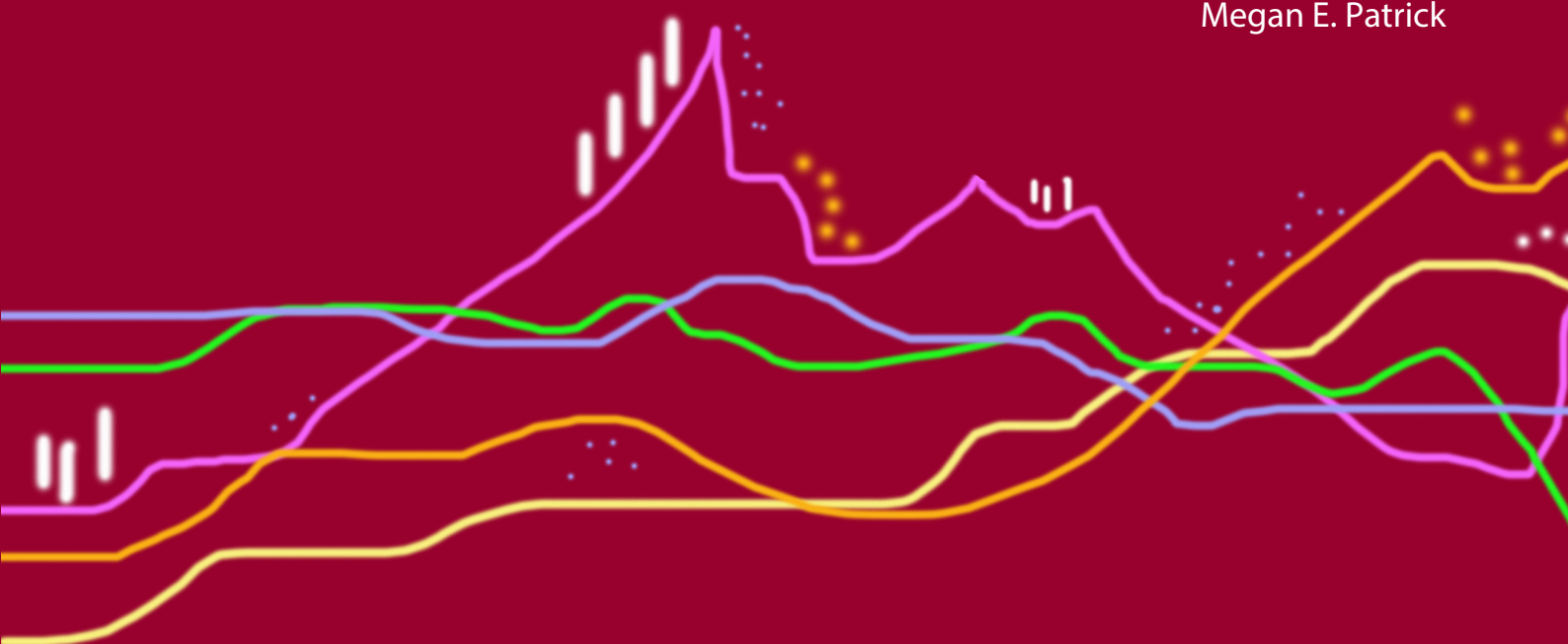# MONITORING *the* FUTURE

NATIONAL SURVEY RESULTS
ON DRUG USE
1975–2018

2018
Overview

Key Findings on Adolescent Drug Use

Lloyd D. Johnston
Richard A. Miech
Patrick M. O'Malley
Jerald G. Bachman
John E. Schulenberg
Megan E. Patrick

MONITORING THE FUTURE

NATIONAL SURVEY RESULTS ON DRUG USE, 1975–2018

2018 Overview

Key Findings on Adolescent Drug Use

Lloyd D. Johnston, Ph.D.
Richard A. Miech, Ph.D.
Patrick M. O'Malley, Ph.D.
Jerald G. Bachman, Ph.D.
John E. Schulenberg, Ph.D.
Megan E. Patrick, Ph.D.

Institute for Social Research
The University of Michigan

Recommended Citation

Contents

Summary of Key Findings

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 60. 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 with age 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 consistent differences among birth cohorts (or in this case, class cohorts) that are then maintained as the cohorts age. The key findings regarding use of various substances by 8th, 10th, and 12th graders surveyed across the coterminous U.S. in 2018 are summarized below.

The analyses and associated tables and figures 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, period, and cohort effects 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 historical 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 trends are statistically significant.

One Form of Drug Use Showed a Sharp Increase in Use in 2018

The most important finding to emerge from the 2018 survey is the dramatic increase in *vaping* by adolescents.[1] Vaping is a relatively new phenomenon, so we are still developing measures related to this behavior, which included asking separately for the first time in 2017 about the vaping of three specific substances—*nicotine*, *marijuana*, and *just flavoring*. As the section on vaping in this monograph shows, there was a significant and substantial increase in 2018 in the vaping of all three of these substances, including some of the largest absolute increases MTF has ever tracked for any substance. Given that nicotine is involved in most vaping, and given that nicotine is a highly addictive substance, this presents a serious threat to all of the hard-won progress that we have

tracked since the mid-1990s in reducing cigarette smoking among adolescents.

Little Change in Marijuana or the Three Indexes of Overall Drug Use

Annual *marijuana* prevalence rose by a nonsignificant 0.5 percentage points to 23.9% in 2018 based on data from the three grades combined.[2] This follows a significant increase in 2017. Annual prevalence stands at 11%, 28%, and 36% in grades 8, 10, and 12. *Daily marijuana* prevalence changed little this year, with rates at 1%, 3%, and 6%, respectively.

Annual use of *any illicit drug*, which tends to be driven by marijuana—by far the most prevalent of the illicit drugs—also rose nonsignificantly in grades 8 and 10, but declined nonsignificantly in 12th grade. Change in 2018 for the three grades combined also did not reach significance. Since 2006 there has been rather little systematic change in this index.

The index of *any illicit drug other than marijuana* showed no change in annual prevalence in 2018 for the three grades combined, but has shown a very gradual decline since 2001 when it was 16% compared to 2018 when it was 9%.

The annual prevalence of the index of *any illicit drug including inhalants* changed little in 2018 for the three grades combined, after rising significantly the previous year.[3] Since 2006 there has been little systematic change in this index.

Illicit Drugs Showing Declines in Use in 2018

Relatively few drugs exhibited a significant decline in use in 2018, although the use of most drugs is well below the peak levels reached in recent years.

Annual prevalence for *salvia* continued its gradual decline in 2018 with a significant drop of 0.2 percentage points to 0.8%. It appears that the use of this drug is close to ending.

Annual *tranquilizer* prevalence among 12th graders continued to fall significantly in 2018 by 0.8 percentage points to 3.9%—well below the 7.7% observed in 2002. There has been little change in the lower grades, however, since 2013.

Narcotics other than heroin, reported only for 12th grade, also declined, as will be discussed below under psychotherapeutic drugs.

Use of Most Illicit Drugs Held Steady in 2018

There are many classes of drugs tracked in the MTF study, and the majority of them held relatively steady in 2018. These include an *index of any illicit drug other than marijuana, synthetic marijuana, LSD, hallucinogens other than LSD, MDMA* (ecstasy, Molly), *cocaine, crack, bath salts, heroin* (overall, and when used with or without a needle), *narcotics other than heroin* (reported for 12th grade only), *Oxycontin, Vicodin, amphetamines* (taken as a class), *ritalin, adderall, sedatives* (reported at 12th grade only), *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 2018, with an annual prevalence of 3.2% 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 was in part due to increases in nonmedical use of many prescription drugs over that period, and in part due to the fact that use of many of the street drugs declined substantially after 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 12th graders illustrate this point.) Also, many 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 by youth began to decline by the start of the current decade. The proportion of 12th 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 2018 (-1.1%, not significant) to 10%, 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 12th grade) continued a gradual decline begun after 2009, when annual prevalence was 9.2%; it was 3.4% after a significant decline of 0.8 percentage points in 2018.

Given the epidemic of narcotics use in older populations along with concurrent rise in medical emergencies and overdose deaths, it is particularly good news that young people are moving away from the use of these drugs. This is good news not only because they will be less vulnerable to tragedies resulting from the use of these drugs during adolescence, but also 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.

Most Forms of Tobacco Use Continue to Decline

Cigarette smoking continued its long decline in 2018 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 84%. Daily prevalence has fallen by 88%, 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 0.3% for 8th graders, 0.7% for 10th graders, and 1.5% for 12th graders. Because of the strong cohort effect that we have consistently observed for cigarette smoking, we have predicted use at 12th grade to continue to show declines, as the lighter-using cohorts of 8th and 10th graders become 12th graders; and, indeed, thirty-day smoking fell another significant 2.0 percentage points in 2018. Use by 10th graders fell a smaller, nonsignificant, 0.8 percentage points to 4.2%.

Initiation of *cigarette* use also continues its long-term and extremely important decline in 2018, but only in 12th grade. Lifetime prevalence declined between 2017 and 2018 in 12th grade by a significant 2.8 percentage points to 23.8%. 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 8th, 10th, and 12th grade, 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 8th, 10th, and 12th graders seeing great risk in 2004. Since then, changes have been small and uneven, and the corresponding figures in 2018 are only slightly changed, at 61%, 70%, and 74%. 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 2018 disapproval stood at 88%, 89%, and 89% in grades 8, 10, and 12, respectively.

It seems likely that some of the long-term 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 8th graders, the proportions saying that they "prefer to date people who don't smoke" rose from 71% in 1996 to 81% by 2004, about where it remained through 2018. Similar changes occurred in 10th and 12th 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 8th and 10th

graders and by more than half among 12th 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 9% of 12th graders in 2018 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.

Hookah. Annual prevalence of smoking tobacco using a hookah (water pipe) had been increasing steadily until 2014 among 12th graders (8th and 10th graders are not asked about this practice), reaching 23% in 2014; but use has been declining steadily since, reaching 8% by 2018.

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 from 2010 through 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 is a form of smokeless tobacco. Its annual prevalence is down considerably from when it was first measured in 2011 (or 2012 in the lower grades) but it showed little change this year.

Vaping

Vaping involves the use of a battery-powered device to heat a liquid or plant material that releases chemicals in an inhalable aerosol. Examples of vaping devices include e-cigarettes such as the popular brand JUUL and "mods." The aerosol may contain any of the following: nicotine, the active ingredients of marijuana, flavored propylene glycol, and/or flavored vegetable glycerin. Liquids that are vaporized come in hundreds of flavors, many of which are likely to be attractive to teens (e.g., bubble gum and milk chocolate cream).

Vaping of all substances increased dramatically in 2018. *Nicotine vaping* in the last 12 months increased by 3.4, 8.9, and 10.9 percentage points in 8th, 10th, and 12th grades. In 10th and 12th grades these increases are the largest ever

recorded for any substance in the 44 years that MTF has tracked adolescent drug use. Nicotine vaping prevalence rates in 2018 were 11%, 25%, and 30%, respectively.

Marijuana vaping also increased substantially in 2018 as this new way of using marijuana becomes more mainstream. In 2018 prevalence of use in the last 12 months increased 1.3, 4.2, and 3.6 percentage points in 8th, 10th, and 12th grades to levels of 4.4%, 12.4%, and 13.1%, respectively.

Vaping *just flavoring* also substantially increased in 2018 to past-year prevalence levels of 15%, 25%, and 26% in 8th, 10th, and 12th grades.

Adolescents associate little risk of harm with vaping. MTF asks separately about regular use of "e-cigarettes" and also regular vaping of nicotine. Levels of perceived risk for these behaviors rank near the lowest of all substances, with little change in recent years.

Alcohol Use Continues Declining in Upper Grades

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 (59%) have consumed alcohol (more than just a few sips) at some time in their lives (after a significant 3 percentage point drop in 2018); and about a quarter (24%) have done so by 8th grade. (Only the 12th grade showed significant change in 2018.)

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 thirty-day prevalence continued in the upper grades into 2018, which marked the lowest levels for alcohol use and drunkenness ever recorded by the survey in the three grades combined.

However, the decline in the annual prevalence of alcohol use has halted in the two lower grades. Only in 12th grade is decline continuing, likely as the result of a cohort effect. This development 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 40-45% 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 three-fourths. These are dramatic declines for such a culturally ingrained behavior and good news to many parents.

Introduction

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 60. 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 of behavior and why. The study has served this function well for the past 44 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 2018 MTF adolescent survey involved about 44,500 students in 8th, 10th, and 12th grades enrolled in 392 secondary schools nationwide. The first published results based on the 2018 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 in 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 8th, 10th, and 12th grades. When historical changes 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 (In this case, these are class-in-school cohorts, which are strongly correlated with age cohorts). 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 8th, 10th, and 12th graders relative to each other. Often 8th grade substance use is a bellwether, and year-to-year changes that are unique to 8th 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 over time for each grade 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 12th graders, annual data are available since 1975 and for 8th and 10th 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 trend data on lifetime, annual, 30-day, and (for selected drugs) daily prevalence.[3] For the sake of brevity, we present these prevalence statistics here in tabular form only for the 1991–2018 interval, but statistics on 12th graders going back to 1975 are available in other MTF publications on the MTF website. For each prevalence period, the tables indicate which one-year changes from 2017 to 2018 are statistically significant. (In the text below, 's' indicates p≤.05, 'ss' indicates p≤.01, 'sss' indicates p≤.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 interval.

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.[4] *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). The most recent such volume, as well as earlier editions, are always available in the Publications section of the MTF website, www.monitoringthefuture.org.

MTF's findings on American college students and adults through age 60 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.[5]

Two annual MTF Occasional Papers are published each year in conjunction with *Volumes I* and *II*, providing trends in use for various demographic subgroups on adolescents and separately on young adults.[6]

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.[7] It is published in October of each year. From 2005 to 2009, these findings were reported as part of *Volume II*.

Information on the study, including its latest press releases, a listing of all publications, and freely accessible reports may be found at www.monitoringthefuture.org. Volumes are immediately available there upon publication. Most publications are also entered into the University of Michigan's repository of publications (https://deepblue.lib.umich.edu/). For the publication years prior to 2010, the volumes in these annual series also are available from the NIDA Drug Publications Research Dissemination Center (877-NIDA-NIH, drugpubs.drugabuse.gov).

---

[3] 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.

[4] 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. (2018). *Monitoring the Future national survey results on drug use, 1975–2017: Volume I, Secondary school students.* Ann Arbor, MI: Institute for Social Research, University of Michigan, 636 pp.

[5] 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. (2018). *Monitoring the Future national survey results on drug use, 1975–2017: Volume II, College students & adults ages 19–55.* Ann Arbor, MI: Institute for Social Research, University of Michigan, 445 pp.

[6] The most recent Occasional Papers on subgroup trends are Johnston, L. D., Miech, R. A., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M.E. (2018).*.Demographic subgroup trends among adolescents in the use of various licit and illicit drugs 1975-2017* (Monitoring the Future Occasional Paper No. 90). Ann Arbor, MI: Institute for Social Research, University of Michigan, 698 pp; and Johnston, L. D., Schulenberg, J.E., O'Malley, P. M., Bachman, J. G., Miech, R. A., & Patrick, M. E. (2018). *Demographic subgroup trends among young adults in the use of various licit and illicit drugs 1989-2016* (Monitoring the Future Occasional Paper No. 91). Ann Arbor, MI: Institute for Social Research, University of Michigan, 109 pp.

[7] 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. (2018). *HIV/AIDS: Risk and protective behaviors among adults ages 21-40 in the U.S., 2004–2017*. Ann Arbor, MI: Institute for Social Research, University of Michigan, 135 pp.

Study Design and Methods

A main component of Monitoring the Future's 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 12th graders have been surveyed. In 1991, the study was expanded to include comparable, independent national samples of 8th and 10th graders. The year 2018 marked the 44th survey of 12th graders and the 28th survey of 8th and 10th graders.

Sample Sizes

In 2018 about 44,500 students in 392 secondary schools participated in the study, with sample sizes of about 14,800 in 8th grade, 15,100 in 10th grade, and 14,500 in 12th grade. Multiple questionnaire forms are distributed randomly at each grade level to increase coverage of attitudinal and behavioral domains. Six different forms are used at 12th grade and four forms at 8th and 10th grades. To reduce burden on the respondents, not all questions are contained in all forms. Thus, the number of cases upon which a particular statistic is based may be less than the total sample size. The tables 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 or other primary caregivers are notified well in advance of the survey administration and are provided the opportunity to decline the child's participation. Questionnaires are self-completed and are formatted for optical scanning. Procedures have been kept consistent over time.

In 8th and 10th grades the questionnaires are completely anonymous, and in 12th grade they are confidential (name and address information is gathered separately from the 12th 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 about vaping, small cigars, large 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 12th graders is assessed with similar questions about consuming 10 or more and 15 or more drinks in a row in the past two weeks. Among 8th and 10th 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. (In 12th grade "…people 18 or older…is specified in the question stem.) Answer categories are "don't disapprove," "disapprove," and "strongly disapprove." In the 8th and 10th 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 8th and 10th 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,[8] 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 at least one of 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 20th 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 next page.[9] 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* (i.e., last 12 month), as opposed to lifetime, prevalence are shown in the second (upper right) panel. They are quite parallel to those for lifetime prevalence, but at lower levels. Among 8th graders, a gradual and continuing falloff occurred after 1996. Peak rates since 1991 were reached in 1997 in the two upper grades and the rates 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. There has been some increase since 2016 among 8th and 10th graders.

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 panel (lower left) of the next page. In 1975 over one third (36%) of 12th 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.[10]) Lifetime prevalence among 12th graders then fell slightly to 24% by 2009, before dropping to 19% in 2018. 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 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 12% among 12th graders by 2018.

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 prevalence 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.

---

[8] Footnote 'a' to Tables 5 through 8 provides the exact definition of any illicit drug.
[9] 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.

[10] 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

Use
% who used any illicit drug in lifetime

Use
% who used any illicit drug in last 12 months

Use
% who used any illicit drug other than marijuana in lifetime*

Use
% who used any illicit drug other than marijuana in last 12 months*
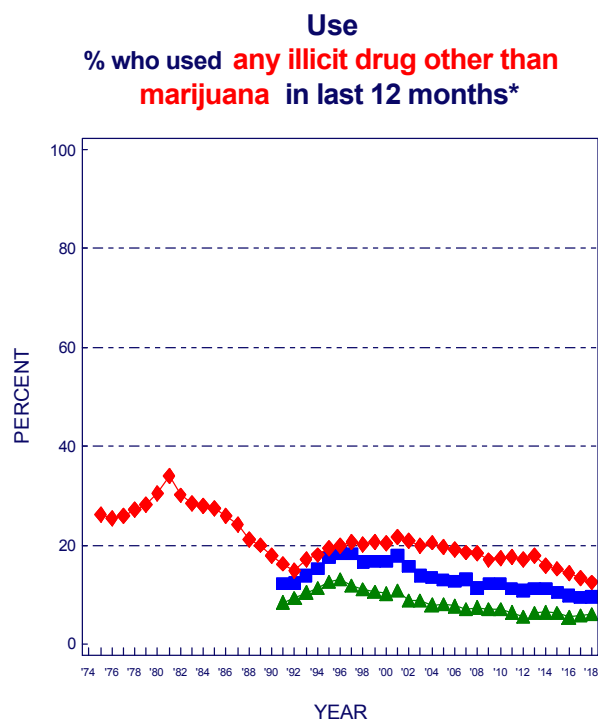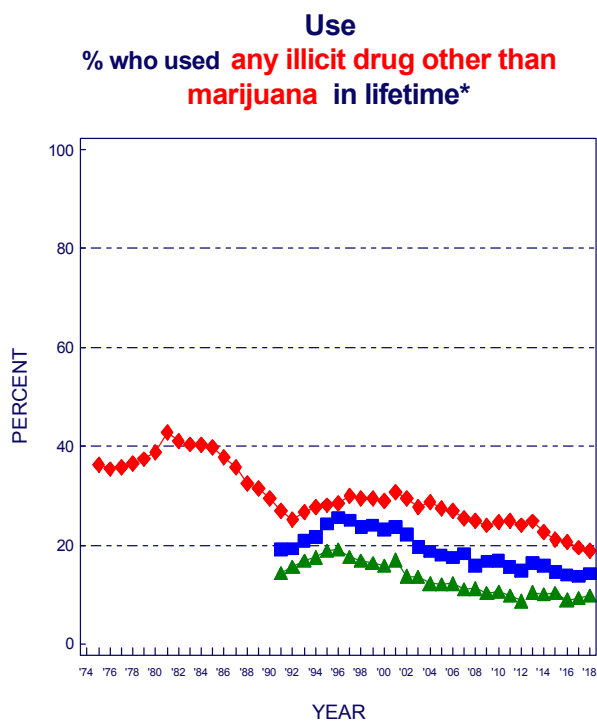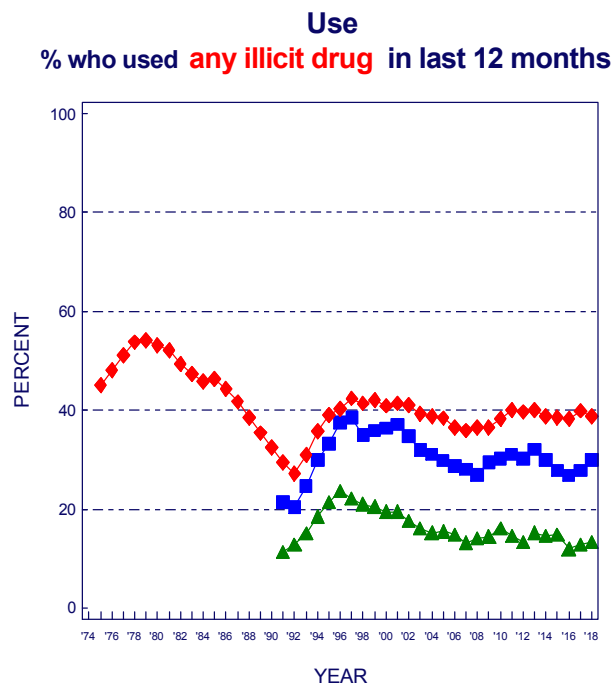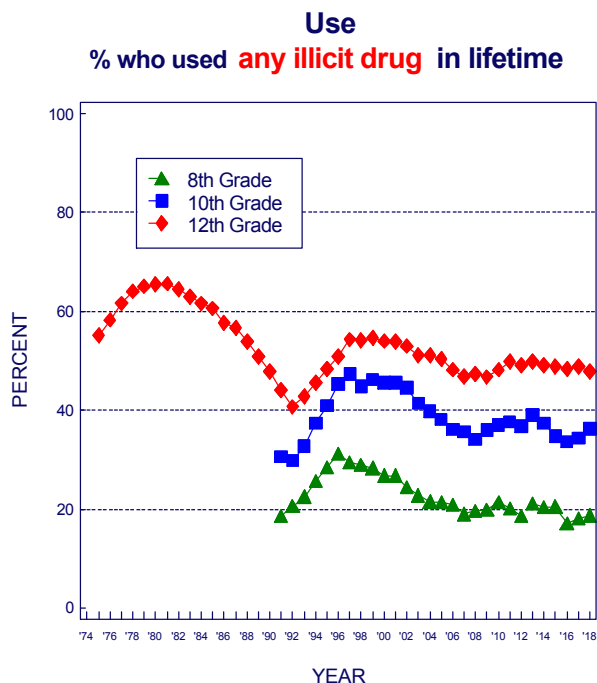
Source. The Monitoring the Future study, the University of Michigan.

*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 44-years. It can be taken orally, mixed with food or drink, vaped, and smoked, including in a concentrated forms such as hashish or honey oil.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 12th graders in 1979 at 51%, following a rise that began during the 1960s. Then use declined fairly steadily to 22% by 1992—a decline of more than half. Use resurged in the 1990s, peaking in 1996 at 8th grade and in 1997 at 10th and 12th 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 8th graders increased in use from 2007 to 2010, decreased slightly from 2010 to 2012, declined significantly in 2016, and leveled in 2017 and 2018. Among 10th graders, use increased somewhat from 2008 to 2013 and then declined, before rising in 2017 and 2018. Among 12th graders, use increased from 2006 to 2011, fell some through 2015, and then increased through 2017 before falling back in 2018. As shown in Table 8, *daily* marijuana use increased in all three grades after about 2007, reaching peaks in 2011 (at 1.3% in 8th), 2013 (at 4.0% in 10th), and 2011 (at 6.6% in 12th), before declining slightly since. Daily prevalence rates in 2018 were 0.7%, 3.4%, and 5.8%, respectively, with one in seventeen 12th 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 were the first ever national estimates of marijuana vaping of this kind. One in ten 12th grade students reported vaping in the past 12 months, and the prevalence was 3%, 8%, and 10% for 8th, 10th, and 12th grade students, respectively. In each grade, more than one quarter of students who had used marijuana had experience vaping it. These levels were quite high, considering that vaping was virtually unknown among adolescents just five years earlier. In 2018 annual prevalence rose substantially and significantly to 4%, 12%, and 13% in the three grades.

Perceived Risk

The proportion of students seeing great risk from regular marijuana smoking fell during the rise in use in the late 1970s and again during the subsequent rise in use in the 1990s. Indeed, for 10th and 12th 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 8th grade but our data do not start early enough to show it.) The decline in perceived risk halted in 1996 in 8th and 10th grades; the increases in use in 10th and 12th 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 8th grade, 2005 in 12th grade, and 2008 in 10th 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 in recent years a sharp decline in the use of "gateway drugs"—in particular cigarette smoking, with which marijuana use has been highly correlated— has offset expected increases in marijuana use.[11]

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 at 79%, 70%, and 67% in 8th, 10th, and 12th grades, respectively. During the early and 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. In 2018 there was a significant decline in 8th grade, some decline in 10th, but a non-significant increase in 12th grade.

Availability

Since 1975, between 80% and 90% of 12th 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 2018. Marijuana has been somewhat less readily available to 10th graders and considerably less available to 8th graders, with 65% and 35%, respectively, reporting it to be fairly or very easy to get in 2018. Availability has declined appreciably among younger adolescents, but remains readily available to most 12th graders.

---

[11] 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

Use
% who used in last 12 months

Legend:
- 8th Grade (green triangle)
- 10th Grade (blue square)
- 12th Grade (red diamond)

Risk
% seeing "great risk" in using regularly

Disapproval
% disapproving of using regularly

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

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

12
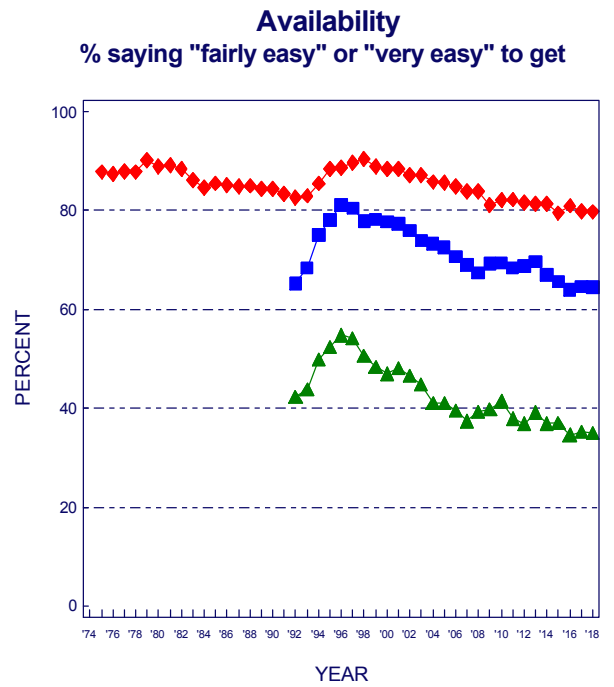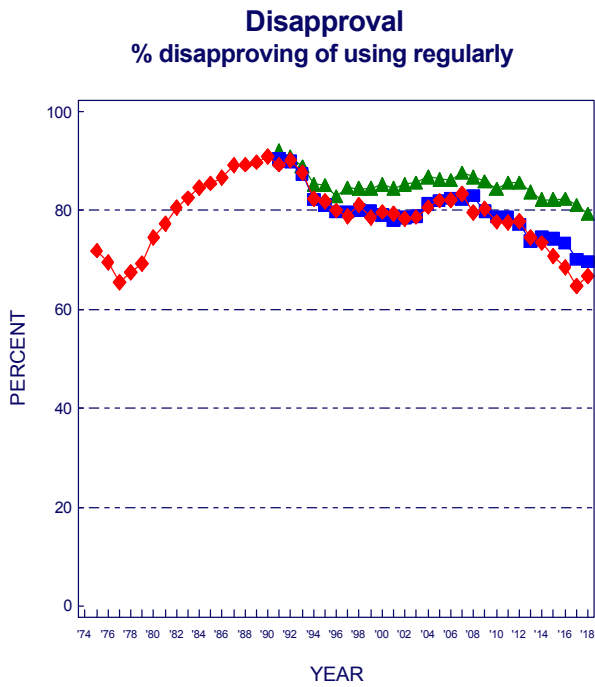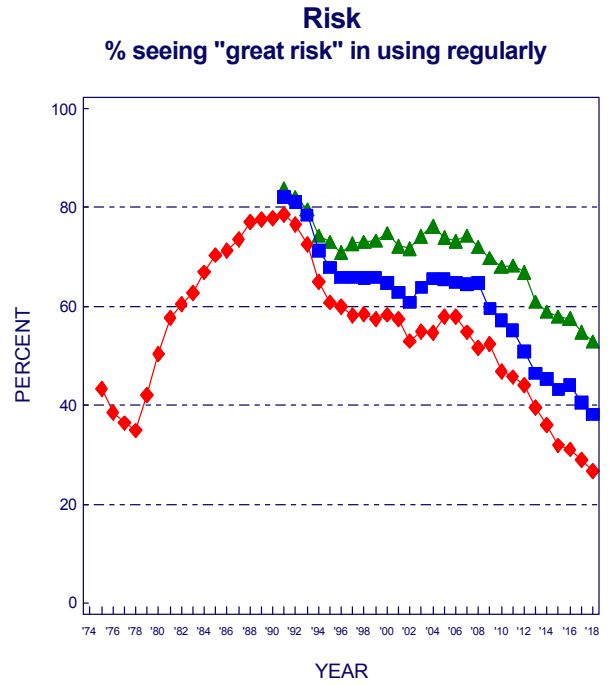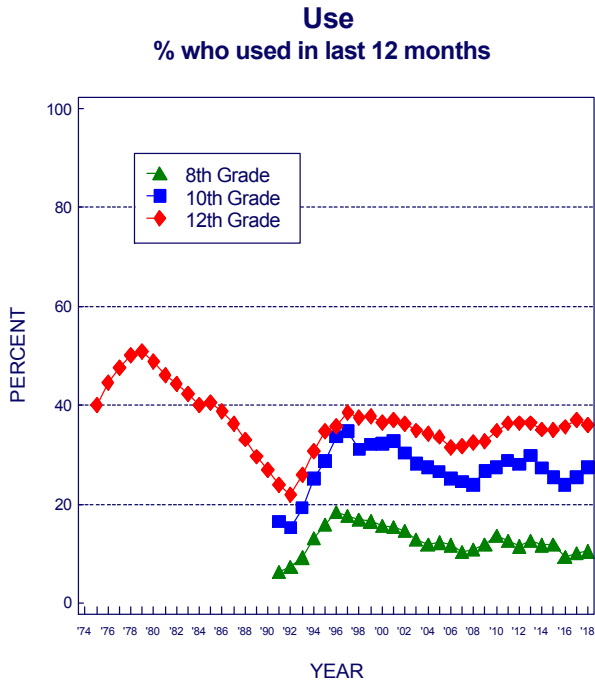
Synthetic Marijuana

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 formulae 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 12th 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 12th graders at that time. Despite the DEA's intervention, use among 12th 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 formulae to avoid using the ingredients that had been scheduled. In 2012, for the first time, 8th and 10th 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 12th graders, and significant declines for both 10th and 12th graders in 2014. These sharp declines continued through 2018 among 8th graders, but halted in 2017 among 12th graders and in 2018 among 10th graders. Annual prevalence in 2018 was down to 1.6%, 2.9%, and 3.5% 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 next page, the level of perceived risk for experimental use was quite low in 2012 (between 24% and 25%) but has risen some, particularly among 12th graders, to 36% in 2016. (The percent would be higher if those answering "can't say, drug unfamiliar" were excluded.) Since 2016 there has been a decline in perceived risk in all three grades. Early on 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. It might well be that access to these products has declined considerably as a result of the DEA scheduling of many of them

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

Use
% who used in last 12 months

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

PERCENT

YEAR

Risk
% seeing "great risk" in using once or twice

PERCENT

YEAR

Disapproval
% disapproving of using once or twice

(no data)

PERCENT

YEAR

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

(no data)

PERCENT

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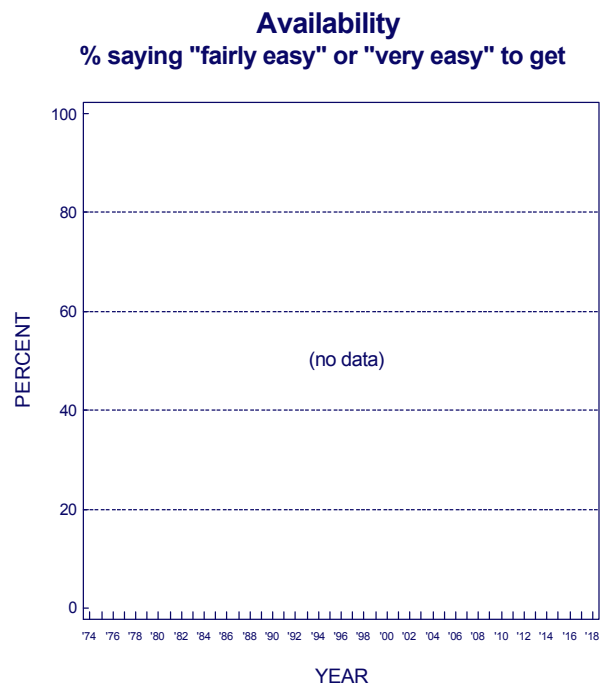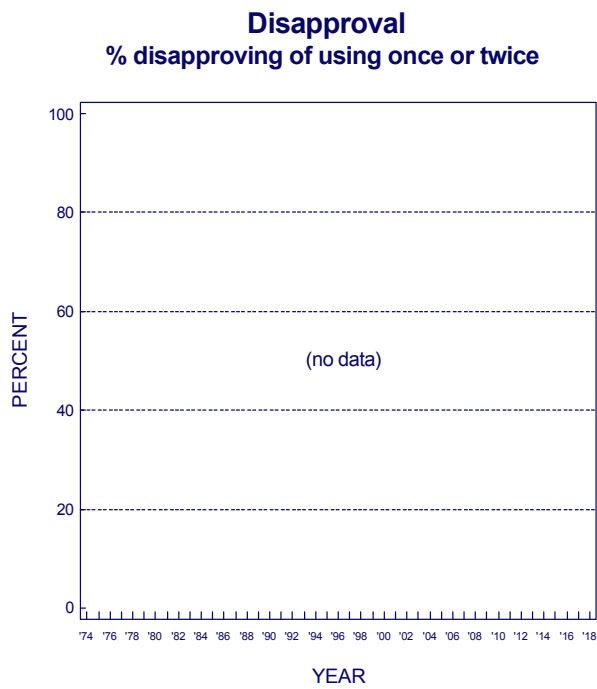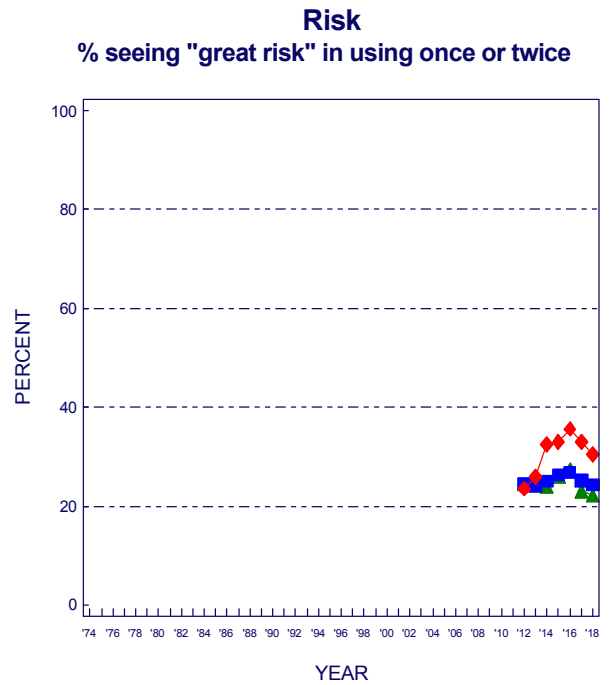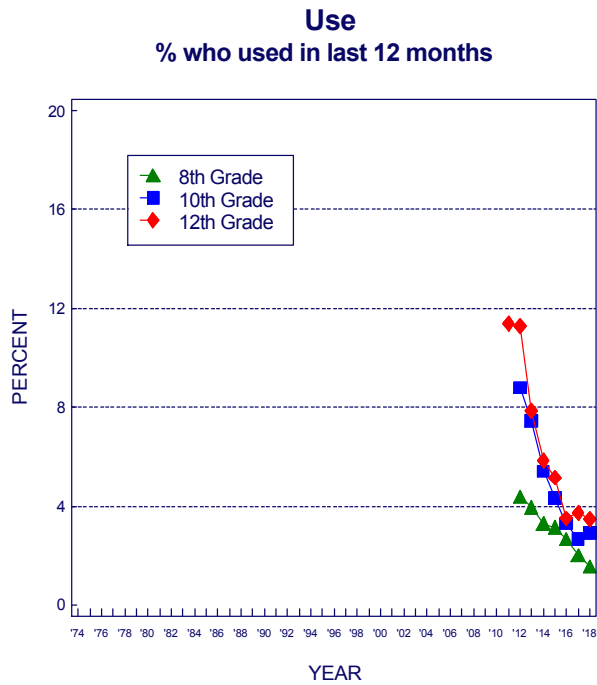
Source. The Monitoring the Future study, the University of Michigan.

Inhalants

Inhalants are any non-combusted and non-heated gases or fumes that can be inhaled to get high. The base substances 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, inhalant 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 12th 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 8th and 10th graders from 1991, when those grades were first included in the study, through 1995; it rose among 12th 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: 8th 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; 10th graders showed an increase after 2003 but a considerable decline since 2007; and 12th 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, 8th graders showed a significant increase, while 10th and 12th graders showed a continued decline; and in 2018 use was level in all three grades.

Perceived Risk

Only 8th and 10th 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 8th and 10th 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 perceived risk associated with inhalant use declined steadily between 2001 and 2008 among both 8th and 10th graders, perhaps explaining the increase in use in 2003 among 8th 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, with significant declines in 8th grade in 2018. These declines leave future class cohorts at risk for a resurgence of inhalant use.

Disapproval

Until 2016, over 80% of 8th and 10th grade students said that they would disapprove of even trying an inhalant. (The question was not asked of 12th 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 8th graders there has been some decline in disapproval of trying inhalants since 2012, and it continued in 2018 with a significant decline. Since 2014 it has dropped among 10th graders as well, including significant declines in 2015 and 2017, but no further decline in 2018.

Availability

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

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

Use
% who used in last 12 months

Legend:
- 8th Grade (green triangle)
- 10th Grade (blue square)
- 12th Grade (red diamond)

Risk
% seeing "great risk" in using once or twice

Disapproval
% disapproving of using once or twice

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

(no data)

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

16
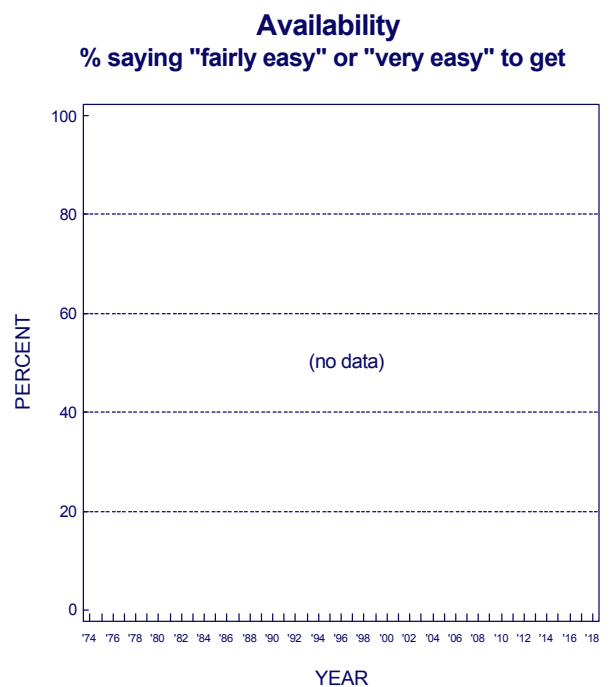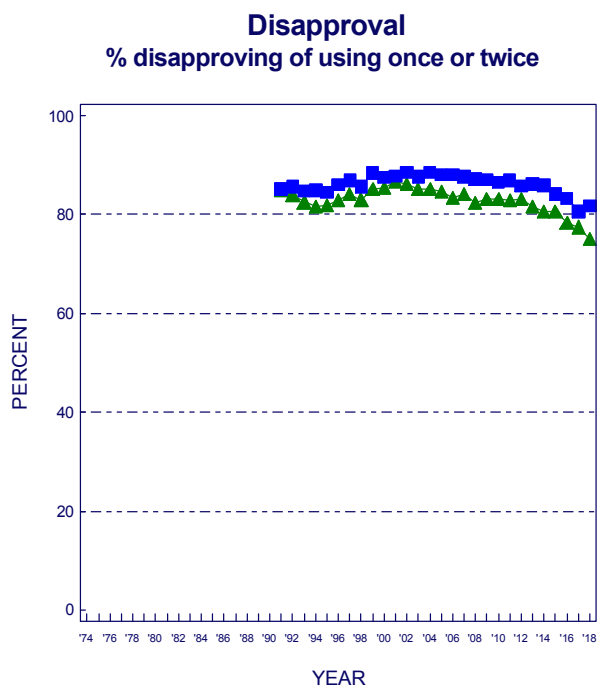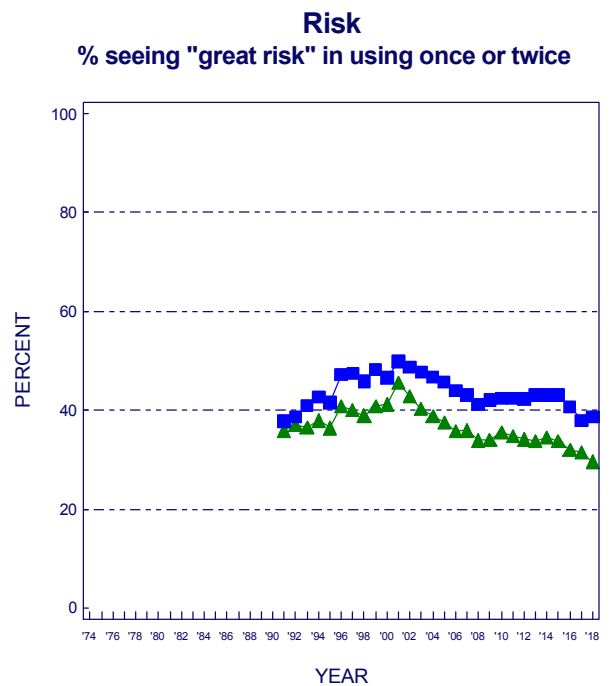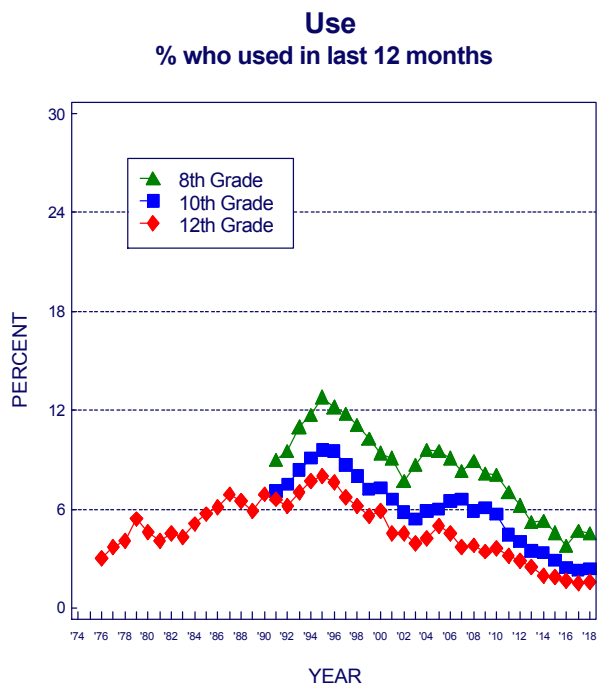
LSD

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 12th graders has been below 10% since MTF began. Use declined some for the first 10 years among 12th 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 modest increase in the upper grades since 2013, particularly at 12th grade; however, there was no change in any grade in 2018.

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 12th 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 8th graders until 2007, when it leveled; it declined considerably among 10th graders before leveling around 2002, dropping through 2007, and then leveling after that. Since 2014 and 2015 risk has declined once again in both 10th and 12th graders. Among 12th graders, the recent decline in perceived risk marks the end of a levelling that had been in place since 2002. The greater decline in 8th grade 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 in actual use of LSD from the mid-1990s to about 2003, despite a fall in perceived risk, suggests that some factors other than a change in underlying attitudes and beliefs contributed to the downturn in use—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 12th 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 12th graders. After 1996 a slight increase in disapproval emerged among 12th graders, accompanied by a leveling among 10th graders and some further decline among 8th graders. From 2001 to 2008, disapproval of LSD use diverged among the three grades, declining considerably among 8th graders, declining less among 10th graders, and increasing significantly among 12th graders. Note, however, that the percentages of 8th and 10th 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 12th grade students, staying fairly level for 10th grade students, and increasing some for 8th grade students.

Availability

Reported availability of LSD by 12th 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 8th and 10th 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

Use
% who used in last 12 months

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

Risk
% seeing "great risk" in using once or twice

Disapproval
% disapproving of using once or twice

Availability
% saying "fairly easy" or "very easy" to get
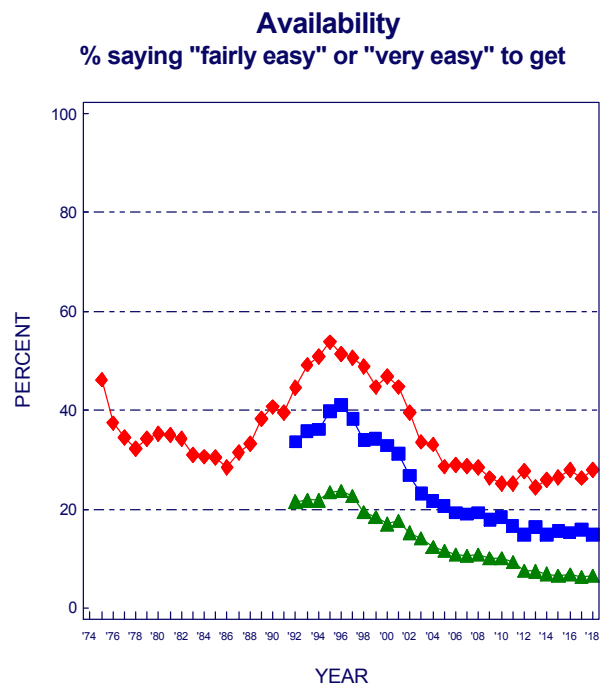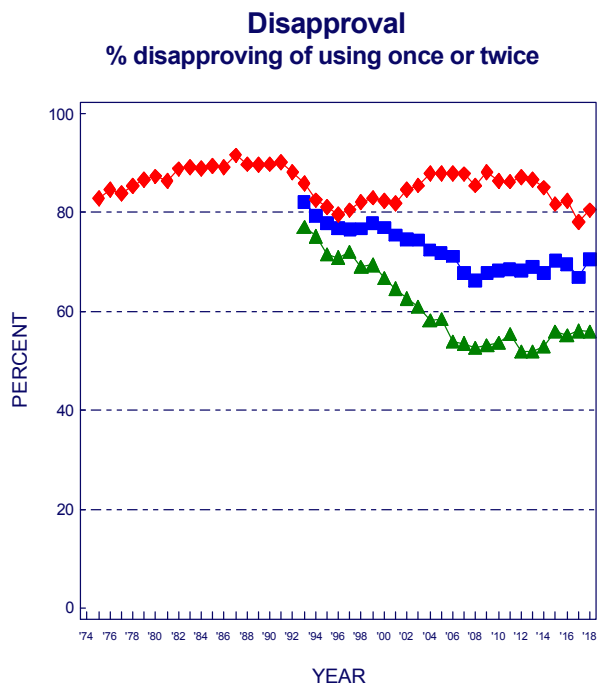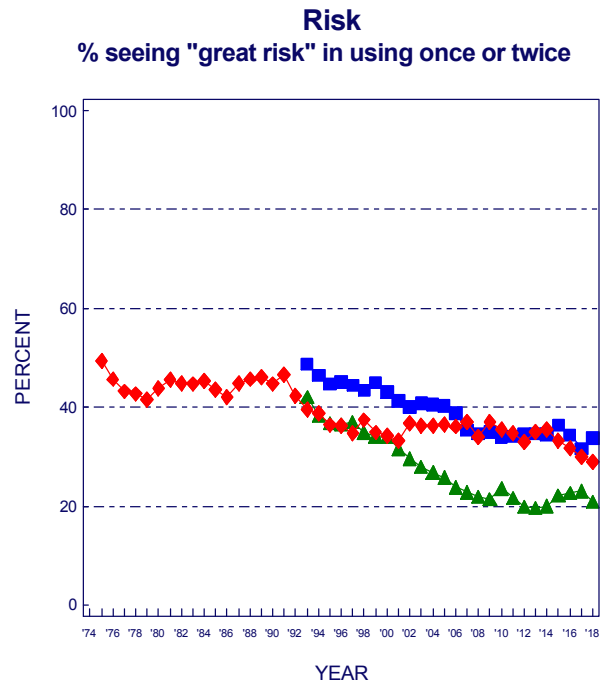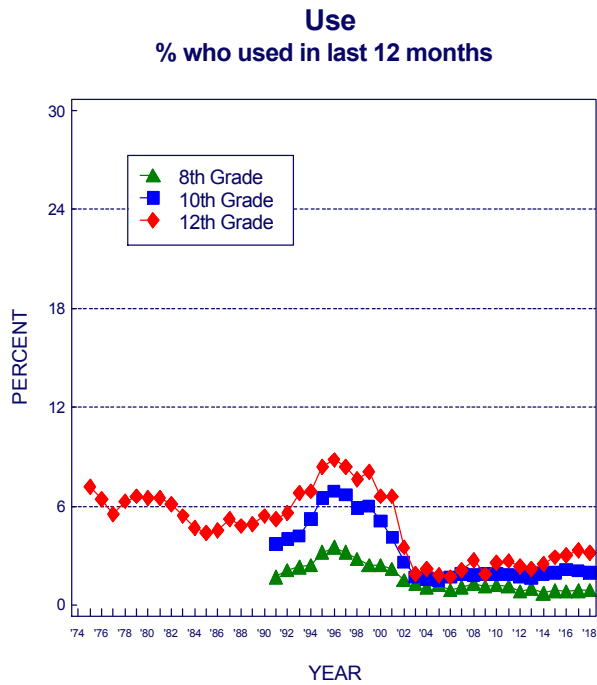
Source. The Monitoring the Future study, the University of Michigan.

Cocaine

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 12th 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 12th 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 8th and 10th graders after 1992 before reaching peak levels in 1998 and 1999. Over the last 18 years, use has declined in all three grades, except for a rise in 12th grade use in 2017 (ns); annual 12th grade use stands at just 2.3% in 2018, with use by 8th and 10th graders still lower, at 0.8% and 1.5%.

Perceived Risk

Questions about the dangers of cocaine in general (without specifying any particular form of cocaine) have been asked only of 12th 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.[12] 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, starting around 2008, before leveling. In 2017, 10th graders showed a significant decline, followed by no changes in 2018. For the 12th 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 12th 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 8th and 10th graders. The question change seemed to matter rather little in the results.

Disapproval

Disapproval of cocaine use by 12th 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 2018.

Availability

The proportion of 12th 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 12th graders it stood at 28% in 2018—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.

---

[12] Among 12th 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

Use
% who used in last 12 months

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

Risk*
% seeing "great risk" in using once or twice

Disapproval*
% disapproving of using once or twice

Availability*
% saying "fairly easy" or "very easy" to get
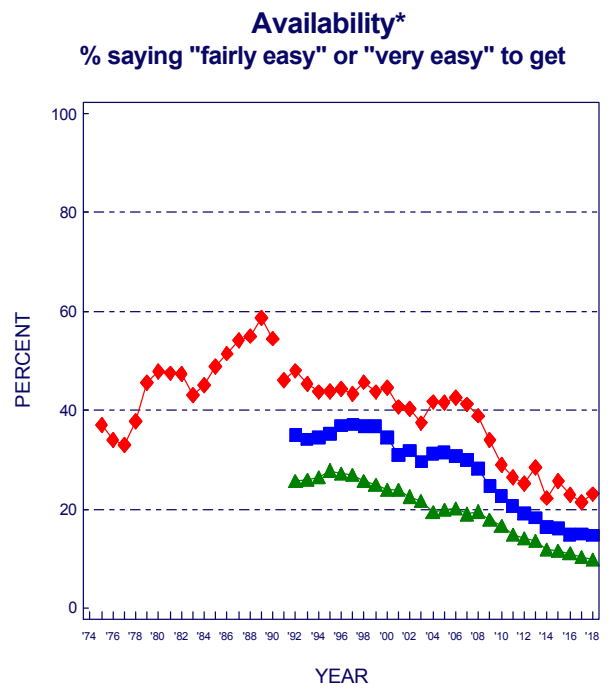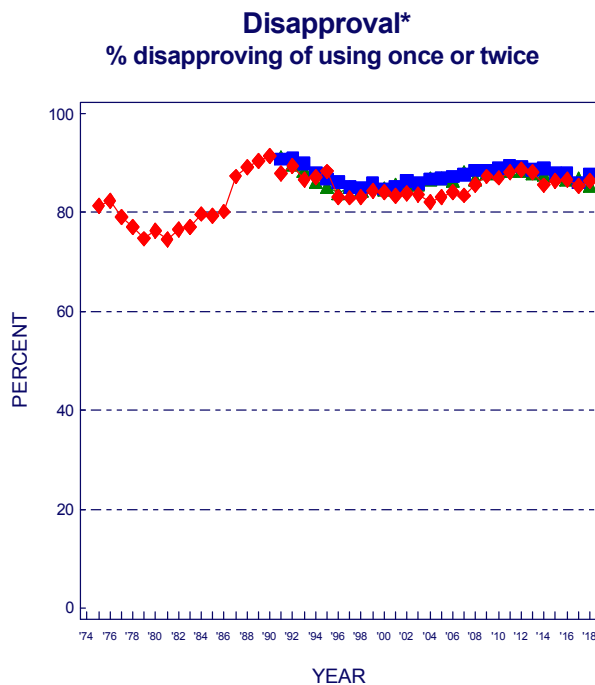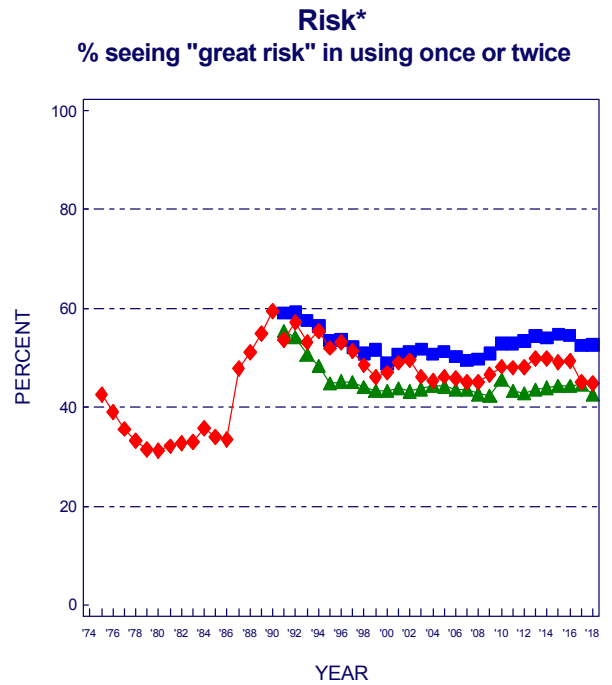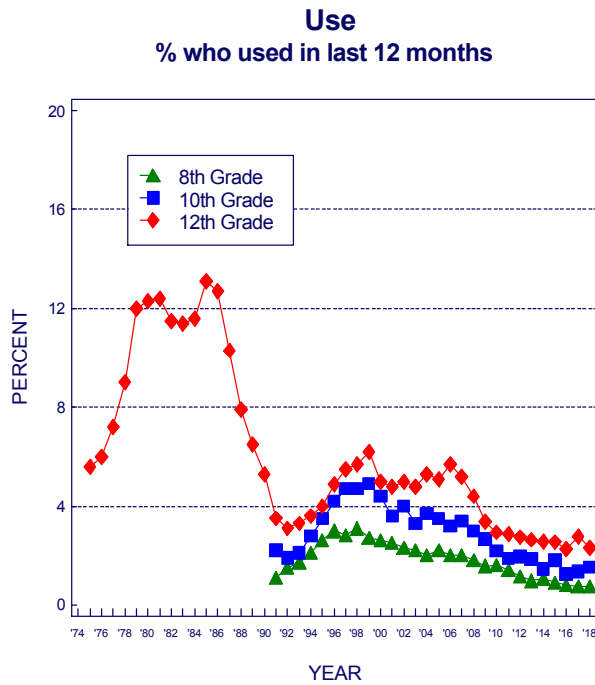
Source. The Monitoring the Future study, the University of Michigan.

*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.

Crack

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 12th 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 next 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 12th graders; the drop continued through 1991. After 1991 for 8th and 10th graders (when data were first available) and after 1993 for 12th 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 8th and 10th grades and nearly two thirds in 12th grade. By 2016 crack use was at historic lows in all three grades; and there has been little change in use since. As with many drugs, the decline at 12th 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 12th 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 12th 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 2018 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 12th 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 8th graders, after 1999 among 10th graders, and after 2000 among 12th graders. Since 2000, availability has declined considerably, reaching historic lows in 2017 in all three grades; there was no change in 2018.

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 next 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

Use
% who used in last 12 months

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

Risk
% seeing "great risk" in using once or twice

Disapproval
% disapproving of using once or twice

Availability
% saying "fairly easy" or "very easy" to get
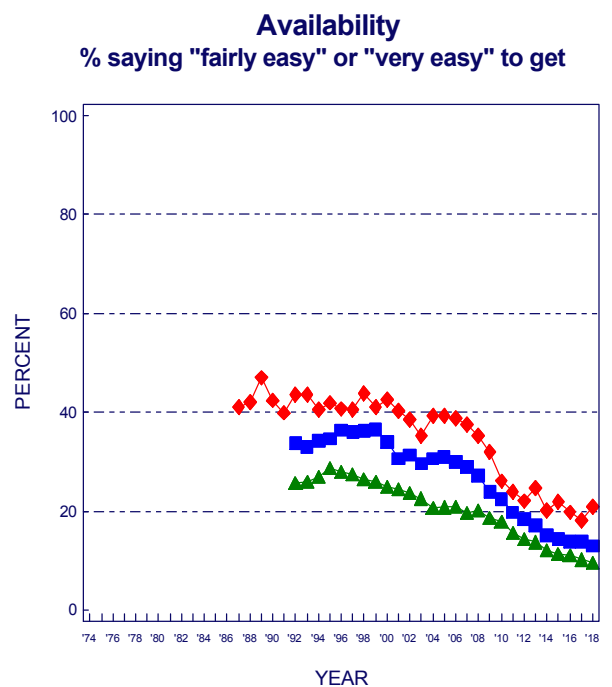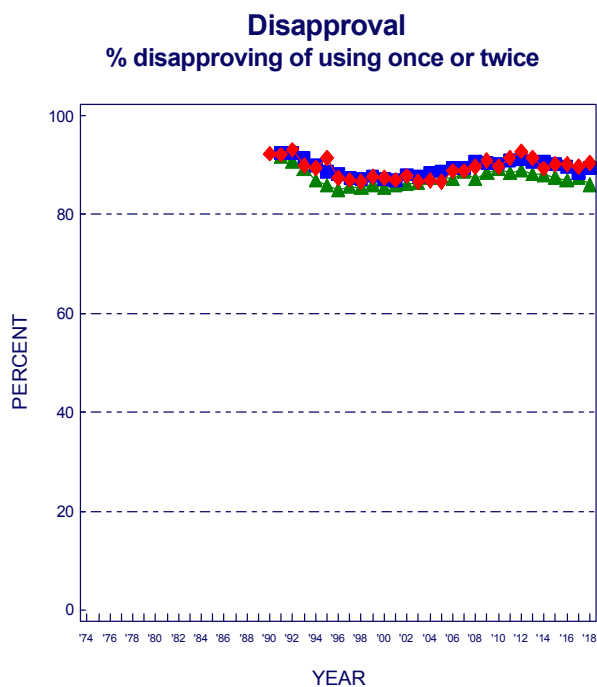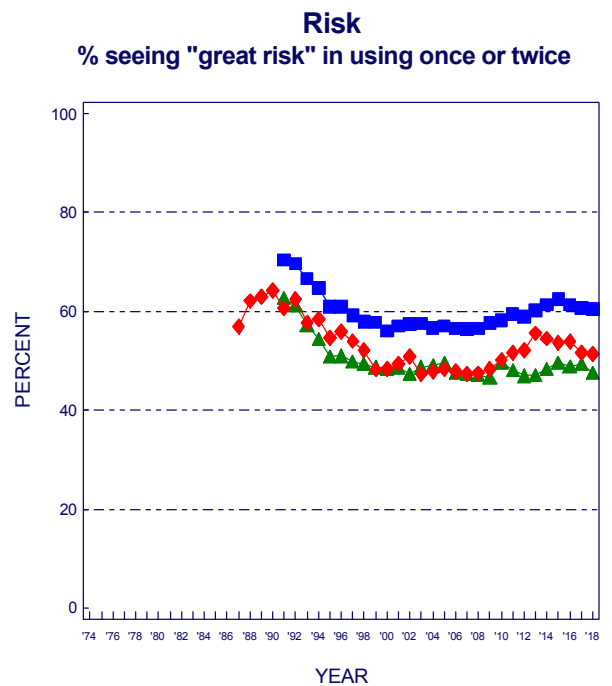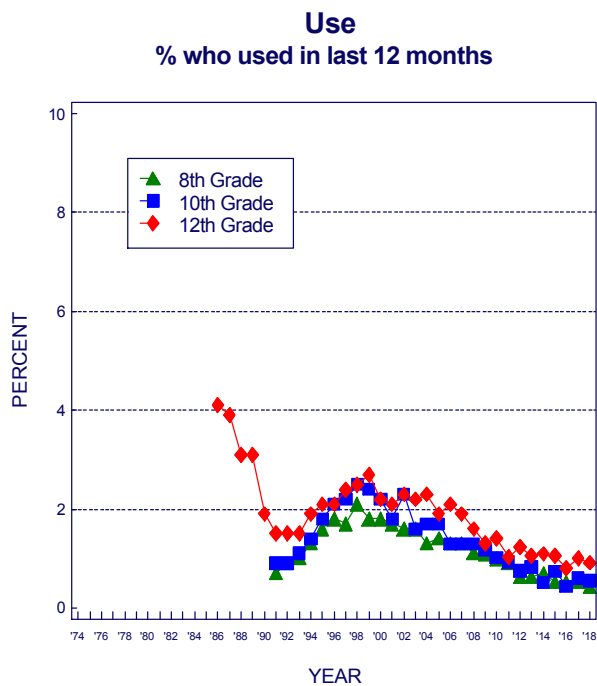
Source. The Monitoring the Future study, the University of Michigan.

Amphetamines and Other Stimulant Drugs

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. Separate estimates for these two drugs are contained in the tables at the end of this volume.

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, 12th graders showed a steady and very substantial decline in stimulant use, reaching 6%.

As with many other illicit drugs, stimulants made a comeback in the 1990s. Use peaked in the lower two grades by 1996 and for many years declined steadily in 8th grade and sporadically in 10th grade. Only in 2003 did use begin to decline in 12th grade—likely reflecting a cohort effect. The decline paused in 2008 for 8th graders and 2008/2009 for 12th graders, and then resumed. The 10th and 12th grade declines 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 based on all the forms. From 2009 to 2013 use rose in the upper grades, likely due to stimulant 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, nonmedical Ritalin use has declined by 75% to 85% in all three grades. Nonmedical Adderall use declined in the lower grades since it was first measured in 2009; but annual prevalence increased significantly in 12th grade between 2009 (to 5.4%) and 2013 (to 7.4%) where it remained in 2015 before falling to 4.5% by 2018.

Perceived Risk

Only 12th 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 12th 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 been occurring in perceived risk since 2013.

Disapproval

Disapproval of amphetamine/stimulant use also is asked in 12th grade only. Relatively high proportions of 12th 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 among 12th graders 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 but halted in 2018.

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

Use*
% who used in last 12 months

Risk**
% seeing "great risk" in using once or twice

Disapproval**
% disapproving of using once or twice

Availability**
% saying "fairly easy" or "very easy" to get
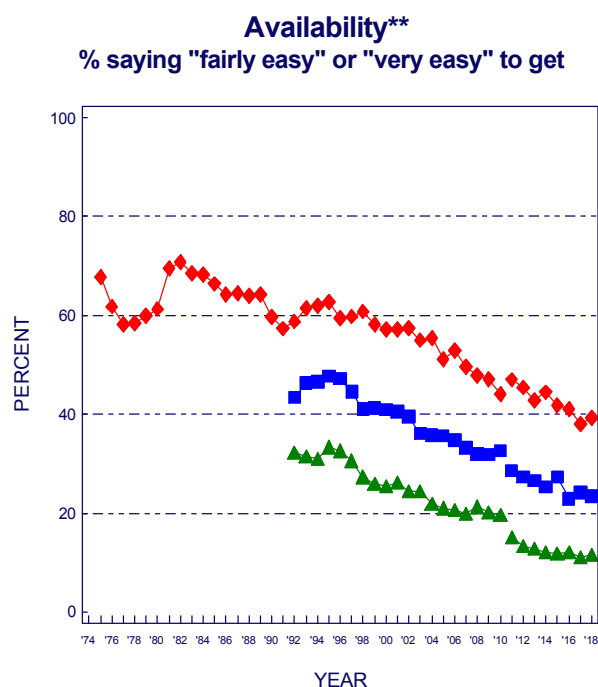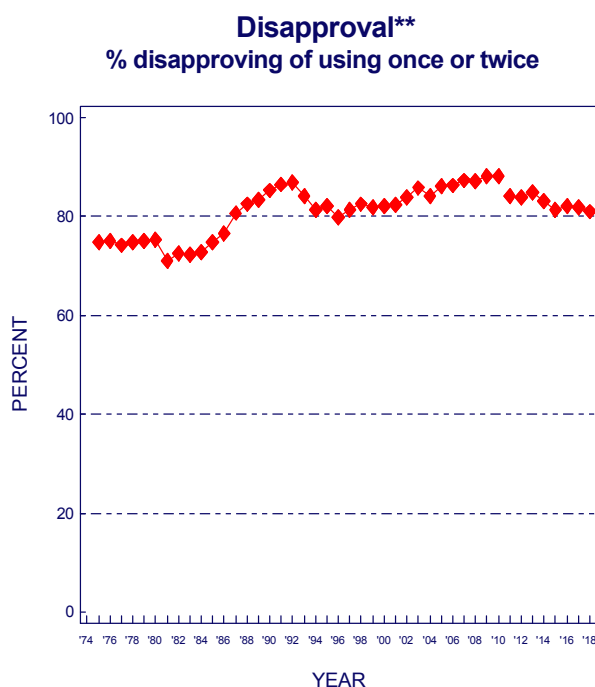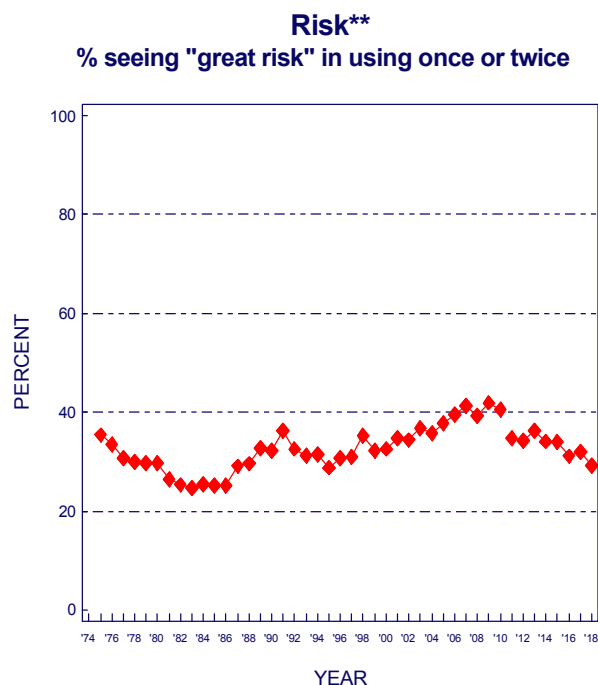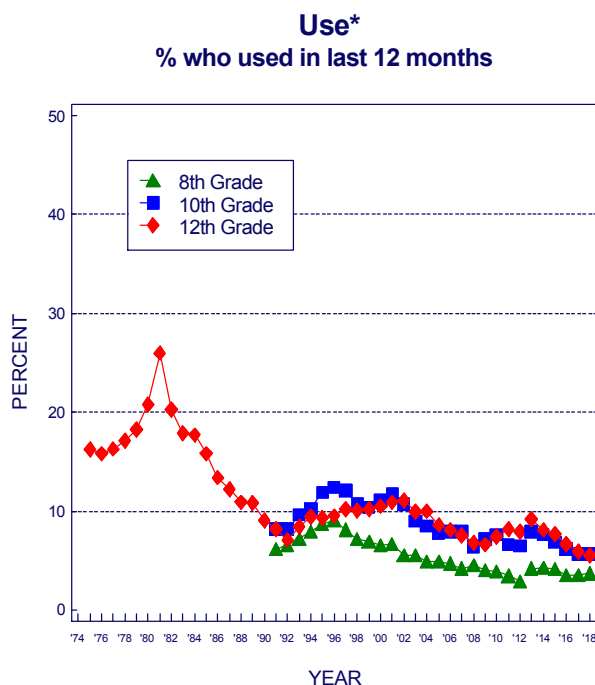
Source. The Monitoring the Future study, the University of Michigan.

*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.

24

Methamphetamine and Crystal Methamphetamine (Ice)

One subclass of amphetamines is called meth-amphetamine ("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 12th-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 12th-grade questionnaires only, we introduced our usual set of three questions for *crystal methamphetamine*, measuring lifetime, annual, and 30-day use. Among 12th 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. It stood at 0.6% in 2018. This variable is graphed on the first panel of the following page.

In 1999, responding to the growing concern about meth-amphetamine use in general—not just crystal methamphetamine use—we added a full set of three questions about the use of *any* methamphetamine to the

questionnaires for all three grade levels. These questions yield a somewhat higher annual prevalence for 12th 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 in any form 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 2018 of 0.4% for 8th graders, 0.4% for 10th graders, and 0.5% for 12th graders. These levels are among the lowest recorded in each of the three grades. They are down considerably from the first measurements taken in 1999, when they were 3.2%, 4.6%, and 4.7% for the three grades, respectively (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 college students and all adults through age 55.)

Other Measures

Data on perceived risk and availability for crystal methamphetamine, specifically, may be found on the following 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 and has shown a slight decline since. 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

Use
% who used in last 12 months

Risk
% seeing "great risk" in using once or twice

Disapproval
% disapproving of using once or twice

(no data)

Availability
% saying "fairly easy" or "very easy" to get
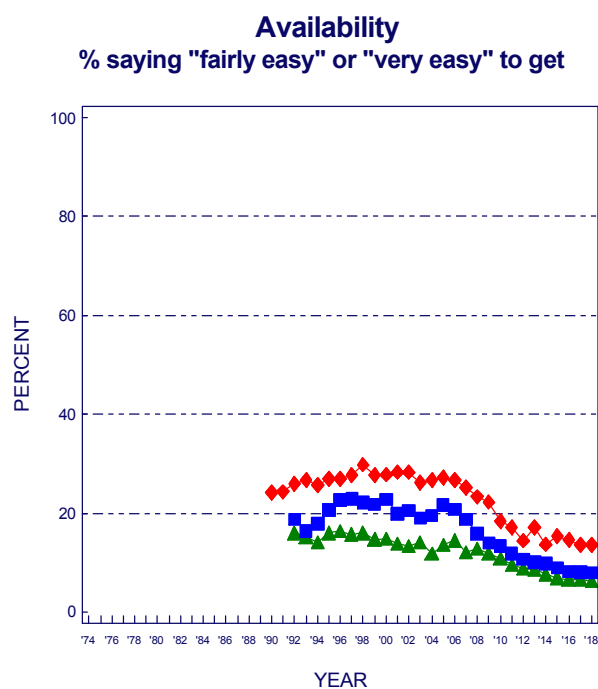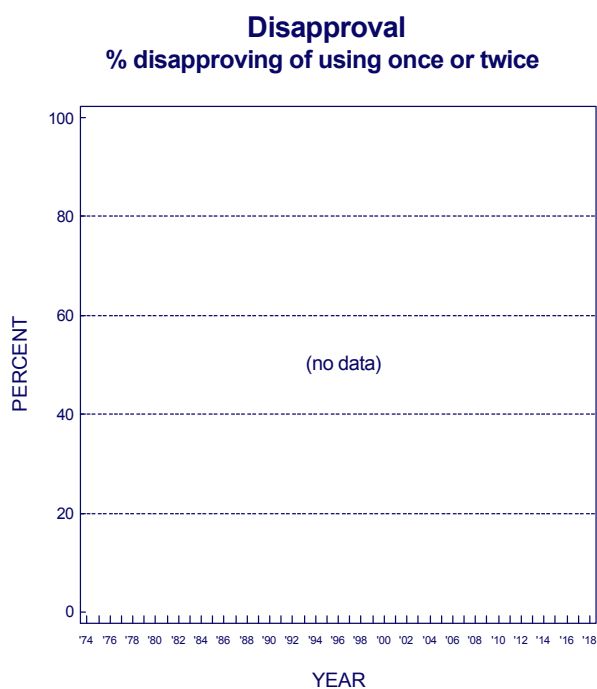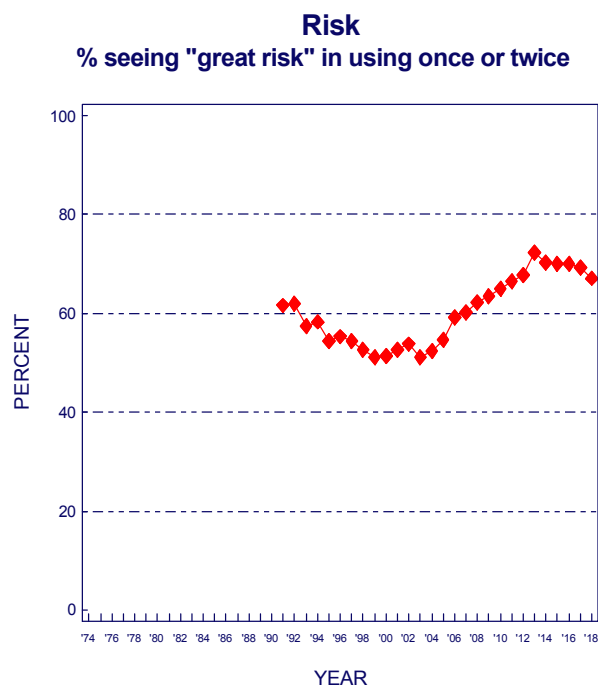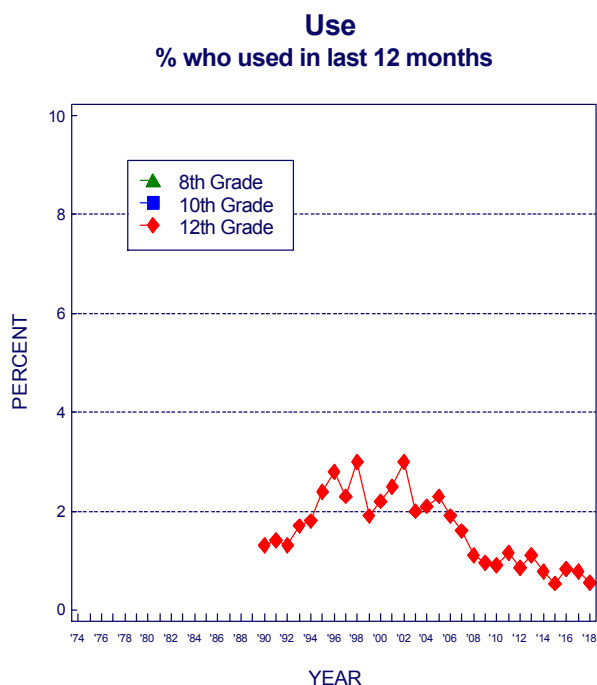
Source. The Monitoring the Future study, the University of Michigan.

Heroin

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 following 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 12th 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 8th graders (1.6%), in 1997 among 10th graders (1.4%), and in 2000 among 12th 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. Then, annual prevalence for the three grades combined declined, from 0.8% in 2010 to 0.3% in 2018. In 2017 and 2018 use reached around its lowest levels in all three grades (0.2%, 0.3%, and 0.4%, respectively) with little change for the last two or three years.

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 8th grade users were taking heroin by each method of ingestion and some—nearly a third of users—were using both means. At 10th grade, a somewhat higher proportion of all users took heroin without a needle, and at 12th 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 8th and 12th graders, and very slight declines since then in 8th and 10th grades.

Use with a needle has fallen considerably in all three grades since the mid-1990s; annual prevalence in 2018 for the three grades stood at 0.2%, 0.1%, and 0.3%, respectively. Heroin use by injection peaked in the mid-1990s and has declined considerably since (see Table 6). . The proportional declines were greatest in the lower grades. While an opioid 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. Perceived risk of use without a needle rose slightly in all grades between 1995 and 1997, foretelling an end to the increase in that form of use. Risk at 12th grade was still rising through 2016, but has fallen some since then. 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 12th 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 nearly leveling in 2014 or 2015 and staying steady since then.

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

Use
% who used in last 12 months

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

Risk*
% seeing "great risk" in using once or twice

Disapproval*
% disapproving of using once or twice

Availability
% saying "fairly easy" or "very easy" to get
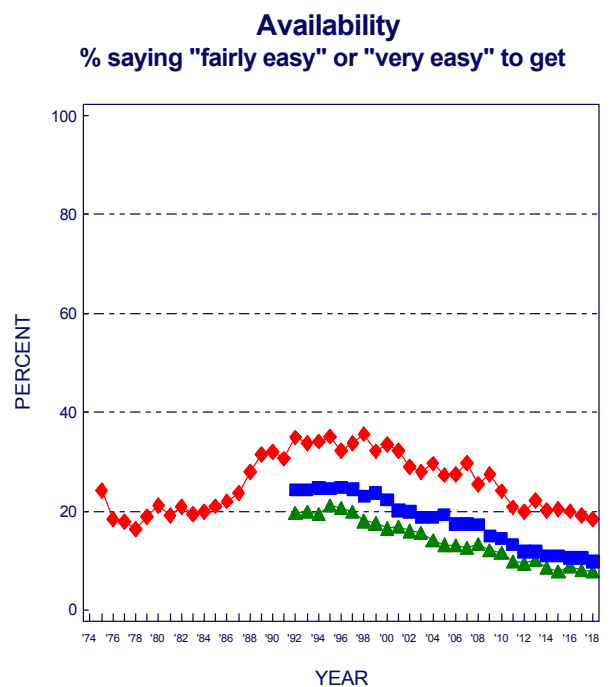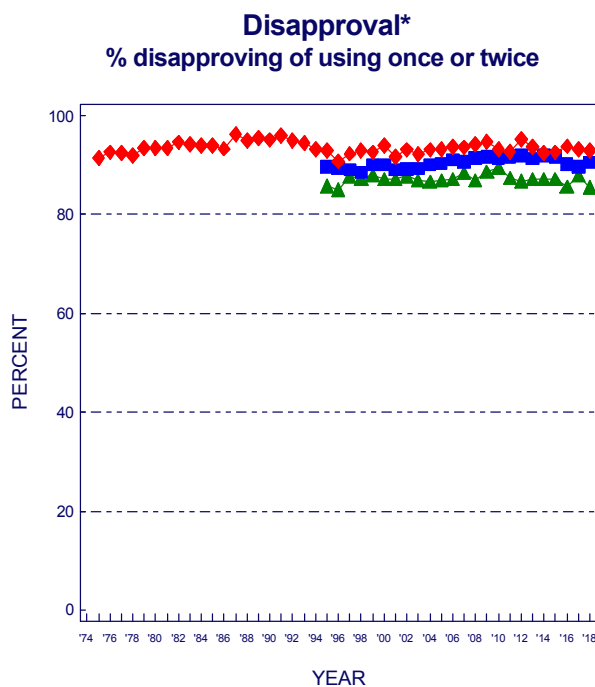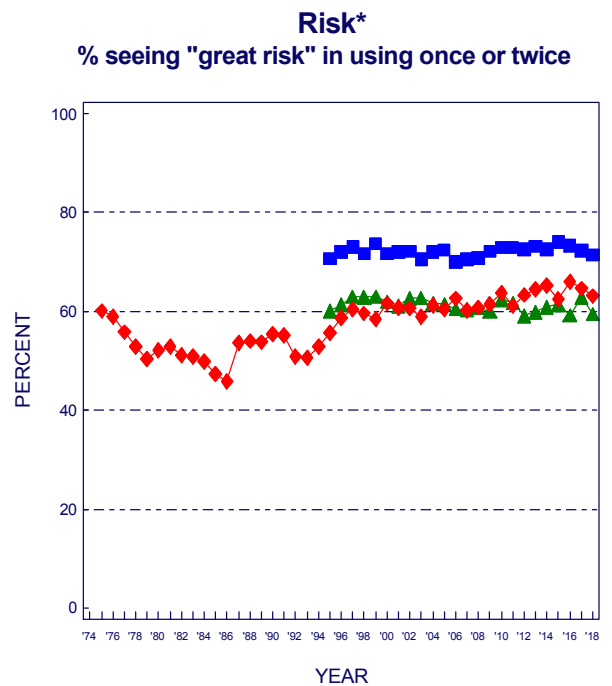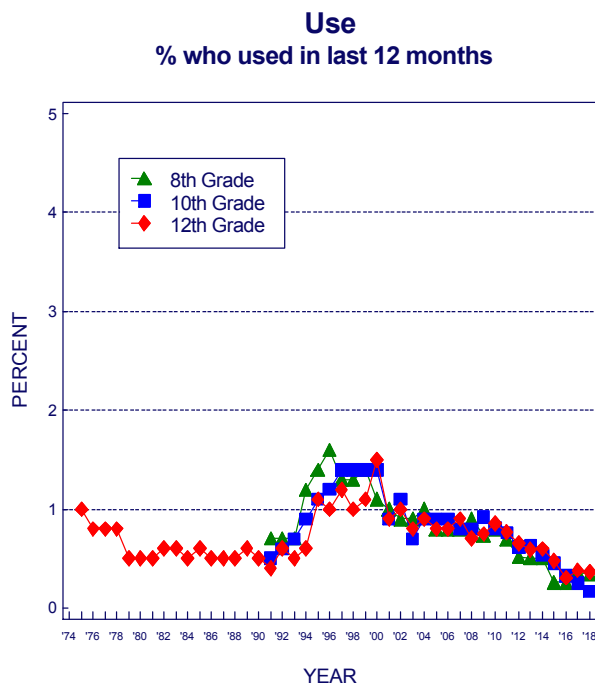
Source. The Monitoring the Future study, the University of Michigan.

*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 12th 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. In the late 1970s, opium and codeine were among the narcotics most widely used. In recent years Vicodin, codeine, Percocet, OxyContin, hydrocodone, and roxycodone have been the most prevalent.

Trends in Use

Use is reported for 12th graders only, because we considered the data from 8th and 10th graders to be of questionable validity. As shown in the first panel of the following page, 12th 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 2009, use has declined substantially from 9.2% to 3.4% in 2018.

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 following 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%. It is possible that the increase in use during the 1990s gave rise to a cohort effect, now reflected in use at older ages.

In a departure from the usual arrangement on the following 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 12th grade data on perceived risk (since 2010), showing high but gradually declining risk levels (see Table 11).

OxyContin use increased 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 2018 was down to 0.8%, 2.2%, and 2.3% 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 2018, annual prevalence rates continued to decline and were 0.6%, 1.1%, and 1.7% for 8th, 10th, and 12th graders respectively.

Availability

Questions were asked about the availability of narcotics other than heroin, taken as a class. (See the fourth panel on the following page.) Perceived availability increased gradually among 12th 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 8th and 10th 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, particularly among 12th graders.

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*
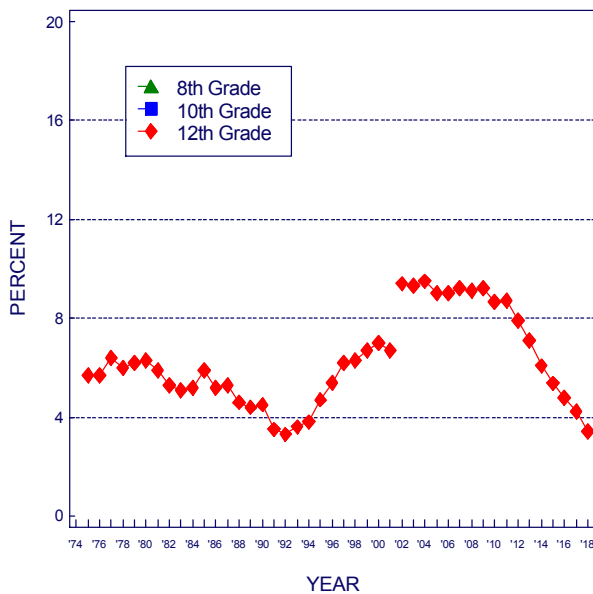
OxyContin Use
% who used OxyContin in last 12 months
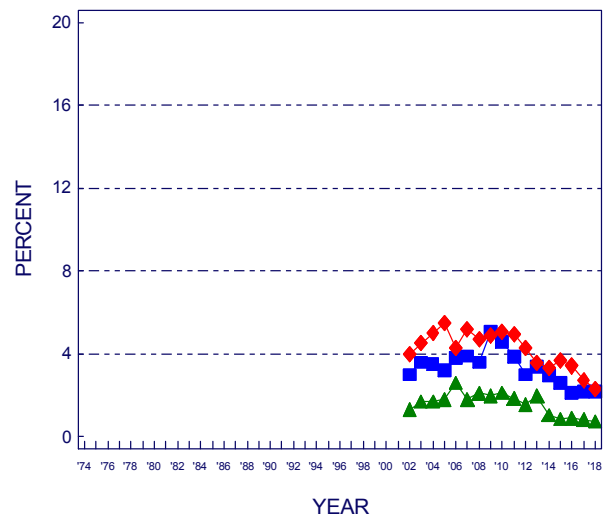
Vicodin Use
% who used Vicodin in last 12 months
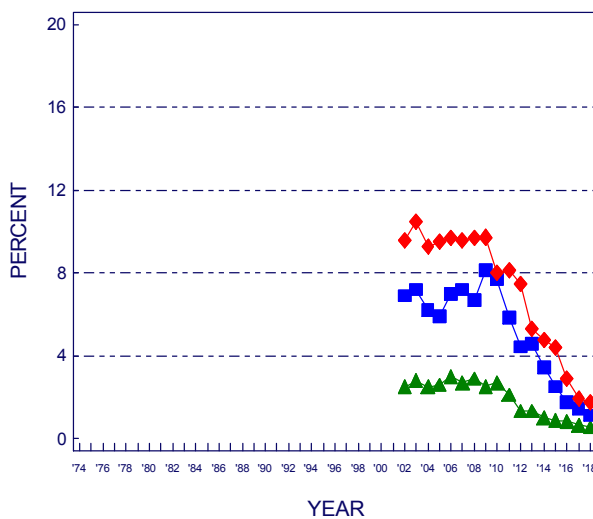
Availability of Narcotics other than Heroin**
% saying "fairly easy" or "very easy" to get
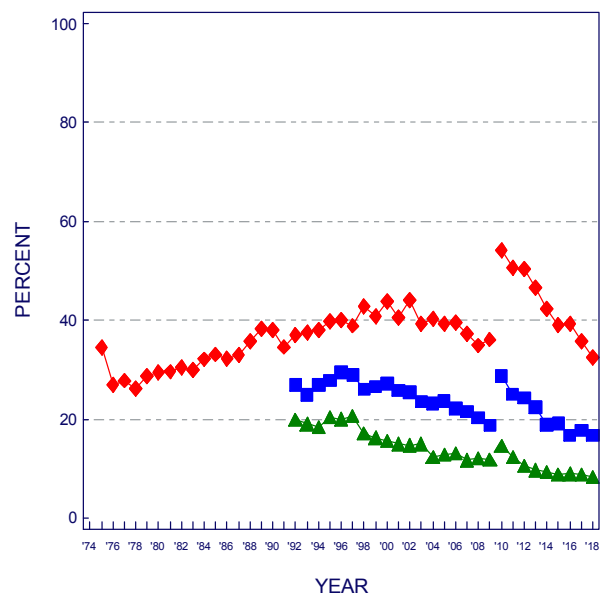
Source. The Monitoring the Future study, the University of Michigan.

*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, *Valium* and *Xanax* are the tranquilizers most commonly used by 12th graders (only 12th 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.) 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 following 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 12th 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 12th graders, rising steadily through 2002, before leveling. Use also rose steadily among 10th graders, but began to decline some in 2002. Use peaked much earlier among 8th graders in 1996 and then declined slightly for two years. Tranquilizer use remained relatively stable among 8th graders through 2010 at considerably lower levels than in the upper two grades. Use in 8th grade showed a brief decline in 2011 before stabilizing again. From 2002 to

2005, there was some decline among 10th graders, followed by a leveling, then a resumption of the decline through 2013 before drifting up again. Among 12th graders, there was a very gradual decline from 2002 through 2007, before leveling and then decreasing in 2010, 2013, and significantly in 2018. There has been little further change since 2012 or 2013 in the lower grades. In 2018, the prevalence of use of these prescription-type drugs was somewhat lower than their recent peak levels, with annual prevalence rates of 2.0%, 3.9%, and 3.9% 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 12th graders reporting non-medically 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, 12th 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 13% by 2018 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 increased in the lower grades and leveled at 12th grade.

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

Use*
% who used in last 12 months

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

Risk
% seeing "great risk" in using once or twice

(no data)

Disapproval
% disapproving of using once or twice

(no data)

Availability
% saying "fairly easy" or "very easy" to get
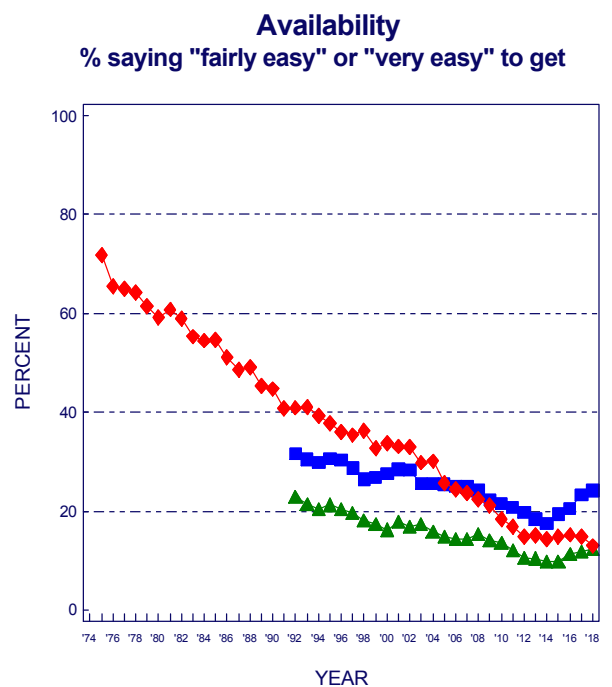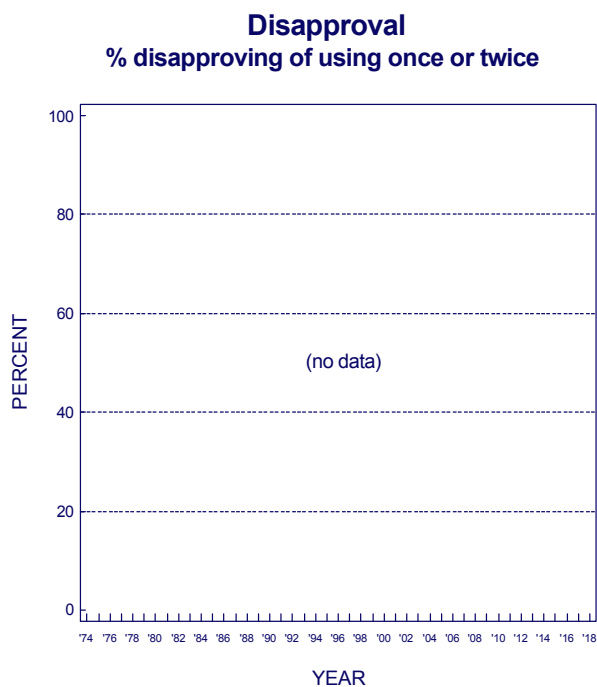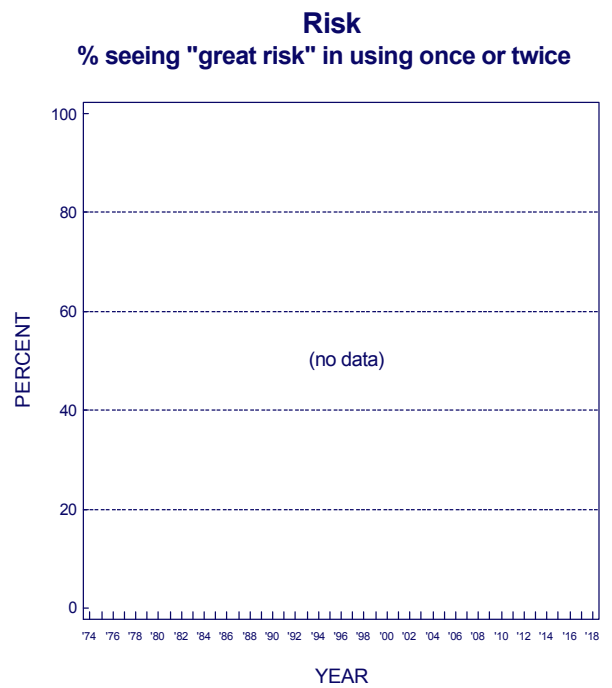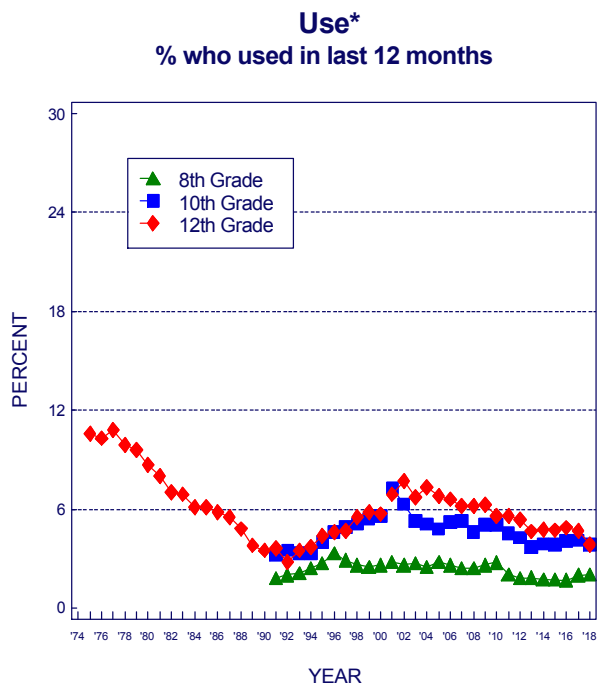
Source. The Monitoring the Future study, the University of Michigan.

*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 12th graders because we believe that 8th and 10th 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 12th 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 since 2005, and by 2018 the annual prevalence rate was down by about six tenths from its recent peak, falling to 2.7%. The sedative methaqualone (known as Quaaludes) was included in the MTF study from the very beginning, and was never as popular among 12th graders as barbiturates; methaqualone 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 following 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,[13] but perceived risk continued to climb gradually through 2013, before turning down. Prior to that point, use declined as perceived risk rose during the 2000s.

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 following 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 12th graders but not among students in the lower grades.) Perceived availability for sedatives (barbiturates) has continued to decline overall through 2018.

[13] Risk of regular use actually shifted up in 2004.

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

Use*
% who used in last 12 months

Risk**
% seeing "great risk" in using once or twice

Disapproval**
% disapproving of using once or twice

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

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

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, as Molly), methamphetamine, GHB (gammahydroxybutyrate), ketamine (special K), and Rohypnol. (For discussion of LSD and meth-amphetamine, 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 10th and 12th 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 8th, 10th, and 12th graders by 2001. From 2001 to 2005, use declined substantially to 1.7%, 2.6%, and 3.0%, respectively. Following some irregular changes, in 2014 use was down slightly in 8th grade (to 0.9%) and 10th grade (to 2.3%) and up slightly in 12th 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 in the Tables 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, then declined a bit more (n.s.) in the upper grades in 2018.

Perceived Risk

In 2001, 12th graders' perceived risk of ecstasy use jumped by eight 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 8th and 10th, and then among 12th 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 8th 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. Perceived risk continued to decline in the 8th grade since 2013, but not in the upper grades. It is clear that 8th graders have seen MDMA as less dangerous than than students in the upper grades since they were first asked this question in 2000.

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 8th, 2004 for 10th, and 2006 for 12th graders, suggesting some cohort effect in this attitude. After those peaks, disapproval dropped sharply among 8th graders and less among 10th graders before leveling, and it did not drop among 12th graders until 2010—again suggesting a cohort effect. After 2015 there was a further decline in disapproval in the lower two grades, but some increase in grade 12. The erosion in perceived risk and disapproval—which was sharpest among 8th graders—left these groups more vulnerable to a possible rebound in use; and some rebound appears to have occurred during the past decade.

Availability

The figure shows a dramatic rise in 12th 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 10th and 12th grades. Decreased availability may help to account for the declines in use since 2011.

Rohypnol, GHB, and Ketamine

Rohypnol, GHB, and *ketamine* are called "date rape drugs" because they can have amnesiac effects, can be added to food or drink without a victim's knowledge, and are sometimes used to assist in sexual assaults. By 2018 annual prevalence of all these drugs in 12th grade had declined by at least half since reaching their peak prevalence in the mid-1990s and early 2000s. In 2018, 0.7% of 12th 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 0.3% annual prevalence of GHB in 2018 compares with a level of 1.9% in 2000. And the 0.7% prevalence of ketamine in 2018 compares with a level of 2.5% in 2000. In 8th and 10th grades the level of Rohypnol was 0.3% in 2018. (Questions about GHB and ketamine were discontinued in 8th and 10th 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

Use*
% who used in last 12 months

Legend:
- 8th Grade (green triangle)
- 10th Grade (blue square)
- 12th Grade (red diamond)

Risk*
% seeing "great risk" in using once or twice

Disapproval*
% disapproving of using once or twice

Availability
% saying "fairly easy" or "very easy" to get
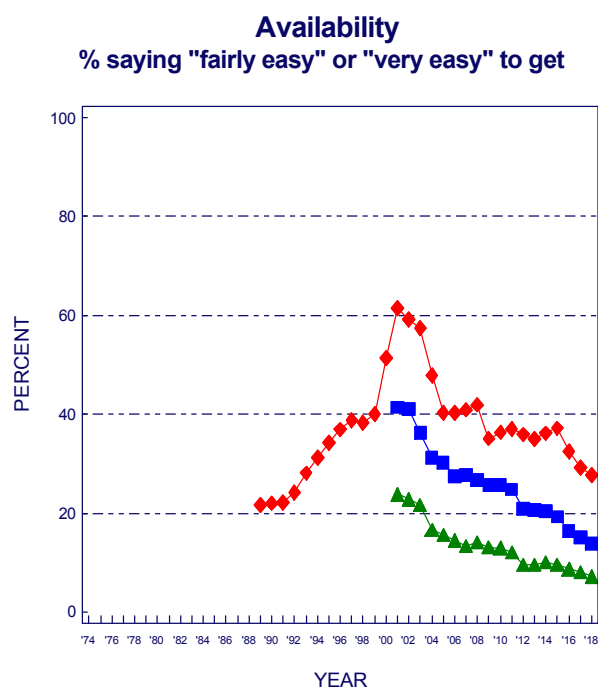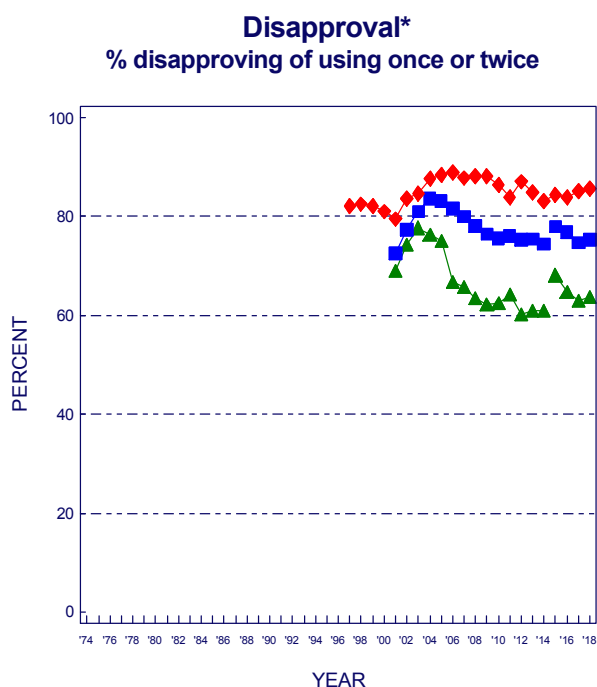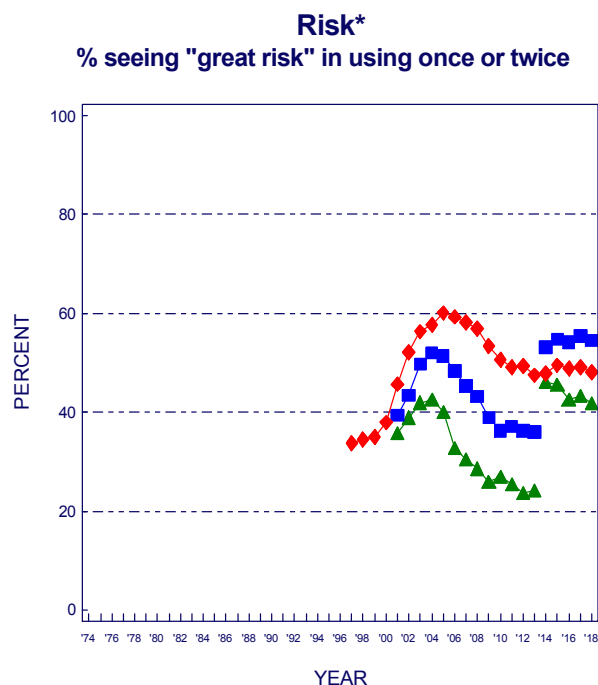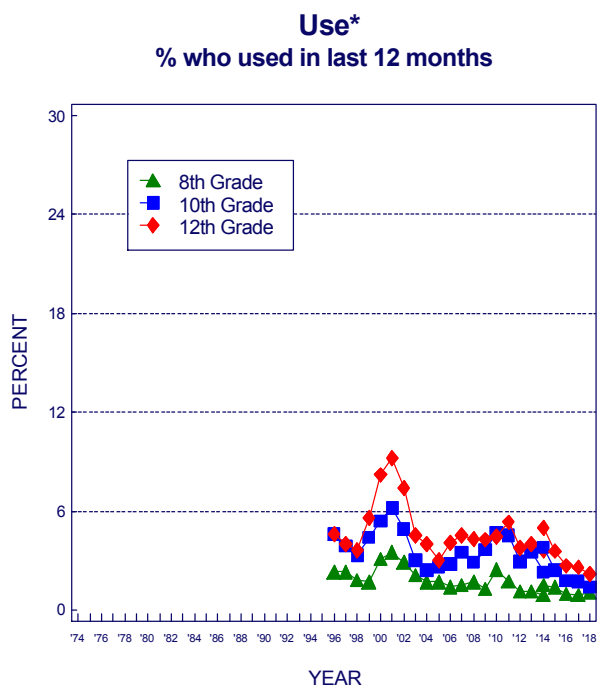
Source. The Monitoring the Future study, the University of Michigan.
*In 2014/2015, revised sets of questions on ecstasy were introduced in which molly was added to the description. This likely explains the discontinuity in the results for those years.

Alcohol

Alcohol has been widely used by young people in the U.S. for a very long time. In 2018, the proportions of 8th, 10th, and 12th graders who reported drinking an alcoholic beverage in the 30-day period prior to the survey were 8%, 19%, and 30%, 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 12th 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 2018, proportional declines since the recent peaks reached in the 1990s were 73%, 64%, and 56% 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. However, the declines in use resumed in the upper grades in 2018 with prevalence rates of 4%, 9%, and 14% for grades 8, 10, and 12, respectively.

In 2005 two measures of *extreme* binge drinking (also called high-intensity drinking) were introduced at 12th grade—one based on having 10 or more drinks in a row in the past two weeks, and the other based on having 15 or more drinks (see Table 9). There has been more than a 50% decline in these measures since then.

Perceived Risk

Across the past four decades, since the MTF study began, the majority of 12th 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 12th 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.[14]

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 12th grade. As with perceived risk, disapproval increased appreciably in all grades, though it leveled after 2012 among 8th graders and after 2016 among 10th graders. Among twelfth graders it increased significantly in 2018.

Availability

Perceived availability of alcohol, which until 1999 was asked only of 8th and 10th graders, was very high and mostly steady in the early 1990s. Since 1996, however, there have been substantial declines in 8th and 10th grades. For 12th grade, availability has declined only modestly with 86% in 2018 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.

---

[14] 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**

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

PERCENT

YEAR

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

PERCENT

YEAR

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

PERCENT

YEAR

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

PERCENT

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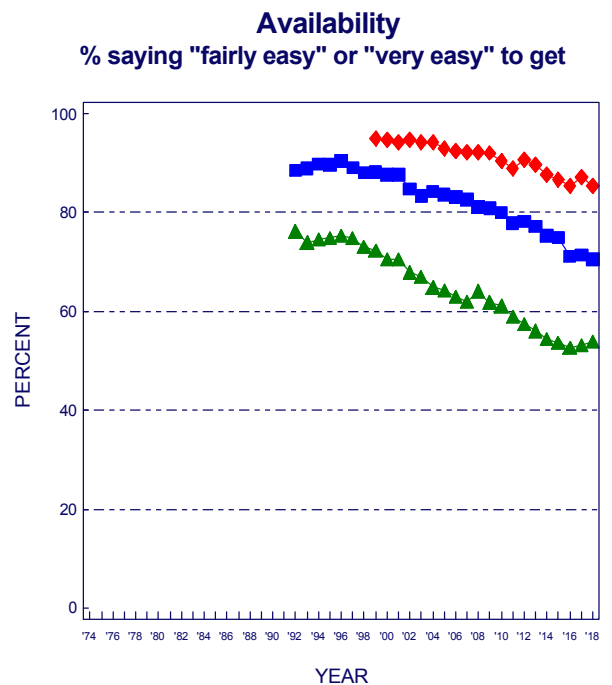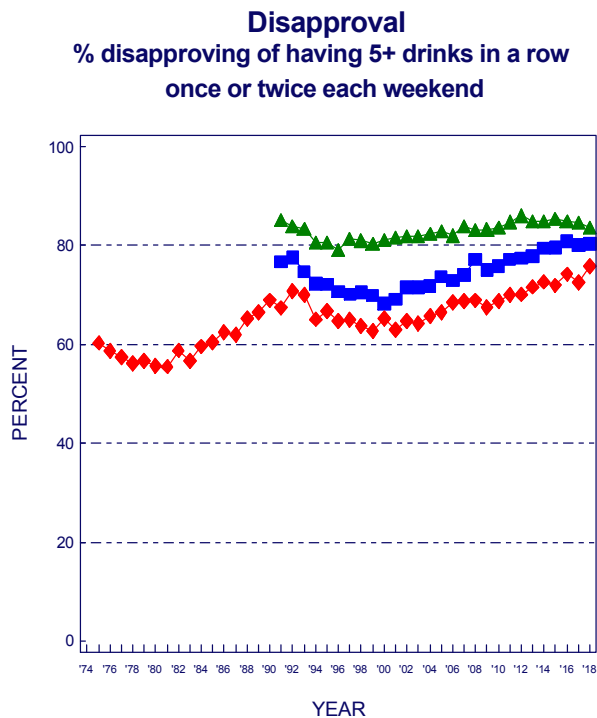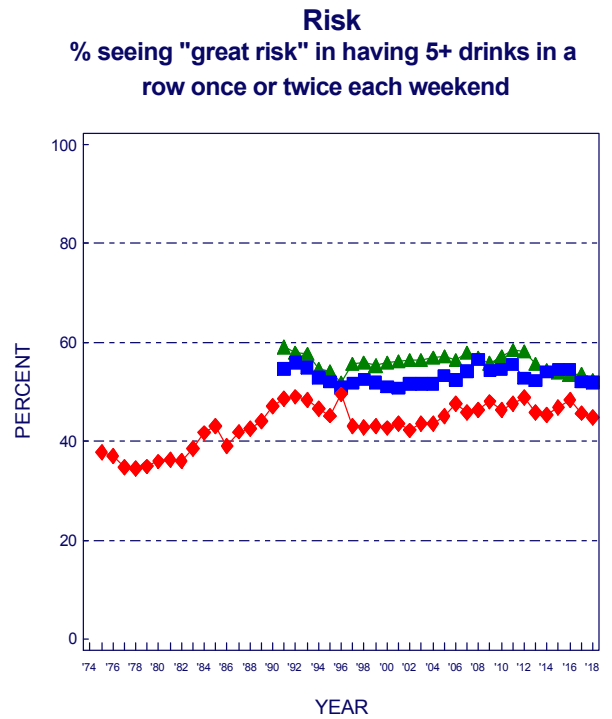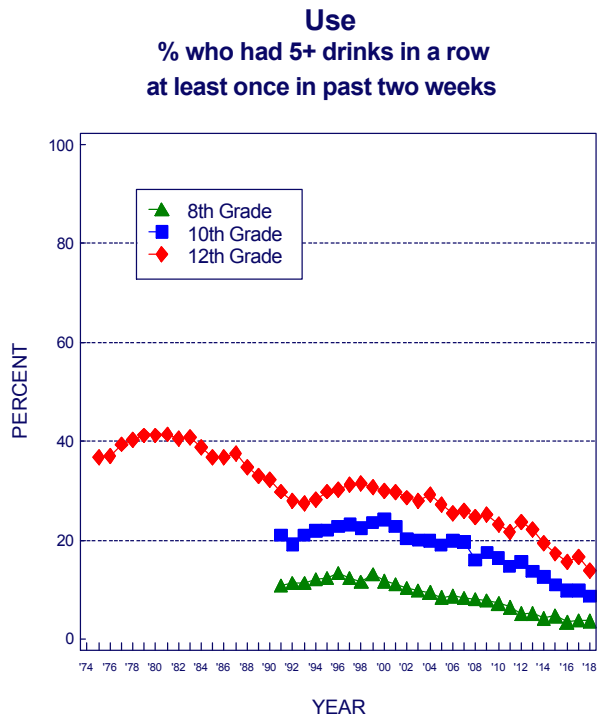
Source. The Monitoring the Future study, the University of Michigan.

Cigarettes

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 12th 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 12th-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 8th and 10th graders and after 1992 among 12th 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. This dramatic increase in smoking may well have contributed to the increase in nearly all forms of drug use during this relapse period. Smoking peaked in 1996 for 8th and 10th graders and in 1997 for 12th graders before beginning a fairly steady and substantial decline that continued through 2017 for 8th, and 2018 for 10th and 12th graders. This important decline in adolescent smoking decelerated after about 2002. *Still, by 2018, 30-day prevalence levels had fallen from peak levels by 90%, 86%, and 75% in grades 8, 10, and 12, respectively.* (In 2018 prevalence among 12th graders continued to fall by a significant 2.0 percentage points.) An increase in 2009 in federal taxes on cigarettes (from $0.39 to $1.01 per pack) may have contributed to the declines in use. Of particular importance, smoking initiation by 8th graders declined by four fifths from a peak of 49% in 1996 to 9% by 2018. These changes are of tremendous importance to the eventual health and longevity of this generation of adolescents.

Perceived Risk

Among 12th 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. Risk 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 10th and 12th grades over the past three to four years, and has remained fairly level among 8th 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 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 12th graders, there was a gradual increase in disapproval of smoking from 1976 to 1986, followed by some erosion over the next decade through 1997 as use rose. 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 which became increasingly negative, but leveled off eight or nine 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, such as reducing availability.

Availability

Since 1996, cigarette availability has declined considerably among 8th and 10th graders, though it has decelerated since 2016. Some 46% of 8th graders and 62% of 10th graders now say that cigarettes would be very easy or fairly easy to get, down from 78% in 1992 among 8th graders and 91% in 1995 among 10th graders. An availability measure was added for 12th graders in 2017: it shows 75% saying the same in 2018, down about 3 percentage points since 2017 (not significant).

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

Use
% who used in last 30 days

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

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.

40
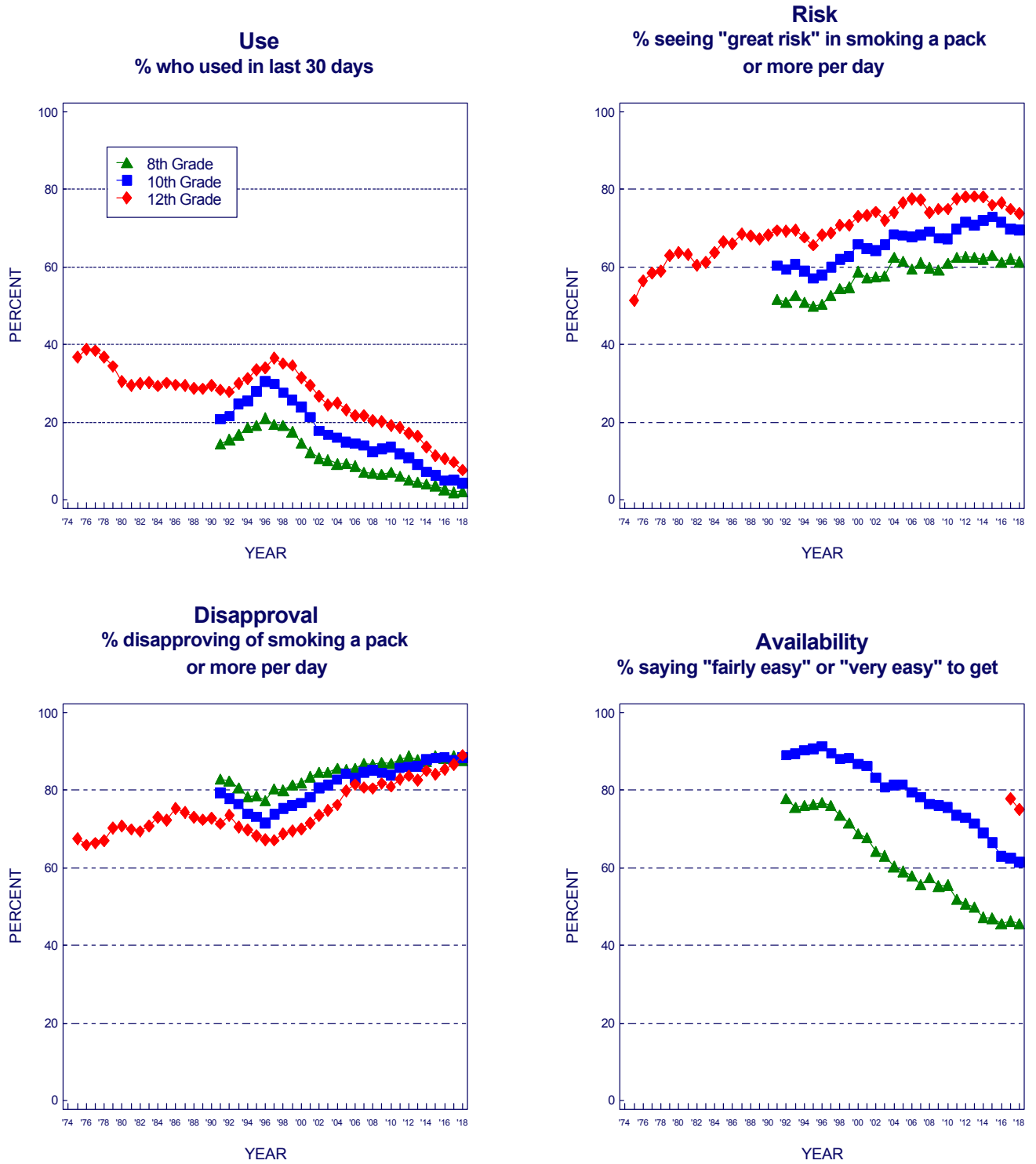
Smokeless Tobacco

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 12th grade surveys in 2011 and to the 8th and 10th grade surveys in 2012. In addition, in 2011 snus and dissolvable tobacco were added as examples in the long-standing general 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 8th 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 2.1% by 2018 Among 10th 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 3.9% in 2018 Among 12th 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 4.2% in 2018. Thirty-day prevalence of daily use of smokeless tobacco fell gradually but appreciably for some years. Daily usage rates in 2017 were 0.3%, 1.0%, and 1.6% 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 2018 were 3.0%, 6.2%, and 7.6% in grades 8, 10, and 12, versus 1.1%, 1.4%, and 1.0% for females. The respective current daily use rates for males were 0.5%, 1.8%, and 3.2% compared to 0.1%, 0.2%, and 0.3% for females.

Annual prevalence in 2018 for *snus* was 1.3%, 3.1%, and 4.7% among 8th, 10th, and 12th graders, respectively, reflecting a decline since 2012 in all three grades. For *dissolvable tobacco*, the corresponding figures were 0.6%, 1.1%, and 1.3%, 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 12th 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 12th 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 8th and 10th 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 8th graders from 74% in 1996 to 82% in 2005, about where it was in 2018 (80%). For 10th graders, disapproval rose from 71% in 1996 to 82% in 2008, also about where it was in 2018 (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
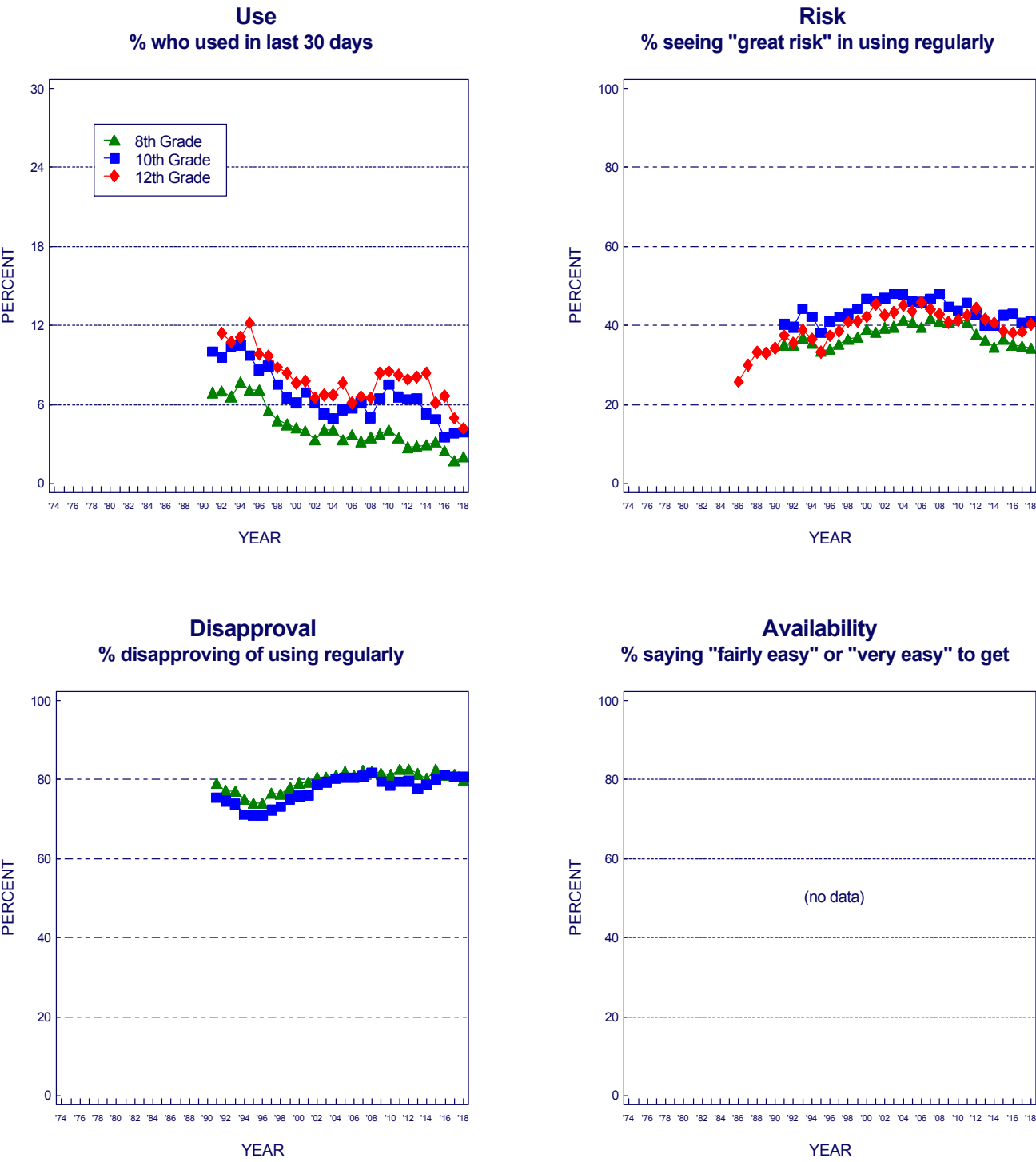
Use
% who used in last 30 days

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

Risk
% seeing "great risk" in using regularly

Disapproval
% disapproving of using regularly

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

(no data)

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

42

Vaping

Vaping involves the use of a battery-powered device to heat a liquid or plant material that releases chemicals in an inhalable aerosol. Examples of vaping devices include e-cigarettes such as the popular brand JUUL and "mods." The aerosol 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 are likely to be attractive to teens (e.g., bubble gum and milk chocolate cream).

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 national estimates for vaping of specific substances in the past 30 days, past 12 months, and lifetime. (See the last three graphs on the next page.)

Trends in Use
Levels of ***nicotine vaping*** in the past year increased dramatically in 2018. In 10th and 12th grade the annual increases are the largest ever recorded for any substance in the 44 years that MTF has tracked adolescent drug use. From 2017 to 2018 nicotine vaping increased by 3.4, 8.9, and 10.9 percentage points in 8th, 10th, and 12th grades. These increases resulted in yielded prevalence levels of 11%, 25%, and 30%, respectively.[15] Additional students may get nicotine in what they vape without being aware of it, so the prevalence levels should be considered conservative.[16]

Levels of ***marijuana vaping*** also increased significantly in 2018. In 2018, 4.4%, 12.4%, and 13.1%% of 8th, 10th, and 12th graders respectively reported vaping marijuana in the past 12 months, which is up 1.3, 4.2, and 3.6 percentage points, respectively, since 2017. These annual levels are quite close to the levels for *lifetime* prevalence of vaping marijuana, indicating that marijuana vaping is a recent phenomenon and/or that non-continuation is limited.

Levels of vaping *'just flavoring'* increased significantly in 2018. Past year prevalence was 15%, 25%, and 26% in, 8th, 10th, and 12th grades, respectively, with significant increases of 3.2, 5.4, and 5.2 percentage points.

These increases in vaping of nicotine, marijuana, and 'just flavoring' drove an increase in ***any vaping***, defined as vaping any of the three substances. In 2018 prevalence was 18%, 32%, and 37% in 8th, 10th, and 12th grades. This represents increases of 4%, 9%, and 9%, respectively, since 2017.

Evidence is accumulating, including from MTF, that vaping predicts future cigarette experimentation.[17,18] Thus high levels of vaping threatens to reverse some of the progress made in reducing cigarette smoking among U.S. adolescents over the past two plus decades. One worries that the large increase in nicotine vaping could lead to a stall in the decline in smoking or even an increase in adolescent cigarette smoking, after a long period of decline.

Perceived Risk
MTF has included questions on perceived risk of regular e-cigarette use since 2014. At that time perceived risk of use was between 14% and 15% in all three grades. Since then it has increased overall to 22% and 23% in 8th and 10th grades, and to 18% in 12th grade. (Results are not charted.) Still, e-cigarettes have one of the lowest levels of perceived risk for regular use of all drugs, including alcohol.

Adolescents see higher risk when asked about "vaping nicotine." The percentage of 12th graders who considered "great risk" in regular vaping of nicotine was 28% in 2018, which compares to 18% for regular use of e-cigarettes. In 10th grade the parallel numbers were 31% and 23%, and in 8th grade they were 32% and 22%. These results suggest that many adolescents in all grades 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 (not charted). In 2017 these questions were replaced with questions about disapproval of vaping an e-liquid with nicotine on a regular basis. Disapproval was high in 2018 at 69%, 68%, and 71%, and was little changed from 2017.

Availability
Data on availability of vaping devices were first gathered in 2017. They show high and rising measures of availability.

[15]Miech, R., Johnston, L., O'Malley, P. M., Bachman, J. G., & Patrick, M. E. (2018). Adolescent vaping and nicotine use in 2017-2018 - U.S. national estimates. *New England Journal of Medicin*
[16] Miech, R. A., Johnston, L. D., O'Malley, P. M., and Terry-McElrath, Y. M. (2019). The national prevalence of adolescent nicotine use in 2017: Estimates taking into account student reports of substances vaped. *Addictive Behaviors Reports*, in press.

[17] 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.
[18] 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.

Vaping: Trends in 30-Day Use
Grade 12

Any Vaping*
% who vaped in last 30 days

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

PERCENT

YEAR

Vaping Nicotine
% who vaped in last 30 days

PERCENT

YEAR

Vaping Marijuana
% who vaped in last 30 days

PERCENT

YEAR

Vaping Just Flavoring
% who vaped in last 30 days

PERCENT

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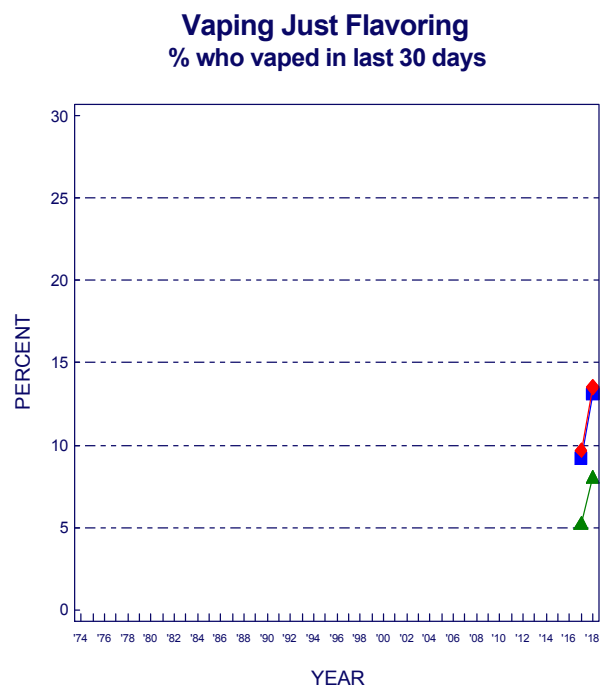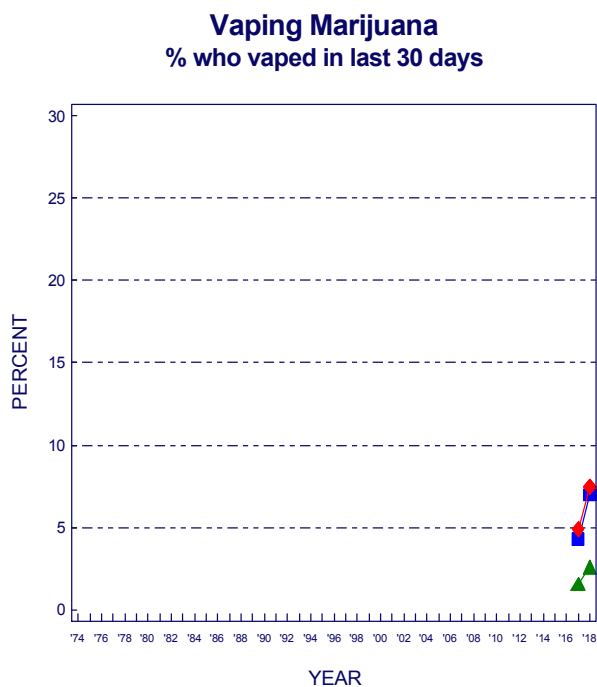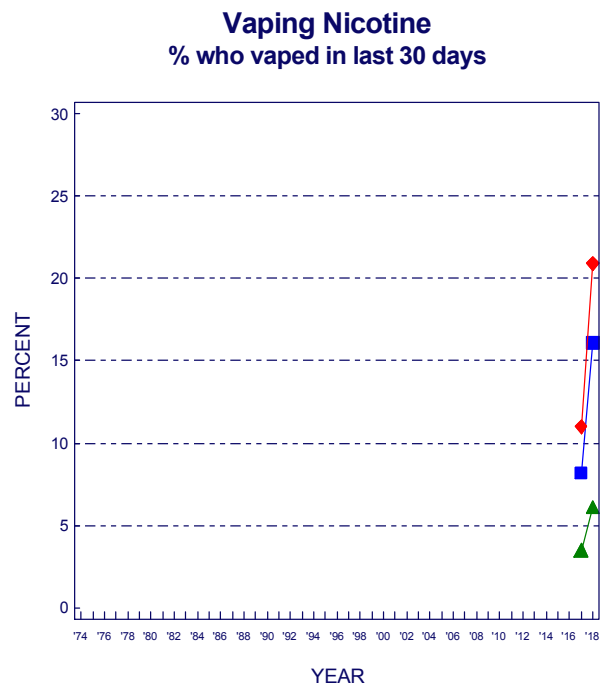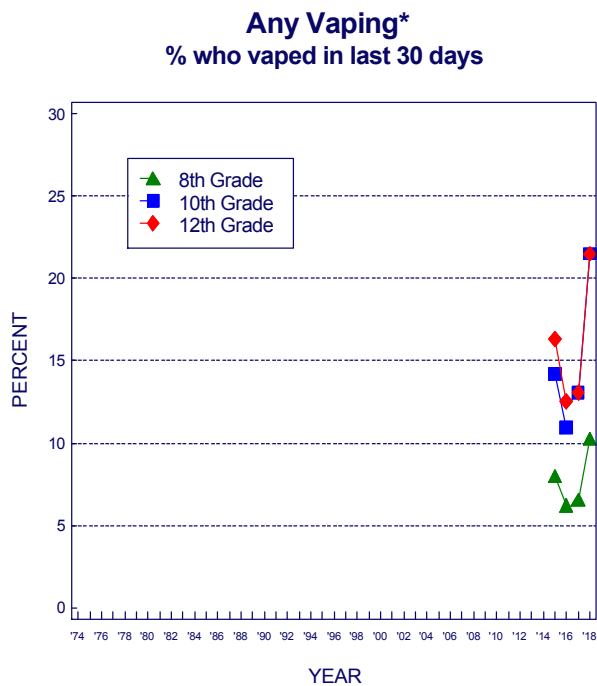
Source. The Monitoring the Future study, the University of Michigan.

*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.

44

Other Tobacco Products

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 8th and 10th 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 to determine whether additional questions on the substance may be warranted in future surveys. Small cigar and hookah use are charted separately on the following page.

Smoking Tobacco Using a Hookah. The past 12-month prevalence of hookah use rose after it was first measured in 2010, from 17.1% in 2010 to 22.9% in 2014; but it then declined sharply to 7.8% by 2018. . Only about 5% of the 12th grade students in 2018 indicated use on more than two occasions during the prior 12 months, suggesting that a considerable amount of hookah use is light or experimental.

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 2018, the annual prevalence for small or little cigars (our question uses the term "small cigars") was 9%, a significant decline from 13.3% the year before. Smoking small cigars has declined significantly since 2010, when annual prevalence was 23%. 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. Six percent of 12th

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 also fall into the lower federal taxation bracket than cigarettes do.) 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 8th and 12th grades, followed by little change in 2017 and some further decline in 12th grade only in 2018 (Table 7). Thirty-day prevalence in 2018 was 2.6%, 5.3%, and 8.9% for flavored and 1.6%, 3.1%, and 5.8% 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 1.7%, 2.8%, and 5.2% in 2018—with all three grades showing declines in 2016 (significant in 8th and 10th grades) but no significant changes in 2017 or 2018 (see Table 7). As with other tobacco products, the usage trends have been down for large cigars.

Small Cigars and Tobacco using a Hookah : Trends in Annual Use
Grade 12

Small Cigar Use
% who used in last 12 months
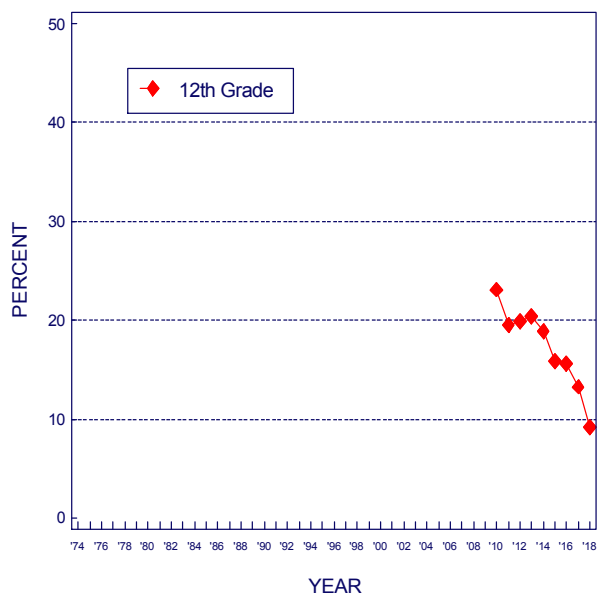
Use of Tobacco with a Hookah
% who used in last 12 months
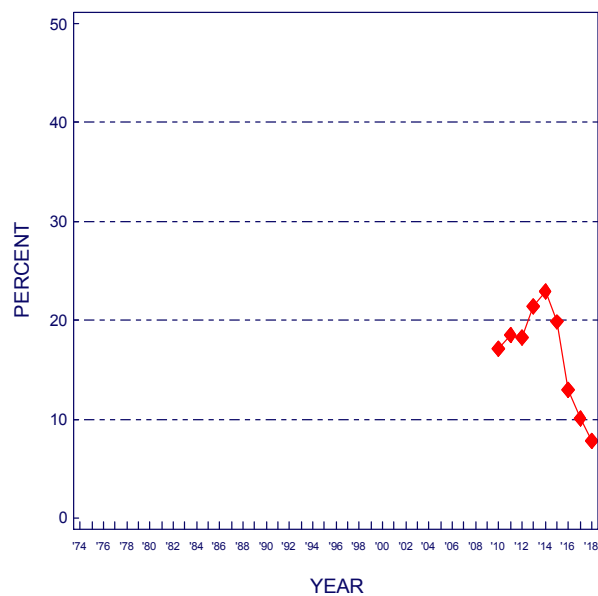
Disapproval
% disapproving of using once or twice
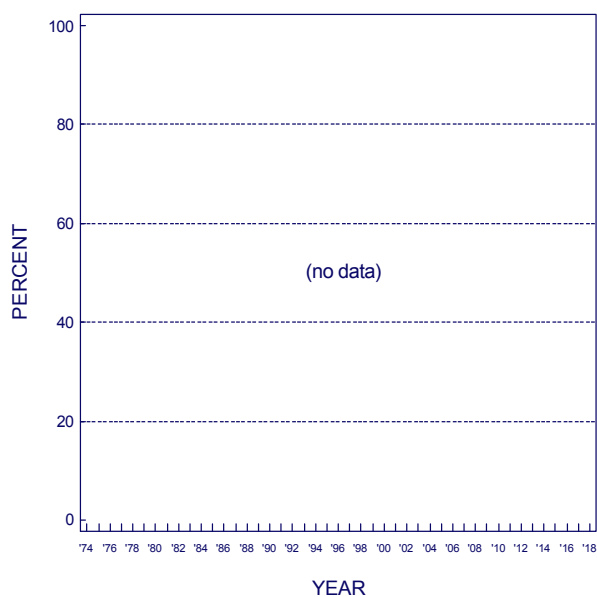
(no data)

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

(no data)

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

46
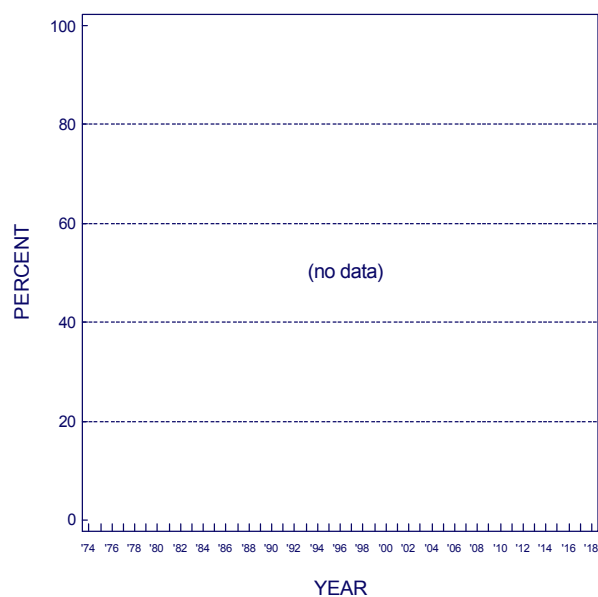
Steroids

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 2018, 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 8th and 10th graders, ranging between 0.9% and 1.2% (as use among 12th graders increased). In 1999, however, use among both 8th and 10th 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 8th grade and from 1.9% to 2.8% in 10th 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 2018 among all 8th graders, steroid use had declined by about two thirds to 0.6%. Among 10th graders, use continued to increase—perhaps reflecting a cohort effect—reaching 2.2% in 2002, but then declined by about two thirds to 0.6% by 2018. In 12th 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 12th 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 since then. Use is now down from recent peak levels by about two thirds among 8th and 10th graders, and about six tenths among 12th 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 8th and 10th graders for only a few years. All grades seemed to have a peak in perceived risk around 1993. The longer-term data from 12th 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 12th 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, and in 2018 it stood at 50%.

Disapproval

Among 12th 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 and in 2018 it was at or near 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

Use
% who used in last 12 months

Legend:
- 8th Grade
- 10th Grade
- 12th Grade

Risk*
% seeing "great risk" in using once or twice

Disapproval*
% disapproving of using once or twice

Availability
% saying "fairly easy" or "very easy" to get
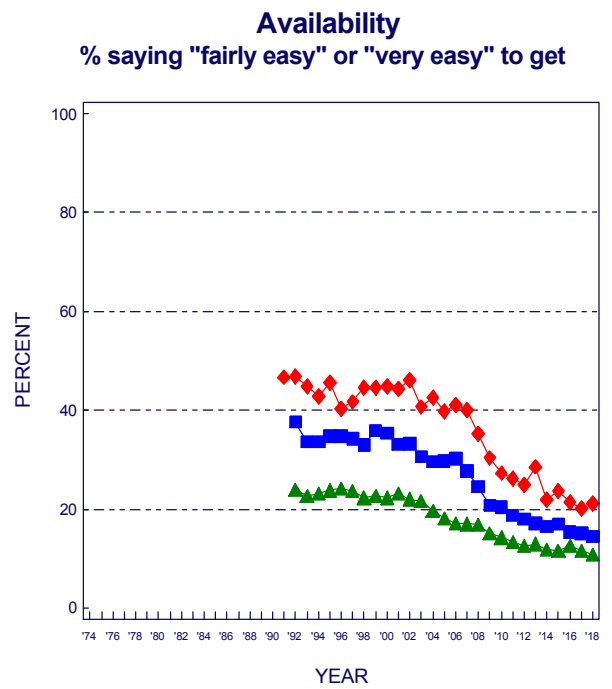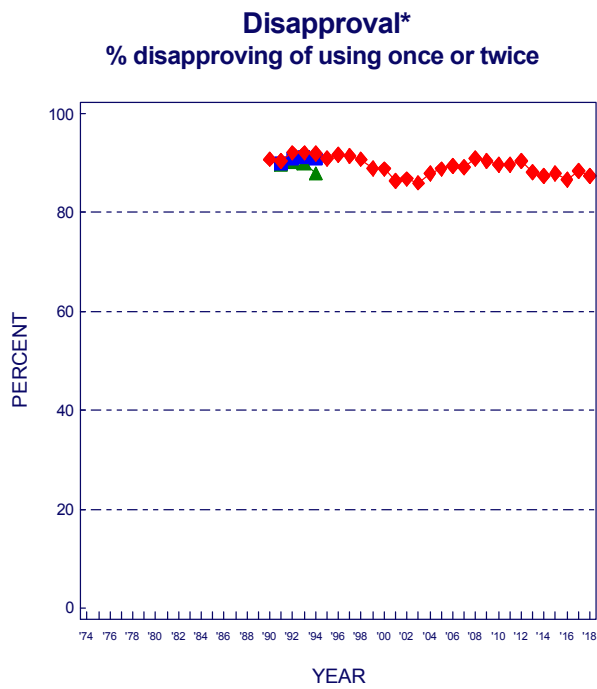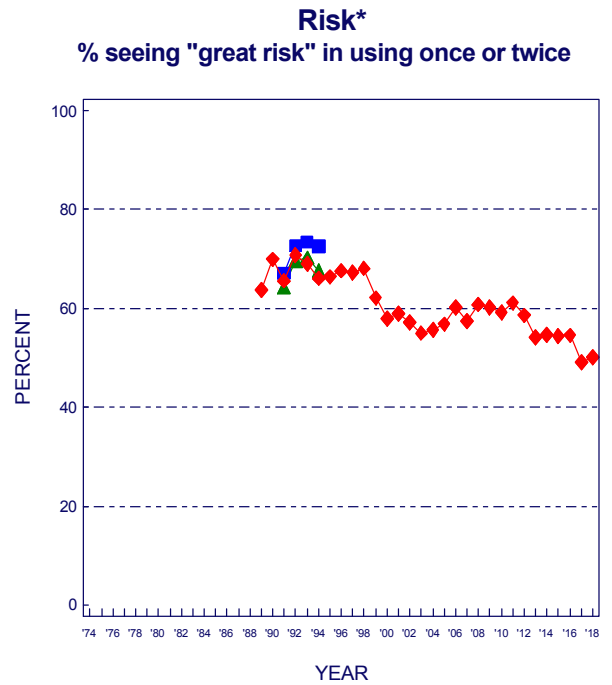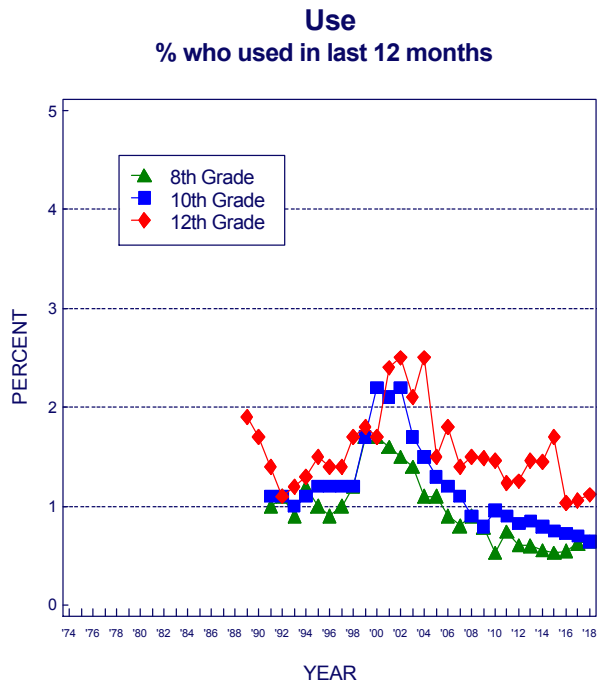
Source. The Monitoring the Future study, the University of Michigan.
*Question discontinued in 8th- and 10th-grade questionnaires in 1995.

48

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 2018, 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, *figures* showing the subgroup trends for all drugs. This is Occasional Paper 92 in the series and contains data through 2018. The figures 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 12th 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 8th graders by 2013 and among 10th graders by 2016. Among 12th graders the gender gap nearly closed by 2018. 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, and snus specifically. The primary exception may be found in the misuse of prescription drugs like amphetamines and tranquilizers, where females have tended to have higher rates of use in the lower grades. Females also had higher rates of prescription sedative use but in recent years there has been little gender difference at 12th grade (the only grade reported). Misuse of prescription narcotic drugs, reported only at grade 12, has consistently had considerably higher rates of use among males.

For most drugs, though, the gender differences among 8th graders are very small, with females fairly consistently reporting slightly higher rates than males through 2015; since then males have been equal to or higher than females in the use of several drugs. Among 10th graders, males have generally, though not always, reported higher rates than females. Use of any illicit drug *other* than marijuana is higher among females than among males at 8th grade but lower than among males at 12th grade.

Alcohol use has tended to show a narrowing of gender differences over the life of the study. Among 12th graders, for many years males consistently reported distinctly higher 30-day and daily alcohol usage rates than females; however, the difference have narrowed considerably. In 8th and 10th grades there had been almost no gender difference, as has been true among 10th graders since about 2002; but in the last few years females have had 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 8th grade.

Gender differences in 30-day cigarette smoking among 8th and 10th graders have generally been minimal. Tenth grade males reported slightly higher rates than females from about 2006 through 2014, but since then this difference has largely disappeared. Among 12th graders, females generally had higher rates of smoking than males through 1990, but since then males have generally had the higher rates (8% vs. 6% in 2018) due to smoking declining more rapidly among females (though both genders have shown very substantial declines).

In sum, the gender differences in substance use appear to emerge for many drugs as students grow older. In 8th 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.[1] 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 some decline among White students. (Marijuana use tends to drive the overall index of any illicit drug use and in 2018 annual prevalence of marijuana use was higher among African American students than among White students in 8th grade and barely different in 10th and 12th grades.)

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 12th 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 use by Whites or Hispanics.

African American students' use of alcohol and cigarettes has in the past tended to be significantly lower than Whites in all three grades. In fact, African Americans' use of cigarettes had been dramatically lower than Whites' use—a difference that emerged largely during the life of the study (i.e., since 1975). However, declines in use in all three grades and in all three groups—but particularly among Whites-- have greatly reduced the differences among them in 30-day smoking prevalence..

Hispanic students generally have had rates of use of the various drugs that place them between the other two groups in 12th grade—usually closer to the rates for Whites than for African Americans. In the last few years, however, both African American and Hispanic students in the upper grades have attained similar rates of use to Whites of any illicit drug. 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 continued for several years. In 12th grade Hispanics have the highest use rates for a number of substances: synthetic marijuana, cocaine, crack, cocaine other than crack, crystal methamphetamine, and sedatives (barbiturates). In 8th 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.

We refer the reader to the recent Occasional Paper 90 and current-year Occasional Paper 92 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 at considerably higher risk for using illicit drugs, drinking heavily, and particularly smoking cigarettes. As is usually the case, 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 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

---

[1]Two-year movning averages are used to compare these three groups in order to moderate fluctuations due to sample sizes and clustering by school.

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 2018, 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 12th grade over most of the life of the study; and prior to 1987 use among 12th graders was highest in the large cities. Use of any illicit drug other than marijuana generally has been lower in large cities at 12th grade, and in the lower grades use has been lowest in the large cities. There has been little consistent difference by population density since the late 1980s. Crack and heroin use have generally not been concentrated in urban areas meaning that students in city schools are not necessarily at higher rish, and that no parents or 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. The removal in 1997 of the Joe Camel ad campaign, which seemed to reach males from educated families in particular, may have played a role in this.

The correlation between parental education and binge drinking has generally been consistently slightly negative among 8th graders. Among 10th graders, the correlation has also been consistently negative, though even smaller. In both grades, the correlations have become smaller in recent years. In contrast to the lower grades, among 12th graders, the correlation has been consistently positive, though small; but in recent years it has been increasing.

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 introduction of entirely new delivery devices, like vaporizers, can be another cause of variability over time.

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 likely to be 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 12th 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 extensive media coverage of potential adverse consequences occurring primarily in 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 8th graders has declined substantially, and more students are saying that they are not familiar with the drug.

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" and "synthetic marijuana." 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 many newer synthetic drugs should be considered dangerous simply 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 extemely 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[b]	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[b]	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[b]	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	**37.8**	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	**19.4**	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‡	**9.2**	7.6	6.9	6.3	5.9
LSD	5.5	5.7	6.5	6.9	8.1	8.9	**9.1**	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‡	**6.7**	6.0	5.8	5.6	5.4
Ecstasy (MDMA)[c], original	—	—	—	—	—	4.9	5.2	4.5	5.3	7.2	**8.0**	6.9	5.4	4.7	4.0
Revised	—	—	—	—	—	—	—	—	—	—	—	5.7	5.3	5.5	5.5
Cocaine	4.6	4.0	4.1	4.5	5.1	6.0	6.6	7.0	**7.2**	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	**3.8**	**3.8**	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	**6.3**	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	**2.2**	**2.2**	2.1	1.7	1.7	1.5	1.5	1.5
With a needle	—	—	—	—	1.1	1.2	1.1	1.1	**1.3**	1.0	0.9	0.9	0.9	0.9	0.9
Without a needle	—	—	—	1.3	1.3	1.7	1.7	1.6	1.6	**1.8**	1.3	1.3	1.3	1.2	1.1
Amphetamines[b]	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	—	—	—	—	—	—	—	—	**6.5**	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‡	**7.9**	**7.9**	7.3	7.1	6.8
Alcohol	*80.1*	79.2‡	68.4	68.4	68.2	68.4	**68.8**	67.4	66.4	66.6	65.5	62.7	61.7	60.5	58.6
Been drunk	**46.3**	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	—	—	—	—	—	—	—	—	—	—	—	—	—	**54.7**	**54.7**
Cigarettes	53.5	53.0	54.0	54.6	55.8	**57.8**	57.4	56.0	54.5	51.8	49.1	44.2	40.8	39.6	37.4
Smokeless tobacco	—	26.2	25.6	**26.3**	26.0	25.7	22.7	21.1	19.4	17.9	16.6	15.2	14.1	13.6	13.8
Any Vaping[d]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	**3.3**	**3.3**	3.0	2.5	2.1

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	2018	2017–2018 change	Peak year–2018 Absolute change	Peak year–2018 Proportional change (%) [a]	Low year–2018 Absolute change	Low year–2018 Proportional change
Any Illicit Drug [b]	34.0	32.7	32.6	33.2	34.4	34.7	34.1	36.0‡	34.9	34.3	32.6	33.4	33.9	+0.5	-1.0	-2.8	+1.3	+4.0
Any Illicit Drug other than Marijuana [b]	18.2	17.7	16.8	16.5	16.8	16.1	15.5	16.8‡	15.8	15.1	14.3	14.0	14.2	+0.2	-1.6 s	-10.4	+0.2	+1.2
Any Illicit Drug including Inhalants [b]	39.3	38.0	37.9	37.9	38.8	38.7	37.9	39.3‡	37.9	37.4	34.9	36.5	36.6	+0.2	-1.3	-3.4	+1.8 s	+5.1
Marijuana/Hashish	28.9	27.9	27.9	29.0	30.4	31.0	30.7	32.0	30.5	30.0	28.6	29.3	29.7	+0.3	-8.1 sss	-21.5	+1.8 s	+6.4
Inhalants	13.7	13.5	13.1	12.5	12.1	10.6	10.0	8.9	8.8	7.5	6.5	6.7	6.6	-0.1	-12.8 sss	-66.0	+0.1	+1.5
Hallucinogens	5.7	5.8	5.6	5.3	5.8	5.7	5.0	5.0	4.3	4.3	4.3	4.2	4.1	-0.1	-5.0 sss	-54.8	—	—
LSD	2.5	2.6	2.7	2.5	2.8	2.7	2.5	2.6	2.4	2.8	3.1	3.1	3.0	0.0	-6.1 sss	-66.6	+0.6 s	+25.4
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	2.9	2.8	-0.1	-3.8 sss	-57.6	—	—
Ecstasy (MDMA) [c], original	4.3	4.5	4.1	4.6	5.5	5.5	4.6	4.7	3.5	—	—	—	—	—				
Revised	—	—	—	—	—	—	—	—	5.0	4.0	3.1	3.0	2.7	-0.3	-2.4 sss	-47.0	—	—
Cocaine	5.3	5.2	4.8	4.2	3.8	3.4	3.3	3.1	2.9	2.7	2.3	2.5	2.6	+0.1	-4.6 sss	-63.9	+0.3	+11.2
Crack	2.6	2.5	2.2	2.0	1.9	1.6	1.5	1.5	1.3	1.3	1.0	1.1	1.1	0.0	-2.7 sss	-71.2	+0.1	+8.2
Other cocaine	4.7	4.6	4.1	3.7	3.4	3.1	2.9	2.7	2.5	2.3	2.1	2.1	2.3	+0.2	-4.0 sss	-63.7	+0.2	+8.8
Heroin	1.4	1.4	1.3	1.4	1.4	1.2	1.0	1.0	0.9	0.7	0.6	0.6	0.6	0.0	-1.7 sss	-75.0	—	—
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	0.4	0.4	0.0	-0.9 sss	-71.6	—	—
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	0.4	0.4	0.0	-1.4 sss	-78.8	—	—
Amphetamines [b]	10.1	9.5	8.6	8.6	8.9	8.6	8.3	10.5‡	9.7	9.1	8.1	7.7	7.7	0.0	-2.0 sss	-20.4	0.0	+0.6
Methamphetamine	3.4	2.5	2.5	2.2	2.2	1.8	1.6	1.5	1.4	1.1	0.8	0.9	0.7	-0.1	-5.8 sss	-88.6	—	—
Tranquilizers	7.0	6.7	6.3	6.5	6.6	6.0	5.8	5.2	5.3	5.2	5.5	5.6	5.4	-0.3	-2.5 sss	-31.9	+0.2	+3.3
Alcohol	57.0	56.3	55.1	54.6	53.6	51.5	50.0	48.4	46.4	45.2	41.9	41.7	41.2	-0.5	-27.5 sss	-40.1	—	—
Been drunk	37.6	36.6	35.1	35.9	34.2	32.5	32.8	31.7	29.2	28.2	26.4	26.0	25.6	-0.3	-20.7 sss	-44.6	—	—
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	33.5	34.3	+0.8	-20.3 sss	-37.2	+0.8	+2.5
Cigarettes	35.0	33.3	31.3	31.2	30.9	28.7	27.0	25.6	22.9	21.1	18.2	17.0	16.1	-1.0	-41.7 sss	-72.2	—	—
Smokeless tobacco	13.3	12.9	12.3	13.5	14.5	13.8	13.5	12.8	12.1	11.3	10.3	8.7	8.8	+0.1	-17.5 sss	-66.5	+0.1	+1.1
Any Vaping [d]	—	—	—	—	—	—	—	—	—	29.9	26.6‡	28.2	33.4	+5.2 sss	—	—	+5.2 sss	+18.5
Vaping nicotine	—	—	—	—	—	—	—	—	—	—	—	18.9	25.2	+6.3 sss	—	—	+6.3 sss	+33.4
Vaping marijuana	—	—	—	—	—	—	—	—	—	—	—	8.5	11.7	+3.2 sss	—	—	+3.2 sss	+38.1
Vaping just flavoring	—	—	—	—	—	—	—	—	—	—	—	24.9	28.3	+3.3 sss	—	—	+3.3 sss	+13.4
Steroids	2.0	1.8	1.6	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.3	1.2	1.3	0.0	-2.0 sss	-62.0	0.0	-2.7

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.

[a] 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%.

[b] 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.

[c] 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.

[d] 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.

55

TABLE 2
Trends in <u>Annual</u> 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[c]	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[c]	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[c]	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)[d], 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[c]	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[b]	—	—	—	—	—	—	—	—	—	**1.4**	1.2	1.2	1.2	1.1	**0.8**
Ketamine[b]	—	—	—	—	—	—	—	—	—	**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 2 (continued)
Trends in Annual 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	2018	2017–2018 change	Peak year–2018 change Absolute change	Peak year–2018 change Proportional change (%) [a]	Low year–2018 change Absolute change	Low year–2018 change Proportional change
Any Illicit Drug [c]	25.8	24.8	24.9	25.9	27.3	27.6	27.1	28.6‡	27.2	26.8	25.3	26.5	27.1	+0.6	-0.1	-0.4	+1.7 s	+6.9
Any Illicit Drug other than Marijuana [c]	12.7	12.4	11.9	11.6	11.8	11.3	10.8	11.4‡	10.9	10.5	9.7	9.4	9.3	-0.1	-1.7 ss	-15.1	—	—
Any Illicit Drug including Inhalants [c]	28.7	27.6	27.6	28.5	29.7	29.8	29.0	30.5‡	28.5	28.4	26.3	28.3	**28.8**	+0.4	-5.7 sss	-19.0	+2.5 ss	+9.4
Marijuana/Hashish	22.0	21.4	21.5	22.9	24.5	25.0	24.7	25.8	24.2	23.7	22.6	23.9	24.3	+0.5	-1.5 sss	-5.8	+3.0 sss	+13.9
Synthetic marijuana	—	—	—	—	—	—	**8.0**	6.4	4.8	4.2	3.1	2.8	2.6	-0.1	-5.4 sss	-67.1	—	—
Inhalants	6.9	6.4	6.4	6.1	6.0	5.0	4.5	3.8	3.6	3.2	3.1	2.8	2.9	0.0	-7.3 sss	-71.8	+0.2	+8.5
Hallucinogens	3.6	3.8	3.8	3.5	3.8	3.7	3.2	3.1	2.8	2.8	2.8	2.7	2.7	0.0	-3.3 sss	-54.4	—	—
LSD	1.4	1.7	1.9	1.6	1.8	1.8	1.6	1.6	1.7	1.9	2.0	2.1	2.0	-0.1	-4.3 sss	-68.7	+0.6 ss	+40.9
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	1.8	1.7	0.0	-2.3 sss	-56.9	—	—
Ecstasy (MDMA) [d], original	2.7	3.0	2.9	3.0	3.8	3.7	2.5	2.8	2.2					—	—	—	—	—
Revised									3.4	2.4	1.8	1.7	1.5	-0.2	-1.8 sss	-54.5	—	—
Salvia	—	—	—	—	3.5	**3.6**	2.7	2.3	1.4	1.2	1.2	0.9	0.8	-0.2 s	-2.9 sss	-79.1	—	—
Cocaine	3.5	3.4	2.9	2.5	2.2	2.0	1.9	1.8	1.6	1.7	1.4	1.6	1.5	-0.1	-2.9 sss	-66.0	+0.1	+7.4
Crack	1.5	1.5	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.8	0.6	0.7	0.6	-0.1	-1.8 sss	-73.8	0.0	+7.3
Other cocaine	3.1	2.9	2.6	2.1	1.9	1.7	1.7	1.5	1.5	1.5	1.2	1.3	1.3	0.0	-2.7 sss	-66.7	+0.1	+7.6
Heroin	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.0	-1.0 sss	-78.1	—	—
With a needle	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.0	-0.5 sss	-68.0	0.0	+4.9
Without a needle	0.6	0.7	0.6	0.5	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.0	-0.9 sss	-83.4	—	—
OxyContin	3.5	3.5	3.4	**3.9**	3.8	3.4	2.9	2.9	2.4	2.3	2.1	1.9	1.7	-0.1	-2.2 sss	-55.4	—	—
Vicodin	6.3	6.2	6.1	6.5	5.9	5.1	4.3	3.7	3.0	2.5	1.8	1.3	1.1	-0.2	-5.4 sss	-82.8	—	—
Amphetamines [c]	6.8	6.5	5.8	5.9	6.2	5.9	5.6	7.0‡	**6.6**	6.2	5.4	5.0	5.0	-0.0	-1.6 sss	-24.9	—	—
Ritalin	3.5	2.8	2.6	2.5	2.2	2.1	1.7	1.7	1.5	1.4	1.1	0.8	0.8	0.0	-3.4 sss	-81.2	—	—
Adderall	—	—	—	4.3	**4.5**	4.1	4.4	4.4	4.1	4.5	3.9	3.5	3.5	-0.1	-1.0 sss	-23.0	—	—
Methamphetamine	2.0	1.4	1.3	1.3	1.3	1.2	1.0	1.0	0.8	0.6	0.5	0.5	0.5	0.0	-3.6 sss	-88.8	—	—
Bath salts (synthetic stimulants)	—	—	—	—	—	—	0.9	0.9	0.8	0.7	0.8	0.5	0.7	+0.1	-0.3 s	-28.9	+0.1	+26.0
Tranquilizers	4.6	4.5	4.3	4.5	4.4	3.9	3.7	3.3	3.4	3.4	3.5	3.6	3.2	-0.3	-2.3 sss	-41.0	—	—
OTC Cough/Cold Medicines	**5.4**	5.0	4.7	5.2	4.8	4.4	4.4	4.0	3.2	3.1	3.2	3.0	3.2	+0.2	-2.2 sss	-40.8	+0.2	+6.3
Rohypnol	0.7	0.8	0.7	0.6	0.8	0.9	0.7	0.6	0.5	0.5	0.7	0.5	0.4	0.0	-0.5 sss	-53.0	—	—
GHB [b]	0.9	0.7	0.9	0.9	0.8	0.8								—	—	—	—	—
Ketamine [b]	1.1	1.0	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	36.7	36.7	36.1	-0.6	-25.2 sss	-41.1	—	—
Been drunk	30.7	29.7	28.1	27.1	25.9	25.9	26.4	25.4	23.6	22.5	20.7	20.4	20.0	-0.3	-16.9 sss	-45.7	—	—
Flavored alcoholic beverages	42.4	40.8	39.0	37.8	35.9	33.7	32.5	31.3	29.4	28.8	25.3	25.9	26.1	+0.2	-18.4 sss	-41.3	+0.8	+3.0
Alcoholic beverages containing caffeine						**19.7**	18.6	16.6	14.3	13.0	11.2	10.6	10.1	-0.5	-9.6 sss	-48.8	—	—
Any Vaping												21.5	28.9	+7.4 sss			+7.4 sss	+34.2
Vaping nicotine												13.9	21.6	+7.6 sss			+7.6 sss	+54.8
Vaping marijuana											6.8	9.9		+3.1 sss			+3.1 sss	+44.7
Vaping just flavoring												17.2	21.8	+4.6 sss			+4.6 sss	+26.9
Dissolvable tobacco products							**1.4**	1.4	1.2	1.1	0.9	0.9	1.0	+0.1	-0.4 s	-28.9	+0.1	+8.8
Snus							**5.6**	4.8	4.1	3.8	3.6	2.6	3.0	+0.4	-2.6 sss	-46.3	+0.4	+16.4
Steroids	1.3	1.1	1.1	1.0	0.9	0.9	0.9	0.9	1.0	0.8	0.8	0.8	0.8	0.0	-1.2 sss	-61.2	0.0	+3.4

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.

[a] 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%.

[b] Question was discontinued among 8th and 10th graders in 2012.

[c] 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.

[d] 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[b]	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[a]	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[b]	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	17.9	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	4.3	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‡	2.3	1.7	1.5	1.5	1.5
LSD	1.3	1.5	1.6	1.9	2.8	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‡	1.4	1.2	1.2	1.3	1.2
Ecstasy (MDMA)[c], original	—	—	—	—	—	1.5	1.3	1.2	1.6	2.4	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	1.9	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	1.0	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	1.7	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	0.6	0.6	0.6	0.4	0.5	0.4	0.5	0.5
With a needle	—	—	—	—	0.3	0.4	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	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3
Amphetamines[b]	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	1.5	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	2.4	2.2	2.1	2.1
Alcohol	39.8	38.4‡	36.3	37.6	37.8	38.8	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	21.2	20.4	20.6	20.3	19.7	17.4	17.7	18.1	17.0
Flavored alcoholic beverages	—	—	—	—	—	—	—	—	—	—	—	—	—	23.0	21.6
Cigarettes	20.7	21.2	23.4	24.7	26.6	28.3	28.3	27.0	25.2	22.6	20.2	17.7	16.6	16.1	15.3
Smokeless tobacco	—	9.2	9.1	9.7	9.6	8.5	8.0	7.0	6.3	5.8	6.1	5.2	5.3	5.1	5.3
Any Vaping[d]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.9	0.9	0.9	0.7

TABLE 3 (continued)
Trends in 30-Day 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	2018	2017–2018 change	Peak year–2018 Absolute change	Peak year–2018 Proportional change (%)[a]	Low year–2018 Absolute change	Low year–2018 Proportional change
Any Illicit Drug[b]	14.9	14.8	14.6	15.8	16.7	17.0	16.8	17.3‡	**16.5**	15.9	15.5	16.1	16.3	+0.2	-0.2	-1.1	-0.2	-1.2
Any Illicit Drug other than Marijuana[b]	6.4	6.4	5.9	5.7	5.7	5.7	5.2	5.4‡	**5.4**	5.1	4.6	4.4	4.4	-0.1	-1.1 sss	-19.8	-0.2	—
Any Illicit Drug including Inhalants[b]	16.5	16.5	16.1	17.3	18.0	17.6	17.6	18.4‡	**17.3**	16.8	16.0	17.2	17.1	0.0	-0.2	-1.0	-0.2	-1.1
Marijuana/Hashish	12.5	12.4	12.5	13.8	14.8	15.2	15.1	15.6	14.4	14.0	13.7	14.5	14.6	+0.2	-3.3 sss	-18.4	+2.3 sss	+18.2
Inhalants	2.7	2.6	2.6	2.5	2.4	2.1	1.7	1.5	1.4	1.3	1.2	1.3	1.1	-0.2	-3.2 sss	-73.8	—	—
Hallucinogens	1.3	1.4	1.4	1.3	1.4	1.3	1.1	1.1	1.0	1.0	1.0	1.0	0.9	-0.1	-1.3 sss	-59.0	—	—
LSD	0.6	0.6	0.7	0.5	0.7	0.7	0.5	0.6	0.6	0.7	0.7	0.8	0.6	-0.1	-2.1 sss	-76.8	+0.1	+16.8
Hallucinogens other than LSD	1.1	1.1	1.1	1.0	1.2	1.0	0.9	0.8	0.7	0.6	0.5	0.6	0.6	0.0	-0.8 sss	-59.0	+0.0	+9.3
Ecstasy (MDMA)[c], original	1.0	1.1	1.2	1.2	1.5	1.4	0.8	1.0	0.8	—	—	—	—	—	—	—	—	—
Revised	—	—	—	—	—	—	—	—	1.1	0.8	0.6	0.6	0.5	-0.1	-0.6 s	-57.8	—	—
Cocaine	1.6	1.4	1.3	1.0	0.9	0.8	0.8	0.8	0.7	0.8	0.6	0.7	0.7	0.0	-1.2 sss	-61.8	+0.1	+26.1
Crack	0.7	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.3	-0.1	-0.7 sss	-64.2	+0.0	5.6
Other cocaine	1.4	1.1	1.1	0.8	0.8	0.7	0.7	0.6	0.6	0.7	0.4	0.6	0.6	0.0	-1.1 sss	-64.4	+0.2 s	+47.4
Heroin	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	-0.1 s	-0.4 sss	-69.7	—	—
With a needle	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.1	0.2	0.1	0.1	0.0	-0.3 sss	-64.6	—	—
Without a needle	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	-0.4 sss	-83.0	—	—
Amphetamines[b]	3.0	3.2	2.6	2.7	2.7	2.8	2.5	3.2‡	**3.2**	2.7	2.5	2.2	2.2	0.0	-1.0 sss	-30.1	—	—
Methamphetamine	0.7	0.5	0.7	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.0	-1.3 sss	-87.3	—	—
Tranquilizers	2.1	2.0	1.9	1.9	1.9	1.7	1.5	1.5	1.5	1.5	1.4	1.4	1.2	-0.2 ss	-1.2 sss	-50.9	—	—
Alcohol	31.0	30.1	28.1	28.4	26.8	25.5	25.9	24.3	22.6	21.8	19.8	19.9	18.7	-1.2 s	-20.1 sss	-51.9	—	—
Been drunk	17.4	16.5	14.9	15.2	14.6	13.5	14.7	13.5	11.9	11.0	10.1	9.8	9.1	-0.7	-12.1 sss	-57.1	—	—
Flavored alcoholic beverages	21.7	20.4	18.6	17.9	17.0	15.2	14.9	14.0	12.9	12.8	10.9	12.3	11.4	-0.9	-11.6 sss	-50.4	+0.5	+4.9
Cigarettes	14.4	13.6	12.6	12.7	12.8	11.7	10.6	9.6	8.0	7.0	5.9	5.4	4.6	-0.8 ss	-23.7 sss	-83.8	—	—
Smokeless tobacco	5.1	5.2	4.9	6.0	6.5	5.9	5.6	5.7	5.4	4.7	4.1	3.5	3.4	-0.1	-6.3 sss	-65.2	—	—
Any Vaping[d]										12.8	9.9‡	12.0	**19.2**	+7.3 sss			+7.3 sss	+60.8
Vaping nicotine												7.5	**14.2**	+6.8 sss			+6.8 sss	+90.3
Vaping marijuana												3.6	**5.7**	+2.1 sss			+2.1 sss	+57.1
Vaping just flavoring											8.0		**11.5**	+3.5 sss			+3.5 sss	+43.8
Large Cigars									3.9	**4.2**	3.3	3.2	3.2	0.0	-1.0 sss	-24.2	+0.0	+0.3
Flavored Little Cigars									**7.4**	7.1	5.6	5.4	5.5	+0.1	-1.9 sss	-25.9	+0.1	+2.1
Regular Little Cigars									4.5	**4.9**	3.6	3.6	3.4	-0.2	-1.5 sss	-30.1	—	—
Tobacco using a hookah										**4.3**	4.3	3.4	2.7	-0.7	-1.6 sss	-36.2	—	—
Steroids	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.0	-0.6 sss	-54.1	+0.0	+11.3

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.

[a] 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%.

[b] 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.

[c] 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.

[d] 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	**3.7**	3.5	3.4	3.0	2.9
Alcohol	1.7	1.6‡	2.0	1.8	1.9	2.0	2.1	**2.2**	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	**21.9**	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	**0.9**	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	**16.9**	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	**8.7**	8.6	7.9	7.6	6.4	5.7	4.9	4.5	4.1	3.7
Smokeless tobacco	—	**3.0**	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 4 (continued)
Trends in <u>Daily</u> Prevalence of Use of Selected Drugs and <u>Heavy Use</u> 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	2018	2017–2018 change	Peak year–2018 change Absolute change	Peak year–2018 change Proportional change (%) [a]	Low year–2018 change Absolute change	Low year–2018 change Proportional change
Marijuana	2.8	2.7	2.8	2.8	3.4	3.6	3.6	3.7	3.3	3.3	3.0	3.1	3.2	+0.1	-1.6 sss	-43.7	+0.5 ss	+18.6
Alcohol	1.5	1.6	1.4	1.3	1.4	1.0	1.2	1.1	1.0	0.8	0.7	0.7	0.6	-0.2 s	-1.6 sss	-73.4	—	—
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	9.4	9.9	8.6	-1.3 sss	-13.4 sss	-61.0	—	—
Been drunk	0.7	0.6	0.6	0.5	0.6	0.5	0.6	0.5	0.5	0.3	0.3	0.4	0.3	-0.1 s	-0.6 sss	-66.6	0.0	+0.2
Cigarettes	7.6	7.1	6.4	6.4	6.4	5.7	5.2	4.7	3.6	3.2	2.5	2.3	2.0	-0.2	-14.9 sss	-87.9	—	—
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	0.8	0.8	0.0	-7.9 sss	-90.6	0.0	+0.2
Smokeless tobacco	1.5	1.6	1.6	1.8	2.1	1.8	1.9	1.7	1.8	1.7	1.4	1.0	1.0	0.0	-2.0 s	-67.1	0.0	+0.5

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.

[a]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%.

61

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	2018	2017–2018 change
Any Illicit Drug [a]																													
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	18.7	+0.6
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	36.3	+2.0
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	47.8	-1.1
Any Illicit Drug other than Marijuana [a,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	9.8	+0.5
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	14.2	+0.5
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	18.9	-0.6
Any Illicit Drug including Inhalants [a,c]																													
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	23.2	-0.1
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	38.7	+1.7
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	49.0	-1.3
Marijuana/Hashish																													
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	13.9	+0.4
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	32.6	+1.8
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	43.6	-1.4
Inhalants [c,d]																													
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	8.7	-0.2
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	6.5	+0.4
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	4.4	-0.5
Hallucinogens [b,f]																													
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	2.2	+0.3
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	3.9	-0.3
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	6.6	-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	2018	2017–2018 change
LSD [b]																													
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	1.4	+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	2.8	-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	5.1	+0.1
Hallucinogens other than LSD [b]																													
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	1.5	+0.3
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	2.7	-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	4.5	-0.3
Ecstasy (MDMA) [g]																													
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	1.6	+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	2.4	-0.3
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	4.1	-0.9
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	1.4	+0.2
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	2.6	+0.5
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	3.9	-0.3
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	0.8	0.8	0.9	+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	1.0	+0.1
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	1.5	-0.1
Cocaine other than Crack [h]																													
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	1.2	+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	2.4	+0.5
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	3.3	-0.2

TABLE 5 (cont.)
Trends in <u>Lifetime</u> 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	2018	2017–2018 change
Heroin [i,j]																													
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	0.6	-0.1
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	0.4	-0.1
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	0.8	+0.1
With a Needle [j]																													
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	0.4	0.0
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	-0.1
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	0.5	0.0
Without a Needle [j]																													
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	0.3	-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	0.2	-0.1
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	0.6	+0.1
Narcotics other than Heroin [k,l]																													
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	6.0	-0.8
Amphetamines [k,m]																													
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	5.9	+0.3
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	8.6	+0.4
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	8.6	-0.6
Methamphetamine [n,o]																													
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	0.7	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	0.8	-0.1
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	0.7	-0.4

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	2018	2017–2018 change
Crystal Methamphetamine (Ice) [o]																													
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	1.1	-0.3
Sedatives (Barbiturates) [k,p]																													
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	4.2	-0.3
Tranquilizers [b,k]																													
8th Grade	3.8	4.1	4.4	4.6	4.5	5.3	4.8	4.6	4.4	4.4‡	4.3	4.4	4.0	4.0	4.1	4.3	3.9	3.9	3.9	4.4	3.4	3.0	2.9	2.9	3.0	3.4	3.4	3.5	+0.1
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	6.1	6.0	6.0	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	6.6	-0.9
Any Prescription Drug [q]																													
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	15.5	-0.9
Rohypnol [r]																													
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	0.7	+0.1
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	1.4	1.2	1.2	0.8	1.1	1.0	0.5	1.0	0.7	0.5	-0.2
12th Grade	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s]																													
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	23.5	+0.4
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	43.0	+0.8
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	58.5	-3.0 s

(Table continued on next page.)

TABLE 5 (cont.)
Trends in <u>Lifetime</u> 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	2018	2017–2018 change
Been Drunk [o]																													
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	9.2	0.0
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	26.2	+1.2
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	42.9	-2.4
Flavored Alcoholic Beverages [e,n]																													
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	18.0	+2.0
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	35.9	+1.1
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	50.4	-0.9
Cigarettes																													
Any Use																													
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	9.1	-0.3
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	16.0	0.0
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	23.8	-2.8 s
Smokeless Tobacco [t]																													
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	6.4	+0.1
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	10.0	+0.9
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	10.1	-0.9
Any Vaping [bb,cc]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.7	17.5‡	18.5	21.5	+3.0 s
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.8	29.0‡	30.9	36.9	+6.0 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.5	33.8‡	35.8	42.5	+6.7 ss
Vaping Nicotine [bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.6	13.5	+2.9 ss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.4	28.6	+7.2 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.0	34.0	+9.0 sss

(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	2018	2017–2018 change
Vaping Marijuana [bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	5.5	+1.5 s
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.8	14.2	+4.4 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.9	15.6	+3.8 ss
Vaping Just Flavoring [bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.0	19.4	+2.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	31.7	+4.3 ss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.7	34.1	+3.4
Steroids [k,u]																													
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	1.1	0.0
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	1.2	+0.1
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	1.6	-0.1
Legal Use of Over-the-Counter Stimulants																													
Diet Pills [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	17.2	15.0	14.8	14.9	15.6	16.0	16.6	15.7	17.1	16.6	17.1	21.0	17.9	15.6	13.7	13.0	10.4	10.5	9.5	7.2	7.7	7.7	8.1	9.1	7.9	6.4	6.7	6.2	-0.5
Stay-Awake Pills [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	37.0	35.6	30.5	31.3	31.2	30.5	31.0	29.6	25.5	23.0	25.6	22.5	19.8	18.4	15.8	14.8	12.3	9.6	7.6	6.4	6.3	5.9	5.2	4.5	3.8	3.6	3.8	3.6	-0.2
Look-Alikes [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	8.9	10.1	10.5	10.3	11.6	10.7	10.8	9.4	9.2	10.0	9.8	9.6	8.6	8.1	7.4	5.7	4.6	5.2	4.3	2.6	3.5	2.9	2.7	2.2	3.3	2.3	2.6	—	—

(Table continued on next page.)

TABLE 5 (cont.)
Trends in <u>Lifetime</u> 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	2018	2017–2018 change
Legal Use of Prescription ADHD Drugs																													
Stimulant-Type [n,dd]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.3	9.3	8.3	8.1	7.8	8.2	7.6	7.7	7.1	7.2	7.1	7.5	6.6	7.1	+0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.7	8.5	8.4	7.8	8.2	8.6	7.2	8.0	8.3	6.8	8.8	7.1	6.5	8.2	+1.6 s
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.5	7.8	7.6	8.6	8.2	8.3	8.4	9.0	9.6	9.1	9.9	8.4	8.6	8.6	-0.0
Non-Stimulant-Type [n,dd]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.3	7.9	6.3	6.3	5.8	5.8	6.1	5.1	5.1	4.8	5.1	5.7	4.9	4.4	-0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.3	8.3	6.7	6.8	6.8	6.1	6.4	5.2	4.9	5.8	5.8	5.2	4.6	5.1	+0.5
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.2	6.1	7.0	6.4	5.4	6.7	5.8	5.9	5.4	5.6	5.6	5.8	6.4	6.1	-0.4
Either Type [n,dd]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.7	15.8	13.4	13.1	12.8	12.8	12.4	11.6	11.5	11.2	11.4	12.1	10.9	11.0	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.3	14.2	12.9	12.8	13.0	12.7	12.0	12.0	11.7	11.3	13.1	11.5	10.1	12.1	+2.1 s
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	11.7	12.1	13.1	11.0	12.7	12.2	12.7	13.2	12.6	13.7	12.7	13.0	12.7	-0.3
Previously surveyed drugs that have been dropped.																													
Nitrites [e]																													
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	—	—	—	—	—	—	—	—	—	—
PCP [e]																													
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	—	—	—	—	—	—
Methaqualone [e,k]																													
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	1.0	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 9.

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	2018	2017–2018 change
Any Illicit Drug [a]																													
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	13.4	+0.5
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	29.9	+2.1
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	38.8	-1.1
Any Illicit Drug other than Marijuana [a,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	6.1	+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	9.6	+0.2
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	12.4	-0.9
Any Illicit Drug including Inhalants [a,c]																													
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	16.0	+0.2
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	31.0	+2.0
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	40.2	-1.0
Marijuana/Hashish																													
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	10.5	+0.3
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	27.5	+2.0
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	35.9	-1.2
Synthetic Marijuana [n,o]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	4.0	3.3	3.1	2.7	2.0	1.6	-0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.8	7.4	5.4	4.3	3.3	2.7	2.9	+0.3
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	11.3	7.9	5.8	5.2	3.5	3.7	3.5	-0.2
Inhalants [c,d]																													
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	4.6	-0.1
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	2.4	+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	1.6	+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	2018	2017–2018 change
Hallucinogens [b,f]																													
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	1.4	+0.2
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	2.7	-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	4.3	-0.2
LSD [b]																													
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	0.9	+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	2.0	-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	3.2	-0.2
Hallucinogens other than LSD [b]																													
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	0.9	+0.2
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	1.7	-0.1
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	2.7	-0.2
PCP [e]																													
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	1.1	+0.1
Ecstasy (MDMA) [g]																													
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	1.1	+0.2
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	4.5	3.0	3.6	2.3	—	—	—	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.8	2.4	1.8	1.7	1.4	-0.3
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	2.2	-0.4
Salvia [n,o]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7	1.6	1.4	1.2	0.6	0.7	0.9	0.4	0.6	+0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.7	3.9	2.5	2.3	1.8	1.2	0.9	0.9	0.7	-0.2
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	5.5	5.9	4.4	3.4	1.8	1.9	1.8	1.5	0.9	-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	2018	2017–2018 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	0.8	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	1.5	+0.2
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	2.3	-0.4
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	0.4	-0.1
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	0.6	0.0
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	0.9	-0.1
Cocaine other than Crack [h]																													
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	0.7	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	1.4	+0.2
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	2.0	-0.4
Heroin [i,j]																													
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	0.3	0.0
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	0.2	-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	0.4	0.0
With a Needle [j]																													
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	0.2	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	0.6	0.5	0.6	0.5	0.5	0.4	0.5	0.4	0.2	0.3	0.2	0.1	-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	1.0	0.4	0.3	0.7	0.6	0.4	0.4	0.5	0.3	0.3	0.2	0.3	+0.1
Without a Needle [j]																													
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	0.6	0.4	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.0
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	0.1	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	0.6	0.5	0.5	0.4	0.3	0.2	0.2	0.0

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	2018	2017–2018 change
Narcotics other than Heroin [k,l]																													
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	3.4	-0.8 s
OxyContin [k,n,v]																													
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	0.8	-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	2.2	0.0
12th Grade	—	—	—	—	—	—	—	—	—	—	—	4.0	4.5	5.0	5.5	4.3	5.2	4.7	4.9	4.9	4.3	4.3	3.6	3.3	3.7	3.4	2.7	2.3	-0.4
Vicodin [k,n,v]																													
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	0.6	-0.1
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	1.1	-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	1.7	-0.2
Amphetamines [k,m]																													
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	3.7	+0.2
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	5.7	0.0
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	5.5	-0.4
Ritalin [k,n,o]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	2.9	2.8	2.6	2.5	2.4	2.6	2.1	1.6	1.8	1.3	1.3	0.7	1.1	0.9	0.6	0.4	0.4	0.5	+0.1
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	0.9	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	5.1	4.0	4.0	5.1	4.4	4.4	3.8	3.4	2.1	2.6	2.6	2.3	2.3	1.8	2.0	1.3	1.3	0.9	-0.4
Adderall [k,n,o]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	2.3	1.7	1.7	1.8	1.3	1.0	1.5	1.3	1.8	+0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	5.3	4.6	4.5	4.4	4.6	5.2	4.2	4.0	4.1	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.4	6.5	6.5	7.6	7.4	6.8	7.5	6.2	5.5	4.6	-1.0

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	2018	2017–2018 change
Methamphetamine [n,o]																													
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	0.4	-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	0.4	0.0
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	0.5	-0.1
Crystal Methamphetamine (Ice) [o]																													
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	0.6	-0.2
Bath salts (synthetic stimulants) [n,o]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	0.5	0.4	0.5	0.5	0.9	+0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.9	0.9	0.7	0.8	0.4	0.5	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	0.9	0.9	1.0	0.8	0.6	0.6	0.0
Sedatives (Barbiturates) [k,p]																													
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	2.7	-0.3
Tranquilizers [b,k]																													
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	2.0	2.0	2.0	+0.1
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	3.9	-0.2
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	3.9	-0.8 s
Any Prescription Drug [q]																													
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	9.9	-1.1

(Table continued on next page.)

TABLE 6 (cont.)

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	2018	2017–2018 change
OTC Cough/Cold Medicines [n,o]																													
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	2.8	+0.7
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	3.3	-0.3
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	3.4	+0.2
Rohypnol [r]																													
8th Grade	—	—	—	—	—	1.0	0.8	0.8	0.5	0.5	0.3	0.5	0.5	0.6	0.7	0.5	0.5	0.4	0.4	0.5	0.8	0.4	0.4	0.3	0.3	0.4	0.3	0.3	-0.1
10th Grade	—	—	—	—	—	1.1	1.3	1.2	1.0	0.8	0.7	0.6	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	0.0
12th Grade	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9‡	1.3	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	0.7	0.0
GHB [n,w]																													
8th Grade	—	—	—	—	—	—	—	—	—	1.2	1.1	0.9	0.7	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	1.0	1.0	1.0	0.7	0.9	0.4	0.3	-0.1
Ketamine [n,x]																													
8th Grade	—	—	—	—	—	—	—	—	—	1.6	1.3	1.1	0.9	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	0.7	0.7	-0.4
Alcohol [s]																													
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	18.7	+0.5
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	37.8	+0.1
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	53.3	-2.4
Been Drunk [o]																													
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	6.5	+0.1
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	20.9	+0.5
12th Grade	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	48.0	34.7	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	33.9	-1.7

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	2018	2017–2018 change
Flavored Alcoholic Beverages [e,n,y]																													
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	12.1	+1.3
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	28.8	+0.5
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	38.4	-1.2
Alcoholic Beverages containing Caffeine [n,o,z]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.8	10.9	10.2	9.5	8.4	6.5	5.6	6.0	+0.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.5	19.7	16.9	14.3	12.8	10.6	9.9	9.8	-0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.4	26.4	23.5	20.0	18.3	17.0	16.9	14.7	-2.2
Tobacco using a Hookah [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.1	18.5	18.3	21.4	22.9	19.8	13.0	10.1	7.8	-2.2
Small cigars [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.1	19.5	19.9	20.4	18.9	15.9	15.6	13.3	9.2	-4.1 ss
Dissolvable Tobacco Products [e,n]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.1	1.1	0.9	0.7	0.6	0.6	-0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.2	1.3	1.1	0.9	0.6	1.1	+0.4
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.6	1.9	1.1	1.4	1.1	1.4	1.3	-0.1
Snus [e,n]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.4	2.0	2.2	1.9	2.2	1.1	1.3	+0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	5.2	4.5	4.0	3.0	2.6	3.1	+0.5
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.9	7.9	7.7	5.8	5.8	5.8	4.2	4.7	+0.6

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	2018	2017–2018 change
Any Vaping[bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.3	17.6	+4.3 sss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.9	32.3	+8.5 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.8	37.3	+9.4 sss
Vaping Nicotine[bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.5	10.9	+3.4 sss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.8	24.7	+8.9 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.8	29.7	+10.9 sss
Vaping Marijuana[bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	4.4	+1.3 ss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.1	12.4	+4.2 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.5	13.1	+3.6 sss
Vaping Just Flavoring[bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.8	15.1	+3.2 ss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.3	24.7	+5.4 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	25.7	+5.2 ss
Steroids[k,u]																													
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	0.6	0.0
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	0.6	-0.1
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	1.1	+0.1
Androstenedione[bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	1.1	1.2	1.0	0.9	0.6	1.0	0.9	0.8	0.9	0.9	0.6	0.6	0.7	0.4	0.4	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	2.2	1.9	1.7	1.1	0.9	0.9	0.6	0.9	1.1	1.0	0.8	0.9	0.9	0.9	0.7	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	3.0	2.5	2.5	2.1	1.7	1.1	0.9	1.3	1.1	1.5	0.7	1.0	0.7	1.1	0.9	0.9	0.6	0.5	0.0

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	2018	2017–2018 change
Creatine [bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	2.7	2.3	2.3	1.9	1.3	2.2	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.6	1.2	1.8	1.7	1.7	0.0
10th Grade	—	—	—	—	—	—	—	—	—	—	7.9	7.6	5.8	5.3	5.1	6.5	6.1	5.8	6.0	6.0	7.1	6.8	5.7	6.0	6.0	7.8	6.8	6.2	-0.6
12th Grade	—	—	—	—	—	—	—	—	—	—	11.7	8.5	8.3	8.1	8.1	7.8	8.0	8.3	9.1	9.2	8.6	9.5	9.3	10.0	8.8	9.0	8.1	9.3	+1.2
Legal Use of Over-the-Counter Stimulants																													
Diet Pills [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	8.8	8.4	8.0	9.3	9.8	9.3	9.8	9.6	10.2	11.1	11.8	15.1	13.0	10.7	10.0	9.4	6.7	7.2	6.1	4.3	4.9	5.5	5.3	6.4	5.1	4.5	4.0	3.5	-0.4
Stay-Awake Pills [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	22.2	20.4	19.1	20.7	20.3	19.0	19.7	19.0	15.7	15.0	17.3	14.9	12.5	11.8	10.4	10.0	7.6	6.3	4.8	3.2	3.9	3.8	3.2	3.5	2.7	2.5	2.5	2.4	0.0
Look-Alikes [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	5.2	5.4	6.2	6.0	6.8	6.5	6.4	5.7	5.0	5.8	7.1	6.6	5.4	5.0	4.2	3.7	2.8	3.1	2.6	1.7	2.2	2.1	1.7	1.4	2.3	1.6	1.5	—	—
Previously surveyed drugs that have been dropped.																													
Nitrites [e]																													
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 [k,o]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.3	1.5	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	2018	2017–2018 change
Methaqualone [e,k]																													
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 [n,o]																													
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 [n,o]																													
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 9.

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

	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	2018	2017–2018 change
Any Illicit Drug [a]																													
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	7.3	+0.3
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	18.3	+1.0
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	24.0	-0.9
Any Illicit Drug other than Marijuana [a,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	3.0	+0.3
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	4.2	-0.3
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	6.0	-0.3
Any Illicit Drug including Inhalants [a,c]																													
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	8.3	-0.4
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	18.7	+0.8
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	25.0	-0.6
Marijuana/Hashish																													
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	5.6	+0.1
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	16.7	+0.9
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	22.2	-0.7
Inhalants [c,d]																													
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	1.8	-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	1.0	-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	0.7	-0.2
Hallucinogens [b,f]																													
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	0.6	+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	0.8	-0.3
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	1.4	-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	2018	2017–2018 change
LSD [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	0.4	+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	0.5	–0.3 s
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	1.0	–0.2
Hallucinogens other than LSD [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	0.4	+0.1
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	0.5	–0.1
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	0.9	0.9	0.7	1.0	0.9	–0.1
Ecstasy (MDMA) [g]																													
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	0.4	+0.1
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	0.4	–0.1
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	1.5	—	—	—	—	—
Revised	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.1	0.9	0.9	0.5	–0.4 s
Cocaine																													
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	0.3	–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	0.6	+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	1.1	0.0
Crack																													
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	0.2	–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	0.3	–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	0.5	–0.1
Cocaine other than Crack [h]																													
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	0.3	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	0.5	+0.2
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	1.0	–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	2018	2017–2018 change
Heroin [l,j]																													
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	0.1	-0.1
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	0.0
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	0.2	-0.1
With a Needle [j]																													
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	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	-0.1
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	0.3	0.1	0.2	0.1	0.1	0.0
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	0.2	+0.0
Without a Needle [j]																													
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	0.1	0.2	0.1	0.1	0.1	0.2	0.1	-0.1
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	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	0.1	0.0
Narcotics other than Heroin [k,l]																													
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	1.1	-0.5 ss
Amphetamines [k,m]																													
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	1.8	+0.1
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	2.4	0.0
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	2.4	-0.2
Methamphetamine [n,o]																													
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	-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	0.0
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	0.3	0.0

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	2018	2017–2018 change
Crystal Methamphetamine (Ice) [o]																													
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	0.4	-0.1
Sedatives (Barbiturates) [k,p]																													
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	1.2	-0.2
Tranquilizers [b,k]																													
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	0.9	+0.1
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	1.3	-0.2
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	1.3	-0.7 ss
Any Prescription Drug [q]																													
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	4.2	-0.6
Rohypnol [r]																													
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	0.3	+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	0.1	0.0
12th Grade	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s]																													
Any Use																													
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	8.2	+0.2
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	18.6	-1.1
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	30.2	-3.0 s

82

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	2018	2017–2018 change
Been Drunk °																													
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	2.1	-0.2
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	8.4	-0.5
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	17.5	-1.6
Flavored Alcoholic Beverages e,n																													
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	4.9	+0.5
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	11.8	-1.1
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	18.1	-2.2
Cigarettes																													
Any Use																													
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	2.2	+0.3
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	4.2	-0.8
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	7.6	-2.0 ss
Smokeless Tobacco t																													
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	2.1	+0.3
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	3.9	+0.1
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	4.2	-0.8
Large Cigars bb																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	2.4	1.5	1.5	1.7	+0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.9	3.4	2.3	2.6	2.8	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.4	7.0	6.5	5.6	5.2	-0.3
Flavored Little Cigars bb																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.1	4.1	2.8	2.6	2.6	0.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	6.1	4.9	4.0	5.3	+1.4
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.9	11.4	9.5	10.1	8.9	-1.2

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	2018	2017–2018 change
Regular Little Cigars [bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	3.3	1.9	1.6	1.6	0.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	3.8	3.0	3.0	3.1	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.0	7.8	6.1	6.6	5.8	-0.7
Any Vaping [bb,cc]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.0	6.2‡	6.6	10.4	+3.7 sss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	11.0‡	13.1	21.7	+8.5 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.3	12.5‡	16.6	26.7	+9.9 sss
Vaping Nicotine [bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	6.1	+2.6 sss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.2	16.1	+7.9 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	20.9	+10.0 sss
Vaping Marijuana [bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	2.6	+1.0 ss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.3	7.0	+2.7 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.9	7.5	+2.5 sss
Vaping Just Flavoring [bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.3	8.1	+2.8 sss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.2	13.1	+4.0 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.7	13.5	+3.8 sss
Tobacco Using a Hookah [bb]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	2.5	1.6	-0.9 s
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	3.0	2.4	-0.7
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.1	5.0	4.4	-0.6

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	2018	2017–2018 change
Steroids [k,u]																													
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	0.3	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	0.4	+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	0.8	+0.0
Legal Use of Over-the-Counter Stimulants																													
Diet Pills [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.7	4.0	3.8	4.2	3.8	4.3	4.6	4.8	5.4	5.8	6.3	9.2	6.5	5.6	4.4	5.3	3.8	3.7	2.6	2.1	2.4	3.4	2.4	3.6	2.1	2.1	2.4	1.9	-0.4
Stay-Awake Pills [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.8	7.2	7.0	6.3	7.3	7.5	7.8	7.4	6.8	7.3	7.2	5.8	5.0	4.5	4.2	4.2	3.3	2.6	2.3	1.6	2.2	1.9	1.5	1.7	1.2	1.7	1.6	1.2	-0.4
Look-Alikes [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	2.1	2.4	2.7	2.4	3.0	3.1	2.7	2.7	2.4	2.6	3.3	2.8	2.4	2.5	1.9	2.3	1.1	1.6	1.0	0.8	1.2	0.8	0.7	0.7	0.9	0.9	0.8	—	—
Legal Use of Prescription ADHD Drugs																													
Stimulant-Type [n,dd,ee]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	3.1	3.5	3.7	3.4	3.3	3.5	3.4	3.2	3.6	3.7	3.4	3.7	+0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	2.8	2.9	3.3	3.1	2.8	3.8	3.7	3.4	4.2	3.0	3.0	3.9	+0.8
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	2.6	2.9	2.9	3.0	3.3	3.8	4.4	3.8	4.0	3.9	3.4	3.5	0.0
Non-Stimulant-Type [n,dd,ee]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.2	1.9	1.4	1.6	1.2	1.4	1.5	1.2	1.4	1.2	1.2	2.0	1.1	1.2	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	2.3	1.6	1.7	1.9	1.6	1.3	1.3	1.3	1.4	1.7	1.2	1.0	1.4	+0.4
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.6	1.7	1.9	1.5	2.3	1.9	1.8	1.8	2.2	1.5	2.1	2.5	2.6	+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	2018	2017–2018 change
Either Type [n,dd,ee]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.1	5.2	4.5	5.1	4.9	4.7	4.9	4.7	5.0	4.6	4.9	5.6	4.7	5.2	+0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.6	4.8	4.2	4.5	5.0	4.6	4.2	5.1	5.0	4.8	5.8	4.3	4.0	5.1	+1.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	3.7	4.1	4.4	4.3	5.2	5.1	5.5	6.0	5.5	5.3	5.6	5.7	5.9	+0.1
Previously surveyed drugs that have been dropped.																													
Nitrites [e]																													
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	—	—	—	—	—	—	—	—	—	—
PCP [e]																													
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	—	—	—	—	—	—
Methaqualone [e,k]																													
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 9.

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	2018	2017–2018 change
Marijuana/Hashish																													
Used Daily in Past 30 Days [aa]																													
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	0.7	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	3.4	+0.5
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	5.8	-0.2
Ever Used Daily for Month or More in Lifetime [e]																													
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	9.0	8.4	9.6	11.3	12.1	15.7	18.8	18.0	17.9	17.0	18.0	15.5	16.4	17.8	14.5	16.6	15.7	15.1	14.9	15.5	17.4	18.2	15.8	13.7	12.4	14.3	13.9	12.3	-1.6
Alcohol [s,aa]																													
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	0.1	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	0.5	-0.1
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	1.2	-0.4 s
Been Drunk																													
Daily [o,aa]																													
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	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	0.2	0.0
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	0.7	-0.4
5+ Drinks in a Row																													
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	3.7	0.0
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	8.7	-1.1
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	13.8	-2.8 ss

	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	2018	2017–2018 change
Cigarettes																													
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	0.8	+0.3
10th Grade	12.6	12.3	14.2	14.6	16.3	18.3	18.0	15.8	15.9	14.0	12.2	10.1	8.9	8.3	7.5	7.6	7.2	5.9	6.3	6.6	5.5	5.0	4.4	3.2	3.0	1.9	2.2	1.8	-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	3.6	-0.6
1/2 Pack+/Day																													
8th Grade	3.1	2.9	3.5	3.6	3.4	4.3	3.5	3.6	3.3	2.8	2.3	2.1	1.8	1.7	1.7	1.5	1.1	1.2	1.0	0.9	0.7	0.6	0.7	0.5	0.4	0.3	0.2	0.3	+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	0.7	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	1.5	-0.2
Smokeless Tobacco																													
Daily[t]																													
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	0.3	-0.1
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	1.0	+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	1.6	-0.4

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

Note. See footnotes following Table 9.

TABLE 9
Trends in Two Week Prevalence of Binge and Extreme Binge Drinking in Grades 8, 10, and 12

Percentage who used in last two weeks

	1975–2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 change
5+ drinks in a row in last 2 weeks																
8th Grade	—	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	3.7	0.0
10th Grade	—	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	8.7	-1.1
12th Grade	—	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	13.8	-2.8 ss
10+ drinks in a row in last 2 weeks [e,ff]																
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	1.2	1.1	1.1	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	3.0	3.6	3.3	-0.3
12th Grade	—	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	4.6	-1.4
15+ drinks in a row in last 2 weeks [e]																
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	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	2.5	-0.7

Source.   The Monitoring the Future study, the University of Michigan.
Note.   See footnotes following Table 9.

89

Footnotes for Tables 5 through 9

Approximate Weighted Ns	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 Ns	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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	14,000
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	14,300
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	13,300

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.

[a]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.

[b]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.

[c]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.

[d]Inhalants are unadjusted for underreporting of amyl and butyl nitrites.

[e]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.

[f]Hallucinogens are unadjusted for underreporting of PCP.

[g]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

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 ecxtasy (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.

^{h}For 12th graders only: Data based on four of six forms; N is four sixths of N indicated.

^{i}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.

^{j}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.

^{k}Only drug use not under a doctor's orders is included here.

^{l}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.

^{m}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.

^{n}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.

^{o}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.

^{p}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.

Footnotes for Tables 5 through 9 (cont.)

[q] 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."

[r] 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.

[s] 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.

[t] 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.

[u] 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.

[v] 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.

[w] 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.

[x] 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.

[y] The 2003 flavored alcoholic beverage data were created by adjusting the 2004 data to reflect the change in the 2003 and 2004 alcopops data.

[z] 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.

[aa] 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.

[bb] 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. For androstenedione, beginning in 2016, data based on one form. N is one sixth of N indicated.

[cc] 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.

[dd] In 2005, data omitted for one of the questionnaire forms due to an error in the skip pattern in the questionnaire. In 2005, data based on one of six forms and N is one sixth of N indicated. Beginning in 2006, data based on two of six forms and N is two sixths of N indicated.

[ee] For the use of prescription ADHD drugs, the question is asked differently than that for other drugs presented here. Therefore, the estimates indicate youth who reported "Yes, I take them now."

[ff] For 8th and 10th graders only: Data based on two of four forms; N is one third of N indicated.

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

Percentage saying great risk [a]

How much do you think people risk harming themselves (physically or in other ways), if they . . .	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Try marijuana once or twice [b]	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 [b]	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 [b]	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 [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take synthetic marijuana occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try inhalants once or twice [d]	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 [d]	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 [e]	—	—	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 [e]	—	—	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, Molly) once or twice [f]	—	—	—	—	—	—	—	—	—	—	35.8	38.9	41.9	42.5	40.0
Take ecstasy (MDMA, Molly) occasionally [f]	—	—	—	—	—	—	—	—	—	—	55.5	61.8	65.8	65.1	60.8
Try salvia once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take salvia occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try crack once or twice [d]	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 [d]	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 [d]	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 [d]	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 [e]	—	—	—	—	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 [e]	—	—	—	—	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 [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take OxyContin occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Vicodin once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take Vicodin occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Adderall once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take Adderall occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try bath salts (synthetic stimulants) once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take bath salts (synthetic stimulants) occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cough/cold medicine once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take cough/cold medicine occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) [b]	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 [b]	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 [b]	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 [c]	—	—	—	—	—	—	—	—	26.9	28.9	30.5	32.8	33.4	37.0	37.5
Smoke one or more packs of cigarettes per day [g]	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 [h]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine ocasionally [c,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly [c,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smoke little cigars or cigarillos regularly [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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 [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take snus regularly [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take steroids [i]	64.2	69.5	70.2	67.6	—	—	—	—	—	—	—	—	—	—	—
Approximate weighted N =	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 10 (cont.)
Trends in Harmfulness of Drugs as Perceived by 8th Graders

Percentage saying great risk [a]

How much do you think people risk harming themselves (physically or in other ways), if they . . .	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 change
Try marijuana once or twice [b]	32.2	32.8	31.1	29.5	29.5	28.2	26.0	24.1	23.0	23.0	22.8	22.0	20.3	-1.7
Smoke marijuana occasionally [b]	48.9	50.2	48.1	44.8	44.1	43.4	41.7	37.2	36.7	36.8	36.8	34.0	32.1	-1.9
Smoke marijuana regularly [b]	73.2	74.3	72.0	69.8	68.0	68.3	66.9	61.0	58.9	58.0	57.5	54.8	52.9	-1.9
Try synthetic marijuana once or twice [c]	—	—	—	—	—	—	24.4	24.2	23.9	26.0	27.5	23.0	22.2	-0.9
Take synthetic marijuana occasionally [c]	—	—	—	—	—	—	36.8	36.2	32.4	33.5	35.4	30.4	28.8	-1.6
Try inhalants once or twice [d]	35.8	35.9	33.9	34.1	35.5	34.7	34.2	33.7	34.5	33.7	32.0	31.5	29.6	-1.9 s
Take inhalants regularly [d]	62.1	61.9	59.2	58.1	60.6	59.0	59.0	56.7	55.3	54.1	52.1	50.0	46.8	-3.3 ss
Take LSD once or twice [e]	23.8	22.8	21.9	21.4	23.6	21.7	19.9	19.6	20.0	22.2	22.6	23.1	20.8	-2.2
Take LSD regularly [e]	40.0	38.5	36.9	37.0	38.6	37.8	35.0	34.5	33.7	37.0	36.8	37.9	36.4	-1.4
Try ecstasy (MDMA, Molly) once or twice [f]	32.8	30.4	28.6	26.0	27.0	25.4	23.6	24.1‡	46.1	45.5	42.5	43.3	41.9	-1.4
Take ecstasy (MDMA, Molly) occasionally [f]	52.0	48.6	46.8	43.9	45.0	43.7	41.0	42.1‡	59.7	58.5	54.0	54.6	53.6	-1.0
Try salvia once or twice [c]	—	—	—	—	—	—	9.5	8.5	—	—	—	—	—	—
Take salvia occasionally [c]	—	—	—	—	—	—	16.1	14.6	—	—	—	—	—	—
Try crack once or twice [d]	47.6	47.3	47.1	46.6	49.6	48.1	47.0	47.1	48.3	49.6	48.9	49.3	47.7	-1.6
Take crack occasionally [d]	68.7	68.3	67.9	66.6	68.4	67.7	67.8	66.5	65.5	65.7	65.7	66.9	65.3	-1.6
Try cocaine powder once or twice [d]	43.5	43.5	42.7	42.3	45.7	43.3	42.8	43.5	43.9	44.3	44.5	44.5	42.6	-2.0
Take cocaine powder occasionally [d]	64.0	64.2	62.7	62.3	64.2	63.5	63.3	62.7	61.8	61.6	62.4	62.7	61.0	-1.7
Try heroin once or twice without using a needle [e]	60.4	60.3	60.8	60.0	62.3	61.7	59.1	59.8	60.9	61.4	59.2	62.9	59.5	-3.4 s
Take heroin occasionally without using a needle [e]	75.3	76.4	75.5	74.0	76.7	75.9	75.1	73.4	73.2	72.7	70.3	74.7	72.1	-2.6 s
Try OxyContin once or twice [c]	—	—	—	—	—	—	21.9	19.9	22.1	20.2	21.3	21.0	20.8	-0.3
Take OxyContin occasionally [c]	—	—	—	—	—	—	35.3	32.6	34.4	32.5	33.5	32.6	32.5	-0.1
Try Vicodin once or twice [c]	—	—	—	—	—	—	17.5	15.0	18.4	16.9	18.3	17.1	16.1	-1.0
Take Vicodin occasionally [c]	—	—	—	—	—	—	29.4	26.2	28.2	26.7	28.8	26.7	25.9	-0.7
Try Adderall once or twice [c]	—	—	—	—	—	—	17.6	16.5	20.7	19.2	21.4	20.4	20.1	-0.3
Take Adderall occasionally [c]	—	—	—	—	—	—	29.9	28.3	32.5	32.0	35.9	33.8	34.0	+0.2
Try bath salts (synthetic stimulants) once or twice [c]	—	—	—	—	—	—	24.9	39.3	36.8	33.9	31.8	32.0	30.1	-1.9
Take bath salts (synthetic stimulants) occasionally [c]	—	—	—	—	—	—	38.8	51.9	49.1	45.5	42.5	43.1	41.2	-2.0
Try cough/cold medicine once or twice [c]	—	—	—	—	—	—	21.2	20.1	22.9	20.9	23.5	21.2	19.5	-1.7
Take cough/cold medicine occasionally [c]	—	—	—	—	—	—	38.8	37.3	37.9	37.3	38.6	35.2	34.5	-0.6
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) [b]	14.2	14.9	13.5	14.4	14.9	14.5	13.9	13.7	14.8	15.3	14.7	14.2	13.6	-0.6
Take one or two drinks nearly every day [b]	31.3	32.6	31.5	31.5	32.3	31.8	31.4	30.6	31.0	30.9	30.7	30.0	28.7	-1.3
Have five or more drinks once or twice each weekend [b]	56.4	57.9	57.0	55.8	57.2	58.4	58.2	55.7	54.3	53.9	53.4	53.7	52.3	-1.4
Smoke one to five cigarettes per day [c]	37.0	38.6	38.6	38.6	38.2	37.4	40.4	42.8	41.9	41.7	43.2	41.9	40.8	-1.1
Smoke one or more packs of cigarettes per day [g]	59.4	61.1	59.8	59.1	60.9	62.5	62.6	62.4	62.1	63.0	61.2	62.1	61.3	-0.8
Use electronic cigarettes (e-cigarettes) regularly [h]	—	—	—	—	—	—	—	—	14.5	18.5	21.3	20.3	22.1	+1.8
Vape an e-liquid with nicotine occasionally [c,j]	—	—	—	—	—	—	—	—	—	—	—	18.3	16.9	-1.4
Vape an e-liquid with nicotine regularly [c,j]	—	—	—	—	—	—	—	—	—	—	—	32.7	32.4	-0.3
Smoke little cigars or cigarillos regularly [c]	—	—	—	—	—	—	—	—	28.8	31.0	32.5	30.8	30.5	-0.3
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	34.3	-0.5
Take dissolvable tobacco regularly [c]	—	—	—	—	—	—	34.8	32.2	33.5	33.0	34.3	31.9	31.3	-0.6
Take snus regularly [c]	—	—	—	—	—	—	42.2	38.9	38.3	37.7	37.9	36.4	34.2	-2.2
Take steroids [i]	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	14,000	

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.

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

[b]Beginning in 2012 data based on two thirds of *N* indicated.

[c]Data based on one third of *N* indicated.

[d]Beginning in 1997, data based on two thirds of *N* indicated due to changes in questionnaire forms.

[e]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.

[f]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.

[g]Beginning in 1999, data based on two thirds of *N* indicated due to changes in questionnaire forms.

[h]E-cigarette data based on two thirds of *N* indicated. Little cigars or cigarillos data based on one third *N* indicated.

[i]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.

[j]Percentages for all years reported here include respondents who replied "can't say, drug unfamiliar" in the denominator. The percentage for 2017 published in late 2017 and early 2018 did not include these respondents in the denominator.

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

Percentage saying great risk [a]

How much do you think people risk harming themselves (physically or in other ways), if they . . .	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Try marijuana once or twice [b]	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 [b]	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 [b]	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 [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take synthetic marijuana occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try inhalants once or twice [d]	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 [d]	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 [e]	—	—	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 [e]	—	78.9	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, Molly) once or twice [f]	—	—	—	—	—	—	—	—	—	—	39.4	43.5	49.7	52.0	51.4
Take ecstasy (MDMA, Molly) occasionally [f]	—	—	—	—	—	—	—	—	—	—	64.8	67.3	71.7	74.6	72.8
Try salvia once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take salvia occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try crack once or twice [d]	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 [d]	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 [d]	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 [d]	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 [e]	—	—	—	—	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 [e]	—	—	—	—	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 [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take OxyContin occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Vicodin once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take Vicodin occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Adderall once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take Adderall occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try bath salts (synthetic stimulants) once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take bath salts (synthetic stimulants) occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cough/cold medicine once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take cough/cold medicine occasionally [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) [b]	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 [b]	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 [v]	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 [c]	—	—	—	—	—	—	—	—	28.4	30.2	32.4	35.1	38.1	39.7	41.0
Smoke one or more packs of cigarettes per day [g]	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 [h]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine occasionally [c,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly [c,j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smoke little cigars or cigarillos regularly [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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 [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take snus regularly [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take steroids [i]	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 11 (cont.)
Trends in Harmfulness of Drugs as Perceived by 10th Graders

Percentage saying great risk[a]

How much do you think people risk harming themselves (physically or in other ways), if they . . .	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 change
Try marijuana once or twice [b]	22.2	22.2	23.1	20.5	19.9	19.3	17.2	15.7	15.2	15.8	16.4	14.8	13.9	−0.8
Smoke marijuana occasionally [b]	35.6	36.0	37.0	32.9	30.9	30.1	26.8	25.1	23.9	24.7	24.4	21.9	21.4	−0.5
Smoke marijuana regularly [b]	64.9	64.5	64.8	59.5	57.2	55.2	50.9	46.5	45.4	43.2	44.0	40.6	38.1	−2.5
Try synthetic marijuana once or twice [c]	—	—	—	—	—	—	24.6	24.1	25.0	26.3	26.8	25.1	24.3	−0.9
Take synthetic marijuana occasionally [c]	—	—	—	—	—	—	34.9	32.8	30.7	31.7	31.8	29.2	28.8	−0.4
Try inhalants once or twice [d]	43.9	43.0	41.2	42.0	42.5	42.4	42.4	43.0	43.1	43.1	40.7	37.9	38.6	+0.7
Take inhalants regularly [d]	70.2	68.6	68.6	66.8	67.1	66.2	66.1	65.9	64.7	63.1	59.7	57.7	57.6	−0.1
Take LSD once or twice [e]	38.8	35.4	34.6	34.9	33.9	34.2	34.7	34.7	34.5	36.4	34.4	31.6	33.8	+2.1
Take LSD regularly [e]	60.7	56.8	55.7	56.7	56.1	54.9	56.4	54.8	54.8	58.3	55.2	53.0	54.1	+1.1
Try ecstasy (MDMA, Molly)) once or twice [f]	48.4	45.3	43.2	38.9	36.3	37.2	36.2	36.0‡	53.2	54.8	54.2	55.4	54.5	−0.9
Take ecstasy (MDMA, Molly) occasionally [f]	71.3	68.2	66.4	62.1	59.2	60.8	59.8	58.6‡	69.0	70.1	69.3	68.6	67.6	−1.0
Try salvia once or twice [c]	—	—	—	—	—	—	12.2	10.7	—	—	—	—	—	—
Take salvia occasionally [c]	—	—	—	—	—	—	20.3	17.1	—	—	—	—	—	—
Try crack once or twice [d]	56.6	56.4	56.5	57.7	58.1	59.5	59.0	60.2	61.4	62.5	61.3	60.7	60.4	−0.2
Take crack occasionally [d]	76.2	76.0	76.5	75.9	76.2	76.5	76.7	77.8	76.4	77.5	75.2	75.1	75.0	−0.1
Try cocaine powder once or twice [d]	50.2	49.5	49.8	50.8	52.9	53.0	53.4	54.5	54.1	54.8	54.6	52.5	52.6	+0.1
Take cocaine powder occasionally [d]	71.3	70.9	71.1	71.0	72.2	72.0	72.6	72.8	71.7	72.6	70.9	70.4	70.2	−0.2
Try heroin once or twice without using a needle [e]	70.0	70.5	70.8	72.2	73.0	72.9	72.6	73.2	72.6	74.1	73.3	72.2	71.4	−0.9
Take heroin occasionally without using a needle [e]	83.6	84.2	83.1	83.3	84.8	83.4	84.4	84.0	82.5	83.3	82.2	81.4	81.0	−0.4
Try OxyContin once or twice [c]	—	—	—	—	—	—	30.9	29.4	29.7	29.9	28.7	27.8	29.6	+1.8
Take OxyContin occasionally [c]	—	—	—	—	—	—	48.3	44.7	44.4	43.7	41.4	41.3	43.9	+2.6
Try Vicodin once or twice [c]	—	—	—	—	—	—	23.2	21.0	22.5	24.1	21.8	22.1	23.2	+1.1
Take Vicodin occasionally [c]	—	—	—	—	—	—	40.3	36.0	36.4	35.4	32.6	32.0	34.8	+2.9 s
Try Adderall once or twice [c]	—	—	—	—	—	—	19.7	17.6	22.2	22.9	22.5	21.6	23.2	+1.6
Take Adderall occasionally [c]	—	—	—	—	—	—	34.3	30.5	37.0	37.0	35.8	36.4	39.8	+3.4 s
Try bath salts (synthetic stimulants) once or twice [c]	—	—	—	—	—	—	32.3	50.1	49.6	49.1	42.7	42.5	41.1	−1.4
Take bath salts (synthetic stimulants) occasionally [c]	—	—	—	—	—	—	44.9	61.8	61.1	60.4	53.0	51.5	51.4	−0.1
Try cough/cold medicine once or twice [c]	—	—	—	—	—	—	23.6	21.6	22.9	24.0	24.0	21.8	22.1	+0.4
Take cough/cold medicine occasionally [c]	—	—	—	—	—	—	40.4	37.3	38.3	38.2	37.6	36.4	37.2	+0.8
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) [b]	11.1	11.6	12.6	11.9	11.9	12.3	11.3	11.3	11.6	12.4	13.3	12.5	13.0	+0.5
Take one or two drinks nearly every day [b]	31.7	33.3	35.0	33.8	33.1	32.9	31.8	30.6	31.3	31.2	32.2	30.9	30.3	−0.6
Have five or more drinks once or twice each weekend [b]	52.4	54.1	56.6	54.2	54.6	55.5	52.8	52.3	54.0	54.5	54.5	52.0	51.8	−0.1
Smoke one to five cigarettes per day [c]	41.3	41.7	43.5	42.8	41.4	44.8	49.1	47.7	52.0	52.9	53.0	50.0	49.9	0.0
Smoke one or more packs of cigarettes per day [g]	67.7	68.2	69.1	67.3	67.2	69.8	71.6	70.8	72.0	72.9	71.5	69.8	69.6	−0.2
Use electronic cigarettes (e-cigarettes) regularly [h]	—	—	—	—	—	—	—	—	14.1	17.0	19.1	19.4	22.8	+3.4 ss
Vape an e-liquid with nicotine occasionally [c,j]	—	—	—	—	—	—	—	—	—	—	—	17.0	17.9	+1.0
Vape an e-liquid with nicotine regularly [c,j]	—	—	—	—	—	—	—	—	—	—	—	30.0	31.3	+1.3
Smoke little cigars or cigarillos regularly [c]	—	—	—	—	—	—	—	—	31.0	34.9	35.3	34.0	34.9	+0.9
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	41.0	+0.3
Take dissolvable tobacco regularly [c]	—	—	—	—	—	—	33.3	31.3	32.0	35.6	34.2	32.7	33.2	+0.6
Take snus regularly [c]	—	—	—	—	—	—	41.0	38.9	38.8	41.8	39.9	38.1	39.8	+1.7
Take steroids [i]	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	14,300	

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.

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

[b] Beginning in 2012 data based on two thirds of *N* indicated.

[c] Data based on one third of *N* indicated.

[d] Beginning in 1997, data based on two thirds of *N* indicated due to changes in questionnaire forms.

[e] Beginning in 1997, data based on two thirds of *N* indicated. Beginning in 1997, data based on one third of *N* indicated due to changes in questionnaire forms.

[f] Data based on one of two forms in 1993–1996; *N* is one half of *N* indicated. Beginning in 1997, *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.

[g] Beginning in 2014 data are based on the revised question which included "Molly," *N* is one third of *N* indicated due to changes in questionnaire forms.

[h] Beginning in 1999, data based on two thirds of *N* indicated due to changes in questionnaire forms.

[i] E-cigarette data based on two thirds of *N* indicated. Little cigars or cigarillos data based on one third *N* indicated.
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.

[j] Percentages for all years reported here include respondents who replied "can't say, drug unfamiliar" in the denominator. The percentage for 2017 published in late 2017 and early
2018 did not include these respondents in the denominator.

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

Percentage saying great risk [a]

How much do you think people risk harming themselves (physically or in other ways), if they . . .

	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, Molly) once or twice [b]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try salvia once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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 [d]	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 [d]	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 [e]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Adderall occasionally [e]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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 [f]	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 [f]	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 [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine ocasionally [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Approximate weighted N =	2,804	2,918	3,052	3,770	3,250	3,234	3,604	3,557	3,305	3,262	3,250	3,020	3,315	3,276	2,796	2,553

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

Percentage saying great risk [a]

How much do you think people risk harming themselves (physically or in other ways), if they . . .

	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, Molly) once or twice [b]	—	—	—	—	—	—	33.8	34.5	35.0	37.9	45.7	52.2	56.3	57.7	60.1
Try salvia once or twice [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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 [d]	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 [d]	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 [e]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try Adderall occasionally [e]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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 [f]	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 [f]	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 [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine ocasionally [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Approximate weighted N =	2,549	2,684	2,759	2,591	2,603	2,449	2,579	2,564	2,306	2,130	2,173	2,198	2,466	2,491	2,512

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

Percentage saying great risk[a]

How much do you think people risk harming themselves (physically or in other ways), if they . . . .

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 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	12.1	+0.2
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	14.3	+0.1
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	26.7	-2.2
Try synthetic marijuana once or twice	—	—	—	—	—	—	23.5	25.9	32.5	33.0	35.6	33.0	30.4	-2.6
Take synthetic marijuana occasionally	—	—	—	—	—	—	32.7	36.2	39.4	40.9	43.9	40.0	37.1	-2.9
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	29.0	-1.0
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	55.2	-0.9
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	51.7	-1.9
Try ecstasy (MDMA, Molly) once or twice[b]	59.3	58.1	57.0	53.3	50.6	49.0	49.4	47.5‡	47.8	49.5	48.8	49.1	48.2	-0.9
Try salvia once or twice[c]	—	—	—	—	39.8	36.7‡	13.8	12.9	14.1	13.1	13.0	10.2	9.8	-0.5
Take salvia occasionally	—	—	—	—	—	—	23.1	21.3	20.0	17.6	16.3	13.8	12.0	-1.9
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	47.9	-1.6
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	62.1	-2.5
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	75.2	+0.3
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	51.3	-0.2
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	64.4	-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	79.8	0.0
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	44.9	-0.2
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	59.8	-0.3
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	77.6	-1.2
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	61.8	-1.2
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	75.0	+0.3
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	81.4	-1.8
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	63.1	-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	69.6	-3.1
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	43.2	+1.1
Take any narcotic other than heroin occasionally	—	—	—	—	54.3	54.8	53.8	57.3	59.0	58.5	55.7	55.5	56.7	+1.2
Take any narcotic other than heroin regularly	—	—	—	—	74.9	75.5	73.9	75.8	72.7	73.9	72.4	70.8	71.6	+0.8
Try amphetamines once or twice[d]	39.5	41.3	39.2	41.9	40.6‡	34.8	34.3	36.3	34.1	34.0	31.1	31.9	29.2	-2.7
Take amphetamines regularly[d]	68.1	68.1	65.4	69.0	63.6‡	58.7	60.0	59.5	55.1	54.3	51.3	50.0	51.1	+1.1
Try Adderall once or twice[e]	—	—	—	—	33.3	31.2	27.2	31.8	33.6	34.3	32.5	32.0	34.0	+2.0
Try Adderall occasionally[e]	—	—	—	—	41.6	40.8	35.3	38.8	41.5	41.6	40.9	40.6	40.1	-0.5
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	67.1	-2.2
Try bath salts (synthetic stimulants) once or twice	—	—	—	—	—	—	33.2	59.5	59.2	57.5	54.9	51.3	50.7	-0.6
Take bath salts (synthetic stimulants) occasionally	—	—	—	—	—	—	45.0	69.9	68.8	67.4	64.2	61.5	60.7	-0.9
Try sedatives (barbiturates) once or twice[f]	28.0	27.9	25.9	29.6	28.0	27.8	27.8	29.4	29.6	28.9	27.4	26.9	26.3	-0.6
Take sedatives (barbiturates) regularly[f]	56.8	55.1	50.2	54.7	52.1	52.4	53.9	53.3	50.5	50.6	47.0	44.0	45.1	+1.1
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	10.2	+0.9
Take one or two drinks nearly every day	25.3	25.1	24.2	23.7	25.4	24.6	23.7	23.1	23.1	21.5	21.6	21.6	22.8	+1.2
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	59.1	+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	44.7	-0.9
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	73.9	-1.1
Use electronic cigarettes (e-cigarettes) regularly[g]	—	—	—	—	—	—	—	—	14.2	16.2	18.2	16.1	18.0	+2.0
Vape an e-liquid with nicotine ocasionally[g]	—	—	—	—	—	—	—	—	—	—	—	16.4	15.8	-0.6
Vape an e-liquid with nicotine regularly[g]	—	—	—	—	—	—	—	—	—	—	—	27.0	27.7	+0.7
Smoke little cigars or cigarillos regularly	—	—	—	—	—	—	—	—	38.3	39.7	39.5	38.2	42.5	+4.4 s
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	40.2	+1.8
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	50.1	+1.0
Approximate weighted N =	2,407	2,450	2,389	2,290	2,440	2,408	2,331	2,098	2,067	2,174	1,988	1,919	1,976	

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.

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

[b]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.

[c]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.

[d]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.

[e]In 2014 "(without a doctor's orders)" added to the questions on perceived risk of using Adderall.

[f]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.

[g]Based on two of six forms; N is two times the N indicated.

TABLE 13
Trends in <u>Disapproval</u> of Drug Use in Grade 8

Percentage who disapprove or strongly disapprove [a]

Do you disapprove of people who . . .

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Try marijuana once or twice [b]	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 [b]	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 [b]	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 [c]	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 [c]	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 [d]	—	—	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 [d]	—	—	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, Molly) once or twice [e]	—	—	—	—	—	—	—	—	—	—	69.0	74.3	77.7	76.3	75.0
Take ecstasy (MDMA, Molly) occasionally [e]	—	—	—	—	—	—	—	—	—	—	73.6	78.6	81.3	79.4	77.9
Try crack once or twice [c]	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 [c]	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 [c]	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 [c]	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 [d]					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 [d]					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) [b]	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 [b]	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 [b]	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 [e]									75.1	79.1	80.4	81.1	81.4	83.1	82.9
Smoke one or more packs of cigarettes per day [f]	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 [e]															
Vape an e-liquid with nicotine ocasionally [e,h]															
Vape an e-liquid with nicotine regularly [e,h]															
Use smokeless tobacco regularly [b]	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 [g]	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.)

TABLE 13 (cont.)
Trends in <u>Disapproval</u> of Drug Use in <u>Grade 8</u>

Percentage who disapprove or strongly disapprove[a]

Do you disapprove of people who . . .	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 change
Try marijuana once or twice[b]	76.0	78.7	76.6	75.3	73.5	74.4	75.1	72.0	70.5	70.3	70.1	67.3	64.5	-2.8 s
Smoke marijuana occasionally[b]	82.2	84.5	82.6	81.9	79.9	81.1	81.6	78.8	77.7	77.5	77.5	75.5	73.1	-2.3 s
Smoke marijuana regularly[b]	86.1	87.7	86.8	85.9	84.3	85.7	85.6	83.8	82.2	82.2	82.3	81.2	79.3	-1.9
Try inhalants once or twice[c]	83.4	84.1	82.3	83.1	83.1	82.9	83.1	81.6	80.7	80.6	78.3	77.4	75.0	-2.4 s
Take inhalants regularly[c]	89.0	89.5	88.5	88.4	88.9	88.5	88.6	86.8	85.5	85.4	83.3	82.8	81.3	-1.5
Take LSD once or twice[d]	53.9	53.5	52.6	53.2	53.7	55.4	51.8	52.0	52.8	56.0	55.2	56.1	55.9	-0.1
Take LSD regularly[d]	55.8	55.6	54.7	55.7	55.8	57.6	54.1	53.6	54.8	58.1	57.6	58.2	59.4	+1.2
Try ecstasy (MDMA, Molly) once or twice[e]	66.7	65.7	63.5	62.3	62.4	64.2	60.2	60.9	61.0‡	68.2	64.8	63.0	63.7	+0.8
Take ecstasy (MDMA, Molly) occasionally[e]	69.8	68.3	66.5	65.7	65.9	67.5	63.2	63.4	64.1‡	71.7	67.5	65.8	67.1	+1.3
Try crack once or twice[c]	87.2	88.6	87.2	88.4	89.1	88.5	89.0	88.1	88.0	87.5	87.0	87.5	86.1	-1.5
Take crack occasionally[c]	90.0	91.2	90.3	91.0	91.5	91.0	91.2	90.3	89.8	89.8	88.8	89.6	88.4	-1.2
Try cocaine powder once or twice[c]	86.5	88.2	86.8	88.1	88.4	88.3	88.6	88.0	87.7	87.5	86.8	86.8	85.6	-1.2
Take cocaine powder occasionally[c]	90.2	91.0	90.1	90.7	91.4	91.3	91.5	90.6	90.1	90.1	89.3	90.0	88.9	-1.1
Try heroin once or twice without using a needle[d]	87.2	88.4	86.9	88.6	89.5	87.5	86.8	87.2	87.1	87.1	85.6	87.9	85.5	-2.5 s
Take heroin occasionally without using a needle[d]	88.5	89.7	88.2	90.1	90.6	89.0	87.7	88.2	88.1	88.0	86.7	88.7	86.8	-1.9
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)[b]	51.3	54.0	52.5	52.7	54.2	54.0	54.1	53.3	53.3	53.7	52.6	51.0	47.4	-3.6 ss
Take one or two drinks nearly every day[b]	78.7	80.4	79.2	78.5	79.5	80.7	81.3	80.2	79.6	79.7	79.1	79.5	77.9	-1.6
Have five or more drinks once or twice each weekend[b]	82.0	83.8	83.2	83.2	83.6	84.8	86.0	85.0	84.9	85.4	84.9	84.7	83.7	-1.0
Smoke one to five cigarettes per day[e]	83.5	85.3	85.0	83.6	84.7	86.8	—	—	—	—	—	—	—	—
Smoke one or more packs of cigarettes per day[f]	85.6	87.0	86.7	87.1	87.0	88.0	88.8	88.0	87.5	88.8	88.1	88.8	87.6	-1.1
Use electronic cigarettes (e-cigarettes) regularly[e]	—	—	—	—	—	—	—	—	58.4	65.0	66.6	—	—	—
Vape an e-liquid with nicotine ocasionally[e,h]	—	—	—	—	—	—	—	—	—	—	—	63.2	60.8	-2.4
Vape an e-liquid with nicotine regularly[e,h]	—	—	—	—	—	—	—	—	—	—	—	69.9	68.9	-0.9
Use smokeless tobacco regularly[b]	81.0	82.3	82.1	81.5	81.2	82.6	82.7	81.5	80.2	82.5	81.1	81.3	79.9	-1.5
Take steroids[g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	14,000	

TABLE 13 (cont.)

Trends in <u>Disapproval</u> of Drug Use in <u>Grade 8</u>

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.

[a] 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.

[b] Beginning in 2012, data based on two thirds of *N* indicated.

[c] Beginning in 1997, data based on two thirds of *N* indicated due to changes in questionnaire forms.

[d] 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.

[e] 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.

[f] Beginning in 1999, data based on two thirds of *N* indicated due to changes in questionnaire forms.

[g] 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.

[h] Percentages for all years reported here include respondents who replied "can't say, drug unfamiliar" in the denominator. The percentage for 2017 published in late 2017 and early 2018 did not include these respondents in the denominator.

105

TABLE 14
Trends in Disapproval of Drug Use in Grade 10

Percentage who disapprove or strongly disapprove [a]

Do you disapprove of people who . . .

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Try marijuana once or twice [b]	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 [b]	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 [b]	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 [c]	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 [c]	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 [d]	—	—	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 [d]	—	—	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, Molly) once or twice [e]	—	—	—	—	—	—	—	—	—	—	72.6	77.4	81.0	83.7	83.1
Take ecstasy (MDMA, Molly) occasionally [e]	—	—	—	—	—	—	—	—	—	—	81.0	84.6	86.3	88.0	87.4
Try crack once or twice [c]	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 [c]	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 [c]	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 [c]	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 [d]	—	—	—	—	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 [d]	—	—	—	—	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) [b]	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 [b]	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 [b]	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 [e]	—	—	—	—	—	—	—	—	67.8	69.1	71.2	74.3	76.2	77.5	79.3
Smoke one or more packs of cigarettes per day [f]	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 [e]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine ocasionally [e,h]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly [e,h]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Use smokeless tobacco regularly [b]	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 [g]	90.0	91.0	91.2	90.8	—	—	—	—	—	—	—	—	—	—	—
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

Percentage who disapprove or strongly disapprove [a]

Do you disapprove of people who . . .	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 change
Try marijuana once or twice [b]	62.5	63.9	64.5	60.1	59.2	58.5	56.2	53.2	53.8	52.7	52.6	48.1	47.9	-0.2
Smoke marijuana occasionally [b]	72.6	73.3	73.6	69.2	68.0	67.9	65.7	62.1	62.9	62.6	61.9	58.1	57.4	-0.7
Smoke marijuana regularly [b]	82.5	82.4	83.0	79.9	78.7	78.8	77.3	73.8	74.6	74.3	73.5	70.2	69.7	-0.5
Try inhalants once or twice [c]	88.1	87.6	87.1	87.0	86.5	86.9	85.7	86.1	85.9	84.1	83.3	80.7	81.8	+1.1
Take inhalants regularly [c]	92.2	91.8	91.6	91.1	90.8	90.9	90.0	89.7	89.7	88.3	87.1	85.4	86.9	+1.5
Take LSD once or twice [d]	71.2	67.7	66.3	67.8	68.2	68.5	68.3	69.1	67.8	70.3	69.5	66.9	70.5	+3.6 s
Take LSD regularly [d]	74.9	71.5	69.8	72.2	72.9	72.5	73.0	74.2	73.3	76.5	74.9	74.5	76.5	+2.0
Try ecstasy (MDMA, Molly) once or twice [e]	81.6	80.0	78.1	76.5	75.5	76.1	75.3	75.4	74.4‡	78.0	76.8	74.7	75.3	+0.6
Take ecstasy (MDMA, Molly) occasionally [e]	86.0	84.3	83.0	81.3	81.3	82.2	81.2	81.3	80.4‡	84.0	81.7	80.0	79.5	-0.6
Try crack once or twice [c]	89.5	89.5	90.8	90.4	90.3	90.9	91.0	90.6	90.6	90.1	89.7	88.4	89.5	+1.1
Take crack occasionally [c]	92.0	92.7	92.9	92.8	92.4	93.0	93.0	92.4	92.4	92.1	91.1	90.0	91.2	+1.1
Try cocaine powder once or twice [c]	87.3	87.7	88.6	88.4	89.0	89.4	89.3	88.7	88.9	87.9	87.9	86.1	87.6	+1.6 s
Take cocaine powder occasionally [c]	91.4	92.0	92.1	92.1	92.2	92.5	92.4	91.8	91.9	91.8	90.8	89.9	90.9	+1.0
Try heroin once or twice without using a needle [d]	91.1	90.7	91.4	91.6	91.4	91.6	91.9	91.3	91.9	91.7	90.2	89.7	90.6	+0.9
Take heroin occasionally without using a needle [d]	92.5	92.5	92.5	93.0	92.4	92.4	92.9	92.3	92.7	92.7	90.9	90.5	91.2	+0.7
Try one or two drinks of an alcoholic beverage (beer, wine, liquor) [b]	37.8	39.5	41.8	39.7	40.3	41.5	39.6	38.5	40.7	40.0	41.8	39.3	39.6	+0.3
Take one or two drinks nearly every day [b]	76.4	77.1	79.1	77.6	77.6	80.0	78.0	77.1	77.9	78.2	78.6	77.7	77.9	+0.2
Have five or more drinks once or twice each weekend [b]	72.9	74.1	77.2	75.1	75.9	77.3	77.5	77.8	79.5	79.6	80.8	80.1	80.4	+0.3
Smoke one to five cigarettes per day [e]	80.2	79.7	82.5	80.0	80.6	82.1	—	—	—	—	—	—	—	—
Smoke one or more packs of cigarettes per day [f]	83.2	84.7	85.2	84.5	83.9	85.8	86.0	86.1	88.0	88.3	88.5	87.8	88.5	+0.7
Use electronic cigarettes (e-cigarettes) regularly [e]	—	—	—	—	—	—	—	—	54.6	59.9	65.0	—	—	—
Vape an e-liquid with nicotine ocasionally [e,h]	—	—	—	—	—	—	—	—	—	—	—	59.3	58.0	-1.3
Vape an e-liquid with nicotine regularly [e,h]	—	—	—	—	—	—	—	—	—	—	—	68.3	67.8	-0.5
Use smokeless tobacco regularly [b]	80.5	80.9	81.8	79.5	78.5	79.5	79.5	77.7	78.7	80.1	81.2	80.7	80.7	0.0
Take steroids [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	14,300	

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.

[a]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.

[b]Beginning in 2012, data based on two thirds of *N* indicated.

[c]Beginning in 1997, data based on two thirds of *N* indicated due to changes in questionnaire forms.

[d]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.

[e]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.

[f]Beginning in 1999, data based on two thirds of *N* indicated due to changes in questionnaire forms.

[g]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.

[h]Percentages for all years reported here include respondents who replied "can't say, drug unfamiliar" in the denominator. The percentage for 2017 published in late 2017 and early 2018 did not include these respondents in the denominator.

TABLE 15
Trends in Disapproval of Drug Use in Grade 12

Percentage who disapprove or strongly disapprove[b]

Do you disapprove of people (who are 18 or older) doing each of the following?[a]	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, Molly) once or twice[c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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[d]	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[d]	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[e]	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[e]	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 ocasionally[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Taking steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	90.8
Approximate weighted N =	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[b]

Do you disapprove of people (who are 18 or older) doing each of the following?[a]	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, Molly) once or twice[c]	—	—	—	—	—	—	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[d]	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[d]	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[e]	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[e]	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 ocasionally[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vape an e-liquid with nicotine regularly[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Approximate weighted N =	2,547	2,645	2,723	2,588	2,603	2,399	2,601	2,545	2,310	2,150	2,144	2,160	2,442	2,455	2,460

TABLE 15 (cont.)

Trends in <u>Disapproval</u> of Drug Use in <u>Grade 12</u>

Percentage who disapprove or strongly disapprove[b]

Do you disapprove of people (who are 18 or older) doing each of the following?[a]	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 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	41.1	+2.1
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	49.2	+2.6
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	66.7	+2.1
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	80.5	+2.5
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	93.4	+0.7
Trying ecstasy (MDMA, Molly) once or twice[c]	89.0	87.8	88.2	88.2	86.3	83.9	87.1	84.9‡	83.1	84.5	84.0	85.1	85.6	+0.4
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	88.9	+0.9
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	95.8	+1.1
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	90.4	+0.7
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	92.2	+0.4
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	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	86.5	+1.0
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	91.3	+1.0
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	92.0	-0.1
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	95.0	+1.2
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	96.4	+0.8
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	96.8	+0.9
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	93.0	-0.2
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	93.4	-0.4
Trying amphetamines once or twice[d]	86.3	87.3	87.2	88.2	88.1‡	84.1	83.9	84.9	83.1	81.4	82.1	81.9	81.0	-0.8
Taking amphetamines regularly[d]	95.3	95.4	94.2	95.6	94.9‡	92.9	93.9	93.2	93.0	92.2	92.2	92.0	92.8	+0.8
Trying sedatives (barbiturates) once or twice[e]	85.3	86.5	86.1	87.7	87.6	87.3	88.2	88.9	88.5	87.4	86.5	85.9	86.9	+0.9
Taking sedatives (barbiturates) regularly[e]	95.1	94.6	94.3	95.8	94.7	95.1	96.1	95.8	95.0	94.7	94.8	94.4	95.3	+0.9
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	31.3	+4.1
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	74.7	+3.9 s
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	91.7	+1.0
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	75.8	+3.3 s
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	89.0	+2.4 s
Vape an e-liquid with nicotine ocasionally[f]	—	—	—	—	—	—	—	—	—	—	—	62.0	59.2	-2.7
Vape an e-liquid with nicotine regularly[f]	—	—	—	—	—	—	—	—	—	—	—	71.8	70.9	-0.9
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	87.4	-1.1
Approximate weighted N =	2,377	2,450	2,314	2,233	2,449	2,384	2,301	2,147	2,078	2,193	2,000	1,870	1,918	

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.

[a]The 1975 question asked about people who are 20 or older.

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

[c]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.

[d]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.

[e]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.

[f]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

Percentage saying fairly easy or very easy to get [a]

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

	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 [b]	—	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") [b]	—	—	—	—	—	—	—	—	—	—	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 [b,c]	—	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 [d]	—	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) [b]	—	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 [e,f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
E-liquid with nicotine (for vaping) [e,f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Approximate weighted N =	*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*	

113

TABLE 16 (cont.)

Trends in Availability of Drugs as Perceived by 8th Graders

Percentage saying fairly easy or very easy to get[a]

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

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 change
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	35.0	-0.3
LSD[b]	10.8	10.5	10.9	10.0	10.0	9.3	7.5	7.4	6.9	6.6	6.9	6.3	6.5	+0.2
PCP[b]	10.5	9.5	10.1	9.1	8.0	7.9	6.7	5.8	5.5	5.1	4.8	4.6	4.7	+0.1
MDMA (e.g. ecstasy, "Molly")[b]	14.5	13.4	14.1	13.1	12.9	12.0	9.6	9.5	10.1	9.6	8.7	8.0	7.2	-0.8
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	9.6	-0.6
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	9.8	-0.5
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	7.8	-0.3
Narcotics other than Heroin[b,c]	13.0	11.7	12.1	11.8‡	14.6	12.3	10.6	9.7	9.2	8.8	8.9	8.9	8.3	-0.5
Amphetamines[d]	20.7	19.9	21.3	20.2	19.6‡	15.0	13.4	12.8	12.1	11.8	12.1	11.0	11.6	+0.5
Crystal methamphetamine (ice)[b]	14.5	12.1	12.8	11.9	10.9	9.6	8.8	8.5	7.7	6.9	6.6	6.6	6.2	-0.4
Sedatives (barbiturates)[e]	17.3	16.8	17.5	15.9	15.3	12.6	11.1	10.6	10.0	9.0	9.3	9.2	8.6	-0.5
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	12.2	+0.5
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	53.9	+0.7
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	45.7	-0.6
Vaping device[e,f]	—	—	—	—	—	—	—	—	—	—	—	38.6	45.7	+7.1 sss
E-liquid with nicotine (for vaping)[e,f]	—	—	—	—	—	—	—	—	—	—	—	31.0	37.9	+6.9 sss
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	10.9	-0.7
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	12,315	

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.

[a] 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.

[b] 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.

[c] 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.

[d] 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.

[e] Beginning in 2017, data based on one half of *N* indicated.

[f] Percentages for all years reported here include respondents who replied "can't say, drug unfamiliar" in the deniminator. The percentage for 2017 published in late 2017 and early 2018 did not include these respondents in the deniminator.

TABLE 17
Trends in <u>Availability</u> of Drugs as Perceived by <u>10th Graders</u>

Percentage saying fairly easy or very easy to get [a]

How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	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 [b]	—	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") [c]	—	—	—	—	—	—	—	—	—	—	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 [b]	—	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 [d]	—	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) [b]	—	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 [e,f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
E-liquid with nicotine (for vaping) [e,f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Approximate weighted N =		*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 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 [a]

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 change
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	64.5	-0.1
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	14.9	-1.0
PCP [b]	15.8	15.4	14.4	13.4	12.6	12.0	10.2	9.4	8.3	9.0	7.6	7.1	7.3	+0.1
MDMA (e.g. ecstasy, "Molly") [c]	27.4	27.7	26.7	25.6	25.7	24.8	21.0	20.7	20.4	19.3	16.3	15.0	13.9	-1.1
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	13.0	-0.8
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	14.7	-0.2
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	9.7	-0.9
Narcotics other than Heroin [b]	22.2	21.5	20.3	18.8‡	28.7	25.0	24.3	22.5	18.8	19.2	16.8	17.7	16.8	-1.0
Amphetamines [d]	34.7	33.3	32.0	31.8	32.6‡	28.5	27.3	26.5	25.2	27.3	22.9	24.2	23.4	-0.8
Crystal methamphetamine (ice) [b]	20.8	18.8	15.8	14.0	13.3	11.8	10.7	10.0	9.8	8.9	8.2	8.0	8.0	-0.0
Sedatives (barbiturates) [e]	29.9	28.2	26.9	25.5	24.9	22.0	20.2	18.3	16.7	16.6	14.2	15.1	14.4	-0.7
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	24.2	+0.8
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	70.6	-0.9
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	61.5	-1.0
Vaping device [e,f]	—	—	—	—	—	—	—	—	—	—	—	59.5	66.6	+7.1 sss
E-liquid with nicotine (for vaping) [e,f]	—	—	—	—	—	—	—	—	—	—	—	52.8	60.4	+7.6 sss
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	14.5	-0.6
Approximate weighted N =	*15,804*	*15,511*	*14,634*	*15,451*	*14,827*	*14,509*	*14,628*	*12,601*	*12,574*	*15,186*	*14,126*	*12,901*	*13,365*	

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.

[a] 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.

[b] 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.

[c] Beginning in 1993, data based on one of two of two 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 from 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.

[d] 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.

[e] Beginning in 2017, data based on one half of *N* indicated.

[f] Percentages for all years reported here include respondents who replied "can't say, drug unfamiliar" in the deniminator. The percentage for 2017 published in late 2017 and early 2018 did not include these respondents in the deniminator.

TABLE 18
Trends in <u>Availability</u> of Drugs as Perceived by <u>12th Graders</u>

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 [a]

	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 [b]	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") [c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	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) [d]	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 [e]	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) [f]	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 [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping device [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
E-liquid with nicotine (for vaping) [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Approximate weighted N =	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 18 (cont.)
Trends in <u>Availability</u> of Drugs as Perceived by <u>12th Graders</u>

Percentage saying fairly easy or very easy to get [a]

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

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
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 [b]	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") [c]	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) [d]	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 [e]	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) [f]	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 [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping device [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
E-liquid with nicotine (for vaping) [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Approximate weighted N =	*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 18 (cont.)
Trends in Availability of Drugs as Perceived by 12th Graders

Percentage saying "fairly easy" or "very easy" to get [a]

How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2017–2018 change
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	79.7	-0.1
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	28.0	+1.7
Some other hallucinogen [b]	43.9	43.7	42.8	40.5	39.5	38.3	37.8	36.6	33.6	31.4	32.5	28.4	28.6	+0.2
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	10.8	+0.2
MDMA (e.g. ecstasy, "Molly") [c]	40.3	40.9	41.9	35.1	36.4	37.1	35.9	35.1	36.1	37.1	32.5	29.3	27.7	-1.6
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	28.1	+0.9
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	20.8	+2.7
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	23.0	+1.7
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	18.4	-0.8
Some other narcotic (including methadone) [d]	39.6	37.3	34.9	36.1‡	54.2	50.7	50.4	46.5	42.2	39.0	39.3	35.8	32.5	-3.3
Amphetamines [e]	52.9	49.6	47.9	47.1	44.1‡	47.0	45.4	42.7	44.5	41.9	41.1	38.0	39.3	+1.3
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	13.6	-0.0
Sedatives (barbiturates) [f]	43.8	41.7	38.8	37.9	36.8	32.4	28.7	27.9	26.3	25.0	25.7	23.4	23.0	-0.4
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	13.0	-1.9
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	85.5	-1.6
Cigarettes [g]	—	—	—	—	—	—	—	—	—	—	—	77.9	75.1	-2.8
Vaping device [g]	—	—	—	—	—	—	—	—	—	—	—	78.2	80.5	+2.2
E-liquid with nicotine (for vaping) [g]	—	—	—	—	—	—	—	—	—	—	—	75.0	77.2	+2.2
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	21.1	+1.0
Approximate weighted N =	2,131	2,420	2,276	2,243	2,395	2,337	2,280	2,092	2,066	2,181	1,958	1,882	1,931	

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.

[a]Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

[b]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.

[c]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.

[d]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.

[e]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.

[f]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.

[g]Data based on 2 of 6 forms. N is twice the N indicated.

119

a continuing study of American youth

Monitoring the Future website:
http://www.monitoringthefuture.org