8 and 10 this year, significantly so in 8<sup>th</sup>. Annual prevalence has declined by more than half at each grade level since it was first measured around 2013.

Annual prevalence for *salvia* had declined appreciably in all three grades prior to 2017, and it declined further in 2017, but only among 8<sup>th</sup> graders (down 0.6 percentage points to 0.4%, s). This drug is now below 1.6% annual prevalence in all three grades.

*Bath salts* (synthetic stimulants) continued their long term decline in 2017 in all three grades, though only the decline for all three grades combined reached statistical significance (down 0.3 percentage points to 0.5%, s). Annual prevalence is now below 0.7% in all three grades.

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<sup>1</sup> Prevalence refers to the percent of the study sample that report using a drug once or more during a given period—i.e. in their lifetime, past 12 months [annual prevalence], past 30 days, or daily in the past 30 days.

<sup>2</sup> Significance notations: s for p<.05, ss for p<.01, sss for p<.001, and ns for non-significant

Use of *Vicodin*, a narcotic analgesic, fell in all three grades, though significantly so only in 12<sup>th</sup> grade, where annual prevalence dropped by 1.0 percentage points to 2.0% (s). There has been a sharp drop in its use in all grades since around 2010.

The other major class of narcotic analgesics that we track, *OxyContin*, has also shown an appreciable drop in use over the same interval, though it started from a lower level than Vicodin. Annual prevalence continued down in 12<sup>th</sup> grade, but that decline did not quite reach statistical significance (down 0.7 percentage points to 2.7%, ns).

*Ritalin*, a prescription controlled stimulant, also has been gradually decreasing in use since it was first measured in 2001. It continued to decline in the lower two grades in 2017, significantly so in 8<sup>th</sup> grade (annual prevalence down 0.4 percentage points to 0.4%, s).

### Most Illicit Drugs Held Steady in Use in 2017

There are many classes of drugs tracked in the MTF study, and the majority of them held relatively steady in 2017. These include an *index of any illicit drug other than marijuana, LSD, hallucinogens other than LSD, MDMA* (ecstasy, Molly), *cocaine, crack, heroin* (overall, and when used with or without a needle), *amphetamines* (taken as a class), *sedatives, tranquilizers, methamphetamine, crystal methamphetamine, and steroids*.

While not strictly speaking illicit drugs, over the counter *cough and cold medications* used to get high (most of which contain dextromethorphan) also remained level in 2017, with an annual prevalence of 3.0% for the three grades combined.

### Psychotherapeutic Drugs

Use of *psychotherapeutic drugs* outside of medical supervision warrants special attention, given that they came to make up a substantially larger part of the overall U.S. drug problem in the 2000s. This is in part because of increases in nonmedical use of many prescription drugs over that period, and in part because use of a number of street drugs has declined substantially since the mid- to late-1990s.

It seems likely that young people are less concerned about the dangers of using these prescription drugs outside of medical regimen because they are widely used for legitimate purposes. (Indeed, the low levels of perceived risk for sedatives and amphetamines observed among 12<sup>th</sup> graders illustrate this point.) Also, prescription psychotherapeutic drugs are now being advertised directly to the consumer, which implies that they are both widely used and safe.

Fortunately, the use of most of these drugs began to decline by the start of this decade. The proportion of 12<sup>th</sup> graders misusing any of these prescription drugs (i.e., amphetamines, sedatives, tranquilizers, or narcotics other than heroin) in the prior year continued its gradual decline in 2017 (-1.0%, not significant) to 11%, down from a high of 17% in 2005, when this index was first calculated. Use of *narcotics* other than heroin without a doctor's orders (reported only for 12<sup>th</sup> grade) continued a gradual decline begun after 2009, when annual prevalence was 9.2%; it was 4.2% after a non-significant decline of 0.5 percentage points in 2017.

Given the epidemic of narcotics use in older populations along with concurrent rise in medical emergencies and deaths, it is particularly good news that young people are moving away from the use of these drugs. This is true not only because adolescents will be less vulnerable to tragedies resulting from the use of these drugs, but because they may well take their more cautious behaviors with them into their twenties, thirties, and beyond—ages in which overdose deaths are currently most prevalent. In other words, a cohort effect may emerge. Indeed, it is quite possible that the increases in overdose deaths in older age groups themselves reflect the result of a cohort effect in which earlier classes of 12<sup>th</sup> graders carried their increased narcotic use during adolescence with them into adulthood.

### Most Forms of Tobacco Use Continue to Decline

*Cigarette smoking* continued its long decline in 2017 and is now at or very close to the lowest levels in the history of the survey. For the three grades combined, thirty-day prevalence of cigarette use, which reached a peak in the mid 1990s, has fallen by 81%. Daily prevalence has fallen by 86%, and current half-pack-a-day prevalence by 91% since their peaks in the 1990s. Current prevalence of half-pack-a-day smoking stands at just 0.2% for 8<sup>th</sup> graders, 0.7% for 10<sup>th</sup> graders, and 1.7% for 12<sup>th</sup> graders. Because of the strong cohort effect that we have consistently observed for cigarette smoking, we have predicted use at 12<sup>th</sup> grade to continue to show declines, as the lighter-using cohorts of 8<sup>th</sup> and 10<sup>th</sup> graders become 12<sup>th</sup> graders.

Initiation of *cigarette* use also continues its long-term and extremely important decline. Lifetime prevalence declined between 2016 and 2017 in all three grades: to 9% in 8<sup>th</sup> grade (down 0.4 percentage points, ns), to 16% in 10<sup>th</sup> grade (down 1.6 percentage points, ns), and to 27% in 12<sup>th</sup> grade (down 1.7 percentage points, ns). The fact that fewer young people now initiate cigarette smoking is an important reason for the large declines in their current use. The proportion of students who have ever tried cigarettes has fallen from peak levels reached in 1996 or



1997 by roughly four fifths, three quarters, and three fifths in the three grades, respectively.

Overall increases in perceived risk and disapproval appear to have contributed to the downturn in cigarette use. Perceived risk of smoking one or more packs of cigarettes per day increased substantially and steadily in all grades from 1995 through 2004, with 62%, 68%, and 74% of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders seeing great risk in 2004. Since then, changes have been small and uneven, and the corresponding figures in 2017 are only slightly changed, at 62%, 70%, and 75%. Disapproval of smoking one or more packs of cigarettes per day has increased somewhat steadily in all three grades since 1996 and has reached very high levels. In 2017 disapproval stood at 89%, 88%, and 87% in grades 8, 10, and 12, respectively.

It seems likely that some of the attitudinal change surrounding cigarettes is attributable to the considerable adverse publicity aimed at the tobacco industry in the 1990s, as well as a reduction in cigarette advertising and an increase in antismoking campaigns reaching youth.

Various other attitudes toward smoking became more unfavorable during that interval as well, though most have since leveled off. For example, among 8<sup>th</sup> graders, the proportions saying that they “prefer to date people who don’t smoke” rose from 71% in 1996 to 81% by 2004, where it remained through 2017. Similar changes occurred in 10<sup>th</sup> and 12<sup>th</sup> grades. Thus, at the present time, smoking is likely to make an adolescent less attractive to the great majority of potential romantic age-mates. Likewise, most of the other negative connotations of smoking and smokers have leveled off in the past few years after rising previously.

In addition to changes in attitudes and beliefs about smoking, price almost surely also played an important role in the decline in use. Cigarette prices rose appreciably in the late 1990s and early 2000s as cigarette companies tried to cover the costs of the 1998 Master Settlement Agreement, and as many states increased excise taxes on cigarettes. A significant increase in the federal tobacco tax passed in 2009 may have contributed to the continuation of the decline in use since then.

**Cigarillos.** One consequence of the rise in cigarette prices is that it may have shifted some adolescents to less expensive alternatives, like cigarillos (little or small cigars), which are taxed at a lower rate than cigarettes. Taking into account this form of smoking of tobacco raises the 30-day prevalence of students smoking tobacco—by about three-fourths among 8<sup>th</sup> and 10<sup>th</sup> graders and by more than half among 12<sup>th</sup> graders—over what it would be if just cigarette smoking were counted. It does appear, however, that the prevalence of using

small cigars is also in decline, with 13% of 12<sup>th</sup> graders in 2017 reporting any past-year use, down substantially from 23% in 2010. Of note is the fact that the majority of users of small cigars in each grade smoke flavored ones.

Annual prevalence of smoking tobacco using a **Hookah** (water pipe) had been increasing steadily until 2014 among 12<sup>th</sup> graders (8<sup>th</sup> and 10<sup>th</sup> graders are not asked about this practice), reaching 23% in 2014; but use declined non-significantly by three percentage points to 20% in 2015 and declined significantly in both 2016 and 2017 to reach 10% by 2017.

**Smokeless tobacco.** From the mid-1990s to the early 2000s, smokeless tobacco use declined substantially, but a rebound in use developed from the mid-2000s through 2010. Since 2010, prevalence levels have declined modestly in all three grades. Perceived risk and disapproval appear to have played important roles in the earlier decline in smokeless tobacco use. In all three grades, perceived risk and disapproval rose fairly steadily from 1995 through 2004, accompanying the declines in use. However, there was not much change in use between 2004 and 2010, suggesting that other factors may have led to the increases in smokeless tobacco use during that time interval; perhaps including 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 decline in smokeless tobacco use since 2010 (including significant declines among 8<sup>th</sup> and 12<sup>th</sup> graders in 2017) may be attributable, at least in part, to the 2009 increase in federal taxes on tobacco. Perceived risk has not changed appreciably since 2010 at any grade level.

**Snus**, a form of smokeless tobacco, showed a significant decline in use this year for the three grades combined (annual prevalence fell from 3.6% to 2.6%).

## Vaping

Vaping involves the inhalation of vapors (sometimes including nicotine) using battery-powered devices such as e-cigarettes, “mods,” Juuls, and e-pens. Prior to 2017 the questions on vaping asked about vaping in general, and then asked which of several substances were vaped on last use. Based on that question, thirty-day prevalence of vaping fell significantly in each grade in 2016 to levels of 6%, 11%, and 13% in the respective grades.

This marked the first reversal of vaping prevalence, which grew rapidly from near zero prevalence in 2011 to one of the most common forms of adolescent substance use by 2015.

In 2017 the question was changed to ask separately about vaping marijuana, vaping nicotine, and vaping “just



flavoring.” Annual prevalence of *marijuana vaping* was considerable: 3%, 8%, and 10% in grades 8, 10, and 12. So were levels of *nicotine vaping*: 8%, 16%, and 19%, respectively. *Vaping “just flavoring”* showed an annual prevalence of 12%, 19%, and 21% in the three grades. Trends are not yet available on these new questions.

Despite the decline in 2016 the prevalence of vaping remains substantially higher than the use of any other tobacco product, including cigarettes. Whether teen vaping has peaked is an issue that MTF will be able to determine in the coming years.

The percentage of students who associated vaping with “great risk” increased slightly as vaping prevalence declined. *E-cigarettes* are the most commonly used vaping device, and e-cigarettes have some of the lowest levels of perceived risk of any substance.

### **Alcohol Use Levels After a Long Decline**

*Alcohol* remains the substance most widely used by today’s teenagers. Despite recent declines by the end of high school six out of every ten students (62%) have consumed alcohol (more than just a few sips), and about a quarter (23%) have done so by 8<sup>th</sup> grade. In fact, nearly half (45%) of 12<sup>th</sup> graders and one in eleven (9%) 8<sup>th</sup> graders in 2017 reported having been drunk at least once in their life.

Alcohol use began a substantial decline in the 1980s. To some degree, alcohol trends have tended to parallel the trends in illicit drug use. These include a modest increase in binge drinking (defined as having five or more drinks in a row at least once in the past two weeks) in the early to mid-1990s, though it was a proportionally smaller increase than was seen for cigarettes and most of the illicit drugs. Fortunately, binge drinking rates leveled off in the early 2000s, just about when the illicit drug rates began to turn around, and in 2002, a drop in *drinking* and *drunkenness* resumed in all grades. Gradual declines in all three grades continued into 2016, which marked the lowest levels for alcohol use and drunkenness ever recorded by the survey in the three grades combined.

In 2017, however, lifetime prevalence, annual prevalence, 30-day prevalence, and daily prevalence all showed little or no change, with no significant changes for any grade or for the three grades combined. This is the first time in some years that this has happened, and may herald the end of the long-term decline in adolescent alcohol use.

Still, prior to this year lifetime prevalence and annual prevalence for the three grades combined both declined by roughly four-tenths from the peak levels of use reached in the mid-1990s; 30-day prevalence was down by about one-half since then; and daily prevalence by two-thirds. These are dramatic declines for such a culturally ingrained behavior and good news to many parents. However, there was no further decline in 2017.

## Introduction

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Monitoring the Future (MTF) is a long-term study of substance use and related factors among U.S. adolescents, college students, and adult high school graduates through age 55. It has been conducted annually by the University of Michigan's Institute for Social Research since its inception in 1975 and is supported under a series of investigator-initiated, competitive research grants from the National Institute on Drug Abuse.

The need for a study such as MTF is clear. Substance use by young people in the U.S. has proven to be a rapidly changing phenomenon, requiring frequent assessments and reassessments. Since the mid-1960s, when it burgeoned in the general youth population, illicit drug use has remained a major concern for the nation. Smoking, drinking, and illicit drug use are leading causes of morbidity and mortality during adolescence as well as later in life. How vigorously the nation responds to teenage substance use, how accurately it identifies the emerging substance abuse problems, and how well it comes to understand the effectiveness of policy and intervention efforts largely depend on the ongoing collection of valid and reliable data. MTF is uniquely designed to generate such data in order to provide an accurate picture of what is happening in this domain and why, and the study has served that function well for the past 43 years. Policy discussions in the scientific literature and media, in government, education, public health institutions, and elsewhere have been informed by the ready availability of extensive and consistently accurate information from the study relating to a large and ever-growing number of substances. Similarly, MTF findings help to inform organizations and agencies that provide prevention and treatment services.

The 2017 MTF survey involved about 43,700 students in 8<sup>th</sup>-, 10<sup>th</sup>-, and 12<sup>th</sup> grades enrolled in 360 secondary schools nationwide. The first published results based on the 2017 survey are presented in this report. Recent trends in the use of licit and illicit drugs are emphasized, as well as trends in the levels of perceived risk and personal disapproval associated with each drug. This project has shown these beliefs and attitudes to be particularly important in explaining current trends in use, and even in predicting future ones. In addition, trends in the perceived availability of each drug are presented, which at times have proven important to explaining changes in usage levels for certain drugs.

MTF is designed to detect age effects, period effects (also referred to as secular trends), and cohort effects in substance use and related attitudes and beliefs. Age effects (similar changes at similar ages seen across multiple class cohorts) are common during adolescence,

and we typically find that use, as well as positive attitudes and beliefs about use, increase across 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grades. When changes over time in substance use (and perhaps related attitudes and beliefs) are parallel over some time interval across all three grades, they reflect period effects, which are also common.

Cohort effects pertain to differences in substance use and related attitudes and behaviors among those born at different times that are maintained as the birth cohorts age (or in this case, as class-in-school cohorts, which are strongly correlated with age). Such cohort effects sometimes drive changes in substance use prevalence at the population level. For example, much of the decline in the prevalence of U.S. cigarette smoking has its roots in youth cohorts that did not take up smoking and then continued to abstain from smoking as they aged into adulthood. As subsequent youth cohorts continued to avoid smoking and then grew older, these cohorts contributed to a further decline in the overall population prevalence of smoking. Cohort effects can also act in the opposite direction, with newer cohorts increasingly taking up a substance and continuing to have greater use of it than previous cohorts as they get older. One important contribution of the MTF study has been the specification of cohort effects that emerged starting in the early 1990s, when an increase in youth substance use occurred for many drugs.

MTF allows detection of cohort effects at an early age through comparison of substance use prevalence of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders relative to each other. Often 8<sup>th</sup> grade substance use is a bellwether, and year-to-year changes that are unique to 8<sup>th</sup> grade can signify an emerging increase or decrease in substance use at later grade levels with some time lag.

The analyses and associated tables that follow present substance use trends for all three grades separately, as well as trends in key attitudes, beliefs, and perceived availability. In a number of cases we provide insight into the age and cohort effects and secular trends that underlie trends in use and in key attitudes and beliefs.

An additional set of tables provides an overview of drug use trends for the three grades combined (Tables 1–4). This information gives a summary of the general nature of secular trends over the last several years, though it obscures any age or cohort effects that may be occurring. Also, for simultaneous trends that are in the same direction and magnitude across all three grades, these combined analyses provide greater statistical power to detect whether secular trends are statistically significant.

A synopsis of the design and methods used in the study follows this introductory section. We then provide a separate section for each individual drug class, including figures that show trends in the overall proportions of students at each grade level (a) using the drug, (b) seeing a “great risk” associated with its use (perceived risk), (c) disapproving of its use (disapproval), and (d) saying that it would be “fairly easy” or “very easy” to get if they wanted to (perceived availability). For 12<sup>th</sup> graders, annual data are available since 1975 and for 8<sup>th</sup> and 10<sup>th</sup> graders since 1991, the first year they were included in the study.

The tables at the end of this report provide the statistics underlying the figures; in addition, they present data on lifetime, annual, 30-day, and (for selected drugs) daily prevalence.<sup>3</sup> For the sake of brevity, we present these prevalence statistics here in tabular form only for the 1991–2017 interval, but statistics on 12<sup>th</sup> graders going back to 1975 are available in other MTF publications. For each prevalence period, the tables indicate which one-year changes from 2016 to 2017 are statistically significant. (In the text below, ‘s’ indicates  $p \leq .05$ , ‘ss’ indicates  $p \leq .01$ , ‘sss’ indicates  $p \leq .001$ , and ‘ns’ indicates not statistically significant). The graphic depictions of multiyear trends often reveal gradual change that may not reach significance in a given one-year interval but nevertheless may be shown to be real over a longer time frame.

An extensive analysis of the study’s findings on secondary school students may be found in *Volume I*, the second publication in this series, published at the end of May each year.<sup>4</sup> *Volume I* contains a more detailed description of the study’s methodology, as well as chapters on grade of initiation, attitudes toward drugs, the social milieu, and a summary of other publications from

the study that year (mostly journal articles). *Volume I* also contains an appendix explaining how to test the significance of differences between groups and of trends over time. The most recent such volume, as well as earlier editions, are always available on the MTF website, [www.monitoringthefuture.org](http://www.monitoringthefuture.org), listed under Publications.

MTF’s findings on American college students and adults through age 55 are not covered in this early *Overview* report because the follow-up data from those populations become available later in the year. Those findings will be covered in *Volume II*, the third monograph in this annual series, published at the end of July each year.<sup>5</sup>

Two annual MTF Occasional Papers are published each year in conjunction with *Volumes I* and *II*, providing trends in use for various demographic subgroups.<sup>6</sup>

A fourth monograph, *HIV/AIDS: Risk and Protective Behaviors Among Young Adults*, dealing with national trends in HIV/AIDS-related risk and protective behaviors among young adults 21 to 40 years old, was added to the series beginning in 2010.<sup>7</sup> It is published in October of each year. From 2005 to 2009, these findings were reported as part of *Volume II*.

For the publication years prior to 2010, the volumes in these annual series are available from the NIDA Drug Publications Research Dissemination Center (877-NIDA-NIH, [drugpubs.drugabuse.gov](http://drugpubs.drugabuse.gov)) and can also be found on the MTF website. Beginning with the 2010 publication date, the volumes are available at the MTF website immediately upon publication. Further information on the study, including its latest press releases, a listing of all publications, and freely accessible reports may also be found at [www.monitoringthefuture.org](http://www.monitoringthefuture.org).

<sup>3</sup> Prevalence refers to the proportion or percentage of the sample reporting use of the given substance on one or more occasions in a given time interval—e.g., lifetime, past 12 months, or past 30 days. For most drugs, the prevalence of daily use refers to reported use on 20 or more occasions in the past 30 days, except for cigarettes and smokeless tobacco, for which actual daily use is measured, and for binge drinking, defined as having 5+ drinks on at least one occasion in the prior two weeks.

<sup>4</sup> The most recent publication of *Volume I* is Miech, R. A., Johnston, L. D., O’Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2017). *Monitoring the Future national survey results on drug use, 1975–2016: Volume I. Secondary school students*. Ann Arbor, MI: Institute for Social Research, University of Michigan, 636 pp.

<sup>5</sup> The most recent publication of *Volume II* is Schulenberg, J. E., Johnston, L. D., O’Malley, P. M., Bachman, J. G., Miech, R. A., & Patrick, M. E. (2017). *Monitoring the Future national survey results on drug use, 1975–2016: Volume*

*II. College students & adults ages 19–55*. Ann Arbor, MI: Institute for Social Research, University of Michigan, 445 pp.

<sup>6</sup> Johnston, L. D., O’Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Miech, R. A. (2017). *Demographic subgroup trends among adolescents in the use of various licit and illicit drugs 1975–2016* (Monitoring the Future Occasional Paper No. 88). Ann Arbor, MI: Institute for Social Research, University of Michigan, 694 pp; Johnston, L. D., O’Malley, P. M., Bachman, J. G., Schulenberg, J. E., Miech, R. A., & Patrick, M. E. (2017). *Demographic subgroup trends among young adults in the use of various licit and illicit drugs 1989–2016* (Monitoring the Future Occasional Paper No. 89). Ann Arbor, MI: Institute for Social Research, University of Michigan, 109 pp.

<sup>7</sup> The most recent publication in the *HIV/AIDS monograph series* is Johnston, L. D., O’Malley, P. M., Bachman, J. G., Schulenberg, J. E., Patrick, M. E., & Miech, R. A. (2017). *HIV/AIDS: Risk and protective behaviors among adults ages 21–40 in the U.S., 2004–2016*. Ann Arbor, MI: Institute for Social Research, University of Michigan, 130 pp.

## Study Design and Methods

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Monitoring the Future's main data collection involves a series of large, annual surveys of nationally representative samples of public and private secondary school students throughout the coterminous United States. Every year since 1975, such samples of 12<sup>th</sup> graders have been surveyed. In 1991, the study was expanded to include comparable, independent national samples of 8<sup>th</sup> and 10<sup>th</sup> graders. The year 2017 marked the 43<sup>rd</sup> survey of 12<sup>th</sup> graders and the 27<sup>th</sup> survey of 8<sup>th</sup> and 10<sup>th</sup> graders.

### Sample Sizes

In 2017 about 43,700 students in 360 secondary schools participated in the study, with sample sizes in 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grades of about 16,000, 14,200, and 13,500, respectively. The number of cases upon which a particular statistic is based may be less than the total sample size. Multiple questionnaire forms are distributed randomly at each grade level to increase coverage of attitudinal and behavioral domains relevant to substance use. To reduce burden on the respondents, not all questions are contained in all forms. The tables here contain notes on the number of forms used for each statistic if less than the total sample is used.

### Field Procedures

University of Michigan staff members administer the questionnaires to students, usually in the student classroom during a regular class period. Participation is voluntary. Parents are notified well in advance of the survey administration and are provided the opportunity to decline their child's participation. Questionnaires are self-completed and are formatted for optical scanning. Procedures are kept consistent over time.

In 8<sup>th</sup> and 10<sup>th</sup> grades the questionnaires are completely anonymous, and in 12<sup>th</sup> grade they are confidential (name and address information is gathered separately from the 12<sup>th</sup> grade questionnaire to permit the longitudinal follow-up surveys of random subsamples of participants after high school). Extensive procedures are followed to protect the confidentiality of the participants and their data. All procedures are reviewed and approved on an annual basis by the University of Michigan's Institutional Review Board (IRB) for compliance with federal guidelines for the treatment of human subjects.

### Measures

A standard set of three questions is used to determine usage levels for most of the drugs. For example, we ask, "On how many occasions (if any) have you used marijuana... (a)...in your lifetime? (b)...during the last 12 months? (c)...during the last 30 days?" Each of the

three questions is answered on the same answer scale: 0, 1–2, 3–5, 6–9, 10–19, 20–39, and 40 or more occasions.

For the psychotherapeutic drugs (amphetamines, sedatives [barbiturates], tranquilizers, and narcotics other than heroin), respondents are instructed to include only use "...on your own—that is, without a doctor telling you to take them." A similar qualification is used in the question on use of anabolic steroids, OxyContin, Vicodin, and several other drugs.

For cigarettes, respondents are asked two questions about use. First, they are asked, "Have you ever smoked cigarettes?" The answer categories are "never," "once or twice," "occasionally but not regularly," "regularly in the past," and "regularly now." The second question asks, "How frequently have you smoked cigarettes during the past 30 days?" The answer categories are "not at all," "less than one cigarette per day," "one to five cigarettes per day," and about one-half, one, one and one half, and two packs or more per day.

Smokeless tobacco questions parallel those for cigarettes. There are also questions recently added about vaping, e-cigarettes, small cigars, and a number of other tobacco products. In general, their use is asked on a prevalence/frequency scale for either the last 12 months or the last 30 days. Beginning in 2017 respondents are asked separate questions about vaping nicotine, vaping marijuana, and vaping "just flavoring."

Alcohol use is measured using the three questions illustrated above for marijuana. A parallel set of three questions asks about the frequency of being drunk. Binge drinking is assessed with the question, "How many times (if any) have you had five or more drinks in a row" over the past two weeks? Extreme binge drinking, also called high-intensity drinking, among 12<sup>th</sup> graders is assessed with similar questions about consuming 10 or more and 15 or more drinks in a row. Among 8<sup>th</sup> and 10<sup>th</sup> graders, it is assessed using only the question about 10 or more drinks.

In general, we try to keep measures consistent across time. When a change is warranted, we usually splice the older and newer measures for at least one year to permit an assessment of whether the change has any effect on reported prevalence levels.

*Perceived risk* is measured by the question, "How much do you think people risk harming themselves (physically or in other ways), if they..." try or use a drug—for example, "...try marijuana once or twice." The answer

categories are “no risk,” “slight risk,” “moderate risk,” “great risk,” and “can’t say, drug unfamiliar.” Parallel questions refer to using the same drug “occasionally” and “regularly.”

*Disapproval* is measured by the question “Do YOU disapprove of people doing each of the following?” followed by “trying marijuana once or twice,” for example. Answer categories are “don’t disapprove,” “disapprove,” and “strongly disapprove.” In the 8<sup>th</sup> and 10<sup>th</sup> grade questionnaires, a fourth category—“can’t say,

drug unfamiliar”—is provided and included in the calculation of percentages.

*Perceived availability* is measured by the question “How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?” Answer categories are “probably impossible,” “very difficult,” “fairly difficult,” “fairly easy,” and “very easy.” For 8<sup>th</sup> and 10<sup>th</sup> graders, an additional answer category—“can’t say, drug unfamiliar”—is provided and included in the calculation of percentages.



## Any Illicit Drug

MTF routinely reports three different indexes of illicit drug use—any illicit drug,<sup>8</sup> any illicit drug other than marijuana, and any illicit drug including inhalants. In this section we discuss only the first two; the statistics for all three may be found in Tables 5–7.

In order to make direct comparisons over time, we have generally kept the definitions and measurement of these indexes constant. The levels of prevalence of each of the indexes could be somewhat affected by the inclusion of newer substances. Typically, the effects would be minimal, primarily because most individuals using newer ones are also using the more prevalent drugs included in the indexes. The major exception has been inhalants, the use of which is quite prevalent in the lower grades, so in 1991 a special index that includes inhalants was added.

### Trends in Use

In the late 20<sup>th</sup> century, U.S. adolescents reached extraordinarily high levels of illicit drug use by U.S. as well as international standards. The trends in *lifetime* use of **any illicit drug** are shown in the first (upper left) panel on the facing page.<sup>9</sup> In 1975, when MTF began, the majority of young people (55%) had used an illicit drug by the time they left high school. This figure rose to two thirds (66%) in 1981 before a long and gradual decline to 41% by 1992—the low point. After 1992—in what we have called the “relapse phase” in the drug epidemic—the proportion rose considerably to a recent high point of 55% in 1999; it then declined gradually to 47% in 2009, and has remained between 48% and 50% since 2011.

Trends for *annual*, as opposed to lifetime, prevalence are shown in the second (upper right) panel. They are quite parallel to those for lifetime prevalence, but at a lower level. Among 8<sup>th</sup> graders, a gradual and continuing falloff occurred after 1996. Peak rates since 1991 were reached in 1997 in the two upper grades and declined little for several years. Between 2001 and 2007 all three grades showed declines, but the annual use rates in all three grades then rose some through 2012. Following that there was some decline in all three grades after 2013, but in 2017 these declines halted.

Because marijuana is much more prevalent than any other illicit drug, trends in its use tend to drive the index of any illicit drug use. Thus we also report an index that excludes marijuana and shows the proportions of students who use any of the other illicit drugs. The proportions who have used **any illicit drug other than marijuana** in their *lifetime* are shown in the third facing panel (lower left). In 1975 over one third (36%) of 12<sup>th</sup> graders had tried some illicit drug other than marijuana. This figure rose to 43% by 1981, then declined for over a decade to a low of 25% in 1992. An increase followed in the 1990s as the use of a number of drugs rose steadily, and it reached 30% by 1997. (In 2001 it was 31%, but this apparent upward shift in the estimate was an artifact due to a change in the question wording for “other hallucinogens” and tranquilizers.<sup>10</sup>) Lifetime prevalence among 12<sup>th</sup> graders then fell slightly to 24% by 2009, before dropping to 20% by 2017. The fourth (lower right) panel presents the *annual* prevalence data for any illicit drug other than marijuana, which shows a pattern of change over the past few years similar to the index of any illicit drug use, but with much less pronounced change since 1991.

The annual prevalence of any illicit drug other than marijuana dropped fairly steadily and gradually in all three grades in recent years, reaching 13% among 12<sup>th</sup> graders by 2017. In fact, prevalence declined in all three grades in 2016—significantly so in 8<sup>th</sup> grade. There was no appreciable change in 2017, however.

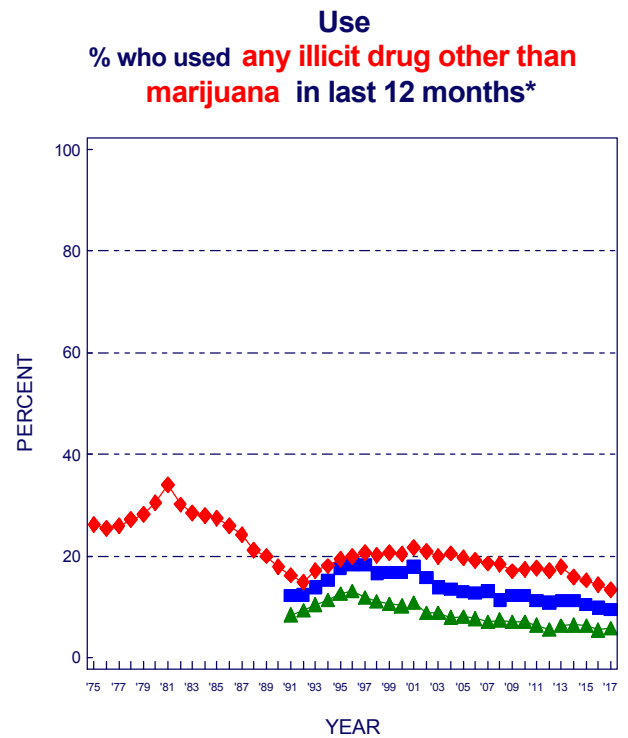
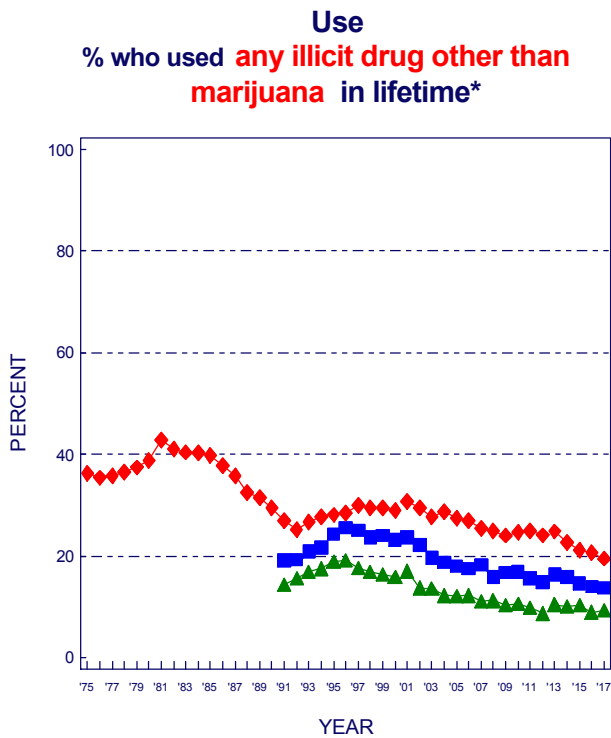
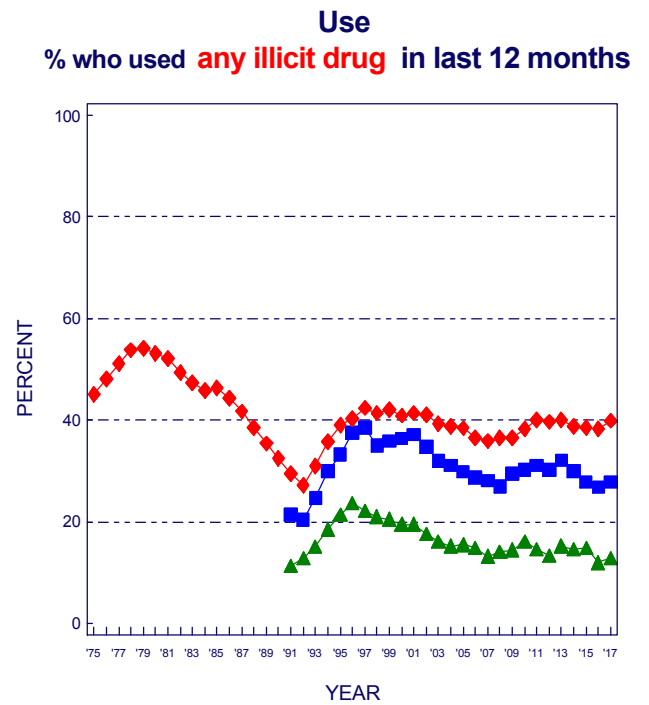
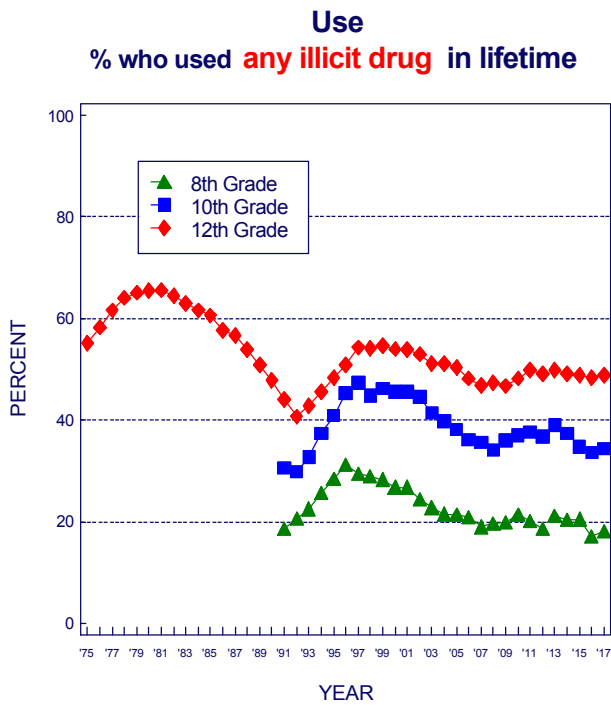
Overall, these data reveal that while use of individual drugs (other than marijuana) may fluctuate widely, the proportion using *any* of them is much more stable. In other words, the proportion of students prone to using such drugs and willing to cross the normative barriers to such use changes more gradually. The usage rate for each individual drug, on the other hand, reflects many more rapidly changing determinants specific to that drug, such as how widely its psychoactive potential is recognized, how favorable the reports of its supposed benefits are, how risky its use is seen to be, how acceptable it is in the peer group, how accessible it is, and so on.

<sup>8</sup> Footnote ‘a’ to Tables 5 through 8 provides the exact definition of any illicit drug.

<sup>9</sup> This is the only set of figures in this *Overview* presenting lifetime use statistics. Lifetime statistics for all drugs may be found in Table 5.

<sup>10</sup> The term psychedelics was replaced with hallucinogens, and “shrooms” was added to the list of examples, resulting in somewhat more respondents indicating use of this class of drugs. For tranquilizers, Xanax was added to the list of examples given, slightly raising the reported prevalence of use.

**Any Illicit Drug and Any Illicit Drug Other than Marijuana : Trends in Lifetime and Annual Use**  
 Grades 8, 10, 12



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

\*In 2001, a revised set of questions on other hallucinogen use and tranquilizer use were introduced. In 2013, a revised set of questions on amphetamine use was introduced. Data for any illicit drug other than marijuana were affected by these changes.



# Marijuana

Marijuana has been the most widely used illicit drug throughout MTF's 43-year .. It can be taken orally, mixed with food or drink, vaped, and smoked, including in a concentrated form as hashish. The great majority of recreational use in the U.S. involves smoking it in rolled cigarettes ("joints"), in pipes or water pipes ("bongs"), or in hollowed-out cigars ("blunts"). More recently, methods include smoking, vaping, or eating different forms of resin extracts like hash oil, honey oil, or shatter—a solid form.

## Trends in Use

Annual marijuana prevalence peaked among 12<sup>th</sup> graders in 1979 at 51%, following a rise that began during the 1960s. Then use declined fairly steadily to 22% in 1992—a decline of more than half. Use resurged in the 1990s, peaking in 1996 at 8<sup>th</sup> grade and in 1997 at 10<sup>th</sup> and 12<sup>th</sup> grades. Use then declined among all three grades through 2007 or 2008, followed again by an upturn .in use in all three grades. Annual marijuana prevalence among 8<sup>th</sup> graders increased in use from 2007 to 2010, decreased slightly from 2010 to 2012, declined significantly in 2016, and leveled in 2017. Among 10<sup>th</sup> graders, use increased somewhat from 2008 to 2013 and then declined, before rising slightly in 2017. Among 12<sup>th</sup> graders, use increased from 2006 to 2011, fell some through 2015, and then increased through 2017 As shown in Table 8, *daily* use increased in all three grades after 2007, reaching peaks in 2011 (at 1.3% in 8<sup>th</sup>), 2013 (at 4.0% in 10<sup>th</sup>), and 2011 (at 6.6% in 12<sup>th</sup>), before declining slightly since. Daily prevalence rates in 2017 were 0.8%, 2.9%, and 5.9%, respectively, with one in seventeen 12<sup>th</sup> graders currently smoking daily.

For the first time in 2017 we included questions about vaping marijuana in the past 30 days, in the past 12 months, and in the student's lifetime. These are the first ever national estimates of marijuana vaping of this kind. One in ten 12<sup>th</sup> grade students reported vaping in the past 12 months, and the prevalence was 8% and 3% for 10<sup>th</sup> and 8<sup>th</sup> grade students, respectively. In each grade, more than one quarter of students who had used marijuana had experience vaping it. These levels are quite high, considering that vaping was virtually unknown among adolescents just five years ago.

## Perceived Risk

The proportion of students seeing great risk from smoking marijuana regularly fell during the rise in use in the 1970s

and again during the subsequent rise in use in the 1990s. Indeed, for 10<sup>th</sup> and 12<sup>th</sup> grades, perceived risk declined a year before use rose in the upturn of the 1990s, making perceived risk a leading indicator of change in use. (The same may have happened for 8<sup>th</sup> grade but our data do not start early enough to show it.) The decline in perceived risk halted in 1996 in 8<sup>th</sup> and 10<sup>th</sup> grades; the increases in use in 10<sup>th</sup> and 12<sup>th</sup> grades ended a year or two later, again making perceived risk a leading indicator of trends in use. From 1996 to 2000, perceived risk held fairly steady, and the decline in use in the upper grades stalled. After some decline prior to 2002, perceived risk increased a bit in all grades through 2004 accompanied by decreases in use. Since 2004 in 8<sup>th</sup> grade, 2005 in 12<sup>th</sup> grade, and 2008 in 10<sup>th</sup> grade, perceived risk has fallen substantially, presaging some resurgence in marijuana use lasting three to five years; however, no increase in perceived risk preceded the recent leveling of use. Rather, perceived risk has continued a steep decline since the mid-2000s without a concomitant further rise in overall use. We have shown that recent sharp declines in the use of "gateway drugs"—in particular cigarette smoking, with which marijuana use has been highly correlated—played a major role in this disconnect.<sup>11</sup>

## Disapproval

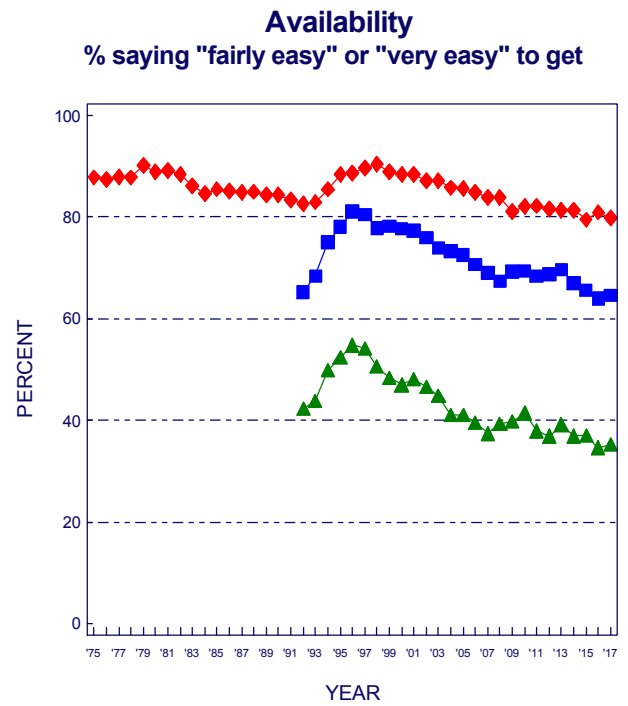
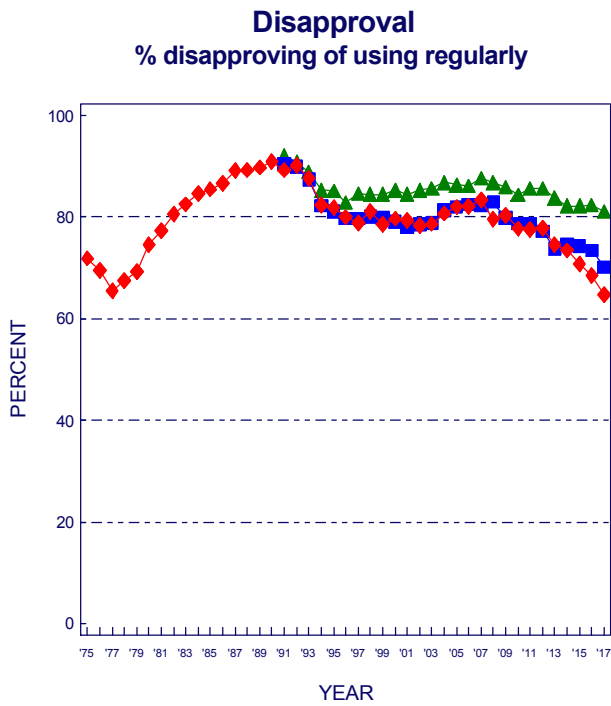
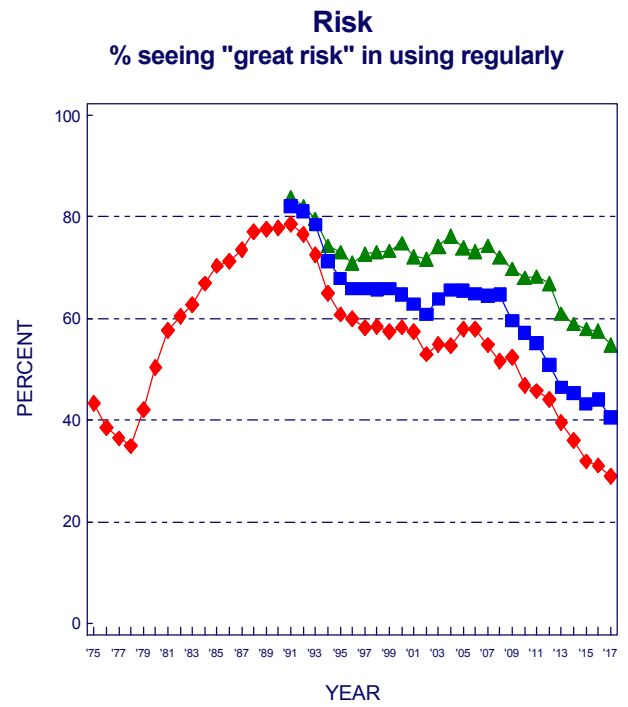
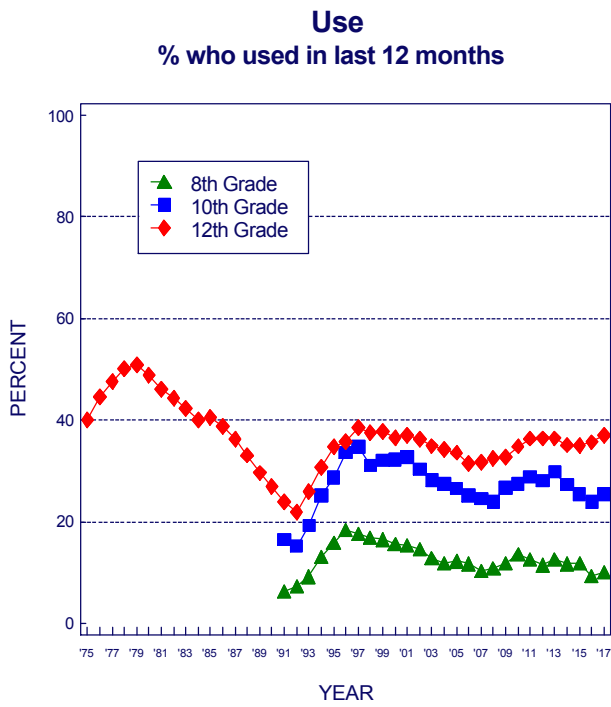
Personal disapproval of trying marijuana has declined some since 2007 or 2008 in all three grades, but disapproval of regular use still remains quite high with 81%, 70%, and 65% in 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grades, respectively. During the early to mid 1990s, as use increased and perceived risk decreased, disapproval fell considerably—by 17, 21, and 19 percentage points for the three grades. As is often the case, perceived risk fell before disapproval. Since 2007 there has been some decline in disapproval, with declines for experimental use in 2017 being significant for all three grades.

## Availability

Since 1975, between 80% and 90% of 12<sup>th</sup> graders each year have said that marijuana would be fairly or very easy to get if they wanted some, with that figure standing at 80% in 2017. Marijuana has been somewhat less readily available to 10<sup>th</sup> graders and considerably less available to 8<sup>th</sup> graders, with 65% and 35%, respectively, reporting it to be fairly or very easy to get in 2017. Though availability has declined appreciably, especially among the younger adolescents, marijuana remains readily available to most 12<sup>th</sup> graders.

<sup>11</sup> Miech, R. A., Johnston, L. D., & O'Malley, P. M. (2017). Prevalence and attitudes regarding marijuana use among adolescents over the past decade. *Pediatrics, 140*(6).

**Marijuana: Trends in Annual Use, Risk, Disapproval, and Availability**  
Grades 8, 10, 12



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

## Synthetic Marijuana

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Synthetic marijuana has generally been sold over the counter under such labels as Spice and K-2. It usually contains some herbal materials that have been sprayed with one or more of the designer chemicals that fall into the cannabinoid family. Until March 2011, these drugs were not scheduled by the Drug Enforcement Administration (DEA), so they were readily and legally available on the Internet and in convenience stores, head shops, gas stations, etc. However, the DEA scheduled some of the most widely used chemicals beginning March 1, 2011, making their possession and sale no longer legal; subsequent laws have expanded the list of banned chemicals, but producers keep tweaking the chemical formula to avoid legal control. These drugs can be dangerous both because the active ingredients keep changing and because those ingredients have never undergone testing to determine their effects on humans.

### Trends in Use

MTF first addressed the use of synthetic marijuana in its 2011 survey by asking 12<sup>th</sup> graders about their use in the prior 12 months (which would have covered a considerable period of time prior to the drugs being scheduled). Annual prevalence was found to be 11.4%, making synthetic marijuana the second most widely used class of illicit drug after marijuana itself among 12<sup>th</sup> graders at that time. Despite the DEA's intervention, use among 12<sup>th</sup> graders remained unchanged in 2012 at 11.3%, which suggests either that compliance with the new scheduling had been limited or that producers of

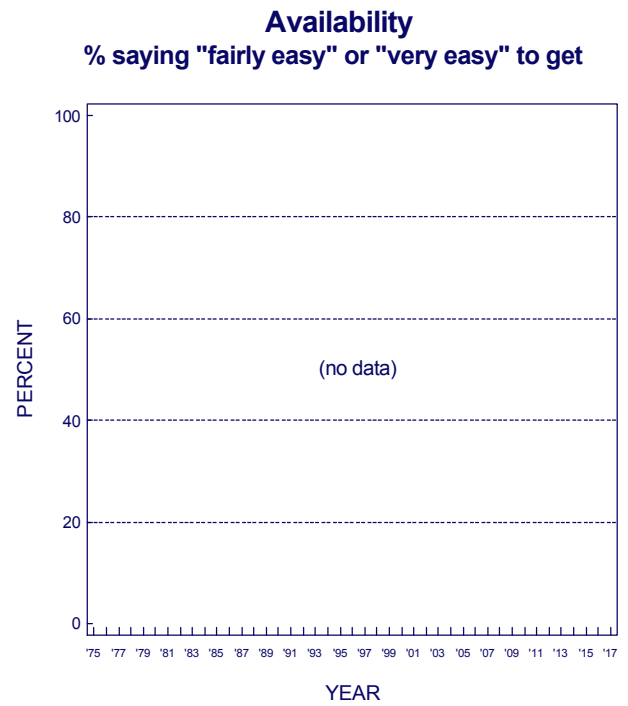
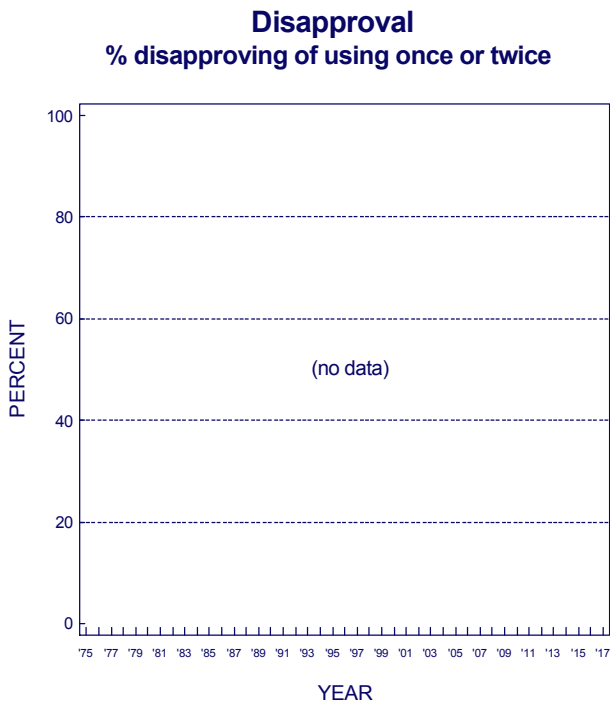
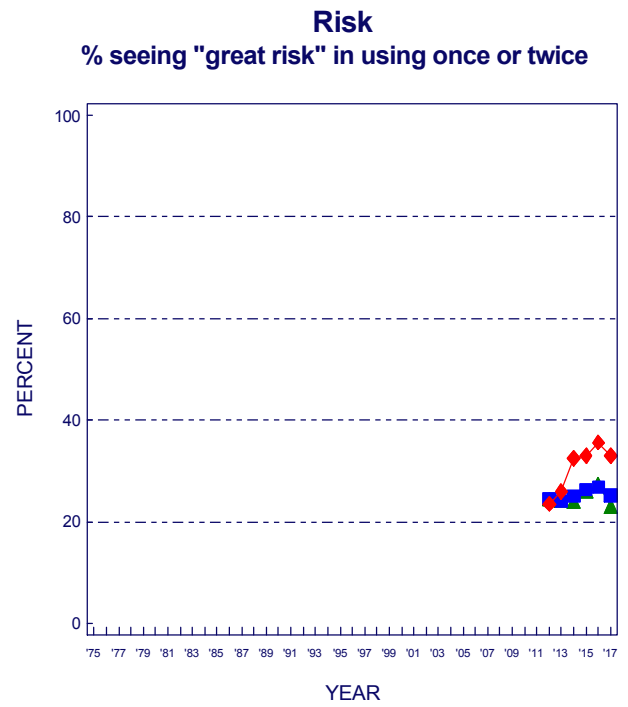
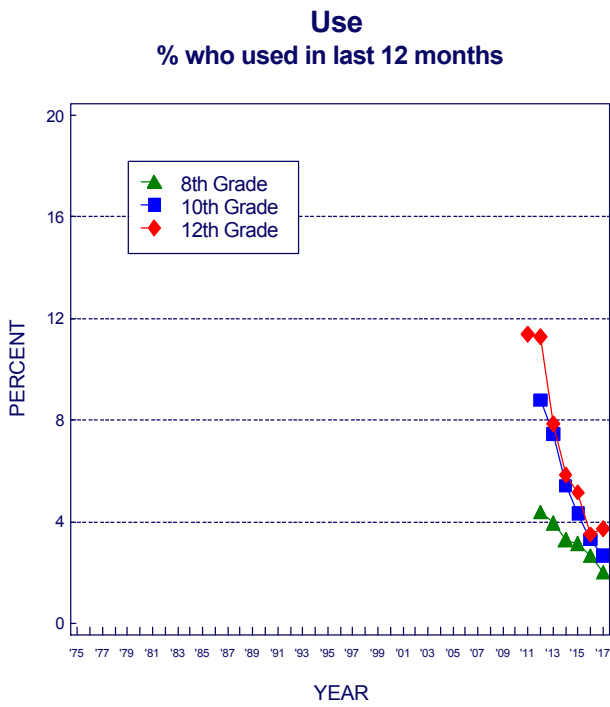
these products succeeded in continuing to change their chemical formulas to avoid using the ingredients that had been scheduled. In 2012, for the first time, 8<sup>th</sup> and 10<sup>th</sup> graders were asked about their use of synthetic marijuana; their annual prevalence rates also were high at 4.4% and 8.8%, respectively. Use in all 3 grades dropped in 2013, with a sharp and significant decline among 12<sup>th</sup> graders, and significant declines for both 10<sup>th</sup> and 12<sup>th</sup> graders in 2014. These sharp declines continued through 2017 among both 8<sup>th</sup> and 10<sup>th</sup> graders, but halted among 12<sup>th</sup> graders. Annual prevalence in 2017 was down to 2.0%, 2.7%, and 3.7% for the three grades, reflecting a dramatic drop in use since 2012.

### Perceived Risk

All three grades were asked whether they associated great risk with trying synthetic marijuana once or twice. As can be seen on the facing page, the level of perceived risk for experimental use was quite low in 2012 (between 24% and 25%) but has risen some, particularly among 12<sup>th</sup> graders, to 36% in 2016. (The percent would be higher if those answering "Can't say, Drug unfamiliar" were excluded.) In 2017 there was a slight decline in perceived risk in all three grades, including a significant one in 8<sup>th</sup> grade. The availability of these drugs over the counter probably had the effect of communicating to teens that they must be safe, though in fact they are not.

Disapproval and Availability have not been measured for this class of drugs.

**Synthetic Marijuana : Trends in Annual Use and Risk**  
Grades 8, 10, 12



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

## Inhalants

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Inhalants are any non-combusted and non-heated gases or fumes that can be inhaled to get high. These include many household products—the sale and possession of which is legal—including glue, nail polish remover, gasoline, solvents, butane, and propellants used in certain commercial products such as whipped cream dispensers. Unlike nearly all other classes of drugs, their use is most common among younger adolescents and tends to decline as youth grow older. The use of inhalants at an early age may reflect the fact that many inhalants are cheap, readily available (often in the home), and legal to buy and possess. The decline in use with age likely reflects their coming to be seen as “kids’ drugs,” in addition to the fact that a number of other drugs become available to older adolescents, who are also more able to afford them.

### Trends in Use

Inhalant use (excluding the use of nitrite inhalants) by 12<sup>th</sup> graders rose gradually from 1976 to 1987, which was somewhat unusual because most other forms of illicit drug use were in decline during the 1980s. Use of inhalants rose among 8<sup>th</sup> and 10<sup>th</sup> graders from 1991, when those grades were first included in the study, through 1995; it rose among 12<sup>th</sup> graders from 1992 to 1995. All grades then exhibited a fairly steady and substantial decline in use through 2001 or 2002. After 2001 the grades diverged somewhat in their trends: 8<sup>th</sup> graders showed a significant increase in use for two years, followed by a decline from 2004 to 2013, and a leveling in 2014, before resuming the decline in 2015 and 2016; 10<sup>th</sup> graders showed an increase after 2003 but a considerable decline since 2007; and 12<sup>th</sup> graders showed a brief increase from 2003 to 2005 but also a considerable decline since then. For the three grades combined, annual use declined significantly in both 2012 and 2013, held steady in 2014 and then declined further in 2015 and 2016. In 2017, 8<sup>th</sup> graders showed a significant increase, while 10<sup>th</sup> and 12<sup>th</sup> graders showed a continued decline.

### Perceived Risk

Only 8<sup>th</sup> and 10<sup>th</sup> graders have been asked questions about the degree of risk they associated with inhalant use. Relatively low proportions think that there is a “great risk” in using an inhalant once or twice. However, significant increases in this belief were observed between 1995 and 1996 in both 8<sup>th</sup> and 10<sup>th</sup> grades, probably due to an anti-inhalant advertising initiative launched by The Partnership for a Drug-Free America. That increase in perceived risk marked the beginning of a long and important decline in inhalant use, when no other drugs showed a turnaround in use. However, the degree of risk associated with inhalant use declined steadily between 2001 and 2008 among both 8<sup>th</sup> and 10<sup>th</sup> graders, perhaps explaining the increase in use in 2003 among 8<sup>th</sup> graders and in 2004 in the upper grades. The hazards of inhalant use were communicated during the mid-1990s, but generational forgetting of those hazards has likely taken place as replacement class cohorts who were too young to get that earlier message now comprise the nation’s adolescents. The decline in perceived risk is worrisome, and it resumed after 2015. In this case, the decline in perceived risk between 2001 and 2008 did not translate into a large surge in use, but it may leave future class cohorts at risk for a resurgence of inhalant use.

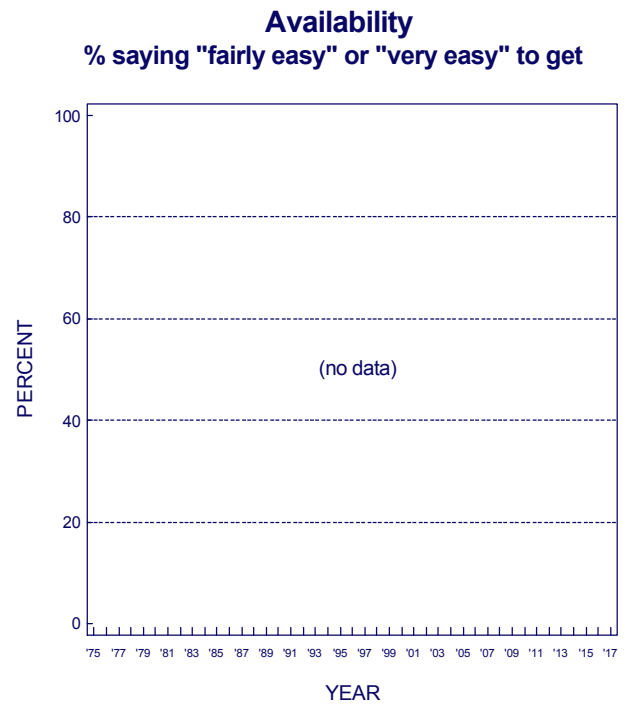
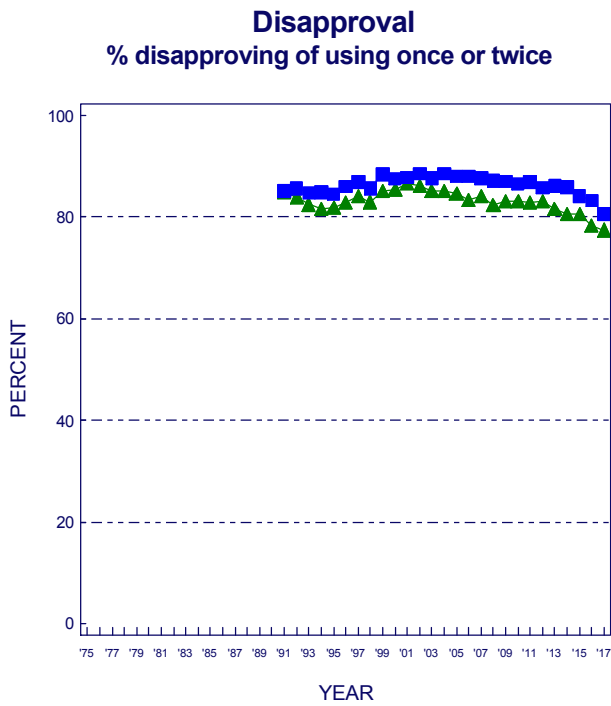
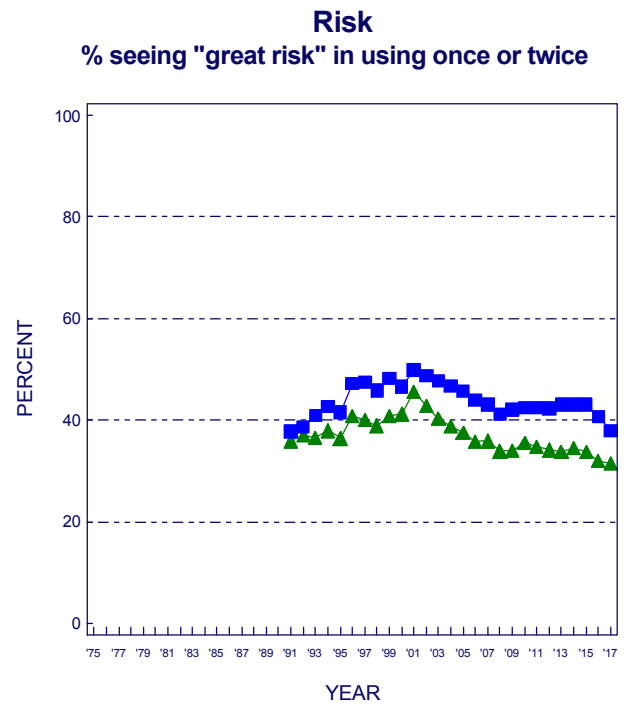
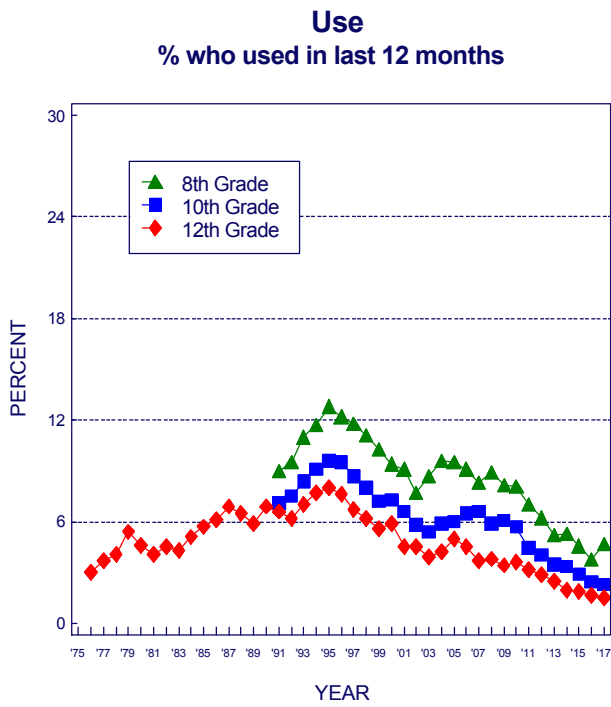
### Disapproval

Until 2016, over 80% of 8<sup>th</sup> and 10<sup>th</sup> grade students said that they would disapprove of even trying an inhalant. (The question was not asked of 12<sup>th</sup> graders.) There was a very gradual upward drift in disapproval from 1995 through about 2001, with a gradual falloff since then in both grades. For 8<sup>th</sup> graders there has been some decline in disapproval of trying inhalants since 2012. Since 2014 it has dropped among 10<sup>th</sup> graders as well, including significant declines in 2015 and 2017.

### Availability

Respondents have not been asked about the availability of inhalants, because we assume that these products are universally available to young people in these age ranges.

**Inhalants : Trends in Annual Use, Risk, and Disapproval**  
Grades 8, 10, 12



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

For some years, LSD was the most widely used drug within the larger class of hallucinogens. This was no longer true for some subsequent years, due to sharp decreases in its use combined with an increasing use of psilocybin. (Statistics on overall hallucinogen use and on use of hallucinogens other than LSD are shown in the tables at the end of this report.) Now overall hallucinogen use and use of hallucinogens other than LSD are about equivalent due to a drop in the use of the other hallucinogens.

## Trends in Use

Annual prevalence of LSD use among 12<sup>th</sup> graders has been below 10% since MTF began. Use declined some for the first 10 years among 12<sup>th</sup> graders, likely continuing a decline that had begun before 1975. Use was fairly level in the latter half of the 1980s but, as was true for a number of other drugs, rose in all three grades between 1991 and 1996. Between 1996 and 2006 or so, use declined in all three grades, with particularly sharp declines between 2001 and 2003. Since then use has remained at very low levels although there has been a slight increase in the upper grades since 2013.

## Perceived Risk

We think it likely that perceived risk for LSD use increased during the early 1970s, before MTF began, as concerns grew about possible neurological and genetic effects (most of which were never scientifically confirmed) as well as “bad trips” and “flashbacks.” However, there was some decline in perceived risk in the late 1970s, after which it remained fairly level among 12<sup>th</sup> graders through most of the 1980s. A substantial decline occurred in all grades in the early 1990s as use rose. Since about 2000, perceived risk declined steadily and substantially among 8<sup>th</sup> graders until 2007, when it leveled; it declined considerably among 10<sup>th</sup> graders before leveling around 2002, dropping through 2007, and then leveling after that. Since 2014 and 2015 risk has declined once again in both 10<sup>th</sup> and 12<sup>th</sup> graders. Among 12<sup>th</sup> graders, the recent decline in perceived risk marks the end of a levelling that had been in place since 2002. The decline in the lower grades initially suggests that younger teens may be less knowledgeable about this drug’s effects than their predecessors—through what we have called “generational forgetting”—making them vulnerable to a resurgence in use. (The percentages who respond “can’t say, drug unfamiliar” to questions about LSD have risen

in recent years, consistent with the notion of “generational forgetting.”)

The decline of LSD use until recent years, despite a fall in perceived risk, suggests that some factors other than a change in underlying attitudes and beliefs contributed to the downturn—prior to 2001 some displacement by ecstasy may have been a factor while more recently a decline in availability (discussed below) likely is a factor.

## Disapproval

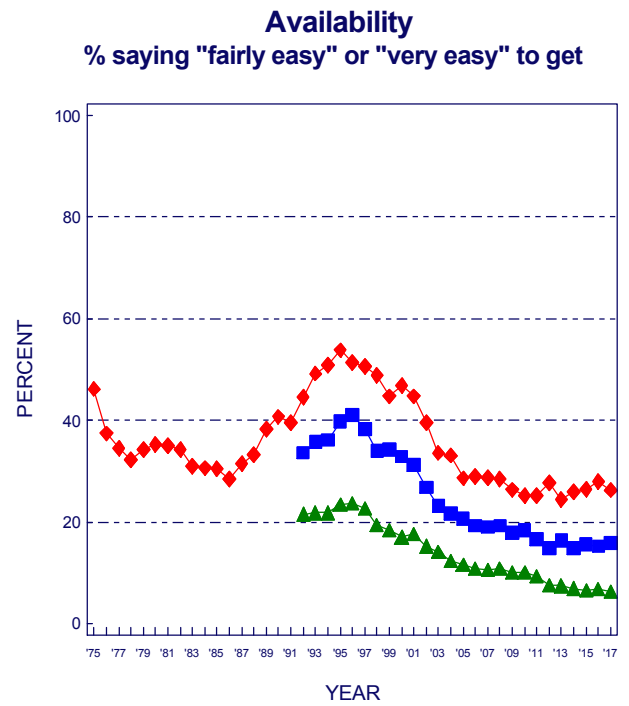
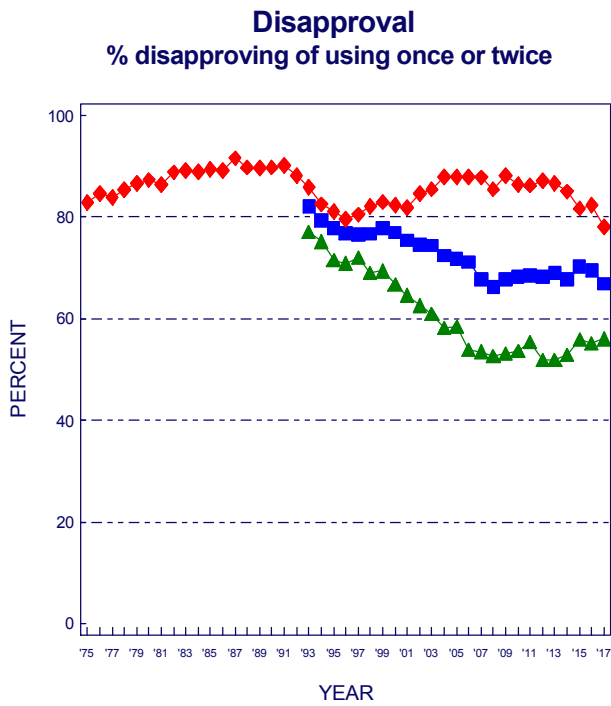
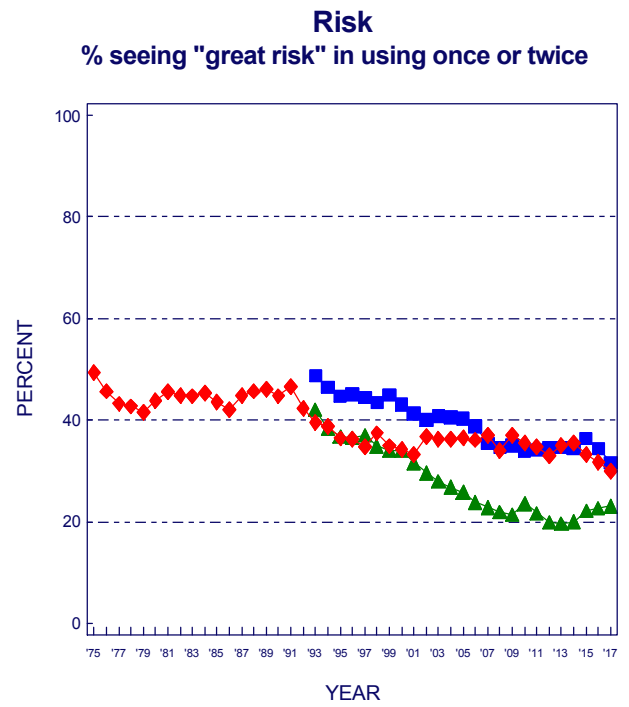
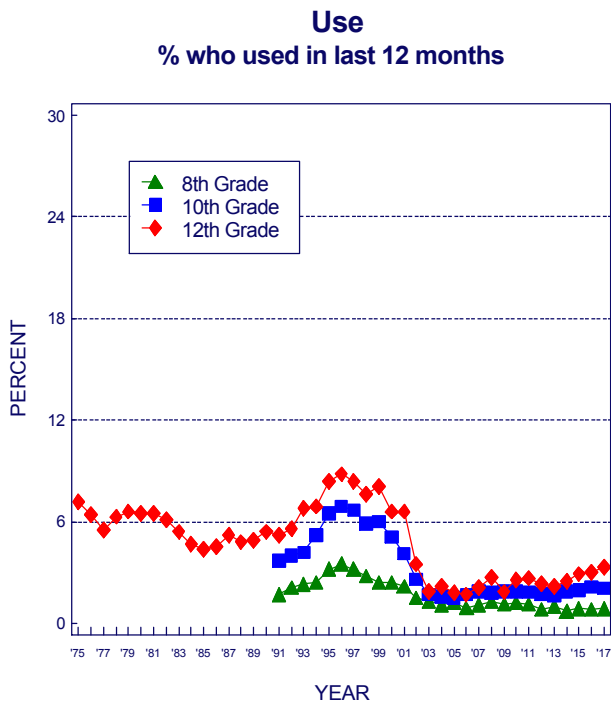
Disapproval of LSD use was quite high among 12<sup>th</sup> graders through most of the 1980s but began to decline after 1991 along with perceived risk. All three grades exhibited a decline in disapproval through 1996, with disapproval of experimentation dropping 11 percentage points between 1991 and 1996 among 12<sup>th</sup> graders. After 1996 a slight increase in disapproval emerged among 12<sup>th</sup> graders, accompanied by a leveling among 10<sup>th</sup> graders and some further decline among 8<sup>th</sup> graders. From 2001 to 2008, disapproval of LSD use diverged among the three grades, declining considerably among 8<sup>th</sup> graders, declining less among 10<sup>th</sup> graders, and increasing significantly among 12<sup>th</sup> graders. Note, however, that the percentages of 8<sup>th</sup> and 10<sup>th</sup> graders who respond with “can’t say, drug unfamiliar” increased through 2008; thus the base for disapproval has shrunk, suggesting that the real decline of disapproval among the younger students is less than it appears here. Since 2010 the divergence has reversed, with levels of disapproval declining for 12<sup>th</sup> grade students, staying level for 10<sup>th</sup> grade students, and increasing for 8<sup>th</sup> grade students.

## Availability

Reported availability of LSD by 12<sup>th</sup> graders fell considerably from 1975 to 1979, declined a bit further until 1986, and then began a substantial rise, reaching a peak in 1995. LSD availability also rose somewhat among 8<sup>th</sup> and 10<sup>th</sup> graders in the early 1990s, reaching a peak in 1995 or 1996. Since those peak years, there has been considerable falloff in reported availability in all three grades, quite possibly in part because fewer students have LSD-using friends from whom they could gain access. There was also very likely a decrease in supply due to the closing of a major LSD-producing lab by the Drug Enforcement Administration in 2000. It is clear that attitudinal changes cannot explain the substantial declines in use.



**LSD: Trends in Annual Use, Risk, Disapproval, and Availability**  
 Grades 8, 10, 12



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

Cocaine was used almost exclusively in powder form for some years, though “freebasing” emerged for a while. The early 1980s brought the advent of crack cocaine. Our original questions did not distinguish among different forms of cocaine or modes of administration. Since 1987, though, we have asked separate questions about the use of crack and “cocaine other than crack,” which has consisted almost entirely of powder cocaine use. Data on cocaine use in general (i. e., all forms of cocaine) are presented in the figures in this section, and results for crack alone are presented in the next section.

### Trends in Use

There have been some important changes in the levels of overall cocaine use over the life of MTF. Use among 12<sup>th</sup> graders originally burgeoned in the late 1970s and remained fairly stable through the first half of the 1980s before starting a precipitous decline after 1986. Annual prevalence among 12<sup>th</sup> graders dropped by about three quarters between 1986 and 1992. Between 1992 and 1999, use reversed course again during the relapse phase of the overall drug epidemic and doubled before declining by 2000. Use also rose among 8<sup>th</sup> and 10<sup>th</sup> graders after 1992 before reaching peak levels in 1998 and 1999. Over the last seventeen years, use has declined in all three grades, except for a rise in 12<sup>th</sup> grade use in 2017 (ns); annual 12<sup>th</sup> grade use stands at just 2.7% in 2016, with use by 8<sup>th</sup> and 10<sup>th</sup> graders still lower, at 0.8% and 1.4%.

### Perceived Risk

Questions about the dangers of cocaine in general (without specifying any particular form of cocaine) have been asked only of 12<sup>th</sup> graders. The results tell a fascinating story. They show that perceived risk for experimental use fell in the latter half of the 1970s (when use was rising), stayed level in the first half of the 1980s (when use was level), and then jumped very sharply in a single year (by 14 percentage points between 1986 and 1987), just when the substantial decline in use began. The year 1986 was marked by a media frenzy over crack cocaine and the widely publicized role of cocaine in the death of Len Bias, a National Basketball Association first-round draft pick. Bias’ death was originally reported as resulting from his first experience with cocaine. Though that was later proven to be incorrect, the

message had already “taken.” We believe that this event helped to persuade many young people that use of cocaine at any level is dangerous, no matter how healthy the individual.<sup>12</sup> Perceived risk continued to rise through 1991 as the fall in use continued. Perceived risk declined modestly from 1991 to 2000, and use rose from 1992 to 2000. Perceived risk has leveled in recent years at far higher levels than existed prior to 1987, and there was a gradual upward drift for about six years in grades 8 and 10, before leveling. In 2017, 10<sup>th</sup> graders showed a significant decline. For the 12<sup>th</sup> graders, perceived risk also increased for about six years before leveling after 2013. There is as yet little evidence of generational forgetting of cocaine’s risks. For 12<sup>th</sup> graders, survey questions on both risk and disapproval referred to cocaine in general, until 1986. After that they referred to cocaine powder and crack separately, as did the questions asked of 8<sup>th</sup> and 10<sup>th</sup> graders. The question change seemed to matter rather little in the results.

### Disapproval

Disapproval of cocaine use by 12<sup>th</sup> graders followed a cross-time pattern similar to that for perceived risk, although its seven percentage-point jump in 1987 was not quite as pronounced. Some decline from 1991 to 1997 was followed by a period of stability. Subsequent years showed a gradual increase in disapproval in all three grades. This upward drift ended in recent years, but disapproval of even trying cocaine remains very high and is above 85% in all grades in 2017.

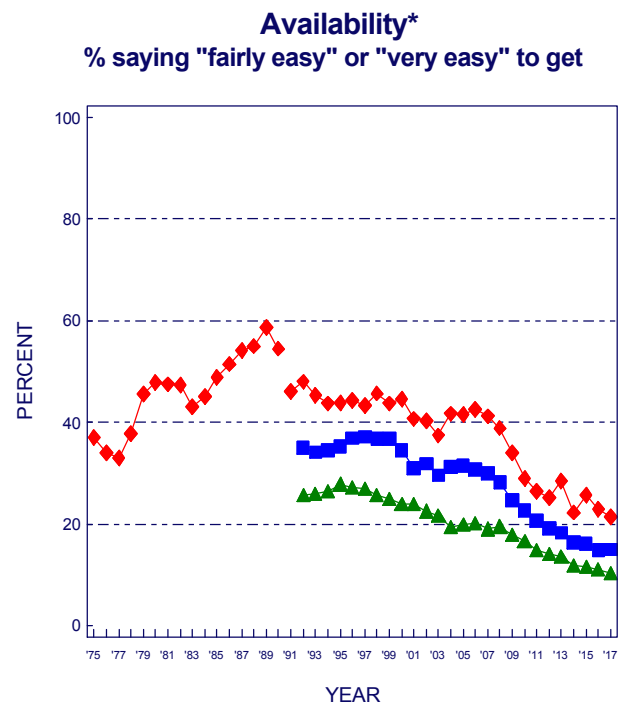
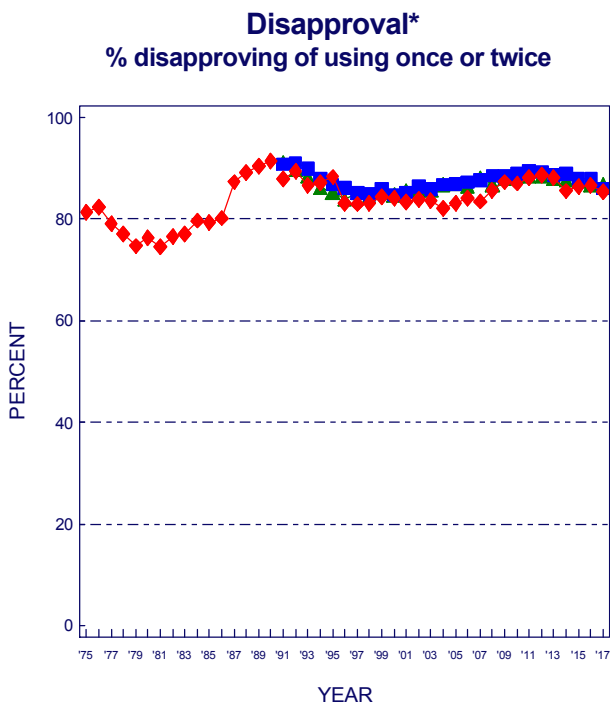
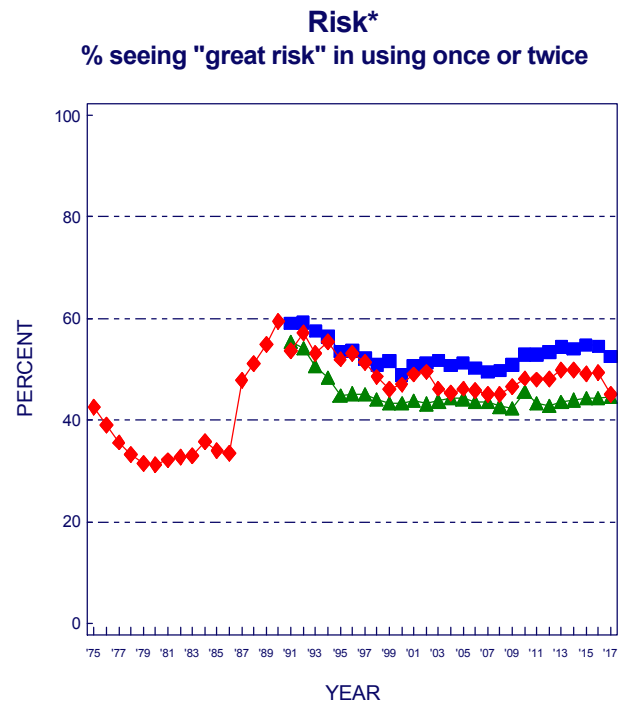
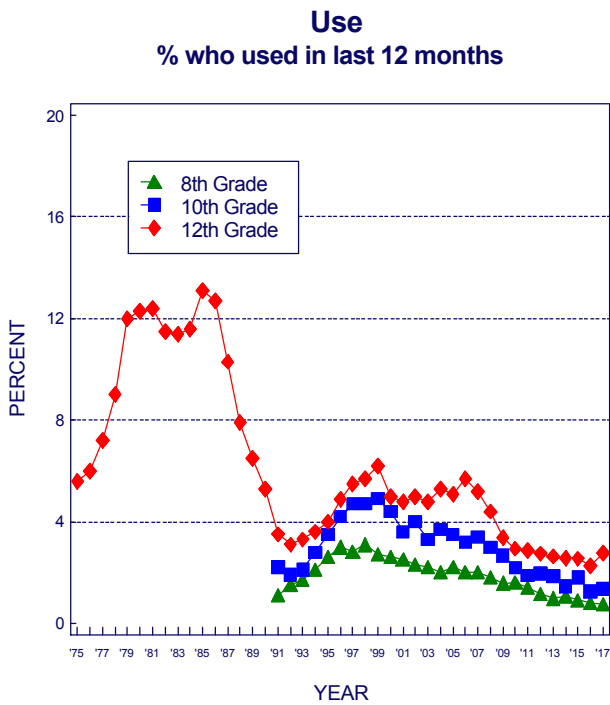
### Availability

The proportion of 12<sup>th</sup> graders saying that cocaine would be “fairly easy” or “very easy” for them to get if they wanted some was 33% in 1977, rose to 48% by 1980 as use rose, and held fairly level through 1982; it increased steadily to 59% by 1989 (in a period of rapidly declining use). Perceived availability then fell back to about 47% by 1994. Since around 1997, perceived availability of cocaine has fallen considerably in all three grades. Among 12<sup>th</sup> graders it stood at 27% in 2017—less than half of its peak level in 1989. Note that the pattern of change does not map well onto the pattern of actual use, suggesting that changes in overall availability have not been a major determinant of use—particularly during the sharp decline in use in the late 1980s.

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<sup>12</sup> Among 12<sup>th</sup> graders trends in perceived risk in Table 8 show a particularly sharp rise from 34% in 1986 to 48% in 1987 for trying cocaine once or twice.

**Cocaine (including Crack) : Trends in Annual Use, Risk, Disapproval, and Availability**  
 Grades 8, 10, 12



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

\*Prior to 1991, data reported here is based on questions on use of cocaine in general. Starting in 1991, data based on questions on use of cocaine powder specifically.

Several indirect indicators suggest that crack use grew rapidly in the period 1983–1986, before we had direct measures of its use. In 1986 a single usage question was included in one of the five 12<sup>th</sup> grade questionnaire forms, asking those who indicated any cocaine use in the prior 12 months if they had used crack. The results from that question represent the first data point in the first panel on the facing page. After that, three questions about crack use covering the usual three prevalence periods were introduced into several questionnaire forms; the data generated by them may be seen in the tables at the end of this volume.

### Trends in Use

Clearly crack use rose rapidly in the early 1980s, judging by the 4% annual prevalence reached in 1986; but after 1986 there was a precipitous drop in crack use among 12<sup>th</sup> graders; the drop continued through 1991. After 1991 for 8<sup>th</sup> and 10<sup>th</sup> graders (when data were first available) and after 1993 for 12<sup>th</sup> graders, all three grades showed a slow, steady increase in use through 1998 during what we have called the relapse phase of the overall drug epidemic. Since 1999, annual prevalence has dropped by about three quarters in 8<sup>th</sup> and 10<sup>th</sup> grades and nearly two thirds in 12<sup>th</sup> grade. By 2016 crack use was at historic lows in all three grades, but in 2017 all three grades showed nonsignificant increases in use. As with many drugs, the decline at 12<sup>th</sup> grade lagged behind those in the lower grades due to a cohort effect.

### Perceived Risk

By the time we added questions about the perceived risk of using crack in 1987, crack was already seen by 12<sup>th</sup> graders as one of the most dangerous illicit drugs: 57% saw a great risk in even trying it. This compared to 54% for heroin, for example. Perceived risk for crack rose still higher through 1990, reaching 64% of 12<sup>th</sup> graders who said they thought there was a great risk in taking crack once or twice. (Use was dropping during that interval.) After 1990 some falloff in perceived risk began, well before crack use began to increase in 1994, making perceived risk again a leading indicator. Between 1991 and 1998 there was a considerable falloff in this belief in

grades 8 and 10, as use rose steadily. Perceived risk leveled in 2000 in grades 8 and 12 and a year later in grade 10. We think that the declines in perceived risk for crack and cocaine during the 1990s may well reflect an example of generational forgetting wherein the class cohorts that were in adolescence when the adverse consequences were most obvious (i.e., in the mid-1980s) were replaced by cohorts who were less knowledgeable about these dangers. By 2017 perceived risk for crack remained at about the same or even declined a bit in all three grades.

### Disapproval

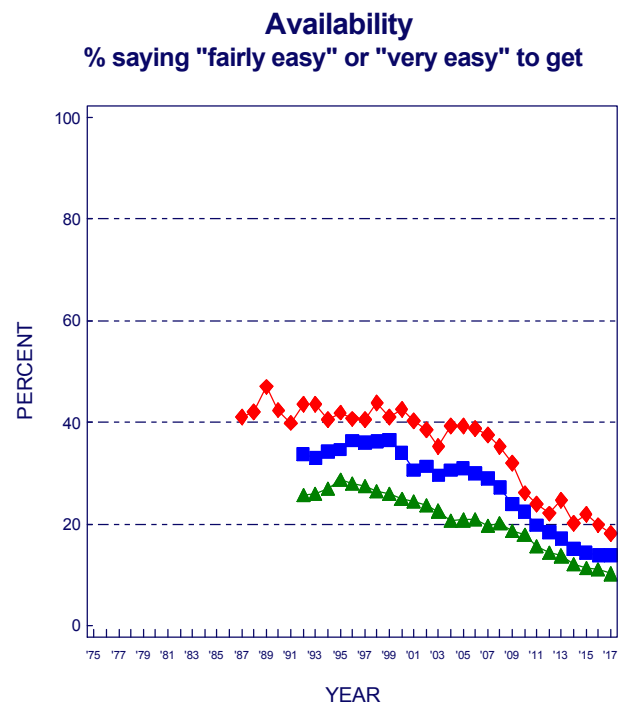
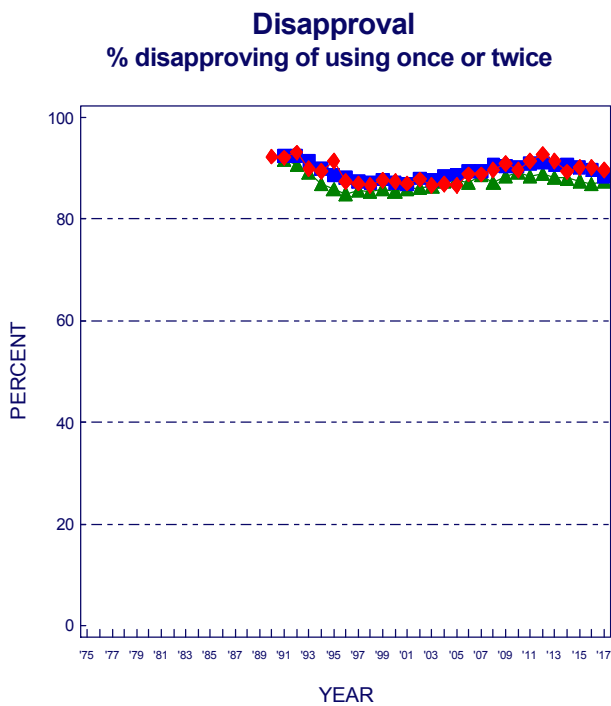
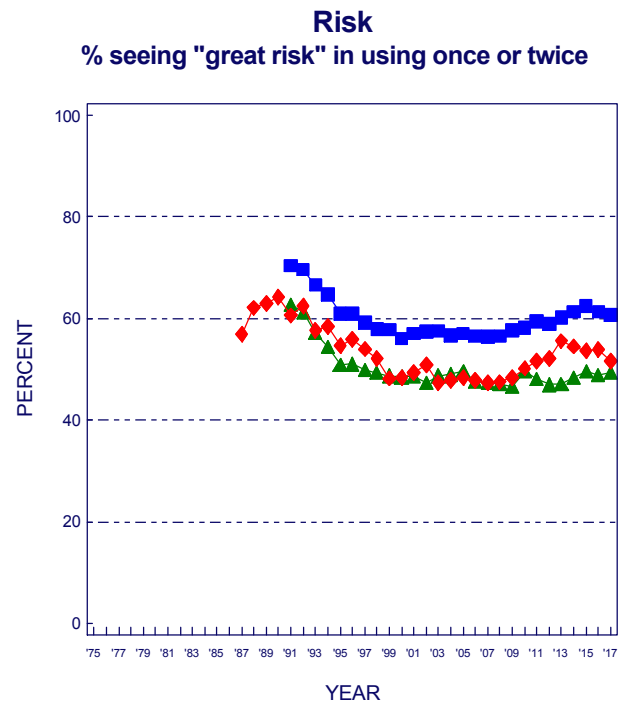
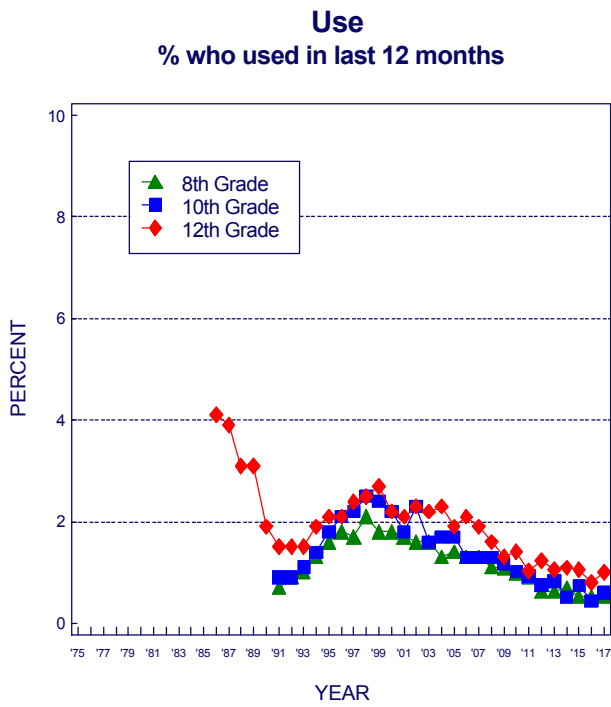
Disapproval of crack use was not assessed until 1990, when it was at a very high level, with 92% of 12<sup>th</sup> graders saying that they disapproved of even trying it. Disapproval of crack use declined slightly but steadily in all three grades from 1991 through about 1997 as perceived risk decreased and use increased. After 1997, disapproval in all three grades rose back to high levels by 2012 before beginning a gradual and small decline.

### Availability

Crack availability did not change dramatically in the early years for which data are available. It began a sustained decline after 1995 among 8<sup>th</sup> graders, after 1999 among 10<sup>th</sup> graders, and after 2000 among 12<sup>th</sup> graders. Since 2000, availability has declined considerably, reaching historic lows in 2017 in all three grades.

NOTE: The distinction between crack cocaine and other forms of cocaine (mostly powder) was made several years after the study's inception. The figures on the facing page begin their trend lines when these distinctions were introduced. Figures are not presented here for the "other forms of cocaine" measures, simply because the trend curves look extremely similar to those for crack. (All statistics are contained in the tables.) Although the trends are very similar, the absolute levels of use, risk, etc., are somewhat different. Usage levels tend to be higher for cocaine powder compared to crack, and the levels of perceived risk a bit lower, while disapproval has been close for the two different forms of cocaine and relative availability has varied (Tables 9 through 14).

**Crack: Trends in Annual Use, Risk, Disapproval, and Availability**  
 Grades 8, 10, 12



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

## Amphetamines and Other Stimulant Drugs

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Amphetamines, a class of psychotherapeutic stimulants, had a relatively high prevalence of use in the youth population for many years. Amphetamines are controlled substances—they are not legally bought or sold without a doctor’s prescription—but some are diverted from legitimate channels, and some are manufactured and/or imported illegally. . . .Another controlled stimulant included here is Ritalin which is used to treat ADHD, as is Adderall, the most prevalent of the amphetamines.

### Trends in Use

The use of these stimulants rose in the last half of the 1970s, reaching a peak in annual prevalence of 26% in 1981 (likely exaggerated due to commonly used “look-alikes”)—two years after marijuana use peaked. From 1981 to 1992, 12<sup>th</sup> graders showed a steady and very substantial decline in stimulant use, reaching 6%.

As with many other illicit drugs, these stimulants made a comeback in the 1990s. Use peaked in the lower two grades by 1996 and for many years declined steadily in 8<sup>th</sup> grade and sporadically in 10<sup>th</sup> grade. Only in 2003 it began to decline in 12<sup>th</sup> grade—likely reflecting a cohort effect. The decline paused in 2008 for 8<sup>th</sup> graders and 2008/2009 for 12<sup>th</sup> graders, and then resumed. The 12<sup>th</sup> grade decline reversed from 2009 to 2013. In 2013 the amphetamines/stimulants prevalence question text was changed in half of the questionnaire forms. The 2013 report used data from the changed forms only, to be comparable to the 2014 measure. In 2014 the remaining forms were changed; the 2014 and subsequent data presented here are for all the forms. From 2009 to 2013 use rose in the upper grades, likely due to use intended to assist with academic performance. Since 2013 there has been a downward drift in annual prevalence but a steeper decline in 30-day prevalence (significant in the upper grades).

See Table 6 for the trends in annual use of two specific amphetamines—Ritalin and Adderall. Since it was first measured in 2001, Ritalin use has declined by 75% to 85% in all three grades. Adderall use declined in the lower grades since it was first measured in 2009; but annual prevalence increased significantly in 12<sup>th</sup> grade between 2009 (to 5.4%) and 2013 (to 7.4%) where it remained in 2015 before falling to 5.5% in 2017.

### Perceived Risk

Only 12<sup>th</sup> graders are asked about the amount of risk they associate with amphetamine/stimulant use. For a few years, changes in perceived risk were not correlated with changes in usage levels (at the aggregate level). Specifically, in the interval 1981–1986, risk was quite stable even though use fell considerably, likely as a result of some displacement by increasing cocaine use. There was, however, a decrease in risk during the period 1975–1981 (when use was rising), some increase in perceived risk in 1986–1991 (when use was falling), and some decline in perceived risk from 1991 to 1995 (in advance of use rising again). Perceived risk generally rose until 2010, very likely contributing to the decline in use that occurred among 12<sup>th</sup> graders after 2002. In 2011 the examples of specific amphetamines provided in the text of the questions on perceived risk, disapproval, and availability were updated with the inclusion of Adderall and Ritalin. This led to some discontinuities in the trend lines in 2011. (Levels of perceived risk and disapproval lowered as a result.) Based on the revised question, some decline has occurred since 2013.

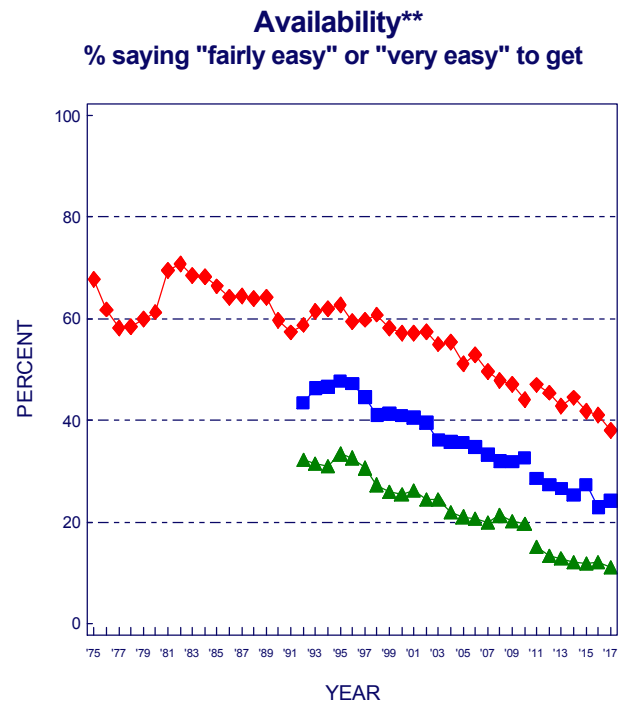
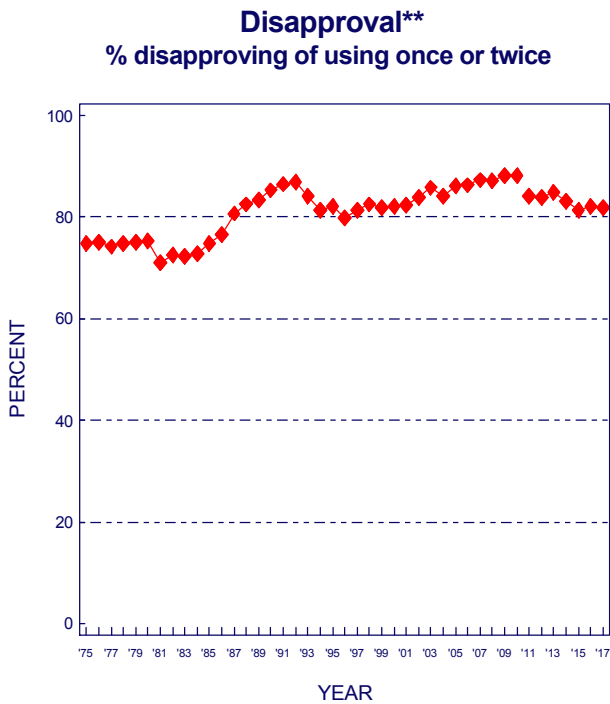
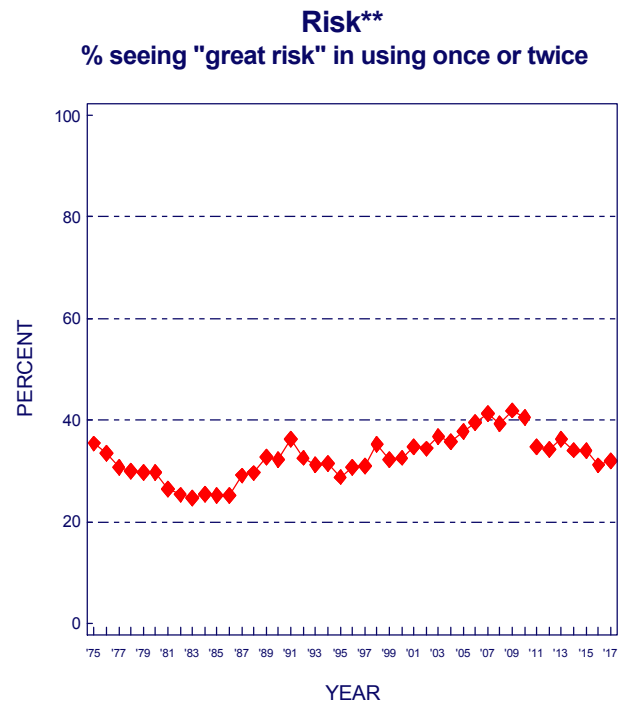
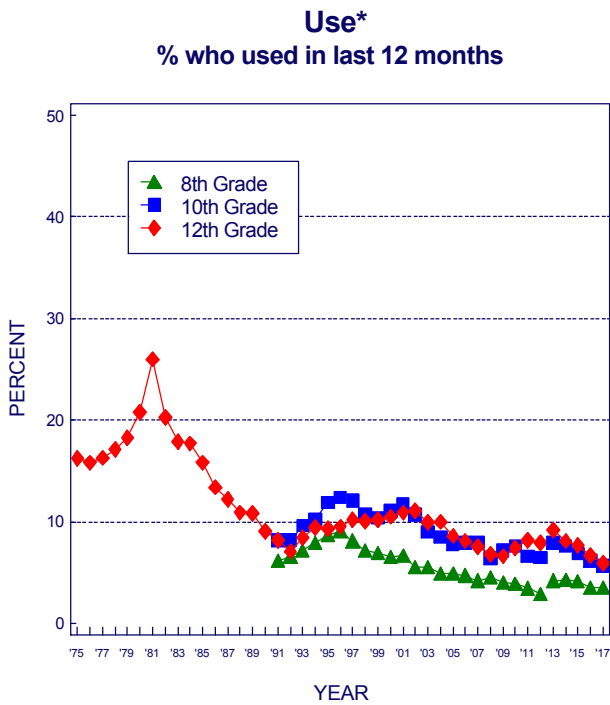
### Disapproval

Disapproval of amphetamine/stimulant use also is asked in 12<sup>th</sup> grade only. Relatively high proportions of 12<sup>th</sup> graders have disapproved of even trying amphetamines/stimulants throughout the life of the study. Disapproval did not change in the late 1970s despite an increase in use. From 1981 to 1992, disapproval rose gradually and substantially from 71% to 87% as perceived risk rose and use declined. In the mid-1990s disapproval declined along with perceived risk, but it increased fairly steadily from 1996 through 2009 before leveling. There has been a very slight falloff since 2013.

### Availability

In 1975, amphetamines/stimulants had a high level of reported availability. The level fell by about 10 percentage points by 1977, drifted up a bit through 1980, jumped sharply in 1981, and then began a long, gradual decline through 1991. There was a modest increase in availability at all three grade levels in the early 1990s as use rose, followed by a very large long-term decline which continued through 2017.

**Amphetamines : Trends in Annual Use, Risk, Disapproval, and Availability**  
Grades 8, 10, 12



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

\*In 2013 the question text was changed on two of the questionnaire forms for 8th and 10th graders and four of the questionnaire forms for 12th graders, and changed on the remaining forms in 2014. Beginning in 2013, data presented here include only the changed forms.

\*\*In 2011 the list of examples was changed from uppers, pep pills, bennies, speed to uppers, speed, Adderall, Ritalin, etc. These changes likely explain the discontinuity in the 2011 results.



## Methamphetamine and Crystal Methamphetamine (Ice)

One subclass of amphetamines is called methamphetamine (“speed”). This subclass has been around for a long time and gave rise to the phrase “speed kills” in the 1960s. Probably because of the reputation it got at that time as a particularly dangerous drug, it was not popular for some years, so we did not include a full set of questions about its use in MTF’s early questionnaires. One form of methamphetamine, crystal methamphetamine or “ice,” grew in popularity in the 1980s. It comes in crystallized form, as the name implies, and the chunks can be heated and the fumes inhaled, much like crack cocaine.

### Trends in Use

For most of the life of the study, the only question about *methamphetamine* use has been contained in one of the six 12<sup>th</sup>-grade questionnaire forms. Respondents who indicate using any type of amphetamine in the prior 12 months are asked in a sequel question to indicate on a pre-specified list the types they have used during that period. Methamphetamine is one type on the list, and data exist on its use since 1976. (The rates are not graphed here until 1990.) In 1976, annual prevalence using this measure was 1.9%; it then roughly doubled to 3.7% by 1981 (the peak year), before declining for over a decade all the way down to 0.4% by 1992. Use then rose again in the mid-1990s, as did use of a number of drugs, reaching 1.3% by 1998. In other words, it has followed a cross-time trajectory fairly similar to that for amphetamines as a whole. No questions have yet been added to the study on perceived risk, disapproval, or availability with regard to overall methamphetamine use.

In 1990, in the 12<sup>th</sup>-grade questionnaires only, we introduced our usual set of three questions for *crystal methamphetamine*, measuring lifetime, annual, and 30-day use. Among 12<sup>th</sup> graders in 1990, 1.3% indicated any use in the prior year; use climbed to 3.0% by 1998, and has generally been declining since then, reaching an all-time low of 0.5% in 2015 and then 0.8% in both 2016 and 2017. This variable is charted on the first panel of the facing page.

Responding to the growing concern about methamphetamine use in general—not just crystal methamphetamine use—we added a full set of three questions about the use of any methamphetamine to the

1999 questionnaires for all three grade levels. These questions yield a somewhat higher annual prevalence for 12<sup>th</sup> graders: 4.3% in 2000, compared to the sum of the methamphetamine and crystal methamphetamine answers in the other, branching question format, which totaled 2.8%. It would appear, then, that the long-term method we had been using for tracking methamphetamine use probably yielded an underestimate of the absolute prevalence level, perhaps because some proportion of methamphetamine users did not correctly categorize themselves initially as amphetamine users (even though methamphetamine was given in the question as one of the examples of amphetamines). We think it likely that the shape of the trend curve was not distorted, however.

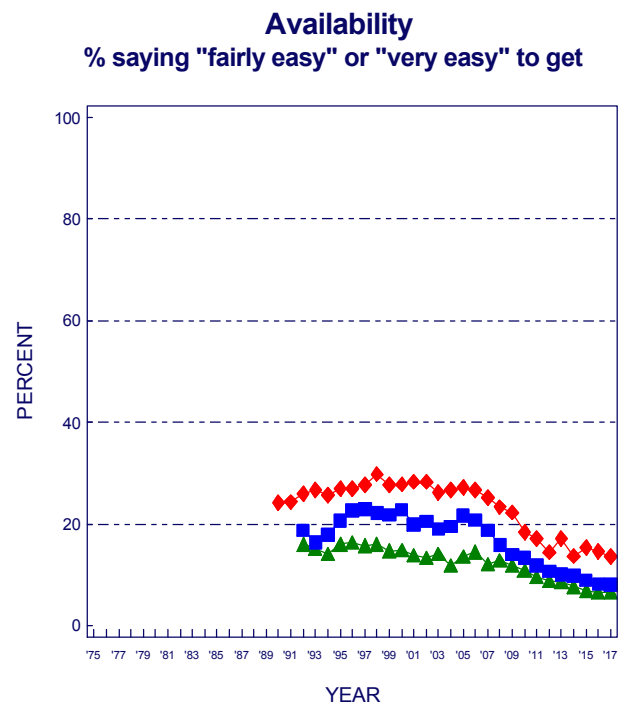
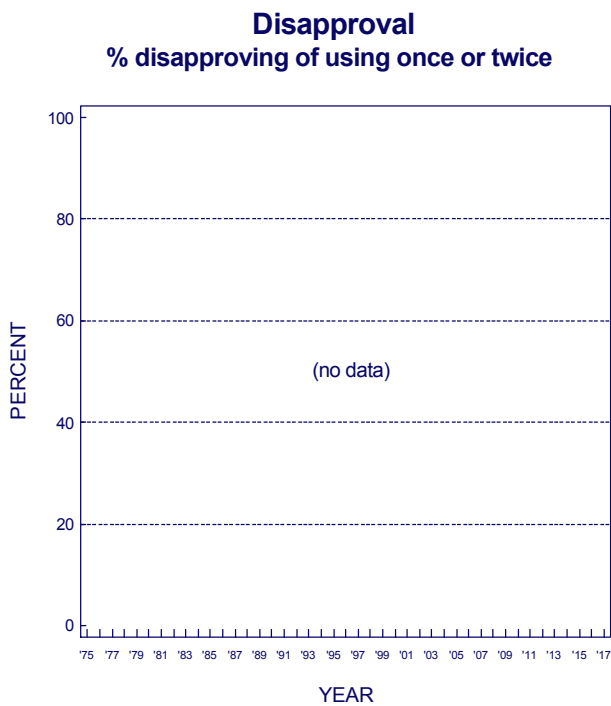
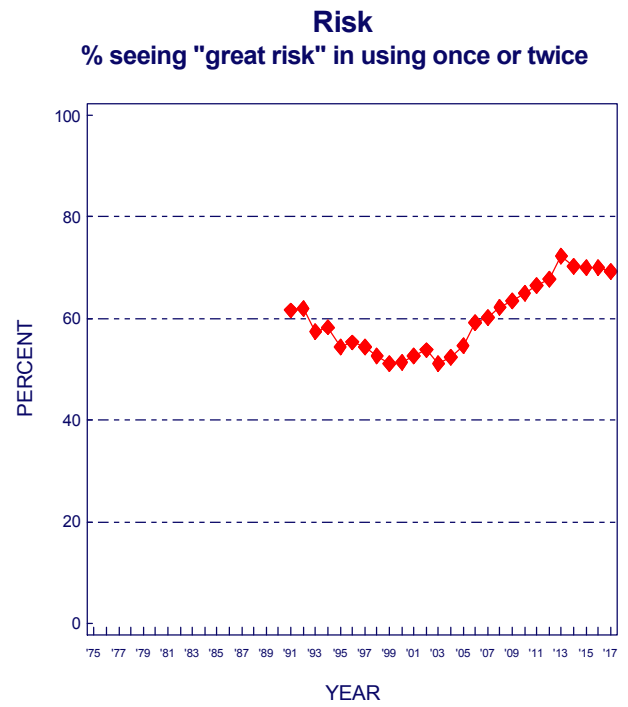
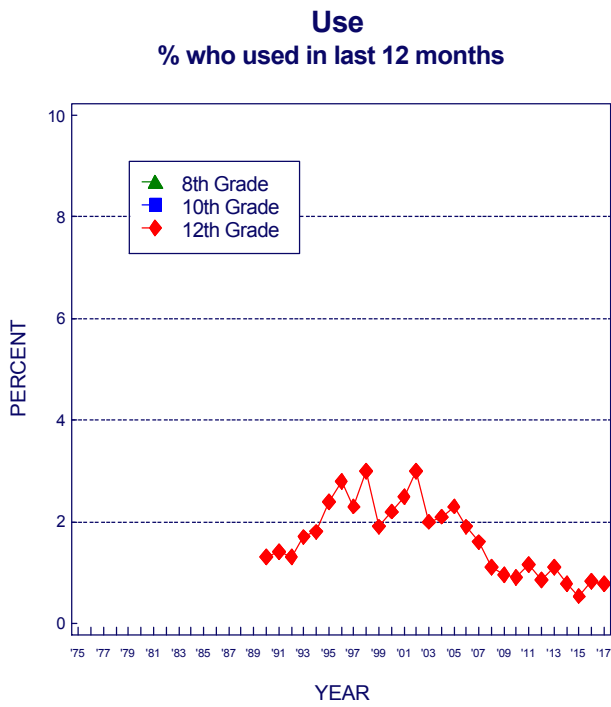
The newer questions for *methamphetamine* (not graphed here) show annual prevalence rates in 2017 of 0.5% for 8<sup>th</sup> graders, 0.4% for 10<sup>th</sup> graders, and 0.6% for 12<sup>th</sup> graders. These levels are the lowest ever recorded for 10<sup>th</sup> and 12<sup>th</sup> graders and very near the lowest for 8<sup>th</sup> graders. The 2017 levels for all three grades are down considerably from the first measurement taken in 1999, when they were 3.2%, 4.6%, and 4.7% (see Table 6). So, despite growing public concern about the methamphetamine problem in the United States, use actually showed a fairly steady and substantial decline since 1999, at least among secondary school students. (A similar decline in methamphetamine use did not begin to appear among college students and young adults generally until after 2004, likely reflecting a cohort effect. See [Volume II](#) in this series for data on adults through age 55.)

### Other Measures

Data on perceived risk and availability for crystal methamphetamine, specifically, may be found on the facing page.

Clearly, the perceived risk of using crystal methamphetamine has risen considerably since 2003, very likely explaining much of the decline in use since then. Perceived risk then leveled after 2013. Perceived availability generally has been falling in all three grades since 2006, perhaps in part because there are many fewer crystal methamphetamine users from whom to get the drug.

**Crystal Methamphetamine (Ice) : Trends in Annual Use, Risk, and Availability**  
 Grades 8, 10, 12



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

## Heroin

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For many decades, heroin—a derivative of opium—was administered primarily by injection into a vein. However, in the 1990s the purity of available heroin reached very high levels, making other modes of administration (e.g., snorting, smoking) practical alternatives. Thus, in 1995 we introduced questions that asked separately about using heroin with and without a needle to determine whether non-injection use explained the upsurge in heroin use we observed. The usage statistics presented on the facing page are based on heroin use by any method, but data on the two specific types of administration are provided in the tables at the end of this report.

### Trends in Use

The annual prevalence of heroin use among 12<sup>th</sup> graders fell by half between 1975 and 1979, from 1.0% to 0.5%. The rate then held amazingly steady until 1994. Use rose in the mid- and late-1990s, along with the use of most drugs; it reached peak levels in 1996 among 8<sup>th</sup> graders (1.6%), in 1997 among 10<sup>th</sup> graders (1.4%), and in 2000 among 12<sup>th</sup> graders (1.5%), suggesting a cohort effect. Following those peak levels, use declined, with annual prevalence in all three grades fluctuating between 0.7% and 0.9% from 2005 through 2010. Since then, annual prevalence for the three grades combined declined, from 0.8% in 2010 to 0.3% in 2017. In 2016 use reached its lowest levels in all three grades (0.3% in each) with little change in 2017.

Because the questions about use with and without a needle were not introduced until the 1995 survey, they did not encompass much of the period of increasing heroin use. The new questions showed that, by then, about equal proportions of all 8<sup>th</sup> grade users were taking heroin by each method of ingestion and some—nearly a third of users—were using both means. At 10<sup>th</sup> grade, a somewhat higher proportion of all users took heroin without a needle, and at 12<sup>th</sup> grade, the proportion was higher still. Thus, much of the increase in overall heroin use after 1995 occurred in the proportions using it without injecting, which we strongly suspect was true in the immediately preceding period of increase as well. Likewise, much of the decrease since the recent peak levels has been due to decreasing use of heroin without a needle. In 2012, there were significant decreases in use of heroin without a needle for 8<sup>th</sup> and 12<sup>th</sup> graders, and very slight declines since then in 8<sup>th</sup> and 10<sup>th</sup> grades.

Use with a needle has fallen considerably in all three grades since the mid-1990s; annual prevalence in 2017 of all three grades combined stood at 0.2%, including significant declines in 8<sup>th</sup> and 10<sup>th</sup> grades from the 2014 to 2015 prevalence levels. The proportional declines were greatest in the lower grades. While a heroin epidemic continues among adults, our data—as well as those from the National Survey on Drug Use and Health—suggest that use has grown primarily among young adults and not among adolescents.

### Perceived Risk

Students have long seen heroin to be one of the most dangerous drugs, which helps to account for both the consistently high level of personal disapproval of use (see below) and the quite low prevalence of use. Nevertheless, perceived risk levels have changed some over the years. Between 1975 and 1986, perceived risk gradually declined, even though use dropped and then stabilized in that interval. Then there was a big spike in 1987 (when perceived risk for cocaine also jumped dramatically), where it held for four years. In 1992, perceived risk dropped to a lower level again, presaging an increase in use a year or two later. Perceived risk rose in the latter half of the 1990s, and use leveled off and then declined. Risk at 12<sup>th</sup> grade is still rising, but has been level for some time at 8<sup>th</sup> and 10<sup>th</sup> grades. Perceived risk of use without a needle rose in 8<sup>th</sup> and 10<sup>th</sup> grades between 1995 and 1997, foretelling an end to the increase in that form of use. Note that perceived risk has served as a leading indicator of use for this drug as well as a number of others. During the 2000s, perceived risk was relatively stable at a high level.

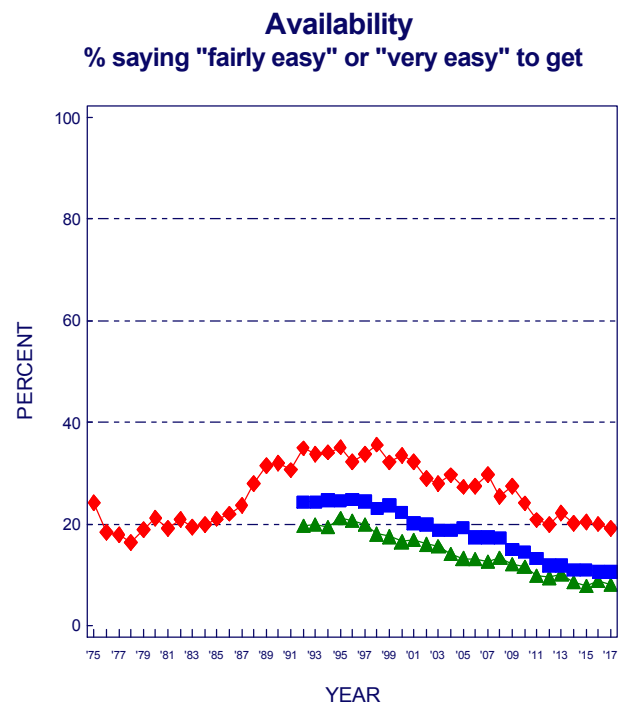
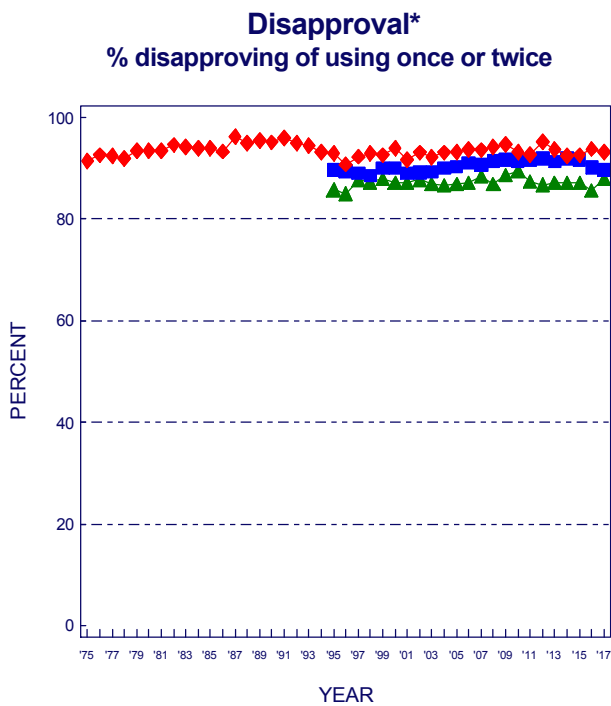
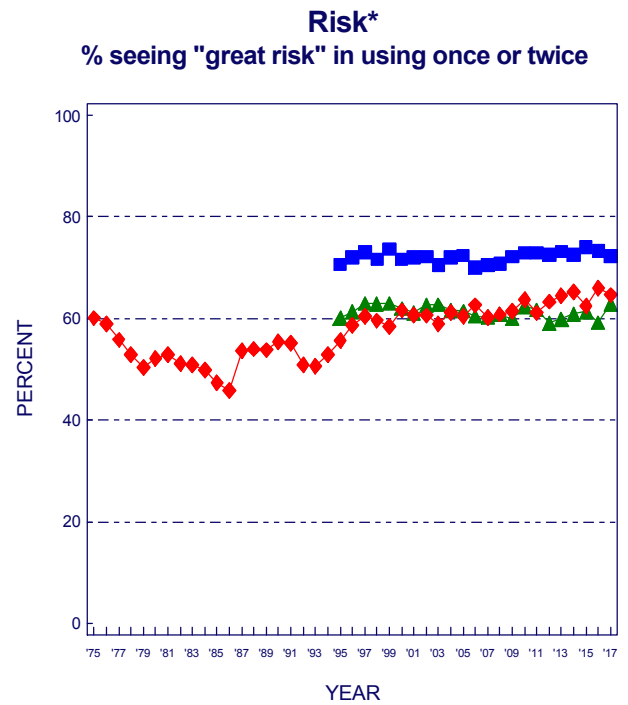
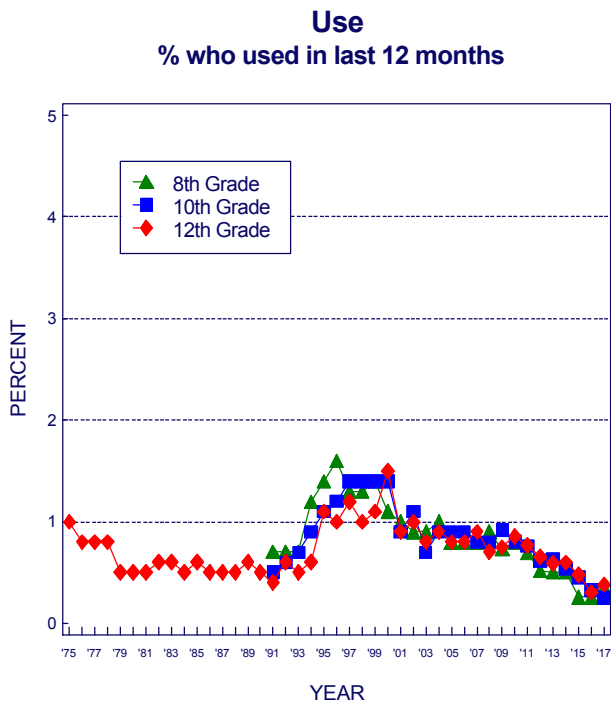
### Disapproval

There has been little fluctuation in the very high levels of disapproval of heroin use over the years, though it did rise gradually between 2000 and 2010. The small changes that have occurred have been generally consistent with changes in perceived risk and use.

### Availability

The proportion of 12<sup>th</sup> grade students saying they could get heroin fairly or very easily if they wanted some remained around 20% through the mid-1980s. It then increased considerably from 1986 to 1992 before stabilizing at about 35% from 1992 through 1998. From the mid- to late-1990s through 2014, perceived availability of heroin declined gradually but substantially in all three grades before leveling in 2014 or 2015.

**Heroin: Trends in Annual Use, Risk, Disapproval, and Availability**  
 Grades 8, 10, 12



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

\*Prior to 1995, the questions asked about heroin use in general. Since 1995, the questions have asked about heroin use without a needle.

## Other Narcotic Drugs, Including OxyContin and Vicodin

There are a number of narcotic drugs other than heroin—all controlled substances. Many are analgesics that can be prescribed by physicians and dentists for pain. Like heroin, many are derived from opium, but there are also a number of synthetic analogues in use today, with OxyContin and Vicodin being two of the major ones.

Throughout the life of the MTF study, we have asked about the use of any narcotic drug other than heroin without specifying which one. Examples of drugs in the class are provided in the question stem. In one of the six 12<sup>th</sup> grade questionnaire forms, however, respondents indicating that they had used any narcotic in the past 12 months were then asked to check which of a fairly long list of such drugs they used. Table E-4 in Appendix E of [Volume I](#) of this annual monograph series provides trends in their annual prevalence data. In the late 1970s, opium and codeine were among the narcotics most widely used. In recent years Vicodin, codeine, Percocet, OxyContin, and hydrocodone have been the most prevalent.

### Trends in Use

Use is reported for 12<sup>th</sup> graders only, because we considered the data from 8<sup>th</sup> and 10<sup>th</sup> graders to be of questionable validity. As shown in the first panel of the facing page, 12<sup>th</sup> graders' use of narcotics other than heroin generally trended down from about 1977 through 1992, dropping considerably. After 1992 use rose rather steeply as all forms of substance use were increasing, with annual prevalence nearly tripling from 3.3% in 1992 to 9.5% in 2004, before leveling through about 2009. Since then, use has been declining, particularly since 2009.

In 2002, the question was revised to add Vicodin, OxyContin, and Percocet to the examples given, which clearly had the effect of increasing reported prevalence, as may be seen in the first panel on the facing page. So the extent of the increase over the full time span likely is exaggerated, although probably not by much, because these drugs came onto the scene later, during the rise. They simply were not being fully reported until the late

1990s. Narcotics had become one of the most widely used classes of illicit drugs by 2004, when annual prevalence reached 9.5%.

In a departure from the usual arrangement on the facing page, use rates for two narcotics of recent interest—OxyContin and Vicodin—are presented in the second and third panels instead of risk and disapproval. There are no data on disapproval for other narcotics, and only limited 12<sup>th</sup> grade data on perceived risk (since 2010), showing high but gradually declining risk levels (see Table 11).

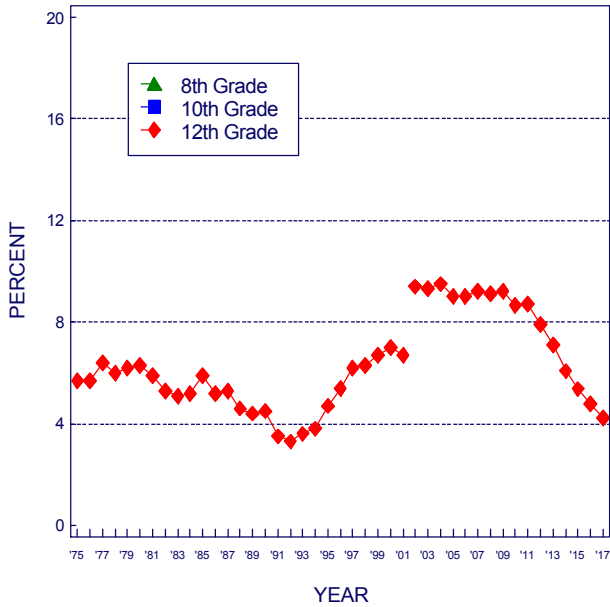
*OxyContin* use increased some in all grades from 2002 (when it was first measured) through roughly 2009, though the trend lines have been irregular. Since 2009 or 2010, the prevalence rate has dropped in all grades. Annual prevalence in 2017 was down to 0.8%, 2.2%, and 2.7% in grades 8, 10, and 12, respectively. Use of *Vicodin*, on the other hand, remained fairly steady at somewhat higher levels from 2002—the first year it was measured—until 2009, after which it declined substantially in all grades. In 2017, annual prevalence rates continued to decline and were 0.7%, 1.5%, and 2.0% for 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders respectively.

### Availability

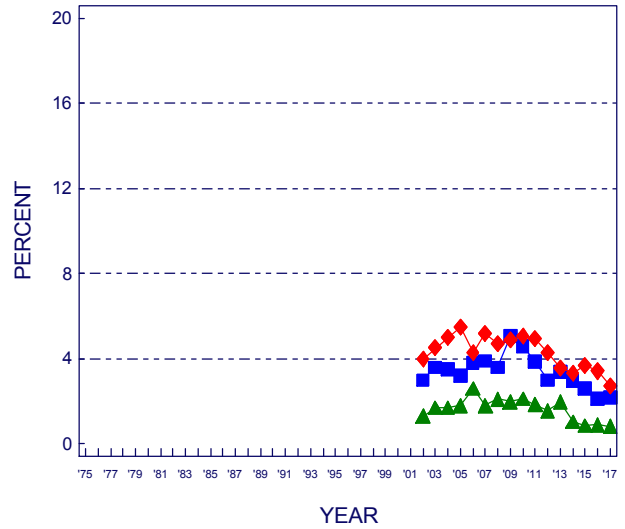
Questions were asked about the availability of narcotics other than heroin, taken as a class. (See facing fourth panel.) Perceived availability increased gradually among 12<sup>th</sup> graders for more than a decade (from 1978 through 1989), even as reported use was dropping. Perceived availability then rose further for another decade (from 1991 through 2001) as use rose quite sharply before leveling by about 2000 and then declining after 2006. In contrast, perceived availability had declined among 8<sup>th</sup> and 10<sup>th</sup> graders since the late 1990s. (In all three grades, a change in question wording in 2010 to include OxyContin and Vicodin as examples presumably accounts for the jump in reported availability that year.) Availability has declined further in all three grades since 2010.

**Narcotics other than Heroin and OxyContin and Vicodin Specifically :**  
**Trends in Annual Use and Availability**  
 Grades 8, 10, 12

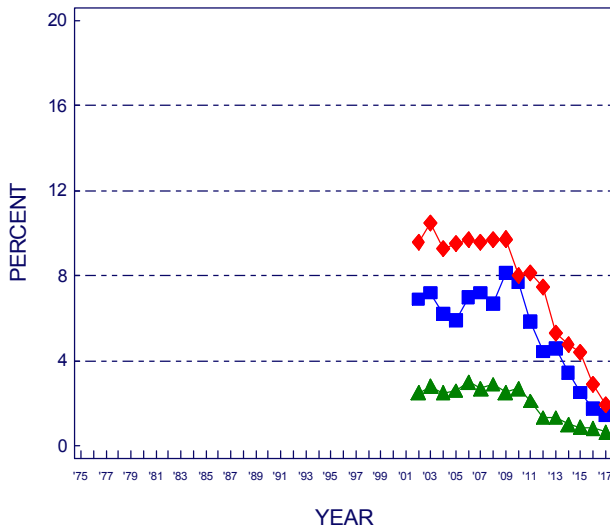
**Use of Narcotics other than Heroin**  
 % who used any narcotics other than heroin  
 in last 12 months\*



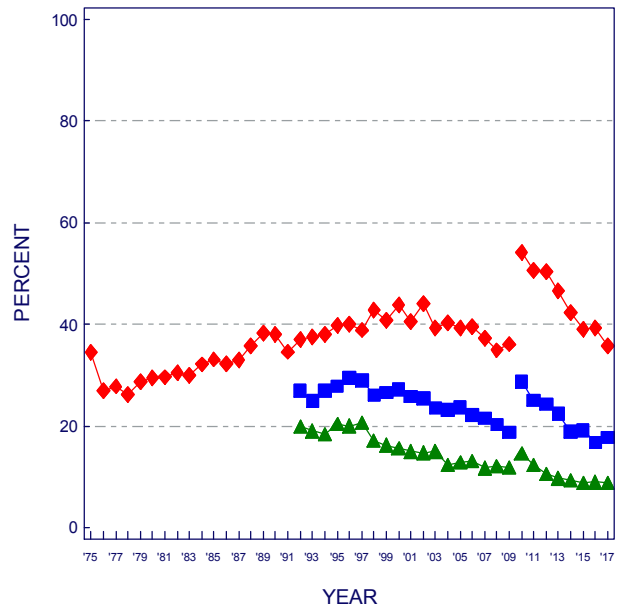
**OxyContin Use**  
 % who used OxyContin in last 12 months



**Vicodin Use**  
 % who used Vicodin in last 12 months



**Availability of Narcotics other than Heroin\*\***  
 % saying "fairly easy" or "very easy" to get



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

\*Beginning in 2002, a revised set of questions on other narcotics use was introduced in which Talwin, laudanum, and paregoric were replaced as examples given with Vicodin, OxyContin, and Percocet.

\*\*In 2010 the list of examples was changed from methadone, opium to Vicodin, OxyContin, Percocet, etc.

## Tranquilizers

---

Tranquilizers are psychotherapeutic drugs that are legally sold only by prescription. They are central nervous depressants and, for the most part, comprise benzodiazepines (minor tranquilizers), although some non-benzodiazepines have been introduced. Respondents are instructed to exclude any medically prescribed use from their answers. At present, *Xanax* is the tranquilizer most commonly used by 12<sup>th</sup> graders (only 12<sup>th</sup> graders are asked to indicate which specific tranquilizers they used). (See Table E-3 in appendix E of *Volume I* in this series for details.) Valium, Klonopin, and Ativan are other tranquilizers, used at somewhat lower levels. In 2001, the examples given in the tranquilizer question were modified to reflect changes in the drugs in common use—Miltown was dropped and Xanax was added. As the first panel on the facing page shows, this caused a modest increase in the reported level of tranquilizer use in the upper grades, so we have broken the trend line to reflect the point of redefinition.

### Trends in Use

During the late 1970s and all of the 1980s, tranquilizers fell steadily and substantially from popularity, with 12<sup>th</sup> graders' use declining by three fourths over the 15-year interval between 1977 and 1992. Their use then increased, as happened with many other drugs during the 1990s. Annual prevalence more than doubled among 12<sup>th</sup> graders, rising steadily through 2002, before leveling. Use also rose steadily among 10<sup>th</sup> graders, but began to decline some in 2002. Use peaked much earlier among 8<sup>th</sup> graders in 1996 and then declined slightly for two years. Tranquilizer use remained relatively stable among 8<sup>th</sup> graders through 2010 at considerably lower levels than the upper two grades. Use in 8<sup>th</sup> grade showed a brief decline in 2011 before stabilizing again. From 2002 to

2005, there was some decline among 10<sup>th</sup> graders, followed by a leveling, then a resumption of the decline through 2014 before drifting up again. Among 12<sup>th</sup> graders, there was a very gradual decline from 2002 through 2007, before leveling and then decreasing in 2010 and again in 2013. This staggered pattern of change across the grades suggests that a cohort effect has been at work. There has been little further change since 2013. In 2017, the prevalence of use of these prescription-type drugs was somewhat lower than their recent peak levels, with annual prevalence rates of 2.0%, 4.1%, and 4.7% in grades 8, 10, and 12, respectively.

### Perceived Risk and Disapproval

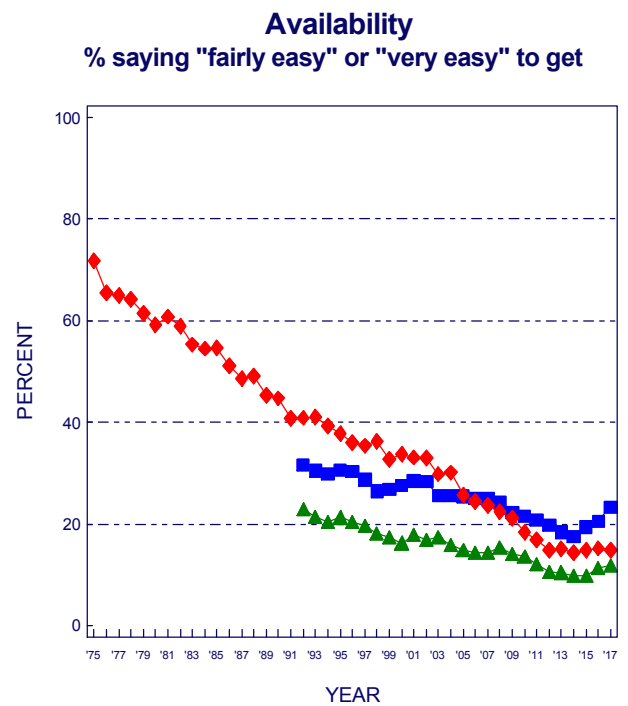
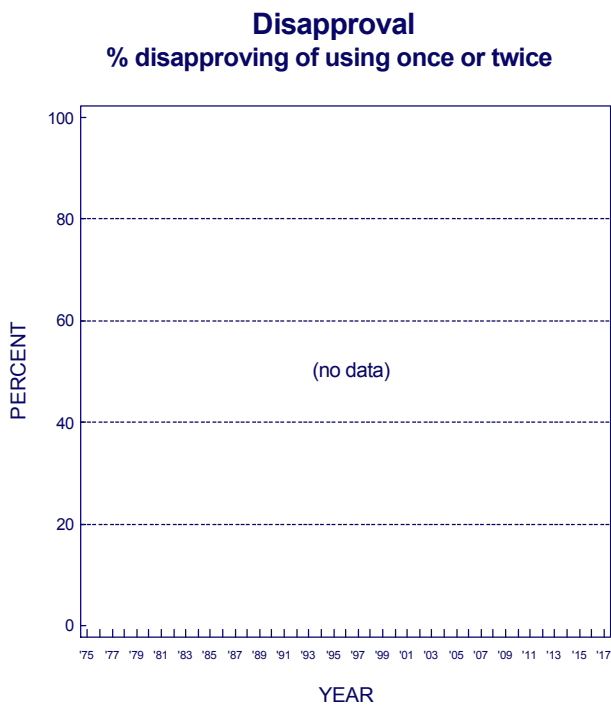
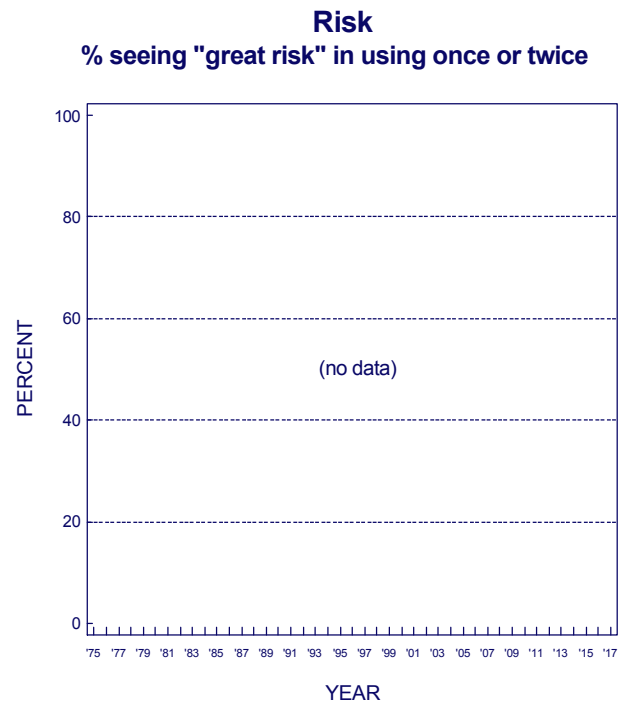
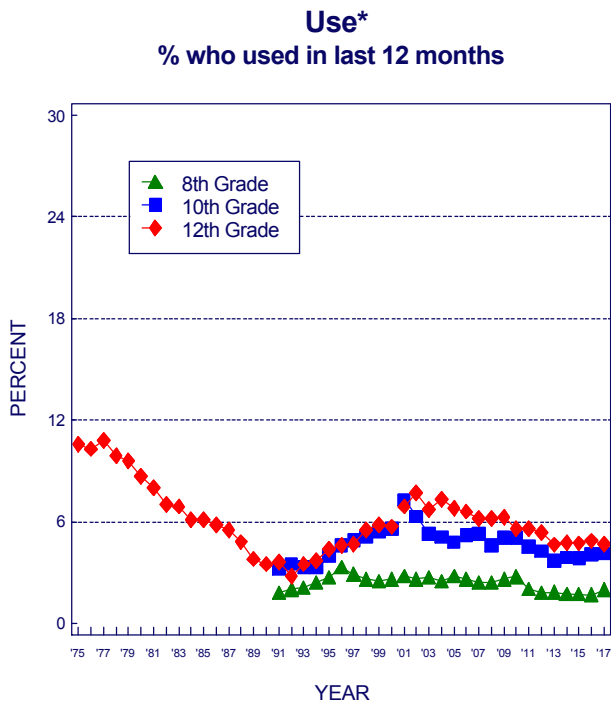
Data have not been collected on perceived risk and disapproval for tranquilizers, primarily due to questionnaire space limitations.

### Availability

As the number of 12<sup>th</sup> graders reporting nonmedically prescribed tranquilizer use fell dramatically during the 1970s and 1980s, so did the proportion saying that tranquilizers would be fairly or very easy to get. Whether declining use caused the decline in availability or vice versa is unclear. However, 12<sup>th</sup> graders' perceived availability has continued to fall since then, even as use rebounded in the 1990s; it is now down by eight tenths over the life of the study—from 72% in 1975 to 15% by 2017 saying that tranquilizers would be fairly or very easy to get if they wanted some. Availability fell fairly continuously after 1991 in the lower grades, as well, though not as sharply. Since 2014, availability has either leveled or increased in all three grades.



**Tranquilizers : Trends in Annual Use and Availability**  
Grades 8, 10, 12



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

\*Beginning in 2001, a revised set of questions on tranquilizer use was introduced in which Xanax replaced Miltown in the list of examples.

## Sedatives (Barbiturates)

---

Like tranquilizers, sedatives are prescription-controlled psychotherapeutic drugs that act as central nervous system depressants. They are used to assist sleep and relieve anxiety.

Though for many years respondents have been asked specifically about their use of barbiturate sedatives, they likely have been including other classes of sedatives in their answers. In 2004, the question on use was revised to say “sedatives/barbiturates”—a change that appeared to have no impact on reported levels of use. Respondents are told for what purposes sedatives are prescribed and are instructed to exclude from their answers any use under medical supervision. Usage data are reported only for 12<sup>th</sup> graders because we believe that 8<sup>th</sup> and 10<sup>th</sup> grade students tend to over report use, perhaps including in their answers their use of nonprescription sleep aids or other over-the-counter drugs.

### Trends in Use

As with tranquilizers, the use of sedatives (barbiturates) fell steadily among 12<sup>th</sup> graders from the mid-1970s through the early 1990s. From 1975 to 1992, annual prevalence fell by three fourths, from 10.7% to 2.8%. As with many other drugs, a gradual, long-term resurgence in sedative use occurred after 1992, but unlike the case with most illegal drugs, sedative (barbiturate) use continued to rise steadily through 2005, well beyond the point at which the use of most illegal drugs began falling. (Recall that tranquilizer use also continued to rise into the early 2000s.) Use has declined some since 2005, and by 2017 the annual prevalence rate was down by about six tenths from its recent peak, falling to 2.9%. The sedative methaqualone (known as Quaaludes) was included in the MTF study from the very beginning, and was never as popular among 12<sup>th</sup> graders as barbiturates; use rates have generally been declining since 1975, reaching an annual prevalence of just 0.5% in 2007, about where it remained through 2012, after which the question was dropped.

### Perceived Risk

Trying sedatives (barbiturates) was never seen by most students as very dangerous; and it is clear from the upper

right panel on the facing page that changes in perceived risk cannot explain the trends in use that occurred from 1975 through 1986, when perceived risk was actually declining along with use. But then perceived risk shifted up some through 1991 while use was still falling. It dropped back some through 1995, as use was increasing, and then remained relatively stable for a few years. Perceived risk has generally been at quite low levels, which may help to explain why the use of this class of psychotherapeutic drugs (and likely others) continued to grow in the first half of the decade of the 2000s. However, perceived risk began to rise a bit after 2000, foretelling the decline in use that began after 2005. When the term “sedatives” was changed to “sedatives/barbiturates” in 2004, the trend line shifted down slightly, but perceived risk continued to climb gradually through 2013, before turning down. Prior to that point use declined as perceived risk rose.

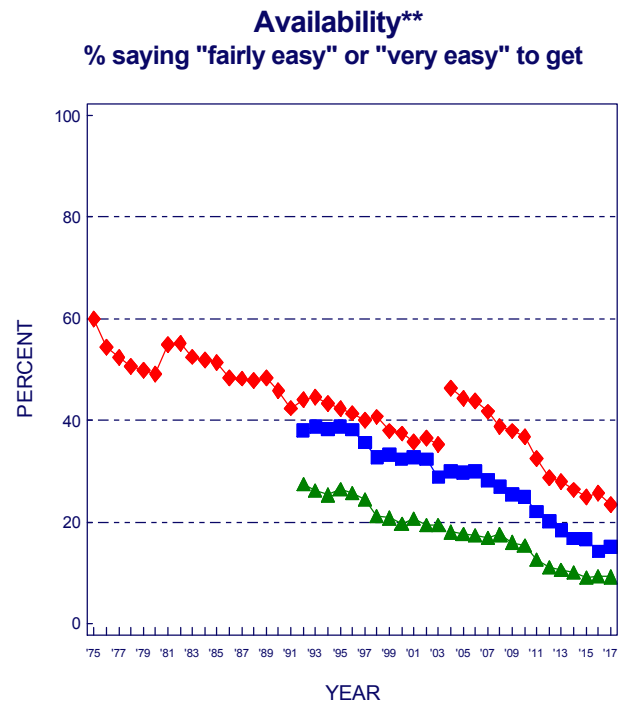
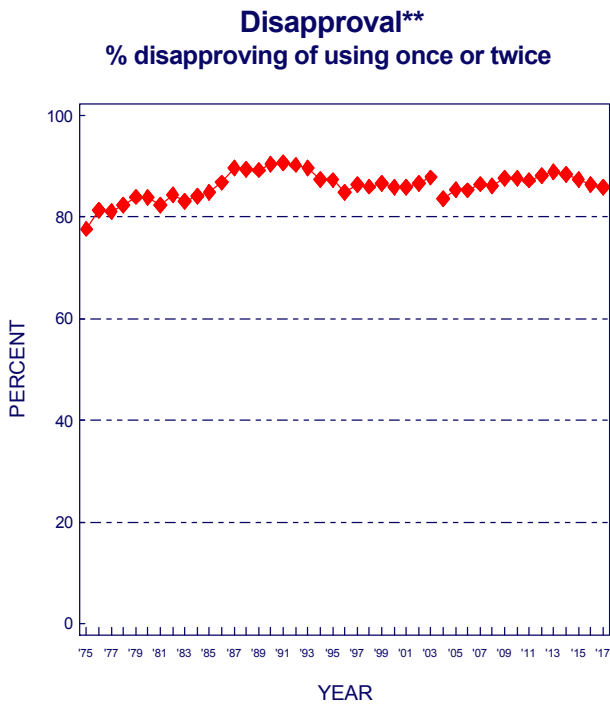
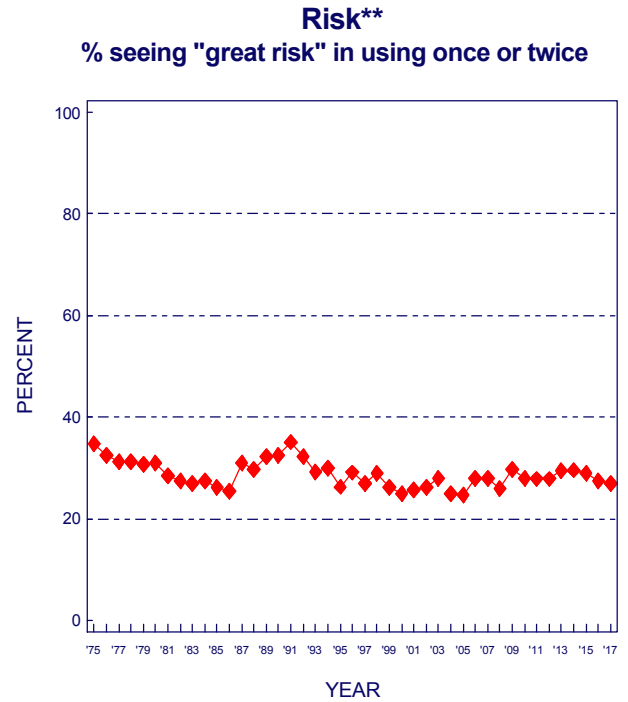
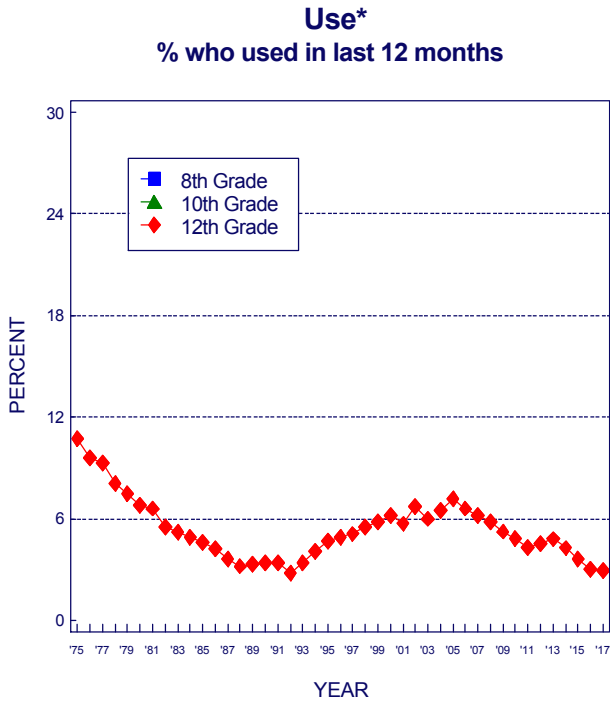
### Disapproval

Like many illicit drugs other than marijuana, sedative (barbiturate) use has received the disapproval of most high school seniors since 1975, with some variation in disapproval rates that have moved consistently with usage patterns. The change in question wording in 2004 appeared to lessen disapproval slightly. There has been a modest increase in disapproval since 2000, although that appears to have stopped in 2014 and has been followed by a slight decrease since then.

### Availability

As the fourth panel on the facing page shows, the perceived availability of sedatives (barbiturates) has generally been declining during most of the life of the study, except for one upward shift that occurred in 1981—a year in which look-alike drugs became more widespread. (The change in question text in 2004 appears to have had the effect of increasing reported availability among 12<sup>th</sup> graders but not among students in the lower grades.) Perceived availability for sedatives (barbiturates) has continued to decline overall through 2017.

**Sedatives (Barbiturates) : Trends in Annual Use, Risk, Disapproval, and Availability**  
 Grades 8, 10, 12



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

\*In 2004 the question text was changed. Barbiturates was changed to Sedatives, including barbiturates and "have you taken barbiturates..." was changed to "have you taken sedatives..." In the list of examples downs, downers, goofballs, yellows, reds, blues, rainbows were changed to downs, or downers, and include Phenobarbital, Tuinal, and Seconal.

\*\*In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2004 results.

## MDMA (Ecstasy, Molly) and Other “Club Drugs”

“Club drugs,” so called because they have been popular at nightclubs and raves, include LSD, MDMA (known as ecstasy, and more recently, Molly), methamphetamine, GHB (gammahydroxybutyrate), ketamine (special K), and Rohypnol. (For discussion of LSD and methamphetamine, see prior pages.) We focus here initially on MDMA (ecstasy, Molly) and treat the other drugs in the last section below.

### Trends in MDMA (Ecstasy, Molly) Use

Ecstasy (3, 4-methylenedioxymethamphetamine or MDMA) is used more for its mildly hallucinogenic properties than for its stimulant properties. Questions on ecstasy use were added to the surveys in 1996.

In 1996, annual prevalence of ecstasy use was 4.6% in 10<sup>th</sup> and 12<sup>th</sup> grades—considerably higher than among college students (2.8%) and young adults (1.7%)—but use declined over the next two years. Use then rose sharply, bringing annual prevalence up to 3.5%, 6.2%, and 9.2% for 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders by 2001. From 2001 to 2005, use declined substantially to 1.7%, 2.6%, and 3.0%, respectively. Following some irregular changes in recent years, in 2014 use was down slightly in 8<sup>th</sup> grade (to 0.9%) and 10<sup>th</sup> grade (to 2.3%) and up slightly in 12<sup>th</sup> grade (to 3.6%). “Molly,” reputedly a purer form of MDMA, received much attention in 2013. Because that term was not used in the 2013 questionnaires, it is not clear whether students included it in their answers about ecstasy use that year. The inclusion of Molly as an example in some of the 2014 questionnaires seemed to make a modest difference in reported prevalence. (The 2014 data reported here show one point based on the unmodified questionnaires and another based on the modified ones for each grade.) After 2014, the change was downward and significantly so by 2016 in all three grades, despite the inclusion of Molly. Use leveled in 2017, however.

### Perceived Risk

In 2001, 12<sup>th</sup> graders’ perceived risk of ecstasy use jumped by 8 percentage points and in 2002, by another seven. Significant increases occurred in 2003 for all grades. This sharp rise in perceived risk likely caused the drop in use, as we had predicted. From 2004 to 2011, we saw a troubling drop in perceived risk (first among 8<sup>th</sup> and 10<sup>th</sup>, and then among 12<sup>th</sup> graders), corresponding to the increase in use in the upper two grades and then in all three grades. This suggests a generational forgetting of the dangers of ecstasy use. In 2012, only 8<sup>th</sup> graders showed

much further decline. The rebound in use after 2004 might be explained by the sizable drop in perceived risk. The addition of Molly as an example caused a considerable jump in perceived risk after 2013 in grades 8 and 10, suggesting that they see it as more dangerous than ecstasy.

### Disapproval

Disapproval of ecstasy use declined some after 1998 but increased significantly in all three grades in 2002, perhaps due to the rise in perceived risk. The rise in disapproval continued through 2003 for 8<sup>th</sup>, 2004 for 10<sup>th</sup>, and 2006 for 12<sup>th</sup> graders, suggesting some cohort effect in this attitude. After those peaks, disapproval dropped sharply among 8<sup>th</sup> graders and less among 10<sup>th</sup> graders before leveling, and it did not drop among 12<sup>th</sup> graders until 2010—again suggesting a cohort effect. Since 2015 there has been a further decline in disapproval in the lower two grades. The erosion in perceived risk and disapproval—which was sharpest among 8<sup>th</sup> graders—left these groups more vulnerable to a possible rebound in use; some rebound appears to have occurred during the past decade.

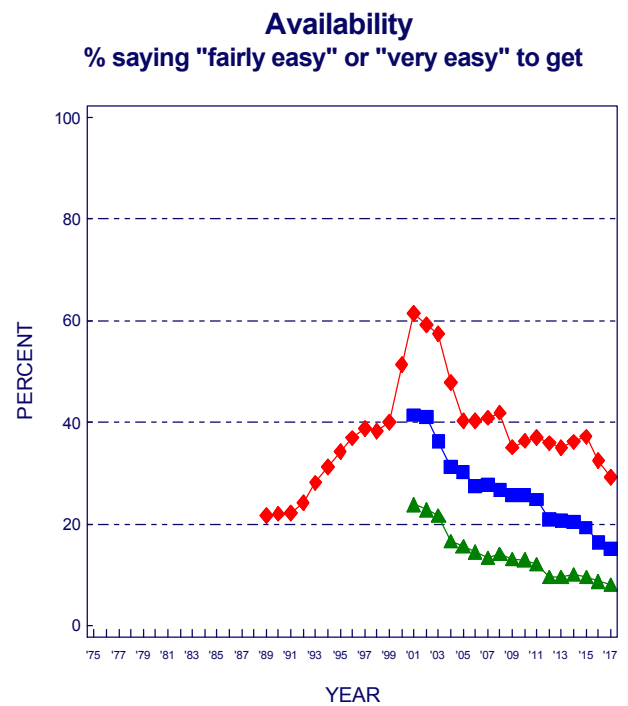
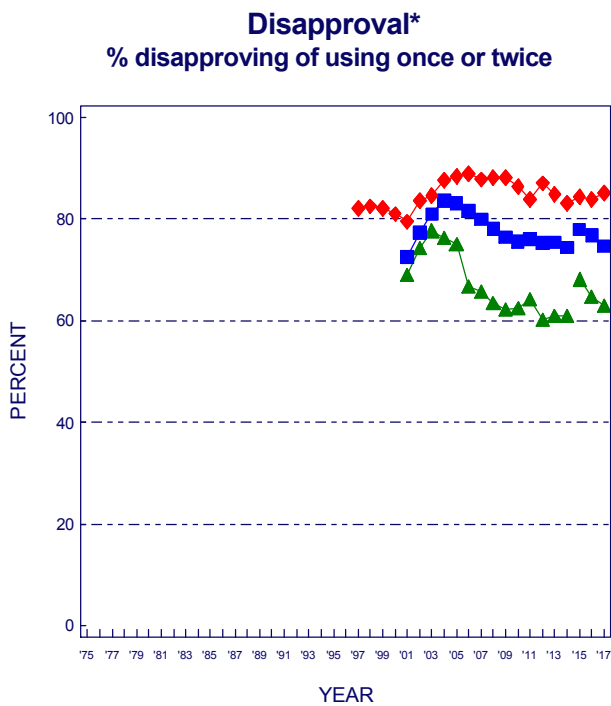
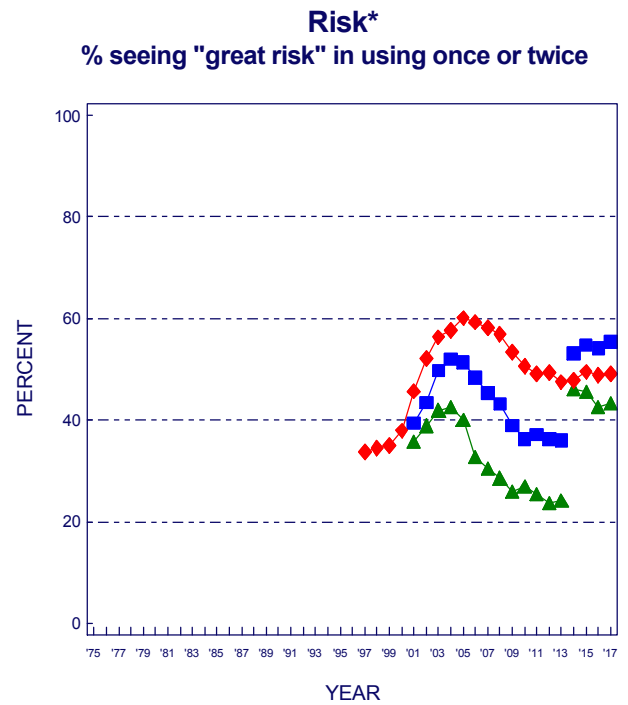
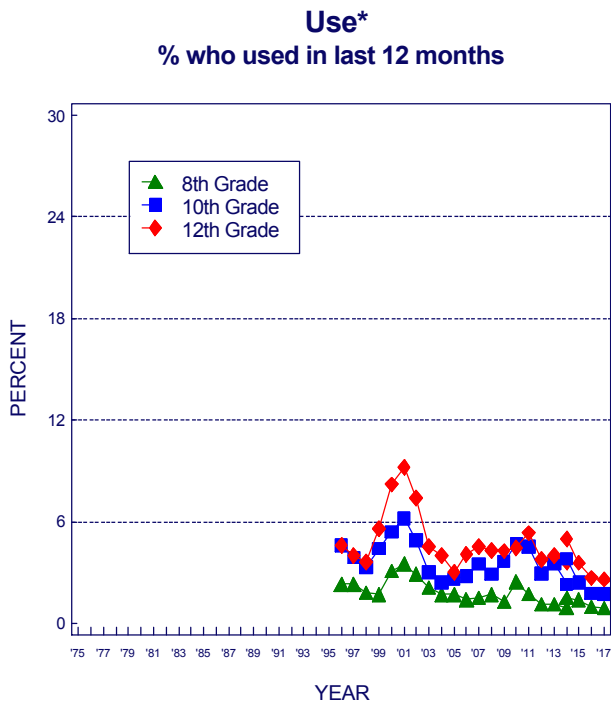
### Availability

The figure shows a dramatic rise in 12<sup>th</sup> graders’ perceived availability of ecstasy after 1991, particularly between 1999 and 2001, consistent with informal reports about growing importation of the drug. Perceived availability then declined considerably in all grades, including significant declines in 2016 at 10<sup>th</sup> and 12<sup>th</sup> grades. Decreased availability may help to account for the declines in use in the past few years.

### Rohypnol, GHB, and Ketamine

*Rohypnol*, *GHB*, and *ketamine* are called “date rape drugs” because they can have amnesiac effects and can be added to food or drink without a victim’s knowledge. By 2017 annual prevalence of all these drugs in 12<sup>th</sup> grade had declined by at least half since reaching their peak prevalence in the mid-1990s and early 2000s. In 2017, 0.8% of 12<sup>th</sup> grade students had used Rohypnol in the last year, compared to a high of 1.6% in 2002 (when the question was last updated). The 0.4% annual prevalence of GHB in 2017 compares with a level of 1.9% in 2000. And the 1.2% prevalence of ketamine in 2017 compares with a level of 2.5% in 2000. In 8<sup>th</sup> and 10<sup>th</sup> grades the levels of Rohypnol were 0.4% or less in 2017. (Questions about GHB and ketamine were discontinued in these grades in 2012 due to low prevalence and to make room for questions on other drugs).

**Ecstasy (MDMA) : Trends in Annual Use, Risk, Disapproval, and Availability**  
 Grades 8, 10, 12



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

\*In 2014/2015, revised sets of questions on ecstasy were introduced in which molly was added to the description. This likely explains the discontinuity in the results for those years.

## Alcohol

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Alcohol has been widely used by young people in the U.S. for a very long time. In 2017, the proportions of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders who reported drinking an alcoholic beverage in the 30-day period prior to the survey were 8%, 20%, and 33%, respectively. Various measures of alcohol use are presented in the tables at the end of this report. Here we focus on episodic heavy or “binge” drinking (defined as having five or more drinks in a row on one or more occasions in the prior two weeks) because heavy alcohol consumption is of substantial concern from a public health perspective.

### Trends in Use

Among 12<sup>th</sup> graders, binge drinking peaked in 1979 along with overall illicit drug use. The prevalence of binge drinking then declined substantially from 41% in 1983 to 28% in 1992, a drop of almost one third (also the low point of any illicit drug use). Although illicit drug use rose sharply in the 1990s, binge drinking rose by only a small fraction, and that rise was followed by some decline at all three grades. By 2017, proportional declines since the recent peaks reached in the 1990s were 72%, 59%, and 47% for grades 8, 10, and 12, respectively (Table 8). The observed prevalence of binge drinking continued to decline in 2016 but halted in all grades in 2017, as did most of the other measures of alcohol use, thus raising the possibility that the long-term decline in alcohol use may be over. The binge drinking rates in 2017 were 4%, 10%, and 17% for grades 8, 10, and 12, respectively— all up slightly from 2016.

In 2005 two measures of extreme binge drinking (also called high intensity drinking) were introduced at 12<sup>th</sup> grade—one based on having 10 or more drinks on one or more occasions in the past two weeks, and the other based on having 15 or more drinks (see Table 9).

It should be noted that there is little evidence of any displacement effect in the aggregate between alcohol and marijuana—a hypothesis frequently heard. The two drugs have moved mostly in parallel over the decades rather than in opposite directions.

### Perceived Risk

Across the past four decades, since the MTF study began,

the majority of 12<sup>th</sup> graders have not viewed binge drinking on weekends as carrying a great risk. However, an increase from 36% to 49% occurred between 1982 and 1992 as use declined substantially. By 1997 a decline in risk occurred (to 43%) as use rose, before risk stabilized. After 2003, perceived risk rose in all grades, at least through 2011 or 2012, after which it either leveled or declined some in all grades. These changes are consistent with changes in actual binge drinking. We believe that the public service advertising campaigns in the 1980s against drunk driving, as well as those that urged use of designated drivers when drinking, contributed to the increase in perceived risk of binge drinking generally. Drunk driving by 12<sup>th</sup> graders declined during that period by an even larger proportion than binge drinking. Also, we showed that increases in the minimum drinking age during the 1980s were followed by reductions in drinking and increases in perceived risk associated with drinking, policy-driven effects that may still be deterring alcohol use among adolescents.<sup>13</sup>

### Disapproval

Disapproval of weekend binge drinking moved fairly parallel with perceived risk, suggesting that such drinking (and very likely the drunk-driving behavior associated with it) became increasingly unacceptable in the peer group. Note that the rates of disapproval and perceived risk for binge drinking are higher in the lower grades than in 12<sup>th</sup> grade. As with perceived risk, disapproval increased appreciably in all grades, though it leveled after 2012 among 8<sup>th</sup> graders and after 2016 in 10<sup>th</sup> and 12<sup>th</sup> grades.

### Availability

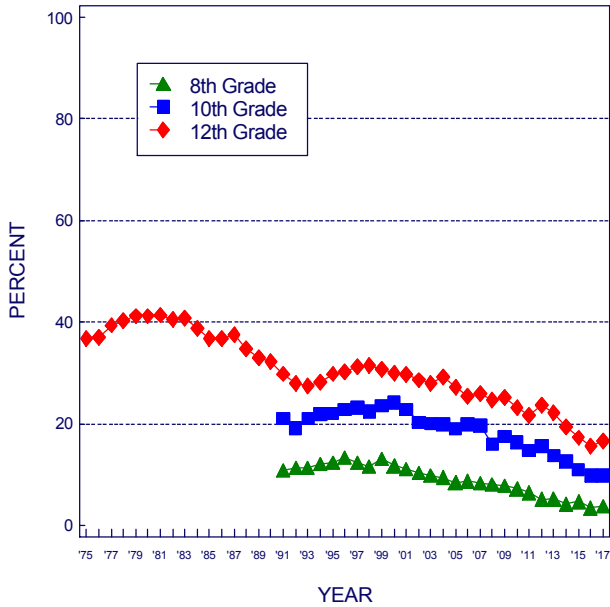
Perceived availability of alcohol, which until 1999 was asked only of 8<sup>th</sup> and 10<sup>th</sup> graders, was very high and mostly steady in the early 1990s. Since 1996, however, there have been substantial declines in 8<sup>th</sup> and 10<sup>th</sup> grades. For 12<sup>th</sup> grade, availability has declined only modestly with 87% in 2017 still saying that alcohol would be fairly or very easy to get. Overall, it appears that states, communities, and parents have been successful in reducing adolescents’ access to alcohol, particularly among the younger teens. Much room for further declines in availability still remains, however.

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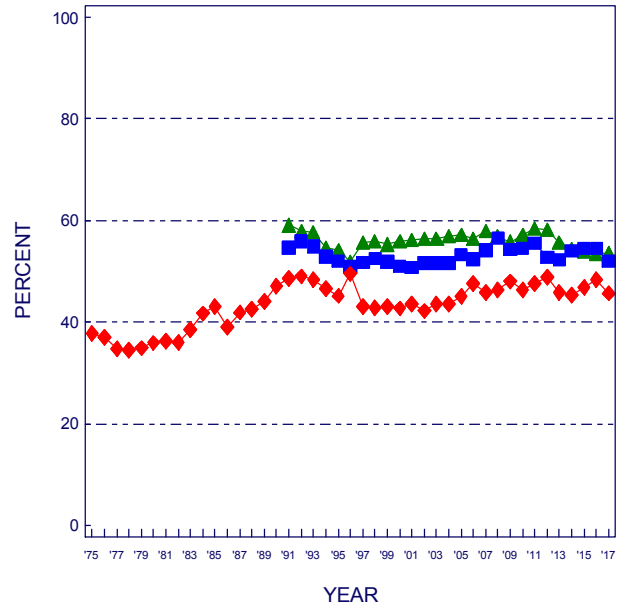
<sup>13</sup> O'Malley, P. M., & Wagenaar, A. C. (1991). Effects of minimum drinking age laws on alcohol use, related behaviors, and traffic crash involvement among American youth: 1976-1987. *Journal of Studies on Alcohol*, 52, 478-491.

**Alcohol: Trends in Binge Drinking, Risk, Disapproval, and Availability**  
 Grades 8, 10, 12

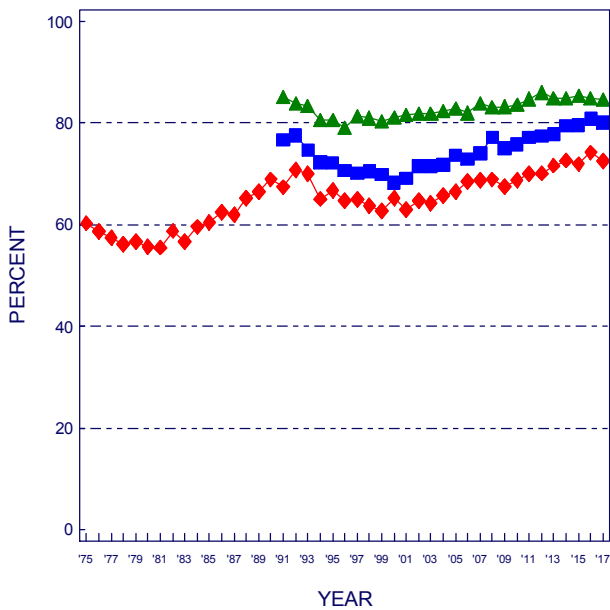
**Use**  
 % who had 5+ drinks in a row at least once in past two weeks



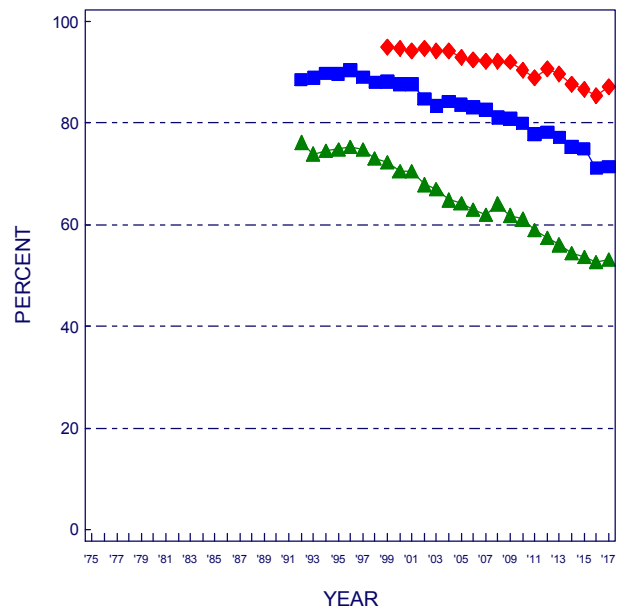
**Risk**  
 % seeing "great risk" in having 5+ drinks in a row once or twice each weekend



**Disapproval**  
 % disapproving of having 5+ drinks in a row once or twice each weekend



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



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



## Cigarettes

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Cigarette smoking is the leading cause of preventable disease and mortality in the United States, and is usually initiated in adolescence. That makes what happens with cigarette smoking in adolescence particularly important to study.

### Trends in Use

Differences in smoking rates between various birth cohorts (or, in this case, school class cohorts) tend to stay with those cohorts throughout the life cycle. This means that it is critical to prevent smoking very early. It also means that the trends in a given historical period may differ across various grade levels as changes in use occurring earlier in adolescence work their way up the age spectrum (i.e., as “cohort effects”).

Among 12<sup>th</sup> graders, 30-day prevalence of smoking reached a peak in 1976 at 39% (likely having peaked earlier at lower grade levels as these same class cohorts passed through them in previous years.) After about a one quarter drop in 12<sup>th</sup>-grade 30-day prevalence between 1976 and 1981, the rate remained remarkably stable until 1992 (28%). In the 1990s, smoking began to rise sharply, after 1991 among 8<sup>th</sup> and 10<sup>th</sup> graders and after 1992 among 12<sup>th</sup> graders. Over the next four to five years, smoking rates increased by about one half in the lower two grades and by almost one third in grade 12—very substantial increases, to which MTF drew considerable public attention. Smoking peaked in 1996 for 8<sup>th</sup> and 10<sup>th</sup> graders and in 1997 for 12<sup>th</sup> graders before beginning a fairly steady and substantial decline that continued through 2004 for 8<sup>th</sup> and 10<sup>th</sup> graders. Between the peak levels in the mid-1990s and 2004, 30-day prevalence of smoking declined by 56% in 8<sup>th</sup> grade, 47% in 10<sup>th</sup>, and 32% in 12<sup>th</sup>. This important decline in adolescent smoking decelerated after about 2002. *Still, by 2017, 30-day prevalence levels had fallen from peak levels by 91%, 84%, and 74% in grades 8, 10, and 12, respectively.* An increase in 2009 in federal taxes on cigarettes (from \$0.39 to \$1.01 per pack) may have contributed to the recent decline in use. Of particular importance, smoking initiation by 8<sup>th</sup> graders declined by four fifths from a peak of 49% in 1996 to 9% by 2017. These changes are of tremendous importance to the eventual health and longevity of this generation of adolescents.

### Perceived Risk

Among 12<sup>th</sup> graders, the proportion seeing great risk in pack-a-day smoking rose before and during the first

period of decline in use in the late 1970s. It leveled in 1980 (before use leveled), declined a bit in 1982, but then started to rise again gradually for five years. (It is possible that cigarette advertising effectively offset the influence of rising perceptions of risk during that period.) Perceived risk fell some in the early 1990s at all three grade levels as use increased sharply. Since then, there has generally been an increase (though not entirely consistently over the years) in perceived risk, reaching in 2015 the highest levels yet observed in grades 8 and 10 and close to the highest in grade 12. Risk has fallen back some in 10<sup>th</sup> and 12<sup>th</sup> grades over the past two to three years, and has remained fairly level among 8<sup>th</sup> graders for the past six years. Note the differences in the extent of perceived risk among grade levels. There is a clear age effect: by the time most youngsters fully appreciate the hazards of smoking, many already have initiated the behavior.

### Disapproval

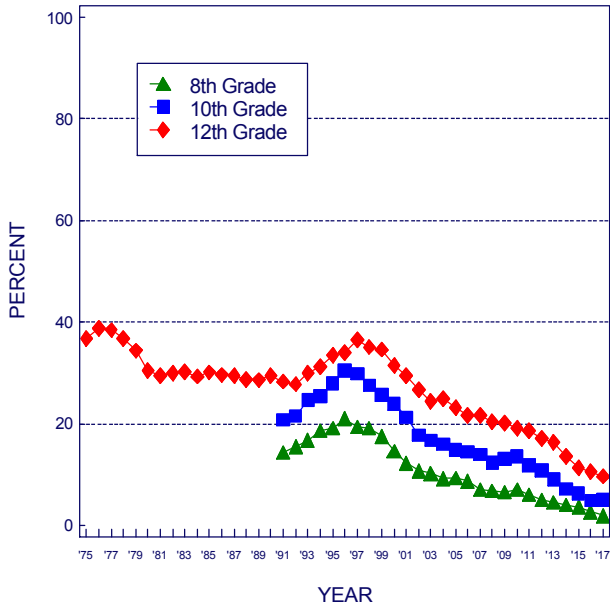
Disapproval rates for pack-a-day smoking have been fairly high throughout the study and, unlike perceived risk, have been higher in the lower grade levels, though as risk has risen, the differences have almost been eliminated. Among 12<sup>th</sup> graders, there was a gradual increase in disapproval of smoking from 1976 to 1986, followed by some erosion over the next decade through 1997. After 1997, disapproval rose for some years in all three grades, but leveled briefly after 2006 or 2007, before rising even more. We measure a number of other smoking-related attitudes; these became increasingly negative, but leveled off seven or eight years ago (see Table 3 in the [2016 MTF press release](#) on teen tobacco use). So, disapproval has leveled in the lower grades, perceived risk is declining in the upper grades, and other attitudes and beliefs about cigarette smoking are no longer moving in a direction that would discourage use. This suggests that external changes in the environment may be required to further reduce youth smoking.

### Availability

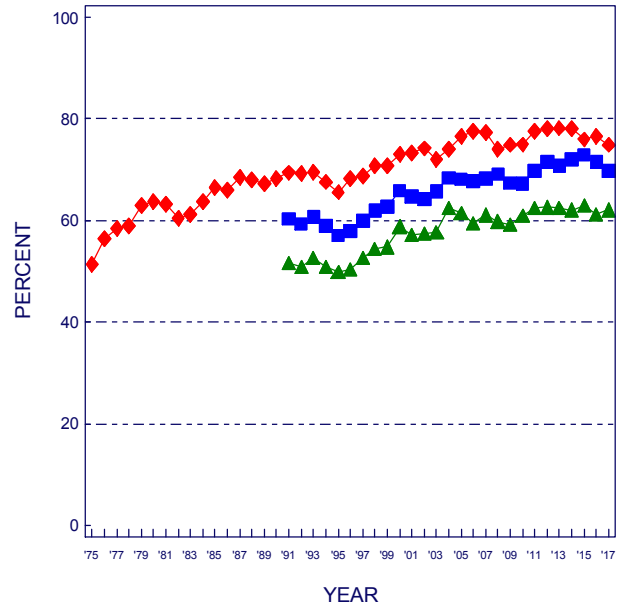
Since 1996, cigarette availability has declined considerably among 8<sup>th</sup> and 10<sup>th</sup> graders, at least until 2017 when both grades leveled. Some 46% of 8<sup>th</sup> graders and 63% of 10<sup>th</sup> graders now say that cigarettes would be very easy or fairly easy to get, down from 78% in 1992 among 8<sup>th</sup> graders and 91% in 1995 among 10<sup>th</sup> graders.

**Cigarettes : Trends in 30-Day Use, Risk, Disapproval, and Availability**  
 Grades 8, 10, 12

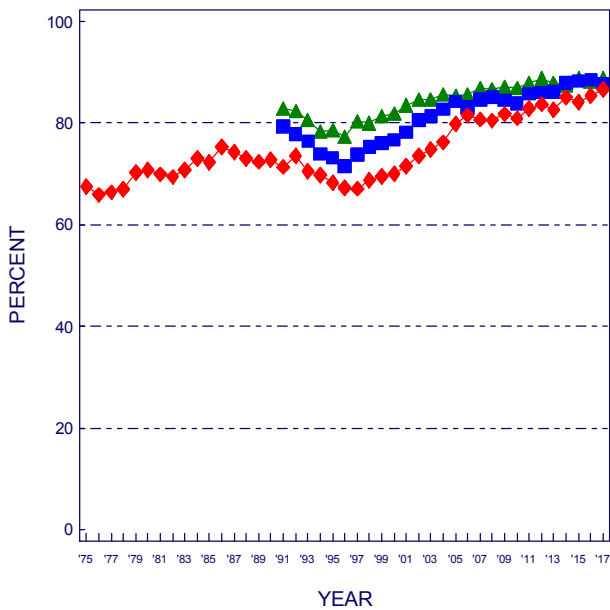
**Use**  
 % who used in last 30 days



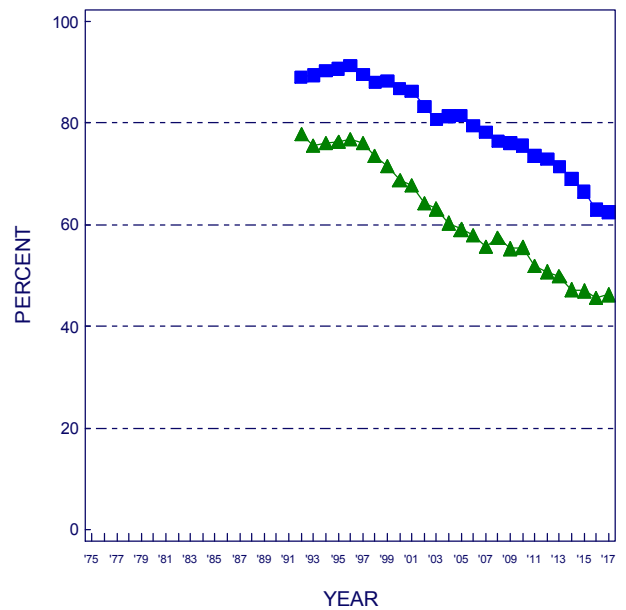
**Risk**  
 % seeing "great risk" in smoking a pack or more per day



**Disapproval**  
 % disapproving of smoking a pack or more per day



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



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

## Smokeless Tobacco

Traditionally, smokeless tobacco has come in two forms: “snuff” and “chew.” Snuff is finely ground tobacco usually sold in tins, either loose or in packets. It is held in the mouth between the lip or cheek and the gums. Chew is a leafy form of tobacco, usually sold in pouches. It too is held in the mouth and may, as the name implies, be chewed. In both cases, nicotine is absorbed by the mucous membranes of the mouth. These forms are sometimes called “spit” tobacco because users expectorate the tobacco juices and saliva (stimulated by the tobacco) that accumulate in the mouth. “*Snus*” (rhymes with goose) is a relatively new variation on smokeless tobacco, as are some other *dissolvable tobacco* products that literally dissolve in the mouth. Given that snus appeared to be gaining in popularity, separate items regarding the use of snus and dissolvable tobacco in the past 12 months were added to the 12<sup>th</sup> grade surveys in 2011 and to the 8<sup>th</sup> and 10<sup>th</sup> grade surveys in 2012. In addition, in 2011 snus and dissolvable tobacco were added as examples in the long-standing question on smokeless tobacco.

### Trends in Use

The use of smokeless tobacco by teens has been decreasing gradually, and 30-day prevalence is now less than half of the recent peak levels in the mid-1990s, though there was a reversal of the declines from about 2007 through 2010. Among 8<sup>th</sup> graders, 30-day prevalence declined from a 1994 peak of 7.7% to 3.2% in 2007, reached a low of 2.8% in 2013, and then fell even lower to 1.7% by 2017. Among 10<sup>th</sup> graders, use declined from a 1994 peak of 10.5% to 4.9% by 2004, and then rose to 6.4% in 2013 before dropping again to 3.8% in 2017. Among 12<sup>th</sup> graders, 30-day use declined from a 1995 peak of 12.2% to 6.1% by 2006 then rose to 8.5% in 2010, before falling back to 4.9% in 2017. Thirty-day prevalence of daily use of smokeless tobacco fell gradually but appreciably for some years. Daily usage rates in 2017 were 0.4%, 0.6%, and 2.0% in grades 8, 10, and 12, respectively—down substantially from peak levels recorded in the 1990s—but most of the declines occurred in the 1990s, not since.

Smokeless tobacco use among American young people is almost exclusively a male behavior. Among males, the 30-day prevalence rates in 2017 were 2.2%, 6.1%, and 9.9% in grades 8, 10, and 12, versus 1.3%, 1.5%, and

0.7% for females. The respective current daily use rates for males were 0.5%, 1.2%, and 4.0% compared to 0.2%, 0.1%, and 0.2% for females.

Annual prevalence in 2017 for *snus* was 1.1%, 2.6%, and 4.2% among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders, respectively, reflecting a decline since 2012 in all three grades. For *dissolvable tobacco*, the corresponding figures were 0.6%, 0.6%, and 1.4%, reflecting little change since 2012. (See Table 6 for trends.)

### Perceived Risk

The most recent low point in the level of perceived risk for smokeless tobacco was 1995 in all three grades (though for 12<sup>th</sup> graders it was considerably lower in the mid-1980s). For a decade following 1995, there was a gradual but substantial increase in proportions saying that there is a great risk in using smokeless tobacco regularly. It thus appears that one important reason for the appreciable declines in smokeless tobacco use during the latter half of the 1990s was that an increasing proportion of young people were persuaded of the dangers of using it. However, the increases in perceived risk ended by 2004 in 12<sup>th</sup> grade, and it has declined some in the interval since then in all grades. The decline could be due to generational forgetting of the dangers of use, the increased marketing of snus and other smokeless products, and/or public statements about smokeless tobacco use being relatively less dangerous than cigarette smoking. In the last two to three years, perceived risk has leveled in all three grades.

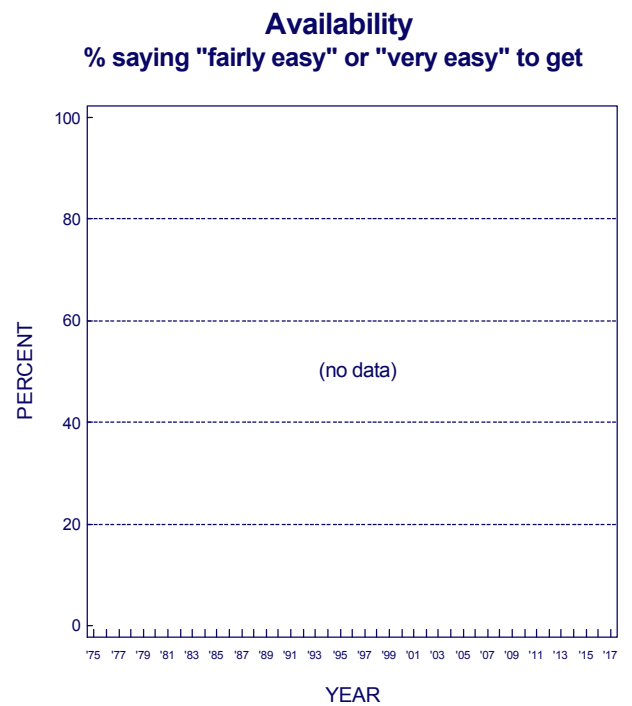
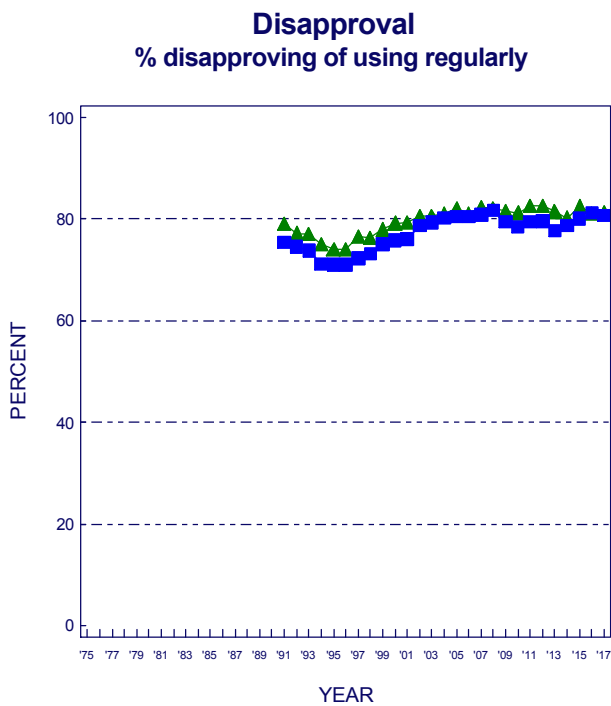
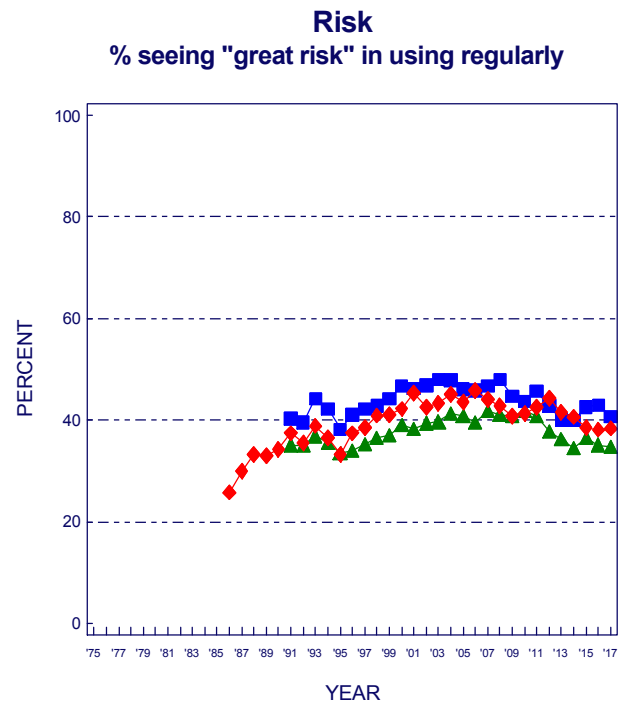
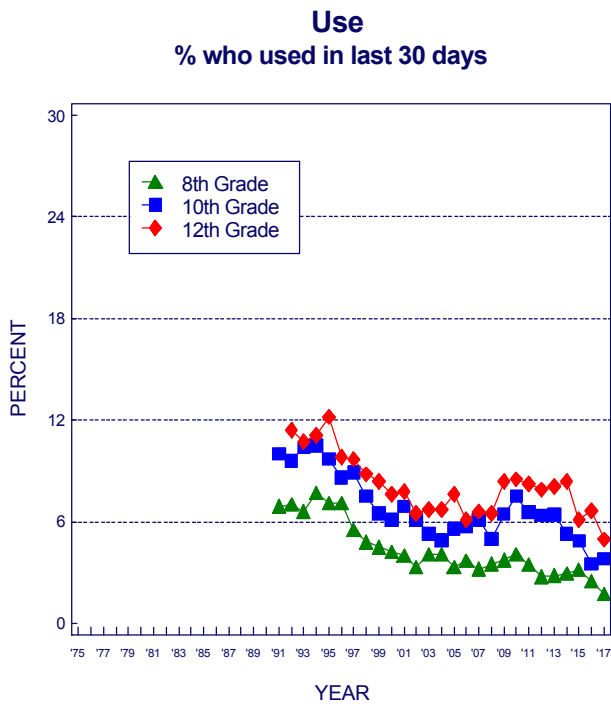
### Disapproval

Only 8<sup>th</sup> and 10<sup>th</sup> graders are asked about their personal disapproval of using smokeless tobacco regularly. The most recent low points for disapproval in both grades were 1995 and 1996. Disapproval rose among 8<sup>th</sup> graders from 74% in 1996 to 82% in 2005, about where it was in 2017 (81%). For 10<sup>th</sup> graders, disapproval rose from 71% in 1996 to 82% in 2008, also about where it was in 2017 (81%).

### Availability

There are no questions on perceived availability of smokeless tobacco.

**Smokeless Tobacco : Trends in 30-Day Use, Risk, and Disapproval**  
Grades 8, 10, 12



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

## Vaping

Vaping involves the use of a battery-powered device to heat a liquid or plant material that releases chemicals in an inhalable vapor or aerosol, or mist. Examples of vaping devices include e-cigarettes, “mods,” and e-pens. The vapor may contain nicotine, the active ingredients of marijuana, flavored propylene glycol, and/or flavored vegetable glycerin. The liquid that is vaporized comes in hundreds of flavors, many of which (e.g., bubble gum and milk chocolate cream) likely are attractive to teens.

MTF questions on vaping were revised for the 2017 survey. They now include separate questions on vaping of nicotine, marijuana, and “just flavoring.” Questions in previous years asked only about vaping in general, and then asked about the substance vaped at last use. With the revised questions we provide the first published estimates for vaping of specific substances in the past 30 days, past 12 months, and lifetime.

### Trends in Use

Levels of *marijuana vaping* are considerable. In 2017, 3%, 8%, and 10% of 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup>, graders respectively reported vaping marijuana in the past 12 months. These annual levels are only 20% to 25% lower than the levels for *lifetime* prevalence of vaping marijuana, indicating that marijuana vaping is a recent phenomenon.

Levels of *nicotine vaping* are also considerable, with 19% of 12<sup>th</sup> graders vaping nicotine in the past year. The annual prevalence levels were 8% and 16% for 8<sup>th</sup> and 10<sup>th</sup> graders, respectively. Additional students may get nicotine in what they vape without being aware of it, so the estimates should be considered conservative.

“*Just flavoring*” was the substance most commonly vaped, at levels higher than nicotine and marijuana vaping in each grade. Prevalence was 12%, 19%, and 21% in 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grades, respectively, in the past year.

Levels of *overall vaping* in 2017 were similar to 2016 levels, although the measures are not directly comparable. With this caveat, the combined portion of students in 2017 who reported vaping flavoring, marijuana, and/or nicotine was similar to those who reported that they had vaped anything in 2016, with the two respective percentages for use in the past 30 days at 17% in 2017 and 13% in 2016 among 12<sup>th</sup> graders, 13% and 11% for 10<sup>th</sup> graders, and 7% and 6% for 8<sup>th</sup> graders.

Evidence is accumulating, including from MTF, that vaping predicts cigarette experimentation.<sup>14,15</sup> Thus high levels of vaping may offset some of the progress made in reducing smoking among U.S. adolescents. We are closely following these developments.

### Perceived Risk

E-cigarettes are by far the most common vaping device, and the percentage of adolescents who believe that regular e-cigarette use poses a risk of harm increased from 14.5% in 2015 to 20.3% in 2017 in 8<sup>th</sup> grade, from 14.1% to 19.4% in 10<sup>th</sup> grade, and from 14.2% to 16.1% (ns) in 12<sup>th</sup> grade. Still, e-cigarettes have one of the lowest levels of perceived risk for regular use of all drugs, including alcohol.

Adolescents see much different risk for “e-cigarette use” as compared to “vaping nicotine.” The percentage of 12<sup>th</sup> graders who considered “great risk” in regular use of e-cigarettes was 16% as compared to 27% for vaping of nicotine on a regular basis. In 10<sup>th</sup> grade the parallel numbers were 19% and 33%, and in 8<sup>th</sup> grade they were 20% and 38%. These results suggest that many adolescents consider “e-cigarette use” to include vaping of e-liquids that do not contain nicotine.

Note that perceived risk of vaping nicotine on a regular basis *declines* at the higher grades, which is the opposite pattern for perceived risk of cigarette smoking.

### Disapproval

Disapproval of regular use of e-cigarettes also has been relatively low compared to most other substances. However, it did rise in 2016 from 65% to 67% in 8<sup>th</sup> grade and from 60% to 65% in 10<sup>th</sup> grade (the increase was statistically significant in 10<sup>th</sup> grade but not in 8<sup>th</sup> grade; the question is not asked of 12<sup>th</sup> graders.) In 2017 these questions were replaced with questions about disapproval of vaping an e-liquid with nicotine. Such vaping on a regular basis was disapproved by 80%, 75%, and 72% in 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grades.

### Availability

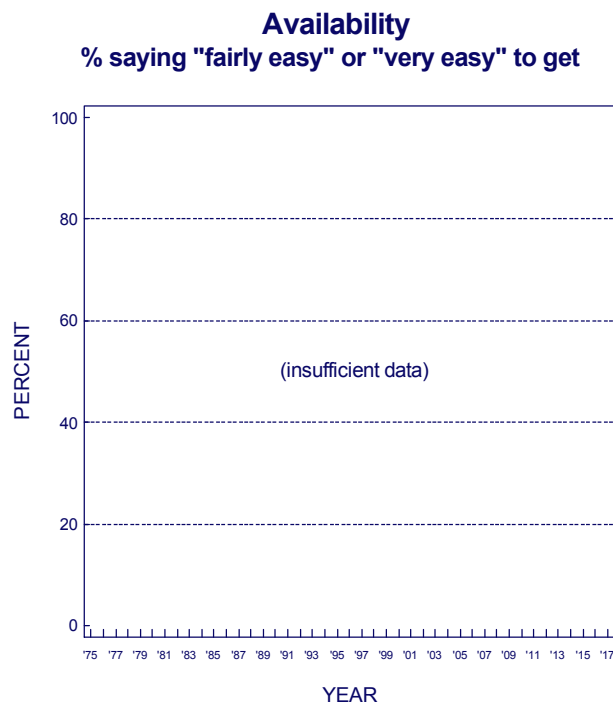
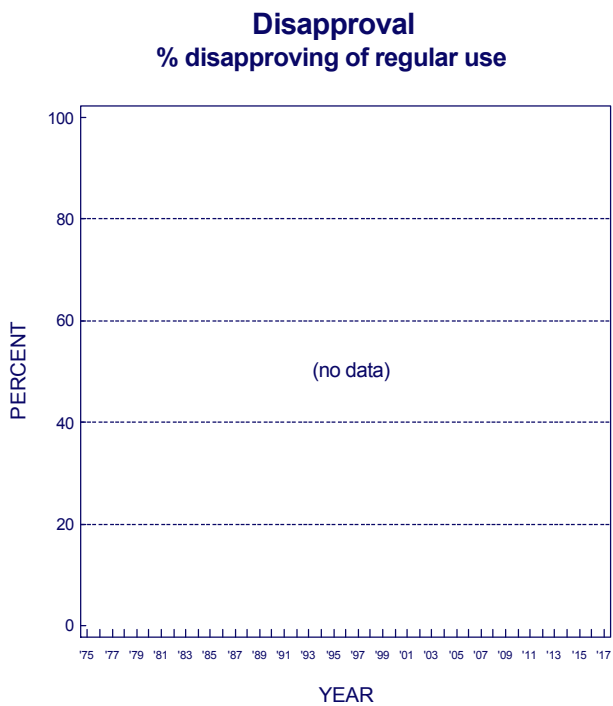
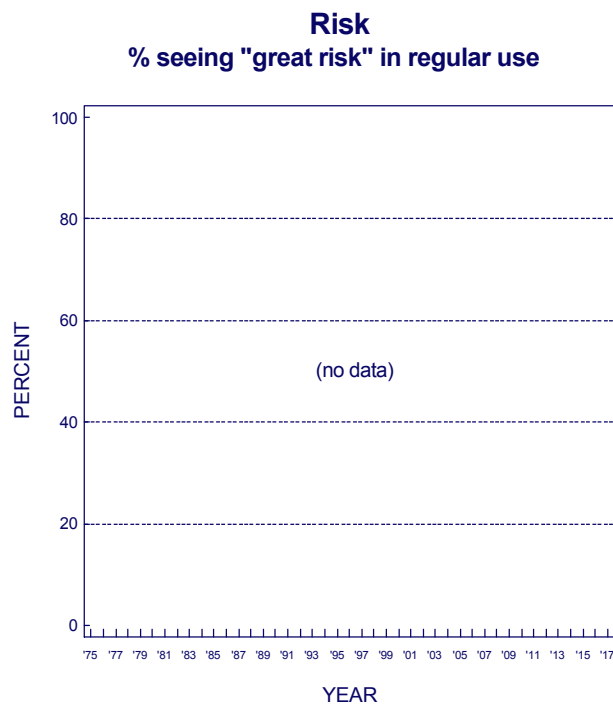
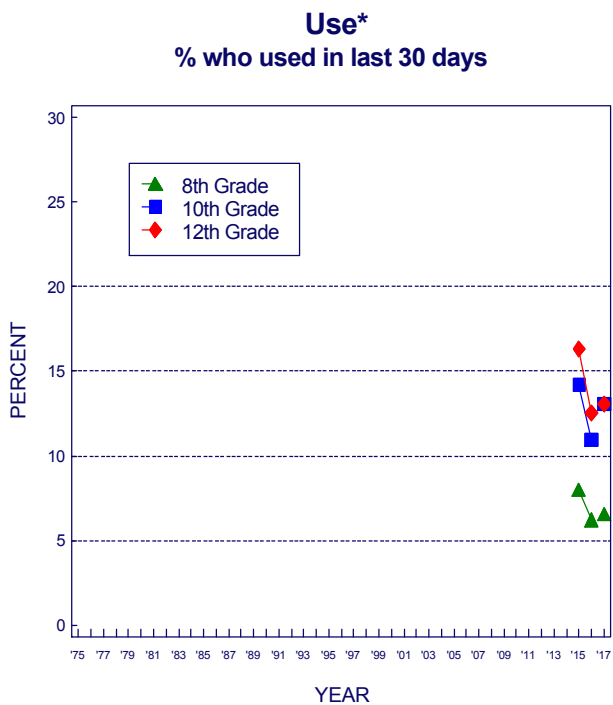
Data on availability of vaping devices or e-cigarettes have not been gathered.

<sup>14</sup> Miech, R. A., Patrick, M. E., O'Malley, P. M., & Johnston, L. D. (2017). E-cigarette use as a predictor of cigarette smoking: Results from a 1-year follow-up of a national sample of 12th grade students. *Tobacco Control*, 26(e2), e106-e111.

<sup>15</sup> Soneji, S., Barrington-Trimis, J. L., Wills, T. A., Leventhal, A. M., Unger, J. B., Gibson, L. A., . . . Sargent, J. D. (2017). Association between initial use of e-cigarettes and subsequent cigarette smoking among adolescents and young

adults: A systematic review and meta-analysis. *JAMA Pediatrics*, 171(8), 788-797.

**Any Vaping: Trends in 30-Day Use**  
Grades 8, 10, 12



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

\*In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and just flavoring. Beginning in 2017, data presented for any vaping are based on these new questions.

## Other Tobacco Products

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Twelfth graders were first asked about smoking small cigars and smoking tobacco using a hookah (water pipe) in 2010. These questions were not asked of 8<sup>th</sup> and 10<sup>th</sup> graders initially, but are now. Only the prevalence and frequency of use in the past 12 months were reported; we use this prevalence period, requiring only a single question (which we call a “tripwire” question) to determine whether additional questions on the substance may be warranted in future surveys. Small cigar and hookah use are charted separately on the facing page.

**Smoking Tobacco Using a Hookah.** The past 12 months prevalence of hookah use had been rising since it was first measured in 2010, from 17.1% in 2010 to 22.9% in 2014; but it then declined sharply to 10.1% in 2017, including a significant decline in all three years. Only about 6% of the 12<sup>th</sup> grade students in 2017 indicated use on more than two occasions during the prior 12 months, suggesting that a considerable amount of hookah use is light or experimental. (Males had been slightly more likely than females to use hookahs, but currently females are slightly more likely.)

**Small Cigars.** Small or little cigars are the approximate size and shape of a cigarette, but they are classified as cigars because they are wrapped in brown paper, which contains some tobacco leaf, rather than in white paper. In 2017, the annual prevalence for small or little cigars (our question uses the term “small cigars”) was 13%. Smoking small cigars has declined significantly since 2010, when annual prevalence was 23%. Unlike hookah smoking, use of small cigars shows a sizable gender difference: the 2017 annual prevalence for 12<sup>th</sup> grade males was 19% compared to 8% for females. The increases in the federal taxes on tobacco products, instituted in 2009, may well have played a role in decreasing the use of small cigars. The tax increase on a pack of small cigars fell under the same regulations as regular cigarettes (rising from \$0.39 to \$1.01 per pack). Some producers of small cigars subsequently increased the weight of their cigars slightly

(taxation is based on weight, with cigars falling into a higher weight class with a lower tax rate) in order to avoid the higher taxes placed on cigarettes and to remove them from FDA control under current law. Seven percent of 12<sup>th</sup> graders indicated having used small cigars on more than two occasions during the past year, and only 1% on more than 20 occasions, so they tend to be smoked much less frequently than regular cigarettes. Some small cigars are flavored, which is likely to make them more attractive to young people. A concern in the public health community is that these products will have the effect of reversing the hard-won gains in reducing cigarette smoking among youth. Small cigars contain nicotine and combustible tobacco as do cigarettes, and therefore carry similar dangers.

**Small (Little) Cigars and Cigarillos.** In a set of questions introduced in 2014 we asked about the use in the prior 30 days of little cigars OR cigarillos. (Cigarillos lie between little cigars and large cigars in size—length and thickness—and are wrapped in tobacco leaf like large cigars. They fall into the lower federal taxation bracket than cigarettes.) The distinction is made between flavored and unflavored (regular) little cigars or cigarillos, and it shows that the flavored ones are more widely used by teens. There was no significant change between 2014 and 2015 in the 30-day prevalence of either type, but in 2016 there were declines in all 3 grades, significant in 8<sup>th</sup> and 12<sup>th</sup> grades, followed by little change in 2017 (Table 7). Thirty-day prevalence in 2017 was 2.6%, 4.0%, and 10.1% for flavored and 1.6%, 3.0%, and 6.6% for regular small cigars or cigarillos in grades 8, 10, and 12, respectively.

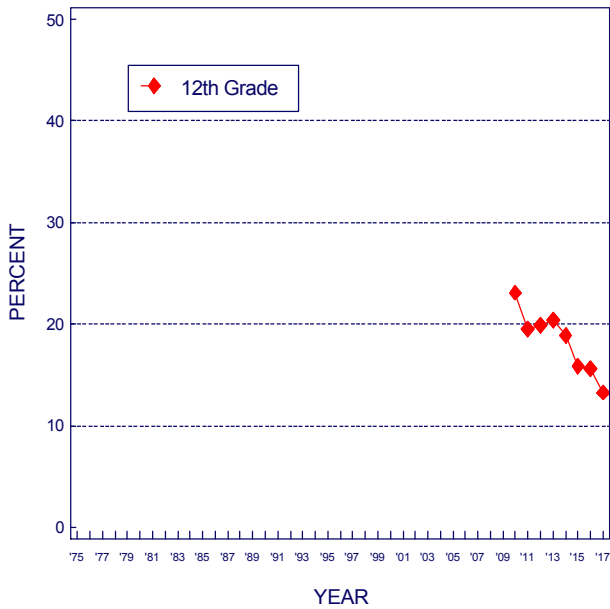
**Large Cigars.** A question on the 30-day prevalence of smoking large cigars also was added in 2014. The rates were 1.5%, 2.6%, and 5.6% in 2017—with all three grades showing declines in 2016 (significant in 8<sup>th</sup> and 10<sup>th</sup> grades) but no significant changes in 2017 (see Table 7).



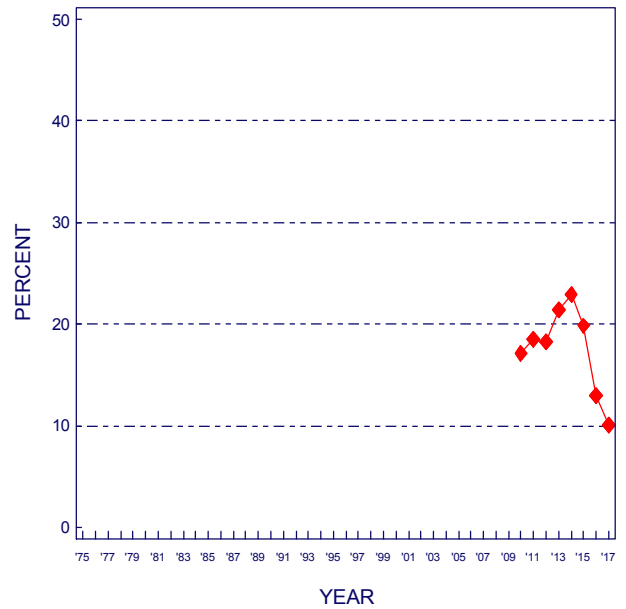
## Small Cigars and Tobacco using a Hookah : Trends in Annual Use

Grade 12

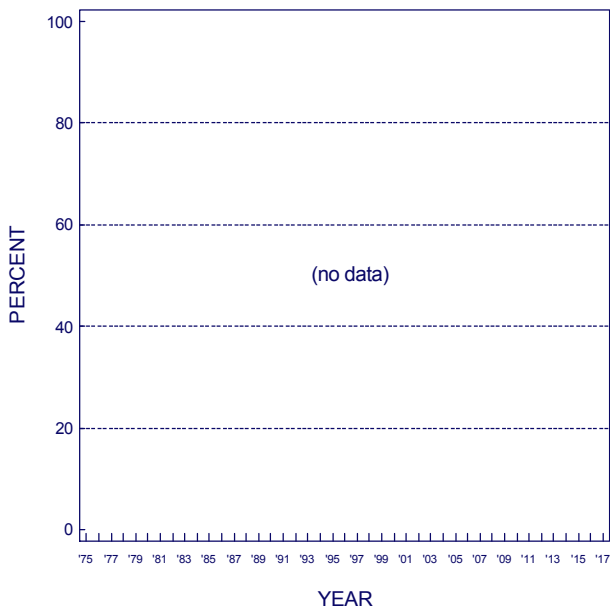
**Small Cigar Use**  
% who used in last 12 months



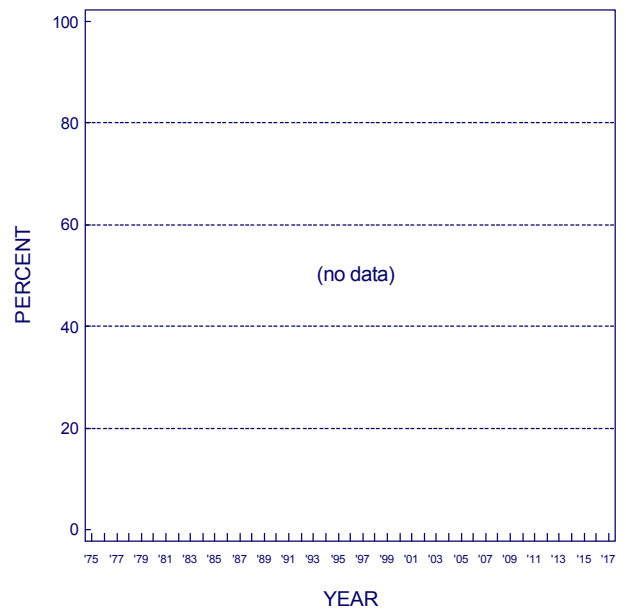
**Use of Tobacco with a Hookah**  
% who used in last 12 months



**Disapproval**  
% disapproving of using once or twice



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



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

## Steroids

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Unlike many other drugs discussed in this Overview, anabolic steroids are not usually taken for their psychoactive effects, though they may have some, but rather for muscle and strength development. However, they are similar to most other drugs studied here in two respects: they are controlled substances for which there is an illicit market, and they can have adverse consequences for the user. Questions about steroid use were added beginning in 1989. Respondents are asked: “Steroids, or anabolic steroids, are sometimes prescribed by doctors to promote healing from certain types of injuries. Some athletes, and others, have used them to try to increase muscle development. The question asks, “On how many occasions (if any) have you taken steroids on your own—that is, without a doctor telling you to take them?” In 2006, the question text was changed slightly in some questionnaire forms—the phrase “to promote healing from certain types of injuries” was replaced by “to treat certain conditions.” The resulting data did not show any effect from this rewording. In 2007, the remaining forms were changed in the same manner.

### Trends in Use

Anabolic steroids have been used predominately by males; therefore, data based on all respondents can mask the higher rates and larger fluctuations that occur among males. (For example, in 2017, annual prevalence rates were 0.6%, 0.8%, and 1.4% for boys in grades 8, 10, and 12, compared with 0.6%, 0.5%, and 0.5% for girls.) Between 1991 and 1998, the overall annual prevalence rate was fairly stable among 8<sup>th</sup> and 10<sup>th</sup> graders, ranging between 0.9% and 1.2% (as use among 12<sup>th</sup> graders increased). In 1999, however, use among both 8<sup>th</sup> and 10<sup>th</sup> graders increased from 1.2% to 1.7%. (Almost all of that increase occurred among boys, increasing from 1.6% in 1998 to 2.5% in 1999 in 8<sup>th</sup> grade and from 1.9% to 2.8% in 10<sup>th</sup> grade.) Thus, rates among boys increased by about half in a single year. The fact that it was the year following Mark McGwire hitting a record number of home runs and admitting using androstenedione (a steroid precursor) is likely not a coincidence. By 2017 among all 8<sup>th</sup> graders, steroid use had declined by about two thirds to 0.6%. Among 10<sup>th</sup> graders, use continued to increase, reaching 2.2% in 2002, but then declined by about two thirds to 0.7% by 2017. In 12<sup>th</sup> grade, there was a different trend story. With data going back to 1989, we can see that steroid use first fell from 1.9% overall in 1989 to 1.1% in 1992—the low point. From 1992 to 2000, there was a

more gradual increase in use, reaching 1.7% in 2000. In 2001, use rose significantly among 12<sup>th</sup> graders to 2.4% (possibly reflecting a cohort effect). Twelfth graders’ use decreased significantly in 2005 to 1.5%, then stayed fairly level through 2015 (1.7%), and then declined significantly in 2016 to 1.1% with little change in 2017. Use is now down from recent peak levels by about two thirds among 8<sup>th</sup> and 10<sup>th</sup> graders, and about six tenths among 12<sup>th</sup> graders. (The use of androstenedione—a steroid precursor—has also declined sharply since 2001, most sharply through 2007. It was classified as a Schedule II controlled substance in 2005 by the DEA.)

### Perceived Risk

Perceived risk and disapproval were asked of 8<sup>th</sup> and 10<sup>th</sup> graders for only a few years. All grades seemed to have a peak in perceived risk around 1993. The longer-term data from 12<sup>th</sup> graders show a ten percentage-point drop between 1998 and 2000. A change this sharp is quite unusual and highly significant, suggesting that some particular event or events in 1998—quite possibly publicity about use of androstenedione by a famous home-run-hitting baseball player—made steroids seem less risky. It seems likely that perceived risk dropped substantially in the lower grades as well, consistent with the sharp upturn in their use that year. By 2006, perceived risk for 12<sup>th</sup> graders was up to 60%, with little change until 2013 when it showed a significant 4.4 percentage point decline. Another significant decline in 2017 of 5.4 percentage points brought it down to 49%, a record low.

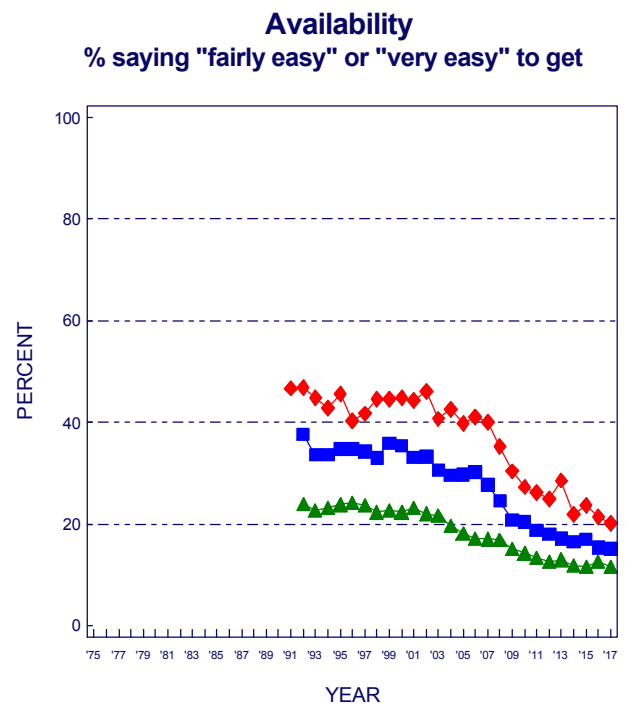
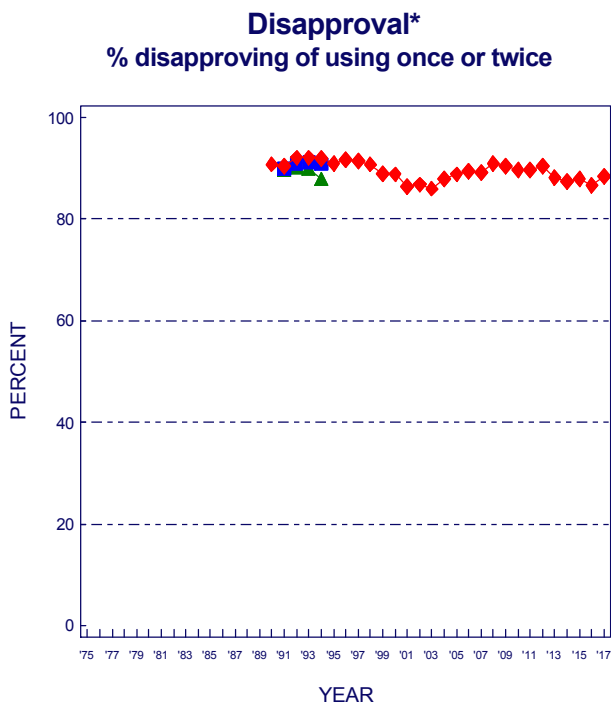
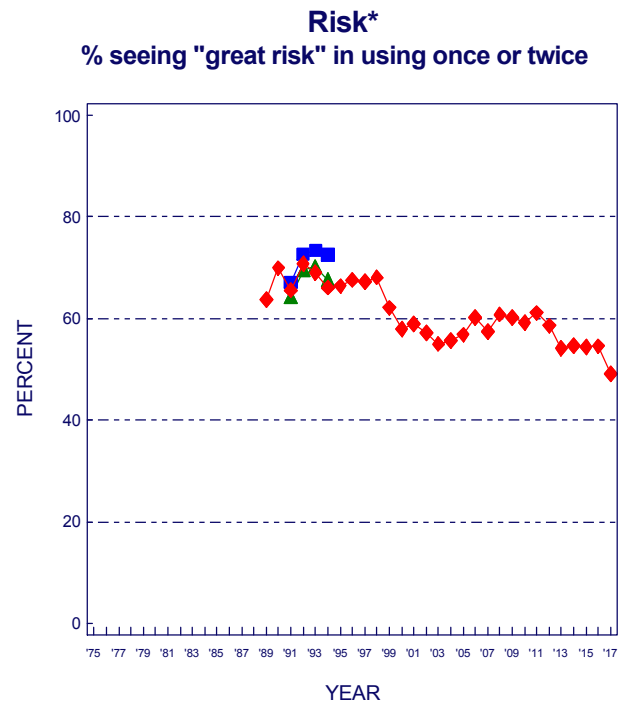
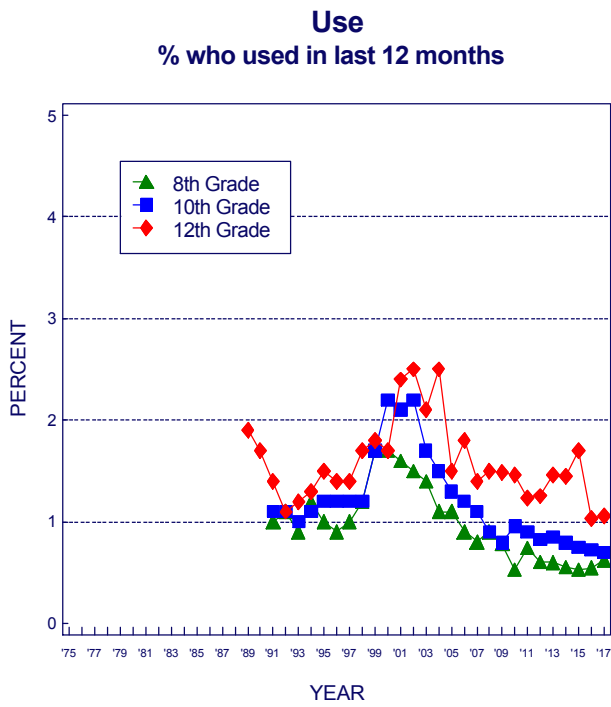
### Disapproval

Among 12<sup>th</sup> graders, disapproval of steroid use has been quite high for some years. Between 1998 and 2003, there was a modest decrease, though not as dramatic as the drop in perceived risk. From 2003 to 2008, disapproval rose some—as perceived risk rose and use declined—then leveled and declined from 2012 through 2014, before leveling.

### Availability

Perceived availability of steroids was relatively high prior to 2001 or 2002, but it has declined appreciably at all grades through 2017 reaching the lowest levels recorded by the study. A number of steroids have been scheduled by the DEA, no doubt contributing to the drop in availability.

**Steroids: Trends in Annual Use, Risk, Disapproval, and Availability**  
 Grades 8, 10, 12



Source. The Monitoring the Future study, the University of Michigan.  
 \*Question discontinued in 8th- and 10th-grade questionnaires in 1995.

## Subgroup Differences

Understanding the important subgroup variations in substance use among the nation's youth allows for more informed considerations of substance use epidemiology, etiology and prevention. It also helps to prioritize prevention and treatment efforts. In this section, we present a brief overview of some of the major demographic subgroup differences.

Space does not permit a full discussion or documentation of the many subgroup differences of the drugs covered in this report. However, the forthcoming *Volume I* in this series contains tables providing subgroup prevalence levels for all of the classes of drugs discussed here in 2017, specifically. Chapters 4 and 5 in *Volume I* have in-depth discussion and interpretation of those subgroup differences. Comparisons are made by gender, college plans, region of the country, population density, socioeconomic level (as measured by educational level of the parents), and race/ethnicity. In addition, an annual Monitoring the Future Occasional Paper provides tables giving *cross-time trends* in the subgroup prevalence levels for all of the classes of drugs discussed here and, importantly, charts showing the subgroup trends for all drugs. This Occasional Paper, [\*Demographic subgroup trends among adolescents in the use of various licit and illicit drugs 1975-2017\*](#), is Number 90 in the series and contains data through 2017. The graphs in the occasional paper present easily accessible views of trends and comparisons while its tables provide the specific numbers behind the figures.

### Gender

Generally, males have somewhat higher rates of illicit drug use than females (especially higher rates of frequent use), most notably by 12<sup>th</sup> grade.

There have been some important changes over the years, however. Specifically, a long-standing gender difference in annual marijuana use (with males somewhat higher than females in their use), was virtually eliminated among 8<sup>th</sup> graders by 2013 and among 10<sup>th</sup> graders by 2016. Among 12<sup>th</sup> graders the gap nearly closed by 2017. The convergence is largely due to sharper declines among males in all grades in the past few years, and some increase in use among females in grade 12.

Males in all three grades have much higher rates of smokeless tobacco use and, until recent years, steroid use. In the upper grades, males have higher rates of use of small cigars, large cigars, dissolvable tobacco, and snus specifically. The primary exception may be found in the misuse of prescription drugs like amphetamines, sedatives, and tranquilizers, where females have tended to

have higher rates of use than males in the early grades. One important exception has been misuse of prescription narcotic drugs, which is reported only at grade 12: Males have consistently had higher rates of use. For most drugs, though, the gender differences among 8<sup>th</sup> graders are very small, with females fairly consistently reporting slightly higher rates than males through 2015; in 2016 and 2017 males were equal to or higher than females in the use of several drugs. Among 10<sup>th</sup> graders, males have generally, though not always, reported higher rates than females.

Alcohol has tended to show a narrowing of gender differences over the life of the study. Among 12<sup>th</sup> graders, for many years males consistently reported distinctly higher 30-day alcohol usage rates than females; however, the difference has been narrowing, and by 2014 females had only a slightly lower prevalence. In 8<sup>th</sup> grade there had been almost no gender difference, as has been true among 10<sup>th</sup> graders since about 2002; but in the last couple of years females have come to have a higher 30-day prevalence of use. Gender differences in *binge drinking* have followed a similar pattern—females reporting the same rates as males in 8<sup>th</sup> grade, the genders converging in recent years in 10<sup>th</sup> grade, and now females having significantly higher rates of binge drinking in both 10<sup>th</sup> and 12<sup>th</sup> grades. This continued narrowing of gender differences among teens, with some recent evidence of cross-over, deserves attention.

Gender differences in 30-day cigarette smoking among 8<sup>th</sup> and 10<sup>th</sup> graders have generally been minimal. Tenth grade males reported slightly higher rates than females from about 2006 through 2014, but this disparity has since dissipated. Among 12<sup>th</sup> graders, females generally had higher rates of smoking than males through 1990, but since then males have generally had the higher rates (11% vs. 8% in 2017) due to smoking declining more rapidly among females (though both genders have shown very substantial declines).

The gender differences in substance use appear to emerge for many drugs as students grow older. In 8<sup>th</sup> grade, females have higher rates of use for some drugs, such as inhalants and amphetamines. Prevalence rates for both genders then increase with age (with the single exception of inhalants), but the increase is often sharper among males. At each grade level, usage rates for both genders generally tend to move much in parallel across time for the various substances, and the absolute differences between the genders tend to be largest in the historical periods in which overall prevalence rates are highest.

## Race/Ethnicity

Among the most dramatic and interesting subgroup differences are those found among the three largest racial/ethnic groups—Whites, African Americans, and Hispanics. For a number of years White students had substantially higher rates of using any illicit drug than did African American students, but the differences have narrowed in recent years as a result of increasing marijuana use among African American students and a decline among White students. (Marijuana use tends to drive the overall index of any illicit drug use and in 2017 marijuana use was significantly higher among African American students than among White students in 8<sup>th</sup> grade and somewhat higher in 10<sup>th</sup> grade.) Still, African American students have tended to have lower levels of use for certain licit and illicit drugs at all three grade levels—in particular for hallucinogens, synthetic marijuana, and all forms of prescription drugs used without a doctor’s orders. For 12<sup>th</sup> graders heroin use among African Americans has been higher than among Whites in recent years, and previously crack use was also higher; in all three grades African American use of bath salts generally has been higher than Whites or Hispanics.

African American students’ use of alcohol and cigarettes tends to be significantly lower than Whites in all three grades. In fact, African Americans’ use of cigarettes has been dramatically lower than Whites’ use—a difference that emerged largely during the life of the study (i.e., since 1975).

Hispanic students generally have had rates of use that place them between the other two groups in 12<sup>th</sup> grade—usually closer to the rates for Whites than for African Americans. In the last few years, however, Hispanics have attained the highest reported rates of use of any illicit drug in all three grades—in large part due to their increase in marijuana use. Indeed, both African Americans and Hispanics have shown a considerably greater increase in marijuana use than Whites, at least until 2014 when Hispanics’ use began to decline in both grades 8 and 10; this decline has continued into 2017. In 12<sup>th</sup> grade Hispanics have the highest use rates for a number of substances: synthetic marijuana, cocaine, crack, cocaine other than crack, OxyContin, methamphetamine, and crystal methamphetamine. In 8<sup>th</sup> grade, Hispanics have tended to report the highest rates of the three racial/ethnic groups on nearly all classes of drugs. Like African American students, Hispanic students generally have lower rates than White students of misusing any of the prescription drugs, particularly in the upper grades.

Again, we refer the reader to [Occasional Paper 90](#) for a detailed picture of these complex subgroup differences and how they have changed over the years.

## College Plans

While in high school, those students who are not college-bound (a decreasing proportion of the total youth population over the longer term) are considerably more likely to be at risk for using illicit drugs, drinking heavily, and particularly smoking cigarettes. Again, these differences are largest in periods of highest prevalence. In the lower grades, the college-bound had a greater increase in cigarette smoking than did their non-college-bound peers in the early to mid-1990s; but the college-bound also showed a considerably larger decline since then, leaving them with dramatically lower smoking rates at present than they had in the 1990s.

## Region of the Country

The differences associated with region of the country are so sufficiently varied and complex that we cannot do justice to them here. In the past, the Northeast and West tended to have the highest proportions of students using any illicit drug, and the South, the lowest; however, these rankings have not applied to many of the specific drugs and do not apply to all grades today. The cocaine epidemic of the early 1980s was much more pronounced in the West and Northeast than in the other two regions, although the differences decreased as the overall epidemic subsided. The upsurge of ecstasy use in 1999 occurred primarily in the Northeast, but that drug’s newfound popularity then spread to the three other regions of the country. While the South and West have generally had lower rates of drinking among students than the Northeast and the Midwest, those differences have narrowed somewhat in recent years and are now fairly small in all three grades. Cigarette smoking rates have generally been lowest in the West; but in 2017, after substantial declines in cigarette smoking in all three grades, the regional differences are smaller.

## Population Density

There have not been very large or consistent differences in overall illicit drug use associated with population density since MTF began, helping to demonstrate just how universal the illicit drug phenomenon has been in this country. Use of any illicit drug has tended to be lowest in the more rural areas at 12<sup>th</sup> grade over most of the life of the study; and use of any illicit drug other than marijuana generally has been lower in large cities in 12<sup>th</sup> grade. Crack and heroin use have generally not been concentrated in urban areas, as is commonly believed, meaning that no parents and schools should assume that their children are immune to these threats simply because they do not live in a city. Since the late 1990s, students in non-urban areas have emerged with much higher smoking rates than others. For alcohol use there have not been large differences as a function of population density.

## Socioeconomic Level

The average level of education of the student's parents, as reported by the student, is used as a proxy for socioeconomic status of the family. For many drugs the differences in use by socioeconomic class are very small, and the trends have been highly parallel. One very interesting difference occurred for cocaine, the use of which was *positively* associated with socioeconomic level in the early 1980s, meaning that higher parental education levels were associated with higher prevalence of cocaine use. However, with the advent of crack, which offered cocaine at a lower price, that association nearly disappeared by 1986.

Cigarette smoking showed a similar narrowing of class differences, but in this case a large *negative* association

with socioeconomic level diminished considerably between roughly 1985 and 1993. In more recent years, that negative association has re-emerged in the lower grades as use declined faster among students from more educated families. We believe that the removal of the Joe Camel ad campaign, which seemed to reach males from educated families in particular, may have played a role in this.

With regard to alcohol, in recent years there has been essentially no association between parental education and binge drinking among 12<sup>th</sup> graders, nor among 10<sup>th</sup> graders in 2017; however, a negative correlation among 8<sup>th</sup> graders has been fairly consistent, albeit small. Similarly, while binge drinking in 8<sup>th</sup> and 10<sup>th</sup> grades is negatively correlated with parental education, in 12<sup>th</sup> grade there is virtually no association.



## Lessons Learned

### Implications for Prevention

The wide divergence in historical trajectories of the various drugs over time helps to illustrate that, to a considerable degree, the determinants of use are often specific to each drug. These determinants include both perceived benefits and perceived adverse outcomes that young people come to associate with each drug, as well as peer norms about their use and the availability of each drug.

### The “Honeymoon Period” for New Drugs

Unfortunately, word of the supposed benefits of using a drug usually spreads much faster than information about the adverse consequences. Supposed benefits take only rumor and a few testimonials, the spread of which have been hastened and expanded greatly by the media in general, and in particular the Internet and social media. It usually takes much longer for the evidence of adverse consequences (e.g., adverse reactions, death, disease, overdose, addiction) to cumulate, be recognized, and then be disseminated. Thus, when a new drug comes onto the scene, it has a considerable “honeymoon period” during which its benefits are alleged and its consequences are not yet known. We believe that cocaine and ecstasy both illustrated this dynamic. Synthetic marijuana and so-called “bath salts” are two more recent examples. “Vaping” may be in a honeymoon period today.

Although encouraging the avoidance or delay of *any* type of substance use is likely beneficial, especially at young ages, prevention efforts also need to be drug-specific. That is, to a considerable degree, prevention must occur drug by drug because people will not necessarily generalize the adverse consequences of the use of one drug to the use of others. Many beliefs and attitudes held by young people are drug specific. The figures in this *Overview* on perceived risk and disapproval for the various drugs—attitudes and beliefs that we have shown to be important in explaining many drug trends over the years—amply illustrate this assertion. These attitudes and beliefs are at quite different levels for the various drugs and, more importantly, often trend quite differently over time.

Marijuana is one drug that is affected by some very specific policies, including medicalization and legalization of recreational use by adults. The effects on youth behaviors and attitudes of recent changes in a number of states will need to be carefully evaluated and monitored to determine their longer-term effects. Currently, marijuana does not hold the same appeal for youth as it did in the past, and today’s annual prevalence

among 12<sup>th</sup> graders of 37% is considerably lower than rates exceeding 50% observed in the 1970s. However, if states that legalize recreational marijuana allow advertising and promotion of marijuana, then prevalence could rebound and approach or even surpass previous levels.

### “Generational Forgetting” Helps Keep the Drug Epidemic Going

Another point worth keeping in mind is that there tends to be a continuous flow of new drugs onto the scene and of older ones being rediscovered by young people. Many drugs have made a comeback years after they first fell from popularity, often because knowledge among youth of their adverse consequences faded as generational replacement took place. We call this process “generational forgetting.” Examples include LSD and methamphetamine, two drugs used widely in the 1960s that made a comeback in the 1990s after their initial popularity faded as a result of their adverse consequences becoming widely recognized during periods of high use. Heroin, cocaine, PCP, and crack are some others that have followed a similar pattern. LSD, inhalants, and ecstasy have all shown some effects of generational forgetting in recent years—that is, perceived risk has declined appreciably for those drugs, particularly among the younger students—which puts future cohorts at greater risk of having a resurgence in use. In the case of LSD, perceived risk among 8<sup>th</sup> graders has declined substantially, and more students are saying that they are not familiar with the drug. It would appear that a resurgence in availability (which declined very sharply after about 2001, likely due to the DEA closing a major lab in 2000) could generate another resurgence of LSD use.

As for newly emerging drugs, examples include nitrite inhalants and PCP in the 1970s; crack and crystal methamphetamine in the 1980s; Rohypnol, GHB, and ecstasy in the 1990s; dextromethorphan and salvia in the early 2000s; and more recently “bath salts,” “synthetic marijuana,” and “vaping.” The frequent introduction of new drugs (or new forms or new modes of administration of older drugs, as illustrated by crack, crystal methamphetamine, and non-injected heroin) helps keep this nation’s drug problem alive. Because of the lag times described previously, the forces of containment are always playing catch-up with the forces of encouragement and exploitation. Organized efforts to reduce the grace period experienced by new drugs would seem to be among the most promising responses for minimizing the damage they will cause. Such efforts



regarding ecstasy by the National Institute on Drug Abuse and others appeared to pay off.

As for other approaches to prevention, it may be useful to emphasize that almost new drugs should be considered dangerous because such drugs are made and sold by people totally unconcerned with adverse consequences for their users. Those who manufacture synthetic drugs regularly change the chemical formulations in order to skirt laws prohibiting their sale, and they make no effort to assess the safety of each new formulation, which may

differ dramatically from the safety of previous formulations. Dealers at the distribution level, in an effort to build a reputation for selling powerful drugs, may mix highly potent drugs (e.g., fentanyl) into other drugs (e.g., heroin or other narcotics, marijuana) not attending to the danger that carries for the user. Some such drugs are extremely potent. As a result there are many drugs on the market with little or no information about their adverse effects, and many injuries and deaths resulting from their use. If young people understood this, they might be less likely to use drugs on the illicit market.

**TABLE 1**  
**Trends in Lifetime Prevalence of Use of Various Drugs for Grades 8, 10, and 12 Combined**

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Any Illicit Drug <sup>b</sup>	30.4	29.8	32.1	35.7	38.9	42.2	43.3	42.3	41.9	41.0	40.9	39.5	37.5	36.4	35.7
Any Illicit Drug other than Marijuana <sup>b</sup>	19.7	19.7	21.2	22.0	23.6	24.2	24.0	23.1	22.7	22.1†	23.2	21.1	19.8	19.3	18.6
Any Illicit Drug including Inhalants <sup>b</sup>	36.8	36.3	38.8	41.9	44.9	47.4	48.2	47.4	46.9	46.2	45.5	43.7	41.9	41.3	41.0
Marijuana/Hashish	22.7	21.1	23.4	27.8	31.6	35.6	<b>37.8</b>	36.5	36.4	35.3	35.3	34.0	32.4	31.4	30.8
Inhalants	17.0	16.9	18.2	18.6	<b>19.4</b>	19.1	18.6	18.1	17.5	16.4	15.3	13.6	13.4	13.7	14.1
Hallucinogens	6.1	6.3	7.0	7.7	8.9	10.0	10.2	9.5	9.0	8.5‡	<b>9.2</b>	7.6	6.9	6.3	5.9
LSD	5.5	5.7	6.5	6.9	8.1	8.9	<b>9.1</b>	8.3	7.9	7.2	6.5	5.0	3.7	3.0	2.6
Hallucinogens other than LSD	2.4	2.5	2.7	3.6	3.9	4.8	4.9	4.8	4.4	4.5‡	<b>6.7</b>	6.0	5.8	5.6	5.4
Ecstasy (MDMA) <sup>c</sup> , original	—	—	—	—	—	4.9	5.2	4.5	5.3	7.2	<b>8.0</b>	6.9	5.4	4.7	4.0
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	4.6	4.0	4.1	4.5	5.1	6.0	6.6	7.0	<b>7.2</b>	6.5	5.9	5.7	5.3	5.5	5.5
Crack	2.0	1.9	2.0	2.5	2.8	3.2	3.4	<b>3.8</b>	<b>3.8</b>	3.5	3.2	3.2	2.9	2.9	2.8
Other cocaine	4.1	3.5	3.6	3.9	4.2	5.2	5.9	6.1	<b>6.3</b>	5.6	5.1	4.8	4.5	4.7	4.7
Heroin	1.1	1.3	1.3	1.6	1.9	2.1	2.1	<b>2.2</b>	<b>2.2</b>	2.1	1.7	1.7	1.5	1.5	1.5
With a needle	—	—	—	—	1.1	1.2	1.1	1.1	<b>1.3</b>	1.0	0.9	0.9	0.9	0.9	0.9
Without a needle	—	—	—	—	1.3	1.7	1.7	1.6	1.6	<b>1.8</b>	1.3	1.3	1.3	1.2	1.1
Amphetamines <sup>b</sup>	12.9	12.5	13.8	14.3	15.2	15.5	15.2	14.5	14.0	13.5	13.9	13.1	11.8	11.2	10.3
Methamphetamine	—	—	—	—	—	—	—	—	<b>6.5</b>	6.2	5.8	5.3	5.0	4.5	3.9
Tranquilizers	5.5	5.3	5.4	5.5	5.8	6.5	6.6	6.9	7.0	6.9‡	<b>7.9</b>	<b>7.9</b>	7.3	7.1	6.8
Alcohol	80.1	79.2‡	68.4	68.4	68.2	68.4	<b>68.8</b>	67.4	66.4	66.6	65.5	62.7	61.7	60.5	58.6
Been drunk	<b>46.3</b>	44.9	44.6	44.3	44.5	45.1	45.7	44.0	43.7	44.0	43.4	40.5	38.9	39.4	38.4
Flavored alcoholic beverages	—	—	—	—	—	—	—	—	—	—	—	—	—	<b>54.7</b>	<b>54.7</b>
Cigarettes	53.5	53.0	54.0	54.6	55.8	<b>57.8</b>	57.4	56.0	54.5	51.8	49.1	44.2	40.8	39.6	37.4
Smokeless tobacco	—	26.2	25.6	<b>26.3</b>	26.0	25.7	22.7	21.1	19.4	17.9	16.6	15.2	14.1	13.6	13.8
Any Vaping <sup>d</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping nicotine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping marijuana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping just flavoring	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	1.9	1.8	1.8	2.1	2.1	1.8	2.1	2.3	2.8	3.0	<b>3.3</b>	<b>3.3</b>	3.0	2.5	2.1

Table continued on next page.

**TABLE 1 (continued)**  
**Trends in Lifetime Prevalence of Use of Various Drugs for Grades 8, 10, and 12 Combined**

(Entries are percentages.)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016–2017 change	Peak year–2017 change		Low year–2017 change	
														Absolute change	Proportional change (%) <sup>a</sup>	Absolute change	Proportional change
Any Illicit Drug <sup>b</sup>	34.0	32.7	32.6	33.2	34.4	34.7	34.1	36.0†	<b>34.9</b>	34.3	<u>32.6</u>	33.4	+0.8	-1.5	-4.4	+0.8	+2.3
Any Illicit Drug other than Marijuana <sup>b</sup>	18.2	17.7	16.8	16.5	16.8	16.1	15.5	16.8†	<b>15.8</b>	15.1	14.3	<u>14.0</u>	-0.3	-1.8 s	-11.5	—	—
Any Illicit Drug including Inhalants <sup>b</sup>	39.3	38.0	37.9	37.9	38.8	38.7	37.9	39.3†	<b>37.9</b>	37.4	<u>34.9</u>	36.5	+1.6 s	-1.5	-3.9	+1.6 s	+4.6
Marijuana/Hashish	28.9	27.9	<u>27.9</u>	29.0	30.4	31.0	30.7	32.0	30.5	30.0	28.6	29.3	+0.7	-8.5 sss	-22.4	+1.4	+5.1
Inhalants	13.7	13.5	13.1	12.5	12.1	10.6	10.0	8.9	8.8	7.5	<u>6.5</u>	6.7	+0.2	-12.7 sss	-65.7	+0.2	+2.7
Hallucinogens	5.7	5.8	5.6	5.3	5.8	5.7	5.0	5.0	4.3	4.3	4.3	<u>4.2</u>	-0.1	-5.0 sss	-54.2	—	—
LSD	2.5	2.6	2.7	2.5	2.8	2.7	2.5	2.6	<u>2.4</u>	2.8	3.1	3.1	0.0	-6.0 sss	-66.2	+0.7 s	+27.0
Hallucinogens other than LSD	5.2	5.1	4.8	4.7	5.0	4.9	4.3	4.1	3.5	3.1	3.0	<u>2.9</u>	-0.1	-3.7 sss	-56.2	—	—
Ecstasy (MDMA) <sup>c</sup> , original	4.3	4.5	4.1	4.6	5.5	5.5	4.6	4.7	3.5	—	—	—	—	—	—	—	—
Revised	—	—	—	—	—	—	—	—	<b>5.0</b>	4.0	3.1	<u>3.0</u>	-0.1	-2.0 sss	-40.3	—	—
Cocaine	5.3	5.2	4.8	4.2	3.8	3.4	3.3	3.1	2.9	2.7	<u>2.3</u>	2.5	+0.1	-4.7 sss	-65.7	+0.1	+5.5
Crack	2.6	2.5	2.2	2.0	1.9	1.6	1.5	1.5	1.3	1.3	<u>1.0</u>	1.1	+0.1	-2.8 sss	-71.7	+0.1	+6.2
Other cocaine	4.7	4.6	4.1	3.7	3.4	3.1	2.9	2.7	2.5	2.3	<u>2.1</u>	2.1	0.0	-4.2 sss	-66.6	0.0	+0.8
Heroin	1.4	1.4	1.3	1.4	1.4	1.2	1.0	1.0	0.9	0.7	0.6	<u>0.6</u>	0.0	-1.6 sss	-73.4	—	—
With a needle	0.9	0.8	0.8	0.8	0.9	0.8	0.6	0.7	0.7	0.5	0.4	<u>0.4</u>	0.0	-0.9 sss	-70.8	—	—
Without a needle	1.0	1.0	0.9	0.9	1.0	0.9	0.7	0.7	0.6	0.5	0.4	<u>0.4</u>	0.0	-1.4 sss	-77.8	—	—
Amphetamines <sup>b</sup>	10.1	9.5	8.6	8.6	8.9	8.6	8.3	10.5†	<b>9.7</b>	9.1	8.1	<u>7.7</u>	-0.5	-2.0 sss	-20.9	—	—
Methamphetamine	3.4	2.5	2.5	2.2	2.2	1.8	1.6	1.5	1.4	1.1	<u>0.8</u>	0.9	0.0	-5.7 sss	-86.6	0.0	+5.0
Tranquilizers	7.0	6.7	6.3	6.5	6.6	6.0	5.8	5.2	5.3	<u>5.2</u>	5.5	5.6	+0.1	-2.2 sss	-28.5	+0.4	-28.5
Alcohol	57.0	56.3	55.1	54.6	53.6	51.5	50.0	48.4	46.4	45.2	41.9	<u>41.7</u>	-0.2	-27.0 sss	-39.3	—	—
Been drunk	37.6	36.6	35.1	35.9	34.2	32.5	32.8	31.7	29.2	28.2	26.4	<u>26.0</u>	-0.4	-20.3 sss	-43.9	—	—
Flavored alcoholic beverages	53.1	51.3	49.3	47.9	46.7	44.5	42.7	41.1	38.8	37.4	33.8	<u>33.5</u>	-0.3	-21.1 sss	-38.7	—	—
Cigarettes	35.0	33.3	31.3	31.2	30.9	28.7	27.0	25.6	22.9	21.1	18.2	<u>17.0</u>	-1.2 s	-40.8 sss	-70.5	—	—
Smokeless tobacco	13.3	12.9	12.3	13.5	14.5	13.8	13.5	12.8	12.1	11.3	10.3	<u>8.7</u>	-1.6 s	-17.6 sss	-66.9	—	—
Any Vaping <sup>d</sup>	—	—	—	—	—	—	—	—	—	29.9	26.6†	28.2	—	—	—	—	—
Vaping nicotine	—	—	—	—	—	—	—	—	—	—	—	18.9	—	—	—	—	—
Vaping marijuana	—	—	—	—	—	—	—	—	—	—	—	8.5	—	—	—	—	—
Vaping just flavoring	—	—	—	—	—	—	—	—	—	—	—	24.9	—	—	—	—	—
Steroids	2.0	1.8	1.6	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.3	<u>1.2</u>	0.0	-2.0 sss	-62.0	—	—

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

Notes. '—' indicates data not available. '†' indicates a change in the question text. When a question change occurs, peak levels after that change are used to calculate the peak year to current year difference.

Values in bold equal peak levels since 1991. Values in italics equal peak level before wording change. Underlined values equal lowest level since recent peak level.

Level of significance of difference between classes: s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>The proportional change is the percent by which the most recent year deviates from the peak year [or the low year] for the drug in question. So, if a drug was at 20% prevalence in the peak year and declined to 10% prevalence in the most recent year, that would reflect a proportional decline of 50%.

<sup>b</sup>In 2013, for the questions on the use of amphetamines, the text was changed on two of the questionnaire forms for 8th and 10th graders and four of the questionnaire forms for 12th graders. This change also impacted the any illicit drug indices. Data presented here include only the changed forms beginning in 2013.

<sup>c</sup>In 2014, the text was changed on one of the questionnaire forms for 8th, 10th, and 12th graders to include "molly" in the description. The remaining forms were changed in 2015. Data for both versions of the question are presented here.

<sup>d</sup>In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and just flavoring. Beginning in 2017, data presented for any vaping are based on these new questions.

**TABLE 2**  
**Trends in Annual Prevalence of Use of Various Drugs for Grades 8, 10, and 12 Combined**

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Any Illicit Drug <sup>c</sup>	20.2	19.7	23.2	27.6	31.0	33.6	34.1	32.2	31.9	31.4	31.8	30.2	28.4	27.6	27.1
Any Illicit Drug other than Marijuana <sup>c</sup>	12.0	12.0	13.6	14.6	16.4	17.0	16.8	15.8	15.6	15.3‡	16.3	14.6	13.7	13.5	13.1
Any Illicit Drug including Inhalants <sup>c</sup>	23.5	23.2	26.7	31.1	34.1	36.6	36.7	35.0	34.6	34.1	34.3	32.3	30.8	30.1	30.1
Marijuana/Hashish	15.0	14.3	17.7	22.5	26.1	29.0	30.1	28.2	27.9	27.2	27.5	26.1	24.6	23.8	23.4
Synthetic marijuana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Inhalants	7.6	7.8	8.9	9.6	10.2	9.9	9.1	8.5	7.9	7.7	6.9	6.1	6.2	6.7	7.0
Hallucinogens	3.8	4.1	4.8	5.2	6.6	7.2	6.9	6.3	6.1	5.4‡	6.0	4.5	4.1	4.0	3.9
LSD	3.4	3.8	4.3	4.7	5.9	6.3	6.0	5.3	5.3	4.5	4.1	2.4	1.6	1.6	1.5
Hallucinogens other than LSD	1.3	1.4	1.7	2.2	2.7	3.2	3.2	3.1	2.9	2.8‡	4.0	3.7	3.6	3.6	3.4
Ecstasy (MDMA) <sup>d</sup> , original	—	—	—	—	—	3.1	3.4	2.9	3.7	5.3	6.0	4.9	3.1	2.6	2.4
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Salvia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	2.2	2.1	2.3	2.8	3.3	4.0	4.3	4.5	4.5	3.9	3.5	3.7	3.3	3.5	3.5
Crack	1.0	1.1	1.2	1.5	1.8	2.0	2.1	2.4	2.2	2.1	1.8	2.0	1.8	1.7	1.6
Other cocaine	2.0	1.8	2.0	2.3	2.8	3.4	3.7	3.7	4.0	3.3	3.0	3.1	2.8	3.1	3.0
Heroin	0.5	0.6	0.6	0.9	1.2	1.3	1.3	1.2	1.3	1.3	0.9	1.0	0.8	0.9	0.8
With a needle	—	—	—	—	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5
Without a needle	—	—	—	—	0.9	0.9	1.0	0.9	1.0	1.1	0.7	0.7	0.6	0.7	0.7
OxyContin	—	—	—	—	—	—	—	—	—	—	—	2.7	3.2	3.3	3.4
Vicodin	—	—	—	—	—	—	—	—	—	—	—	6.0	6.6	5.8	5.7
Amphetamines <sup>c</sup>	7.5	7.3	8.4	9.1	10.0	10.4	10.1	9.3	9.0	9.2	9.6	8.9	8.0	7.6	7.0
Ritalin	—	—	—	—	—	—	—	—	—	—	4.2	3.8	3.5	3.6	3.3
Adderall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methamphetamine	—	—	—	—	—	—	—	—	4.1	3.5	3.4	3.2	3.0	2.6	2.4
Bath salts (synthetic stimulants)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers	2.8	2.8	2.9	3.1	3.7	4.1	4.1	4.4	4.4	4.5‡	5.5	5.3	4.8	4.8	4.7
OTC Cough/Cold Medicines	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rohypnol	—	—	—	—	—	1.1	1.1	1.1	0.8	0.7	0.9‡	0.8	0.8	0.9	0.8
GHB <sup>b</sup>	—	—	—	—	—	—	—	—	—	1.4	1.2	1.2	1.2	1.1	0.8
Ketamine <sup>b</sup>	—	—	—	—	—	—	—	—	—	2.0	1.9	2.0	1.7	1.3	1.0
Alcohol	67.4	66.3‡	59.7	60.5	60.4	60.9	61.4	59.7	59.0	59.3	58.2	55.3	54.4	54.0	51.9
Been drunk	35.8	34.3	34.3	35.0	35.9	36.7	36.9	35.5	36.0	35.9	35.0	32.1	31.2	32.5	30.8
Flavored alcoholic beverages	—	—	—	—	—	—	—	—	—	—	—	—	—	44.5	43.9
Alcoholic beverages containing caffeine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any Vaping	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping nicotine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping marijuana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping just flavoring	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dissolvable tobacco products	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Snus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	1.2	1.1	1.0	1.2	1.3	1.1	1.2	1.3	1.7	1.9	2.0	2.0	1.7	1.6	1.3

Table continued on next page.

**TABLE 2 (continued)**  
**Trends in Annual Prevalence of Use of Various Drugs for Grades 8, 10, and 12 Combined**

(Entries are percentages.)

	2016–2017													Peak year–2017 change		Low year–2017 change	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	change	Absolute change	Proportional change (%) <sup>a</sup>	Absolute change	Proportional change
Any Illicit Drug <sup>c</sup>	25.8	24.8	24.9	25.9	27.3	27.6	27.1	28.6‡	<b>27.2</b>	26.8	<u>25.3</u>	26.5	+1.2	-0.7	-2.6	+1.2	+4.6
Any Illicit Drug other than Marijuana <sup>c</sup>	12.7	12.4	11.9	11.6	11.8	11.3	10.8	11.4‡	<b>10.9</b>	10.5	9.7	<u>9.4</u>	-0.3	-1.5 ss	-14.2	—	—
Any Illicit Drug including Inhalants <sup>c</sup>	28.7	27.6	27.6	28.5	29.7	29.8	29.0	30.5‡	<b>28.5</b>	28.4	<u>26.3</u>	28.3	+2.0 ss	-0.2	-0.6	+2.0 ss	+7.7
Marijuana/Hashish	22.0	<u>21.4</u>	21.5	22.9	24.5	25.0	24.7	25.8	24.2	23.7	22.6	23.9	+1.3 s	-6.2 sss	-20.6	+2.5 sss	+11.8
Synthetic marijuana	—	—	—	—	—	—	<b>8.0</b>	6.4	4.8	4.2	3.1	<u>2.8</u>	-0.4 s	-5.2 sss	-65.4	—	—
Inhalants	6.9	6.4	6.4	6.1	6.0	5.0	4.5	3.8	3.6	3.2	<u>2.6</u>	2.9	+0.2	-7.3 sss	-71.9	+0.2	+8.1
Hallucinogens	3.6	3.8	3.8	3.5	3.8	3.7	3.2	3.1	2.8	2.8	<u>2.7</u>	2.7	0.0	-3.2 sss	-54.1	—	—
LSD	<u>1.4</u>	1.7	1.9	1.6	1.8	1.8	1.6	1.6	1.7	1.9	2.0	2.1	+0.1	-4.3 sss	-67.5	+0.6 ss	+46.1
Hallucinogens other than LSD	3.3	3.3	3.2	3.0	3.3	3.1	2.7	2.5	2.1	1.9	1.8	<u>1.8</u>	0.0	-2.3 sss	-56.3	—	—
Ecstasy (MDMA) <sup>d</sup> , original	2.7	3.0	2.9	3.0	3.8	3.7	2.5	2.8	2.2	—	—	—	—	—	—	—	—
Revised	—	—	—	—	—	—	—	—	<b>3.4</b>	2.4	1.8	<u>1.7</u>	-0.1	-1.6 sss	-48.9	—	—
Salvia	—	—	—	—	3.5	<b>3.6</b>	2.7	2.3	1.4	1.2	1.2	<u>0.9</u>	-0.3 ss	-2.7 sss	-74.2	—	—
Cocaine	3.5	3.4	2.9	2.5	2.2	2.0	1.9	1.8	1.6	1.7	<u>1.4</u>	1.6	+0.2	-2.9 sss	-64.5	+0.2	+12.2
Crack	1.5	1.5	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.8	<u>0.6</u>	0.7	+0.1	-1.7 sss	-70.7	+0.1	+20.1
Other cocaine	3.1	2.9	2.6	2.1	1.9	1.7	1.7	1.5	1.5	1.5	<u>1.2</u>	1.3	+0.1	-2.7 sss	-66.3	+0.1	+8.8
Heroin	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.4	<u>0.3</u>	0.3	0.0	-1.0 sss	-75.4	0.0	+8.9
With a needle	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.3	0.3	<u>0.2</u>	0.0	-0.5 sss	-69.5	—	—
Without a needle	0.6	0.7	0.6	0.5	0.6	0.5	0.4	0.4	0.3	0.3	<u>0.2</u>	0.2	0.0	-0.9 sss	-81.4	0.0	+6.5
OxyContin	3.5	3.5	3.4	<b>3.9</b>	3.8	3.4	2.9	2.9	2.4	2.3	2.1	<u>1.9</u>	-0.2	-2.0 sss	-51.6	—	—
Vicodin	6.3	6.2	6.1	6.5	5.9	5.1	4.3	3.7	3.0	2.5	1.8	<u>1.3</u>	-0.5	-5.2 sss	-79.6	—	—
Amphetamines <sup>c</sup>	6.8	6.5	5.8	5.9	6.2	5.9	5.6	7.0‡	<b>6.6</b>	6.2	5.4	<u>5.0</u>	-0.4	-1.6 sss	-24.1	—	—
Ritalin	3.5	2.8	2.6	2.5	2.2	2.1	1.7	1.7	1.5	1.4	1.1	<u>0.8</u>	-0.2	-3.4 sss	-80.5	—	—
Adderall	—	—	—	4.3	<b>4.5</b>	4.1	4.4	4.4	4.1	4.5	3.9	<u>3.5</u>	-0.3	-0.5 s	-10.3	—	—
Methamphetamine	2.0	1.4	1.3	1.3	1.3	1.2	1.0	1.0	0.8	0.6	0.5	<u>0.5</u>	0.0	-3.6 sss	-88.2	—	—
Bath salts (synthetic stimulants)	—	—	—	—	—	—	0.9	<b>0.9</b>	0.8	0.7	0.8	<u>0.5</u>	-0.3 s	-0.4 s	-43.6	—	—
Tranquilizers	4.6	4.5	4.3	4.5	4.4	3.9	3.7	<u>3.3</u>	3.4	3.4	3.5	3.6	+0.1	-1.9 sss	-35.1	+0.2	+7.5
OTC Cough/Cold Medicines	<b>5.4</b>	5.0	4.7	5.2	4.8	4.4	4.4	4.0	3.2	3.1	3.2	<u>3.0</u>	-0.2	-2.4 sss	-44.4	—	—
Rohypnol	0.7	0.8	0.7	0.6	0.8	0.9	0.7	0.6	0.5	0.5	0.7	<u>0.5</u>	-0.2 s	-0.5 sss	-50.4	—	—
GHB <sup>b</sup>	0.9	0.7	0.9	0.9	0.8	<u>0.8</u>	—	—	—	—	—	—	—	—	—	—	—
Ketamine <sup>b</sup>	1.1	<u>1.0</u>	1.2	1.3	1.2	1.2	—	—	—	—	—	—	—	—	—	—	—
Alcohol	50.7	50.2	48.7	48.4	47.4	45.3	44.3	42.8	40.7	39.9	<u>36.7</u>	36.7	0.0	-24.7 sss	-40.2	0.0	+0.1
Been drunk	30.7	29.7	28.1	28.7	27.1	25.9	26.4	25.4	23.6	22.5	20.7	<u>20.4</u>	-0.3	-16.5 sss	-44.8	—	—
Flavored alcoholic beverages	42.4	40.8	39.0	37.8	35.9	33.7	32.5	31.3	29.4	28.8	<u>25.3</u>	25.9	+0.5	-18.6 sss	-41.9	+0.5	+2.1
Alcoholic beverages containing caffeine	—	—	—	—	—	<b>19.7</b>	18.6	16.6	14.3	13.0	11.2	<u>10.6</u>	-0.6	-9.1 sss	-46.1	—	—
Any Vaping	—	—	—	—	—	—	—	—	—	—	—	21.5	—	—	—	—	—
Vaping nicotine	—	—	—	—	—	—	—	—	—	—	—	13.9	—	—	—	—	—
Vaping marijuana	—	—	—	—	—	—	—	—	—	—	—	6.8	—	—	—	—	—
Vaping just flavoring	—	—	—	—	—	—	—	—	—	—	—	17.2	—	—	—	—	—
Dissolvable tobacco products	—	—	—	—	—	—	<b>1.4</b>	1.4	1.2	1.1	0.9	<u>0.9</u>	0.0	-0.5	-35.1	—	—
Snus	—	—	—	—	—	—	<b>5.6</b>	4.8	4.1	3.8	3.6	<u>2.6</u>	-1.0 sss	-3.0 sss	-53.9	—	—
Steroids	1.3	1.1	1.1	1.0	0.9	0.9	0.9	0.9	0.9	1.0	<u>0.8</u>	0.8	0.0	-1.2 sss	-61.3	0.0	+2.9

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

Notes. '—' indicates data not available. '‡' indicates a change in the question text. When a question change occurs, peak levels after that change are used to calculate the peak year to current year difference.

Values in bold equal peak levels since 1991. Values in italics equal peak level before wording change. Underlined values equal lowest level since recent peak level.

Level of significance of difference between classes: s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>The proportional change is the percent by which the most recent year deviates from the peak year [or the low year] for the drug in question. So, if a drug was at 20% prevalence in the peak year and declined to 10% prevalence in the most recent year, that would reflect a proportional decline of 50%.

<sup>b</sup>Question was discontinued among 8th and 10th graders in 2012.

<sup>c</sup>In 2013, for the questions on the use of amphetamines, the text was changed on two of the questionnaire forms for 8th and 10th graders and four of the questionnaire forms for 12th graders. This change also impacted the any illicit drug indices. Data presented here include only the changed forms beginning in 2013.

<sup>d</sup>In 2014, the text was changed on one of the questionnaire forms for 8th, 10th, and 12th graders to include "molly" in the description. The remaining forms were changed in 2015. Data for both versions of the question are presented here.

**TABLE 3**  
**Trends in 30-Day Prevalence of Use of Various Drugs for Grades 8, 10, and 12 Combined**

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Any Illicit Drug <sup>b</sup>	10.9	10.5	13.3	16.8	18.6	20.6	20.5	19.5	19.5	19.2	19.4	18.2	17.3	16.2	15.8
Any Illicit Drug other than Marijuana <sup>b</sup>	5.4	5.5	6.5	7.1	8.4	8.4	8.4	8.2	7.9	8.0†	8.2	7.7	7.1	7.0	6.7
Any Illicit Drug including Inhalants <sup>b</sup>	13.0	12.5	15.4	18.9	20.7	22.4	22.2	21.1	21.1	21.0	20.8	19.5	18.6	17.5	17.5
Marijuana/Hashish	8.3	7.7	10.2	13.9	15.6	17.7	<b>17.9</b>	16.9	16.9	16.3	16.6	15.3	14.8	13.6	13.4
Inhalants	3.2	3.3	3.8	4.0	<b>4.3</b>	3.9	3.7	3.4	3.3	3.2	2.8	2.7	2.7	2.9	2.9
Hallucinogens	1.5	1.6	1.9	2.2	3.1	2.7	3.0	2.8	2.5	2.0†	<b>2.3</b>	1.7	1.5	1.5	1.5
LSD	1.3	1.5	1.6	1.9	<b>2.8</b>	2.1	2.4	2.3	2.0	1.4	1.5	0.7	0.6	0.6	0.6
Hallucinogens other than LSD	0.5	0.5	0.7	1.0	1.0	1.2	1.2	1.2	1.1	1.1†	<b>1.4</b>	1.4	1.2	1.3	1.2
Ecstasy (MDMA) <sup>c</sup> , original	—	—	—	—	—	1.5	1.3	1.2	1.6	<b>2.4</b>	2.4	1.8	1.0	0.9	0.9
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	0.8	0.9	0.9	1.2	1.5	1.7	1.8	<b>1.9</b>	1.9	1.7	1.5	1.6	1.4	1.6	1.6
Crack	0.4	0.5	0.5	0.7	0.8	0.9	0.8	<b>1.0</b>	0.9	0.9	0.9	1.0	0.8	0.8	0.8
Other cocaine	0.7	0.7	0.8	1.1	1.2	1.3	1.5	1.6	<b>1.7</b>	1.4	1.3	1.3	1.2	1.4	1.3
Heroin	0.2	0.3	0.3	0.4	0.6	0.6	0.6	<b>0.6</b>	0.6	0.6	0.4	0.5	0.4	0.5	0.5
With a needle	—	—	—	—	0.3	<b>0.4</b>	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Without a needle	—	—	—	—	0.4	0.4	<b>0.5</b>	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3
Amphetamines <sup>b</sup>	3.0	3.3	3.9	4.0	4.5	4.8	4.5	4.3	4.2	4.5	4.7	4.4	3.9	3.6	3.3
Methamphetamine	—	—	—	—	—	—	—	—	1.5	<b>1.5</b>	1.4	1.5	1.4	1.1	0.9
Tranquilizers	1.1	1.1	1.1	1.3	1.6	1.7	1.7	1.9	1.9	2.1†	2.3	<b>2.4</b>	2.2	2.1	2.1
Alcohol	39.8	38.4†	36.3	37.6	37.8	<b>38.8</b>	38.6	37.4	37.2	36.6	35.5	33.3	33.2	32.9	31.4
Been drunk	19.2	17.8	18.2	19.3	20.3	20.4	<b>21.2</b>	20.4	20.6	20.3	19.7	17.4	17.7	18.1	17.0
Flavored alcoholic beverages	—	—	—	—	—	—	—	—	—	—	—	—	—	<b>23.0</b>	21.6
Cigarettes	20.7	21.2	23.4	24.7	26.6	28.3	<b>28.3</b>	27.0	25.2	22.6	20.2	17.7	16.6	16.1	15.3
Smokeless tobacco	—	9.2	9.1	<b>9.7</b>	9.6	8.5	8.0	7.0	6.3	5.8	6.1	5.2	5.3	5.1	5.3
Any Vaping <sup>d</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping nicotine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping marijuana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping just flavoring	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Large Cigars	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flavored Little Cigars	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regular Little Cigars	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tobacco using a hookah	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	0.6	0.6	0.6	0.7	0.6	0.5	0.7	0.7	0.9	0.9	0.9	<b>1.0</b>	0.9	0.9	0.7

Table continued on next page.

**TABLE 3 (continued)**  
**Trends in 30-Day Prevalence of Use of Various Drugs for Grades 8, 10, and 12 Combined**

(Entries are percentages.)

	2006–2017													Peak year–2017 change		Low year–2017 change	
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	change	Absolute change	Proportional change (%) <sup>a</sup>	Absolute change	Proportional change
Any Illicit Drug <sup>b</sup>	14.9	14.8	14.6	15.8	16.7	17.0	16.8	17.3‡	<b>16.5</b>	15.9	<u>15.5</u>	16.1	+0.6	-0.4	-2.4	+0.6	+3.9
Any Illicit Drug other than Marijuana <sup>b</sup>	6.4	6.4	5.9	5.7	5.7	5.7	5.2	5.4‡	<b>5.4</b>	5.1	4.6	<u>4.4</u>	-0.1	-1.0 sss	-18.2	—	—
Any Illicit Drug including Inhalants <sup>b</sup>	16.5	16.5	16.1	17.3	18.0	18.3	17.6	18.4‡	<b>17.3</b>	16.8	<u>16.0</u>	17.2	+1.2 s	-0.1	-0.7	+1.2 s	+7.2
Marijuana/Hashish	12.5	<u>12.4</u>	12.5	13.8	14.8	15.2	15.1	15.6	14.4	14.0	13.7	14.5	+0.7	-3.4 sss	-19.2	+2.1 sss	+17.0
Inhalants	2.7	2.6	2.6	2.5	2.4	2.1	1.7	1.5	1.4	1.3	<u>1.2</u>	1.3	+0.2	-3.0 sss	-68.9	+0.2	+14.3
Hallucinogens	1.3	1.4	1.4	1.3	1.4	1.3	1.1	1.1	1.0	1.0	<u>1.0</u>	1.0	+0.1	-1.2 sss	-54.5	+0.1	+6.6
LSD	0.6	0.6	0.7	<u>0.5</u>	0.7	0.7	<u>0.5</u>	0.6	0.6	0.7	0.7	0.8	+0.1	-2.0 sss	-72.1	+0.2 s	+40.8
Hallucinogens other than LSD	1.1	1.1	1.1	1.0	1.2	1.0	0.9	0.8	0.7	0.6	<u>0.5</u>	0.6	+0.1	-0.8 sss	-56.9	+0.1	+16.1
Ecstasy (MDMA) <sup>c</sup> , original	1.0	1.1	1.2	1.2	1.5	1.4	0.8	1.0	0.8	—	—	—	—	—	—	—	—
Revised	—	—	—	—	—	—	—	—	<b>1.1</b>	0.8	<u>0.6</u>	0.6	0.0	-0.5 s	-46.1	0.0	+5.8
Cocaine	1.6	1.4	1.3	1.0	0.9	0.8	0.8	0.8	0.7	0.8	<u>0.5</u>	0.7	+0.1	-1.2 sss	-64.0	+0.1	+27.6
Crack	0.7	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	<u>0.3</u>	0.4	+0.1	-0.6 sss	-64.2	+0.1	28.6
Other cocaine	1.4	1.1	1.1	0.8	0.8	0.7	0.7	0.6	0.6	0.7	<u>0.4</u>	0.6	+0.2 s	-1.1 sss	-65.7	+0.2 s	+42.3
Heroin	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	<u>0.2</u>	0.2	0.0	-0.4 sss	-63.5	0.0	+2.7
With a needle	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3	<u>0.1</u>	0.2	0.1	0.0	-0.2 sss	-63.2	0.0	+0.3
Without a needle	0.3	0.3	<u>0.2</u>	<u>0.2</u>	0.3	0.3	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	0.2	<u>0.1</u>	0.1	0.0	-0.3 sss	-73.0	0.0	+6.9
Amphetamines <sup>b</sup>	3.0	3.2	2.6	2.7	2.7	2.8	2.5	3.2‡	<b>3.2</b>	2.7	2.5	<u>2.2</u>	-0.2	-0.9 sss	-29.2	—	—
Methamphetamine	0.7	0.5	0.7	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.3	<u>0.2</u>	-0.1	-1.3 sss	-87.2	—	—
Tranquilizers	2.1	2.0	1.9	1.9	1.9	1.7	1.5	1.5	1.5	1.5	<u>1.4</u>	1.4	+0.1	-1.0 sss	-40.4	+0.1	+4.5
Alcohol	31.0	30.1	28.1	28.4	26.8	25.5	25.9	24.3	22.6	21.8	<u>19.8</u>	19.9	+0.1	-18.9 sss	-48.7	+0.1	+0.7
Been drunk	17.4	16.5	14.9	15.2	14.6	13.5	14.7	13.5	11.9	11.0	10.1	<u>9.8</u>	-0.3	-11.4 sss	-53.8	—	—
Flavored alcoholic beverages	21.7	20.4	18.6	17.9	17.0	15.2	14.9	14.0	12.9	12.8	<u>10.9</u>	12.3	+1.4 ss	-10.7 sss	-46.6	+1.4 ss	+13.1
Cigarettes	14.4	13.6	12.6	12.7	12.8	11.7	10.6	9.6	8.0	7.0	5.9	<u>5.4</u>	-0.5	-22.9 sss	-80.9	—	—
Smokeless tobacco	5.1	5.2	4.9	6.0	6.5	5.9	5.6	5.7	5.4	4.7	4.1	<u>3.5</u>	-0.7	-6.2 sss	-64.3	—	—
Any Vaping <sup>d</sup>	—	—	—	—	—	—	—	—	—	12.8	9.9‡	12.0	—	—	—	—	—
Vaping nicotine	—	—	—	—	—	—	—	—	—	—	—	7.5	—	—	—	—	—
Vaping marijuana	—	—	—	—	—	—	—	—	—	—	—	3.6	—	—	—	—	—
Vaping just flavoring	—	—	—	—	—	—	—	—	—	—	—	8.0	—	—	—	—	—
Large Cigars	—	—	—	—	—	—	—	—	—	3.9	<b>4.2</b>	<u>3.3</u>	-0.1	-1.0 sss	-24.4	—	—
Flavored Little Cigars	—	—	—	—	—	—	—	—	—	<b>7.4</b>	7.1	5.6	<u>5.4</u>	-0.2	-2.0 sss	-27.4	—
Regular Little Cigars	—	—	—	—	—	—	—	—	—	4.5	<b>4.9</b>	<u>3.6</u>	3.6	+0.1	-1.3 sss	-25.9	+0.1
Tobacco using a hookah	—	—	—	—	—	—	—	—	—	—	<b>4.3</b>	<u>3.4</u>	-0.8	-0.8	-18.6	—	—
Steroids	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.4	<u>0.4</u>	0.0	-0.6 sss	-58.8	—	—

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

Notes. '—' indicates data not available. '‡' indicates a change in the question text. When a question change occurs, peak levels after that change are used to calculate the peak year to current year difference.

Values in bold equal peak levels since 1991. Values in italics equal peak level before wording change. Underlined values equal lowest level since recent peak level.

Level of significance of difference between classes: s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>The proportional change is the percent by which the most recent year deviates from the peak year [or the low year] for the drug in question. So, if a drug was at 20% prevalence in the peak year and declined to 10% prevalence in the most recent year, that would reflect a proportional decline of 50%.

<sup>b</sup>In 2013, for the questions on the use of amphetamines, the text was changed on two of the questionnaire forms for 8th and 10th graders and four of the questionnaire forms for 12th graders. This change also impacted the any illicit drug indices. Data presented here include only the changed forms beginning in 2013.

<sup>c</sup>In 2014, the text was changed on one of the questionnaire forms for 8th, 10th, and 12th graders to include "molly" in the description. The remaining forms were changed in 2015. Data for both versions of the question are presented here.

<sup>d</sup>In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and just flavoring. Beginning in 2017, data presented for any vaping are based on these new questions.



**TABLE 4**  
**Trends in Daily Prevalence of Use of Selected Drugs and Heavy Use of Alcohol and Tobacco**  
**for Grades 8, 10, and 12 Combined**

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Marijuana	0.9	0.9	1.2	2.1	2.7	3.2	3.4	3.4	3.5	3.5	<b>3.7</b>	3.5	3.4	3.0	2.9
Alcohol	1.7	1.6†	2.0	1.8	1.9	2.0	2.1	<b>2.2</b>	2.0	1.7	2.0	1.9	1.7	1.5	1.5
5+ drinks in a row in last 2 weeks	20.0	19.0	19.5	20.3	21.1	21.9	<b>21.9</b>	21.5	21.7	21.2	20.4	18.9	18.6	18.8	17.5
Been drunk	0.4	0.4	0.5	0.6	0.7	0.7	0.9	0.8	<b>0.9</b>	0.8	0.7	0.6	0.7	0.7	0.6
Cigarettes	12.4	11.9	13.5	14.0	15.5	16.8	<b>16.9</b>	15.4	15.0	13.4	11.6	10.2	9.3	9.0	8.0
1/2 pack+/day	6.5	6.1	6.9	7.2	7.9	<b>8.7</b>	8.6	7.9	7.6	6.4	5.7	4.9	4.5	4.1	3.7
Smokeless tobacco	—	<b>3.0</b>	2.7	2.9	2.5	2.3	2.5	2.1	1.7	1.9	2.0	1.4	1.6	1.7	1.6

Table continued on next page.

**TABLE 4 (continued)**  
**Trends in Daily Prevalence of Use of Selected Drugs and Heavy Use of Alcohol and Tobacco**  
**for Grades 8, 10, and 12 Combined**

(Entries are percentages.)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016–2017 change	Peak year–2017 change		Low year–2017 change	
														Absolute change	Proportional change (%) <sup>a</sup>	Absolute change	Proportional change
Marijuana	2.8	<u>2.7</u>	2.8	2.8	3.4	3.6	3.6	3.7	3.3	3.3	3.0	3.1	+0.1	-0.5 ss	-14.9	+0.4 s	+15.0
Alcohol	1.5	1.6	1.4	1.3	1.4	1.0	1.2	1.1	1.0	0.8	<u>0.7</u>	0.7	+0.1	-1.4 sss	-65.9	+0.1	+11.5
5+ drinks in a row in last 2 weeks	17.4	17.2	15.5	16.1	14.9	13.6	14.3	13.2	11.7	10.7	<u>9.4</u>	9.9	+0.5	-12.1 sss	-55.1	+0.5	+5.0
Been drunk	0.7	0.6	0.6	0.5	0.6	0.5	0.6	0.5	0.5	0.3	<u>0.3</u>	0.4	+0.1 s	-0.5 sss	-54.4	+0.1 s	+36.8
Cigarettes	7.6	7.1	6.4	6.4	6.4	5.7	5.2	4.7	3.6	3.2	2.5	<u>2.3</u>	-0.2	-14.6 sss	-86.4	—	—
1/2 pack+/day	3.4	3.0	2.7	2.6	2.5	2.1	1.9	1.8	1.4	1.1	0.9	<u>0.8</u>	-0.1	-7.9 sss	-90.6	—	—
Smokeless tobacco	1.5	1.6	1.6	1.8	2.1	1.8	1.9	1.7	1.8	1.7	1.4	<u>1.0</u>	-0.4	-2.0 sss	-67.2	—	—

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

Notes. '—' indicates data not available. '+' indicates a change in the question text. When a question change occurs, peak levels after that change are used to calculate the peak year to current year difference.

Values in bold equal peak levels since 1991. Values in italics equal peak level before wording change. Underlined values equal lowest level since recent peak level.

Level of significance of difference between classes: s = .05, ss = .01, sss = .001.

Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>The proportional change is the percent by which the most recent year deviates from the peak year [or the low year] for the drug in question. So, if a drug was at 20% prevalence in the peak year and declined to 10% prevalence in the most recent year, that would reflect a proportional decline of 50%.

**TABLE 5**  
**Trends in Lifetime Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
<b>Any Illicit Drug<sup>a</sup></b>																												
8th Grade	18.7	20.6	22.5	25.7	28.5	31.2	29.4	29.0	28.3	26.8	26.8	24.5	22.8	21.5	21.4	20.9	19.0	19.6	19.9	21.4	20.1	18.5†	21.1	20.3	20.5	17.2	18.2	+1.0
10th Grade	30.6	29.8	32.8	37.4	40.9	45.4	47.3	44.9	46.2	45.6	45.6	44.6	41.4	39.8	38.2	36.1	35.6	34.1	36.0	37.0	37.7	36.8†	39.1	37.4	34.7	33.7	34.3	+0.7
12th Grade	44.1	40.7	42.9	45.6	48.4	50.8	54.3	54.1	54.7	54.0	53.9	53.0	51.1	51.1	50.4	48.2	46.8	47.4	46.7	48.2	49.9	49.1†	49.8	49.1	48.9	48.3	48.9	+0.6
<b>Any Illicit Drug other than Marijuana<sup>a,b</sup></b>																												
8th Grade	14.3	15.6	16.8	17.5	18.8	19.2	17.7	16.9	16.3	15.8†	17.0	13.7	13.6	12.2	12.1	12.2	11.1	11.2	10.4	10.6	9.8	8.7†	10.4	10.0	10.3	8.9	9.3	+0.4
10th Grade	19.1	19.2	20.9	21.7	24.3	25.5	25.0	23.6	24.0	23.1†	23.6	22.1	19.7	18.8	18.0	17.5	18.2	15.9	16.7	16.8	15.6	14.9†	16.4	15.9	14.6	14.0	13.7	-0.3
12th Grade	26.9	25.1	26.7	27.6	28.1	28.5	30.0	29.4	29.4	29.0†	30.7	29.5	27.7	28.7	27.4	26.9	25.5	24.9	24.0	24.7	24.9	24.1†	24.8	22.6	21.1	20.7	19.5	-1.2
<b>Any Illicit Drug including Inhalants<sup>a,c</sup></b>																												
8th Grade	28.5	29.6	32.3	35.1	38.1	39.4	38.1	37.8	37.2	35.1	34.5	31.6	30.3	30.2	30.0	29.2	27.7	28.3	27.9	28.6	26.4	25.1†	25.9	25.2	24.9	20.6	23.3	+2.7 s
10th Grade	36.1	36.2	38.7	42.7	45.9	49.8	50.9	49.3	49.9	49.3	48.8	47.7	44.9	43.1	42.1	40.1	39.8	38.7	40.0	40.6	40.8	40.0†	41.6	40.4	37.2	35.9	37.0	+1.1
12th Grade	47.6	44.4	46.6	49.1	51.5	53.5	56.3	56.1	56.3	57.0	56.0	54.6	52.8	53.0	53.5	51.2	49.1	49.3	48.4	49.9	51.8	50.3†	52.3	49.9	51.4	49.3	50.3	+1.1
<b>Marijuana/Hashish</b>																												
8th Grade	10.2	11.2	12.6	16.7	19.9	23.1	22.6	22.2	22.0	20.3	20.4	19.2	17.5	16.3	16.5	15.7	14.2	14.6	15.7	17.3	16.4	15.2	16.5	15.6	15.5	12.8	13.5	+0.6
10th Grade	23.4	21.4	24.4	30.4	34.1	39.8	42.3	39.6	40.9	40.3	40.1	38.7	36.4	35.1	34.1	31.8	31.0	29.9	32.3	33.4	34.5	33.8	35.8	33.7	31.1	29.7	30.7	+1.0
12th Grade	36.7	32.6	35.3	38.2	41.7	44.9	49.6	49.1	49.7	48.8	49.0	47.8	46.1	45.7	44.8	42.3	41.8	42.6	42.0	43.8	45.5	45.2	45.5	44.4	44.7	44.5	45.0	+0.5
<b>Inhalants<sup>c,d</sup></b>																												
8th Grade	17.6	17.4	19.4	19.9	21.6	21.2	21.0	20.5	19.7	17.9	17.1	15.2	15.8	17.3	17.1	16.1	15.6	15.7	14.9	14.5	13.1	11.8	10.8	10.8	9.4	7.7	8.9	+1.2 s
10th Grade	15.7	16.6	17.5	18.0	19.0	19.3	18.3	18.3	17.0	16.6	15.2	13.5	12.7	12.4	13.1	13.3	13.6	12.8	12.3	12.0	10.1	9.9	8.7	8.7	7.2	6.6	6.1	-0.5
12th Grade	17.6	16.6	17.4	17.7	17.4	16.6	16.1	15.2	15.4	14.2	13.0	11.7	11.2	10.9	11.4	11.1	10.5	9.9	9.5	9.0	8.1	7.9	6.9	6.5	5.7	5.0	4.9	-0.2
<b>Hallucinogens<sup>b,f</sup></b>																												
8th Grade	3.2	3.8	3.9	4.3	5.2	5.9	5.4	4.9	4.8	4.6†	5.2	4.1	4.0	3.5	3.8	3.4	3.1	3.3	3.0	3.4	3.3	2.8	2.5	2.0	2.0	1.9	1.9	0.0
10th Grade	6.1	6.4	6.8	8.1	9.3	10.5	10.5	9.8	9.7	8.9†	8.9	7.8	6.9	6.4	5.8	6.1	6.4	5.5	6.1	6.1	6.0	5.2	5.4	5.0	4.6	4.4	4.2	-0.2
12th Grade	9.6	9.2	10.9	11.4	12.7	14.0	15.1	14.1	13.7	13.0†	14.7	12.0	10.6	9.7	8.8	8.3	8.4	8.7	7.4	8.6	8.3	7.5	7.6	6.3	6.4	6.7	6.7	0.0

(Table continued on next page.)

**TABLE 5 (cont.)**  
**Trends in Lifetime Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
LSD <sup>b</sup>																												
8th Grade	2.7	3.2	3.5	3.7	4.4	5.1	4.7	4.1	4.1	3.9	3.4	2.5	2.1	1.8	1.9	1.6	1.6	1.9	1.7	1.8	1.7	1.3	1.4	1.1	1.3	1.2	1.3	+0.1
10th Grade	5.6	5.8	6.2	7.2	8.4	9.4	9.5	8.5	8.5	7.6	6.3	5.0	3.5	2.8	2.5	2.7	3.0	2.6	3.0	3.0	2.8	2.6	2.7	2.6	3.0	3.2	3.0	-0.2
12th Grade	8.8	8.6	10.3	10.5	11.7	12.6	13.6	12.6	12.2	11.1	10.9	8.4	5.9	4.6	3.5	3.3	3.4	4.0	3.1	4.0	4.0	3.8	3.9	3.7	4.3	4.9	5.0	+0.1
Hallucinogens other than LSD <sup>b</sup>																												
8th Grade	1.4	1.7	1.7	2.2	2.5	3.0	2.6	2.5	2.4	2.3†	3.9	3.3	3.2	3.0	3.3	2.8	2.6	2.5	2.4	2.7	2.8	2.3	1.9	1.5	1.2	1.3	1.2	0.0
10th Grade	2.2	2.5	2.8	3.8	3.9	4.7	4.8	5.0	4.7	4.8†	6.6	6.3	5.9	5.8	5.2	5.5	5.7	4.8	5.4	5.3	5.2	4.5	4.4	4.1	3.3	3.1	2.9	-0.2
12th Grade	3.7	3.3	3.9	4.9	5.4	6.8	7.5	7.1	6.7	6.9†	10.4	9.2	9.0	8.7	8.1	7.8	7.7	7.8	6.8	7.7	7.3	6.6	6.4	5.1	4.8	4.7	4.8	+0.1
Ecstasy (MDMA) <sup>g</sup>																												
8th Grade, original	—	—	—	—	—	3.4	3.2	2.7	2.7	4.3	5.2	4.3	3.2	2.8	2.8	2.5	2.3	2.4	2.2	3.3	2.6	2.0	1.8	1.4	—	—	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.4	2.3	1.7	1.5	-0.1
10th Grade, original	—	—	—	—	—	5.6	5.7	5.1	6.0	7.3	8.0	6.6	5.4	4.3	4.0	4.5	5.2	4.3	5.5	6.4	6.6	5.0	5.7	3.7	—	—	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.2	3.8	2.8	2.8	0.0
12th Grade, original	—	—	—	—	—	6.1	6.9	5.8	8.0	11.0	11.7	10.5	8.3	7.5	5.4	6.5	6.5	6.2	6.5	7.3	8.0	7.2	7.1	5.6	—	—	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.9	5.9	4.9	4.9	0.0
Cocaine																												
8th Grade	2.3	2.9	2.9	3.6	4.2	4.5	4.4	4.6	4.7	4.5	4.3	3.6	3.6	3.4	3.7	3.4	3.1	3.0	2.6	2.6	2.2	1.9	1.7	1.8	1.6	1.4	1.3	-0.1
10th Grade	4.1	3.3	3.6	4.3	5.0	6.5	7.1	7.2	7.7	6.9	5.7	6.1	5.1	5.4	5.2	4.8	5.3	4.5	4.6	3.7	3.3	3.3	3.3	2.6	2.7	2.1	2.1	0.0
12th Grade	7.8	6.1	6.1	5.9	6.0	7.1	8.7	9.3	9.8	8.6	8.2	7.8	7.7	8.1	8.0	8.5	7.8	7.2	6.0	5.5	5.2	4.9	4.5	4.6	4.0	3.7	4.2	+0.5
Crack																												
8th Grade	1.3	1.6	1.7	2.4	2.7	2.9	2.7	3.2	3.1	3.1	3.0	2.5	2.5	2.4	2.4	2.3	2.1	2.0	1.7	1.5	1.5	1.0	1.2	1.2	1.0	0.9	0.8	-0.1
10th Grade	1.7	1.5	1.8	2.1	2.8	3.3	3.6	3.9	4.0	3.7	3.1	3.6	2.7	2.6	2.5	2.2	2.3	2.0	2.1	1.8	1.6	1.4	1.5	1.0	1.1	0.8	0.8	0.0
12th Grade	3.1	2.6	2.6	3.0	3.0	3.3	3.9	4.4	4.6	3.9	3.7	3.8	3.6	3.9	3.5	3.5	3.2	2.8	2.4	2.4	1.9	2.1	1.8	1.8	1.7	1.4	1.7	+0.3
Cocaine other than Crack <sup>h</sup>																												
8th Grade	2.0	2.4	2.4	3.0	3.4	3.8	3.5	3.7	3.8	3.5	3.3	2.8	2.7	2.6	2.9	2.7	2.6	2.4	2.1	2.1	1.8	1.6	1.4	1.4	1.3	1.1	1.0	-0.1
10th Grade	3.8	3.0	3.3	3.8	4.4	5.5	6.1	6.4	6.8	6.0	5.0	5.2	4.5	4.8	4.6	4.3	4.8	4.0	4.1	3.4	3.0	3.0	2.9	2.2	2.3	1.9	1.9	-0.1
12th Grade	7.0	5.3	5.4	5.2	5.1	6.4	8.2	8.4	8.8	7.7	7.4	7.0	6.7	7.3	7.1	7.9	6.8	6.5	5.3	5.1	4.9	4.4	4.2	4.1	3.4	3.3	3.5	+0.2

(Table continued on next page.)

**TABLE 5 (cont.)**  
**Trends in Lifetime Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
<b>Heroin <sup>l,j</sup></b>																												
8th Grade	1.2	1.4	1.4	2.0	2.3	2.4	2.1	2.3	2.3	1.9	1.7	1.6	1.6	1.6	1.5	1.4	1.3	1.4	1.3	1.3	1.2	0.8	1.0	0.9	0.5	0.5	0.7	+0.2
10th Grade	1.2	1.2	1.3	1.5	1.7	2.1	2.1	2.3	2.3	2.2	1.7	1.8	1.5	1.5	1.5	1.4	1.5	1.2	1.5	1.3	1.2	1.1	1.0	0.9	0.7	0.6	0.4	-0.2
12th Grade	0.9	1.2	1.1	1.2	1.6	1.8	2.1	2.0	2.0	2.4	1.8	1.7	1.5	1.5	1.5	1.4	1.5	1.3	1.2	1.6	1.4	1.1	1.0	1.0	0.8	0.7	0.7	0.0
<b>With a Needle <sup>j</sup></b>																												
8th Grade	—	—	—	—	1.5	1.6	1.3	1.4	1.6	1.1	1.2	1.0	1.0	1.1	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.6	0.6	0.8	0.3	0.3	0.4	+0.1
10th Grade	—	—	—	—	1.0	1.1	1.1	1.2	1.3	1.0	0.8	1.0	0.9	0.8	0.8	0.9	0.9	0.7	0.9	0.8	0.8	0.7	0.7	0.6	0.5	0.5	0.3	-0.2
12th Grade	—	—	—	—	0.7	0.8	0.9	0.8	0.9	0.8	0.7	0.8	0.7	0.7	0.9	0.8	0.7	0.7	0.6	1.1	0.9	0.7	0.7	0.8	0.6	0.5	0.4	0.0
<b>Without a Needle <sup>i</sup></b>																												
8th Grade	—	—	—	—	1.5	1.6	1.4	1.5	1.4	1.3	1.1	1.0	1.1	1.0	0.9	0.9	0.7	0.9	0.8	0.7	0.7	0.5	0.5	0.4	0.3	0.4	0.5	+0.1
10th Grade	—	—	—	—	1.1	1.7	1.7	1.7	1.6	1.7	1.3	1.3	1.0	1.1	1.1	1.0	1.1	0.8	1.0	0.9	0.8	0.8	0.7	0.5	0.4	0.3	0.3	0.0
12th Grade	—	—	—	—	1.4	1.7	2.1	1.6	1.8	2.4	1.5	1.6	1.8	1.4	1.3	1.1	1.4	1.1	0.9	1.4	1.3	0.8	0.9	0.7	0.7	0.6	0.4	-0.2
<b>Narcotics other than Heroin <sup>k,l</sup></b>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.6	6.1	6.4	6.6	7.2	8.2	9.7	9.8	10.2	10.6	9.9‡	13.5	13.2	13.5	12.8	13.4	13.1	13.2	13.2	13.0	13.0	12.2	11.1	9.5	8.4	7.8	6.8	-1.0
<b>Amphetamines <sup>k,m</sup></b>																												
8th Grade	10.5	10.8	11.8	12.3	13.1	13.5	12.3	11.3	10.7	9.9	10.2	8.7	8.4	7.5	7.4	7.3	6.5	6.8	6.0	5.7	5.2	4.5‡	6.9	6.7	6.8	5.7	5.7	-0.1
10th Grade	13.2	13.1	14.9	15.1	17.4	17.7	17.0	16.0	15.7	15.7	16.0	14.9	13.1	11.9	11.1	11.2	11.1	9.0	10.3	10.6	9.0	8.9‡	11.2	10.6	9.7	8.8	8.2	-0.6
12th Grade	15.4	13.9	15.1	15.7	15.3	15.3	16.5	16.4	16.3	15.6	16.2	16.8	14.4	15.0	13.1	12.4	11.4	10.5	9.9	11.1	12.2	12.0‡	13.8	12.1	10.8	10.0	9.2	-0.8
<b>Methamphetamine <sup>n,o</sup></b>																												
8th Grade	—	—	—	—	—	—	—	—	4.5	4.2	4.4	3.5	3.9	2.5	3.1	2.7	1.8	2.3	1.6	1.8	1.3	1.3	1.4	1.0	0.8	0.6	0.7	0.0
10th Grade	—	—	—	—	—	—	—	—	7.3	6.9	6.4	6.1	5.2	5.3	4.1	3.2	2.8	2.4	2.8	2.5	2.1	1.8	1.6	1.4	1.3	0.7	0.9	+0.2
12th Grade	—	—	—	—	—	—	—	—	8.2	7.9	6.9	6.7	6.2	6.2	4.5	4.4	3.0	2.8	2.4	2.3	2.1	1.7	1.5	1.9	1.0	1.2	1.1	-0.1

(Table continued on next page.)

**TABLE 5 (cont.)**  
**Trends in Lifetime Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
Crystal Methamphetamine (Ice) <sup>o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.3	2.9	3.1	3.4	3.9	4.4	4.4	5.3	4.8	4.0	4.1	4.7	3.9	4.0	4.0	3.4	3.4	2.8	2.1	1.8	2.1	1.7	2.0	1.3	1.2	1.4	1.5	+0.1
Sedatives (Barbiturates) <sup>k,p</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.2	5.5	6.3	7.0	7.4	7.6	8.1	8.7	8.9	9.2	8.7	9.5	8.8	9.9	10.5	10.2	9.3	8.5	8.2	7.5	7.0	6.9	7.5	6.8	5.9	5.2	4.5	-0.7
Tranquilizers <sup>b,k</sup>																												
8th Grade	3.8	4.1	4.4	4.6	4.5	5.3	4.8	4.6	4.4	4.4‡	5.0	4.3	4.4	4.0	4.1	4.3	3.9	3.9	3.9	4.4	3.4	3.0	2.9	2.9	3.0	3.0	3.4	+0.4
10th Grade	5.8	5.9	5.7	5.4	6.0	7.1	7.3	7.8	7.9	8.0‡	9.2	8.8	7.8	7.3	7.1	7.2	7.4	6.8	7.0	7.3	6.8	6.3	5.5	5.8	5.8	6.1	6.0	0.0
12th Grade	7.2	6.0	6.4	6.6	7.1	7.2	7.8	8.5	9.3	8.9‡	10.3	11.4	10.2	10.6	9.9	10.3	9.5	8.9	9.3	8.5	8.7	8.5	7.7	7.4	6.9	7.6	7.5	-0.1
Any Prescription Drug <sup>q</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.0	23.9	22.2	21.5	20.9	21.6	21.7	21.2‡	22.2	19.9	18.3	18.0	16.5	-1.6
Rohypnol <sup>f</sup>																												
8th Grade	—	—	—	—	—	1.5	1.1	1.4	1.3	1.0	1.1	0.8	1.0	1.0	1.1	1.0	1.0	0.7	0.7	0.9	2.0	1.0	0.7	0.6	0.8	0.9	0.6	-0.3
10th Grade	—	—	—	—	—	1.5	1.7	2.0	1.8	1.3	1.5	1.3	1.0	1.2	1.0	0.8	1.3	0.9	0.7	1.4	1.2	0.8	1.1	1.0	0.5	1.0	0.7	-0.3
12th Grade	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol <sup>s</sup>																												
Any Use																												
8th Grade	70.1	69.3‡	55.7	55.8	54.5	55.3	53.8	52.5	52.1	51.7	50.5	47.0	45.6	43.9	41.0	40.5	38.9	38.9	36.6	35.8	33.1	29.5	27.8	26.8	26.1	22.8	23.1	+0.3
10th Grade	83.8	82.3‡	71.6	71.1	70.5	71.8	72.0	69.8	70.6	71.4	70.1	66.9	66.0	64.2	63.2	61.5	61.7	58.3	59.1	58.2	56.0	54.0	52.1	49.3	47.1	43.4	42.2	-1.2
12th Grade	88.0	87.5‡	80.0	80.4	80.7	79.2	81.7	81.4	80.0	80.3	79.7	78.4	76.6	76.8	75.1	72.7	72.2	71.9	72.3	71.0	70.0	69.4	68.2	66.0	64.0	61.2	61.5	+0.3

(Table continued on next page.)

**TABLE 5 (cont.)**  
**Trends in Lifetime Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change	
<b>Been Drunk <sup>o</sup></b>																													
8th Grade	26.7	26.8	26.4	25.9	25.3	26.8	25.2	24.8	24.8	25.1	23.4	21.3	20.3	19.9	19.5	19.5	17.9	18.0	17.4	16.3	14.8	12.8	12.2	10.8	10.9	8.6	9.2	+0.6	
10th Grade	50.0	47.7	47.9	47.2	46.9	48.5	49.4	46.7	48.9	49.3	48.2	44.0	42.4	42.3	42.1	41.4	41.2	37.2	38.6	36.9	35.9	34.6	33.5	30.2	28.6	26.0	25.1	-1.0	
12th Grade	65.4	63.4	62.5	62.9	63.2	61.8	64.2	62.4	62.3	62.3	63.9	61.6	58.1	60.3	57.5	56.4	55.1	54.7	56.5	54.1	51.0	54.2	52.3	49.8	46.7	46.3	45.3	-0.9	
<b>Flavored Alcoholic Beverages <sup>e,n</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	37.9	35.5	35.5	34.0	32.8	29.4	30.0	27.0	23.5	21.9	19.2	19.3	16.3	16.0	-0.3	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	58.6	58.8	58.1	55.7	53.5	51.4	51.3	48.4	46.7	44.9	42.3	38.7	33.3	34.8	+1.5	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	71.0	73.6	69.9	68.4	65.5	67.4	62.6	62.4	60.5	58.9	57.5	55.6	53.6	51.2	-2.4	
<b>Cigarettes</b>																													
<b>Any Use</b>																													
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	24.6	22.1	20.5	20.1	20.0	18.4	15.5	14.8	13.5	13.3	9.8	9.4	-0.4	
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	36.1	34.6	31.7	32.7	33.0	30.4	27.7	25.7	22.6	19.9	17.5	15.9	-1.6	
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	47.1	46.2	44.7	43.6	42.2	40.0	39.5	38.1	34.4	31.1	28.3	26.6	-1.7	
<b>Smokeless Tobacco <sup>t</sup></b>																													
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	10.2	9.1	9.8	9.6	9.9	9.7	8.1	7.9	8.0	8.6	6.9	6.2	-0.7	
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	15.0	15.1	12.2	15.2	16.8	15.6	15.4	14.0	13.6	12.3	10.2	9.1	-1.0	
12th Grade	—	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	15.2	15.1	15.6	16.3	17.6	16.9	17.4	17.2	15.1	13.2	14.2	11.0	-3.2 s	
<b>Any Vaping <sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.7	17.5†	18.5	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.8	29.0†	30.9	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.5	33.8†	35.8	—
<b>Vaping Nicotine <sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.6	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.4	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.0	—

(Table continued on next page.)



**TABLE 5 (cont.)**  
**Trends in Lifetime Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change	
<b>Vaping Marijuana<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.8	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.9	—
<b>Vaping Just Flavoring<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.0	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.7	—
<b>Steroids<sup>k,u</sup></b>																													
8th Grade	1.9	1.7	1.6	2.0	2.0	1.8	1.8	2.3	2.7	3.0	2.8	2.5	2.5	1.9	1.7	1.6	1.5	1.4	1.3	1.1	1.2	1.2	1.1	1.0	1.0	0.9	1.1	+0.1	
10th Grade	1.8	1.7	1.7	1.8	2.0	1.8	2.0	2.0	2.7	3.5	3.5	3.5	3.0	2.4	2.0	1.8	1.8	1.4	1.3	1.6	1.4	1.3	1.3	1.4	1.2	1.3	1.1	-0.2	
12th Grade	2.1	2.1	2.0	2.4	2.3	1.9	2.4	2.7	2.9	2.5	3.7	4.0	3.5	3.4	2.6	2.7	2.2	2.2	2.2	2.0	1.8	1.8	2.1	1.9	2.3	1.6	1.6	0.0	
<b>Previously surveyed drugs that have been dropped.</b>																													
<b>Nitrites<sup>e</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.6	1.5	1.4	1.7	1.5	1.8	2.0	2.7	1.7	0.8	1.9	1.5	1.6	1.3	1.1	1.2	1.2	0.6	1.1	—	—	—	—	—	—	—	—	—	
<b>PCP<sup>e</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	2.9	2.4	2.9	2.8	2.7	4.0	3.9	3.9	3.4	3.4	3.5	3.1	2.5	1.6	2.4	2.2	2.1	1.8	1.7	1.8	2.3	1.6	1.3	—	—	—	—	—	
<b>Methaqualone<sup>e,k</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.3	1.6	0.8	1.4	1.2	2.0	1.7	1.6	1.8	0.8	1.1	1.5	1.0	1.3	1.3	1.2	1.0	0.8	0.7	0.4	0.6	0.8	—	—	—	—	—	—	

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

Note: See footnotes following Table 5-5d.

**TABLE 6**  
**Trends in Annual Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
<b>Any Illicit Drug<sup>a</sup></b>																												
8th Grade	11.3	12.9	15.1	18.5	21.4	23.6	22.1	21.0	20.5	19.5	19.5	17.7	16.1	15.2	15.5	14.8	13.2	14.1	14.5	16.0	14.7	13.4†	15.2	14.6	14.8	12.0	12.9	+0.9
10th Grade	21.4	20.4	24.7	30.0	33.3	37.5	38.5	35.0	35.9	36.4	37.2	34.8	32.0	31.1	29.8	28.7	28.1	26.9	29.4	30.2	31.1	30.1†	32.1	29.9	27.9	26.8	27.8	+1.0
12th Grade	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4	41.0	39.3	38.8	38.4	36.5	35.9	36.6	36.5	38.3	40.0	39.7†	40.1	38.7	38.6	38.3	39.9	+1.6
<b>Any Illicit Drug other than Marijuana<sup>a,b</sup></b>																												
8th Grade	8.4	9.3	10.4	11.3	12.6	13.1	11.8	11.0	10.5	10.2†	10.8	8.8	8.8	7.9	8.1	7.7	7.0	7.4	7.0	7.1	6.4	5.5†	6.3	6.4	6.3	5.4	5.8	+0.3
10th Grade	12.2	12.3	13.9	15.2	17.5	18.4	18.2	16.6	16.7	16.7†	17.9	15.7	13.8	13.5	12.9	12.7	13.1	11.3	12.2	12.1	11.2	10.8†	11.2	11.2	10.5	9.8	9.4	-0.4
12th Grade	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4†	21.6	20.9	19.8	20.5	19.7	19.2	18.5	18.3	17.0	17.3	17.6	17.0†	17.8	15.9	15.2	14.3	13.3	-1.0
<b>Any Illicit Drug including Inhalants<sup>a,c</sup></b>																												
8th Grade	16.7	18.2	21.1	24.2	27.1	28.7	27.2	26.2	25.3	24.0	23.9	21.4	20.4	20.2	20.4	19.7	18.0	19.0	18.8	20.3	18.2	17.0†	17.6	16.8	17.0	13.5	15.8	+2.3 ss
10th Grade	23.9	23.5	27.4	32.5	35.6	39.6	40.3	37.1	37.7	38.0	38.7	36.1	33.5	32.9	31.7	30.7	30.2	28.8	31.2	31.8	32.5	31.5†	33.2	31.0	28.9	27.7	29.1	+1.4
12th Grade	31.2	28.8	32.5	37.6	40.2	41.9	43.3	42.4	42.8	42.5	42.6	42.1	40.5	39.1	40.3	38.0	37.0	37.3	37.6	39.2	41.5	40.2†	42.3	39.2	40.2	38.7	41.2	+2.5
<b>Marijuana/Hashish</b>																												
8th Grade	6.2	7.2	9.2	13.0	15.8	18.3	17.7	16.9	16.5	15.6	15.4	14.6	12.8	11.8	12.2	11.7	10.3	10.9	11.8	13.7	12.5	11.4	12.7	11.7	11.8	9.4	10.1	+0.8
10th Grade	16.5	15.2	19.2	25.2	28.7	33.6	34.8	31.1	32.1	32.2	32.7	30.3	28.2	27.5	26.6	25.2	24.6	23.9	26.7	27.5	28.8	28.0	29.8	27.3	25.4	23.9	25.5	+1.6
12th Grade	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	36.2	34.9	34.3	33.6	31.5	31.7	32.4	32.8	34.8	36.4	36.4	36.4	35.1	34.9	35.6	37.1	+1.5
<b>Synthetic Marijuana<sup>n,o</sup></b>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	4.0	3.3	3.1	2.7	2.0	-0.7 s
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.8	7.4	5.4	4.3	3.3	2.7	-0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	11.3	7.9	5.8	5.2	3.5	3.7	+0.2
<b>Inhalants<sup>c,d</sup></b>																												
8th Grade	9.0	9.5	11.0	11.7	12.8	12.2	11.8	11.1	10.3	9.4	9.1	7.7	8.7	9.6	9.5	9.1	8.3	8.9	8.1	8.1	7.0	6.2	5.2	5.3	4.6	3.8	4.7	+0.9 s
10th Grade	7.1	7.5	8.4	9.1	9.6	9.5	8.7	8.0	7.2	7.3	6.6	5.8	5.4	5.9	6.0	6.5	6.6	5.9	6.1	5.7	4.5	4.1	3.5	3.3	2.9	2.4	2.3	-0.1
12th Grade	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	4.5	3.9	4.2	5.0	4.5	3.7	3.8	3.4	3.6	3.2	2.9	2.5	1.9	1.9	1.7	1.5	-0.1

(Table continued on next page.)

**TABLE 6 (cont.)**  
**Trends in Annual Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
Hallucinogens <sup>b,f</sup>																												
8th Grade	1.9	2.5	2.6	2.7	3.6	4.1	3.7	3.4	2.9	2.8†	3.4	2.6	2.6	2.2	2.4	2.1	1.9	2.1	1.9	2.2	2.2	1.6	1.6	1.3	1.3	1.2	1.1	-0.1
10th Grade	4.0	4.3	4.7	5.8	7.2	7.8	7.6	6.9	6.9	6.1†	6.2	4.7	4.1	4.1	4.0	4.1	4.4	3.9	4.1	4.2	4.1	3.5	3.4	3.3	3.1	2.9	2.8	-0.1
12th Grade	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1†	9.1	6.6	5.9	6.2	5.5	4.9	5.4	5.9	4.7	5.5	5.2	4.8	4.5	4.0	4.2	4.3	4.4	+0.1
LSD <sup>b</sup>																												
8th Grade	1.7	2.1	2.3	2.4	3.2	3.5	3.2	2.8	2.4	2.4	2.2	1.5	1.3	1.1	1.2	0.9	1.1	1.3	1.1	1.2	1.1	0.8	1.0	0.7	0.9	0.8	0.9	+0.1
10th Grade	3.7	4.0	4.2	5.2	6.5	6.9	6.7	5.9	6.0	5.1	4.1	2.6	1.7	1.6	1.5	1.7	1.9	1.8	1.9	1.9	1.8	1.7	1.7	1.9	2.0	2.1	2.1	-0.1
12th Grade	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	3.5	1.9	2.2	1.8	1.7	2.1	2.7	1.9	2.6	2.7	2.4	2.2	2.5	2.9	3.0	3.3	+0.3
Hallucinogens other than LSD <sup>b</sup>																												
8th Grade	0.7	1.1	1.0	1.3	1.7	2.0	1.8	1.6	1.5	1.4†	2.4	2.1	2.1	1.9	2.0	1.8	1.6	1.6	1.5	1.8	1.8	1.3	1.2	1.0	0.8	0.8	0.7	-0.1
10th Grade	1.3	1.4	1.9	2.4	2.8	3.3	3.3	3.4	3.2	3.1†	4.3	4.0	3.6	3.7	3.5	3.7	3.8	3.3	3.5	3.5	3.5	3.0	2.7	2.6	1.9	2.0	1.8	-0.2
12th Grade	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4†	5.9	5.4	5.4	5.6	5.0	4.6	4.8	5.0	4.2	4.8	4.3	4.0	3.7	3.0	2.9	2.7	2.9	+0.2
PCP <sup>e</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.4	1.4	1.6	1.8	2.6	2.3	2.1	1.8	2.3	1.8	1.1	1.3	0.7	1.3	0.7	0.9	1.1	1.0	1.0	1.3	0.9	0.7	0.8	1.4	1.3	1.0	-0.3
Ecstasy (MDMA) <sup>g</sup>																												
8th Grade, original	—	—	—	—	2.3	2.3	1.8	1.7	3.1	3.5	2.9	2.1	1.7	1.7	1.4	1.5	1.7	1.3	2.4	1.7	1.1	1.1	0.9	—	—	—	—	
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.4	1.0	0.9	-0.1
10th Grade, original	—	—	—	—	4.6	3.9	3.3	4.4	5.4	6.2	4.9	3.0	2.4	2.6	2.8	3.5	2.9	3.7	4.7	3.0	3.6	2.3	—	—	—	—	—	
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.8	2.4	1.8	1.7	-0.0
12th Grade, original	—	—	—	—	4.6	4.0	3.6	5.6	8.2	9.2	7.4	4.5	4.0	3.0	4.1	4.5	4.3	4.3	4.5	5.3	3.8	4.0	3.6	—	—	—	—	
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.0	3.6	2.7	2.6	-0.1
Salvia <sup>n,o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7	1.6	1.4	1.2	0.6	0.7	0.9	0.4	-0.6 s
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.7	3.9	2.5	2.3	1.8	1.2	0.9	0.9	0.0
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	5.5	5.9	4.4	3.4	1.8	1.9	1.8	1.5	-0.2

(Table continued on next page.)

**TABLE 6 (cont.)**  
**Trends in Annual Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
Cocaine																												
8th Grade	1.1	1.5	1.7	2.1	2.6	3.0	2.8	3.1	2.7	2.6	2.5	2.3	2.2	2.0	2.2	2.0	2.0	1.8	1.6	1.6	1.4	1.2	1.0	1.0	0.9	0.8	0.8	0.0
10th Grade	2.2	1.9	2.1	2.8	3.5	4.2	4.7	4.7	4.9	4.4	3.6	4.0	3.3	3.7	3.5	3.2	3.4	3.0	2.7	2.2	1.9	2.0	1.9	1.5	1.8	1.3	1.4	+0.1
12th Grade	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	5.0	4.8	5.3	5.1	5.7	5.2	4.4	3.4	2.9	2.9	2.7	2.6	2.6	2.5	2.3	2.7	+0.5
Crack																												
8th Grade	0.7	0.9	1.0	1.3	1.6	1.8	1.7	2.1	1.8	1.8	1.7	1.6	1.6	1.3	1.4	1.3	1.3	1.1	1.1	1.0	0.9	0.6	0.6	0.7	0.5	0.5	0.5	0.0
10th Grade	0.9	0.9	1.1	1.4	1.8	2.1	2.2	2.5	2.4	2.2	1.8	2.3	1.6	1.7	1.7	1.3	1.3	1.3	1.2	1.0	0.9	0.8	0.8	0.5	0.7	0.4	0.6	+0.2
12th Grade	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	2.3	2.2	2.3	1.9	2.1	1.9	1.6	1.3	1.4	1.0	1.2	1.1	1.1	1.1	0.8	1.0	+0.2
Cocaine other than Crack <sup>h</sup>																												
8th Grade	1.0	1.2	1.3	1.7	2.1	2.5	2.2	2.4	2.3	1.9	1.9	1.8	1.6	1.6	1.7	1.6	1.5	1.4	1.3	1.3	1.1	1.0	0.8	0.8	0.8	0.6	0.6	0.0
10th Grade	2.1	1.7	1.8	2.4	3.0	3.5	4.1	4.0	4.4	3.8	3.0	3.4	2.8	3.3	3.0	2.9	3.1	2.6	2.3	1.9	1.7	1.8	1.6	1.3	1.5	1.1	1.2	+0.1
12th Grade	3.2	2.6	2.9	3.0	3.4	4.2	5.0	4.9	5.8	4.5	4.4	4.4	4.2	4.7	4.5	5.2	4.5	4.0	3.0	2.6	2.6	2.4	2.4	2.4	2.1	2.0	2.3	+0.3
Heroin <sup>l,j</sup>																												
8th Grade	0.7	0.7	0.7	1.2	1.4	1.6	1.3	1.3	1.4	1.1	1.0	0.9	0.9	1.0	0.8	0.8	0.8	0.9	0.7	0.8	0.7	0.5	0.5	0.5	0.3	0.3	0.3	+0.1
10th Grade	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.4	1.4	1.4	0.9	1.1	0.7	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.6	0.6	0.5	0.5	0.3	0.2	-0.1
12th Grade	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	1.0	0.8	0.9	0.8	0.8	0.9	0.7	0.7	0.9	0.8	0.6	0.6	0.6	0.5	0.3	0.4	+0.1
With a Needle <sup>j</sup>																												
8th Grade	—	—	—	—	0.9	1.0	0.8	0.8	0.9	0.6	0.7	0.6	0.6	0.7	0.6	0.5	0.6	0.5	0.5	0.6	0.5	0.4	0.3	0.4	0.2	0.2	0.2	0.0
10th Grade	—	—	—	—	0.6	0.7	0.7	0.8	0.6	0.5	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.5	0.4	0.2	0.3	0.2	-0.1
12th Grade	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.7	0.6	0.4	0.4	0.5	0.3	0.3	0.2	0.0
Without a Needle <sup>j</sup>																												
8th Grade	—	—	—	—	0.8	1.0	0.8	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.3	+0.1
10th Grade	—	—	—	—	0.8	0.9	1.1	1.0	1.1	1.1	0.7	0.8	0.5	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.0
12th Grade	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	0.8	0.8	0.7	0.8	0.6	1.0	0.5	0.6	0.8	0.7	0.4	0.4	0.5	0.4	0.3	0.2	-0.1

(Table continued on next page.)

**TABLE 6 (cont.)**  
**Trends in Annual Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
Narcotics other than Heroin <sup>k,l</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7†	9.4	9.3	9.5	9.0	9.0	9.2	9.1	9.2	8.7	8.7	7.9	7.1	6.1	5.4	4.8	4.2	-0.5
OxyContin <sup>k,n,v</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	1.3	1.7	1.7	1.8	2.6	1.8	2.1	2.0	2.1	1.8	1.6	2.0	1.0	0.8	0.9	0.8	-0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	3.0	3.6	3.5	3.2	3.8	3.9	3.6	5.1	4.6	3.9	3.0	3.4	3.0	2.6	2.1	2.2	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	4.0	4.5	5.0	5.5	4.3	5.2	4.7	4.9	5.1	4.9	4.3	3.6	3.3	3.7	3.4	2.7	-0.7
Vicodin <sup>k,n,v</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	2.5	2.8	2.5	2.6	3.0	2.7	2.9	2.5	2.7	2.1	1.3	1.4	1.0	0.9	0.8	0.7	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	6.9	7.2	6.2	5.9	7.0	7.2	6.7	8.1	7.7	5.9	4.4	4.6	3.4	2.5	1.7	1.5	-0.3
12th Grade	—	—	—	—	—	—	—	—	—	—	—	9.6	10.5	9.3	9.5	9.7	9.6	9.7	9.7	8.0	8.1	7.5	5.3	4.8	4.4	2.9	2.0	-1.0 ss
Amphetamines <sup>k,m</sup>																												
8th Grade	6.2	6.5	7.2	7.9	8.7	9.1	8.1	7.2	6.9	6.5	6.7	5.5	5.5	4.9	4.9	4.7	4.2	4.5	4.1	3.9	3.5	2.9†	4.2	4.3	4.1	3.5	3.5	0.0
10th Grade	8.2	8.2	9.6	10.2	11.9	12.4	12.1	10.7	10.4	11.1	11.7	10.7	9.0	8.5	7.8	7.9	8.0	6.4	7.1	7.6	6.6	6.5†	7.9	7.6	6.8	6.1	5.6	-0.5
12th Grade	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	11.1	9.9	10.0	8.6	8.1	7.5	6.8	6.6	7.4	8.2	7.9†	9.2	8.1	7.7	6.7	5.9	-0.8
Ritalin <sup>k,n,o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	2.9	2.8	2.6	2.5	2.4	2.6	2.1	1.6	1.8	1.5	1.3	0.7	1.1	0.9	0.6	0.8	0.4	-0.4 s
10th Grade	—	—	—	—	—	—	—	—	—	—	4.8	4.8	4.1	3.4	3.4	3.6	2.8	2.9	3.6	2.7	2.6	1.9	1.8	1.8	1.6	1.2	0.8	-0.4
12th Grade	—	—	—	—	—	—	—	—	—	—	5.1	4.0	4.0	5.1	4.4	4.4	3.8	3.4	2.1	2.7	2.6	2.6	2.3	1.8	2.0	1.2	1.3	+0.1
Adderall <sup>k,n,o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	2.3	1.7	1.7	1.8	1.3	1.0	1.5	1.3	-0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	5.3	4.6	4.5	4.4	4.6	5.2	4.2	4.0	-0.2
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.4	6.5	6.5	7.6	7.4	6.8	7.5	6.2	5.5	-0.6

(Table continued on next page.)

**TABLE 6 (cont.)**  
**Trends in Annual Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
Methamphetamine <sup>n,o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	3.2	2.5	2.8	2.2	2.5	1.5	1.8	1.8	1.1	1.2	1.0	1.2	0.8	1.0	1.0	0.6	0.5	0.4	0.5	+0.1
10th Grade	—	—	—	—	—	—	—	—	4.6	4.0	3.7	3.9	3.3	3.0	2.9	1.8	1.6	1.5	1.6	1.6	1.4	1.0	1.0	0.8	0.8	0.4	0.4	-0.1
12th Grade	—	—	—	—	—	—	—	—	4.7	4.3	3.9	3.6	3.2	3.4	2.5	2.5	1.7	1.2	1.2	1.0	1.4	1.1	0.9	1.0	0.6	0.6	0.6	-0.1
Crystal Methamphetamine (Ice) <sup>o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	3.0	2.0	2.1	2.3	1.9	1.6	1.1	0.9	0.9	1.2	0.8	1.1	0.8	0.5	0.8	0.8	0.0
Bath salts (synthetic stimulants) <sup>n,o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	0.5	0.4	0.9	0.5	-0.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.9	0.9	0.7	0.8	0.4	-0.3
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	0.9	0.9	1.0	0.8	0.6	-0.1
Sedatives (Barbiturates) <sup>k,p</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	6.7	6.0	6.5	7.2	6.6	6.2	5.8	5.2	4.8	4.3	4.5	4.8	4.3	3.6	3.0	2.9	-0.1
Tranquilizers <sup>b,k</sup>																												
8th Grade	1.8	2.0	2.1	2.4	2.7	3.3	2.9	2.6	2.5	2.6†	2.8	2.6	2.7	2.5	2.8	2.6	2.4	2.4	2.6	2.8	2.0	1.8	1.8	1.7	1.7	1.7	2.0	+0.3
10th Grade	3.2	3.5	3.3	3.3	4.0	4.6	4.9	5.1	5.4	5.6†	7.3	6.3	5.3	5.1	4.8	5.2	5.3	4.6	5.0	5.1	4.5	4.3	3.7	3.9	3.9	4.1	4.1	0.0
12th Grade	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7†	6.9	7.7	6.7	7.3	6.8	6.6	6.2	6.2	6.3	5.6	5.6	5.3	4.6	4.7	4.7	4.9	4.7	-0.2
Any Prescription Drug <sup>q</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.1	16.8	15.8	15.4	14.4	15.0	15.2	14.8†	15.9	13.9	12.9	12.0	10.9	-1.0

(Table continued on next page.)

**TABLE 6 (cont.)**  
**Trends in Annual Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
OTC Cough/Cold Medicines <sup>n,o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.2	4.0	3.6	3.8	3.2	2.7	3.0	2.9	2.0	1.6	2.6	2.1	-0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.3	5.4	5.3	6.0	5.1	5.5	4.7	4.3	3.7	3.3	3.0	3.6	+0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	5.8	5.5	5.9	6.6	5.3	5.6	5.0	4.1	4.6	4.0	3.2	-0.8
Rohypnol <sup>f</sup>																												
8th Grade	—	—	—	—	—	1.0	0.8	0.8	0.5	0.5	0.7	0.3	0.5	0.6	0.7	0.5	0.7	0.5	0.4	0.5	0.8	0.4	0.4	0.3	0.3	0.5	0.4	-0.1
10th Grade	—	—	—	—	—	1.1	1.3	1.2	1.0	0.8	1.0	0.7	0.6	0.7	0.5	0.5	0.7	0.4	0.4	0.6	0.6	0.5	0.6	0.5	0.2	0.5	0.3	-0.3
12th Grade	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9†	1.6	1.3	1.6	1.2	1.1	1.0	1.3	1.0	1.5	1.3	1.5	0.9	0.7	1.0	1.1	0.8	-0.4
GHB <sup>n,w</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	1.2	1.1	0.8	0.9	0.7	0.5	0.8	0.7	1.1	0.7	0.6	0.6	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	1.1	1.0	1.4	1.4	0.8	0.8	0.7	0.6	0.5	1.0	0.6	0.5	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	1.9	1.6	1.5	1.4	2.0	1.1	1.1	0.9	1.2	1.1	1.4	1.4	1.4	1.0	1.0	0.7	0.9	0.4	-0.5
Ketamine <sup>n,x</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	1.6	1.3	1.3	1.1	0.9	0.6	0.9	1.0	1.2	1.0	1.0	0.8	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	2.1	2.1	2.2	1.9	1.3	1.0	1.0	0.8	1.0	1.3	1.1	1.2	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	2.5	2.5	2.6	2.1	1.9	1.6	1.4	1.3	1.5	1.7	1.6	1.7	1.5	1.4	1.5	1.4	1.2	1.2	-0.1
Alcohol <sup>s</sup>																												
Any Use																												
8th Grade	54.0	53.7‡	45.4	46.8	45.3	46.5	45.5	43.7	43.5	43.1	41.9	38.7	37.2	36.7	33.9	33.6	31.8	32.1	30.3	29.3	26.9	23.6	22.1	20.8	21.0	17.6	18.2	+0.6
10th Grade	72.3	70.2‡	63.4	63.9	63.5	65.0	65.2	62.7	63.7	65.3	63.5	60.0	59.3	58.2	56.7	55.8	56.3	52.5	52.8	52.1	49.8	48.5	47.1	44.0	41.9	38.3	37.7	-0.6
12th Grade	77.7	76.8‡	72.7	73.0	73.7	72.5	74.8	74.3	73.8	73.2	73.3	71.5	70.1	70.6	68.6	66.5	66.4	65.5	66.2	65.2	63.5	63.5	62.0	60.2	58.2	55.6	55.7	+0.2
Been Drunk <sup>o</sup>																												
8th Grade	17.5	18.3	18.2	18.2	18.4	19.8	18.4	17.9	18.5	18.5	16.6	15.0	14.5	14.5	14.1	13.9	12.6	12.7	12.2	11.5	10.5	8.6	8.4	7.3	7.7	5.7	6.4	+0.7
10th Grade	40.1	37.0	37.8	38.0	38.5	40.1	40.7	38.3	40.9	41.6	39.9	35.4	34.7	35.1	34.2	34.5	34.4	30.0	31.2	29.9	28.8	28.2	27.1	24.6	23.4	20.5	20.4	-0.1
12th Grade	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	50.4	48.0	51.8	47.7	47.9	46.1	45.6	47.0	44.0	42.2	45.0	43.5	41.4	37.7	37.3	35.6	-1.7

(Table continued on next page.)



**TABLE 6 (cont.)**  
**Trends in Annual Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change	
Flavored Alcoholic Beverages <sup>e,n,y</sup>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	30.4	27.9	26.8	26.0	25.0	22.2	21.9	19.2	17.0	15.7	13.4	13.4	11.2	10.8	-0.5	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	49.7	48.5	48.8	45.9	43.4	41.5	41.0	38.3	37.8	35.6	33.2	31.4	26.1	28.3	+2.3	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	55.2	55.8	58.4	54.7	53.6	51.8	53.4	47.9	47.0	44.4	44.2	43.6	42.8	40.0	39.6	-0.4	
Alcoholic Beverages containing Caffeine <sup>n,o,z</sup>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.8	10.9	10.2	9.5	8.4	6.5	5.6	-0.9	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.5	19.7	16.9	14.3	12.8	10.6	9.9	-0.8	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.4	26.4	23.5	20.0	18.3	17.0	16.9	-0.1	
Tobacco using a Hookah <sup>e</sup>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.1	18.5	18.3	21.4	22.9	19.8	13.0	10.1	-2.9 s
Small cigars <sup>e</sup>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.1	19.5	19.9	20.4	18.9	15.9	15.6	13.3	-2.4
Dissolvable Tobacco Products <sup>e,n</sup>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.1	1.1	0.9	0.7	0.6	0.0	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.2	1.3	1.1	0.9	0.6	-0.3	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.6	1.9	1.1	1.4	1.1	1.4	+0.3	
Snus <sup>e,n</sup>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.4	2.0	2.2	1.9	2.2	1.1	-1.0 ss	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	5.2	4.5	4.0	3.0	2.6	-0.4	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.9	7.9	7.7	5.8	5.8	5.8	4.2	-1.6	

(Table continued on next page.)

**TABLE 6 (cont.)**  
**Trends in Annual Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**  
(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
Any Vaping <sup>bb</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.3	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.9	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.8	—
Vaping Nicotine <sup>bb</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.5	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.8	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.8	—
Vaping Marijuana <sup>bb</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.1	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.5	—
Vaping Just Flavoring <sup>bb</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.8	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.3	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	—
Steroids <sup>k,u</sup>																												
8th Grade	1.0	1.1	0.9	1.2	1.0	0.9	1.0	1.2	1.7	1.7	1.6	1.5	1.4	1.1	1.1	0.9	0.8	0.9	0.8	0.5	0.7	0.6	0.6	0.6	0.5	0.5	0.6	+0.1
10th Grade	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.7	2.2	2.1	2.2	1.7	1.5	1.3	1.2	1.1	0.9	0.8	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.0
12th Grade	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	2.5	2.1	2.5	1.5	1.8	1.4	1.5	1.5	1.5	1.2	1.3	1.5	1.5	1.7	1.0	1.1	0.0

(Table continued on next page.)

**TABLE 6 (cont.)**  
**Trends in Annual Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
<b>Previously surveyed drugs that have been dropped.</b>																												
Nitrites <sup>e</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.9	0.5	0.9	1.1	1.1	1.6	1.2	1.4	0.9	0.6	0.6	1.1	0.9	0.8	0.6	0.5	0.8	0.6	0.9	—	—	—	—	—	—	—	—	—
Provigil <sup>k,o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.3	1.5	—	—	—	—	—	—
Methaqualone <sup>e,k</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.5	0.6	0.2	0.8	0.7	1.1	1.0	1.1	1.1	0.3	0.8	0.9	0.6	0.8	0.9	0.8	0.5	0.5	0.6	0.3	0.3	0.4	—	—	—	—	—	—
Bidis <sup>n,o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	3.9	2.7	2.7	2.0	1.7	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	6.4	4.9	3.1	2.8	2.1	1.6	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	9.2	7.0	5.9	4.0	3.6	3.3	2.3	1.7	1.9	1.5	1.4	—	—	—	—	—	—	—	—
Kreteks <sup>n,o</sup>																												
8th Grade	—	—	—	—	—	—	—	—	—	2.6	2.6	2.0	1.9	1.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	6.0	4.9	3.8	3.7	2.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	10.1	8.4	6.7	6.5	7.1	6.2	6.8	6.8	5.5	4.6	2.9	3.0	1.6	1.6	—	—	—	—	—

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

Note: See footnotes following Table 5-5d.

**TABLE 7**  
**Trends in 30-Day Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

	Percentage who used in last 30 days																											2016– 2017 change
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
<b>Any Illicit Drug<sup>a</sup></b>																												
8th Grade	5.7	6.8	8.4	10.9	12.4	14.6	12.9	12.1	12.2	11.9	11.7	10.4	9.7	8.4	8.5	8.1	7.4	7.6	8.1	9.5	8.5	7.7†	8.7	8.3	8.1	6.9	7.0	+0.1
10th Grade	11.6	11.0	14.0	18.5	20.2	23.2	23.0	21.5	22.1	22.5	22.7	20.8	19.5	18.3	17.3	16.8	16.9	15.8	17.8	18.5	19.2	18.6†	19.2	18.5	16.5	15.9	17.2	+1.3
12th Grade	16.4	14.4	18.3	21.9	23.8	24.6	26.2	25.6	25.9	24.9	25.7	25.4	24.1	23.4	23.1	21.5	21.9	22.3	23.3	23.8	25.2	25.2†	25.2	23.7	23.6	24.4	24.9	+0.4
<b>Any Illicit Drug other than Marijuana<sup>a,b</sup></b>																												
8th Grade	3.8	4.7	5.3	5.6	6.5	6.9	6.0	5.5	5.5	5.6†	5.5	4.7	4.7	4.1	4.1	3.8	3.6	3.8	3.5	3.5	3.4	2.6†	3.6	3.3	3.1	2.7	2.7	0.0
10th Grade	5.5	5.7	6.5	7.1	8.9	8.9	8.8	8.6	8.6	8.5†	8.7	8.1	6.9	6.9	6.4	6.3	6.9	5.3	5.7	5.8	5.4	5.0†	4.9	5.6	4.9	4.4	4.5	+0.1
12th Grade	7.1	6.3	7.9	8.8	10.0	9.5	10.7	10.7	10.4	10.4†	11.0	11.3	10.4	10.8	10.3	9.8	9.5	9.3	8.6	8.6	8.9	8.4†	8.2	7.7	7.6	6.9	6.3	-0.6
<b>Any Illicit Drug including Inhalants<sup>a,c</sup></b>																												
8th Grade	8.8	10.0	12.0	14.3	16.1	17.5	16.0	14.9	15.1	14.4	14.0	12.6	12.1	11.2	11.2	10.9	10.1	10.4	10.6	11.7	10.5	9.5†	10.0	9.5	9.3	7.9	8.6	+0.8
10th Grade	13.1	12.6	15.5	20.0	21.6	24.5	24.1	22.5	23.1	23.6	23.6	21.7	20.5	19.3	18.4	17.7	18.1	16.8	18.8	19.4	20.1	19.3†	20.0	19.1	17.1	16.4	18.0	+1.5
12th Grade	17.8	15.5	19.3	23.0	24.8	25.5	26.9	26.6	26.4	26.4	26.5	25.9	24.6	23.3	24.2	22.1	22.8	22.8	24.1	24.5	26.2	25.2†	26.5	24.3	24.7	24.6	25.7	+1.1
<b>Marijuana/Hashish</b>																												
8th Grade	3.2	3.7	5.1	7.8	9.1	11.3	10.2	9.7	9.7	9.1	9.2	8.3	7.5	6.4	6.6	6.5	5.7	5.8	6.5	8.0	7.2	6.5	7.0	6.5	6.5	5.4	5.5	0.0
10th Grade	8.7	8.1	10.9	15.8	17.2	20.4	20.5	18.7	19.4	19.7	19.8	17.8	17.0	15.9	15.2	14.2	14.2	13.8	15.9	16.7	17.6	17.0	18.0	16.6	14.8	14.0	15.7	+1.7 s
12th Grade	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4	21.5	21.2	19.9	19.8	18.3	18.8	19.4	20.6	21.4	22.6	22.9	22.7	21.2	21.3	22.5	22.9	+0.4
<b>Inhalants<sup>c,d</sup></b>																												
8th Grade	4.4	4.7	5.4	5.6	6.1	5.8	5.6	4.8	5.0	4.5	4.0	3.8	4.1	4.5	4.2	4.1	3.9	4.1	3.8	3.6	3.2	2.7	2.3	2.2	2.0	1.8	2.1	+0.4
10th Grade	2.7	2.7	3.3	3.6	3.5	3.3	3.0	2.9	2.6	2.6	2.4	2.4	2.2	2.4	2.2	2.3	2.5	2.1	2.2	2.0	1.7	1.4	1.3	1.1	1.2	1.0	1.1	+0.1
12th Grade	2.4	2.3	2.5	2.7	3.2	2.5	2.5	2.3	2.0	2.2	1.7	1.5	1.5	1.5	2.0	1.5	1.2	1.4	1.2	1.4	1.0	0.9	1.0	0.7	0.7	0.8	0.8	0.0
<b>Hallucinogens<sup>b,f</sup></b>																												
8th Grade	0.8	1.1	1.2	1.3	1.7	1.9	1.8	1.4	1.3	1.2†	1.6	1.2	1.2	1.0	1.1	0.9	1.0	0.9	0.9	1.0	1.0	0.6	0.8	0.5	0.6	0.6	0.5	-0.1
10th Grade	1.6	1.8	1.9	2.4	3.3	2.8	3.3	3.2	2.9	2.3†	2.1	1.6	1.5	1.6	1.5	1.5	1.7	1.3	1.4	1.6	1.4	1.2	1.1	1.2	0.9	0.9	1.1	+0.2
12th Grade	2.2	2.1	2.7	3.1	4.4	3.5	3.9	3.8	3.5	2.6†	3.3	2.3	1.8	1.9	1.9	1.5	1.7	2.2	1.6	1.9	1.6	1.6	1.4	1.5	1.6	1.4	1.6	+0.1

(Table continued on next page.)

**TABLE 7 (cont.)**  
**Trends in 30-Day Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

Percentage who used in last 30 days

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
<b>LSD<sup>b</sup></b>																												
8th Grade	0.6	0.9	1.0	1.1	1.4	1.5	1.5	1.1	1.1	1.0	1.0	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.5	0.3	0.5	0.3	0.4	0.4	0.3	-0.1
10th Grade	1.5	1.6	1.6	2.0	3.0	2.4	2.8	2.7	2.3	1.6	1.5	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.5	0.7	0.7	0.5	0.6	0.6	0.6	0.7	0.8	+0.1
12th Grade	1.9	2.0	2.4	2.6	4.0	2.5	3.1	3.2	2.7	1.6	2.3	0.7	0.6	0.7	0.7	0.6	0.6	1.1	0.5	0.8	0.8	0.8	0.8	1.0	1.1	1.0	1.2	+0.2
<b>Hallucinogens other than LSD<sup>b</sup></b>																												
8th Grade	0.3	0.4	0.5	0.7	0.8	0.9	0.7	0.7	0.6	0.6†	1.1	1.0	1.0	0.8	0.9	0.7	0.7	0.7	0.7	0.8	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.0
10th Grade	0.4	0.5	0.7	1.0	1.0	1.0	1.2	1.4	1.2	1.2†	1.4	1.4	1.2	1.4	1.3	1.3	1.4	1.0	1.1	1.2	1.1	0.9	0.8	0.8	0.6	0.5	0.6	+0.0
12th Grade	0.7	0.5	0.8	1.2	1.3	1.6	1.7	1.6	1.6	1.7†	1.9	2.0	1.5	1.7	1.6	1.3	1.4	1.6	1.4	1.5	1.2	1.3	1.0	1.0	0.9	0.7	1.0	+0.2
<b>Ecstasy (MDMA)<sup>g</sup></b>																												
8th Grade, original	—	—	—	—	1.0	1.0	0.9	0.8	1.4	1.8	1.4	0.7	0.8	0.6	0.7	0.6	0.8	0.6	1.1	0.6	0.5	0.5	0.4	—	—	—	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.5	0.3	0.4	0.0
10th Grade, original	—	—	—	—	1.8	1.3	1.3	1.8	2.6	2.6	1.8	1.1	0.8	1.0	1.2	1.2	1.1	1.3	1.9	1.6	1.0	1.2	0.8	—	—	—	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	0.9	0.5	0.5	0.0
12th Grade, original	—	—	—	—	2.0	1.6	1.5	2.5	3.6	2.8	2.4	1.3	1.2	1.0	1.3	1.6	1.8	1.8	1.4	2.3	0.9	1.5	1.4	—	—	—	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.1	0.9	0.9	0.0
<b>Cocaine</b>																												
8th Grade	0.5	0.7	0.7	1.0	1.2	1.3	1.1	1.4	1.3	1.2	1.2	1.1	0.9	0.9	1.0	1.0	0.9	0.8	0.8	0.6	0.8	0.5	0.5	0.5	0.5	0.3	0.4	+0.1
10th Grade	0.7	0.7	0.9	1.2	1.7	1.7	2.0	2.1	1.8	1.8	1.3	1.6	1.3	1.7	1.5	1.5	1.3	1.2	0.9	0.9	0.7	0.8	0.8	0.6	0.8	0.4	0.5	+0.1
12th Grade	1.4	1.3	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.1	2.1	2.3	2.1	2.3	2.3	2.5	2.0	1.9	1.3	1.3	1.1	1.1	1.1	1.0	1.1	0.9	1.2	+0.3
<b>Crack</b>																												
8th Grade	0.3	0.5	0.4	0.7	0.7	0.8	0.7	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.3	+0.1
10th Grade	0.3	0.4	0.5	0.6	0.9	0.8	0.9	1.1	0.8	0.9	0.7	1.0	0.7	0.8	0.7	0.7	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.3	+0.1
12th Grade	0.7	0.6	0.7	0.8	1.0	1.0	0.9	1.0	1.1	1.0	1.1	1.2	0.9	1.0	1.0	0.9	0.9	0.8	0.6	0.7	0.5	0.6	0.6	0.7	0.6	0.5	0.6	+0.1
<b>Cocaine other than Crack<sup>h</sup></b>																												
8th Grade	0.5	0.5	0.6	0.9	1.0	1.0	0.8	1.0	1.1	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.5	0.6	0.3	0.3	0.4	0.4	0.3	0.3	0.0
10th Grade	0.6	0.6	0.7	1.0	1.4	1.3	1.6	1.8	1.6	1.6	1.2	1.3	1.1	1.5	1.3	1.3	1.1	1.0	0.8	0.7	0.6	0.7	0.7	0.5	0.7	0.3	0.4	+0.1
12th Grade	1.2	1.0	1.2	1.3	1.3	1.6	2.0	2.0	2.5	1.7	1.8	1.9	1.8	2.2	2.0	2.4	1.7	1.7	1.1	1.1	1.0	1.0	0.9	0.9	1.1	0.6	1.1	+0.5 ss

(Table continued on next page.)

**TABLE 7 (cont.)**  
**Trends in 30-Day Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

	Percentage who used in last 30 days																											2016– 2017 change	
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
<b>Heroin <sup>l,j</sup></b>																													
8th Grade	0.3	0.4	0.4	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.6	0.5	0.4	0.5	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.2	0.3	0.3	0.1	0.2	0.2	0.0	
10th Grade	0.2	0.2	0.3	0.4	0.6	0.5	0.6	0.7	0.7	0.5	0.3	0.5	0.3	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.2	0.2	0.1	-0.1	
12th Grade	0.2	0.3	0.2	0.3	0.6	0.5	0.5	0.5	0.5	0.7	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.3	+0.1	
<b>With a Needle <sup>i</sup></b>																													
8th Grade	—	—	—	—	0.4	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.0
10th Grade	—	—	—	—	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.1	-0.1
12th Grade	—	—	—	—	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.0	
<b>Without a Needle <sup>i</sup></b>																													
8th Grade	—	—	—	—	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.0
10th Grade	—	—	—	—	0.3	0.3	0.4	0.5	0.5	0.4	0.2	0.4	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	
12th Grade	—	—	—	—	0.6	0.4	0.6	0.4	0.4	0.7	0.3	0.5	0.4	0.3	0.5	0.3	0.4	0.2	0.3	0.4	0.4	0.2	0.2	0.4	0.3	0.1	0.2	0.0	
<b>Narcotics other than Heroin <sup>k,l</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	1.1	1.2	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.9	3.0†	4.0	4.1	4.3	3.9	3.8	3.8	3.8	4.1	3.6	3.6	3.0	2.8	2.2	2.1	1.7	1.6	-0.1	
<b>Amphetamines <sup>k,m</sup></b>																													
8th Grade	2.6	3.3	3.6	3.6	4.2	4.6	3.8	3.3	3.4	3.4	3.2	2.8	2.7	2.3	2.3	2.1	2.0	2.2	1.9	1.8	1.8	1.3†	2.3	2.1	1.9	1.7	1.7	0.0	
10th Grade	3.3	3.6	4.3	4.5	5.3	5.5	5.1	5.1	5.0	5.4	5.6	5.2	4.3	4.0	3.7	3.5	4.0	2.8	3.3	3.3	3.1	2.8†	3.3	3.7	3.1	2.7	2.5	-0.2	
12th Grade	3.2	2.8	3.7	4.0	4.0	4.1	4.8	4.6	4.5	5.0	5.6	5.5	5.0	4.6	3.9	3.7	3.7	2.9	3.0	3.3	3.7	3.3†	4.2	3.8	3.2	3.0	2.6	-0.4	
<b>Methamphetamine <sup>n,o</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	1.1	0.8	1.3	1.1	1.2	0.6	0.7	0.6	0.6	0.7	0.5	0.7	0.4	0.5	0.4	0.2	0.3	0.3	0.2	-0.1	
10th Grade	—	—	—	—	—	—	—	—	1.8	2.0	1.5	1.8	1.4	1.3	1.1	0.7	0.4	0.7	0.6	0.7	0.5	0.6	0.4	0.3	0.3	0.2	0.1	-0.1	
12th Grade	—	—	—	—	—	—	—	—	1.7	1.9	1.5	1.7	1.7	1.4	0.9	0.9	0.6	0.6	0.5	0.5	0.6	0.5	0.4	0.5	0.4	0.3	0.3	+0.1	

(Table continued on next page.)

**TABLE 7 (cont.)**  
**Trends in 30-Day Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

	Percentage who used in last 30 days																											2016– 2017 change
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
<b>Crystal Methamphetamine (Ice)<sup>o</sup></b>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.6	0.5	0.6	0.7	1.1	1.1	0.8	1.2	0.8	1.0	1.1	1.2	0.8	0.8	0.9	0.7	0.6	0.6	0.5	0.6	0.6	0.4	0.8	0.4	0.3	0.4	0.5	0.0
<b>Sedatives (Barbiturates)<sup>k,p</sup></b>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.1	1.3	1.7	2.2	2.1	2.1	2.6	2.6	3.0	2.8	3.2	2.9†	2.9	3.3	3.0	2.7	2.8	2.5	2.2	1.8	2.0	2.2	2.0	1.7	1.5	1.4	0.0
<b>Tranquilizers<sup>b,k</sup></b>																												
8th Grade	0.8	0.8	0.9	1.1	1.2	1.5	1.2	1.2	1.1	1.4†	1.2	1.2	1.4	1.2	1.3	1.3	1.1	1.2	1.2	1.2	1.0	0.8	0.9	0.8	0.8	0.8	0.7	0.0
10th Grade	1.2	1.5	1.1	1.5	1.7	1.7	2.2	2.2	2.2	2.5†	2.9	2.9	2.4	2.3	2.3	2.4	2.6	1.9	2.0	2.2	1.9	1.7	1.6	1.6	1.7	1.5	1.5	0.0
12th Grade	1.4	1.0	1.2	1.4	1.8	2.0	1.8	2.4	2.5	2.6†	2.9	3.3	2.8	3.1	2.9	2.7	2.6	2.6	2.7	2.5	2.3	2.1	2.0	2.1	2.0	1.9	2.0	+0.2
<b>Any Prescription Drug<sup>q</sup></b>																												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.6	8.1	7.8	7.2	7.3	6.9	7.2	7.0†	7.1	6.4	5.9	5.4	4.9	-0.5
<b>Rohypnol<sup>r</sup></b>																												
8th Grade	—	—	—	—	—	0.5	0.3	0.4	0.3	0.3	0.4	0.2	0.1	0.2	0.2	0.4	0.3	0.1	0.2	0.2	0.6	0.1	0.1	0.2	0.1	0.2	0.1	-0.1
10th Grade	—	—	—	—	—	0.5	0.5	0.4	0.5	0.4	0.2	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.4	0.1	0.3	0.0	-0.3 s
12th Grade	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Alcohol<sup>s</sup></b>																												
<b>Any Use</b>																												
8th Grade	25.1	26.1†	24.3	25.5	24.6	26.2	24.5	23.0	24.0	22.4	21.5	19.6	19.7	18.6	17.1	17.2	15.9	15.9	14.9	13.8	12.7	11.0	10.2	9.0	9.7	7.3	8.0	+0.7
10th Grade	42.8	39.9†	38.2	39.2	38.8	40.4	40.1	38.8	40.0	41.0	39.0	35.4	35.4	35.2	33.2	33.8	33.4	28.8	30.4	28.9	27.2	27.6	25.7	23.5	21.5	19.9	19.7	-0.2
12th Grade	54.0	51.3†	48.6	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	48.6	47.5	48.0	47.0	45.3	44.4	43.1	43.5	41.2	40.0	41.5	39.2	37.4	35.3	33.2	33.2	-0.1

(Table continued on next page.)



**TABLE 7 (cont.)**  
**Trends in 30-Day Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

Percentage who used in last 30 days

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change	
<b>Been Drunk<sup>o</sup></b>																													
8th Grade	7.6	7.5	7.8	8.7	8.3	9.6	8.2	8.4	9.4	8.3	7.7	6.7	6.7	6.2	6.0	6.2	5.5	5.4	5.4	5.0	4.4	3.6	3.5	2.7	3.1	1.8	2.2	+0.5 s	
10th Grade	20.5	18.1	19.8	20.3	20.8	21.3	22.4	21.1	22.5	23.5	21.9	18.3	18.2	18.5	17.6	18.8	18.1	14.4	15.5	14.7	13.7	14.5	12.8	11.2	10.3	9.0	8.9	-0.1	
12th Grade	31.6	29.9	28.9	30.8	33.2	31.3	34.2	32.9	32.9	32.3	32.7	30.3	30.9	32.5	30.2	30.0	28.7	27.6	27.4	26.8	25.0	28.1	26.0	23.5	20.6	20.4	19.1	-1.3	
<b>Flavored Alcoholic Beverages<sup>e,n</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	14.6	12.9	13.1	12.2	10.2	9.5	9.4	8.6	7.6	6.3	5.7	5.5	4.0	4.4	+0.4	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	25.1	23.1	24.7	21.8	20.2	19.0	19.4	15.8	16.3	15.5	14.0	12.8	11.0	12.9	+1.9	
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	31.1	30.5	29.3	29.1	27.4	27.4	24.1	23.1	21.8	21.0	19.9	20.8	18.3	20.2	+1.9	
<b>Cigarettes</b>																													
<b>Any Use</b>																													
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	8.7	7.1	6.8	6.5	7.1	6.1	4.9	4.5	4.0	3.6	2.6	1.9	-0.7 ss	
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	14.5	14.0	12.3	13.1	13.6	11.8	10.8	9.1	7.2	6.3	4.9	5.0	+0.2	
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	21.6	21.6	20.4	20.1	19.2	18.7	17.1	16.3	13.6	11.4	10.5	9.7	-0.8	
<b>Smokeless Tobacco<sup>t</sup></b>																													
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	3.7	3.2	3.5	3.7	4.1	3.5	2.8	2.8	3.0	3.2	2.5	1.7	-0.8 s	
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	5.7	6.1	5.0	6.5	7.5	6.6	6.4	6.4	5.3	4.9	3.5	3.8	+0.3	
12th Grade	—	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	6.1	6.6	6.5	8.4	8.5	8.3	7.9	8.1	8.4	6.1	6.6	4.9	-1.7 s	
<b>Large Cigars<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	2.4	1.5	1.5	0.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.9	3.4	2.3	2.6	+0.4
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.4	7.0	6.5	5.6	-0.9
<b>Flavored Little Cigars<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.1	4.1	2.8	2.6	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	6.1	4.9	4.0	-1.0
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.9	11.4	9.5	10.1	+0.6

(Table continued on next page.)

**TABLE 7 (cont.)**  
**Trends in 30-Day Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

	Percentage who used in last 30 days																											2016– 2017 change	
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
<b>Regular Little Cigars<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	3.3	1.9	1.6	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	3.8	3.0	3.0	0.0
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.0	7.8	6.1	6.6	+0.4
<b>Any Vaping<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.0	6.2†	6.6	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	11.0†	13.1	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.3	12.5†	16.6	—
<b>Vaping Nicotine<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.2	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	—
<b>Vaping Marijuana<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.3	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.9	—
<b>Vaping Just Flavoring<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.3	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.2	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.7	—
<b>Tobacco Using a Hookah<sup>bb</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	2.5	-0.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	3.0	-0.9 s
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.1	5.0	-1.1

(Table continued on next page.)

**TABLE 7 (cont.)**  
**Trends in 30-Day Prevalence of Use of Various Drugs**  
**in Grades 8, 10, and 12**

	Percentage who used in last 30 days																												2016– 2017 change
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
<b>Steroids <sup>k,u</sup></b>																													
8th Grade	0.4	0.5	0.5	0.5	0.6	0.4	0.5	0.5	0.7	0.8	0.7	0.8	0.7	0.5	0.5	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.0	
10th Grade	0.6	0.6	0.5	0.6	0.6	0.5	0.7	0.6	0.9	1.0	0.9	1.0	0.8	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	-0.1	
12th Grade	0.8	0.6	0.7	0.9	0.7	0.7	1.0	1.1	0.9	0.8	1.3	1.4	1.3	1.6	0.9	1.1	1.0	1.0	1.0	1.1	0.7	0.9	1.0	0.9	1.0	0.7	0.8	+0.1	
<b>Previously surveyed drugs that have been dropped.</b>																													
<b>Nitrites <sup>e</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	0.4	0.3	0.6	0.4	0.4	0.7	0.7	1.0	0.4	0.3	0.5	0.6	0.7	0.7	0.5	0.3	0.5	0.3	0.6	—	—	—	—	—	—	—	—	—	
<b>PCP <sup>e</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	0.5	0.6	1.0	0.7	0.6	1.3	0.7	1.0	0.8	0.9	0.5	0.4	0.6	0.4	0.7	0.4	0.5	0.6	0.5	0.8	0.8	0.5	0.4	—	—	—	—	—	
<b>Methaqualone <sup>e,k</sup></b>																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12th Grade	0.2	0.4	0.1	0.4	0.4	0.6	0.3	0.6	0.4	0.2	0.5	0.3	0.4	0.5	0.5	0.4	0.4	0.2	0.3	0.2	0.2	0.3	—	—	—	—	—	—	

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

Note: See footnotes following Table 8.

**TABLE 8**  
**Trends in 30-Day Prevalence of Daily Use of Various Drugs**  
**in Grades 8, 10, and 12**

(Entries are percentages.)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016– 2017 change
<b>Marijuana/Hashish</b>																												
Daily <sup>aa</sup>																												
8th Grade	0.2	0.2	0.4	0.7	0.8	1.5	1.1	1.1	1.4	1.3	1.3	1.2	1.0	0.8	1.0	1.0	0.8	0.9	1.0	1.2	1.3	1.1	1.1	1.0	1.1	0.7	0.8	0.0
10th Grade	0.8	0.8	1.0	2.2	2.8	3.5	3.7	3.6	3.8	3.8	4.5	3.9	3.6	3.2	3.1	2.8	2.8	2.7	2.8	3.3	3.6	3.5	4.0	3.4	3.0	2.5	2.9	+0.4
12th Grade	2.0	1.9	2.4	3.6	4.6	4.9	5.8	5.6	6.0	6.0	5.8	6.0	6.0	5.6	5.0	5.0	5.1	5.4	5.2	6.1	6.6	6.5	6.5	5.8	6.0	6.0	5.9	-0.1
<b>Alcohol<sup>s,aa</sup></b>																												
Any Daily Use																												
8th Grade	0.5	0.6‡	1.0	1.0	0.7	1.0	0.8	0.9	1.0	0.8	0.9	0.7	0.8	0.6	0.5	0.5	0.6	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.0
10th Grade	1.3	1.2‡	1.8	1.7	1.7	1.6	1.7	1.9	1.9	1.8	1.9	1.8	1.5	1.3	1.3	1.4	1.4	1.0	1.1	1.1	0.8	1.0	0.9	0.8	0.5	0.5	0.6	0.0
12th Grade	3.6	3.4‡	3.4	2.9	3.5	3.7	3.9	3.9	3.4	2.9	3.6	3.5	3.2	2.8	3.1	3.0	3.1	2.8	2.5	2.7	2.1	2.5	2.2	1.9	1.9	1.3	1.6	+0.2
<b>Been Drunk</b>																												
Daily <sup>o,aa</sup>																												
8th Grade	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
10th Grade	0.2	0.3	0.4	0.4	0.6	0.4	0.6	0.6	0.7	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.3	0.4	0.3	0.2	0.4	0.3	0.3	0.1	0.1	0.2	+0.1
12th Grade	0.9	0.8	0.9	1.2	1.3	1.6	2.0	1.5	1.9	1.7	1.4	1.2	1.6	1.8	1.5	1.6	1.3	1.4	1.1	1.6	1.3	1.5	1.3	1.1	0.8	0.8	1.1	+0.3
<b>5+ Drinks in a Row</b>																												
in Last 2 Weeks																												
8th Grade	10.9	11.3	11.3	12.1	12.3	13.3	12.3	11.5	13.1	11.7	11.0	10.3	9.8	9.4	8.4	8.7	8.3	8.1	7.8	7.2	6.4	5.1	5.1	4.1	4.6	3.4	3.7	+0.3
10th Grade	21.0	19.1	21.0	21.9	22.0	22.8	23.1	22.4	23.5	24.1	22.8	20.3	20.0	19.9	19.0	19.9	19.6	16.0	17.5	16.3	14.7	15.6	13.7	12.6	10.9	9.7	9.8	+0.1
12th Grade	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	28.6	27.9	29.2	27.1	25.4	25.9	24.6	25.2	23.2	21.6	23.7	22.1	19.4	17.2	15.5	16.6	+1.1
<b>Cigarettes</b>																												
Any Daily Use																												
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	4.0	3.0	3.1	2.7	2.9	2.4	1.9	1.8	1.4	1.3	0.9	0.6	-0.3 s
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	7.6	7.2	5.9	6.3	6.6	5.5	5.0	4.4	3.2	3.0	1.9	2.2	+0.4
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	12.2	12.3	11.4	11.2	10.7	10.3	9.3	8.5	6.7	5.5	4.8	4.2	-0.5

(Table continued on next page.)

**TABLE 8 (cont.)**  
**Trends in 30-Day Prevalence of Daily Use of Various Drugs**  
**in Grades 8, 10, and 12**

(Entries are percentages.)

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	2016– 2017 change
<b>1/2 Pack+/Day</b>																												
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	1.5	1.1	1.2	1.0	0.9	0.7	0.6	0.7	0.5	0.4	0.3	0.2	-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	3.3	2.7	2.0	2.4	2.4	1.9	1.5	1.5	1.2	1.0	0.6	0.7	0.0
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	5.9	5.7	5.4	5.0	4.7	4.3	4.0	3.4	2.6	2.1	1.8	1.7	-0.1
<b>Smokeless Tobacco</b>																												
<b>Daily<sup>t</sup></b>																												
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	0.7	0.8	0.8	0.8	0.9	0.8	0.5	0.5	0.5	0.8	0.6	0.4	-0.2
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	1.7	1.6	1.4	1.9	2.5	1.7	2.0	1.9	1.8	1.6	1.0	0.6	-0.4
12th Grade	—	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	2.2	2.8	2.7	2.9	3.1	3.1	3.2	3.0	3.4	2.9	2.7	2.0	-0.7

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

*Note.* See footnotes following Table 5-5d.

## Footnotes for Tables 5 through 8

Approximate Weighted <i>N</i> s	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
8th Graders	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
10th Graders	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
12th Graders	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

Approximate Weighted <i>N</i> s	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
8th Graders	16,800	16,500	16,100	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300
10th Graders	16,200	16,200	16,100	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500
12th Graders	14,700	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600

*Notes.* Level of significance of difference between the two most recent classes:  $s = .05$ ,  $ss = .01$ ,  $sss = .001$ . ' — ' indicates data not available. ' † ' indicates that the question changed in the following year. See relevant footnote for that drug. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>For 12th graders only: Use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of narcotics other than heroin, amphetamines, sedatives (barbiturates), or tranquilizers not under a doctor's orders. For 8th and 10th graders only: The use of narcotics other than heroin and sedatives (barbiturates) has been excluded because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers). Due to changes in the amphetamines questions 2013 data for all grades for any illicit drug use, any illicit drug use other than marijuana and 8th and 10th grade any illicit drug use including inhalants are based on one half of the *N* indicated. 12th grade any illicit drug use including inhalants data are based on one form; *N* is one sixth of *N* indicated. 2014 data are based on all forms. See the amphetamine note for details.

<sup>b</sup>In 2001 the question text was changed on half of the questionnaire forms for each age group. Other psychedelics was changed to other hallucinogens and shrooms was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. For 8th, 10th, and 12th graders: The 2001 data presented here are based on the changed forms only; *N* is one half of *N* indicated. In 2002 the remaining forms were changed to the new wording. The data are based on all forms beginning in 2002. Data for any illicit drug other than marijuana and data for hallucinogens are also affected by these changes and have been handled in a parallel manner. Hallucinogens, LSD, and hallucinogens other than LSD are based on five of six forms beginning in 2014; *N* is five sixths of *N* indicated.

<sup>c</sup>For 12th graders only: Data based on five of six forms in 1991–1998; *N* is five sixths of *N* indicated. Data based on three of six forms beginning in 1999; *N* is three sixths of *N* indicated. For 8th and 10th graders only, beginning in 2014 data based on two thirds of *N* indicated.

<sup>d</sup>Inhalants are unadjusted for underreporting of amyl and butyl nitrites.

<sup>e</sup>For 12th graders only: Data based on one of six forms; *N* is one sixth of *N* indicated. In 2011 for flavored alcoholic beverages Skyy Blue and Zima were dropped from the list of examples. An examination of the data did not show any effect from the wording change. In 2014 the PCP use questions were dropped; annual PCP use was moved to another form. In 2016 a question on use of tobacco using a hookah was added to two additional forms; *N* is three sixths of *N* indicated.

<sup>f</sup>Hallucinogens are unadjusted for underreporting of PCP.

<sup>g</sup>For 8th and 10th graders only: Data based on one of two forms in 1996; *N* is one half of *N* indicated. Data based on one third of *N* indicated in 1997–2001 due to changes in the questionnaire forms. Data based on two of four forms beginning in 2002; *N* is one half of *N* indicated. In 2014 a revised question on use of ecstasy (MDMA) including "Molly" was added to one form. The 2013 and 2014 "Original wording" data reported here are for only the questionnaires using the original question wording; *N* is one half of *N* indicated. Beginning in 2014 data

(Footnote continued on next page.)

### Footnotes for Tables 5 through 8 (cont.)

reported here for the "Revised wording" are for only the questionnaires which include "Molly;"  $N$  is two sixths of  $N$  indicated in 2014 and five sixths of the  $N$  indicated in 2015. For 12th graders only: Data based on one of six forms in 1996–2001;  $N$  is one sixth of  $N$  indicated. Data based on two of six forms beginning in 2002;  $N$  is two sixths of  $N$  indicated. In 2014 a revised question on use of ecstasy (MDMA) including "Molly" was added to one form. The 2013 and 2014 "Original wording" data reported here are for only the questionnaires using the original question wording;  $N$  is two sixths of  $N$  indicated. Beginning in 2014 data reported for the "Revised wording" are for only the questionnaires which include "Molly.;"  $N$  is one sixth of the  $N$  indicated in 2014 and three sixths of the  $N$  indicated in 2015.

<sup>h</sup>For 12th graders only: Data based on four of six forms;  $N$  is four sixths of  $N$  indicated.

<sup>i</sup>In 1995 the heroin question was changed in one of two forms for 8th and 10th graders and in three of six forms for 12th graders. Separate questions were asked for use with and without injection. In 1996, the heroin question was changed in the remaining 8th- and 10th-grade forms. Data presented here represent the combined data from all forms.

<sup>j</sup>For 8th and 10th graders only: Data based on one of two forms in 1995;  $N$  is one half of  $N$  indicated. Data based on all forms in 1996 through 2014. In 2015 the question was dropped from 1 form;  $N$  is four sixths of  $N$  indicated. For 12th graders only: Data based on three of six forms;  $N$  is three sixths of  $N$  indicated.

<sup>k</sup>Only drug use not under a doctor's orders is included here.

<sup>l</sup>In 2002 the question text was changed in half of the questionnaire forms. The list of examples of narcotics other than heroin was updated: Talwin, laudanum, and paregoric—all of which had negligible rates of use by 2001—were replaced with Vicodin, OxyContin, and Percocet. The 2002 data presented here are based on the changed forms only;  $N$  is one half of  $N$  indicated. In 2003, the remaining forms were changed to the new wording. The data are based on all forms beginning in 2003. In 2013 the list of examples was changed on one form: MS Contin, Roxycodone, Hydrocodone (Lortab, Lorcet, Norco), Suboxone, Tylox, and Tramadol were added to the list. An examination of the data did not show any effect from the wording change.

<sup>m</sup>For 8th, 10th, and 12th graders: In 2009, the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. In 2010 the remaining forms were changed in a like manner. In 2011 the question text was changed slightly in one form; bennies, Benzedrine and Methadrine were dropped from the list of examples. An examination of the data did not show any effect from the wording change. In 2013 the question wording was changed slightly in two of the 8th and 10th grade questionnaires and in three of the 12th grade questionnaires. The new wording in 2013 asked "On how many occasions (if any) have taken amphetamines **or other prescription stimulant drugs...**" In contrast, the old wording did not include the text highlighted in red. Results in 2013 indicated higher prevalence in questionnaires with the new wording as compared to the old wording; it was proportionally 61% higher in 8th grade, 34% higher in 10th grade, and 21% higher in 12th grade. 2013 data are based on the changed forms only; for 8th, 10th, and 12th graders  $N$  is one half of  $N$  indicated. Beginning in 2014 all questionnaires included the new, updated wording.

<sup>n</sup>For 8th and 10th graders only: Data based on one of four forms;  $N$  is one third of  $N$  indicated. See text for detailed explanation. In 2011 for flavored alcoholic beverages: Skyy Blue and Zima were dropped from the list of examples. An examination of the data did not show any effect from the wording change. Annual synthetic marijuana use questions asked of one third of  $N$  indicated.

<sup>o</sup>For 12th graders only: Data based on two of six forms;  $N$  is two sixths of  $N$  indicated. Bidis and kreteks based on one of six forms beginning in 2009;  $N$  is one sixth  $N$  indicated.

<sup>p</sup>For 12th graders only: In 2004 the barbiturate question text was changed on half of the questionnaire forms. Barbiturates was changed to sedatives including barbiturates, and "have you taken barbiturates . . ." was changed to "have you taken sedatives . . ." In the list of examples downs, downers, goofballs, yellow, reds, blues, rainbows were changed to downs, or downers, and include Phenobarbital, Tuinal, Nembutal, and Seconal. An examination of the data did not show any effect from the wording change. In 2005 the remaining forms were changed in a like manner. In 2013 the question text was changed in all forms: Tuinal, Nembutal, and Seconal were replaced with Ambien, Lunesta, and Sonata. In one form the list of examples was also changed: Tuinal was dropped from the list and Dalmane, Restoril, Halcion, Intermezzo, and Zolpimist were added. An examination of the data did not show any effect from the wording change.

(Footnote continued on next page.)

### Footnotes for Tables 5 through 8 (cont.)

<sup>q</sup>The use of any prescription drug includes use of any of the following: amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers "...without a doctor telling you to use them."

<sup>r</sup>For 8th and 10th graders only: Data based on one of two forms in 1996; *N* is one half of *N* indicated. Data based on three of four forms in 1997–1998; *N* is two thirds of *N* indicated. Data based on two of four forms in 1999–2001; *N* is one third of *N* indicated. Data based on one of four forms beginning in 2002; *N* is one sixth of *N* indicated. See text for detailed explanation. For 12th graders only: Data based on one of six forms in 1996–2001; *N* is one sixth of *N* indicated. Data based on two of six forms in 2002–2009; *N* is two sixths of *N* indicated. Data for 2001 and 2002 are not comparable due to changes in the questionnaire forms. Data based on one of six forms beginning in 2010; *N* is one sixth of *N* indicated.

<sup>s</sup>For 8th, 10th, and 12th graders: In 1993, the question text was changed slightly in half of the forms to indicate that a drink meant more than just a few sips. The 1993 data are based on the changed forms only; *N* is one half of *N* indicated for these groups. In 1994 the remaining forms were changed to the new wording. The data are based on all forms beginning in 1994. In 2004, the question text was changed slightly in half of the forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2005.

<sup>t</sup>For 8th and 10th graders only: Data based on one of two forms for 1991–1996 and on two of four forms beginning in 1997; *N* is one half of *N* indicated. For 12th graders only: Data based on one of six forms; *N* is one sixth of *N* indicated. For all grades in 2011: snus and dissolvable tobacco were added to the list of examples. An examination of the data did not show any effect from the wording change.

<sup>u</sup>For 8th and 10th graders only: In 2006, the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording change. In 2007 the remaining forms were changed in a like manner. In 2008 the question text was changed slightly in half of the questionnaire forms. An examination of the data did not show any effect from the wording change. In 2009 the remaining forms were changed in a like manner. For 12th graders only: Data based on two of six forms in 1991–2005; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2006; *N* is three sixths of *N* indicated. In 2006 a slightly altered version of the question was added to a third form. An examination of the data did not show any effect from the wording change. In 2007 the remaining forms were changed in a like manner. In 2008 the question text was changed slightly in two of the questionnaire forms. An examination of the data did not show any effect from the wording change. In 2009 the remaining form was changed in a like manner.

<sup>v</sup>For 12th graders only: Data based on two of six forms in 2002–2005; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2006; *N* is three sixths of *N* indicated.

<sup>w</sup>For 12th graders only: Data based on two of six forms in 2000; *N* is two sixths of *N* indicated. Data based on three of six forms in 2001; *N* is three sixths of *N* indicated. Data based on one of six forms beginning in 2002; *N* is one sixth of *N* indicated.

<sup>x</sup>For 12th graders only: Data based on two of six forms in 2000; *N* is two sixths of *N* indicated. Data based on three of six forms in 2001–2009; *N* is three sixths of *N* indicated. Data based on two of six forms beginning in 2010; *N* is two sixths of *N* indicated.

<sup>y</sup>The 2003 flavored alcoholic beverage data were created by adjusting the 2004 data to reflect the change in the 2003 and 2004 alcopops data.

<sup>z</sup>For 8th and 10th graders only: Data based on one of four forms; *N* is one third of *N* indicated. See text for detailed explanation.

For 12th graders only: Data based on two of six forms; *N* is two sixths of *N* indicated. For all grades: In 2011 the question text was "...had an alcoholic beverage containing caffeine (like Four Loko or Joose)." In 2012 the question text was changed to "...had an alcoholic beverage mixed with an energy drink (like Red Bull)." An examination of the data did not show any effect from the wording changes.

<sup>aa</sup>Daily use is defined as use on 20 or more occasions in the past 30 days except for cigarettes and smokeless tobacco, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.

<sup>bb</sup>8th and 10th grade data based on one third of *N* indicated. 12th grade data based on two of six forms; *N* is two sixths of *N* indicated.

<sup>cc</sup>In 2017, the surveys switched from asking about vaping in general to asking separately about vaping nicotine, marijuana, and just flavoring. Beginning in 2017, data presented for any vaping are based on these new questions.



**TABLE 9**  
**Trends in Two Week Prevalence of Extreme Binge Drinking**  
**in Grade 12**

Percentage who used in last two weeks

	<u>1975- 2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2016- 2017 change</u>
<i>Approximate weighted N =</i>	—	14,700	14,200	14,500	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	
5+ drinks in a row in last 2 weeks	—	27.1	25.4	25.9	24.6	25.2	23.2	21.6	23.7	22.1	19.4	17.2	15.5	16.6	+1.1
10+ drinks in a row in last 2 weeks	—	10.6	12.9	11.1	10.4	10.6	9.9	9.8	10.4	8.1	7.1	6.1	4.4	6.0	+1.6
15+ drinks in a row in last 2 weeks	—	5.7	7.2	5.6	5.6	6.0	6.3	4.6	5.5	4.4	4.1	3.5	2.3	3.1	+0.8

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

*Notes.* 5+ drinks in a row data are based on all forms. 10+ and 15+ drinks in a row are based on one of six forms; *N* is one sixth of *N* indicated.

**TABLE 10**  
**Trends in Harmfulness of Drugs as Perceived by 8th Graders**

<i>How much do you think people risk harming themselves (physically or in other ways), if they . . .</i>	Percentage saying great risk <sup>a</sup>														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Try marijuana once or twice <sup>b</sup>	40.4	39.1	36.2	31.6	28.9	27.9	25.3	28.1	28.0	29.0	27.7	28.2	30.2	31.9	31.4
Smoke marijuana occasionally <sup>b</sup>	57.9	56.3	53.8	48.6	45.9	44.3	43.1	45.0	45.7	47.4	46.3	46.0	48.6	50.5	48.9
Smoke marijuana regularly <sup>b</sup>	83.8	82.0	79.6	74.3	73.0	70.9	72.7	73.0	73.3	74.8	72.2	71.7	74.2	76.2	73.9
Try synthetic marijuana once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take synthetic marijuana occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try inhalants once or twice <sup>d</sup>	35.9	37.0	36.5	37.9	36.4	40.8	40.1	38.9	40.8	41.2	45.6	42.8	40.3	38.7	37.5
Take inhalants regularly <sup>d</sup>	65.6	64.4	64.6	65.5	64.8	68.2	68.7	67.2	68.8	69.9	71.6	69.9	67.4	66.4	64.1
Take LSD once or twice <sup>e</sup>	—	—	42.1	38.3	36.7	36.5	37.0	34.9	34.1	34.0	31.6	29.6	27.9	26.8	25.8
Take LSD regularly <sup>e</sup>	—	—	68.3	65.8	64.4	63.6	64.1	59.6	58.8	57.5	52.9	49.3	48.2	45.2	44.0
Try ecstasy (MDMA) once or twice <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	—	35.8	38.9	41.9	42.5
Take ecstasy (MDMA) occasionally <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	55.5	61.8	65.8	65.1	60.8
Try salvia once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take salvia occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try crack once or twice <sup>d</sup>	62.8	61.2	57.2	54.4	50.8	51.0	49.9	49.3	48.7	48.5	48.6	47.4	48.7	49.0	49.6
Take crack occasionally <sup>d</sup>	82.2	79.6	76.8	74.4	72.1	71.6	71.2	70.6	70.6	70.1	70.0	69.7	70.3	70.4	69.4
Try cocaine powder once or twice <sup>d</sup>	55.5	54.1	50.7	48.4	44.9	45.2	45.0	44.0	43.3	43.3	43.9	43.2	43.7	44.4	44.2
Take cocaine powder occasionally <sup>d</sup>	77.0	74.3	71.8	69.1	66.4	65.7	65.8	65.2	65.4	65.5	65.8	64.9	65.8	66.0	65.3
Try heroin once or twice without using a needle <sup>e</sup>	—	—	—	—	60.1	61.3	63.0	62.8	63.0	62.0	61.1	62.6	62.7	61.6	61.4
Take heroin occasionally without using a needle <sup>e</sup>	—	—	—	—	76.8	76.6	79.2	79.0	78.9	78.6	78.5	78.5	77.8	77.5	76.8
Try OxyContin once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take OxyContin occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Vicodin once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take Vicodin occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Adderall once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take Adderall occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try bath salts (synthetic stimulants) once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take bath salts (synthetic stimulants) occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cough/cold medicine once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take cough/cold medicine occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) <sup>b</sup>	11.0	12.1	12.4	11.6	11.6	11.8	10.4	12.1	11.6	11.9	12.2	12.5	12.6	13.7	13.9
Take one or two drinks nearly every day <sup>b</sup>	31.8	32.4	32.6	29.9	30.5	28.6	29.1	30.3	29.7	30.4	30.0	29.6	29.9	31.0	31.4
Have five or more drinks once or twice each weekend <sup>b</sup>	59.1	58.0	57.7	54.7	54.1	51.8	55.6	56.0	55.3	55.9	56.1	56.4	56.5	56.9	57.2
Smoke one to five cigarettes per day <sup>c</sup>	—	—	—	—	—	—	—	—	26.9	28.9	30.5	32.8	33.4	37.0	37.5
Smoke one or more packs of cigarettes per day <sup>g</sup>	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
Use electronic cigarettes (e-cigarettes) regularly <sup>h</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smoke little cigars or cigarillos regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use smokeless tobacco regularly	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
Take dissolvable tobacco regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take snus regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take steroids <sup>i</sup>	64.2	69.5	70.2	67.6	—	—	—	—	—	—	—	—	—	—	—
<i>Approximate weighted N =</i>	17,400	18,700	18,400	17,400	17,500	17,900	18,800	18,100	16,700	16,700	16,200	15,100	16,500	17,000	16,800

Table continued on next page.

**TABLE 10 (cont.)**  
**Trends in Harmfulness of Drugs as Perceived by 8th Graders**

How much do you think people risk harming themselves (physically or in other ways), if they . . .	Percentage saying great risk <sup>a</sup>												2016–2017 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Try marijuana once or twice <sup>b</sup>	32.2	32.8	31.1	29.5	29.5	28.2	26.0	24.1	23.0	23.0	22.8	22.0	-0.7
Smoke marijuana occasionally <sup>b</sup>	48.9	50.2	48.1	44.8	44.1	43.4	41.7	37.2	36.7	36.8	36.8	34.0	-2.8 ss
Smoke marijuana regularly <sup>b</sup>	73.2	74.3	72.0	69.8	68.0	68.3	66.9	61.0	58.9	58.0	57.5	54.8	-2.7 s
Try synthetic marijuana once or twice <sup>c</sup>	—	—	—	—	—	—	24.4	24.2	23.9	26.0	27.5	23.0	-4.4 sss
Take synthetic marijuana occasionally <sup>c</sup>	—	—	—	—	—	—	36.8	36.2	32.4	33.5	35.4	30.4	-5.0 sss
Try inhalants once or twice <sup>d</sup>	35.8	35.9	33.9	34.1	35.5	34.7	34.2	33.7	34.5	33.7	32.0	31.5	-0.5
Take inhalants regularly <sup>d</sup>	62.1	61.9	59.2	58.1	60.6	59.0	59.0	56.7	55.3	54.1	52.1	50.0	-2.1
Take LSD once or twice <sup>e</sup>	23.8	22.8	21.9	21.4	23.6	21.7	19.9	19.6	20.0	22.2	22.6	23.1	+0.5
Take LSD regularly <sup>e</sup>	40.0	38.5	36.9	37.0	38.6	37.8	35.0	34.5	33.7	37.0	36.8	37.9	+1.1
Try ecstasy (MDMA) once or twice <sup>f</sup>	32.8	30.4	28.6	26.0	27.0	25.4	23.6	24.1‡	46.1	45.5	42.5	43.3	+0.7
Take ecstasy (MDMA) occasionally <sup>f</sup>	52.0	48.6	46.8	43.9	45.0	43.7	41.0	42.1‡	59.7	58.5	54.0	54.6	+0.7
Try salvia once or twice <sup>c</sup>	—	—	—	—	—	—	9.5	8.5	—	—	—	—	—
Take salvia occasionally <sup>c</sup>	—	—	—	—	—	—	16.1	14.6	—	—	—	—	—
Try crack once or twice <sup>d</sup>	47.6	47.3	47.1	46.6	49.6	48.1	47.0	47.1	48.3	49.6	48.9	49.3	+0.4
Take crack occasionally <sup>d</sup>	68.7	68.3	67.9	66.6	68.4	67.7	67.8	66.5	65.5	65.7	65.7	66.9	+1.1
Try cocaine powder once or twice <sup>d</sup>	43.5	43.5	42.7	42.3	45.7	43.3	42.8	43.5	43.9	44.3	44.3	44.5	+0.3
Take cocaine powder occasionally <sup>d</sup>	64.0	64.2	62.7	62.3	64.2	63.5	63.3	62.7	61.8	61.6	62.4	62.7	+0.3
Try heroin once or twice without using a needle <sup>e</sup>	60.4	60.3	60.8	60.0	62.3	61.7	59.1	59.8	60.9	61.4	59.2	62.9	+3.7 ss
Take heroin occasionally without using a needle <sup>e</sup>	75.3	76.4	75.5	74.0	76.7	75.9	75.1	73.4	73.2	72.7	70.3	74.7	+4.4 sss
Try OxyContin once or twice <sup>c</sup>	—	—	—	—	—	—	21.9	19.9	22.1	20.2	21.3	21.0	-0.3
Take OxyContin occasionally <sup>c</sup>	—	—	—	—	—	—	35.3	32.6	34.4	32.5	33.5	32.6	-0.9
Try Vicodin once or twice <sup>c</sup>	—	—	—	—	—	—	17.5	15.0	18.4	16.9	18.3	17.1	-1.2
Take Vicodin occasionally <sup>c</sup>	—	—	—	—	—	—	29.4	26.2	28.2	26.7	28.8	26.7	-2.1
Try Adderall once or twice <sup>c</sup>	—	—	—	—	—	—	17.6	16.5	20.7	19.2	21.4	20.4	-1.0
Take Adderall occasionally <sup>c</sup>	—	—	—	—	—	—	29.9	28.3	32.5	32.0	35.9	33.8	-2.1
Try bath salts (synthetic stimulants) once or twice <sup>c</sup>	—	—	—	—	—	—	24.9	39.3	36.8	33.9	31.8	32.0	+0.1
Take bath salts (synthetic stimulants) occasionally <sup>c</sup>	—	—	—	—	—	—	38.8	51.9	49.1	45.5	42.5	43.1	+0.6
Try cough/cold medicine once or twice <sup>c</sup>	—	—	—	—	—	—	21.2	20.1	22.9	20.9	23.5	21.2	-2.3 s
Take cough/cold medicine occasionally <sup>c</sup>	—	—	—	—	—	—	38.8	37.3	37.9	37.3	38.6	35.2	-3.4 s
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) <sup>b</sup>	14.2	14.9	13.5	14.4	14.9	14.5	13.9	13.7	14.8	15.3	14.7	14.2	-0.5
Take one or two drinks nearly every day <sup>b</sup>	31.3	32.6	31.5	31.5	32.3	31.8	31.4	30.6	31.0	30.9	30.7	30.0	-0.7
Have five or more drinks once or twice each weekend <sup>b</sup>	56.4	57.9	57.0	55.8	57.2	58.4	58.2	55.7	54.3	53.9	53.4	53.7	+0.3
Smoke one to five cigarettes per day <sup>c</sup>	37.0	38.6	38.6	38.6	38.2	37.4	40.4	42.8	41.9	41.7	43.2	41.9	-1.3
Smoke one or more packs of cigarettes per day <sup>g</sup>	59.4	61.1	59.8	59.1	60.9	62.5	62.6	62.4	62.1	63.0	61.2	62.1	+0.9
Use electronic cigarettes (e-cigarettes) regularly <sup>h</sup>	—	—	—	—	—	—	—	—	14.5	18.5	21.3	20.3	-1.0
Vape an e-liquid with nicotine occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	21.4	—
Vape an e-liquid with nicotine regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	38.2	—
Smoke little cigars or cigarillos regularly <sup>c</sup>	—	—	—	—	—	—	—	—	28.8	31.0	32.5	30.8	-1.7
Use smokeless tobacco regularly	39.5	41.8	41.0	40.8	41.8	40.8	37.8	36.2	34.5	36.6	35.1	34.8	-0.3
Take dissolvable tobacco regularly <sup>c</sup>	—	—	—	—	—	—	34.8	32.2	33.5	33.0	34.3	31.9	-2.4
Take snus regularly <sup>c</sup>	—	—	—	—	—	—	42.2	38.9	38.3	37.7	37.9	36.4	-1.5
Take steroids <sup>i</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—

Approximate weighted N = 16,500 16,100 15,700 15,000 15,300 16,000 15,100 14,600 14,600 14,400 16,900 15,300

Table continued on next page.

**TABLE 10 (cont.)**  
**Trends in Harmfulness of Drugs as Perceived by 8th Graders**

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

*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 estimates for the two most recent years is due to rounding. "‡" indicates that the question changed the following year.

<sup>a</sup>Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar.

<sup>b</sup>Beginning in 2012 data based on two thirds of  $N$  indicated.

<sup>c</sup>Data based on one third of  $N$  indicated.

<sup>d</sup>Beginning in 1997, data based on two thirds of  $N$  indicated due to changes in questionnaire forms.

<sup>e</sup>Data based on one of two forms in 1993–1996;  $N$  is one half of  $N$  indicated. Beginning in 1997, data based on one third of  $N$  indicated due to changes in questionnaire forms.

<sup>f</sup>Beginning in 2014 data are based on the revised question which included "Molly,"  $N$  is one third of  $N$  indicated in 2014 and two thirds of  $N$  indicated in 2015. 2014 and 2015 data are not comparable to earlier years due to the revision of the question text.

<sup>g</sup>Beginning in 1999, data based on two thirds of  $N$  indicated due to changes in questionnaire forms.

<sup>h</sup>E-cigarette data based on two thirds of  $N$  indicated. Little cigars or cigarillos data based on one third  $N$  indicated.

<sup>i</sup>Data based on two forms in 1991 and 1992. Data based on one of two forms in 1993 and 1994;  $N$  is one half of  $N$  indicated.

**TABLE 11**  
**Trends in Harmfulness of Drugs as Perceived by 10th Graders**

How much do you think people risk harming themselves (physically or in other ways), if they . . .	Percentage saying great risk <sup>a</sup>														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Try marijuana once or twice <sup>b</sup>	30.0	31.9	29.7	24.4	21.5	20.0	18.8	19.6	19.2	18.5	17.9	19.9	21.1	22.0	22.3
Smoke marijuana occasionally <sup>b</sup>	48.6	48.9	46.1	38.9	35.4	32.8	31.9	32.5	33.5	32.4	31.2	32.0	34.9	36.2	36.6
Smoke marijuana regularly <sup>b</sup>	82.1	81.1	78.5	71.3	67.9	65.9	65.9	65.8	65.9	64.7	62.8	60.8	63.9	65.6	65.5
Try synthetic marijuana once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take synthetic marijuana occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try inhalants once or twice <sup>d</sup>	37.8	38.7	40.9	42.7	41.6	47.2	47.5	45.8	48.2	46.6	49.9	48.7	47.7	46.7	45.7
Take inhalants regularly <sup>d</sup>	69.8	67.9	69.6	71.5	71.8	75.8	74.5	73.3	76.3	75.0	76.4	73.4	72.2	73.0	71.2
Take LSD once or twice <sup>e</sup>	—	—	48.7	46.5	44.7	45.1	44.5	43.5	45.0	43.0	41.3	40.1	40.8	40.6	40.3
Take LSD regularly <sup>e</sup>	—	—	78.9	75.9	75.5	75.3	73.8	72.3	73.9	72.0	68.8	64.9	63.0	63.1	60.8
Try ecstasy (MDMA) once or twice <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	39.4	43.5	49.7	52.0	51.4
Take ecstasy (MDMA) occasionally <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	64.8	67.3	71.7	74.6	72.8
Try salvia once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take salvia occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try crack once or twice <sup>d</sup>	70.4	69.6	66.6	64.7	60.9	60.9	59.2	58.0	57.8	56.1	57.1	57.4	57.6	56.7	57.0
Take crack occasionally <sup>d</sup>	87.4	86.4	84.4	83.1	81.2	80.3	78.7	77.5	79.1	76.9	77.3	75.7	76.4	76.7	76.9
Try cocaine powder once or twice <sup>d</sup>	59.1	59.2	57.5	56.4	53.5	53.6	52.2	50.9	51.6	48.8	50.6	51.3	51.8	50.7	51.3
Take cocaine powder occasionally <sup>d</sup>	82.2	80.1	79.1	77.8	75.6	75.0	73.9	71.8	73.6	70.9	72.3	71.0	71.4	72.2	72.4
Try heroin once or twice without using a needle <sup>e</sup>	—	—	—	—	70.7	72.1	73.1	71.7	73.7	71.7	72.0	72.2	70.6	72.0	72.4
Take heroin occasionally without using a needle <sup>e</sup>	—	—	—	—	85.1	85.8	86.5	84.9	86.5	85.2	85.4	83.4	83.5	85.4	85.2
Try OxyContin once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take OxyContin occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Vicodin once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take Vicodin occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Adderall once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take Adderall occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try bath salts (synthetic stimulants) once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take bath salts (synthetic stimulants) occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cough/cold medicine once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take cough/cold medicine occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) <sup>b</sup>	9.0	10.1	10.9	9.4	9.3	8.9	9.0	10.1	10.5	9.6	9.8	11.5	11.5	10.8	11.5
Take one or two drinks nearly every day <sup>b</sup>	36.1	36.8	35.9	32.5	31.7	31.2	31.8	31.9	32.9	32.3	31.5	31.0	30.9	31.3	32.6
Have five or more drinks once or twice each weekend <sup>u</sup>	54.7	55.9	54.9	52.9	52.0	50.9	51.8	52.5	51.9	51.0	50.7	51.7	51.6	51.7	53.3
Smoke one to five cigarettes per day <sup>c</sup>	—	—	—	—	—	—	—	—	28.4	30.2	32.4	35.1	38.1	39.7	41.0
Smoke one or more packs of cigarettes per day <sup>g</sup>	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
Use electronic cigarettes (e-cigarettes) regularly <sup>h</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smoke little cigars or cigarillos regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use smokeless tobacco regularly	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
Take dissolvable tobacco regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take snus regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take steroids <sup>i</sup>	67.1	72.7	73.4	72.5	—	—	—	—	—	—	—	—	—	—	—

Approximate weighted N = 14,700 14,800 15,300 15,900 17,000 15,700 15,600 15,000 13,600 14,300 14,000 14,300 15,800 16,400 16,200

Table continued on next page.

**TABLE 11 (cont.)**  
**Trends in Harmfulness of Drugs as Perceived by 10th Graders**

<i>How much do you think people risk harming themselves (physically or in other ways), if they . . .</i>	Percentage saying great risk <sup>a</sup>												2016–2017 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Try marijuana once or twice <sup>b</sup>	22.2	22.2	23.1	20.5	19.9	19.3	17.2	15.7	15.2	15.8	16.4	14.8	-1.6
Smoke marijuana occasionally <sup>b</sup>	35.6	36.0	37.0	32.9	30.9	30.1	26.8	25.1	23.9	24.7	24.4	21.9	-2.5 s
Smoke marijuana regularly <sup>b</sup>	64.9	64.5	64.8	59.5	57.2	55.2	50.9	46.5	45.4	43.2	44.0	40.6	-3.4 ss
Try synthetic marijuana once or twice <sup>c</sup>	—	—	—	—	—	—	24.6	24.1	25.0	26.3	26.8	25.1	-1.7
Take synthetic marijuana occasionally <sup>c</sup>	—	—	—	—	—	—	34.9	32.8	30.7	31.7	31.8	29.2	-2.5
Try inhalants once or twice <sup>d</sup>	43.9	43.0	41.2	42.0	42.5	42.4	43.0	43.1	43.1	40.7	37.9	—	-2.8 ss
Take inhalants regularly <sup>d</sup>	70.2	68.6	66.8	66.8	67.1	66.2	66.1	65.9	64.7	63.1	59.7	57.7	-2.1
Take LSD once or twice <sup>e</sup>	38.8	35.4	34.6	34.9	33.9	34.2	34.7	34.7	34.5	36.4	34.4	31.6	-2.8 s
Take LSD regularly <sup>e</sup>	60.7	56.8	55.7	56.7	56.1	54.9	56.4	55.9	54.8	58.3	55.2	53.0	-2.2
Try ecstasy (MDMA) once or twice <sup>f</sup>	48.4	45.3	43.2	38.9	36.3	37.2	36.2	36.0†	53.2	54.8	54.2	55.4	+1.2
Take ecstasy (MDMA) occasionally <sup>f</sup>	71.3	68.2	66.4	62.1	59.2	60.8	59.8	58.6†	69.0	70.1	69.3	68.6	-0.7
Try salvia once or twice <sup>c</sup>	—	—	—	—	—	—	12.2	10.7	—	—	—	—	—
Take salvia occasionally <sup>c</sup>	—	—	—	—	—	—	20.3	17.1	—	—	—	—	—
Try crack once or twice <sup>d</sup>	56.6	56.4	56.5	57.7	58.1	59.5	59.0	60.2	61.4	62.5	61.3	60.7	-0.7
Take crack occasionally <sup>d</sup>	76.2	76.0	76.5	75.9	76.2	76.5	76.7	77.8	76.4	77.5	75.2	75.1	-0.1
Try cocaine powder once or twice <sup>d</sup>	50.2	49.5	49.8	50.8	52.9	53.0	53.4	54.5	54.1	54.8	54.6	52.5	-2.1 s
Take cocaine powder occasionally <sup>d</sup>	71.3	70.9	71.1	71.0	72.2	72.0	72.6	72.8	71.7	72.6	70.9	70.4	-0.5
Try heroin once or twice without using a needle <sup>e</sup>	70.0	70.5	70.8	72.2	73.0	72.9	72.6	73.2	72.6	74.1	73.3	72.2	-1.0
Take heroin occasionally without using a needle <sup>e</sup>	83.6	84.2	83.1	83.3	84.8	83.4	84.4	84.0	82.5	83.3	82.2	81.4	-0.8
Try OxyContin once or twice <sup>c</sup>	—	—	—	—	—	—	30.9	29.4	29.7	29.9	28.7	27.8	-1.0
Take OxyContin occasionally <sup>c</sup>	—	—	—	—	—	—	48.3	44.7	44.4	43.7	41.4	41.3	-0.1
Try Vicodin once or twice <sup>c</sup>	—	—	—	—	—	—	23.2	21.0	22.5	24.1	21.8	22.1	+0.3
Take Vicodin occasionally <sup>c</sup>	—	—	—	—	—	—	40.3	36.0	36.4	35.4	32.6	32.0	-0.6
Try Adderall once or twice <sup>c</sup>	—	—	—	—	—	—	19.7	17.6	22.2	22.9	22.5	21.6	-0.9
Take Adderall occasionally <sup>c</sup>	—	—	—	—	—	—	34.3	30.5	37.0	37.0	35.8	36.4	+0.6
Try bath salts (synthetic stimulants) once or twice <sup>c</sup>	—	—	—	—	—	—	32.3	50.1	49.6	49.1	42.7	42.5	-0.2
Take bath salts (synthetic stimulants) occasionally <sup>c</sup>	—	—	—	—	—	—	44.9	61.8	61.1	60.4	53.0	51.5	-1.5
Try cough/cold medicine once or twice <sup>c</sup>	—	—	—	—	—	—	23.6	21.6	22.9	24.0	24.0	21.8	-2.3 s
Take cough/cold medicine occasionally <sup>c</sup>	—	—	—	—	—	—	40.4	37.3	38.3	38.2	37.6	36.4	-1.2
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) <sup>b</sup>	11.1	11.6	12.6	11.9	11.9	12.3	11.3	11.3	11.6	12.4	13.3	12.5	-0.8
Take one or two drinks nearly every day <sup>b</sup>	31.7	33.3	35.0	33.8	33.1	32.9	31.8	30.6	31.3	31.2	32.2	30.9	-1.4
Have five or more drinks once or twice each weekend <sup>b</sup>	52.4	54.1	56.6	54.2	54.6	55.5	52.8	52.3	54.0	54.5	54.5	52.0	-2.5 s
Smoke one to five cigarettes per day <sup>c</sup>	41.3	41.7	43.5	42.8	41.4	44.8	49.1	47.7	52.0	52.9	53.0	50.0	-3.0 s
Smoke one or more packs of cigarettes per day <sup>g</sup>	67.7	68.2	69.1	67.3	67.2	69.8	71.6	70.8	72.0	72.9	71.5	69.8	-1.7
Use electronic cigarettes (e-cigarettes) regularly <sup>h</sup>	—	—	—	—	—	—	—	—	14.1	17.0	19.1	19.4	+0.3
Vape an e-liquid with nicotine occasionally <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	18.8	—
Vape an e-liquid with nicotine regularly <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	33.3	—
Smoke little cigars or cigarillos regularly <sup>c</sup>	—	—	—	—	—	—	—	—	31.0	34.9	35.3	34.0	-1.3
Use smokeless tobacco regularly	45.9	46.7	48.0	44.7	43.7	45.7	42.9	40.0	39.9	42.5	43.0	40.7	-2.3
Take dissolvable tobacco regularly <sup>c</sup>	—	—	—	—	—	—	33.3	31.3	32.0	35.6	34.2	32.7	-1.6
Take snus regularly <sup>c</sup>	—	—	—	—	—	—	41.0	38.9	38.8	41.8	39.9	38.1	-1.8
Take steroids <sup>i</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—

*Approximate weighted N = 16,200 16,100 15,100 15,900 15,200 14,900 15,000 12,900 13,000 15,600 14,700 13,500*

Table continued on next page.

**TABLE 11 (cont.)**  
**Trends in Harmfulness of Drugs as Perceived by 10th Graders**

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

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 estimates for the two most recent years is due to rounding. '\*' indicates that the question changed the following year.

<sup>a</sup>Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar

<sup>b</sup>Beginning in 2012 data based on two thirds of  $N$  indicated.

<sup>c</sup>Data based on one third of  $N$  indicated.

<sup>d</sup>Beginning in 1997, data based on two thirds of  $N$  indicated due to changes in questionnaire forms.

<sup>e</sup>Data based on one of two forms in 1993–1996;  $N$  is one half of  $N$  indicated. Beginning in 1997, data based on one third of  $N$  indicated due to changes in questionnaire forms.

<sup>f</sup>Beginning in 2014 data are based on the revised question which included "Molly."  $N$  is one third of  $N$  indicated in 2014 and two thirds of  $N$  indicated in 2015. 2014 and 2015 data are not comparable to earlier years due to the revision of the question text.

<sup>g</sup>Beginning in 1999, data based on two thirds of  $N$  indicated due to changes in questionnaire forms.

<sup>h</sup>E-cigarette data based on two thirds of  $N$  indicated. Little cigars or cigarillos data based on one third  $N$  indicated.

<sup>i</sup>Data based on two forms in 1991 and 1992. Data based on one of two forms in 1993 and 1994;  $N$  is one half of  $N$  indicated.

**TABLE 12**  
**Trends in Harmfulness of Drugs as Perceived by 12th Graders**

Percentage saying great risk <sup>a</sup>

<i>How much do you think people risk harming themselves (physically or in other ways), if they . . .</i>	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Try marijuana once or twice	15.1	11.4	9.5	8.1	9.4	10.0	13.0	11.5	12.7	14.7	14.8	15.1	18.4	19.0	23.6	23.1
Smoke marijuana occasionally	18.1	15.0	13.4	12.4	13.5	14.7	19.1	18.3	20.6	22.6	24.5	25.0	30.4	31.7	36.5	36.9
Smoke marijuana regularly	43.3	38.6	36.4	34.9	42.0	50.4	57.6	60.4	62.8	66.9	70.4	71.3	73.5	77.0	77.5	77.8
Try synthetic marijuana once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take synthetic marijuana occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try LSD once or twice	49.4	45.7	43.2	42.7	41.6	43.9	45.5	44.9	44.7	45.4	43.5	42.0	44.9	45.7	46.0	44.7
Take LSD regularly	81.4	80.8	79.1	81.1	82.4	83.0	83.5	83.5	83.2	83.8	82.9	82.6	83.8	84.2	84.3	84.5
Try PCP once or twice	—	—	—	—	—	—	—	—	—	—	—	—	55.6	58.8	56.6	55.2
Try ecstasy (MDMA) once or twice <sup>b</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try salvia once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take salvia occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cocaine once or twice	42.6	39.1	35.6	33.2	31.5	31.3	32.1	32.8	33.0	35.7	34.0	33.5	47.9	51.2	54.9	59.4
Take cocaine occasionally	—	—	—	—	—	—	—	—	—	—	—	54.2	66.8	69.2	71.8	73.9
Take cocaine regularly	73.1	72.3	68.2	68.2	69.5	69.2	71.2	73.0	74.3	78.8	79.0	82.2	88.5	89.2	90.2	91.1
Try crack once or twice	—	—	—	—	—	—	—	—	—	—	—	—	57.0	62.1	62.9	64.3
Take crack occasionally	—	—	—	—	—	—	—	—	—	—	—	—	70.4	73.2	75.3	80.4
Take crack regularly	—	—	—	—	—	—	—	—	—	—	—	—	84.6	84.8	85.6	91.6
Try cocaine powder once or twice	—	—	—	—	—	—	—	—	—	—	—	—	45.3	51.7	53.8	53.9
Take cocaine powder occasionally	—	—	—	—	—	—	—	—	—	—	—	—	56.8	61.9	65.8	71.1
Take cocaine powder regularly	—	—	—	—	—	—	—	—	—	—	—	—	81.4	82.9	83.9	90.2
Try heroin once or twice	60.1	58.9	55.8	52.9	50.4	52.1	52.9	51.1	50.8	49.8	47.3	45.8	53.6	54.0	53.8	55.4
Take heroin occasionally	75.6	75.6	71.9	71.4	70.9	70.9	72.2	69.8	71.8	70.7	69.8	68.2	74.6	73.8	75.5	76.6
Take heroin regularly	87.2	88.6	86.1	86.6	87.5	86.2	87.5	86.0	86.1	87.2	86.0	87.1	88.7	88.8	89.5	90.2
Try heroin once or twice without using a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take heroin occasionally without using a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try any narcotic other than heroin (codeine, Vicodin, OxyContin, Percocet, etc.) once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take any narcotic other than heroin occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take any narcotic other than heroin regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try amphetamines once or twice <sup>d</sup>	35.4	33.4	30.8	29.9	29.7	29.7	26.4	25.3	24.7	25.4	25.2	25.1	29.1	29.6	32.8	32.2
Take amphetamines regularly <sup>d</sup>	69.0	67.3	66.6	67.1	69.9	69.1	66.1	64.7	64.8	67.1	67.2	67.3	69.4	69.8	71.2	71.2
Try Adderall once or twice <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Adderall occasionally <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try crystal methamphetamine (ice) once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try bath salts (synthetic stimulants) once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take bath salts (synthetic stimulants) occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try sedatives (barbiturates) once or twice <sup>f</sup>	34.8	32.5	31.2	31.3	30.7	30.9	28.4	27.5	27.0	27.4	26.1	25.4	30.9	29.7	32.2	32.4
Take sedatives (barbiturates) regularly <sup>f</sup>	69.1	67.7	68.6	68.4	71.6	72.2	69.9	67.6	67.7	68.5	68.3	67.2	69.4	69.6	70.5	70.2
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	5.3	4.8	4.1	3.4	4.1	3.8	4.6	3.5	4.2	4.6	5.0	4.6	6.2	6.0	6.0	8.3
Take one or two drinks nearly every day	21.5	21.2	18.5	19.6	22.6	20.3	21.6	21.6	21.6	23.0	24.4	25.1	26.2	27.3	28.5	31.3
Take four or five drinks nearly every day	63.5	61.0	62.9	63.1	66.2	65.7	64.5	65.5	66.8	68.4	69.8	66.5	69.7	68.5	69.8	70.9
Have five or more drinks once or twice each weekend	37.8	37.0	34.7	34.5	34.9	35.9	36.3	36.0	38.6	41.7	43.0	39.1	41.9	42.6	44.0	47.1
Smoke one or more packs of cigarettes per day	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
Use electronic cigarettes (e-cigarettes) regularly <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine occasionally <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smoke little cigars or cigarillos regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use smokeless tobacco regularly	—	—	—	—	—	—	—	—	—	—	—	25.8	30.0	33.2	32.9	34.2
Take steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	63.8	69.9
<i>Approximate weighted N =</i>	<i>2,804</i>	<i>2,918</i>	<i>3,052</i>	<i>3,770</i>	<i>3,250</i>	<i>3,234</i>	<i>3,604</i>	<i>3,557</i>	<i>3,305</i>	<i>3,262</i>	<i>3,250</i>	<i>3,020</i>	<i>3,315</i>	<i>3,276</i>	<i>2,796</i>	<i>2,553</i>

Table continued on next page.



**TABLE 12 (cont.)**  
**Trends in Harmfulness of Drugs as Perceived by 12th Graders**

	Percentage saying great risk <sup>a</sup>														
<i>How much do you think people risk harming themselves (physically or in other ways), if they . . .</i>	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Try marijuana once or twice	27.1	24.5	21.9	19.5	16.3	15.6	14.9	16.7	15.7	13.7	15.3	16.1	16.1	15.9	16.1
Smoke marijuana occasionally	40.6	39.6	35.6	30.1	25.6	25.9	24.7	24.4	23.9	23.4	23.5	23.2	26.6	25.4	25.8
Smoke marijuana regularly	78.6	76.5	72.5	65.0	60.8	59.9	58.1	58.5	57.4	58.3	57.4	53.0	54.9	54.6	58.0
Try synthetic marijuana once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take synthetic marijuana occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try LSD once or twice	46.6	42.3	39.5	38.8	36.4	36.2	34.7	37.4	34.9	34.3	33.2	36.7	36.2	36.2	36.5
Take LSD regularly	84.3	81.8	79.4	79.1	78.1	77.8	76.6	76.5	76.1	75.9	74.1	73.9	72.3	70.2	69.9
Try PCP once or twice	51.7	54.8	50.8	51.5	49.1	51.0	48.8	46.8	44.8	45.0	46.2	48.3	45.2	47.1	46.6
Try ecstasy (MDMA) once or twice <sup>b</sup>	—	—	—	—	—	—	33.8	34.5	35.0	37.9	45.7	52.2	56.3	57.7	60.1
Try salvia once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take salvia occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cocaine once or twice	59.4	56.8	57.6	57.2	53.7	54.2	53.6	54.6	52.1	51.1	50.7	51.2	51.0	50.7	50.5
Take cocaine occasionally	75.5	75.1	73.3	73.7	70.8	72.1	72.4	70.1	70.1	69.5	69.9	68.3	69.1	67.2	66.7
Take cocaine regularly	90.4	90.2	90.1	89.3	87.9	88.3	87.1	86.3	85.8	86.2	84.1	84.5	83.0	82.2	82.8
Try crack once or twice	60.6	62.4	57.6	58.4	54.6	56.0	54.0	52.2	48.2	48.4	49.4	50.8	47.3	47.8	48.4
Take crack occasionally	76.5	76.3	73.9	73.8	72.8	71.4	70.3	68.7	67.3	65.8	65.4	65.6	64.0	64.5	63.8
Take crack regularly	90.1	89.3	87.5	89.6	88.6	88.0	86.2	85.3	85.4	85.3	85.8	84.1	83.2	83.5	83.3
Try cocaine powder once or twice	53.6	57.1	53.2	55.4	52.0	53.2	51.4	48.5	46.1	47.0	49.0	49.5	46.2	45.4	46.2
Take cocaine powder occasionally	69.8	70.8	68.6	70.6	69.1	68.8	67.7	65.4	64.2	64.7	63.2	64.4	61.4	61.6	60.8
Take cocaine powder regularly	88.9	88.4	87.0	88.6	87.8	86.8	86.0	84.1	84.6	85.5	84.4	84.2	82.3	81.7	82.7
Try heroin once or twice	55.2	50.9	50.7	52.8	50.9	52.5	56.7	57.8	56.0	54.2	55.6	56.0	58.0	56.6	55.2
Take heroin occasionally	74.9	74.2	72.0	72.1	71.0	74.8	76.3	76.9	77.3	74.6	75.9	76.6	78.5	75.7	76.0
Take heroin regularly	89.6	89.2	88.3	88.0	87.2	89.5	88.9	89.1	89.9	89.2	88.3	88.5	89.3	86.8	87.5
Try heroin once or twice without using a needle	—	—	—	—	55.6	58.6	60.5	59.6	58.5	61.6	60.7	60.6	58.9	61.2	60.5
Take heroin occasionally without using a needle	—	—	—	—	71.2	71.0	74.3	73.4	73.6	74.7	74.4	74.7	73.0	76.1	73.3
Try any narcotic other than heroin (codeine, Vicodin, OxyContin, Percocet, etc.) once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take any narcotic other than heroin occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take any narcotic other than heroin regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try amphetamines once or twice <sup>d</sup>	36.3	32.6	31.3	31.4	28.8	30.8	31.0	35.3	32.2	32.6	34.7	34.4	36.8	35.7	37.7
Take amphetamines regularly <sup>d</sup>	74.1	72.4	69.9	67.0	65.9	66.8	66.0	67.7	66.4	66.3	67.1	64.8	65.6	63.9	67.1
Try Adderall once or twice <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Adderall occasionally <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try crystal methamphetamine (ice) once or twice	61.6	61.9	57.5	58.3	54.4	55.3	54.4	52.7	51.2	51.3	52.7	53.8	51.2	52.4	54.6
Try bath salts (synthetic stimulants) once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take bath salts (synthetic stimulants) occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try sedatives (barbiturates) once or twice <sup>f</sup>	35.1	32.2	29.2	29.9	26.3	29.1	26.9	29.0	26.1	25.0	25.7	26.2	27.9†	24.9	24.7
Take sedatives (barbiturates) regularly <sup>f</sup>	70.5	70.2	66.1	63.3	61.6	60.4	56.8	56.3	54.1	52.3	50.3	49.3	49.6†	54.0	54.1
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	9.1	8.6	8.2	7.6	5.9	7.3	6.7	8.0	8.3	6.4	8.7	7.6	8.4	8.6	8.5
Take one or two drinks nearly every day	32.7	30.6	28.2	27.0	24.8	25.1	24.8	24.3	21.8	21.7	23.4	21.0	20.1	23.0	23.7
Take four or five drinks nearly every day	69.5	70.5	67.8	66.2	62.8	65.6	63.0	62.1	61.1	59.9	60.7	58.8	57.8	59.2	61.8
Have five or more drinks once or twice each weekend	48.6	49.0	48.3	46.5	45.2	49.5	43.0	42.8	43.1	42.7	43.6	42.2	43.5	43.6	45.0
Smoke one or more packs of cigarettes per day	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
Use electronic cigarettes (e-cigarettes) regularly <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine occasionally <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smoke little cigars or cigarillos regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use smokeless tobacco regularly	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
Take steroids	65.6	70.7	69.1	66.1	66.4	67.6	67.2	68.1	62.1	57.9	58.9	57.1	55.0	55.7	56.8
<i>Approximate weighted N =</i>	<i>2,549</i>	<i>2,684</i>	<i>2,759</i>	<i>2,591</i>	<i>2,603</i>	<i>2,449</i>	<i>2,579</i>	<i>2,564</i>	<i>2,306</i>	<i>2,130</i>	<i>2,173</i>	<i>2,198</i>	<i>2,466</i>	<i>2,491</i>	<i>2,512</i>

Table continued on next page.

**TABLE 12 (cont.)**  
**Trends in Harmfulness of Drugs as Perceived by 12th Graders**

	Percentage saying great risk <sup>a</sup>												
<i>How much do you think people risk harming themselves (physically or in other ways), if they . . .</i>	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016 – 2017 change
Try marijuana once or twice	17.8	18.6	17.4	18.5	17.1	15.6	14.8	14.5	12.5	12.3	12.9	11.9	-1.1
Smoke marijuana occasionally	25.9	27.1	25.8	27.4	24.5	22.7	20.6	19.5	16.4	15.8	17.1	14.1	-3.0 s
Smoke marijuana regularly	57.9	54.8	51.7	52.4	46.8	45.7	44.1	39.5	36.1	31.9	31.1	29.0	-2.1
Try synthetic marijuana once or twice	—	—	—	—	—	—	23.5	25.9	32.5	33.0	35.6	33.0	-2.6
Take synthetic marijuana occasionally	—	—	—	—	—	—	32.7	36.2	39.4	40.9	43.9	40.0	-3.9
Try LSD once or twice	36.1	37.0	33.9	37.1	35.6	34.7	33.1	34.9	35.5	33.2	31.7	30.0	-1.7
Take LSD regularly	69.3	67.3	63.6	67.8	65.3	65.5	66.8	66.8	62.7	60.7	58.2	56.1	-2.1
Try PCP once or twice	47.0	48.0	47.4	49.7	52.4	53.9	51.6	53.9	53.8	54.4	55.1	53.6	-1.5
Try ecstasy (MDMA) once or twice <sup>b</sup>	59.3	58.1	57.0	53.3	50.6	49.0	49.4	47.5†	47.8	49.5	48.8	49.1	+0.3
Try salvia once or twice <sup>c</sup>	—	—	—	—	39.8	36.7†	13.8	12.9	14.1	13.1	13.0	10.2	-2.8
Take salvia occasionally	—	—	—	—	—	—	23.1	21.3	20.0	17.6	16.3	13.8	-2.5
Try cocaine once or twice	52.5	51.3	50.3	53.1	52.8	54.0	51.6	54.4	53.7	51.1	52.7	49.5	-3.2
Take cocaine occasionally	69.8	68.8	67.1	71.4	67.8	69.7	69.0	70.2	68.1	66.3	68.6	64.6	-4.0 s
Take cocaine regularly	84.6	83.3	80.7	84.4	81.7	83.8	82.6	83.3	80.6	79.1	78.3	74.9	-3.5
Try crack once or twice	47.8	47.3	47.5	48.4	50.2	51.7	52.0	55.6	54.5	53.6	53.9	51.6	-2.3
Take crack occasionally	64.8	63.6	65.2	64.7	64.3	66.2	66.5	69.5	68.5	67.8	66.2	65.3	-0.9
Take crack regularly	82.8	82.6	83.4	84.0	83.8	83.9	84.0	85.4	82.0	81.2	81.9	79.8	-2.2
Try cocaine powder once or twice	45.8	45.1	45.1	46.5	48.2	48.0	48.1	49.9	49.9	49.0	49.3	45.1	-4.1 s
Take cocaine powder occasionally	61.9	59.9	61.6	62.6	62.6	64.2	62.6	65.4	64.8	62.8	62.9	60.1	-2.8
Take cocaine powder regularly	82.1	81.5	82.5	83.4	81.8	83.3	83.3	83.9	81.5	80.1	80.7	78.8	-1.9
Try heroin once or twice	59.1	58.4	55.5	59.3	58.3	59.1	59.4	61.7	62.8	64.0	64.5	63.0	-1.5
Take heroin occasionally	79.1	76.2	75.3	79.7	74.8	77.2	78.0	78.2	77.9	78.0	78.7	74.6	-4.1 s
Take heroin regularly	89.7	87.8	86.4	89.9	85.5	87.9	88.6	87.6	85.7	84.8	85.4	83.3	-2.2
Try heroin once or twice without using a needle	62.6	60.2	60.8	61.5	63.8	61.1	63.3	64.5	65.3	62.5	66.1	64.6	-1.5
Take heroin occasionally without using a needle	76.2	73.9	73.2	74.8	76.2	74.7	76.1	76.4	73.6	71.1	74.6	72.7	-1.9
Try any narcotic other than heroin (codeine, Vicodin, OxyContin, Percocet, etc.) once or twice	—	—	—	—	40.4	39.9	38.4	43.1	42.7	44.1	43.6	42.0	-1.6
Take any narcotic other than heroin occasionally	—	—	—	—	54.3	54.8	53.8	57.3	59.0	58.5	55.7	55.5	-0.2
Take any narcotic other than heroin regularly	—	—	—	—	74.9	75.5	73.9	75.8	72.7	73.9	72.4	70.8	-1.6
Try amphetamines once or twice <sup>d</sup>	39.5	41.3	39.2	41.9	40.6†	34.8	34.3	36.3	34.1	34.0	31.1	31.9	+0.8
Take amphetamines regularly <sup>d</sup>	68.1	68.1	65.4	69.0	63.6†	58.7	60.0	59.5	55.1	54.3	51.3	50.0	-1.3
Try Adderall once or twice <sup>e</sup>	—	—	—	—	33.3	31.2	27.2	31.8	33.6	34.3	32.5	32.0	-0.5
Try Adderall occasionally <sup>e</sup>	—	—	—	—	41.6	40.8	35.3	38.8	41.5	41.6	40.9	40.6	-0.3
Try crystal methamphetamine (ice) once or twice	59.1	60.2	62.2	63.4	64.9	66.5	67.8	72.2	70.2	70.0	70.0	69.3	-0.6
Try bath salts (synthetic stimulants) once or twice	—	—	—	—	—	—	33.2	59.5	59.2	57.5	54.9	51.3	-3.6
Take bath salts (synthetic stimulants) occasionally	—	—	—	—	—	—	45.0	69.9	68.8	67.4	64.2	61.5	-2.7
Try sedatives (barbiturates) once or twice <sup>f</sup>	28.0	27.9	25.9	29.6	28.0	27.8	27.8	29.4	29.6	28.9	27.4	26.9	-0.5
Take sedatives (barbiturates) regularly <sup>f</sup>	56.8	55.1	50.2	54.7	52.1	52.4	53.9	53.3	50.5	50.6	47.0	44.0	-3.0
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	9.3	10.5	10.0	9.4	10.8	9.4	8.7	9.9	8.6	10.3	9.5	9.3	-0.2
Take one or two drinks nearly every day	25.3	25.1	24.2	23.7	25.4	24.6	23.7	23.1	21.1	21.5	21.6	21.6	+0.1
Take four or five drinks nearly every day	63.4	61.8	60.8	62.4	61.1	62.3	63.6	62.4	61.2	59.1	59.1	58.7	-0.4
Have five or more drinks once or twice each weekend	47.6	45.8	46.3	48.0	46.3	47.6	48.8	45.8	45.4	46.9	48.4	45.7	-2.7
Smoke one or more packs of cigarettes per day	77.6	77.3	74.0	74.9	75.0	77.7	78.2	78.2	78.0	75.9	76.5	74.9	-1.6
Use electronic cigarettes (e-cigarettes) regularly <sup>g</sup>	—	—	—	—	—	—	—	—	14.2	16.2	18.2	16.1	-2.1
Vape an e-liquid with nicotine occasionally <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	16.4	—
Vape an e-liquid with nicotine regularly <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	27.0	—
Smoke little cigars or cigarillos regularly	—	—	—	—	—	—	—	—	38.3	39.7	39.5	38.2	-1.3
Use smokeless tobacco regularly	45.9	44.0	42.9	40.8	41.2	42.6	44.3	41.6	40.7	38.5	38.1	38.4	+0.2
Take steroids	60.2	57.4	60.8	60.2	59.2	61.1	58.6	54.2	54.6	54.4	54.5	49.1	-5.4 ss
<i>Approximate weighted N =</i>	<i>2,407</i>	<i>2,450</i>	<i>2,389</i>	<i>2,290</i>	<i>2,440</i>	<i>2,408</i>	<i>2,331</i>	<i>2,098</i>	<i>2,067</i>	<i>2,174</i>	<i>1,988</i>	<i>1,919</i>	

Table continued on next page.

**TABLE 12 (cont.)**  
**Trends in Harmfulness of Drugs as Perceived by 12th Graders**

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

*Notes.* Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. '‡' indicates that the question changed the following year. See relevant footnote for that drug. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar.

<sup>b</sup>Beginning in 2014 data are based on the revised question which included "Molly." 2014 and 2015 data are not comparable to earlier years due to the revision of the question text.

<sup>c</sup>In 2011 the question on perceived risk of using salvia once or twice appeared at the end of a form. In 2012 the question was moved to an earlier section of the same form. A question on perceived risk of using salvia occasionally was also added following the question on perceived risk of trying salvia once or twice. These changes likely explain the discontinuity in the 2012 results.

<sup>d</sup>In 2011 the list of examples was changed from uppers, pep pills, bennies, speed to uppers, speed, Adderall, Ritalin, etc. These changes likely explain the discontinuity in the 2011 results.

<sup>e</sup>In 2014 "(without a doctor's orders)" added to the questions on perceived risk of using Adderall.

<sup>f</sup>In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2004 results.

<sup>g</sup>Based on two of six forms; N is two times the N indicated.

**TABLE 13**  
**Trends in Disapproval of Drug Use in Grade 8**

Do you disapprove of people who . . .	Percentage who disapprove or strongly disapprove <sup>a</sup>														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Try marijuana once or twice <sup>b</sup>	84.6	82.1	79.2	72.9	70.7	67.5	67.6	69.0	70.7	72.5	72.4	73.3	73.8	75.9	75.3
Smoke marijuana occasionally <sup>b</sup>	89.5	88.1	85.7	80.9	79.7	76.5	78.1	78.4	79.3	80.6	80.6	80.9	81.5	83.1	82.4
Smoke marijuana regularly <sup>b</sup>	92.1	90.8	88.9	85.3	85.1	82.8	84.6	84.5	84.5	85.3	84.5	85.3	85.7	86.8	86.3
Try inhalants once or twice <sup>c</sup>	84.9	84.0	82.5	81.6	81.8	82.9	84.1	83.0	85.2	85.4	86.6	86.1	85.1	85.1	84.6
Take inhalants regularly <sup>c</sup>	90.6	90.0	88.9	88.1	88.8	89.3	90.3	89.5	90.3	90.2	90.5	90.4	89.8	90.1	89.8
Take LSD once or twice <sup>d</sup>	—	—	77.1	75.2	71.6	70.9	72.1	69.1	69.4	66.7	64.6	62.6	61.0	58.1	58.5
Take LSD regularly <sup>d</sup>	—	—	79.8	78.4	75.8	75.3	76.3	72.5	72.5	69.3	67.0	65.5	63.5	60.5	60.7
Try ecstasy (MDMA) once or twice <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	69.0	74.3	77.7	76.3	75.0
Take ecstasy (MDMA) occasionally <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	73.6	78.6	81.3	79.4	77.9
Try crack once or twice <sup>c</sup>	91.7	90.7	89.1	86.9	85.9	85.0	85.7	85.4	86.0	85.4	86.0	86.2	86.4	87.4	87.6
Take crack occasionally <sup>c</sup>	93.3	92.5	91.7	89.9	89.8	89.3	90.3	89.5	89.9	88.8	89.8	89.6	89.8	90.3	90.5
Try cocaine powder once or twice <sup>c</sup>	91.2	89.6	88.5	86.1	85.3	83.9	85.1	84.5	85.2	84.8	85.6	85.8	85.6	86.8	87.0
Take cocaine powder occasionally <sup>c</sup>	93.1	92.4	91.6	89.7	89.7	88.7	90.1	89.3	89.9	88.8	89.6	89.9	89.8	90.3	90.7
Try heroin once or twice without using a needle <sup>d</sup>	—	—	—	—	85.8	85.0	87.7	87.3	88.0	87.2	87.2	87.8	86.9	86.6	86.9
Take heroin occasionally without using a needle <sup>d</sup>	—	—	—	—	88.5	87.7	90.1	89.7	90.2	88.9	88.9	89.6	89.0	88.6	88.5
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) <sup>b</sup>	51.7	52.2	50.9	47.8	48.0	45.5	45.7	47.5	48.3	48.7	49.8	51.1	49.7	51.1	51.2
Take one or two drinks nearly every day <sup>b</sup>	82.2	81.0	79.6	76.7	75.9	74.1	76.6	76.9	77.0	77.8	77.4	78.3	77.1	78.6	78.7
Have five or more drinks once or twice each weekend <sup>b</sup>	85.2	83.9	83.3	80.7	80.7	79.1	81.3	81.0	80.3	81.2	81.6	81.9	81.9	82.3	82.9
Smoke one to five cigarettes per day <sup>e</sup>	—	—	—	—	—	—	—	—	75.1	79.1	80.4	81.1	81.4	83.1	82.9
Smoke one or more packs of cigarettes per day <sup>f</sup>	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
Use electronic cigarettes (e-cigarettes) regularly <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine occasionally <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use smokeless tobacco regularly <sup>b</sup>	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
Take steroids <sup>g</sup>	89.8	90.3	89.9	87.9	—	—	—	—	—	—	—	—	—	—	—

Approximate weighted N = 17,400 18,500 18,400 17,400 17,600 18,000 18,800 18,100 16,700 16,700 16,200 15,100 16,500 17,000 16,800

(Table continued on next page.)

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**TABLE 13 (cont.)**  
**Trends in Disapproval of Drug Use in Grade 8**

Do you disapprove of people who . . .	Percentage who disapprove or strongly disapprove <sup>a</sup>												2016–2017 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Try marijuana once or twice <sup>b</sup>	76.0	78.7	76.6	75.3	73.5	74.4	75.1	72.0	70.5	70.3	70.1	67.3	-2.8 s
Smoke marijuana occasionally <sup>b</sup>	82.2	84.5	82.6	81.9	79.9	81.1	81.6	78.8	77.7	77.5	77.5	75.5	-2.1
Smoke marijuana regularly <sup>b</sup>	86.1	87.7	86.8	85.9	84.3	85.7	85.6	83.8	82.2	82.2	82.3	81.2	-1.1
Try inhalants once or twice <sup>c</sup>	83.4	84.1	82.3	83.1	83.1	82.9	83.1	81.6	80.7	80.6	78.3	77.4	-0.8
Take inhalants regularly <sup>c</sup>	89.0	89.5	88.5	88.4	88.9	88.5	88.6	86.8	85.5	85.4	83.3	82.8	-0.5
Take LSD once or twice <sup>d</sup>	53.9	53.5	52.6	53.2	53.7	55.4	51.8	52.0	52.8	56.0	55.2	56.1	+0.8
Take LSD regularly <sup>d</sup>	55.8	55.6	54.7	55.7	55.8	57.6	54.1	53.6	54.8	58.1	57.6	58.2	+0.6
Try ecstasy (MDMA) once or twice <sup>e</sup>	66.7	65.7	63.5	62.3	62.4	64.2	60.2	60.9	61.0†	68.2	64.8	63.0	-1.8
Take ecstasy (MDMA) occasionally <sup>e</sup>	69.8	68.3	66.5	65.7	65.9	67.5	63.2	63.4	64.1‡	71.7	67.5	65.8	-1.7
Try crack once or twice <sup>c</sup>	87.2	88.6	87.2	88.4	89.1	88.5	89.0	88.1	88.0	87.5	87.0	87.5	+0.5
Take crack occasionally <sup>c</sup>	90.0	91.2	90.3	91.0	91.5	91.0	91.2	90.3	89.8	89.8	88.8	89.6	+0.8
Try cocaine powder once or twice <sup>c</sup>	86.5	88.2	86.8	88.1	88.4	88.3	88.6	88.0	87.7	87.5	86.8	86.8	0.0
Take cocaine powder occasionally <sup>c</sup>	90.2	91.0	90.1	90.7	91.4	91.3	91.5	90.6	90.1	90.1	89.3	90.0	+0.6
Try heroin once or twice without using a needle <sup>d</sup>	87.2	88.4	86.9	88.6	89.5	87.5	86.8	87.2	87.1	87.1	85.6	87.9	+2.4 s
Take heroin occasionally without using a needle <sup>d</sup>	88.5	89.7	88.2	90.1	90.6	89.0	87.7	88.2	88.1	88.0	86.7	88.7	+2.0
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) <sup>b</sup>	51.3	54.0	52.5	52.7	54.2	54.0	54.1	53.3	53.3	53.7	52.6	51.0	-1.6
Take one or two drinks nearly every day <sup>b</sup>	78.7	80.4	79.2	78.5	79.5	80.7	81.3	80.2	79.6	79.7	79.1	79.5	+0.4
Have five or more drinks once or twice each weekend <sup>b</sup>	82.0	83.8	83.2	83.2	83.6	84.8	86.0	85.0	84.9	85.4	84.9	84.7	-0.2
Smoke one to five cigarettes per day <sup>e</sup>	83.5	85.3	85.0	83.6	84.7	86.8	—	—	—	—	—	—	—
Smoke one or more packs of cigarettes per day <sup>f</sup>	85.6	87.0	86.7	87.1	87.0	88.0	88.8	88.0	87.5	88.8	88.1	88.8	+0.7
Use electronic cigarettes (e-cigarettes) regularly <sup>e</sup>	—	—	—	—	—	—	—	—	58.4	65.0	66.6	—	—
Vape an e-liquid with nicotine occasionally <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	72.0	—
Vape an e-liquid with nicotine regularly <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	79.8	—
Use smokeless tobacco regularly <sup>b</sup>	81.0	82.3	82.1	81.5	81.2	82.6	82.7	81.5	80.2	82.5	81.1	81.3	+0.3
Take steroids <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—

Table continued on next page.

Approximate weighted N = 16,500 16,100 15,700 15,000 15,300 16,000 15,100 14,600 14,600 14,400 16,900 15,300

(Table continued on next page.)

**TABLE 13 (cont.)**  
**Trends in Disapproval of Drug Use in Grade 8**

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

*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 estimates for the two most recent years is due to rounding. ' ‡ ' indicates that the question changed the following year.

<sup>a</sup>Answer alternatives were: (1) Don't disapprove, (2) Disapprove, (3) Strongly disapprove, and (4) Can't say, drug unfamiliar. Percentages are shown for categories (2) and (3) combined.

<sup>b</sup>Beginning in 2012, data based on two thirds of *N* indicated.

<sup>c</sup>Beginning in 1997, data based on two thirds of *N* indicated due to changes in questionnaire forms.

<sup>d</sup>Data based on one of two forms in 1993–1996; *N* is one half of *N* indicated. Beginning in 1997, data based on one third of *N* indicated due to changes in questionnaire forms.

<sup>e</sup>Data based on one third of *N* indicated. For MDMA "Molly" was added to the question text in 2015; 2014 and 2015 data are not comparable due to this change.

<sup>f</sup>Beginning in 1999, data based on two thirds of *N* indicated due to changes in questionnaire forms.

<sup>g</sup>Data based on two forms in 1991 and 1992. Data based on one of two forms in 1993 and 1994; *N* is one half of *N* indicated.

**TABLE 14**  
**Trends in Disapproval of Drug Use in Grade 10**

Do you disapprove of people who . . .	Percentage who disapprove or strongly disapprove <sup>a</sup>														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Try marijuana once or twice <sup>b</sup>	74.6	74.8	70.3	62.4	59.8	55.5	54.1	56.0	56.2	54.9	54.8	57.8	58.1	60.4	61.3
Smoke marijuana occasionally <sup>b</sup>	83.7	83.6	79.4	72.3	70.0	66.9	66.2	67.3	68.2	67.2	66.2	68.3	68.4	70.8	71.9
Smoke marijuana regularly <sup>b</sup>	90.4	90.0	87.4	82.2	81.1	79.7	79.7	80.1	79.8	79.1	78.0	78.6	78.8	81.3	82.0
Try inhalants once or twice <sup>c</sup>	85.2	85.6	84.8	84.9	84.5	86.0	86.9	85.6	88.4	87.5	87.8	88.6	87.7	88.5	88.1
Take inhalants regularly <sup>c</sup>	91.0	91.5	90.9	91.0	90.9	91.7	91.7	91.1	92.4	91.8	91.3	91.8	91.0	92.3	91.9
Take LSD once or twice <sup>d</sup>	—	—	82.1	79.3	77.9	76.8	76.6	76.7	77.8	77.0	75.4	74.6	74.4	72.4	71.8
Take LSD regularly <sup>d</sup>	—	—	86.8	85.6	84.8	84.5	83.4	82.9	84.3	82.1	80.8	79.4	77.6	75.9	75.0
Try ecstasy (MDMA) once or twice <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	72.6	77.4	81.0	83.7	83.1
Take ecstasy (MDMA) occasionally <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	81.0	84.6	86.3	88.0	87.4
Try crack once or twice <sup>c</sup>	92.5	92.5	91.4	89.9	88.7	88.2	87.4	87.1	87.8	87.1	86.9	88.0	87.6	88.6	88.8
Take crack occasionally <sup>c</sup>	94.3	94.4	93.6	92.5	91.7	91.9	91.0	90.6	91.5	90.9	90.6	91.0	91.0	91.8	91.8
Try cocaine powder once or twice <sup>c</sup>	90.8	91.1	90.0	88.1	86.8	86.1	85.1	84.9	86.0	84.8	85.3	86.4	85.9	86.8	86.9
Take cocaine powder occasionally <sup>c</sup>	94.0	94.0	93.2	92.1	91.4	91.1	90.4	89.7	90.7	89.9	90.2	89.9	90.4	91.2	91.2
Try heroin once or twice without using a needle <sup>d</sup>	—	—	—	—	89.7	89.5	89.1	88.6	90.1	90.1	89.1	89.2	89.3	90.1	90.3
Take heroin occasionally without using a needle <sup>d</sup>	—	—	—	—	91.6	91.7	91.4	90.5	91.8	92.3	90.8	90.7	90.6	91.8	92.0
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) <sup>b</sup>	37.6	39.9	38.5	36.5	36.1	34.2	33.7	34.7	35.1	33.4	34.7	37.7	36.8	37.6	38.5
Take one or two drinks nearly every day <sup>b</sup>	81.7	81.7	78.6	75.2	75.4	73.8	75.4	74.6	75.4	73.8	73.8	74.9	74.2	75.1	76.9
Have five or more drinks once or twice each weekend <sup>b</sup>	76.7	77.6	74.7	72.3	72.2	70.7	70.2	70.5	69.9	68.2	69.2	71.5	71.6	71.8	73.7
Smoke one to five cigarettes per day <sup>e</sup>	—	—	—	—	—	—	—	—	67.8	69.1	71.2	74.3	76.2	77.5	79.3
Smoke one or more packs of cigarettes per day <sup>f</sup>	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
Use electronic cigarettes (e-cigarettes) regularly <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine occasionally <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use smokeless tobacco regularly <sup>b</sup>	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
Take steroids <sup>g</sup>	90.0	91.0	91.2	90.8	—	—	—	—	—	—	—	—	—	—	—

Table continued on next page.

*Approximate weighted N = 14,800 14,800 15,300 15,900 17,000 15,700 15,600 15,000 13,600 14,300 14,000 14,300 15,800 16,400 16,200*

**TABLE 14 (cont.)**  
**Trends in Disapproval of Drug Use in Grade 10**

Do you disapprove of people who . . .	Percentage who disapprove or strongly disapprove <sup>a</sup>												2016–2017 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Try marijuana once or twice <sup>b</sup>	62.5	63.9	64.5	60.1	59.2	58.5	56.2	53.2	53.8	52.7	52.6	48.1	-4.6 sss
Smoke marijuana occasionally <sup>b</sup>	72.6	73.3	73.6	69.2	68.0	67.9	65.7	62.1	62.9	62.6	61.9	58.1	-3.8 ss
Smoke marijuana regularly <sup>b</sup>	82.5	82.4	83.0	79.9	78.7	78.8	77.3	73.8	74.6	74.3	73.5	70.2	-3.3 ss
Try inhalants once or twice <sup>c</sup>	88.1	87.6	87.1	87.0	86.5	86.9	85.7	86.1	85.9	84.1	83.3	80.7	-2.6 s
Take inhalants regularly <sup>c</sup>	92.2	91.8	91.6	91.1	90.8	90.9	90.0	89.7	89.7	88.3	87.1	85.4	-1.8
Take LSD once or twice <sup>d</sup>	71.2	67.7	66.3	67.8	68.2	68.5	68.3	69.1	67.8	70.3	69.5	66.9	-2.7
Take LSD regularly <sup>d</sup>	74.9	71.5	69.8	72.2	72.9	72.5	73.0	74.2	73.3	76.5	74.9	74.5	-0.4
Try ecstasy (MDMA) once or twice <sup>e</sup>	81.6	80.0	78.1	76.5	75.5	76.1	75.3	75.4	74.4‡	78.0	76.8	74.7	-2.1
Take ecstasy (MDMA) occasionally <sup>e</sup>	86.0	84.3	83.0	81.3	81.3	82.2	81.2	81.3	80.4‡	84.0	81.7	80.0	-1.7
Try crack once or twice <sup>c</sup>	89.5	89.5	90.8	90.4	90.3	90.9	91.0	90.6	90.6	90.1	89.7	88.4	-1.3
Take crack occasionally <sup>c</sup>	92.0	92.7	92.9	92.8	92.4	93.0	93.0	92.4	92.4	92.1	91.1	90.0	-1.0
Try cocaine powder once or twice <sup>c</sup>	87.3	87.7	88.6	88.4	89.0	89.4	89.3	88.7	88.9	87.9	87.9	86.1	-1.8 s
Take cocaine powder occasionally <sup>c</sup>	91.4	92.0	92.1	92.1	92.2	92.5	92.4	91.8	91.9	91.8	90.8	89.9	-0.9
Try heroin once or twice without using a needle <sup>d</sup>	91.1	90.7	91.4	91.6	91.4	91.6	91.9	91.3	91.9	91.7	90.2	89.7	-0.5
Take heroin occasionally without using a needle <sup>d</sup>	92.5	92.5	92.5	93.0	92.4	92.4	92.9	92.3	92.7	92.7	90.9	90.5	-0.5
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) <sup>b</sup>	37.8	39.5	41.8	39.7	40.3	41.5	39.6	38.5	40.7	40.0	41.8	39.3	-2.5 s
Take one or two drinks nearly every day <sup>b</sup>	76.4	77.1	79.1	77.6	77.6	80.0	78.0	77.1	77.9	78.2	78.6	77.7	-0.9
Have five or more drinks once or twice each weekend <sup>b</sup>	72.9	74.1	77.2	75.1	75.9	77.3	77.5	77.8	79.5	79.6	80.8	80.1	-0.7
Smoke one to five cigarettes per day <sup>e</sup>	80.2	79.7	82.5	80.0	80.6	82.1	—	—	—	—	—	—	—
Smoke one or more packs of cigarettes per day <sup>f</sup>	83.2	84.7	85.2	84.5	83.9	85.8	86.0	86.1	88.0	88.3	88.5	87.8	-0.8
Use electronic cigarettes (e-cigarettes) regularly <sup>e</sup>	—	—	—	—	—	—	—	—	54.6	59.9	65.0	—	—
Vape an e-liquid with nicotine occasionally <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	64.2	—
Vape an e-liquid with nicotine regularly <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	73.9	—
Use smokeless tobacco regularly <sup>b</sup>	80.5	80.9	81.8	79.5	78.5	79.5	79.5	77.7	78.7	80.1	81.2	80.7	-0.5
Take steroids <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—
Approximate weighted N = 16,200 16,100 15,100 15,900 15,200 14,900 15,000 12,900 13,000 15,600 14,700 13,500													

Table continued on next page.



**TABLE 14 (cont.)**  
**Trends in Disapproval of Drug Use in Grade 10**

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

*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 estimates for the two most recent years is due to rounding. '‡' indicates that the question changed the following year.

<sup>a</sup>Answer alternatives were: (1) Don't disapprove, (2) Disapprove, (3) Strongly disapprove, and (4) Can't say, drug unfamiliar. Percentages are shown for categories (2) and (3) combined.

<sup>b</sup>Beginning in 2012, data based on two thirds of  $N$  indicated.

<sup>c</sup>Beginning in 1997, data based on two thirds of  $N$  indicated due to changes in questionnaire forms.

<sup>d</sup>Data based on one of two forms in 1993–1996;  $N$  is one half of  $N$  indicated. Beginning in 1997, data based on one third of  $N$  indicated due to changes in questionnaire forms.

<sup>e</sup>Data based on one third of  $N$  indicated. For MDMA "Molly" was added to the question text in 2015; 2014 and 2015 data are not comparable due to this change.

<sup>f</sup>Beginning in 1999, data based on two thirds of  $N$  indicated due to changes in questionnaire forms.

<sup>g</sup>Data based on two forms in 1991 and 1992. Data based on one of two forms in 1993 and 1994;  $N$  is one half of  $N$  indicated.

**TABLE 15**  
**Trends in Disapproval of Drug Use in Grade 12**

Percentage who disapprove or strongly disapprove<sup>b</sup>

<i>Do you disapprove of people (who are 18 or older) doing each of the following?<sup>a</sup></i>	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Trying marijuana once or twice	47.0	38.4	33.4	33.4	34.2	39.0	40.0	45.5	46.3	49.3	51.4	54.6	56.6	60.8	64.6	67.8
Smoking marijuana occasionally	54.8	47.8	44.3	43.5	45.3	49.7	52.6	59.1	60.7	63.5	65.8	69.0	71.6	74.0	77.2	80.5
Smoking marijuana regularly	71.9	69.5	65.5	67.5	69.2	74.6	77.4	80.6	82.5	84.7	85.5	86.6	89.2	89.3	89.8	91.0
Trying LSD once or twice	82.8	84.6	83.9	85.4	86.6	87.3	86.4	88.8	89.1	88.9	89.5	89.2	91.6	89.8	89.7	89.8
Taking LSD regularly	94.1	95.3	95.8	96.4	96.9	96.7	96.8	96.7	97.0	96.8	97.0	96.6	97.8	96.4	96.4	96.3
Trying ecstasy (MDMA) once or twice <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Trying cocaine once or twice	81.3	82.4	79.1	77.0	74.7	76.3	74.6	76.6	77.0	79.7	79.3	80.2	87.3	89.1	90.5	91.5
Taking cocaine regularly	93.3	93.9	92.1	91.9	90.8	91.1	90.7	91.5	93.2	94.5	93.8	94.3	96.7	96.2	96.4	96.7
Trying crack once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	92.3
Taking crack occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94.3
Taking crack regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94.9
Trying cocaine powder once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.9
Taking cocaine powder occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	92.1
Taking cocaine powder regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	93.7
Trying heroin once or twice	91.5	92.6	92.5	92.0	93.4	93.5	93.5	94.6	94.3	94.0	94.0	93.3	96.2	95.0	95.4	95.1
Taking heroin occasionally	94.8	96.0	96.0	96.4	96.8	96.7	97.2	96.9	96.9	97.1	96.8	96.6	97.9	96.9	97.2	96.7
Taking heroin regularly	96.7	97.5	97.2	97.8	97.9	97.6	97.8	97.5	97.7	98.0	97.6	97.6	98.1	97.2	97.4	97.5
Trying heroin once or twice without using a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taking heroin occasionally without using a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Trying amphetamines once or twice <sup>d</sup>	74.8	75.1	74.2	74.8	75.1	75.4	71.1	72.6	72.3	72.8	74.9	76.5	80.7	82.5	83.3	85.3
Taking amphetamines regularly <sup>d</sup>	92.1	92.8	92.5	93.5	94.4	93.0	91.7	92.0	92.6	93.6	93.3	93.5	95.4	94.2	94.2	95.5
Trying sedatives (barbiturates) once or twice <sup>e</sup>	77.7	81.3	81.1	82.4	84.0	83.9	82.4	84.4	83.1	84.1	84.9	86.8	89.6	89.4	89.3	90.5
Taking sedatives (barbiturates) regularly <sup>e</sup>	93.3	93.6	93.0	94.3	95.2	95.4	94.2	94.4	95.1	95.1	95.5	94.9	96.4	95.3	95.3	96.4
Trying one or two drinks of an alcoholic beverage (beer, wine, liquor)	21.6	18.2	15.6	15.6	15.8	16.0	17.2	18.2	18.4	17.4	20.3	20.9	21.4	22.6	27.3	29.4
Taking one or two drinks nearly every day	67.6	68.9	66.8	67.7	68.3	69.0	69.1	69.9	68.9	72.9	70.9	72.8	74.2	75.0	76.5	77.9
Taking four or five drinks nearly every day	88.7	90.7	88.4	90.2	91.7	90.8	91.8	90.9	90.0	91.0	92.0	91.4	92.2	92.8	91.6	91.9
Having five or more drinks once or twice each weekend	60.3	58.6	57.4	56.2	56.7	55.6	55.5	58.8	56.6	59.6	60.4	62.4	62.0	65.3	66.5	68.9
Smoking one or more packs of cigarettes per day	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
Vape an e-liquid with nicotine occasionally <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taking steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.8
<i>Approximate weighted N =</i>	2,677	2,957	3,085	3,686	3,221	3,261	3,610	3,651	3,341	3,254	3,265	3,113	3,302	3,311	2,799	2,566

Table continued on next page.

**TABLE 15 (cont.)**  
**Trends in Disapproval of Drug Use in Grade 12**

Percentage who disapprove or strongly disapprove<sup>b</sup>

<i>Do you disapprove of people (who are 18 or older) doing each of the following?<sup>a</sup></i>	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Trying marijuana once or twice	68.7	69.9	63.3	57.6	56.7	52.5	51.0	51.6	48.8	52.5	49.1	51.6	53.4	52.7	55.0
Smoking marijuana occasionally	79.4	79.7	75.5	68.9	66.7	62.9	63.2	64.4	62.5	65.8	63.2	63.4	64.2	65.4	67.8
Smoking marijuana regularly	89.3	90.1	87.6	82.3	81.9	80.0	78.8	81.2	78.6	79.7	79.3	78.3	78.7	80.7	82.0
Trying LSD once or twice	90.1	88.1	85.9	82.5	81.1	79.6	80.5	82.1	83.0	82.4	81.8	84.6	85.5	87.9	87.9
Taking LSD regularly	96.4	95.5	95.8	94.3	92.5	93.2	92.9	93.5	94.3	94.2	94.0	94.0	94.4	94.6	95.6
Trying ecstasy (MDMA) once or twice <sup>c</sup>	—	—	—	—	—	—	82.2	82.5	82.1	81.0	79.5	83.6	84.7	87.7	88.4
Trying cocaine once or twice	93.6	93.0	92.7	91.6	90.3	90.0	88.0	89.5	89.1	88.2	88.1	89.0	89.3	88.6	88.9
Taking cocaine regularly	97.3	96.9	97.5	96.6	96.1	95.6	96.0	95.6	94.9	95.5	94.9	95.0	95.8	95.4	96.0
Trying crack once or twice	92.1	93.1	89.9	89.5	91.4	87.4	87.0	86.7	87.6	87.5	87.0	87.8	86.6	86.9	86.7
Taking crack occasionally	94.2	95.0	92.8	92.8	94.0	91.2	91.3	90.9	92.3	91.9	91.6	91.5	90.8	92.1	91.9
Taking crack regularly	95.0	95.5	93.4	93.1	94.1	93.0	92.3	91.9	93.2	92.8	92.2	92.4	91.2	93.1	92.1
Trying cocaine powder once or twice	88.0	89.4	86.6	87.1	88.3	83.1	83.0	83.1	84.3	84.1	83.3	83.8	83.6	82.2	83.2
Taking cocaine powder occasionally	93.0	93.4	91.2	91.0	92.7	89.7	89.3	88.7	90.0	90.3	89.8	90.2	88.9	90.0	89.4
Taking cocaine powder regularly	94.4	94.3	93.0	92.5	93.8	92.9	91.5	91.1	92.3	92.6	92.5	92.2	90.7	92.6	92.0
Trying heroin once or twice	96.0	94.9	94.4	93.2	92.8	92.1	92.3	93.7	93.5	93.0	93.1	94.1	94.1	94.2	94.3
Taking heroin occasionally	97.3	96.8	97.0	96.2	95.7	95.0	95.4	96.1	95.7	96.0	95.4	95.6	95.9	96.4	96.3
Taking heroin regularly	97.8	97.2	97.5	97.1	96.4	96.3	96.4	96.6	96.4	96.6	96.2	96.2	97.1	97.1	96.7
Trying heroin once or twice without using a needle	—	—	—	—	92.9	90.8	92.3	93.0	92.6	94.0	91.7	93.1	92.2	93.1	93.2
Taking heroin occasionally without using a needle	—	—	—	—	94.7	93.2	94.4	94.3	93.8	95.2	93.5	94.4	93.5	94.4	95.0
Trying amphetamines once or twice <sup>d</sup>	86.5	86.9	84.2	81.3	82.2	79.9	81.3	82.5	81.9	82.1	82.3	83.8	85.8	84.1	86.1
Taking amphetamines regularly <sup>d</sup>	96.0	95.6	96.0	94.1	94.3	93.5	94.3	94.0	93.7	94.1	93.4	93.5	94.0	93.9	94.8
Trying sedatives (barbiturates) once or twice <sup>e</sup>	90.6	90.3	89.7	87.5	87.3	84.9	86.4	86.0	86.6	85.9	85.9	86.6	87.8‡	83.7	85.4
Taking sedatives (barbiturates) regularly <sup>e</sup>	97.1	96.5	97.0	96.1	95.2	94.8	95.3	94.6	94.7	95.2	94.5	94.7	94.4‡	94.2	95.2
Trying one or two drinks of an alcoholic beverage (beer, wine, liquor)	29.8	33.0	30.1	28.4	27.3	26.5	26.1	24.5	24.6	25.2	26.6	26.3	27.2	26.0	26.4
Taking one or two drinks nearly every day	76.5	75.9	77.8	73.1	73.3	70.8	70.0	69.4	67.2	70.0	69.2	69.1	68.9	69.5	70.8
Taking four or five drinks nearly every day	90.6	90.8	90.6	89.8	88.8	89.4	88.6	86.7	86.9	88.4	86.4	87.5	86.3	87.8	89.4
Having five or more drinks once or twice each weekend	67.4	70.7	70.1	65.1	66.7	64.7	65.0	63.8	62.7	65.2	62.9	64.7	64.2	65.7	66.5
Smoking one or more packs of cigarettes per day	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
Vape an e-liquid with nicotine occasionally <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taking steroids	90.5	92.1	92.1	91.9	91.0	91.7	91.4	90.8	88.9	88.8	86.4	86.8	86.0	87.9	88.8
<i>Approximate weighted N =</i>	<i>2,547</i>	<i>2,645</i>	<i>2,723</i>	<i>2,588</i>	<i>2,603</i>	<i>2,399</i>	<i>2,601</i>	<i>2,545</i>	<i>2,310</i>	<i>2,150</i>	<i>2,144</i>	<i>2,160</i>	<i>2,442</i>	<i>2,455</i>	<i>2,460</i>

Table continued on next page.

**TABLE 15 (cont.)**  
**Trends in Disapproval of Drug Use in Grade 12**

Percentage who disapprove or strongly disapprove<sup>b</sup>

Do you disapprove of people (who are 18 or older) doing each of the following? <sup>a</sup>	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2016–2017 change
Trying marijuana once or twice	55.6	58.6	55.5	54.8	51.6	51.3	48.8	49.1	48.0	45.5	43.1	39.0	-4.1 s
Smoking marijuana occasionally	69.3	70.2	67.3	65.6	62.0	60.9	59.1	58.9	56.7	52.9	50.5	46.7	-3.8
Smoking marijuana regularly	82.2	83.3	79.6	80.3	77.7	77.5	77.8	74.5	73.4	70.7	68.5	64.7	-3.9 s
Trying LSD once or twice	88.0	87.8	85.5	88.2	86.5	86.3	87.2	86.6	85.0	81.7	82.4	78.0	-4.4 s
Taking LSD regularly	95.9	94.9	93.5	95.3	94.3	94.9	95.2	95.3	94.7	92.5	92.4	92.7	+0.3
Trying ecstasy (MDMA) once or twice <sup>c</sup>	89.0	87.8	88.2	88.2	86.3	83.9	87.1	84.9†	83.1	84.5	84.0	85.1	+1.2
Trying cocaine once or twice	89.1	89.6	89.2	90.8	90.5	91.1	91.0	92.3	90.0	89.0	88.4	88.0	-0.4
Taking cocaine regularly	96.1	96.2	94.8	96.5	96.0	96.0	96.8	96.7	96.3	95.2	94.8	94.8	-0.1
Trying crack once or twice	88.8	88.8	89.6	90.9	89.8	91.4	92.8	91.4	89.3	90.2	90.1	89.7	-0.4
Taking crack occasionally	92.9	92.4	93.3	94.0	92.6	93.9	95.0	93.6	91.9	92.5	92.0	91.8	-0.1
Taking crack regularly	93.8	93.6	93.5	94.3	93.1	94.4	95.4	94.1	92.4	92.8	92.6	92.5	0.0
Trying cocaine powder once or twice	84.1	83.5	85.7	87.3	87.0	88.1	88.7	88.2	85.5	86.4	86.6	85.5	-1.2
Taking cocaine powder occasionally	90.4	90.6	91.7	92.3	91.0	92.2	93.0	91.7	90.4	91.3	90.6	90.3	-0.3
Taking cocaine powder regularly	93.2	92.6	92.8	93.9	92.6	93.8	95.0	94.1	91.7	92.4	92.0	92.2	+0.2
Trying heroin once or twice	93.8	94.8	93.3	94.7	93.9	94.3	95.8	95.6	94.7	94.2	94.1	93.7	-0.4
Taking heroin occasionally	96.2	96.8	95.3	96.9	96.2	96.3	97.0	96.9	96.6	95.3	95.5	95.5	0.0
Taking heroin regularly	96.9	97.1	95.9	97.4	96.4	96.7	97.4	97.4	97.1	96.4	95.7	95.9	+0.2
Trying heroin once or twice without using a needle	93.7	93.6	94.2	94.7	93.2	92.6	95.2	93.7	92.5	92.6	93.8	93.3	-0.6
Taking heroin occasionally without using a needle	94.5	94.9	95.3	95.5	94.5	94.1	95.9	94.6	93.5	92.8	94.0	93.8	-0.2
Trying amphetamines once or twice <sup>d</sup>	86.3	87.3	87.2	88.2	88.1‡	84.1	83.9	84.9	83.1	81.4	82.1	81.9	-0.2
Taking amphetamines regularly <sup>d</sup>	95.3	95.4	94.2	95.6	94.9‡	92.9	93.9	93.2	93.0	92.2	92.2	92.0	-0.2
Trying sedatives (barbiturates) once or twice <sup>e</sup>	85.3	86.5	86.1	87.7	87.6	87.3	88.2	88.9	88.5	87.4	86.5	85.9	-0.5
Taking sedatives (barbiturates) regularly <sup>e</sup>	95.1	94.6	94.3	95.8	94.7	95.1	96.1	95.8	95.0	94.7	94.8	94.4	-0.4
Trying one or two drinks of an alcoholic beverage (beer, wine, liquor)	29.0	31.0	29.8	30.6	30.7	28.7	25.4	27.3	29.2	28.9	28.8	27.2	-1.6
Taking one or two drinks nearly every day	72.8	73.3	74.5	70.5	71.5	72.8	70.8	71.9	71.7	71.1	71.8	70.8	-1.1
Taking four or five drinks nearly every day	90.6	90.5	89.8	89.7	88.8	90.8	90.1	90.6	91.9	89.7	91.1	90.7	-0.3
Having five or more drinks once or twice each weekend	68.5	68.8	68.9	67.6	68.8	70.0	70.1	71.6	72.6	71.9	74.2	72.5	-1.7
Smoking one or more packs of cigarettes per day	81.5	80.7	80.5	81.8	81.0	83.0	83.7	82.6	85.0	84.1	85.3	86.6	+1.3
Vape an e-liquid with nicotine occasionally <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	—	62.0	—
Vape an e-liquid with nicotine regularly <sup>f</sup>	—	—	—	—	—	—	—	—	—	—	—	71.8	—
Taking steroids	89.4	89.2	90.9	90.3	89.8	89.7	90.4	88.2	87.5	87.8	86.7	88.5	+1.8
<i>Approximate weighted N =</i>	<i>2,377</i>	<i>2,450</i>	<i>2,314</i>	<i>2,233</i>	<i>2,449</i>	<i>2,384</i>	<i>2,301</i>	<i>2,147</i>	<i>2,078</i>	<i>2,193</i>	<i>2,000</i>	<i>1,870</i>	

Table continued on next page.

**TABLE 15 (cont.)**  
**Trends in Disapproval of Drug Use in Grade 12**

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

*Notes.* Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. '‡' indicates that the question changed the following year. See relevant footnote for that drug. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>The 1975 question asked about people who are 20 or older.

<sup>b</sup>Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

<sup>c</sup>Beginning in 2014 "molly" was added to the question on disapproval of using MDMA once or twice. 2014 and 2015 data are not comparable to earlier years due to this change.

<sup>d</sup>In 2011 the list of examples was changed from upper, pep pill, bennie, speed to upper, speed, Adderall, Ritalin, etc. These changes likely explain the discontinuity in the 2011 results.

<sup>e</sup>In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2004 results.

<sup>f</sup>Based on two of six forms; N is two times the N indicated.

**TABLE 16**  
**Trends in Availability of Drugs as Perceived by 8th Graders**

*How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?*

Percentage saying fairly easy or very easy to get <sup>a</sup>

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Marijuana	—	42.3	43.8	49.9	52.4	54.8	54.2	50.6	48.4	47.0	48.1	46.6	44.8	41.0	41.1
LSD	—	21.5	21.8	21.8	23.5	23.6	22.7	19.3	18.3	17.0	17.6	15.2	14.0	12.3	11.5
PCP <sup>b</sup>	—	18.0	18.5	17.7	19.0	19.6	19.2	17.5	17.1	16.0	15.4	14.1	13.7	11.4	11.0
MDMA (e.g. ecstasy, "Molly") <sup>b</sup>	—	—	—	—	—	—	—	—	—	—	23.8	22.8	21.6	16.6	15.6
Crack	—	25.6	25.9	26.9	28.7	27.9	27.5	26.5	25.9	24.9	24.4	23.7	22.5	20.6	20.8
Cocaine powder	—	25.7	25.9	26.4	27.8	27.2	26.9	25.7	25.0	23.9	23.9	22.5	21.6	19.4	19.9
Heroin	—	19.7	19.8	19.4	21.1	20.6	19.8	18.0	17.5	16.5	16.9	16.0	15.6	14.1	13.2
Narcotics other than Heroin <sup>b,c</sup>	—	19.8	19.0	18.3	20.3	20.0	20.6	17.1	16.2	15.6	15.0	14.7	15.0	12.4	12.9
Amphetamines <sup>d</sup>	—	32.2	31.4	31.0	33.4	32.6	30.6	27.3	25.9	25.5	26.2	24.4	24.4	21.9	21.0
Crystal methamphetamine (ice) <sup>b</sup>	—	16.0	15.1	14.1	16.0	16.3	15.7	16.0	14.7	14.9	13.9	13.3	14.1	11.9	13.5
Sedatives (barbiturates)	—	27.4	26.1	25.3	26.5	25.6	24.4	21.1	20.8	19.7	20.7	19.4	19.3	18.0	17.6
Tranquilizers	—	22.9	21.4	20.4	21.3	20.4	19.6	18.1	17.3	16.2	17.8	16.9	17.3	15.8	14.8
Alcohol	—	76.2	73.9	74.5	74.9	75.3	74.9	73.1	72.3	70.6	70.6	67.9	67.0	64.9	64.2
Cigarettes	—	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
Vaping device <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
E-liquid with nicotine (for vaping) <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	—	24.0	22.7	23.1	23.8	24.1	23.6	22.3	22.6	22.3	23.1	22.0	21.7	19.7	18.1
<i>Approximate weighted N =</i>		8,355	16,775	16,119	15,496	16,318	16,482	16,208	15,397	15,180	14,804	13,972	15,583	15,944	15,730

Table continued on next page.

**TABLE 16 (cont.)**  
**Trends in Availability of Drugs as Perceived by 8th Graders**

How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	Percentage saying fairly easy or very easy to get <sup>a</sup>												2016–2017 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Marijuana	39.6	37.4	39.3	39.8	41.4	37.9	36.9	39.1	36.9	37.0	34.6	35.2	+0.6
LSD	10.8	10.5	10.9	10.0	10.0	9.3	7.5	7.4	6.9	6.6	6.9	6.3	-0.6
PCP <sup>b</sup>	10.5	9.5	10.1	9.1	8.0	7.9	6.7	5.8	5.5	5.1	4.8	4.6	-0.1
MDMA (e.g. ecstasy, "Molly") <sup>b</sup>	14.5	13.4	14.1	13.1	12.9	12.0	9.6	9.5	10.1	9.6	8.7	8.0	-0.7
Crack	20.9	19.7	20.2	18.6	17.9	15.7	14.4	13.7	12.0	11.3	11.1	10.2	-0.9
Cocaine powder	20.2	19.0	19.5	17.8	16.6	14.9	14.1	13.5	11.9	11.6	11.0	10.4	-0.6
Heroin	13.0	12.6	13.3	12.0	11.6	9.9	9.4	10.0	8.6	7.8	8.9	8.1	-0.8
Narcotics other than Heroin <sup>b,c</sup>	13.0	11.7	12.1	11.8‡	14.6	12.3	10.6	9.7	9.2	8.8	8.9	8.9	-0.1
Amphetamines <sup>d</sup>	20.7	19.9	21.3	20.2	19.6‡	15.0	13.4	12.8	12.1	11.8	12.1	11.0	-1.1
Crystal methamphetamine (ice) <sup>b</sup>	14.5	12.1	12.8	11.9	10.9	9.6	8.8	8.5	7.7	6.9	6.6	6.6	0.0
Sedatives (barbiturates) <sup>e</sup>	17.3	16.8	17.5	15.9	15.3	12.6	11.1	10.6	10.0	9.0	9.3	9.2	-0.1
Tranquilizers	14.4	14.4	15.4	14.1	13.7	12.0	10.5	10.4	9.8	9.8	11.4	11.8	+0.4
Alcohol	63.0	62.0	64.1	61.8	61.1	59.0	57.5	56.1	54.4	53.6	52.7	53.2	+0.5
Cigarettes	58.0	55.6	57.4	55.3	55.5	51.9	50.7	49.9	47.2	47.0	45.6	46.2	+0.6
Vaping device <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	44.1	—
E-liquid with nicotine (for vaping) <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	37.2	—
Steroids	17.1	17.0	16.8	15.2	14.2	13.3	12.5	12.9	11.8	11.6	12.6	11.6	-0.9
<i>Approximate weighted N = 15,502 15,043 14,482 13,989 14,485 15,233 14,235 13,605 13,208 13,494 15,628 14,042</i>													

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

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. ' — ' indicates data not available. ' ‡ ' indicates that the question changed the following year. See relevant footnote for that drug. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, (5) Very easy, and (6) Can't say, drug unfamiliar.

<sup>b</sup>Beginning in 1993, data based on one of two of forms; N is one half of N indicated. Beginning in 2014 data based on one sixth of N indicated. For MDMA only: In 2014 the question text was changed in one form to include "Molly." In 2015 a second form was changed to including "Molly;" data based on one sixth of N indicated in 2014 and on one half of N indicated in 2015. An examination of the data did not show any effect from this wording change.

<sup>c</sup>In 2010 the list of examples for narcotics other than heroin was changed from methadone, opium to Vicodin, OxyContin, Percocet, etc. This change likely explains the discontinuity in the 2010 results.

<sup>d</sup>In 2011 the list of examples for amphetamines was changed from uppers, pep pills, bennies, speed to uppers, speed, Adderall, Ritalin, etc. These changes likely explain the discontinuity in the 2012 results.

<sup>e</sup>Beginning in 2017, data based on one half of N indicated.

**TABLE 17**  
**Trends in Availability of Drugs as Perceived by 10th Graders**

*How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?*

Percentage saying fairly easy or very easy to get <sup>a</sup>

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Marijuana	—	65.2	68.4	75.0	78.1	81.1	80.5	77.9	78.2	77.7	77.4	75.9	73.9	73.3	72.6
LSD	—	33.6	35.8	36.1	39.8	41.0	38.3	34.0	34.3	32.9	31.2	26.8	23.1	21.6	20.7
PCP <sup>b</sup>	—	23.7	23.4	23.8	24.7	26.8	24.8	23.9	24.5	25.0	21.6	20.8	19.4	18.0	18.1
MDMA (e.g. ecstasy, "Molly") <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	41.4	41.0	36.3	31.2	30.2
Crack	—	33.7	33.0	34.2	34.6	36.4	36.0	36.3	36.5	34.0	30.6	31.3	29.6	30.6	31.0
Cocaine powder	—	35.0	34.1	34.5	35.3	36.9	37.1	36.8	36.7	34.5	31.0	31.8	29.6	31.2	31.5
Heroin	—	24.3	24.3	24.7	24.6	24.8	24.4	23.0	23.7	22.3	20.1	19.9	18.8	18.7	19.3
Narcotics other than Heroin <sup>b</sup>	—	26.9	24.9	26.9	27.8	29.4	29.0	26.1	26.6	27.2	25.8	25.4	23.5	23.1	23.6
Amphetamines <sup>d</sup>	—	43.4	46.4	46.6	47.7	47.2	44.6	41.0	41.3	40.9	40.6	39.6	36.1	35.7	35.6
Crystal methamphetamine (ice) <sup>b</sup>	—	18.8	16.4	17.8	20.7	22.6	22.9	22.1	21.8	22.8	19.9	20.5	19.0	19.5	21.6
Sedatives (barbiturates)	—	38.0	38.8	38.3	38.8	38.1	35.6	32.7	33.2	32.4	32.8	32.4	28.8	30.0	29.7
Tranquilizers	—	31.6	30.5	29.8	30.6	30.3	28.7	26.5	26.8	27.6	28.5	28.3	25.6	25.6	25.4
Alcohol	—	88.6	88.9	89.8	89.7	90.4	89.0	88.0	88.2	87.7	87.7	84.8	83.4	84.3	83.7
Cigarettes	—	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
Vaping device <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
E-liquid with nicotine (for vaping) <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	—	37.6	33.6	33.6	34.8	34.8	34.2	33.0	35.9	35.4	33.1	33.2	30.6	29.6	29.7
<i>Approximate weighted N =</i>		7,014	14,652	15,192	16,209	14,887	14,856	14,423	13,112	13,690	13,518	13,694	15,255	15,806	15,636

Table continued on next page



**TABLE 17 (cont.)**  
**Trends in Availability of Drugs as Perceived by 10th Graders**

How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	Percentage saying fairly easy or very easy to get <sup>a</sup>												2016–2017 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Marijuana	70.7	69.0	67.4	69.3	69.4	68.4	68.8	69.7	66.9	65.6	64.0	64.6	+0.6
LSD	19.2	19.0	19.3	17.8	18.3	16.6	14.9	16.3	14.8	15.5	15.2	15.9	+0.7
PCP <sup>b</sup>	15.8	15.4	14.4	13.4	12.6	12.0	10.2	9.4	8.3	9.0	7.6	7.1	-0.4
MDMA (e.g. ecstasy, "Molly") <sup>c</sup>	27.4	27.7	26.7	25.6	25.7	24.8	21.0	20.7	20.4	19.3	16.3	15.0	-1.3
Crack	29.9	29.0	27.2	23.9	22.5	19.7	18.4	17.1	15.1	14.4	13.9	13.8	-0.1
Cocaine powder	30.7	30.0	28.2	24.7	22.6	20.6	19.2	18.3	16.4	16.1	14.9	15.0	+0.1
Heroin	17.4	17.3	17.2	15.0	14.5	13.2	11.9	11.9	10.9	11.0	10.6	10.6	+0.0
Narcotics other than Heroin <sup>b</sup>	22.2	21.5	20.3	18.8‡	28.7	25.0	24.3	22.5	18.8	19.2	16.8	17.7	+1.0
Amphetamines <sup>d</sup>	34.7	33.3	32.0	31.8	32.6‡	28.5	27.3	26.5	25.2	27.3	22.9	24.2	+1.4
Crystal methamphetamine (ice) <sup>b</sup>	20.8	18.8	15.8	14.0	13.3	11.8	10.7	10.0	9.8	8.9	8.2	8.0	-0.2
Sedatives (barbiturates) <sup>e</sup>	29.9	28.2	26.9	25.5	24.9	22.0	20.2	18.3	16.7	16.6	14.2	15.1	+0.9
Tranquilizers	25.1	24.9	24.1	22.3	21.6	20.8	19.7	18.3	17.5	19.4	20.5	23.3	+2.8 s
Alcohol	83.1	82.6	81.1	80.9	80.0	77.9	78.2	77.2	75.3	74.9	71.1	71.5	+0.3
Cigarettes	79.5	78.2	76.5	76.1	75.6	73.6	72.9	71.4	69.0	66.6	62.9	62.5	-0.5
Vaping device <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	66.3	—
E-liquid with nicotine (for vaping) <sup>e</sup>	—	—	—	—	—	—	—	—	—	—	—	60.8	—
Steroids	30.2	27.7	24.5	20.8	20.3	18.8	18.0	17.2	16.5	17.0	15.3	15.0	-0.2
<i>Approximate weighted N =</i> 15,804 15,511 14,634 15,451 14,827 14,509 14,628 12,601 12,574 15,186 14,126 12,901													

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

Notes. Level of significance of difference between the two most recent classes:  $s = .05$ ,  $ss = .01$ ,  $sss = .001$ . '—' indicates data not available. '‡' indicates that the question changed the following year. See relevant footnote for that drug. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, (5) Very easy, and (6) Can't say, drug unfamiliar.

<sup>b</sup>Beginning in 1993, data based on one of two forms;  $N$  is one half of  $N$  indicated. Beginning in 2014 data based on one sixth of  $N$  indicated.

<sup>c</sup>Beginning in 1993, data based on one of two of forms;  $N$  is one half of  $N$  indicated. Beginning in 2014 data based on one sixth of  $N$  indicated for MDMA only:

In 2014 the question text was changed in one form to include "Molly." In 2015 a second form was changed to including "Molly;" data based on one sixth of  $N$  indicated in 2014 and on one half of  $N$  indicated in 2015. An examination of the data did not show any effect from this wording change.

<sup>d</sup>In 2011 the list of examples for amphetamines was changed from uppers, pep pills, bennies, speed to uppers, speed, Adderall, Ritalin, etc. These changes likely explain the discontinuity in the 2011 results.

<sup>e</sup>Beginning in 2017, data based on one half of  $N$  indicated.

**TABLE 18**  
**Trends in Availability of Drugs as Perceived by 12th Graders**

Percentage saying fairly easy or very easy to get <sup>a</sup>

<i>How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?</i>	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Marijuana	87.8	87.4	87.9	87.8	90.1	89.0	89.2	88.5	86.2	84.6	85.5	85.2	84.8	85.0	84.3	84.4
Amyl/butyl nitrites	—	—	—	—	—	—	—	—	—	—	—	—	23.9	25.9	26.8	24.4
LSD	46.2	37.4	34.5	32.2	34.2	35.3	35.0	34.2	30.9	30.6	30.5	28.5	31.4	33.3	38.3	40.7
Some other hallucinogen <sup>b</sup>	47.8	35.7	33.8	33.8	34.6	35.0	32.7	30.6	26.6	26.6	26.1	24.9	25.0	26.2	28.2	28.3
PCP	—	—	—	—	—	—	—	—	—	—	—	—	22.8	24.9	28.9	27.7
MDMA (e.g. ecstasy, "molly") <sup>c</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.7	22.0
Cocaine	37.0	34.0	33.0	37.8	45.5	47.9	47.5	47.4	43.1	45.0	48.9	51.5	54.2	55.0	58.7	54.5
Crack	—	—	—	—	—	—	—	—	—	—	—	—	41.1	42.1	47.0	42.4
Cocaine powder	—	—	—	—	—	—	—	—	—	—	—	—	52.9	50.3	53.7	49.0
Heroin	24.2	18.4	17.9	16.4	18.9	21.2	19.2	20.8	19.3	19.9	21.0	22.0	23.7	28.0	31.4	31.9
Some other narcotic (including methadone) <sup>d</sup>	34.5	26.9	27.8	26.1	28.7	29.4	29.6	30.4	30.0	32.1	33.1	32.2	33.0	35.8	38.3	38.1
Amphetamines <sup>e</sup>	67.8	61.8	58.1	58.5	59.9	61.3	69.5	70.8	68.5	68.2	66.4	64.3	64.5	63.9	64.3	59.7
Crystal methamphetamine (ice)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.1
Sedatives (barbiturates) <sup>f</sup>	60.0	54.4	52.4	50.6	49.8	49.1	54.9	55.2	52.5	51.9	51.3	48.3	48.2	47.8	48.4	45.9
Tranquilizers	71.8	65.5	64.9	64.3	61.4	59.1	60.8	58.9	55.3	54.5	54.7	51.2	48.6	49.1	45.3	44.7
Alcohol	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping device <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
E-liquid with nicotine (for vaping) <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<i>Approximate weighted N =</i>	2,627	2,865	3,065	3,598	3,172	3,240	3,578	3,602	3,385	3,269	3,274	3,077	3,271	3,231	2,806	2,549

Table continued on next page

**TABLE 18 (cont.)**  
**Trends in Availability of Drugs as Perceived by 12th Graders**

Percentage saying fairly easy or very easy to get <sup>a</sup>

<i>How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?</i>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Marijuana	83.3	82.7	83.0	85.5	88.5	88.7	89.6	90.4	88.9	88.5	88.5	87.2	87.1	85.8	85.6
Amyl/butyl nitrites	22.7	25.9	25.9	26.7	26.0	23.9	23.8	25.1	21.4	23.3	22.5	22.3	19.7	20.0	19.7
LSD	39.5	44.5	49.2	50.8	53.8	51.3	50.7	48.8	44.7	46.9	44.7	39.6	33.6	33.1	28.6
Some other hallucinogen <sup>b</sup>	28.0	29.9	33.5	33.8	35.8	33.9	33.9	35.1	29.5	34.5‡	48.5	47.7	47.2	49.4	45.0
PCP	27.6	31.7	31.7	31.4	31.0	30.5	30.0	30.7	26.7	28.8	27.2	25.8	21.9	24.2	23.2
MDMA (e.g. ecstasy, "Molly") <sup>c</sup>	22.1	24.2	28.1	31.2	34.2	36.9	38.8	38.2	40.1	51.4	61.5	59.1	57.5	47.9	40.3
Cocaine	51.0	52.7	48.5	46.6	47.7	48.1	48.5	51.3	47.6	47.8	46.2	44.6	43.3	47.8	44.7
Crack	39.9	43.5	43.6	40.5	41.9	40.7	40.6	43.8	41.1	42.6	40.2	38.5	35.3	39.2	39.3
Cocaine powder	46.0	48.0	45.4	43.7	43.8	44.4	43.3	45.7	43.7	44.6	40.7	40.2	37.4	41.7	41.6
Heroin	30.6	34.9	33.7	34.1	35.1	32.2	33.8	35.6	32.1	33.5	32.3	29.0	27.9	29.6	27.3
Some other narcotic (including methadone) <sup>d</sup>	34.6	37.1	37.5	38.0	39.8	40.0	38.9	42.8	40.8	43.9	40.5	44.0	39.3	40.2	39.2
Amphetamines <sup>e</sup>	57.3	58.8	61.5	62.0	62.8	59.4	59.8	60.8	58.1	57.1	57.1	57.4	55.0	55.4	51.2
Crystal methamphetamine (ice)	24.3	26.0	26.6	25.6	27.0	26.9	27.6	29.8	27.6	27.8	28.3	28.3	26.1	26.7	27.2
Sedatives (barbiturates) <sup>f</sup>	42.4	44.0	44.5	43.3	42.3	41.4	40.0	40.7	37.9	37.4	35.7	36.6	35.3‡	46.3	44.4
Tranquilizers	40.8	40.9	41.1	39.2	37.8	36.0	35.4	36.2	32.7	33.8	33.1	32.9	29.8	30.1	25.7
Alcohol	—	—	—	—	—	—	—	—	95.0	94.8	94.3	94.7	94.2	94.2	93.0
Cigarettes <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping device <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
E-liquid with nicotine (for vaping) <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	46.7	46.8	44.8	42.9	45.5	40.3	41.7	44.5	44.6	44.8	44.4	45.5	40.7	42.6	39.7
<i>Approximate weighted N =</i>	2,476	2,586	2,670	2,526	2,552	2,340	2,517	2,520	2,215	2,095	2,120	2,138	2,391	2,169	2,161

Table continued on next page

**TABLE 18 (cont.)**  
**Trends in Availability of Drugs as Perceived by 12th Graders**

<i>How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?</i>	Percentage saying "fairly easy" or "very easy" to get <sup>a</sup>												2016–2017 change
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Marijuana	84.9	83.9	83.9	81.1	82.1	82.2	81.6	81.4	81.3	79.5	81.0	79.8	-1.1
Amyl/butyl nitrites	18.4	18.1	16.9	15.7	—	—	—	—	—	—	—	—	—
LSD	29.0	28.7	28.5	26.3	25.1	25.1	27.6	24.5	25.9	26.5	28.0	26.3	-1.7
Some other hallucinogen <sup>b</sup>	43.9	43.7	42.8	40.5	39.5	38.3	37.8	36.6	33.6	31.4	32.5	28.4	-4.0
PCP	23.1	21.0	20.6	19.2	18.5	17.2	14.2	15.3	11.1	13.8	12.6	10.6	-2.0
MDMA (e.g. ecstasy, "Molly") <sup>c</sup>	40.3	40.9	41.9	35.1	36.4	37.1	35.9	35.1	36.1	37.1	32.5	29.3	-3.2
Cocaine	46.5	47.1	42.4	39.4	35.5	30.5	29.8	30.5	29.2	29.1	28.6	27.3	-1.3
Crack	38.8	37.5	35.2	31.9	26.1	24.0	22.0	24.6	20.1	22.0	19.8	18.1	-1.7
Cocaine powder	42.5	41.2	38.9	33.9	29.0	26.4	25.1	28.4	22.3	25.8	22.9	21.3	-1.6
Heroin	27.4	29.7	25.4	27.4	24.1	20.8	19.9	22.1	20.2	20.4	20.0	19.1	-0.9
Some other narcotic (including methadone) <sup>d</sup>	39.6	37.3	34.9	36.1‡	54.2	50.7	50.4	46.5	42.2	39.0	39.3	35.8	-3.5
Amphetamines <sup>e</sup>	52.9	49.6	47.9	47.1	44.1‡	47.0	45.4	42.7	44.5	41.9	41.1	38.0	-3.2
Crystal methamphetamine (ice)	26.7	25.1	23.3	22.3	18.3	17.1	14.5	17.2	13.7	15.3	14.5	13.6	-0.9
Sedatives (barbiturates) <sup>f</sup>	43.8	41.7	38.8	37.9	36.8	32.4	28.7	27.9	26.3	25.0	25.7	23.4	-2.3
Tranquilizers	24.4	23.6	22.4	21.2	18.4	16.8	14.9	15.0	14.4	14.9	15.2	14.9	-0.3
Alcohol	92.5	92.2	92.2	92.1	90.4	88.9	90.6	89.7	87.6	86.6	85.4	87.1	+1.7
Cigarettes <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	77.9	—
Vaping device <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	78.2	—
E-liquid with nicotine (for vaping) <sup>g</sup>	—	—	—	—	—	—	—	—	—	—	—	75.0	—
Steroids	41.1	40.1	35.2	30.3	27.3	26.1	25.0	28.5	22.0	23.7	21.3	20.1	-1.2
<i>Approximate weighted N =</i>													
	2,131	2,420	2,276	2,243	2,395	2,337	2,280	2,092	2,066	2,181	1,958	1,882	

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

*Notes.* Level of significance of difference between the two most recent classes:  $s = .05$ ,  $ss = .01$ ,  $sss = .001$ . '—' indicates data not available. '‡' indicates that the question changed the following year. See relevant footnote for that drug. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding.

<sup>a</sup>Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

<sup>b</sup>In 2001 the question text was changed from other psychedelics to other hallucinogens and shrooms was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

<sup>c</sup>Beginning in 2014 "molly" was added to the question on availability of Ecstasy (MDMA). An examination of the data did not show any effect from this wording change.

<sup>d</sup>In 2010 the list of examples for narcotics other than heroin was changed from methadone, opium to Vicodin, OxyContin, Percocet, etc. This change likely explains the discontinuity in the 2010 results.

<sup>e</sup>In 2011 the list of examples was changed from uppers, pep pills, bennies, speed to uppers, speed, Adderall, Ritalin, etc. These changes likely explain the discontinuity in the 2011 results.

<sup>f</sup>In 2004 the question text was changed from barbiturates to sedatives/barbiturates and the list of examples was changed from downers, goofballs, reds, yellows, etc. to just downers. These changes likely explain the discontinuity in the 2004 results.

<sup>g</sup>Data based on 2 of 6 forms. N is twice the N indicated.



**Monitoring the Future website:**  
**<http://www.monitoringthefuture.org>**

