MONITORING *the* FUTURE

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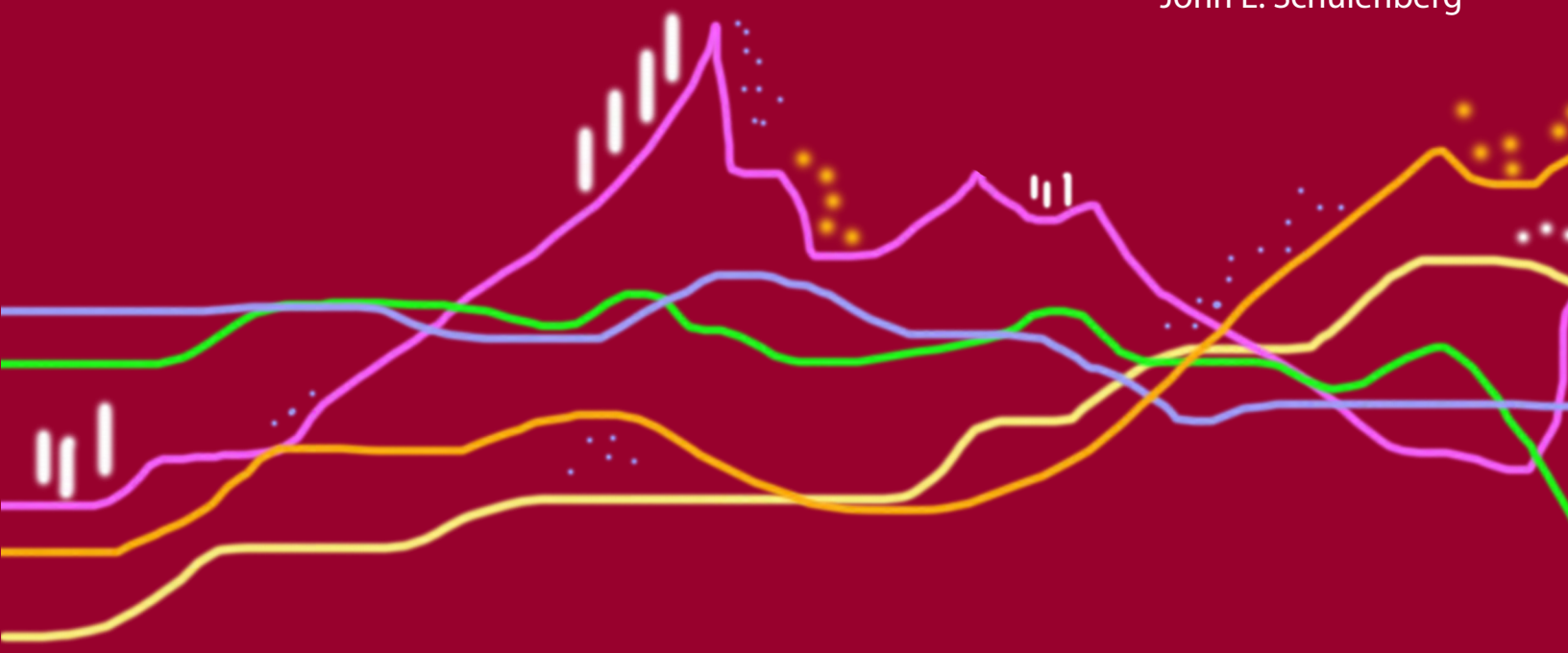

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NATIONAL SURVEY RESULTS ON DRUG USE, 1975–2022:

SECONDARY SCHOOL STUDENTS

by

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Chapter 1

INTRODUCTION

Substance use is a leading cause of preventable morbidity and mortality; it is in large part why, among 17 high income nations, people in the U.S. have the highest probability of dying by age 50.[1,2,3] Substance use is also an important contributor to many social ills including domestic violence, violence more generally, theft, suicide, and more—and it typically is initiated during adolescence. It warrants our sustained attention.

Monitoring the Future (MTF) is designed to give such attention to substance use among the nation's youth and adults. It is an investigator-initiated study that originated with, and is conducted by, a team of research professors at the University of Michigan's Institute for Social Research. Since its onset in 1975, MTF has been funded continuously by the National Institute on Drug Abuse—one of the National Institutes of Health—under a series of peer reviewed, competitive research grants. The 2022 survey, reported here, is the 48th consecutive national survey of 12th grade students and the 32nd national survey of 8th and 10th grade students (who were added to the study in 1991).

MTF contains ongoing national surveys of both adolescents and adults in the United States. It provides the nation with a vital window into the important but often hidden problem behaviors of use of illegal drugs, alcohol, tobacco, and psychotherapeutic drugs (used without a doctor's orders). For more than four decades, MTF has helped provide a clearer view of the changing topography of these problems among adolescents and adults, a better understanding of the dynamics of factors that drive some of these problems, and a better understanding of some of their consequences. It has also given policymakers, government agencies, and nongovernmental organizations (NGOs) in the field some practical approaches for intervening.

A widespread epidemic of illicit drug use emerged in the 1960s among U.S. youth, and since then dramatic changes have occurred in the use of nearly all types of illicit drugs, as well as alcohol and tobacco. Of particular importance, as discussed in detail below, are the many new illicit drugs that have emerged, along with new forms of alcoholic beverages and nicotine products. Among the substances that have arisen over the life of the survey are new classes of drugs that include vaping devices, hookah smoking, synthetic marijuana, and drugs taken for strength enhancement. New devices and methods for taking drugs, such as vaporizers and e-cigarettes, provide novel ways to use substances and use them in new combinations. Unfortunately, the number of new substances added to the list over the years substantially outnumbers the number removed because so many substances remain in active use. Throughout these many changes, substance use among the nation's youth has remained a major concern for parents, teachers, health professionals, law

[1] Case, A. & Deaton, A. (2015). Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. *Proceedings of the National Academy of Sciences, 112*(49), 15078-15083.

[2] Murphy, S. L., Xu, J., Kochanek, K. D., & Arias, E. S. (2020). Mortality in the United States, 2020. NCHS Data Brief, no 395. Hyattsville, MD: National Center for Health Statistics.

[3] Esser, M. B., Leung, G., Sherk, A., Bohm, M. K., Liu, Y. Lu, H., & Naimi, T. S. (2022). Estimated deaths attributable to excessive alcohol use among US adults aged 20 to 64 years, 2015 to 2019. *JAMA Network Open, 5*(11), e2239485.

enforcement, and policymakers, largely because substance misuse is one of the largest and yet most preventable causes of morbidity and mortality during and after adolescence.

The MTF annual monograph series is a key vehicle for disseminating MTF's epidemiological findings. In addition to this monograph, the series includes an Overview that is an executive summary of the year's key results; a separate, annual monograph that presents prevalence and trends among U.S. adults ages 19 to 60, including both college students and young adults who are not attending college(scheduled for publication August 1, 2023); and an additional, periodic monograph that presents information on risk and protective behaviors for HIV among young adults. All MTF publications, including press releases, are available on the project website at www.monitoringthefuture.org.

CONTENT AREAS COVERED

Two of the major topics included in the present monograph are (a) the *prevalence and frequency* of use of a great many substances, both licit and illicit, among U.S. secondary school students in 8th, 10th, and 12th grades and (b) *historical trends* in use by students in those grades. Distinctions are made among important demographic subgroups in these populations based on gender, college plans, region of the country, population density, parent education, and race/ethnicity. MTF has demonstrated that key attitudes and beliefs about drug use are important determinants of usage trends, in particular the amount of risk to the user perceived to be associated with the various drugs and disapproval of using them; thus, those measures also are tracked over time, as are students' perceptions of certain relevant aspects of the social environment—in particular, perceived availability of each drug, peer norms about their use, use by friends, and exposure to use by others of the various drugs. Data on grade of first use, noncontinuation of use, trends in use in lower grades (based on retrospective reports), and intensity of use are also reported here.

Drug Classes

Initially, 11 separate classes of drugs were distinguished in order to heighten comparability with a parallel series of publications based on the National Survey of Drug Use and Health (NSDUH, formerly titled the National Household Survey of Drug Abuse): marijuana (including hashish), inhalants, hallucinogens, cocaine, heroin, narcotics other than heroin (both natural and synthetic), amphetamines, sedatives, tranquilizers, alcohol, and tobacco. Separate statistics have been presented for a number of subclasses of drugs within these more general categories: PCP and LSD (both hallucinogens), barbiturates and methaqualone (both sedatives), methamphetamine, crystal methamphetamine ("ice"), and crack and cocaine other than crack.

In the years since the study was launched, many additional categories of substances have been added to the MTF questionnaires—in many but not all cases in all three grades. Relatively fewer substances have been dropped due to their reaching very low prevalence. The substances added and dropped are shown in Table 1-1 sequentially by year and within year by the grade levels affected.

The large number of substances added over the years illustrates the dynamic and multidimensional nature of the country's drug problems. As time passes and new trends develop, additional drugs will be added to the study's coverage; occasionally ones that fall to low prevalence levels (such as bath salts, "look-alike" pseudo-amphetamines, kreteks, bidis, PCP, and Provigil) are dropped. It is

important, given this rapidly shifting variety of drugs, that information be gathered and reported relatively quickly to inform legislators, regulatory agencies, scientists, practitioners in the field, parents, and educators about the extent to which newer drugs are making inroads in the youth population and what subgroups are proving most vulnerable.

Most of the information reported here deals with illicit use of controlled substances. The major exceptions are alcohol, vaping, cigarettes, other tobacco products, inhalants, nonprescription stimulants, medicines taken appropriately by prescription in the treatment of ADHD, creatine, cough and cold medicines, and salvia. In the questions about nonmedical use of psychotherapeutic drugs, respondents are asked to exclude any use with a doctor's order.

Throughout this report, we also focus attention on drug use at high frequency levels in addition to reporting proportions that have ever used various drugs. This is done to help differentiate levels of seriousness, or extent, of drug involvement. While there is no scientific or public consensus on what levels or patterns of use constitute misuse, there is a consensus that higher levels of use are more likely to have detrimental effects for the user and for society. We have indirect measures of dosage per occasion by asking respondents about the duration and intensity of highs they usually experience with each type of drug. These items have shown some interesting trends over the years, detailed in Chapter 7.

Attitudes, Beliefs, and Early Experiences

Separate sections or whole chapters are devoted to the following issues related to a number of licit and illicit drugs:

- grade of first use;
- noncontinuation of use;
- respondents' own attitudes and beliefs about specific drugs;
- degree and duration of the highs attained;
- perceptions of availability of the drug; and
- perceptions of attitudes and behaviors of others in the social environment.

Some of these variables have proven to be very important in explaining changes in use, as we discuss in detail in Chapter 8.

Over-the-Counter Substances

Included in this monograph are trends in the use of nonprescription stimulants, including diet pills and stay-awake pills, cough medicines, and the performance-enhancing substances of anabolic steroids, androstenedione (andro), and creatine.

Cumulative Lifetime Daily Marijuana Use

Also included are trend results from a set of questions about cumulative lifetime marijuana use at a daily or near-daily level. These questions were added to enable us to develop a more complete individual history of daily use over a period of years. They reveal some important facts about frequent users of this drug.

Trends in Use of Specific Alcoholic Beverages

Twelfth grade data are reported for a wide spectrum of substances, including beer, liquor, wine, and flavored alcoholic beverages. (For 8th and 10th graders, the measures of specific alcoholic substances are restricted to beer and wine coolers, though the category of wine coolers was dropped from the questionnaires in 2004 to make space for the more general class of flavored alcoholic beverages.) Results on these various substances are discussed in Chapters 4 and 5. We present trends on alcohol use as well as on most other substances among demographic subgroups and for specific classes of alcoholic beverages in a separate, accompanying publication.[4]

Sources of Prescription Drugs

MTF documents trends in prescription-type psychotherapeutic drugs used without medical supervision. Since 2008, Chapters 4 and 5 also contain estimates of the proportion of 12th grade students who use *any* psychotherapeutic drug nonmedically in each prevalence period; these estimates can be made only for 12th graders, because estimates of use of sedatives and narcotics other than heroin are not reported for students in the lower grades due to concerns about the validity of their reports of these substances.

Synopses of Other MTF Publications

Chapter 10 contains short synopses of other MTF publications produced during the past year (journal articles, chapters, occasional papers, etc.). References to the full documents are provided, and many are available on the MTF website.

Appendices

Appendix A addresses the issue of whether absentees and school dropouts affect MTF results and, if so, to what extent. For illustrative purposes, the appendix provides estimates of prevalence and trends adjusted for these missing segments of the population for marijuana, cocaine, any illicit drug use, cigarettes, and alcohol.

Appendix B gives the definitions of the various demographic subgroups discussed.

Appendix C provides trends for 12th grade only on various *subclasses* of drugs within each of the following five general classes: hallucinogens other than LSD, amphetamines, tranquilizers, narcotics other than heroin, and sedatives. These tables provide annual prevalence levels over time and show how the mix of subclasses has changed over the years within each of the general classes.

Appendix D provides trends since 1991 in drug use for the *three grades combined*, as well as the absolute decline and the proportional decline in the prevalence of each drug since the most recent *peak* level. Such tables are helpful in getting a quick read on the trends. By combining the three grades, however, much of the meaningful detail available from grade-specific estimates is lost, including evidence of cohort effects.

[4] Johnston, L. D., Miech, R. A., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2022). *Demographic subgroup trends among adolescents in the use of various licit and illicit drugs 1975-2021* (Monitoring the Future Occasional Paper No. 97). Ann Arbor, MI: Institute for Social Research, University of Michigan.

In years 2017 and earlier the Appendix C of this monograph reported information on how to calculate confidence intervals for point estimates and how to calculate statistics that test the significance of changes over time or of differences between subgroups. This appendix is no longer necessary with the opening of MTF's secure remote portal at the National Addiction and HIV Data Archive Program, which now allows researchers to compute such statistics directly using MTF weights and clustering variables, after completing an application process that includes a signed pledge to protect the confidentiality of the data. Interested readers may refer to Appendix C of earlier monographs for the information it provides about design effects and how their computational influence varies by substance. They are listed under Results>Publications on the study website: www.monitoringthefuture.org.

PURPOSES AND RATIONALE FOR THIS RESEARCH

Perhaps no social problem has proven more clearly appropriate for and in need of the application of systematic research and reporting than that of substance misuse. Substance use behaviors are often hidden from public view, can change rapidly and frequently, and are of great importance to the well-being of the nation. Many legislative and programmatic interventions are aimed at these behaviors, such as the policies that were put into place in response to the increases in adolescent smoking and illicit drug use we reported in the 1970s and then again in the 1990s as a relapse in the drug epidemic unfolded.

Young people are often at the leading edge of social change, and this has been particularly true of drug use. The substantial changes in drug use during the last 50 or so years have proven to be largely a youth phenomenon. MTF documented that the relapse in the drug epidemic in the early 1990s initially occurred almost exclusively among adolescents. Adolescents and adults in their 20s fall into the age groups at highest risk for illicit drug use. Moreover, use that begins in adolescence sometimes continues well into adulthood. This is indicated in the cohort effects that we report for a number of substances (and even in some attitudes and beliefs about them). The original epidemic of illicit drug use in the 1960s began on the nation's college campuses and then spread downward in age. By way of contrast, MTF has shown that the relapse phase in the 1990s first manifested itself among secondary school students and then started moving upward in age as those cohorts matured.

One purpose of MTF is to develop an accurate description of these important changes as they are unfolding. An accurate picture of the basic size and contours of the substance use problem among youth in the U.S. is a prerequisite for informed public debate and policymaking. In the absence of reliable *prevalence* data, substantial misconceptions can develop and resources can be misallocated. In the absence of reliable *trend* data, early detection and localization of emerging problems are more difficult and societal responses more lagged. For example, MTF provided early evidence that cigarette smoking among U.S. adolescents was rising sharply in the early 1990s, which helped stimulate and support some extremely important policy initiatives that culminated in the tobacco settlement between the tobacco industry and the states. MTF documented and described the sharp rise and subsequent decline in ecstasy use and earlier in cocaine use, illustrating the important role that *perceived risk* played in these changes, as it has done for a number of other drugs in the past. The study also helped draw attention to the rise in steroid and androstenedione use among adolescents in the late 1990s, resulting in legislative and regulatory action. It exposed a rise in the use of narcotic drugs other than heroin (especially certain prescription-type

analgesics), stimulating an initiative at the White House Office of National Drug Control Policy aimed at reducing use. More recently, MTF has become a key source of information on vaping, and MTF results are cited by the FDA in its recent regulations prohibiting all flavoring of vaping cartridges except tobacco and menthol. In addition to enabling early detection and localization of problems, valid trend data make assessments of the impact of major historical and policy-induced events much less conjectural.

The accurate empirical comparison of subgroup differences has challenged conventional wisdom in some important ways. Accurately characterizing not only differences but also differential changes among subgroups has been an important scientific contribution from MTF. For example, dramatic racial/ethnic differences in cigarette smoking emerged during the life of the study—differences that were almost nonexistent when MTF began in 1975. Further, the misinformed assumption by some that Black students use illicit drugs more than do White students has been disconfirmed since the beginning of the study, which shows lower levels of use for African-American students in most years, though these differences have been narrowing in recent years as overall use of many substances declined, thus leaving less room for differences.

MTF also monitors a number of factors—peer norms regarding drugs, beliefs about the dangers of drugs, and perceived availability—that help explain the historical changes observed in drug use. Monitoring these factors has made it possible to examine a central policy issue in this nation's efforts to reduce drug use—namely, the relative importance of supply versus demand factors in bringing about some of the observed declines and increases in drug use.[5] Our group has also put forth a general theory of drug epidemics that uses many of these concepts to help explain the rises and declines that occur in use and emphasizes the importance of demand-side factors.[6]

In addition to accurately assessing prevalence and testing explanations of their causes, the integrated MTF study of adolescents and adults has a substantial number of other important research objectives that are addressed in our other publications. These include (a) assessing the impact of historical events such as the COVID-19 pandemic on population levels of substance use; (b) helping to determine which young people are at greatest risk for developing various short- and long-term patterns of drug misuse; (c) gaining a better understanding of the lifestyles and value orientations associated with various patterns of drug use and monitoring how subgroup differences shift over time; (d) determining the immediate and more general aspects of the social environment associated with drug use and misuse; (e) determining how major transitions in the social environment (e.g., entry into military service, civilian employment, college, working, unemployment) or in social roles (e.g., engagement, marriage, pregnancy, parenthood, divorce, remarriage) affect changes in drug use; (f) determining the life course trajectories and comorbidity of the various drug-using behaviors from early adolescence to middle and later adulthood and distinguishing such age effects from cohort and period effects; (g) determining the effects of social legislation, such as marijuana legalization, the long-term effects of the Master Tobacco Settlement Agreement of 1998, and Tobacco 21 legislation on various types of substance use; (h) examining

[5] Other major studies have adopted many of these measures including the National Survey on Drug Use and Health (NSDUH) and the European school surveys of substance use in nearly forty European countries (ESPAD), which is largely modeled after Monitoring the Future.

[6] See Johnston, L. D. (1991). Toward a theory of drug epidemics. In R. L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention* (pp. 93–132). Hillsdale, NJ: Lawrence Erlbaum.

possible consequences of using various drugs; (i) examining linkages between educational success or failure and substance use; and (j) determining the changing connotations of drug use and changing patterns of multiple drug use among youth.[7] Readers interested in publications dealing with any of these topics should visit the MTF website at www.monitoringthefuture.org.

The differentiation of age, period, and cohort effects in the use of various substances has been a particularly important contribution of MTF and one for which the study's cohort-sequential research design is especially well suited.

Since 2004, we have also been reporting about factors related to the spread of HIV. These factors include number of sexual partners, gender of sexual partners, condom use, injection drug use, injection drug use using shared needles, illicit drug and alcohol use more generally, and getting tested for HIV. Most of the research objectives listed above for licit and illicit drug use can also be addressed in relation to these very important behaviors. Our emphasis is on measuring and reporting prevalence and trends in HIV-related behaviors in the general population of young adults ages 19–30 who are high school graduates. We have also been measuring the extent to which these various risk and protective behaviors are correlated.

Our efforts over the years and going into the future cover both the epidemiology and etiology of substance use and related risk behaviors. Including both sets of efforts within the same large-scale study, and keeping measurement consistent across historical and developmental time, allows us to provide the nation with scientifically reliable, nationally representative estimates of historical trends of substance use as well as the developmental trends and possible causes, correlates, and consequences of substance use and other risk behaviors from adolescence through adulthood.

[7] For an elaboration and discussion of the full range of MTF research objectives in the domain of substance use, see Johnston, L. D., O'Malley, P. M., Schulenberg, J. E., Bachman, J. G., Miech, R. A., & Patrick, M. E. (2016). *The objectives and theoretical foundation of the Monitoring the Future Study* (Monitoring the Future Occasional Paper No. 84). Ann Arbor, MI: Institute for Social Research, University of Michigan.

TABLE 1-1
Added and Deleted Prevalence of Use Questions for 8th, 10th, and 12th Graders

Drug Name	Year in which added	Grades in which added			Year in which dropped	Grades in which dropped		
		8th	10th	12th		8th	10th	12th
PCP	1979			X	2014 [c]			X
Nonprescription Diet Pills	1982			X				
Stay-Awake Pills	1982			X				
Smokeless Tobacco [a]	1986, 1992			X	1990			X
Crack [b]	1986–1987, 1990			X				
Cocaine other than Crack	1987			X				
Steroids	1989			X				
Crystal Methamphetamine (Ice)	1990			X				
Been Drunk	1991			X				
Ecstasy (MDMA)	1996	X	X	X				
Rohypnol	1996	X	X	X	2002 [h]			X
Methamphetamine	1999	X	X	X				
GHB	2000	X	X	X	2012 [i]	X	X	
Ketamine	2000	X	X	X	2012 [i]	X	X	
Androstenedione	2001	X	X	X	2016 [i]	X	X	
Creatine	2001	X	X	X				
Ritalin	2001	X	X	X				
OxyContin	2002	X	X	X				
Vicodin	2002	X	X	X				
Flavored Alcoholic	2003			X				
Beverages (Alcopops) [d]	2004	X	X					
ADHD Stimulant-type drug—prescribed	2005	X	X	X				
ADHD Non-stimulant-type drug—prescribed	2005	X	X	X				
Any Prescription Drug—not prescribed [e]	2005			X				
10+ drinks in a row in past two weeks	2005			X				
	2016	X	X					
15+ drinks in a row in past two weeks	2005			X				
Over-the-counter Cough/Cold Medicines	2006	X	X	X				
Adderall	2009	X	X	X				
Salvia	2009			X				
	2010	X	X					
Tobacco using a Hookah	2010, 2016			X				
	2016	X	X					
Small Cigars	2010			X				
Energy Drinks	2010	X	X	X				
Energy Shots	2010	X	X	X				
Synthetic Marijuana [g]	2011			X				
	2012	X	X					
Alcohol Beverages containing Caffeine [f]	2011	X	X	X				
Dissolvable Tobacco Products	2011			X				
	2012	X	X					
Snus	2011			X				
	2012	X	X					
Large Cigars	2014	X	X	X				
Flavored Little Cigars	2014	X	X	X				
Regular Little Cigars	2014	X	X	X				

(Table continued on next page.)

TABLE 1-1 (cont.)
Added and Deleted Prevalence of Use Questions for 8th, 10th, and 12th Graders

	Year in which added	Grades in which added			Year in which dropped	Grades in which dropped		
		8th	10th	12th		8th	10th	12th
Vaping Nicotine	2017	X	X	X				
Vaping Marijuana	2017	X	X	X				
Vaping Just Flavoring	2017	X	X	X				
Marijuana Under a Doctor's Orders	2017	X	X	X				
Methaqualone	1975			X	1990/2013			X
Nitrites	1979			X	2010			X
Provigil	2009			X	2012			X
Bidis	2000	X	X		2006	X	X	
	2000			X	2011			X
Kreteks	2001	X	X		2006	X	X	
	2001			X	2015			X
Electronic Vaporizors	2015	X	X	X	2017	X	X	X
Look-Alikes	1982			X	2018			X
Bath Salts (synthetic stimulants)	2012	X	X	X	2019	X	X	X
Powdered Alcohol	2016	X	X	X	2020	X	X	X
Heroin With a Needle	1995	X	X	X	2022	X	X	X
Heroin Without a Needle	1995	X	X	X	2022	X	X	X
JUUL	2019	X	X	X	2022	X	X	X

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

Note. All prescription-type drugs listed refer to use without a doctor's orders, unless otherwise noted.

[a]Smokeless tobacco was added to one questionnaire form in 1986, dropped in 1990, then added to a different questionnaire form in 1992.

[b]A question on annual use of crack was added to a single form in 1986. The standard triplet questions (lifetime, annual, and 30-day use) were added to two forms in 1987 and to all forms in 1990.

[c]For 12th grade only: Lifetime and 30-day prevalence of use questions were dropped in 2002. A question on annual use remains in the study.

[d]For 12th grade only: A question on annual use of Alcopops was added to a single form in 2003. In 2004 it was replaced by the standard triplet questions (lifetime, annual, and 30-day use) about use of flavored alcoholic beverages.

[e]For 12th grade only: 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.

[f]For all grades: In 2012 the alcoholic beverages containing caffeine question text was changed. See text for details.

[g]For all grades: Questions on the annual use of synthetic marijuana were added to the survey in the year specified in the table.

[h]For 12th grade only: Lifetime and 30-day prevalence of use questions were dropped in 2014. A question on annual use remains in the study.

[i]Only 8th and 10th grade questions were dropped from the study.

Chapter 2

KEY FINDINGS IN 2022

Monitoring the Future (MTF), now having completed its 48th year of data collection, has become one of the nation's most relied upon scientific sources of valid information on trends in use of licit and illicit psychoactive drugs by U.S. adolescents, college students, young adults, and adults up to age 60. During the last four decades, the study has tracked and reported on the use of an ever-growing array of such substances in these populations of adolescents and adults.

The annual MTF series of monographs is one of the primary mechanisms through which the epidemiological findings are reported. Findings from the inception of the study in 1975 through 2022 are included—the results of 48 national in-school surveys and 46 national follow-up surveys.

MTF has conducted in-school surveys of nationally representative samples of (a) 12th grade students each year since 1975 and (b) 8th and 10th grade students each year since 1991. In addition, beginning with the class of 1976, the study has conducted follow-up surveys of representative subsamples of the respondents from each previously participating 12th grade class. These follow-up surveys now continue well into adulthood, currently up to age 60. This monograph focuses on the results from the in-school surveys of 8th, 10th, and 12th grade students; a companion report on the panel study results[1] focuses on the follow-up surveys from ages 19 to 60.

MTF is designed to detect age, period, and cohort effects in substance use and related attitudes. Age effects are similar changes at similar ages seen across multiple class cohorts; they are common during adolescence. Period effects are changes that are parallel over a number of years across multiple age groups (in this case, all three grades under study—8, 10, and 12). Cohort effects are substance use behaviors or attitudes that distinguish a class cohort from others that came before or after them and are maintained as the cohort ages.

Below we summarize key findings for use of various substances by U.S. 8th, 10th, and 12th graders in 2022. In addition, the text below also refers to analyses for all three grades combined, the results of which are presented in Appendix D.

The survey results divide neatly into the time periods before and after the onset of the COVID-19 pandemic. All surveys in 2020 were completed before March 15, when national social distancing policies were enacted and data collection was halted due to pandemic concerns. Consequently, results from 2020 and previous years are pre-pandemic, while results from 2021 and 2022 took place after the onset of the pandemic and the associated national response.

[1] Patrick, M. E., Schulenberg, J. E., Miech, R. A., Johnston, L. D., O'Malley, P. M., & Bachman, J. G. *Monitoring the Future Panel Study annual report: National data on substance use among adults ages 19 to 60, 1976-2021*. Monitoring the Future Monograph Series. University of Michigan Institute for Social Research: Ann Arbor, MI. Prior year versions are available at the MTF website.

EXECUTIVE SUMMARY

Lowered Levels after Pandemic Onset Continued for Some Substances While Others Bounced Back in 2022

Levels of adolescent **cannabis use** and **nicotine vaping** decreased after the onset of pandemic in 2021, and these lowered levels of use continued into 2022. In contrast, levels of **alcohol use** significantly increased between 2021 and 2022, returning to pre-pandemic levels. These three substances have the highest levels of use among adolescents.

The percentage of 12th grade students who used **cannabis** (or marijuana) in the past 12 months in 2022 was 31%, as it was in 2021. In both these years the survey took place after the onset of the pandemic. These levels are significantly lower than they were during the pre-pandemic years of 2020 and 2019, when prevalence levels were 35% and 36%, respectively. The decline from 35% in 2020 to 31% in 2021 is the largest one-year decline among 12th grade students ever recorded in the 48 years of the survey for this measure.

The percentage of 12th grade students who **vaped nicotine** within the last 12 months in 2022 was 27%, as it was in 2021. In both these years the survey took place after the onset of the pandemic. These levels are significantly lower than they were during pre-pandemic years of 2020 and 2019, when the prevalence level was 35% in both years. The decline from 35% in 2020 to 27% in 2021 is the largest one-year decline recorded for 12th grade students since the survey began tracking nicotine vaping in 2017.

The percentage of 12th grade students who used **alcohol** within the last 12 months in 2022 was 52%. This is a statistically significant increase from the 2021 level of 47%. With this increase, prevalence in 2022 returned to pre-pandemic levels and does not significantly differ from the 55% level recorded in 2020 (or the 52% level of 2019).

All these trends were similar in MTF's nationally-representative samples of 8th and 10th grade students.

The results for cannabis and nicotine vaping suggest at least two different scenarios. First, it is possible that the factors that disrupted and lowered drug use during the pandemic in 2021 continued into 2022. These include disruptions in adolescents' ability to use drugs outside of parental supervision, to obtain drugs, and to interact with friends who use drugs and may encourage drug use. Second, an alternative scenario is that a one-year delay or halt in drug use during adolescence may lower adolescents' drug use levels for the rest of their lives. This could occur if absence of drug use reduces involvement with peer groups that encourage the use of drugs, and/or these adolescents have been spared psychological or neurological changes that increased their susceptibility for future drug use. In future years we will be able to see which of these two scenarios plays out.

The results for alcohol indicate that the dip in prevalence last year was fleeting and that alcohol use is back to where it was before the pandemic. For alcohol use, a one-year delay in use appears to have little long-term effect on adolescent alcohol use prevalence, at least at the population level.

Additional, notable changes in adolescent substance use took place in 2022. Among 12th grade students significant increases in 12th grade took place for past 30-day use of **cocaine**, **hallucinogens**, and **heroin**, as well as past 12-month use of **prescription opioids**. With these increases, levels of use for these substances returned to pre-pandemic levels—but did not surpass them.

Use of **anabolic steroids** outside of a doctor's supervision in the past 30 days significantly increased in 2022 for 8th, 10th, and 12th graders. In addition, past 12-month use of **creatine**—a nutrient used to reduce recovery time of muscles and increase muscle mass—also increased in 10th and 12th grade. Use of **androstenedione** (a controlled, performance-enhancing substance) without a doctor's orders in the past 12 months also significantly increased among 12th grade students. Taken together, these findings suggest some adolescents have increased their involvement in fitness and weightlifting since the pandemic, and with this increase has come an increased need to prevent adolescents from unsupervised use of these substances, which can potentially lead to serious harm and even death.

Among 12th grade students, prescribed use of **medications for ADHD** (attention-deficit/hyperactivity disorder) significantly increased in 2022. The percentage of 12th grade students who had ever used these drugs under a doctor's order's increased from 11% in 2021 to 15% in 2022. It is possible that the need for treatment of ADHD increased during the pandemic due to adolescents experiencing more stress. Another possibility is that sheltering at home during the pandemic may have made any attention issues of adolescents more salient to their parents, who then sought out medical care for their children.

Chapter 3

STUDY DESIGN AND PROCEDURES

Monitoring the Future (MTF) incorporates several survey designs into one study, yielding analytic power beyond the sum of those component parts. The components include cross-sectional studies, repeated cross-sectional studies, and panel studies of individual cohorts and sets of cohorts. The annual cross-sectional surveys provide point estimates of various behaviors and conditions in any given year for a number of subpopulations (e.g., 8th graders, 10th graders, 12th graders, college students, all young adult high school graduates ages 19–30, as well adults ages 35 to 60) and provide point estimates for various subgroups within these different populations. Repeating these annual cross-sectional surveys over time allows an assessment of change across history in consistent age segments of the population, as well as among subgroups. The panel study feature permits the examination of developmental change in the same individuals as they assume adult responsibilities, enter and leave various adult roles and environments, and continue further into adulthood. It also permits an assessment of a number of outcomes later in life that MTF has shown to be linked to substance use in adolescence and beyond.

Finally, with a series of panel studies of sequential graduating class cohorts we are able to offer distinctions among, and explanations for, three fundamentally different types of change: period, age, and cohort. It is this feature that creates a synergistic effect in terms of analytic and explanatory power.[1,2]

This Volume reports results for the 8th, 10th, and 12th graders, and the accompanying annual report on the panel data[3] reports results those ages 19 to 60. It also focuses specifically on levels and trends in substance use among nationally representative samples of students enrolled in college and among high school graduates the same age not currently enrolled in college.

In 2022 MTF used an electronic questionnaire format for the fourth consecutive year. In both 2021 and 2022 students in 8th, 10th, and 12th grades completed a web-based questionnaire on their own electronic devices during class time (which may have been at home if they were schooling remotely, for example as a result of the pandemic). In both 2019 and 2020 students also completed an electronic questionnaire that was connected to the internet, although they completed the survey on electronic tablets that MTF brought to schools. It is no longer necessary for MTF to bring tablets to schools because practically all schools now have internet access and almost all students have electronic devices to complete the MTF questionnaires. In rare cases when these resources are not available at a school, MTF brings electronic devices for students, as well as a mobile server to collect survey responses.

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[1] Bachman, J. G., Johnston, L. D., O'Malley, P. M., Schulenberg, J. E., & Miech, R. A. (2015). *The Monitoring the Future project after four decades: Design and procedures* (Monitoring the Future Occasional Paper No. 82). Ann Arbor, MI: Institute for Social Research.

[2] For a more detailed description of the full range of research objectives of Monitoring the Future, see Johnston, L. D., O'Malley, P. M., Schulenberg, J. E., Bachman, J. G., Miech, R. A., & Patrick, M. E. (2016). *The objectives and theoretical foundation of the Monitoring the Future study* (Monitoring the Future Occasional Paper No. 84). Ann Arbor, MI: Institute for Social Research.

[3] Patrick, M. E., Schulenberg, J. E., Miech, R. A., Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2022). Monitoring the Future Panel Study annual report: National data on substance use among adults ages 19 to 60, 1976-2021. Monitoring the Future Monograph Series. Ann Arbor: Institute for Social Research, The University of Michigan

RESEARCH DESIGN AND PROCEDURES FOR THE 12th GRADE SURVEYS

In 2022 the project surveyed 9,599 12th grade students in 102 schools distributed throughout the contiguous U.S. Twelfth graders have been surveyed in the spring semester of each year since 1975. Each year's data collection took place in both public and private high schools, which were selected to provide a representative cross-section of 12th graders throughout the contiguous U.S. (see Figure 3-1). A sampling statistician directed the selection of schools to ensure the rigor of the sampling procedures.

The Population under Study

Senior year of high school is a strategic point at which to monitor drug use and related attitudes of youth. First, completion of high school represents the end of an important developmental period in this society, demarcating both the end of universal education and, for many, the end of living full-time in the parental home. Therefore, it is a logical point at which to take stock of cumulated influences. Further, completion of high school represents a jumping-off point—a point from which young people diverge into widely differing social environments and experiences. Thus senior year is a good time to take a "before" measure, allowing for the subsequent calculation of changes that may be attributable to the environmental transitions occurring in young adulthood, including college attendance, civilian employment, military service, and role transitions such as marriage, parenthood, divorce, etc. Finally, there are some important practical advantages built into the original system of data collections with samples of 12th graders. The need for systematically repeated, large-scale samples from which to make reliable estimates of change requires that considerable emphasis be put on cost efficiency as well as feasibility. The last year of high school constitutes the final point at which a reasonably good national sample of an age-specific cohort can be drawn and studied economically.

The Omission of Dropouts

One limitation in the MTF study design is the exclusion of individuals who drop out of high school before graduation—approximately 6–15% of each age cohort nationally, according to U.S. Census statistics. (The dropout rate has been declining in recent years; 6% is the most recent estimate.[4]) Clearly, the omission of individuals who drop out of high school introduces biases in the estimation of certain characteristics of the entire age group; however, for most purposes, the small proportion of students who drop out sets outer limits on the bias. Further, since the bias should remain relatively constant from one year to the next, their omission should introduce little or no bias in year-to-year change estimates. Appendix A in this volume addresses in detail the likely effects of the exclusion of those who dropped out or were absent in 12th grade on estimates of drug use prevalence and trends for the entire age cohort.

Sampling Procedures and Sample Weights

A multistage random sampling procedure is used to secure the nationwide sample of 12th graders each year. Stage 1 is the selection of particular geographic areas, Stage 2 is the selection of one or more high schools in each area (with probability proportionate to the student enrollment size for the grade in question), and Stage 3 is the selection of 12th graders within each high school. Up to 500 12th graders in each school may be included. In schools with fewer 12th graders, the usual

[4] U.S. Child Trends Databank. (2018). High school dropout rates. Bethesda, MD.

procedure is to include all of them in the data collection, though a smaller sample is sometimes taken to accommodate the needs of the school (either by randomly sampling entire classrooms or by some other unbiased, random method). Weights are assigned to compensate for differential probabilities of selection at each stage of sampling.

Starting in 2020, to address the smaller sample size in that year as a result of the COVID-19 pandemic and associated greater variability, the analyses were additionally weighted by region of the country (West, Midwest, Northeast and South) and, within each region, by metropolitan/non-metropolitan status. The purpose this weighting is to ensure that the impact of these two factors on the analysis is proportional to their size in the nation. Substance use levels and other demographics did not inform the sampling weights. This same weighting procedure was used for the 8th and 10th grade students. This post-stratification weighting was continued in 2021 and 2022 for all three grades.

In order to be able to check observed trends in any given one-year interval, schools participate in the study for two consecutive years on a staggered schedule, with one half of them being replaced with a new random half-sample of schools each year. Therefore, in any given year about half of the schools in the sample are participating for the first time and the other half are participating for their second and final year. This three-stage sampling procedure, with annual replacement of half of the sample of schools each year, has yielded the numbers of participating schools and students shown in Table 3-1.

Questionnaire Administration

Informed consent (active or passive, per school policy) is obtained from parents of students younger than 18 years and from students aged 18 years or older. About three weeks prior to the questionnaire administration date, parents of the target respondents are sent a letter by first-class mail, usually from the principal, announcing and describing the MTF study and providing parents with an opportunity to decline participation of their child if they wish. A flyer outlining the study in more detail is enclosed with the letter. Copies of the flyers are also given to the students by teachers in the target classrooms in advance of the date of administration. The flyers state that participation is entirely voluntary. Institute for Social Research representatives and their assistants conduct the actual questionnaire administrations following standardized procedures detailed in an instruction manual. The questionnaires are administered in classrooms during a normal class period whenever possible; however, circumstances in some schools require the use of larger group administrations. Teachers are asked to remain present in the classroom to help maintain order, but to remain at their desks so that they cannot see students' answers.

Questionnaire Format

Because many questions are needed to cover all of the many topic areas in the MTF study, the questionnaire content for 12th graders is divided into six different questionnaire forms that are randomly distributed to participants to ensure six virtually identical random subsamples. (Five questionnaire forms were used between 1975 and 1988.) About one third of each form consists of key, or "core," variables common to all forms. All demographic variables are contained in this core set of measures. Key drug use variables are also in the core, while many of the specific drugs that have been added over time are not in the core set, but are in one or more forms. Many questions on attitudes, beliefs, and perceptions of relevant features of the social environment are in fewer

forms, and data are thus based on fewer cases—a single form would have one fifth of the total number of cases in 1975–1988 (approximately 3,300 per year) and one sixth of the total beginning in 1989 (approximately 2,500 per year). All tables in this report list the sample sizes upon which the statistics are based, stated in terms of the weighted number of cases.

2019 Estimates

The project's use of two different survey modes in 2019—both electronic tablets and paper-and-pencil—raised the possibility that differences in 2019 estimates in comparison to other years may have stemmed in part from survey mode effects. We examined this possibility in detail, and for drug prevalence estimates we found no evidence of mode effects.[5] Consequently, for all 2019 drug prevalence estimates we report results from the pooled sample of paper-and-pencil and electronic tablet responses.

2020 Estimates

In-school data collection in 2020 was halted on March 15, 2020 as a result of the COVID-19 pandemic. This halt resulted in a sample size about one-quarter the size of a typical data collection. The 2020 in-school data collection was also unique because it was the first year all students recorded their answers on electronic tablets, which MTF brought to the schools. This transition to electronic data collection was part of a plan that included a 2019 MTF administration in which a randomly selected half of schools used traditional paper-and-pencil questionnaires and the other half used electronic tablets. This allowed assessment of potential survey mode effects, and in 2020 and all future years the project will no longer use paper-and-pencil questionnaires.

Detailed analyses of the 2020 results indicated that the curtailed MTF 2020 sample did not differ significantly from the nationally representative results from previous years in terms of sociodemographics and prevalence of use of substances that had stable prevalence in recent years.[6]

2021 Estimates and Beyond

The year 2021 was the first full school year affected by the COVID-19 pandemic and its associated social distancing policies. Anticipating that many students would be schooling remotely, MTF switched to an on-line questionnaire that students completed on their own electronic devices, either at school or at home (if in remote school).

Because the pandemic came on suddenly and unexpectedly, it was not possible for MTF to conduct a randomized-controlled test of the web-survey mode in comparison to electronic tablets. For two reasons we expect that such a test would have shown little to no differences in drug prevalence across the two modes, given that they are similar and both involve electronic devices connected to the internet. First, a 2019 MTF experiment that tested a much more substantial mode difference found no significant effect on drug prevalence estimates. In the 2019 administration, MTF surveyed a randomly-selected half of the schools using electronic tablets and the other half using paper-and-pencil questionnaires and found no mode differences in drug use prevalence.[6] Second, 2021 trends were similar in analyses that used all participants and in analyses that restricted the

[5] Miech, R. A., Couper, M. P., Heeringa, S. G., & Patrick, M. E. (2020). The impact of survey mode on US national estimates of adolescent drug prevalence: Results from a randomized controlled study. *Addiction, 116*(5), 1144–1151.

[6] Miech, R. A., Leventhal, A., Johnston, L., O'Malley, P. M., Patrick, M. E., & Barrington-Trimis, J. (2021). Trends in Use and Perceptions of Nicotine Vaping Among US Youth From 2017 to 2020. JAMA pediatrics, 175(2), 185–190.

analysis pool to the 46% of students who had all their classes in their school building, which suggests that at-home and in-school administrations produced similar results (analyses not shown here). Consequently, in this report we directly compare drug prevalence estimates in 2022 and 2021 with previous years.

However, we cannot rule out possible mode effects for some of the attitudes and beliefs estimates after 2020. Consequently, we do not directly compare these results from 2022 and later years with results from 2020 and beforehand. We note that our cautiousness in comparing to previous years does necessarily mean that the results are not comparable, but only that comparability is not known at this point.

In 2023 and in all future years MTF will continue to use a web-based questionnaire that students answer with their own electronic devices at school.

RESEARCH DESIGN AND PROCEDURES FOR THE 8th AND 10th GRADE SURVEYS

In 1991, MTF was expanded to include nationally representative samples of 8th and 10th grade students surveyed on an annual basis. Separate samples of schools and students are drawn at each grade level. In general, the procedures used for the annual in-school surveys of 8th and 10th grade students closely parallel those used for 12th graders, including the selection of schools and students, questionnaire administration, and questionnaire format. A major exception is that only two different questionnaire forms were used in 8th and 10th grade from 1991 to 1996, expanding to four forms beginning in 1997. The same four questionnaire forms are used for both 8th and 10th graders; most of the content is drawn from the 12th grade surveys, including the core section. Thus, key demographic variables and measures of drug use and related attitudes and beliefs are generally identical for all three grades. Many fewer questions about other values and attitudes are included in the 8th and 10th grade forms, in part because we think that many of them are likely to be more fully formed by 12th grade and, therefore, are best monitored there.

In 2022, the project surveyed 9,889 8th grade students in 104 schools and 11,950 10th grade students in 102 schools distributed throughout the contiguous U.S. Each year's data collection took place in both public and private schools, which were selected to provide a representative cross-section of 8th graders and 10th graders throughout the contiguous U.S. (see Figure 3-1). A sampling statistician directed the selection of schools to ensure the rigor of the sampling procedures.

Anonymity

Since 1999, all surveys for 8th and 10th graders have been fully anonymous. In previous years, MTF collected confidential, personal identification information from these respondents, and from 1991 to 1993 this information was used to follow up with 8th and 10th graders in a manner similar to follow-ups of 12th graders (see below).[7] Follow-up of 8th and 10th graders was discontinued after 1993, precluding the need for further collection of confidential, personal identification information. Considerations supporting a switch to fully anonymous surveys in 8th and 10th grade included the following: (a) school cooperation might be easier to obtain; and (b) to the extent that

[7] A book reporting results from analyses of these younger panels was published in 2008. See Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Johnston, L. D., Freedman-Doan, P., & Messersmith, E. E. (2008). *The education–drug use connection: How successes and failures in school relate to adolescent smoking, drinking, drug use, and delinquency*. New York: Lawrence Erlbaum Associates/Taylor & Francis.

collecting contact information had any effect on survey responses such an effect would be removed from the national data, which are widely compared with results of state and local surveys (nearly all of which use anonymous questionnaires), thus making those comparisons more valid.

MTF considered in detail the effects of an anonymous survey as compared to a confidential survey that collected personal identification information. In 1998 the half-sample of 8th and 10th grade schools beginning their two-year participation in MTF received fully anonymous questionnaires, while the half-sample participating for their second and final year continued to get the confidential questionnaires that had been previously in use by MTF since 1991.

Examination of the 1998 results, based on the two equivalent half-samples at both grades 8 and 10, revealed that there was no effect of anonymous as compared to confidential surveys among 10th graders and only a very modest effect, if any, in self-reported substance use rates among 8th graders (with prevalence levels slightly higher in the anonymous condition).[8] All tables and figures in this volume combine data from both half-samples of 8th graders surveyed in a given year. This is also true for 10th graders, for whom we found no methodological effect, and 12th graders, for whom we assumed no such effect since none was found for 10th graders. (See this chapter's later section entitled "Representativeness and Sample Accuracy" for a further discussion of half-samples among all three grades.)

Questionnaire Forms and Sample Proportions

Beginning in 1997, in order to increase the measurement content in the study of 8th and 10th graders, the number of forms was expanded from two to four, although they are not distributed in equal numbers. Forms 1, 2, 3, and 4 are assigned to one third, one third, one sixth, and one sixth of the students, respectively. Thus, if a question appears on only one form, it is administered to either one third or one sixth of the sample. A question in two forms may be assigned to one third of the sample (one sixth plus one sixth), one half of the sample (one third plus one sixth), or two thirds of the sample (one third plus one third). A question in three forms may be assigned to two thirds (one third plus one sixth plus one sixth), or five sixths of the sample (one third plus one third plus one sixth). Footnotes to the tables indicate what proportions of all respondents in each grade were asked each question, if that proportion is other than the entire sample. All of the samples, whether based on one or more forms, are random samples and therefore representative of the larger population (the universe) of students at each grade.

[8] We have examined in detail the effects of administration mode using multivariable controls to assess the effects of the change on 8th-grade self-report data. Our findings generally show even less effect than is to be found without such controls. See O'Malley, P. M., Johnston, L. D., Bachman, J. G., & Schulenberg, J. E. (2000). A comparison of confidential versus anonymous survey procedures: Effects on reporting of drug use and related attitudes and beliefs in a national study of students. *Journal of Drug Issues, 30,* 35–54.

REPRESENTATIVENESS AND SAMPLE ACCURACY

School Participation

Schools are invited to participate in the MTF study for a two-year period. With very few exceptions, each school participating in the first year has agreed to participate in the second year as well.

Figure 3-2 presents the percentage of geographical stratum in the U.S. where at least one school was successfully surveyed each year. For each grade the U.S. is divided into 72 geographical areas that together are nationally representative. MTF has successfully surveyed a school in 93%+ of the geographic strata every year in each grade, at least until the COVID-19 pandemic that began in 2020. That year the halt of data collection on March 15 reduced the geographic coverage of the survey considerably (as noted in Figure 3-2). Thereafter the coverage recovered substantially, such that in 2022 the percentage of U.S, geographical areas surveyed was 88% in 12th grade, 89% in 10th grade, and 92% in 8th grade.

When an original, randomly-drawn school in a geographic area declines to participate in the survey, a replacement school is selected in the same geographic area. In these cases the replacement is selected to be demographically similar to the original selection. This should almost entirely remove problems of bias in region, urbanicity, and the like that might result from schools that decline to participate. Table 3-2 presents yearly information on the percentage of originally-selected and replacement schools. These percentages declined in 2021, when schools were addressing the COVID-19 pandemic and many did not have the bandwidth to participate in a survey such as MTF. The decline persisted into 2022, when many schools reported to us severe staff shortages as a result of the national economic recovery from the pandemic.

Two questions are sometimes raised about the replacement schools: (a) How do replacements affect the representativeness of the sample? (b) How does variation over time in the percentage of schools that are replacements contribute to changes in estimates of drug use?

Among participating schools, there is very little difference in substance use levels between the sample of participating schools that were original selections, taken as a set, and the schools that were replacements. Averaged over the years 2003 through 2015 for grades 8, 10, and 12 combined, the difference between original schools and replacement schools averaged 0.26 percentage points in the observed prevalence averaged across a number of drug use measures: two indices of annual illicit drug use, the annual prevalence of each of the major illicit drug classes, and several measures of alcohol and cigarette use. For half of the measures prevalence was higher in the replacement selections and in the other half it was higher in the original selections; specifically, out of 39 comparisons (13 drugs and drug indexes for each grade), prevalence was higher in 20 of the original selections and in 19 of the replacement selections.

Potential biases could be subtle, however. If, for example, it turned out that principals of schools with “drug problems” refused to participate, the sample could be biased. And if any other single factor were dominant in school refusals, that reason for refusal might also suggest a source of potential bias. However, the reasons principals give for declining to participate tend to be varied and are often a function of happenstance events specific to that particular year, such as a weather-related event that reduced the number of school days or the fact that the school already committed

to participate in a number of other surveys that year; only very few schools, if any, object specifically to the drug-related survey content.

If it were the case that replacement schools differed substantially in drug use, then which particular schools participated could have a greater effect on estimates of drug use. However, the great majority of variance in drug use lies within schools, not between schools.[9] For example, from 2003 to 2015 for schools with 8th, 10th, or 12th grade students, about 2% to 8% of the variance in smoking cigarettes or drinking alcohol in the past 30 days was between schools. Among the illicit drugs, marijuana showed the largest amount of between-school variation, averaging between slightly less than 4% up to 5% for annual use, and 3% to 4% for 30-day use. Annual prevalence of cocaine use averaged between less than 1% and 1.5%, while prevalence of annual heroin use averaged less than 0.5%. Further, some, if not most, of the between-schools variance is due to differences related to factors such as region and urbanicity, which remain well controlled in the present sampling design.

It is unlikely that replacement schools affect drug trends. If they did, then we would expect noticeable bumps up or down across all substance use estimates as the percentage of replacement schools varied over time. But MTF produces results that are very smooth and generally change in an orderly fashion from one year to the next. Moreover, different substances trend in distinctly different ways. We have observed, for example, marijuana use decreasing while cocaine use was stable (in the early 1980s), alcohol use declining while cigarette use held steady (in the mid- to late 1980s), ecstasy use rising sharply while cocaine use showed some decline (late 1990s, early 2000s); and marijuana use remaining steady while alcohol use hit historic lows (since 2011). Moreover, attitudes and perceptions about drugs have changed variously, but generally in ways quite consistent with the changes in actual use. All of these patterns are explainable in terms of psychological, social, and cultural factors; they cannot be explained by a common factor of changes in percentage of replacement schools.

Of course, there could be some sort of constant bias across the years, but even in the unlikely event that there is, it seems highly improbable that it would be of much consequence for policy purposes, given that it would not affect trends and likely would have a very modest effect on levels of prevalence. Thus, we have a high degree of confidence that school refusals have not seriously biased the survey results.

Nevertheless, securing the cooperation of schools has become increasingly difficult. This is a problem common to the field, not specific to MTF. Therefore, beginning with the 2003 survey, we have provided payment to schools as a means of increasing their incentive to participate. (By that time, several other ongoing school-based survey studies already were using payments to schools.)

At each grade level, half of each year's sample comprises schools that started their participation the previous year, and half comprises schools that began participating in the current year. (Both samples are national replicates, meaning that each is drawn to be nationally representative by itself.) This staggered half sample design is used to check on possible fluctuations in the year-to-year trend estimates due to school turnover. For example, separate sets of one-year trend estimates

[9] O'Malley, P. M., Johnston, L. D., Bachman, J. G., Schulenberg, J. E., & Kumar, R. (2006). How substance use differs among American secondary schools. *Prevention Science, 7,* 409–420.

are computed based on students in the half-sample of schools that participated in both 2017 and 2018, then based on the students in the half-sample that participated in both 2016 and 2017, and so on. Thus, each one-year matched half-sample trend estimate derived in this way is based on a constant set of schools (about 65 in 12th grade, for example, over a given one-year interval). When the trend data derived from the matched half-sample (examined separately for each class of drugs) are compared with trends based on the total sample of schools, the results are usually highly similar, indicating that the trend estimates are affected little by school turnover or school replacements. Of course, levels of absolute prevalence are not as precisely estimated when the sample is only half the usual size.

Student Participation

In 2022, completed questionnaires were obtained from 86% of all sampled students in 8th grade, 84% in 10th grade, and 75% in 12th grade (see Table 3-1 for response rates in all years). Because students with fairly high rates of absenteeism also report above-average rates of drug use, some degree of bias is introduced into the prevalence estimates by missing the absentees. Much of that bias could be corrected through the use of special weighting based on the self-reported absentee rates of the students who did respond; however, we decided not to use such a weighting procedure because the bias in overall drug use estimates was determined to be quite small, whereas the necessary weighting procedures would have introduced greater sampling variance in the estimates. Appendix A in this report illustrates the changes in trend and prevalence estimates that would result if corrections for absentees had been included.

Sampling Accuracy of the Estimates

Confidence intervals (95%) are provided in Tables 4-1a through 4-1d for lifetime, annual, 30-day, and daily prevalence of use for 8th, 10th, and 12th grade students. For example, lifetime prevalence of marijuana use for 12th graders could theoretically vary by up to ± 2.8 percentage points. The interpretation of this 95% confidence interval is that if we took a large number of samples of this size from the universe of all schools containing 12th graders in the contiguous U.S., 95 times out of 100 the sample would yield a result that would be less than 2.8 percentage points divergent from the result we would get from a comparable massive survey of *all* 12th graders in *all* schools. Confidence intervals for the other prevalence periods (last 12 months, last 30 days, and current daily use) are generally smaller than those for lifetime use. In general, confidence intervals for 8th and 10th graders are very similar to those observed for 12th graders. Some drugs (smokeless tobacco, Rohypnol, and others, as indicated in the footnotes for Tables 2-1 to 2-4) are measured on only one or two questionnaire forms; these drugs will have larger confidence intervals because they are based on smaller sample sizes.

In 2020, as a result of the smaller sample size, these confidence intervals were wider than they have been in previous years, when confidence intervals averaged ± 1.4% for lifetime prevalence across a wide variety of drug classes. Because of these larger confidence intervals in 2020, the minimum change in prevalence from 2019 to 2020 that was detectable as statistically significant was larger in 2020 than it was in earlier years.

In 2021 and 2022 sample sizes, and consequently confidence intervals, were closer to their typical size.

The Appendix C of Volume I published in 2017 and earlier years reported information on how to calculate confidence intervals for point estimates and how to calculate statistics that test the significance of changes over time or of differences between subgroups. This appendix is no longer necessary with the opening of MTF's remote portal at the National Addiction and HIV Data Archive Program, which now allows researchers to compute such statistics directly using MTF weights and clustering variables. Interested readers may refer to earlier publications of this monograph for the information it provides about design effects and how their computational influence varies by substance (e.g., see Appendix C here).

VALIDITY OF MEASURES OF SELF-REPORTED DRUG USE

Are sensitive behaviors such as drug use honestly reported? Like most studies dealing with sensitive behaviors, we have no direct, totally objective validation of the present measures; however, the considerable amount of existing inferential evidence strongly suggests that the MTF self-report questions produce largely valid data. Here we briefly summarize this evidence.[10]

First, using a three-wave panel design, we established that the various measures of self-reported drug use have a high degree of reliability—a necessary condition for validity.[11] In essence, respondents were highly consistent in their self-reported behaviors from model ages 18 to 22. Second, we found a high degree of consistency among logically related measures of use within the same questionnaire administration. Third, the proportion of 12th graders reporting some illicit drug use has reached two thirds of all respondents in peak years and over 80% in some follow-up years, constituting *prima facie* evidence that the degree of underreporting must be very limited. Fourth, 12th graders' reports of use by their unnamed friends—about whom they would presumably have considerably less reason to conceal information about use—have been highly consistent with self-reported use in the aggregate, both in terms of prevalence and trends in prevalence, as discussed in Chapter 9. Fifth, we have found self-reported drug use to relate in consistent and expected ways based on theory to a number of other attitudes, behaviors, beliefs, and social situations—strong evidence of "construct validity." Sixth, the missing data levels for the self-reported use questions are only very slightly higher than for the preceding non-sensitive questions, in spite of explicit instructions to respondents immediately preceding the drug section to leave blank those questions they feel they cannot answer honestly. Seventh, an examination of consistency in reporting of lifetime use conducted on the long-term panels of graduating seniors found quite low levels of recanting of earlier reported use of the illegal drugs.[12] There was a higher level of recanting for the psychotherapeutic drugs, suggesting that adolescents may actually overestimate their use of some drugs because of misinformation about definitions, but that this knowledge improves as they get

[10] A more complete discussion may be found in: Johnston, L. D. & O'Malley, P. M. (1985). Issues of validity and population coverage in student surveys of drug use. In B. A. Rouse, N. J. Kozel, & L. G. Richards (Eds.), *Self-report methods of estimating drug use: Meeting current challenges to validity* (NIDA Research Monograph No. 57 (ADM) 85 1402). Washington, DC: U.S. Government Printing Office; Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1984). *Drugs and American high school students: 1975–1983* (DHHS (ADM) 85 1374). Washington, DC: U.S. Government Printing Office; Wallace, J. M., Jr., & Bachman, J. G. (1993). Validity of self-reports in student-based studies on minority populations: Issues and concerns. In M. de LaRosa (Ed.), *Drug abuse among minority youth: Advances in research and methodology* (NIDA Research Monograph No. 130). Rockville, MD: National Institute on Drug Abuse.

[11] O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18*, 805–824.

[12] Johnston, L. D. & O'Malley, P. M. (1997). The recanting of earlier reported drug use by young adults. In L. Harrison (Ed.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* (NIDA Research Monograph No. 167, pp. 59–80). Rockville, MD: National Institute on Drug Abuse.

older. Finally, the great majority of respondents, when asked, say they would answer such questions honestly if they are or were users.[13]

As an additional step to assure the validity of the data, we check for logical inconsistencies in the answers to the triplet of questions about use of each drug (i.e., lifetime, annual, and 30-day use), and if a respondent exceeds a maximum number of inconsistencies across the set of drug use questions, his or her record is deleted from the data set. Similarly, we check for improbably high rates of use of multiple drugs and delete such cases, assuming that the respondents are not taking the task seriously. Fortunately, very few cases (< 3%) have to be eliminated for these reasons.

This is not to argue that self-reported measures of drug use are necessarily valid in all studies. In MTF we have gone to great lengths to create a situation and set of procedures in which respondents recognize that their confidentiality will be protected. We have also tried to present a convincing case as to why such research is needed. The evidence suggests that a high level of validity has been obtained. Nevertheless, insofar as any remaining reporting bias exists, we believe it to be in the direction of underreporting. Thus, with the possible exception of the psychotherapeutic drugs, we believe our estimates to be lower than their true values, even for the obtained samples, but not substantially so.

Consistency and Measurement of Trends

MTF is designed to be sensitive to changes from one time period to another. A great strength of this study is that the measures and procedures have been standardized and applied consistently across many years. To the extent that any biases remain because of limits in school and/or student participation, and to the extent that there are systematic distortions (lack of validity) in the responses of some students, it seems very likely that such problems will exist in much the same proportions from one year to the next. In other words, biases in the survey estimates will tend to be consistent from one year to another, meaning that they should have very little effect on our measurement of trends. The smooth and consistent nature of most trend curves reported for the various drugs provides rather compelling empirical support for this assertion.

[13] For a discussion of reliability and validity of student self-report measures of drug use like those used in MTF across varied cultural settings, see Johnston, L. D., Driessen, F. M. H. M., & Kokkevi, A. (1994). Surveying student drug misuse: A six-country pilot study. Strasbourg, France: Council of Europe.

TABLE 3-1
Sample Sizes and Response Rates

	Number of Public Schools			Number of Private Schools			Total Number of Schools				Total Number of Students				*Student Response Rate (%)*		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	Total	8th	10th	12th	Total	*8th*	*10th*	*12th*
1975	—	—	111	—	—	14	—	—	125	—	—	—	15,791	—	—	—	*78*
1976	—	—	108	—	—	15	—	—	123	—	—	—	16,678	—	—	—	*77*
1977	—	—	108	—	—	16	—	—	124	—	—	—	18,436	—	—	—	*79*
1978	—	—	111	—	—	20	—	—	131	—	—	—	18,924	—	—	—	*83*
1979	—	—	111	—	—	20	—	—	131	—	—	—	16,662	—	—	—	*82*
1980	—	—	107	—	—	20	—	—	127	—	—	—	16,524	—	—	—	*82*
1981	—	—	109	—	—	19	—	—	128	—	—	—	18,267	—	—	—	*81*
1982	—	—	116	—	—	21	—	—	137	—	—	—	18,348	—	—	—	*83*
1983	—	—	112	—	—	22	—	—	134	—	—	—	16,947	—	—	—	*84*
1984	—	—	117	—	—	17	—	—	134	—	—	—	16,499	—	—	—	*83*
1985	—	—	115	—	—	17	—	—	132	—	—	—	16,502	—	—	—	*84*
1986	—	—	113	—	—	16	—	—	129	—	—	—	15,713	—	—	—	*83*
1987	—	—	117	—	—	18	—	—	135	—	—	—	16,843	—	—	—	*84*
1988	—	—	113	—	—	19	—	—	132	—	—	—	16,795	—	—	—	*83*
1989	—	—	111	—	—	22	—	—	133	—	—	—	17,142	—	—	—	*86*
1990	—	—	114	—	—	23	—	—	137	—	—	—	15,676	—	—	—	*86*
1991	131	107	117	31	14	19	162	121	136	419	17,844	14,996	15,483	48,323	*90*	*87*	*83*
1992	133	106	120	26	19	18	159	125	138	422	19,015	14,997	16,251	50,263	*90*	*88*	*84*
1993	126	111	121	30	17	18	156	128	139	423	18,820	15,516	16,763	51,099	*90*	*86*	*84*
1994	116	116	119	34	14	20	150	130	139	419	17,708	16,080	15,929	49,717	*89*	*88*	*84*
1995	118	117	120	34	22	24	152	139	144	435	17,929	17,285	15,876	51,090	*89*	*87*	*84*
1996	122	113	118	30	20	21	152	133	139	424	18,368	15,873	14,824	49,065	*91*	*87*	*83*
1997	125	113	125	27	18	21	152	131	146	429	19,066	15,778	15,963	50,807	*89*	*86*	*83*
1998	122	110	124	27	19	20	149	129	144	422	18,667	15,419	15,780	49,866	*88*	*87*	*82*
1999	120	117	124	30	23	19	150	140	143	433	17,287	13,885	14,056	45,228	*87*	*85*	*83*
2000	125	121	116	31	24	18	156	145	134	435	17,311	14,576	13,286	45,173	*89*	*86*	*83*
2001	125	117	117	28	20	17	153	137	134	424	16,756	14,286	13,304	44,346	*90*	*88*	*82*
2002	115	113	102	26	20	18	141	133	120	394	15,489	14,683	13,544	43,716	*91*	*85*	*83*
2003	117	109	103	24	20	19	141	129	122	392	17,023	16,244	15,200	48,467	*89*	*88*	*83*
2004	120	111	109	27	20	19	147	131	128	406	17,413	16,839	15,222	49,474	*89*	*88*	*82*
2005	119	107	108	27	20	21	146	127	129	402	17,258	16,711	15,378	49,347	*90*	*88*	*82*
2006	122	105	116	29	18	20	151	123	136	410	17,026	16,620	14,814	48,460	*91*	*88*	*83*
2007	119	103	111	32	17	21	151	120	132	403	16,495	16,398	15,132	48,025	*91*	*88*	*81*
2008	116	103	103	28	19	17	144	122	120	386	16,253	15,518	14,577	46,348	*90*	*88*	*79*
2009	119	102	106	26	17	19	145	119	125	389	15,509	16,320	14,268	46,097	*88*	*89*	*82*
2010	120	105	104	27	18	22	147	123	126	396	15,769	15,586	15,127	46,482	*88*	*87*	*85*
2011	117	105	110	28	21	19	145	126	129	400	16,496	15,382	14,855	46,733	*91*	*86*	*83*
2012	115	107	107	27	19	20	142	126	127	395	15,678	15,428	14,343	45,449	*91*	*87*	*83*
2013	116	103	106	27	17	20	143	120	126	389	15,233	13,262	13,180	41,675	*90*	*88*	*82*
2014	111	98	105	30	16	17	141	114	122	377	15,195	13,341	13,015	41,551	*90*	*88*	*82*
2015	111	102	101	30	18	20	141	120	121	382	15,015	16,147	13,730	44,892	*89*	*87*	*83*
2016	117	92	100	25	18	20	142	110	120	372	17,643	15,230	12,600	45,473	*90*	*88*	*80*
2017	109	89	105	22	17	18	131	106	123	360	16,010	14,171	13,522	43,703	*87*	*85*	*79*
2018	110	106	106	28	21	22	138	127	128	393	14,836	15,144	14,502	44,482	*89*	*86*	*81*
2019	114	104	108	29	22	20	143	126	128	397	14,223	14,595	13,713	42,531	*89*	*86*	*80*
2020	30	36	29	8	2	7	38	38	36	112	3,161	4,890	3,770	11,821	*88*	*89*	*79*
2021	91	84	82	30	16	16	121	100	98	319	11,446	11,792	9,022	32,260	*82*	*78*	*69*
2022	81	82	80	23	20	22	104	102	102	308	9,889	11,950	9,599	31,438	*86*	*84*	*75*

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

TABLE 3-2

Percentage Original and Replacement School Selections, by Year [a]

Percent of slots filled by...	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
Original	59	63	62	63	71	71	66	72	67	66	72	71	68	70	59	55	60	53	52	53	51	51	57	62	56	49	53	62	63	59	58
Replacements	39	36	35	32	25	26	32	26	29	33	26	26	30	29	39	43	39	44	44	43	47	48	42	35	42	48	45	37	34	40	39
Total	98	99	97	95	96	97	99	98	96	99	99	98	99	99	98	98	99	97	96	96	98	99	99	97	98	97	98	99	97	99	97

filled by...	'08	'09	'10	'11	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22
Original	53	54	58	56	53	54	58	56	53	54	51	44	44	41	40	41	13	27	22
Replacements	43	44	39	40	43	44	39	40	43	41	41	49	47	49	50	50	13	52	50
Total	96	98	97	96	96	98	97	96	96	95	92	93	91	90	90	91	26	79	72

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

[a]In 2020 data collection was halted prematurely as a result of the COVID-19 pandemic.

FIGURE 3-1
Schools included in 1 Year's Data Collection
8th, 10th, and 12th Grades

Source. The Monitoring the Future study, the University of Michigan.
Note. One dot equals one school.

FIGURE 3-2
Percentage of Sampled Geographic Strata With At Least One School Surveyed, by Grade

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

Chapter 4:
Data is forthcoming May 31, 2023

Chapter 5

TRENDS IN DRUG USE

The measurement of historical and developmental change over the past four and a half decades has been among the most important contributions of Monitoring the Future to the fields of substance use research, policy, and prevention. This includes measurements of change in the levels of drug use, in the types of drugs being used, in the methods of using them, in the ages and characteristics of people using them, in related attitudes and beliefs about drug use, and in conditions surrounding use. Such information has significant implications for public policy—for needs assessment, agenda setting, policy formulation, and policy evaluation. More generally, it has implications for the current and future health of the nation. In this chapter, we review the many changes that have taken place over the past 48 years in the use of drugs, both licit and illicit, and we distinguish trends for various sectors of the population.

Historical trend data are presented and discussed in this chapter for students in 8th, 10th, and 12th grades. Data for 12th graders come from 48 nationally-representative surveys conducted between 1975 and 2022, while data for the 8th and 10th graders come from 32 nationally-representative surveys conducted between 1991 and 2022. For a variety of substances, the use measures discussed include lifetime use, use during the past 12 months, use during the past 30 days, and use on 20 or more occasions during the past 30 days (which we refer to as daily to near-daily use).

THE COVID-19 PANDEMIC AND ADOLESCENT DRUG USE

The survey results divide neatly into the time periods before and after the onset of the pandemic. All surveys in 2020 were completed before March 15, when national social distancing policies were enacted and data collection was halted due to pandemic concerns. Consequently, results from 2020 and previous years are pre-pandemic, while results from 2021 and 2022 took place after the onset of the pandemic and the associated national response.

The COVID-19 pandemic is a historical event of particular interest for the 2022 results. Last year MTF documented some of the largest one-year declines ever recorded by the survey across a wide variety of drugs from 2020 to 2021. It is possible that these decreases will hold for future years going forward, or, instead, drug prevalence levels may bounce back to where they were before the pandemic in 2020.

TWO THEMES IN DRUG TRENDS FROM 1975–2022

Two general themes are apparent in trends over nearly a half century in use of a majority of drugs, and we elaborate on these themes in what follows. The first theme is what we term the "1990s drug relapse," which was a rapid increase in prevalence for many drugs that started in the early 1990s. Previous to this period, prevalence levels of many drugs had reached a historical low after years of decline. The prevalence levels for many drugs today lie between the nadirs observed at the start of the 1990s and the peak of 1990s drug relapse. Drugs that do not follow this overall pattern, such as some forms of alcohol use and tobacco use, are important exceptions that we note and discuss below.

The second theme is cohort effects. We use the term cohort here to refer to youth born at roughly the same time who are grouped by grade level and experience history together as they age. A cohort effect is a drug trend that follows a cohort as it grows older. For example, if an upsurge in cigarette smoking occurs in a cohort that is in 8th grade, it is likely to be observed two years later when that cohort is in 10th grade and then again two years later when that cohort is in 12th grade.

A cohort-specific pattern of drug use can stem from factors such as cohort-specific attitudes towards perceived risk of drug use, changing peer norms about the acceptability of drug use, changes in legal status of a drug, and the addictiveness of the drugs that youth use. We have found that cohort effects are often present, and trends among the lower grades can foretell future changes in the higher grades. This has been the case especially during the onset of the drug relapse in the early 1990s.

TRENDS IN PREVALENCE OF USE, 1975–2022

Trends in Indices of Overall Illicit Drug Use

Abstainers

Abstainers are defined as students with no lifetime use of alcohol, marijuana, or nicotine (either by cigarettes or by vaping). In 2022 levels of abstaining declined in all grades, and significantly so in 10th and 12th grade. Despite these decreases, in all three grades level of abstaining remained higher than they had been in 2020, before the onset of the pandemic.

Any Illicit Drug

Any illicit drug use is a measure of the percentage of youth who have engaged in use of at least one type of illicit drug.[1] In 2022 the percentages of youth who had ever used any illicit drugs in their lifetime did not return to 2020 levels and remained near the decreased levels observed during the pandemic in 2021. Lifetime prevalence levels in 2022 were 17% for 8th graders, 28% for 10th graders, and 41% for 12th graders.

In all three grades in 2022, past 12-month and past 30-day use also did not return to 2020 levels. Both measures increased slightly in all three grades, but remained well below 2020 levels. One exception is past 30-day use of any illicit drug among 12th grade students, which in 2022 almost returned completely to the 2020 prevalence level.

There have been gradual albeit inconsistent declines for all grades since the peaks in the mid- to late-1990s drug use relapse, beginning in 1996 for 8th graders, 1997 for 10th graders, and 1999 for 12th graders. These declines also ended in a staggered fashion in 2007, 2008, and 2009, respectively. The declines were followed by increases between 2007 and 2010 among 8th graders, between 2008 and 2011 among 10th graders, and between 2009 and 2011 for 12th graders. This overall pattern suggests some cohort effects were in play. In 2013 the trend lines shifted up slightly as new examples of drugs in the amphetamine class were added to the questionnaires.

[1] "Any illicit drug" includes use of cannabis, for which recreational use is illegal at the federal level

This pattern of younger teens being the first to exhibit many of the turnarounds in use suggests that they may be particularly sensitive to new social forces. Because they are considerably less likely to have established usage patterns or related attitudes, their behavior and attitudes may simply be more malleable. They then carry those changes in their behaviors and attitudes into later grades as they age; in this volume we discuss a number of such cohort effects. Prior to the 1990s, a period when Monitoring the Future surveys were limited to 12th grade students, their prevalence of lifetime use of any illicit drug peaked at 66% in 1981, the highest level ever recorded by the survey. From that year on, lifetime use declined steadily to a prevalence of 41% by 1992, which ties with 2022 for the lowest level these surveys have ever recorded.

Use of any illicit drug in 12th grade is defined as 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. In 8th and 10th grade the use of narcotics other than heroin and sedatives (barbiturates) has been reported because these younger respondents appear to over report use (perhaps because they include the use of nonprescription drugs in their answers).

Any Illicit Drug including Inhalants

When inhalants are included in the index of illicit drug use, the percentages categorized as having ever used an illicit drug rise, especially for 8th graders.

As with the findings for any illicit drug use, in 2022 the percentages of youth who had ever used any illicit drugs including inhalants in their lifetime did not return to their 2020 levels and remained at the decreased levels observed during the pandemic in 2021. Lifetime prevalence levels in 2022 were 22% for 8th graders, 31% for 10th graders, and 44% for 12th graders.

Past 12-month use changed little between 2021 and 2022, and 2022 levels remained below 2020 levels. Past 30-day use followed the same pattern, with the exception that in 12th grade 2022 prevalence was only slightly below 2020 prevalence.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey was halted due to pandemic concerns.

Use of any illicit drug in 12th grade is defined as any use of inhalants, 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. In 8th and 10th grade the use of narcotics other than heroin and sedatives (barbiturates) has been excluded because these younger respondents appear to over report use (perhaps because they include the use of nonprescription drugs in their answers).

Any Illicit Drug other than Marijuana

The percentage of youth who had used any illicit drug other than marijuana in their lifetime did not return to 2020 levels and remained near the decreased levels observed during the pandemic in 2021. Prevalence levels in 2022 were 9% for 8th graders, 10% for 10th graders, and 13% for 12th graders.

Past 12-month use and past 30-day use followed the same pattern as lifetime use, with prevalence levels in all grades much closer to 2021 than 2020 levels.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey was halted due to pandemic concerns.

In 2001 these past 12-month levels were at or near peak levels and stood at 10%, 18%, and 21% in 8th, 10th, and 12th grade, respectively, so the proportion of these age groups using illicit drugs other than marijuana has declined by more than half since then.

In the 1970s most of the sudden rise in 12th graders' reported use resulted from the increasing popularity of cocaine between 1976 and 1979 and, then, to the increasing use of amphetamines between 1979 and 1981.

Use of any illicit drug in 12th grade is defined as any use of 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. In 8th and 10th grade the use of narcotics other than heroin and sedatives (barbiturates) has been excluded because these younger respondents appear to over report use (perhaps because they include the use of nonprescription drugs in their answers).

Any Prescription Drug

The percentage of 12th grade students who used any prescription drug without a doctor's orders during their lifetime increased slightly from 8.3% in 2021 to 9.3% in 2022. This slight increase follows the previous year's decline, which was the largest on record for this outcome from 14.2% in 2020 (before the pandemic) to 8.8% in 2021 (during the pandemic). Past 12-month and past 30-day use follow the same pattern.

Overall, use of any prescription drug without a doctor's direction has declined markedly since first tracked by the survey in 2005. Prevalence is about three times lower in 2022 as compared to 2005 for lifetime, past 12-month, and past 30-day use.

Every year MTF publishes prevalence levels of specific prescription drugs, such as OxyContin and Xanax, which can be found in Appendix C.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

The use of any prescription drug nonmedically, defined as any use of amphetamines, sedatives (barbiturates), narcotics other than heroin, or tranquilizers "without a doctor telling you to use them."

Any Nicotine Use

Any nicotine use in the past 30 days held steady from 2021 to 2022, thereby maintaining the large decrease that took place from 2020 to 2021.

Any nicotine use was indicated by any use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Any Nicotine Use other than Vaping

Past 30-day prevalence levels of any nicotine use other than vaping did not return to their 2020 levels in 2022. Prevalence increased slightly in 12th grade to 8.3%, stayed steady in 10th grade at 4.2%, and decreased slightly in 8th grade to 2.7%. Overall this outcome has declined markedly since first tracked by the survey (in 2017 for 12th grade and in 2019 in 10th and 8th grade). The decrease is quite dramatic in 12th grade, falling by well over half from 21% in 2017 to 8% in 2022; it fell by roughly half in all three grades in the two-year interval from 2019 to 2022.

In contrast, the outcome of "any nicotine use" shows relatively less decline, underscoring the role of nicotine vaping on overall nicotine prevalence.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Trends in Use of Specific Drugs

Marijuana

The percentage of youth who have used marijuana in the past 12 months did not return to 2020 levels in 2022. Lifetime and past 12-month prevalence stayed steady or edged slightly upward in 2021, and prevalence in 2022 remained closer to 2021 than 2020 levels. Lifetime prevalence in 2022 was 11% in 8th grade, 24% in 10th grade, and 38% in 12th grade.

The lower prevalence levels in 2021 and 2022 mark the first substantial change in past 12-month marijuana prevalence in more than a decade; previous to 2021 marijuana levels had hovered without any systematic trending for about a decade.

Levels of annual marijuana use today are considerably lower than the historic highs observed in the late 1970s, when more than half of 12th graders had used marijuana in the past 12 months. This high point marked the pinnacle of a rise in marijuana use from relatively negligible levels before the 1960s.

Daily marijuana use, defined as use on 20 or more occasions in the past 30 days, held steady in 2022 after substantial declines in 2021. In all grades 2022 levels remained below those in 2019 and 2020, when all surveys were collected before the start of the national social distancing policies on March 15, 2020.

The prevalence of using marijuana daily for a month or more during one's lifetime is reported for 12th graders only. That prevalence was at 21% when first measured in 1982, declined sharply to just 8% by 1992, and rose back to 19% by 1997, followed by a long gradual decline to 12% by 2018, before leveling. It stood at 14% in 2022.

2020 prevalence levels are not reported for daily marijuana use for a month due to low sample size that resulted from curtailed data collection due to the pandemic.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Synthetic Marijuana

The proportion of 12th grade students who used synthetic marijuana in the past 12 months significantly increased in 2022. This increase marks a reversal of a long-term decline in prevalence that has taken place since it was first introduced onto the survey in 2012.

In 10th and 8th grade prevalence levels did not change in 2022 and are near record lows.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Inhalants

Prevalence of inhalant use in the last 12 months declined in 2022 for 8th grade students, continuing a decline that began a year earlier in 2021. With these declines prevalence in 2022 is slightly lower than it was in 2016, when it began an increase that had been concerning.

Inhalants are unusual because their prevalence is higher in the lower grades, a pattern not observed for any other drug. 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 (although using them to get high is illicit). 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, more desirable drugs become more accessible to older adolescents, who also are more able to afford them.

In 10th and 12th grade both lifetime and past 12-month prevalence were little changed in 2022.

The increase in prevalence of inhalants in all three grades at the start of the 1990s was a continuation of a trend that was observable far earlier among 12th grade students, when only they were being surveyed. The same was likely true among 8th and 10th graders, although our data on them cover only 1991 forward. The anti-inhalant campaign launched by the Partnership for a Drug-Free America in 1995 (partly in response to MTF results showing increasing use) may have played an important role in reversing this long-term trend. Long-term declines in use continued through 2022, with temporary increases that took place in the early 2000s and around 2018; these increases proved fleeting and prevalence in 2022 is at or near record lows.

Prior to 2000, trends in inhalants were confounded by the use of amyl and butyl nitrites, and past MTF reports presented an additional 12th grade inhalant trend for measures without nitrites

(e.g., see the 2014 MTF report for a detailed description). Since that time youth's use of nitrites has fallen to very low levels and is no longer tracked by Monitoring the Future.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Hallucinogens

The percentage of adolescents using hallucinogens in the past 12 months has varied little between a narrow window of 4% and 5% over the past decade and in 2022 was 4%. In 10th grade declines in prevalence resumed a long-term decline that began around 2010, after a short, temporary increase in 2019 and 2020. In 8th grade declines in use have plateaued since around 2014, in part because prevalence has hovered at 1% since that time and has little room to fall further.

Hallucinogen use followed the typical pattern of an increase during the 1990s relapse, followed by a gradual but inconsistent decline in the following years. Annual hallucinogen use peaked in 1996, which is a few years earlier than the peak for most other drugs. Current levels of annual hallucinogen use are less than half their peak in the 1990s. The two components of the hallucinogens class, LSD and hallucinogens other than LSD, generally followed the same pattern until a sharp decline in LSD use emerged after 1999.

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LSD

LSD prevalence did not return to 2020 levels in 2022, for either lifetime, past 12-month use, or past 30-day use. In 2022 lifetime and past 12-month prevalence trended down, bringing levels down to record or near-record lows.

LSD was one of the first drugs to decline at the start of the 1980s, almost surely due to increased information about its potential dangers. The subsequent increase in its use during the mid-1980s may reflect the effects of "generational forgetting"—that is, replacement cohorts knowing less than their predecessors about the potential dangers of LSD because they have had less exposure to the negative consequences of using the drug.

We believe that the decline in use prior to 2002 might have resulted in part from a displacement of LSD by sharply rising use of MDMA (ecstasy and more recently Molly). After 2001, when MDMA use itself began to decline, the sharp further decline in LSD use likely resulted from a sudden drop in the availability of LSD (discussed in Chapter 9), because attitudes generally have not moved in a way that could explain the fall in use, while perceived availability has.

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Hallucinogens other than LSD

Hallucinogens other than LSD include psilocybin, or "shrooms," which comprise a major component of this category.

In 12th grade hallucinogen use shows an unusual pattern of increasing prevalence in both 2021 and 2022 for both lifetime and past 12-month use (although none of these single-year increases is statistically significant).

In 10th grade prevalence shows the more common pattern of edging slightly upward in 2022 for lifetime and past 12-month use, although these increases fall short of countering the drops that took place from 2020 to 2021.

In 8th grade lifetime and past 12-month prevalence changed little and was 1% or lower from 2020 to 2022.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

PCP

The prevalence of past-year PCP use is reported only for 12th grade students, and in 2022 it was 1.2%. Prevalence has not risen above 2% for the past 20 years.

PCP was first included in the survey in 1979, and its prevalence dropped rapidly thereafter, suggesting that it achieved a deserved reputation as a dangerous drug very quickly. Its use increased during the 1990s drug relapse, but its annual prevalence increased to a high of only 2.6%. Since 2002, its use has remained low.

To free up space for questions on other drugs, the survey stopped tracking lifetime and past 30-day use of this low-prevalence drug in 2014. These measures will be re-introduced into the survey if past 12-month use increases in the future.

Ecstasy (MDMA)

The percentage of youth who used MDMA (street names "Molly" and "ecstasy") did not return to 2020 levels in 2022. Lifetime prevalence stayed steady or edged slightly upward in 2022 in all grades, but remained below 2020 levels. Past 12-month use followed the same pattern. Past 30-day use prevalence levels have been below 1% in all grades since 2016; at such low prevalence levels changes from year to year may well reflect random sampling fluctuations and may not be substantive.

The historical trend for MDMA follows a pattern somewhat different from most of the other drugs in that an increase did not occur until the late 1990s, and it peaked later than many drugs—in 2001. Obviously there were some unique forces at work on the use of this drug, including its popularity at raves followed by public concern about the dangers of its use. Since that time its prevalence has gradually declined, although a short-lived upsurge took place in all grades around 2009–2010.

In 2014 some questionnaire forms in the survey included "Molly" as an example of MDMA, along with ecstasy, and the inclusion of this example appeared to make relatively little difference in the overall prevalence of MDMA. In 2015 the remaining forms were changed to also include "Molly" as an example in the questions about MDMA.

Trends in MDMA use are unique because the upswing in use in 1999 occurred first in the older grades. The 8th graders did not show this resurgence until a year later, in 2000. A different dynamic seemed to be at work for MDMA than for most other drugs during this historical period, because it appears that the increase in use rippled down the age scale rather than the reverse; this may be because raves (which older teens would be more likely to attend) played an important role in its dispersion.

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Salvia

Salvia is an herb with hallucinogenic properties, common to southern Mexico and Central and South Americas. Although it currently is not a drug regulated by the Controlled Substances Act, several states have passed legislation to regulate its use, as have several countries.

Prevalence of salvia use in the last 12 months did not change in 2022 and currently stands at 0.8% in all grades. Use of this drug has declined considerably since it was first measured in 2009, when prevalence among 12th grade students was 5.7%.

Cocaine

The percentage of youth who had ever used cocaine did not return to 2020 levels in 2022. In 12th grade prevalence continued to trend downward to 2.4% after a nearly 50% drop the previous year. In both 10th grade and 8th grade lifetime prevalence was 0.8%, which is half of the 1.6% prevalence level for both in 2020. At such low levels there is little room for prevalence to fall further in future years.

Both past 12-month and past 30-day cocaine use are near zero prevalence in 2022, with the former at levels 1.5% or less in all grades, and the latter less than 1% in all grades.

Cocaine grew in popularity among 12th graders in the late 1970s, then plateaued at a high level of around 12% annual prevalence in the first half of the 1980s, when most drugs were falling, before plunging by about three quarters by 1991. This drug then followed the common pattern of an increase in use during the 1990s relapse before showing a period of decline since 2006. The increase had leveled out about three years earlier for 8th graders (in 1996) than for 12th graders (in 1999), evidence of a cohort effect.

The reduction of adolescent cocaine use to today's low levels is a success story given its considerable popularity in the 1980s, when past-year prevalence among 12th graders reached 13% (in 1985). Reasons for this steep decline in cocaine use—in particular the role of perceived risk—are discussed in Chapter 8 in this MTF report.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Crack Cocaine

In 2022 past-year use of crack cocaine was at or near historic lows. Annual use levels among 8th, 10th, and 12th grade students were all less than 1%. Like cocaine, crack use dropped sharply from 1986—when its use was first measured—through 1991. Consistent with other illicit drugs, its prevalence then increased during the 1990s drug relapse, peaked in the late 1990s, and has since declined to today's low levels of use.

Questions on crack cocaine were first introduced into the survey in 1986, when information gathered routinely in MTF showed some indirect evidence of the rapid spread of crack cocaine. For example, we found that the proportion of all 12th graders reporting that they had ever smoked cocaine (as well as used it in the past year) more than doubled between 1983 and 1986, from 2.4% to 5.7%. In the same period, the proportion of those who said that they had both used cocaine during the prior year and at some time had been unable to stop using it when they tried doubled (from 0.4% to 0.8%). In addition, between 1984 and 1986, the proportion of 12th graders reporting *daily* use of cocaine also doubled (from 0.2% to 0.4%). We think it likely that the rapid advent of crack use during this period was reflected in all of these changes, though we did not yet have a direct measure of its use.

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Cocaine other than Crack

Trends in prevalence of cocaine other than crack follow closely the trends for cocaine use overall. In 2022 prevalence did not return to 2020 levels. In 12th grade lifetime prevalence fell further to 2% after a nearly 50% decrease the previous year. Lifetime prevalence also continued to fall in 10th grade and reach 0.6% after a 50% decline the previous year. In 8th grade lifetime prevalence edged up, but overall prevalence was low at 0.7% in 2022.

Both past 12-month and past 30-day cocaine use are near zero prevalence in 2022, with the former at levels 1.3% or less in all grades, and the latter less than 1% in all grades.

These low levels in 2022 contrast with annual prevalence of highs of 2.5% in 8th grade in 1996, 4.4% in 10th grade in 1999, and 10% in 12th grade in 1987, when this outcome was first measured.

In the late 1980s only 12th graders were asked this question, starting in 1987; they showed a precipitous decline in use through 1992. Perceived risk rose sharply during that period as the population became more concerned regarding the possibilities of addiction and overdose death from using cocaine.

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Heroin

Past 12-month use of heroin has always been relatively low, with annual prevalence never higher than 2% at any time in the survey for any grade. In 2022 the level of annual use was 0.3% or less in each grade. Prevalence levels of heroin are now at or near all-time lows, after a long decline from a peak established at the end of the 1990s drug relapse period. One unusual pattern specific to heroin is that the late 1990s mark the highest levels of use ever recorded in the study, whereas for most other drugs the all-time highs were set near the beginning of the 1980s. This trend was due in part to the advent of a new mode of administration made possible by the high levels of purity of heroin on the street—use without a needle. Questions about use without using a needle were added to the study (discussed next) and showed that this new form of administration was accounting for a fair proportion of all heroin users for a while.

The increase in heroin use that occurred around 1995 was recognized fairly quickly and gave rise to some ameliorative actions, including an anti-heroin campaign by the Partnership for a Drug-Free America. An increasing number of deaths due to heroin use, including in the entertainment and fashion communities, also received widespread publicity. These factors may well explain the subsequent leveling in use after the near doubling of heroin prevalence that took place in 1995.

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Narcotics other than Heroin

Use of narcotics other than heroin without a doctor's orders is reported only for 12th grade students. In 2022 lifetime use edged up slightly but this increase fell far short of countering the decline that took place the previous year from 2020 to 2021. Lifetime prevalence in 2022 was 3.2%, which was down more than fourfold from the high of 14% in 2002.

For past 12-month and past 30-day use a prevalence rebound in 2022 returned use to at or near 2020 levels. Past 12-month use had halved from 2020 to 2021 to a prevalence level of 1%, and then in 2022 increased back to 2%. Past 30-day use prevalence was 0.7% in 2020, declined to 0.3% in 2021, and then returned to 0.7% in 2021.

Two patterns make trends in use of these drugs unique. First, peak use came during the 1990s relapse—and not during the 1980s as it did for so many other drugs—suggesting that its rise during the 1990s was more than just a return to drug use patterns of the past and instead represented the emergence of new, unique patterns of use for adolescents. Second, the peak established after the 1990s drug relapse stayed at a stubbornly high level for much longer than most illicit drugs. High levels of use during the 2000s raised concern that use of these types of prescription drugs had become endemic. The recent decline in prevalence since 2010 shows that efforts to reduce use among adolescents have been successful.

Because the question text on half of the questionnaire forms was updated in 2002 with the inclusion of additional examples of narcotics other than heroin (i.e., OxyContin, Vicodin, and Percocet), we obtained a higher reported level of use with the new version of the question that year (9.4%) than with the previous version of the question (7.0%). (When we make a

significant change in the wording of a question, we often use this type of spliced design in which a random half of the respondents to the forms containing the drug get the new version and others get the old version in the same year so that we can assess the impact of the wording change.) All questionnaire forms contained the new version of the question in 2003 and thereafter.

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Oxycontin

In 2022 the percentage of youth who used the specific narcotic drug OxyContin® without a doctor's orders in the past 12 months was 2% or lower in all grades.
Use of OxyContin® has declined overall since first tracked by the survey in 2002. Its prevalence began a long-term decline in all grades around 2012 and 2013, and was at record or near-record lows in 2022.

Vicodin

Use of the specific narcotic drug Vicodin® without a doctor's orders had an annual prevalence of 1.3% or less across the three grades in 2022. These low levels are the result of marked declines from peaks before 2010 of 3% in 8th grade, 8% in 10th grade, and 11% in 12th grade.

While there was a large age difference in prevalence in earlier years, there remained practically none in 2022.

Amphetamines

The percentage of youth who used amphetamines without a doctor's orders trended slightly upward in 2022, but remained below 2020 levels.

Use has declined gradually and substantially over the course of the study in all grades. Across the three grades, lifetime use ranged from 11% to 17% in 1991 and declined to a range of 5% to 6% in 2022. In all three grades past 12-month use was 3% in 2022, and past 30-day use was between 1% and 2%.

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We believe past prevalence reports among 12th grade students in the early 1980s were somewhat exaggerated because some respondents included non-amphetamine over-the-counter diet and stay-awake pills, as well as "look-alike" and "sound-alike" stimulants, in their answers. In 1982, we added new versions of the amphetamine use questions that were more explicit in instructing respondents not to include such nonprescription pills. Between 1981 and 1982, prevalence level reports dropped as a result of this methodological change. In all tables and figures, data for 1975 through 1981 are based on the unchanged questions; data since 1982 are based on the revised questions, providing our best assessments of current prevalence and more recent trends in true amphetamine use.

In 1982 and 1983, the two years for which both adjusted and unadjusted statistics are available, the unadjusted data showed a modest amount of over-reporting. Both statistics suggest that a downturn in 12th graders' use of amphetamines began in 1982 and continued for a decade. For example, between 1982 and 1992 their annual prevalence for amphetamines fell by nearly two thirds, from 20% to 7%, while 30-day use and current daily use both fell by more than two thirds. As with a number of other drugs, the trend lines veered upwards after 1992 during the relapse period in drug use.

Ritalin

The stimulant Ritalin® is used to treat attention deficit hyperactivity disorder (ADHD). In 12th grade prevalence of use without a doctor's orders in the last 12 months significantly increased to 1.1% in 2022, while in 10th and 8th grade it did not significantly change and for both grades was less than 1%.

Prevalence of nonmedical use has declined substantially since first tracked by the survey in 2001. From 2001 to 2021 it declined from 2.9% to 0.7% in 8th grade, from 4.8% to 0.7% in 10th grade, and from 5.1% to 1.1% in 12th grade.

Adderall

In 2022 nonmedical use of the amphetamine Adderall® in the past 12 months returned to 2020 levels or near-2020 levels in all grades, after a marked decline in 2021 during the pandemic. Despite this return, 12th and 10th grade levels of use remain substantially lower than their 2015 levels. In 12th grade annual prevalence was 3.4% in 2022 as compared to 7.5% in 2015, and in 10th grade was 2.9% in 2022 as compared to 5.2% in 2015. In 8th grade past 12-month prevalence trended slightly upward from 2015, when it was 1%, through 2020. By 2022 prevalence was 2.3%.

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Methamphetamine

Use of methamphetamine has declined to near-zero prevalence over the past two decades, with past 12-month use at or below 0.5% in 2022. This marks a steep decline from 1999 levels (when it was first tracked) at 3.2% in 8th grade, 4.6% in 10th grade, and 4.7% in 12th grade.

Crystal Methamphetamine

Lifetime prevalence of crystal methamphetamine use in 12th grade has been less than 1% for the past three years, leaving little room to fluctuate in response to environmental influences.

Annual prevalence among 12th graders fell from a high of 3.0% in 1998 to 0.3% in 2021. Its similarity to crack cocaine (both are in chunks and are burned) may have played a role in this decline, because crack came to be seen as very dangerous to use, and the concern may have generalized to crystal methamphetamine.

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Sedatives (Barbiturates)

Use of sedatives (barbiturates) without a doctor's orders edged up slightly in 2022 but did not return to 2020 levels for lifetime and past 12-month use. For past 30-day use, the rebound in prevalence in 2022 essentially returned use to the 2020 level.

Prevalence declined after the highs of the 1990s drug relapse but for some years remained substantially higher than they were before the relapse began. By 2022 annual prevalence was near a historic low at 2.0% (the lowest level recorded was in the previous year, at 1.8%). As with many other substances, prevalence increased during the 1990s drug relapse, but a long-term decline did not start until 2005, which is nearly a decade later than the decline seen for most illegal drugs. This pattern of sustained, high levels past the 1990s is found for misuse of many of the prescription drugs, and was seen for the class "narcotics other than heroin." Trends over the past fifteen years, however, indicate that a long-term decline has been taking place.

Prior to the increase in use in the 1990s, past 12-month use had declined very appreciably from its highest reading of 16% in 1976 to 3% in 1992.

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Tranquilizers

The percentage of youth who used tranquilizers without a doctor's orders stayed steady or edged up slightly in 2022 in all grades. As a result, the substantial decreases in prevalence that took place the previous year from 2020 to 2021 largely persisted in 2022.

Back in 2001 the survey question on tranquilizers was modified to include Xanax as an example of a tranquilizer, and the discontinuity in the graph for that year marks the slightly higher prevalence estimate that resulted from this question change.

Among 12th and 10th grade students, tranquilizer use increased during the 1990s during the relapse phase and the increase was sustained well into the 2000s. This trend is typical for the general category of prescription medication misuse.

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Rohypnol

Rohypnol, a "club drug," was added to MTF in 1996. As a questionnaire space economy measure, in 2002 the standard triplet question (asking about lifetime, past 12-month, and past 30-day use of Rohypnol) was replaced with a tripwire question asking only about use in the past 12 months. (This change was made at 12th grade only.) As a result of this change in the structure and location of the question, trend data since 2002 may not be directly comparable to data prior to 2002, as noted by the discontinuity in the graph.

In 2022 prevalence is less than 1% in all grades for past 12-month use. Lifetime and past 30-day use, which are measured in 8th and 10th grade, were also below 1% in 2022; and all measures in all grades have been below 1% since 2017.

Ketamine

Prevalence of past-12 month use of ketamine (another "club drug") among 12th grade students has been below 2% for the past decade and in 2022 stood at 1.2%. This "club drug" was added to the survey in 2000. It showed little change in its usage levels through 2002. Since then use has declined in all grades. Because of the very low levels of use of this drug by 2011, questions about its use were dropped from the questionnaires administered to 8th and 10th graders.

GHB

Prevalence of past-year GHB use among 12th grade students has been below 1.5% for the past decade and in 2022 stood at 0.5%. Since 2014 prevalence has hovered around 0.4%.

This "club drug" was added to the survey in 2000. Its use has declined overall in all grades. Because of the very low levels of use of this drug by 2011, questions about its use were dropped from the questionnaires administered to 8th and 10th graders. Since then 12th grade prevalence declined to very low levels and plateaued at around 0.4%. At these low levels, changes from year to year may well reflect random sampling fluctuations and may not be substantive.

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Alcohol

In 2022 lifetime alcohol use returned to 2020 levels or near-2020 levels in all grades after a marked decline during the pandemic in 2021. Lifetime prevalence levels in 2022 were 61.6% in 12th grade, 41.1% in 10th grade, and 23.1% in 8th grade.

In 12th grade past 12-month use also returned to 2020 prevalence levels, as a result of significant increases in 2022. No such return took place for past 30-day, daily, or binge drinking, which stayed closer to the decreased 2021 levels than 2020 levels in 12th and 10th grade.

In 8th grade changes in 2021 and 2022 were smaller. Lower levels of alcohol use in 8th grade, as well as lower levels of autonomy for 8th graders to use substances such as alcohol, likely resulted in the smaller magnitude of change during the pandemic.

Despite the increases from 2021 to 2022 for some grades and intensities of use, alcohol use has been on a long-term, overall decline and all measures are at substantially lower levels than they were in the year 2000. From 2001 to 2022 past 12-month prevalence has decreased from 73% to 52% in 12th grade, from 64% to 31.3% in 10th grade, and from 42% to 15.2% in 8th grade.

Unlike most other drugs, alcohol use showed only a modest increase during the 1990s relapse, exhibiting more of a pause in its long-term decline.

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Been Drunk

Prevalence of past 12-month and past 30-day being drunk did not return to 2020 levels in 2022. In 12th and 8th grade lifetime prevalence continued a long-term downward trend in 2022. In 10th grade, lifetime prevalence increased slightly to 20% from 18% in 2021 but remained well below the 29% level of 2020.
Past 12-month prevalence followed a trend similar to lifetime use, although in 12th grade prevalence trended slightly upward in 2022, after a large decline from 2020 to 2021.

Annual prevalence of being drunk has been in a long-term decline, which began first among 8th graders after 1996, then among 10th graders after 2000, and in 12th grade after 2000, suggesting a cohort effect.

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The survey text for this item reads "On how many occasions (if any) have you been drunk or very high from drinking alcoholic beverages?" and is asked in reference to use over the respondent's lifetime, the last 12 months, the last 30 days, and daily.

Alcoholic Beverages Containing Caffeine

Annual use of alcoholic beverages containing caffeine has been in steady decline since 2011, when first added to the study. Annual prevalence among 12th and 10th grade students has decreased more than 50% overall since then. In 2022 the annual prevalence level in 12th grade was 11.6%, which is a slight increase from the 9.9% level in 2021. In 10th and 8th grade annual prevalence continued its long-term decline and levels were 7.1% and 4.7%, respectively.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Flavored Alcoholic Beverages

In 2022, use of flavored alcoholic beverages (also known as "alcopops" or "malternatives") in the past 12 months returned to pre-pandemic levels in 12th grade. Specifically, prevalence was 38% in 2019 (the last measurement of this outcome before the pandemic), declined to 32% in 2021, and then returned to 38% in 2022. (2020 prevalence levels are not reported for 12th grade due to low sample size that resulted from curtailed data collection due to the pandemic.)

In 10th and 8th grade past 12-month prevalence stayed steady or edged up slightly, but did not increase back to 2020 levels. It is possible that 12th grade students had more opportunities and more autonomy to use flavored alcoholic beverages in 2022 than did students in lower grades.

A single tripwire question, asking about the frequency of flavored alcoholic beverage use in the past 12 months, was introduced in 2003 to determine how widespread the use of these beverages was. In 2003, the annual prevalence was 55% among 12th graders. Because of this

high level of use, we introduced more extensive measurement of use (i.e., the standard questions about use in lifetime, past 12 months and past 30 days) of these beverages into the 2004 questionnaires. The annual prevalence was about the same in 2004 (56%), and it rose slightly in 2005 (58%), after which it declined to 53% by 2009 and eventually declined to 38% by 2022. Thirty-day prevalence among 12th grade students fell to 21% by 2021, while lifetime prevalence fell to 46%.

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Beer

In 2022 lifetime prevalence of beer drinking rebounded slightly in all grades. Despite the upward trending this year, use remained lower than 2020 levels in 8th and 10th grade. In 12th grade the 2022 level was lower than the 2019 prevalence (2020 prevalence levels not reported in 12th grade because of low sample size that resulted from curtailed data collection during the pandemic).

In the long term, beer drinking has declined substantially in all grades and from 1991 to 2022 lifetime use decreased in 12th grade from 82% to 48%, in 10th grade from 74% to 27%, and in 8th grade from 59% to 17%. Substantial long-term declines have also taken place for past 12-month, past 30-day, and binge beer drinking in all grades.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Hard Liquor

Use of hard liquor is asked only of 12th grade students. In 2022 prevalence edged upward for lifetime, past 12-month, past 30-day use, as well as for binge drinking. These increases were not large or statistically significant and prevalence for all reporting periods was the second lowest recorded by the survey (with lowest levels occurring in 2021). Nevertheless, prevalence remains substantial, with one out of every five 12th graders reporting use of liquor in the past 30 days.

A decline in liquor consumption among 12th graders actually began after about 1980 but was interrupted in the late 1990s by the relapse phase in the use of most drugs, including alcohol. After about 2002 the long-term decline in alcohol use resumed.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Wine

Wine consumption is asked only of 12th grade students. In 2022 prevalence edged up slightly for lifetime, past 12-month, and past 30-day use. Nevertheless prevalence was near record lows in 2022 as prevalence has declined overall since 2000. Specifically, from 2000 to 2022 lifetime prevalence declined from 64% to 37%, past 12-month from 45% to 26%, and past 30-day from 16% to 10%.

In 1988 MTF added a question on wine coolers, which had the effect of sharply reducing self-reported wine use. (Up to that point many users of wine coolers likely reported such use under wine.) Prevalence of wine use rose somewhat during the 1990s drug relapse but continued a long-standing decline in 2001.

As with liquor, the longer-term decline in wine consumption that began in the late 1980s was interrupted in the 1990s during the relapse phase in drug and alcohol use.

Wine Coolers

Beginning in 2004, questions on wine coolers were asked only of 12th grade students. Prevalence in 2022 edged up slightly for lifetime, past 12-month, and past 30-day use. Nevertheless prevalence was near record lows in 2022 as it has declined markedly since 2000. For example, the past 12-month prevalence of 21% in 2022 was more than three times lower than the all-time high of 69% in 1988.

Cigarettes

The percentage of adolescents who had ever smoked a cigarette did not significantly change from 2021 to 2022, although it trended downward slightly in 8th and 12th grade, and increased nominally in 10th grade. Overall, cigarette prevalence in 2022 is at or near the lowest ever recorded by the survey for lifetime, last 30-day, daily and half-a-pack per day use.

The intense public debate in the late 1990s over cigarette policies likely played an important role in bringing about the very significant downturn in adolescent smoking over the past two decades. MTF helped to give rise to that debate, as it publicly reported in the first half of the 1990s that the level of smoking among U.S. adolescents was rising sharply—results that were widely covered in the national media. Other subsequent developments likely have contributed, including (a) increases in cigarette prices, brought about in part by the tobacco industry settlement with the states and by state-level taxing decisions; (b) substantially increased prevention activities, including antismoking ad campaigns in a number of states; (c) the removal of certain types of advertising (including billboards) as well as the Joe Camel campaign nationwide; (d) the initiation of a national antismoking ad campaign by the American Legacy Foundation, which was created under the conditions of the tobacco Master Settlement Agreement of 1998; and (e) efforts by the Food and Drug Administration (FDA) and states to reduce youth access to cigarettes.

An important milestone occurred in 2009 with passage of the Family Smoking Prevention and Tobacco Control Act, which gave the U.S. Food and Drug Administration the authority to regulate the manufacturing, marketing, and sale of tobacco products. New efforts by the FDA have undoubtedly contributed to the continuing decline in use of cigarettes and their reported availability by 8th, 10th, and 12th graders.

In earlier years, efforts to reduce adolescent smoking did not meet with as much success. Between 1984 and 1992 smoking prevalence was little changed among 12th grade students despite increasingly restrictive legislation with regard to smoking debated and enacted at state and local levels, as well as prevention efforts made in many school systems. These results

suggest that the successful reduction of adolescent smoking, as we have seen in recent decades, requires a concerted, national, multi-pronged effort.

During the 1990s trends in cigarette smoking generally moved in concert across 8th, 10th, and 12th grades—and not in the usual, staggered pattern indicative of a cohort effect. The prevalence of current smoking began to rise among 8th and 10th graders after 1991 and among 12th graders after 1992, and until 1996 moved steadily upward in all three grades. In 1996, current smoking peaked in grades 8 and 10 and then peaked a year later among 12th graders. It is interesting that cigarettes, which normally reflect cohort differences, began to exhibit a secular trend in the same historical period that illicit drugs, which normally exhibit secular trends, began to show cohort effects.

Of particular importance is the fact that in all three grades in 2022 the prevalence of smoking half-a-pack or more per day is down from peak levels by more than 90%.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Nicotine Vaping

The percentage of students who vaped nicotine in 2022 stayed steady or edged up slightly for lifetime, past 12-month, and past 30-day use. As a result, the substantial decreases in prevalence that took place the previous year from 2020 to 2021 largely persisted in 2022.

Despite the recent declines in use, the prevalence of nicotine vaping remains one of the highest among all adolescent substances. In 2022 its past 12-month prevalence levels of 12% in 8th grade and 21% in 10th grade are second only to alcohol. Nicotine vaping's prevalence of 27% in 12th grade ranks third behind alcohol and marijuana use. These high rankings are largely due to the very sharp increases between 2017 and 2019.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Marijuana Vaping

In 2022 the percentage of 8th and 10th grade students who vaped marijuana changed little, and as a result the substantial decreases in prevalence that took place the previous year from 2020 to 2021 largely persisted in 2022. This pattern was apparent for lifetime, past 12-month, and past 30-day use.

In 12th grade prevalence levels in 2022 rebounded and did not maintain any decreases that took place the previous year from 2020 to 2021. This pattern differs from overall marijuana use, for which prevalence levels in 2022 did not return to 2020 levels.

Large increases in marijuana vaping in previous years were not accompanied by increases in overall marijuana use. These results suggest that marijuana vaping is not increasing the pool of adolescent marijuana users. It could substitute for combustible marijuana use, it could serve as a way for marijuana users to avoid detection by adults (because vaped marijuana does not

have the distinctive smell of combustible marijuana), and/or it could be a way for users to supplement their combustible marijuana use.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Vaping Flavoring

The percentage of youth who report that they vaped "just flavoring" in their lifetime and in the past 12 months did not return to 2020 levels in 2022 though they did show some rebound in the upper grades from the declines in use in 2021. Flavor vaping remains somewhat common, with nearly one in four 12th graders reporting that they vaped 'just flavor' in their lifetime and more than one in ten reporting having done so in the last 12 months.

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Flavoring Vaping with no Nicotine Vaping

A substantial prevalence of "just flavoring" vaping could raise at least two potential scenarios. First, it could be possible that a portion of youth believed they were not vaping nicotine when in fact they were. Second, if students truly were vaping only flavoring, then the recent large increases in adolescent vaping may be less alarming than they at first appear—to the extent that adolescents would not be exposed to the addictive chemical nicotine.

These two potential scenarios are not supported by the results. The finding that in 2022 1% of students or less in all grades report vaping flavoring exclusively without vaping nicotine in the past 30 days indicates that practically all students who report vaping flavoring are also nicotine vapers. These results suggest most adolescents who vape flavoring are doing so as a supplement to their nicotine vaping and not as a substitute for it.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Smokeless Tobacco

The percentage of youth who used smokeless tobacco during the past 30 days was at or near record lows in 2022. In 12th grade prevalence was 3.2% (the record low was the previous year at 2.2%), in 10th grade it was 2.5% (the record low was the previous year at 1.7%) and in 8th grade it was 1.2% (a record low).

Daily use of smokeless tobacco is at near-negligible levels, with a prevalence of 1.1% or less in all grades.

Trends in smokeless tobacco use stand out as very different from trends for adolescent use of other drugs. Unlike almost all other substances, use of smokeless tobacco did not increase during the 1990s relapse but actually declined for nearly 10 years, beginning around 1994. Further, smokeless tobacco is one of few substances for which prevalence increased after 2007, although this increase among 10th and 12th grade students was not lasting. Finally, the trends

show little in the way of cohort effects, given that trends have moved in parallel and not in staggered fashion for all three grades. These results suggest that the factors leading to use of smokeless tobacco are much different from the drivers of use of other drugs.

Questions about the use of smokeless tobacco were first introduced in 1986, omitted in 1990 and 1991, and then reintroduced in 1992. Through 2010, the examples of smokeless tobacco provided were snuff, plug, dipping tobacco, and chewing tobacco; because of new forms of smokeless tobacco entering the market, snus and dissolvable tobacco were added to the examples in 2011. The introduction and promotion of new smokeless products, including snus, may well have contributed to the increase in use seen in all grades that peaked around that time.

Snus

Prevalence of snus use in the past 12 months stood at 1%, 1.5%, and 2.4% for 8th, 10th, and 12th graders, respectively in 2022. These levels are little changed from 2021.

Snus is a variation on smokeless tobacco, as are some other dissolvable tobacco products, that literally dissolve in the mouth. Questions on snus were added to the 12th grade survey in 2011 and to the 8th and 10th grade surveys in 2012. Past year prevalence had been falling quite sharply in the upper grades since the introduction of those questions. The upper grades have tended to have considerably higher levels of use—at least until 2018.

Clearly snus has lost most of its appeal to teenagers, possibly in part due to the sharp increases in the popularity of vaping.

Dissolvable Tobacco

Questions on the use of dissolvable tobacco were added to the 12th grade in 2011 and to 8th and 10th grades in 2012. The annual prevalence levels since then have been variable but below 2% in all grades and all years.

Large Cigars

Use of large cigars has declined overall since 2014 in all three grades. Since 2019 a steep decline in prevalence of 30-day use took place among 12th grade students, falling by more than half from 5.3% in 2019 to 2.3% in 2022. The trend has also been downward in 8th and 10th grades, which in 2022 have 30-day prevalence levels of 0.5% in 8th grade and 0.8% in 10th.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Flavored Little Cigars

Use of flavored little cigars in the past 30 days changed little in 2022. Prevalence levels consequently maintained the dramatic decreases in prevalence that took place in 2021.

Overall prevalence has declined markedly since this outcome was added to the survey in 2014. Specifically, from 2014 to 2022 prevalence in 12th grade fell from 12% to 2%, in 10th grade from 7% to 1%, and in 8th grade from 4% to 1%.

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Regular Small Cigars

Use of regular small cigars during the past 12 months edged slightly lower in 2022 across all grades, further lowering prevalence after the large decline that took place the previous year. Prevalence has declined markedly overall since first tracked in 2014, and 2022 levels are record lows, all below 2%.

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Cigarillos (Small Cigars)

The percentage of 12th grade students who used a cigarillo (also known as a small cigar) in the past 12 months significantly increased from 3.4% in 2021 to 5.6% in 2022. Despite this increase the 5.6% level in 2022 remains the second-lowest prevalence level recorded by the study since it began tracking cigarillos in 2010. The long-term, overall decline in use has been substantial, with prevalence declining from a high of 23% in 2010.

Tobacco Using a Hookah

A hookah is a device to inhale combustible tobacco and consists of a long, flexible tube through which users inhale tobacco smoke that has passed through water and is thereby cooled. Only 12th grade students are asked about their use. In 2022 the percentage of 12th grade students who used a hookah in the past 12 months edged up slightly, although the increase was not statistically significant. Use has been steadily declining and the 3.3% prevalence level in 2022 compares with the high of 23% recorded in 2014.

Steroids

In 2022 prevalence of steroid use increased in all grades for lifetime, past 12-month and past 30-day use. These increases were statistically significant for lifetime use in 12th grade, for past 12-month use in 12th and 8th grade, and for past 30-day use in all three grades.

These results are consistent with the possibility of an increase in the proportion of adolescents involved in fitness and weightlifting during the pandemic. Also increasing during 2022 were the performance-enhancing drugs of creatine and androstenedione.

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Creatine

Creatine is not a hormone or a drug but a nutrient found in the skeletal muscle of most animals. It is used to reduce the recovery time of muscles, to increase muscle mass, and to thereby enhance performance for high-intensity, short-duration exercises. It is readily available over the counter and not prohibited by the NCAA, which undoubtedly helps to explain the high levels of use we have found among teens.

Past 12-month use increased markedly in all grades in 2022, particularly in 12th and 10th grade. In all grades the increase from 2021 to 2022 is the largest on record for this outcome.
These results are consistent with the possibility of an increase in the proportion of adolescents involved in fitness and weightlifting during the pandemic. Also increasing during 2022 were the performance-enhancing drugs of steroids and androstenedione with which creatine is sometimes used.

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Androstenedione

Androstenedione, a precursor to testosterone, is a performance-enhancing substance that was scheduled by the Drug Enforcement Administration early in 2005, making its sale and possession no longer legal.

Past 12-month prevalence significantly increased in 2022, and more than tripled from 0.6% in 2021 to 1.9% in 2022. The increase in 2022, along with a smaller increase in 2021, reverses a long-term decline from 3.0% in 2001 to 0.5% in 2019.

These results are consistent with the possibility of an increase in the proportion of 12th grade students involved in fitness and weightlifting during the pandemic. Increases also took place in 2022 for the performance-enhancing substances of steroids and creatine.

The survey stopped tracking this drug among 8th and 10th graders after 2014, when prevalence levels were less than 1% in these grades.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Legal Stimulants

Diet Pills

Use of diet pills, which are over-the-counter stimulants, were at the lowest level ever recorded by the survey in 2022 for lifetime, past 12-month, and past 30-day use.

Today's levels of past 12-month use are more than five times lower than their peak of 21% in 1982, when diet pills were first included on the survey. After 1982, prevalence fell quickly over the next ten years to 8% in 1993; this was a particularly positive development because nearly all of these diet pills contained phenylpropanolamine, which the Food and Drug Administration has since determined has health risks for the user and in 2005 removed them from over-the-counter sale. Use stabilized through the mid-1990s at around 9.4%, rose after 1998 to reach 15.1% in 2002, and then declined to today's low of 1.6%.

Stay-Awake Pills

Use of stay-awake pills, which are over-the-counter stimulants, were at or the lowest level ever recorded by the survey in 2022 for lifetime, past 12-month, and past 30-day use.

The 2022 prevalence of 1.6% for past 12-month use is more than sixteen times lower than the peak level of 26% in 1988. Since then prevalence of stay-awake pills has gradually declined somewhat irregularly with no periods of sustained increases.

OTC Cough/Cold Medicine

There are a number of over-the-counter drugs that can be used to relieve symptoms from coughing or having a cold. Several of them, like Robotussin® and Tylenol® contain dextromethorphan (DXM). When taken in large doses, its side effects can mimic those of some illegal drugs, like hallucinations and sensory changes. Teens can buy them to use for these purposes and risk a number of dangerous side effects.

Not all cough and cold medications contain DXM, of course, but because a number of them do, we track the more general class to get an indication of changes in DXM abuse.

In 2022 past 12-month prevalence decreased slightly for 8th grade students, lowering prevalence further from a decrease that had taken place the year before. The current level of 3.2% is about midway between the low of 2% recorded in 2015 and the high of 4.6% recorded in 2020.

In 10th grade a significant increase in 2022 raised prevalence from a low of 2.7% in 2021 to a level of 3.9%, about where it had been eight years earlier.

In 12th grade prevalence edged upward, but at 2.4% it was the second-lowest level recorded by the survey (the lowest level was 1.7% in 2021).

Legal Use of Drugs for the Treatment of ADHD Taken Under Medical Supervision

ADHD

One of the few substances with increasing prevalence during the pandemic was medical use of either stimulant or non-stimulant drugs to treat ADHD. In 12th grade prevalence for both 30-day and lifetime use increased in 2021—and then again in 2022 (these increases were statistically significant in 2022).

In 10th and 8th grade lifetime prevalence of medical use also increased in 2022, although not significantly so.

In all three grades, prevalence increases during the pandemic reversed a decline that had led both lifetime and 30-day prevalence to be at or near the lowest level recorded by the survey in 2020.

It is possible that the need for treatment of ADHD increased during the pandemic due to adolescents experiencing more stress during the pandemic. Another possibility is that

sheltering at home during the pandemic may have made any attention issues of adolescents more salient to their parents.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

ADHD Stimulant

One of the few substances with increasing prevalence during the pandemic was medical use of stimulant drugs to treat ADHD. In 10th and 12th grade prevalence for both 30-day and lifetime use increased in 2021—and then again in 2022 (the increases were statistically significant in 2022 for 12th grade students for both lifetime and past 30-day prevalence).

In 12th grade, both lifetime and past 30-day medical use were at the highest levels recorded by the survey in 2022, at 11.2% and 5.6%, respectively.

It is conceivable that there was an increase in the need for treatment during the pandemic due to adolescents being under more stress during the pandemic. Another possibility is that sheltering at home during the pandemic may have made any attention issues of adolescents more salient to their parents.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

ADHD Non-Stimulant

Non-stimulant type drugs for the treatment of ADHD are sometimes prescribed when stimulants have proven ineffective or not well tolerated.

In 2022 the percentage of 12th grade students who took these drugs for the treatment of ADHD increased for both lifetime and past 30-day use. In 2022 past 30-day use in 12th grade was 3.5%, which is the highest level recorded by the survey since tracking of this class of drugs began in 2005.

In 10th and 8th grade lifetime medical use trended upward in 2022, although in both grades the 2022 levels were near the lowest recorded by the survey at 3.4% and 3.5%, respectively. Past 30-day use increased slightly in 8th grade and decreased slightly in 10th grade.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

DRUGS NO LONGER TRACKED ANNUALLY

The drugs listed below did not appear on the 2022 MTF surveys. In most cases prevalence levels fell so low that survey questions on the drug were removed to make room for questions on other drugs, as well as to reduce respondent burden. In some cases, as with “electronic vaporizers,” questions were removed to make place for updated terminology and measures.

JUUL

Questions about use of the vaping device JUUL were not asked in 2022 because the FDA had removed them from the market at the time the 2022 survey was being prepared.

Prior to 2022 prevalence of the vaping device JUUL declined dramatically. Both past 12-month and past 30-day prevalence declined about 50% in just one year in all three grades from 2020 to 2021.

This decline likely stemmed from both national policies aimed at reducing nicotine vaping prevalence among adolescents, as well as the COVID-19 pandemic.

One policy to reduce tobacco use in general is the "Tobacco 21" law, which went into force on December 20, 2019. This law raised the age of sale for all tobacco products in the U.S. from 18 to 21. It is specifically designed to reduce adolescent access to vaping devices and other tobacco products.

In addition, in 2020 the FDA placed restrictions on flavoring of cartridge-based vaping systems and banned flavors popular among adolescents such as mint and fruit. These restrictions went into force on February 7, 2020, four days before the first school was surveyed in MTF that year. This ban likely has had a continuing effect.

At the same time, these large declines took place during the COVID-19 pandemic, when social distancing policies were implemented specifically to reduce social interactions outside of the home. These policies included school building closures, reductions and/or cancellations of after school group activities, and physical distancing policies requiring people to stay six feet from others. For many, these policies likely reduced adolescents' access to vaping devices and cartridges, as well as their opportunities to use them free from adult supervision.

All results from 2020 are from surveys completed before March 15, 2020, when national social distancing policies were implemented and the survey halted due to pandemic concerns.

Heroin Use without a needle

The percentage of youth ever using heroin without a needle fell to near-zero levels in 2021, and those questions were removed from the survey to make room for questions on other drugs.

The advent of new, very pure, heroin that could be used without a needle played a significant role in raising heroin prevalence to its all-time peak in the mid-1990s. Since then its use has declined to record lows.

Heroin Use with a needle

The percentage of youth ever using heroin with a needle fell to near-zero levels in 2021 and was removed from the survey to make room for questions on other drugs.

Heroin use with a needle among students is quite rare, and lifetime use was never higher than 2% when tracked between 1995 and 2021.

Bath Salts

Questions on "bath salts" (synthetic cathinones) were added to the survey in 2012 out of concern that these particularly toxic drugs would gain popularity among adolescents. As it turns out, annual prevalence has been low and never higher than 1.3% in any grade. In 2018, prevalence was 0.9% or less in all grades, and the survey questions were removed to make room for questions on other drugs. These questions will be added back to the survey in future years if a concern arises that adolescent use of bath salts is making a comeback.

Amyl and Butyl Nitrites

Amyl and butyl nitrites, one class of inhalants, became somewhat popular in the late 1970s, but their use has been almost eliminated in the years since. The annual prevalence level among 12th grade students was 6.5% in 1979 but only 0.9% in 2009. Because of this decrease in use, and to allow for the addition of other questions, the questions on nitrite use have not been included in the study since 2010. These questions will be added back to the survey in future years if a concern arises that adolescent use of these nitrites is making a comeback.

When nitrites were included in the definition of inhalants, they masked the increase that was occurring in the use of other inhalants, because their use was declining at the same time that the use of the other inhalants was increasing.

Methaqualone (Quaaludes)

Use of methaqualone (brand name Quaalude®) without a doctor's orders had a past 12-month prevalence among 12th graders of 0.4% in 2012, after which it was no longer included on the survey to make room for questions on other drugs. Previously, use of this drug rose sharply from 1978 until 1981. Starting in 1982 use began to decline, helping to account for the overall adjusted sedative index resuming its decline that year. Annual prevalence for methaqualone plummeted from 7.6% in 1981 to 0.2% by 1993; it then inched up a bit during the drug relapse phase in the 1990s to 1.1% in 1996, where it remained in 1999. By 2012 it was down to 0.4%, a tiny fraction of its peak level.

Provigil

Questions on use of Provigil® (a prescription stay-awake drug used for narcolepsy, shift work, etc.) were added to the 12th grade questionnaires in 2009. In 2011, 1.5% used this drug without a doctor's orders in the past 12 months, suggesting that this drug had not made serious inroads among youth in terms of non-medically-supervised use. Given the low use, questions on Provigil were no longer included on the survey starting in 2012. These questions will be added back to the survey in future years if a concern arises that adolescent use of Provigil is making a comeback.

Bidis

A question about bidis, a type of flavored cigarette imported from India, was included in the MTF questionnaires for the first time in 2000, with a single tripwire question asking about the frequency of use in the past year. Some observers had been concerned that bidis might become popular among U.S. youth, but that does not seem to have been the case. The 2010 proportion of 12th graders using bidis during the past year was only 1.4%. Thirty-day and daily use would be appreciably lower. Given the low prevalence levels, the question on bidis was dropped from

8th and 10th grade questionnaires in 2006 and from 12th grade questionnaires in 2011. These questions will be added back to the survey in future years if a concern arises that adolescent use of bidis is making a comeback.

Kreteks

A question about kreteks, a type of clove cigarette that was usually imported from Indonesia, was added in 2001 to the list of tripwire questions that ask only about past 12-month use.

Because the prevalence levels turned out to be low, this question also was dropped in 2006 from the 8th and 10th grade questionnaires to make room for other questions. In 2014, only 1.6% of 12th graders reported any use of kreteks in the prior 12 months, and the question has not been included on the survey since then. These questions will be added back to the survey in future years if a concern arises that adolescent use of kreteks is making a comeback.

SUMMARY OF TRENDS

As these varied patterns of use show, the overall proportion of U.S. adolescents using any substance in their lifetime has changed over the years, and the mix of drugs they use has changed even more. A number of drug classes showed dramatic declines (particularly in the 1980s), some showed substantial increases (particularly in the late 1970s and again in the 1990s), and some remained fairly stable. Further, the periods in which they either increased or decreased varied considerably, although between 1992 and 1996—the "relapse phase" of the epidemic—the use of many drugs increased and by 1997 the use of most had stabilized. Afterwards most have declined in use to some degree, sometimes very sharply, as was seen with LSD and MDMA; however, this was not true of all illicitly used drugs—in particular the prescription type drugs such as narcotics other than heroin, sedatives, and tranquilizers continued to increase well into the 2000s before they began their current declines, making them an important part of the nation's drug problems.

Recent years have seen new increases and decreases in adolescent drug use. Vaping of nicotine and marijuana surged in prevalence in 2018 and 2019. This surge was then followed by a large, overall decline in adolescent drug use after the onset of the pandemic from 2020 to 2021 that resulted in some of the largest one-year declines recorded by the survey. Whether these declines persist among affected cohorts in the coming years—and whether persistence of the declines varies by substance—is of central importance for drug theory and policy. These findings demonstrate once again the ever-changing nature of adolescent substance use and, consequently, the need to continually monitor and address emerging trends.

Author Note: Further content to this Chapter will be added in the coming months.

TABLE 5-1
Trends in Lifetime Prevalence of Use of Various Drugs in Grade 12

Percentage who ever used

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	*9,400*	*15,400*	*17,100*	*17,800*	*15,500*	*15,900*	*17,500*	*17,700*	*16,300*	*15,900*	*16,000*	*15,200*	*16,300*	*16,300*	*16,700*	*15,200*
Any Illicit Drug [a,b]	55.2	58.3	61.6	64.1	65.1	65.4	65.6	64.4	62.9	61.6	60.6	57.6	56.6	53.9	50.9	47.9
Any Illicit Drug other than Marijuana [a,b,c]	36.2	35.4	35.8	36.5	37.4	38.7	42.8	41.1	40.4	40.3	39.7	37.7	35.8	32.5	31.4	29.4
Marijuana/Hashish	47.3	52.8	56.4	59.2	60.4	60.3	59.5	58.7	57.0	54.9	54.2	50.9	50.2	47.2	43.7	40.7
Inhalants [d]	—	10.3	11.1	12.0	12.7	11.9	12.3	12.8	13.6	14.4	15.4	15.9	17.0	16.7	17.6	18.0
Inhalants, Adjusted [d,e]	—	—	—	—	18.2	17.3	17.2	17.7	18.2	18.0	18.1	20.1	18.6	17.5	18.6	18.5
Amyl/Butyl Nitrites [f,g]	—	—	—	—	11.1	11.1	10.1	9.8	8.4	8.1	7.9	8.6	4.7	3.2	3.3	2.1
Hallucinogens [c]	16.3	15.1	13.9	14.3	14.1	13.3	13.3	12.5	11.9	10.7	10.3	9.7	10.3	8.9	9.4	9.4
Hallucinogens, Adjusted [c,h]	—	—	—	—	17.7	15.6	15.3	14.3	13.6	12.3	12.1	11.9	10.6	9.2	9.9	9.7
LSD [c]	11.3	11.0	9.8	9.7	9.5	9.3	9.8	9.6	8.9	8.0	7.5	7.2	8.4	7.7	8.3	8.7
Hallucinogens other than LSD [c]	14.1	12.1	11.2	11.6	10.7	9.8	9.1	8.0	7.3	6.6	6.5	5.7	5.4	4.1	4.3	4.1
PCP [f,g]	—	—	—	—	12.8	9.6	7.8	6.0	5.6	5.0	4.9	4.8	3.0	2.9	3.9	2.8
MDMA (Ecstasy, Molly) [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	9.0	9.7	10.8	12.9	15.4	15.7	16.5	16.0	16.2	16.1	17.3	16.9	15.2	12.1	10.3	9.4
Crack [i]	—	—	—	—	—	—	—	—	—	—	—	—	5.4	4.8	4.7	3.5
Cocaine other than Crack [j]	—	—	—	—	—	—	—	—	—	—	—	—	14.0	12.1	8.5	8.6
Heroin [k]	2.2	1.8	1.8	1.6	1.1	1.1	1.1	1.2	1.2	1.3	1.2	1.1	1.2	1.1	1.3	1.3
With a needle [l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Without a needle [l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Narcotics other than Heroin [m,n]	9.0	9.6	10.3	9.9	10.1	9.8	10.1	9.6	9.4	9.7	10.2	9.0	9.2	8.6	8.3	8.3
Amphetamines [b,m]	22.3	22.6	23.0	22.9	24.2	26.4	32.2‡	27.9	26.9	27.9	26.2	23.4	21.6	19.8	19.1	17.5
Methamphetamine [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crystal Methamphetamine (Ice) [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.7

Table continued on next page.

TABLE 5-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs in Grade 12

Percentage who ever used

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	*9,400*	*15,400*	*17,100*	*17,800*	*15,500*	*15,900*	*17,500*	*17,700*	*16,300*	*15,900*	*16,000*	*15,200*	*16,300*	*16,300*	*16,700*	*15,200*
Sedatives (Barbiturates) [m,p]	16.9	16.2	15.6	13.7	11.8	11.0	11.3	10.3	9.9	9.9	9.2	8.4	7.4	6.7	6.5	6.8
Sedatives, Adjusted [m,q]	18.2	17.7	17.4	16.0	14.6	14.9	16.0	15.2	14.4	13.3	11.8	10.4	8.7	7.8	7.4	7.5
Methaqualone [m,r]	8.1	7.8	8.5	7.9	8.3	9.5	10.6	10.7	10.1	8.3	6.7	5.2	4.0	3.3	2.7	2.3
Tranquilizers [c,m]	17.0	16.8	18.0	17.0	16.3	15.2	14.7	14.0	13.3	12.4	11.9	10.9	10.9	9.4	7.6	7.2
Rohypnol [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s]	90.4	91.9	92.5	93.1	93.0	93.2	92.6	92.8	92.6	92.6	92.2	91.3	92.2	92.0	90.7	89.5
Been Drunk [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes	73.6	75.4	75.7	75.3	74.0	71.0	71.0	70.1	70.6	69.7	68.8	67.6	67.2	66.4	65.7	64.4
Smokeless Tobacco [f,t]	—	—	—	—	—	—	—	—	—	—	—	31.4	32.2	30.4	29.2	—
Any Vaping [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Nicotine [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Marijuana [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Just Flavoring [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flavoring Vaping with no Nicotine Vaping [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
JUUL [ee]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [m,u]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	2.9
Legal Use of Over-the-Counter Stimulants																
Diet Pills [f]	—	—	—	—	—	—	—	29.6	31.4	29.7	28.7	26.6	25.5	21.5	19.9	17.7
Stay-Awake Pills [f]	—	—	—	—	—	—	—	19.1	20.4	22.7	26.3	31.5	37.4	37.4	36.3	37.0
Look-Alikes [f]	—	—	—	—	—	—	—	15.1	14.8	15.3	14.2	12.7	11.9	11.7	10.5	10.7
Legal Use of Prescription ADHD Drugs																
Stimulant-Type [aa]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Non-Stimulant-Type [aa]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Either Type [aa]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table continued on next page.

TABLE 5-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs in Grade 12

Percentage who ever used

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	*15,000*	*15,800*	*16,300*	*15,400*	*15,400*	*14,300*	*15,400*	*15,200*	*13,600*	*12,800*	*12,800*	*12,900*	*14,600*	*14,600*	*14,700*	*14,200*
Any Illicit Drug [a,b]	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
Any Illicit Drug other than Marijuana [a,b,c]	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
Marijuana/Hashish	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
Inhalants [d]	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
Inhalants, Adjusted [d,e]	18.0	17.0	17.7	18.3	17.8	17.5	16.9	16.5	16.0	14.6	13.8	12.4	12.2	11.4	11.9	11.5
Amyl/Butyl Nitrites [f,g]	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
Hallucinogens [c]	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
Hallucinogens, Adjusted [c,h]	10.0	9.4	11.3	11.7	13.1	14.5	15.4	14.4	14.2	13.6‡	15.3	12.8	10.9	9.9	9.3	8.8
LSD [c]	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
Hallucinogens other than LSD [c]	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
PCP [f,g]	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
MDMA (Ecstasy, Molly) [f]	—	—	—	—	—	6.1	6.9	5.8	8.0	11.0	11.7	10.5	8.3	7.5	5.4	6.5
Cocaine	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
Crack [i]	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
Cocaine other than Crack [j]	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
Heroin [k]	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
With a needle [l]	—	—	—	—	0.7	0.8	0.9	0.8	0.9	0.8	0.7	0.8	0.7	0.7	0.9	0.8
Without a needle [l]	—	—	—	—	1.4	1.7	2.1	1.6	1.8	2.4	1.5	1.6	1.8	1.4	1.3	1.1
Narcotics other than Heroin [m,n]	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
Amphetamines [b,m,gg]	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
Methamphetamine [o]	—	—	—	—	—	—	—	—	8.2	7.9	6.9	6.7	6.2	6.2	4.5	4.4
Crystal Methamphetamine (Ice) [o]	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

Table continued on next page.

TABLE 5-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs in Grade 12

Percentage who ever used

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	*15,000*	*15,800*	*16,300*	*15,400*	*15,400*	*14,300*	*15,400*	*15,200*	*13,600*	*12,800*	*12,800*	*12,900*	*14,600*	*14,600*	*14,700*	*14,200*
Sedatives (Barbiturates) [m,p]	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
Sedatives, Adjusted [m,q]	6.7	6.1	6.4	7.3	7.6	8.2	8.7	9.2	9.5	9.3	8.9	10.2	9.1	10.1	11.0	10.6
Methaqualone [m,r]	1.3	1.6	0.8	1.4	1.2	2.0	1.7	1.6	1.8	0.8	1.1	1.5	1.0	1.3	1.3	1.2
Tranquilizers [c,m]	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
Rohypnol [f]	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	—	—	—	—	—
Alcohol [s]	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
Been Drunk [o]	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
Cigarettes	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
Smokeless Tobacco [f,t]	—	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
Any Vaping [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Nicotine [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Marijuana [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Just Flavoring [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flavoring Vaping with no Nicotine Vaping [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
JUUL [ee]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [m,u]	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
Legal Use of Over-the-Counter Stimulants																
Diet Pills [f]	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
Stay-Awake Pills [f]	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
Look-Alikes [f]	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
Legal Use of Prescription ADHD Drugs																
Stimulant-Type [aa]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.5	7.8
Non-Stimulant-Type [aa]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.2	6.1
Either Type [aa]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	11.7

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TABLE 5-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs in Grade 12

Percentage who ever used

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019[ff]	2020	2021	2022	2021–2022 change
Approximate weighted N =	*14,500*	*14,000*	*13,700*	*14,400*	*14,100*	*13,700*	*12,600*	*12,400*	*12,900*	*11,800*	*12,600*	*13,300*	*12,900*	*3,500*	*8,300*	*8,900*	
Any Illicit Drug [a,b]	46.8	47.4	46.7	48.2	49.9	49.1	49.8	49.1	48.9	48.3	48.9	47.8	47.4	46.6	41.3	41.0	-0.3
Any Illicit Drug other than Marijuana [a,b,c]	25.5	24.9	24.0	24.7	24.9	24.1	24.8	22.6	21.1	20.7	19.5	18.9	18.4	17.5	12.8	13.2	+0.3
Marijuana/Hashish	41.8	42.6	42.0	43.8	45.5	45.2	45.5	44.4	44.7	44.5	45.0	43.6	43.7	43.7	38.6	38.3	-0.3
Inhalants [d]	10.5	9.9	9.5	9.0	8.1	7.9	6.9	6.5	5.7	5.0	4.9	4.4	5.3	3.8	5.0	5.8	+0.9
Inhalants, Adjusted [d,e]	11.0	10.1	10.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amyl/Butyl Nitrites [f,g]	1.2	0.6	1.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens [c]	8.4	8.7	7.4	8.6	8.3	7.5	7.6	6.3	6.4	6.7	6.7	6.6	6.9	7.5	7.1	7.1	0.0
Hallucinogens, Adjusted [c,h]	8.9	9.0	8.0	9.1	8.8	7.9	8.1	—	—	—	—	—	—	—	—	—	—
LSD [c]	3.4	4.0	3.1	4.0	4.0	3.8	3.9	3.7	4.3	4.9	5.0	5.1	5.6	5.9	4.9	4.4	-0.5
Hallucinogens other than LSD [c]	7.7	7.8	6.8	7.7	7.3	6.6	6.4	5.1	4.8	4.7	4.8	4.5	4.3	4.7	5.3	5.6	+0.4
PCP [f,g]	2.1	1.8	1.7	1.8	2.3	1.6	1.3	—	—	—	—	—	—	—	—	—	—
MDMA (Ecstasy, Molly) [f]	6.5	6.2	6.5	7.3	8.0	7.2	7.1‡	7.9	5.9	4.9	4.9	4.1	3.3	3.6	2.8	3.0	+0.2
Cocaine	7.8	7.2	6.0	5.5	5.2	4.9	4.5	4.6	4.0	3.7	4.2	3.9	3.8	4.1	2.5	2.4	0.0
Crack [i]	3.2	2.8	2.4	2.4	1.9	2.1	1.8	1.8	1.7	1.4	1.7	1.5	1.7	1.6	1.5	1.3	-0.3
Cocaine other than Crack [j]	6.8	6.5	5.3	5.1	4.9	4.4	4.2	4.1	3.4	3.3	3.5	3.3	3.2	4.0	2.2	2.0	-0.2
Heroin [k]	1.5	1.3	1.2	1.6	1.4	1.1	1.0	1.0	0.8	0.7	0.7	0.8	0.6	0.4	0.4	0.5	0.0
With a needle [l]	0.7	0.7	0.6	1.1	0.9	0.7	0.7	0.8	0.6	0.5	0.4	0.5	0.4	0.2	0.2	—	—
Without a needle [l]	1.4	1.1	0.9	1.4	1.3	0.8	0.9	0.7	0.7	0.6	0.4	0.6	0.4	0.1	0.2	—	—
Narcotics other than Heroin [m,n]	13.1	13.2	13.2	13.0	13.0	12.2	11.1	9.5	8.4	7.8	6.8	6.0	5.3	5.3	2.3	3.2	+0.9 s
Amphetamines [b,m,gg]	11.4	10.5	9.9	11.1	12.2	12.0	13.8	12.1	10.8	10.0	9.2	8.6	7.7	7.3	4.9	5.3	+0.4
Methamphetamine [o]	3.0	2.8	2.4	2.3	2.1	1.7	1.5	1.9	1.0	1.2	1.1	0.7	0.8	1.7	0.6	1.1	+0.5
Crystal Methamphetamine (Ice) [o]	3.4	2.8	2.1	1.8	2.1	1.7	2.0	1.3	1.2	1.4	1.5	1.1	1.3	0.2	0.7	0.8	0.0

Table continued on next page.

TABLE 5-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs in Grade 12

Percentage who ever used

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019[ff]	2020	2021	2022	2021–2022 change
Approximate weighted N =	*14,500*	*14,000*	*13,700*	*14,400*	*14,100*	*13,700*	*12,600*	*12,400*	*12,900*	*11,800*	*12,600*	*13,300*	*12,900*	*3,500*	*8,300*	*8,900*	
Sedatives (Barbiturates)[m,p]	9.3	8.5	8.2	7.5	7.0	6.9	7.5	6.8	5.9	5.2	4.5	4.2	4.2	4.4	3.5	3.6	+0.1
Sedatives, Adjusted[m,q]	9.6	8.9	8.4	7.6	7.2	7.2	—	—	—	—	—	—	—	—	—	—	—
Methaqualone[m,r]	1.0	0.8	0.7	0.4	0.6	0.8	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers[c,m]	9.5	8.9	9.3	8.5	8.7	8.5	7.7	7.4	6.9	7.6	7.5	6.6	6.1	7.0	3.3	3.3	0.0
Rohypnol[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol[s]	72.2	71.9	72.3	71.0	70.0	69.4	68.2	66.0	64.0	61.2	61.5	58.5	58.5	61.5	54.1	61.6	+7.5 sss
Been Drunk[o]	55.1	54.7	56.5	54.1	51.0	54.2	52.3	49.8	46.7	46.3	45.3	42.9	40.8	41.7	38.9	36.7	-2.2
Cigarettes	46.2	44.7	43.6	42.2	40.0	39.5	38.1	34.4	31.1	28.3	26.6	23.8	22.3	24.0	17.8	16.8	-1.0
Smokeless Tobacco[f,t]	15.1	15.6	16.3	17.6	16.9	17.4	17.2	15.1	13.2	14.2	11.0	10.1	9.8	§	8.6	10.3	+1.8
Any Vaping[y,z]	—	—	—	—	—	—	—	—	35.5	33.8‡	35.8	42.5	45.6	47.2	40.5	40.7	+0.2
Vaping Nicotine[y]	—	—	—	—	—	—	—	—	—	—	25.0	34.0	40.8	44.3	38.7	38.8	+0.1
Vaping Marijuana[y]	—	—	—	—	—	—	—	—	—	—	11.9	15.6	23.7	27.9	25.7	27.5	+1.8
Vaping Just Flavoring[y]	—	—	—	—	—	—	—	—	—	—	30.7	34.1	29.0	29.8	25.2	23.7	-1.5
Flavoring Vaping with no Nicotine Vaping[y]	—	—	—	—	—	—	—	—	—	—	10.1	7.6	3.7	1.3	0.8	1.1	+0.3
JUUL[ee]	—	—	—	—	—	—	—	—	—	—	—	—	33.0	36.2	28.5	—	—
Steroids[m,u]	2.2	2.2	2.2	2.0	1.8	1.8	2.1	1.9	2.3	1.6	1.6	1.6	1.6	2.0	0.8	1.5	+0.7 s
Legal Use of Over-the-Counter Stimulants																	
Diet Pills[f]	10.4	10.5	9.5	7.2	7.7	7.7	8.1	9.1	7.9	6.4	6.7	6.2	5.1	§	4.6	3.8	-0.8
Stay-Awake Pills[f]	12.3	9.6	7.6	6.4	6.3	5.9	5.2	4.5	3.8	3.6	3.8	3.6	3.4	§	3.4	2.6	-0.8
Look-Alikes[f]	4.6	5.2	4.3	2.6	3.5	2.9	2.7	2.2	3.3	2.3	2.6	—	—	—	—	—	—
Legal Use of Prescription ADHD Drugs																	
Stimulant-Type[aa]	7.6	8.6	8.2	8.3	8.4	9.0	9.6	9.1	9.9	8.4	8.6	8.6	7.9	7.5	8.0	11.2	+3.2 s
Non-Stimulant-Type[aa]	7.0	6.4	5.4	6.7	5.8	5.9	5.4	5.6	5.6	5.8	6.4	6.1	5.7	4.8	4.5	5.8	+1.3
Either Type[aa]	12.1	13.1	11.0	12.7	12.2	12.7	13.2	12.6	13.7	12.7	13.0	12.7	11.1	9.9	10.9	14.6	+3.7 s

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

See footnotes following Table 5-4.

TABLE 5-2
Trends in Annual Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 12 months

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	*9,400*	*15,400*	*17,100*	*17,800*	*15,500*	*15,900*	*17,500*	*17,700*	*16,300*	*15,900*	*16,000*	*15,200*	*16,300*	*16,300*	*16,700*	*15,200*
Any Illicit Drug [a,b]	45.0	48.1	51.1	53.8	54.2	53.1	52.1	49.4	47.4	45.8	46.3	44.3	41.7	38.5	35.4	32.5
Any Illicit Drug other than Marijuana [a,b,c]	26.2	25.4	26.0	27.1	28.2	30.4	34.0	30.1	28.4	28.0	27.4	25.9	24.1	21.1	20.0	17.9
Marijuana/Hashish	40.0	44.5	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.0	40.6	38.8	36.3	33.1	29.6	27.0
Inhalants [d]	—	3.0	3.7	4.1	5.4	4.6	4.1	4.5	4.3	5.1	5.7	6.1	6.9	6.5	5.9	6.9
Inhalants, Adjusted [d,e]	—	—	—	—	8.9	7.9	6.1	6.6	6.2	7.2	7.5	8.9	8.1	7.1	6.9	7.5
Amyl/Butyl Nitrites [f,g]	—	—	—	—	6.5	5.7	3.7	3.6	3.6	4.0	4.0	4.7	2.6	1.7	1.7	1.4
Hallucinogens [c]	11.2	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.5	6.3	6.0	6.4	5.5	5.6	5.9
Hallucinogens, Adjusted [c,h]	—	—	—	—	11.8	10.4	10.1	9.0	8.3	7.3	7.6	7.6	6.7	5.8	6.2	6.0
LSD [c]	7.2	6.4	5.5	6.3	6.6	6.5	6.5	6.1	5.4	4.7	4.4	4.5	5.2	4.8	4.9	5.4
Hallucinogens other than LSD [c]	9.4	7.0	6.9	7.3	6.8	6.2	5.6	4.7	4.1	3.8	3.6	3.0	3.2	2.1	2.2	2.1
PCP [f,g]	—	—	—	—	7.0	4.4	3.2	2.2	2.6	2.3	2.9	2.4	1.3	1.2	2.4	1.2
MDMA (Ecstasy, Molly) [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Salvia [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	5.6	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	12.7	10.3	7.9	6.5	5.3
Crack [i]	—	—	—	—	—	—	—	—	—	—	—	4.1	3.9	3.1	3.1	1.9
Cocaine other than Crack [j]	—	—	—	—	—	—	—	—	—	—	—	—	9.8	7.4	5.2	4.6
Heroin [k]	1.0	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5
With a needle [l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Without a needle [l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Narcotics other than Heroin [m,n]	5.7	5.7	6.4	6.0	6.2	6.3	5.9	5.3	5.1	5.2	5.9	5.2	5.3	4.6	4.4	4.5
OxyContin [m,v]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vicodin [m,v]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amphetamines [b,m,gg]	16.2	15.8	16.3	17.1	18.3	20.8	26.0‡	20.3	17.9	17.7	15.8	13.4	12.2	10.9	10.8	9.1
Ritalin [m,o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Adderall [m,o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Provigil [m,o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methamphetamine [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crystal Methamphetamine (Ice) [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3
Sedatives (Barbiturates) [m,p]	10.7	9.6	9.3	8.1	7.5	6.8	6.6	5.5	5.2	4.9	4.6	4.2	3.6	3.2	3.3	3.4
Sedatives, Adjusted [m,q]	11.7	10.7	10.8	9.9	9.9	10.3	10.5	9.1	7.9	6.6	5.8	5.2	4.1	3.7	3.7	3.6
Methaqualone [m,r]	5.1	4.7	5.2	4.9	5.9	7.2	7.6	6.8	5.4	3.8	2.8	2.1	1.5	1.3	1.3	0.7
Tranquilizers [c,m]	10.6	10.3	10.8	9.9	9.6	8.7	8.0	7.0	6.9	6.1	6.1	5.8	5.5	4.8	3.8	3.5
OTC Cough/Cold Medicines [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rohypnol [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table continued on next page.

(List of drugs continued.)

TABLE 5-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for Grade 12

Percentage who used in last 12 months

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	*9,400*	*15,400*	*17,100*	*17,800*	*15,500*	*15,900*	*17,500*	*17,700*	*16,300*	*15,900*	*16,000*	*15,200*	*16,300*	*16,300*	*16,700*	*15,200*
GHB [w]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ketamine [x]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s]	84.8	85.7	87.0	87.7	88.1	87.9	87.0	86.8	87.3	86.0	85.6	84.5	85.7	85.3	82.7	80.6
Been Drunk [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bidis [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kreteks [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco [f,t]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any Vaping [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Nicotine [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Marijuana [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Just Flavoring [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flavoring Vaping with no Nicotine Vaping [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
JUUL [ee]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [m,u]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	1.7
Androstenedione [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Creatine [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Legal Use of Over-the-Counter Stimulants																
Diet Pills [f]	—	—	—	—	—	—	—	20.5	20.5	18.8	16.9	15.3	13.9	12.2	10.9	10.4
Stay-Awake Pills [f]	—	—	—	—	—	—	—	11.8	12.3	13.9	18.2	22.2	25.2	26.4	23.0	23.4
Look-Alikes [f]	—	—	—	—	—	—	—	10.8	9.4	9.7	8.2	6.9	6.3	5.7	5.6	5.6

Table continued on next page.

TABLE 5-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 12 months

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	*15,000*	*15,800*	*16,300*	*15,400*	*15,400*	*14,300*	*15,400*	*15,200*	*13,600*	*12,800*	*12,800*	*12,900*	*14,600*	*14,600*	*14,700*	*14,200*
Any Illicit Drug [a,b]	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
Any Illicit Drug other than Marijuana [a,b,c]	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
Marijuana/Hashish	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
Inhalants [d]	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
Inhalants, Adjusted [d,e]	6.9	6.4	7.4	8.2	8.4	8.5	7.3	7.1	6.0	6.2	4.9	4.9	4.5	4.6	5.4	4.7
Amyl/Butyl Nitrites [f,g]	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
Hallucinogens [c]	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
Hallucinogens, Adjusted [c,h]	6.1	6.2	7.8	7.8	9.7	10.7	10.0	9.2	9.8	8.7‡	9.7	7.2	6.5	6.4	5.9	5.3
LSD [c]	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
Hallucinogens other than LSD [c]	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
PCP [f,g]	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
MDMA (Ecstasy, Molly) [f]	—	—	—	—	—	4.6	4.0	3.6	5.6	8.2	9.2	7.4	4.5	4.0	3.0	4.1
Salvia [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	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
Crack [i]	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
Cocaine other than Crack [j]	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
Heroin [k]	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
With a needle [l]	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.5
Without a needle [l]	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	0.8	0.8	0.7	0.8	0.6
Narcotics other than Heroin [m,n]	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
OxyContin [m,v]	—	—	—	—	—	—	—	—	—	—	—	4.0	4.5	5.0	5.5	4.3
Vicodin [m,v]	—	—	—	—	—	—	—	—	—	—	—	9.6	10.5	9.3	9.5	9.7
Amphetamines [b,m,gg]	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
Ritalin [m,o]	—	—	—	—	—	—	—	—	—	—	5.1	4.0	4.0	5.1	4.4	4.4
Adderall [m,o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Provigil [m,o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methamphetamine [o]	—	—	—	—	—	—	—	—	4.7	4.3	3.9	3.6	3.2	3.4	2.5	2.5
Crystal Methamphetamine (Ice) [o]	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
Sedatives (Barbiturates) [m,p]	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
Sedatives, Adjusted [m,q]	3.6	2.9	3.4	4.2	4.9	5.3	5.4	6.0	6.3	6.3	5.9	7.0	6.2	6.6	7.6	6.8
Methaqualone [m,r]	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
Tranquilizers [c,m]	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
OTC Cough/Cold Medicines [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9
Rohypnol [f]	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9‡	1.6	1.3	1.6	1.2	1.1

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(List of drugs continued.)

Table continued on next page.

TABLE 5-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs for Grade 12

Percentage who used in last 12 months

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	*15,000*	*15,800*	*16,300*	*15,400*	*15,400*	*14,300*	*15,400*	*15,200*	*13,600*	*12,800*	*12,800*	*12,900*	*14,600*	*14,600*	*14,700*	*14,200*
GHB [w]	—	—	—	—	—	—	—	—	—	1.9	1.6	1.5	1.4	2.0	1.1	1.1
Ketamine [x]	—	—	—	—	—	—	—	—	—	2.5	2.5	2.6	2.1	1.9	1.6	1.4
Alcohol [s]	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
Been Drunk [o]	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	50.4	48.0	51.8	47.7	47.9
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bidis [o]	—	—	—	—	—	—	—	—	—	9.2	7.0	5.9	4.0	3.6	3.3	2.3
Kreteks [o]	—	—	—	—	—	—	—	—	—	—	10.1	8.4	6.7	6.5	7.1	6.2
Smokeless Tobacco [f,t]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any Vaping [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Nicotine [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Marijuana [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Just Flavoring [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flavoring Vaping with no Nicotine Vaping [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
JUUL [ee]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [m,u]	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
Androstenedione [y]	—	—	—	—	—	—	—	—	—	—	3.0	2.5	2.5	2.1	1.7	1.1
Creatine [y]	—	—	—	—	—	—	—	—	—	—	11.7	8.5	8.3	8.1	8.1	7.8
Legal Use of Over-the-Counter Stimulants																
Diet Pills [f]	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
Stay-Awake Pills [f]	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
Look-Alikes [f]	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

Table continued on next page.

TABLE 5-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 12 months

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019[ff]	2020	2021	2022	2021-2022 change
Approximate weighted N =	*14,500*	*14,000*	*13,700*	*14,400*	*14,100*	*13,700*	*12,600*	*12,400*	*12,900*	*11,800*	*12,600*	*13,300*	*12,900*	*3,500*	*8,300*	*8,900*	
Any Illicit Drug [a,b]	35.9	36.6	36.5	38.3	40.0	39.7	40.1	38.7	38.6	38.3	39.9	38.8	38.0	36.8	32.0	32.6	+0.6
Any Illicit Drug other than Marijuana [a,b,c]	18.5	18.3	17.0	17.3	17.6	17.0	17.8	15.9	15.2	14.3	13.3	12.4	11.5	11.4	7.2	8.0	+0.7
Marijuana/Hashish	31.7	32.4	32.8	34.8	36.4	36.4	36.4	35.1	34.9	35.6	37.1	35.9	35.7	35.2	30.5	30.7	+0.2
Inhalants [d]	3.7	3.8	3.4	3.6	3.2	2.9	2.5	1.9	1.9	1.7	1.5	1.6	1.9	1.1	1.8	1.8	0.0
Inhalants, Adjusted [d,e]	4.1	4.0	4.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amyl/Butyl Nitrites [f,g]	0.8	0.6	0.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens [c]	5.4	5.9	4.7	5.5	5.2	4.8	4.5	4.0	4.2	4.3	4.4	4.3	4.6	5.3	4.1	4.4	+0.4
Hallucinogens, Adjusted [c,h]	5.8	6.1	5.2	6.0	5.8	5.0	4.9	—	—	—	—	—	—	—	—	—	—
LSD [c]	2.1	2.7	1.9	2.6	2.7	2.4	2.2	2.5	2.9	3.0	3.3	3.2	3.6	3.9	2.5	2.5	-0.1
Hallucinogens other than LSD [c]	4.8	5.0	4.2	4.8	4.3	4.0	3.7	3.0	2.9	2.7	2.9	2.7	2.7	2.8	2.9	3.4	+0.5
PCP [f,g]	0.9	1.1	1.0	1.0	1.3	0.9	0.7	0.8	1.4	1.3	1.0	1.1	1.1	§	0.7	1.2	+0.5
MDMA (Ecstasy, Molly) [f]	4.5	4.3	4.3	4.5	5.3	3.8	4.0‡	5.0	3.6	2.7	2.6	2.2	2.2	1.8	1.1	1.4	+0.2
Salvia [o]	—	—	5.7	5.5	5.9	4.4	3.4	1.8	1.9	1.8	1.5	0.9	0.7	0.7	0.6	0.8	+0.2
Cocaine	5.2	4.4	3.4	2.9	2.9	2.7	2.6	2.6	2.5	2.3	2.7	2.3	2.2	2.9	1.2	1.5	+0.3
Crack [i]	1.9	1.6	1.3	1.4	1.0	1.2	1.1	1.1	1.1	0.8	1.0	0.9	1.0	1.2	0.7	0.9	+0.2
Cocaine other than Crack [j]	4.5	4.0	3.0	2.6	2.6	2.4	2.4	2.4	2.1	2.0	2.3	2.0	1.9	2.9	0.9	1.3	+0.4
Heroin [k]	0.9	0.7	0.7	0.9	0.8	0.6	0.6	0.6	0.5	0.3	0.4	0.4	0.4	0.3	0.1	0.3	+0.2
With a needle [l]	0.4	0.4	0.3	0.7	0.6	0.4	0.4	0.5	0.3	0.3	0.2	0.3	0.3	0.1	0.1	—	—
Without a needle [l]	1.0	0.5	0.6	0.8	0.7	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	—	—
Narcotics other than Heroin [m,n]	9.2	9.1	9.2	8.7	8.7	7.9	7.1	6.1	5.4	4.8	4.2	3.4	2.7	2.1	1.0	1.7	+0.7 ss
OxyContin [m,v]	5.2	4.7	4.9	5.1	4.9	4.3	3.6	3.3	3.7	3.4	2.7	2.3	1.7	2.4	0.9	1.9	+1.0 ss
Vicodin [m,v]	9.6	9.7	9.7	8.0	8.1	7.5	5.3	4.8	4.4	2.9	2.0	1.7	1.1	1.2	0.9	1.3	+0.5
Amphetamines [b,m]	7.5	6.8	6.6	7.4	8.2	7.9	9.2	8.1	7.7	6.7	5.9	5.5	4.5	4.3	2.3	2.8	+0.5
Ritalin [m,o]	3.8	3.4	2.1	2.7	2.6	2.6	2.3	1.8	2.0	1.2	1.3	0.9	1.1	1.7	0.5	1.1	+0.6 s
Adderall [m,o]	—	—	5.4	6.5	6.5	7.6	7.4	6.8	7.5	6.2	5.5	4.6	3.9	4.4	1.8	3.4	+1.7 sss
Provigil [m,o]	—	—	1.8	1.3	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Methamphetamine [o]	1.7	1.2	1.2	1.0	1.4	1.1	0.9	1.0	0.6	0.6	0.6	0.5	0.5	1.4	0.2	0.5	+0.4
Crystal Methamphetamine (Ice) [o]	1.6	1.1	0.9	0.9	1.2	0.8	1.1	0.8	0.5	0.8	0.8	0.6	0.6	0.0	0.4	0.3	0.0
Sedatives (Barbiturates) [m,p]	6.2	5.8	5.2	4.8	4.3	4.5	4.8	4.3	3.6	3.0	2.9	2.7	2.5	2.4	1.8	2.0	+0.2
Sedatives, Adjusted [m,q]	6.4	6.1	5.4	5.0	4.4	4.5	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [m,r]	0.5	0.5	0.6	0.3	0.3	0.4	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [c,m]	6.2	6.2	6.3	5.6	5.6	5.3	4.6	4.7	4.7	4.9	4.7	3.9	3.4	3.2	1.2	1.5	+0.3
OTC Cough/Cold Medicines [o]	5.8	5.5	5.9	6.6	5.3	5.6	5.0	4.1	4.6	4.0	3.2	3.4	2.5	3.2	1.7	2.4	+0.7
Rohypnol [f]	1.0	1.3	1.0	1.5	1.3	1.5	0.9	0.7	1.0	1.1	0.8	0.7	0.5	§	0.4	0.7	+0.3

Table continued on next page.

(List of drugs continued.)

TABLE 5-2 (cont.)
Trends in Annual Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 12 months

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019[ff]	2020	2021	2022	2021–2022 change
Approximate weighted N =	*14,500*	*14,000*	*13,700*	*14,400*	*14,100*	*13,700*	*12,600*	*12,400*	*12,900*	*11,800*	*12,600*	*13,300*	*12,900*	*3,500*	*8,300*	*8,900*	
GHB [w]	0.9	1.2	1.1	1.4	1.4	1.4	1.0	1.0	0.7	0.9	0.4	0.3	0.4	§	0.4	0.5	+0.1
Ketamine [x]	1.3	1.5	1.7	1.6	1.7	1.5	1.4	1.5	1.4	1.2	1.2	0.7	0.7	1.3	0.9	1.2	+0.3
Alcohol [s]	66.4	65.5	66.2	65.2	63.5	63.5	62.0	60.2	58.2	55.6	55.7	53.3	52.1	55.3	46.5	51.9	+5.4 ss
Been Drunk [o]	46.1	45.6	47.0	44.0	42.2	45.0	43.5	41.4	37.7	37.3	35.6	33.9	32.8	36.9	28.8	29.6	+0.8
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bidis [o]	1.7	1.9	1.5	1.4	—	—	—	—	—	—	—	—	—	—	—	—	—
Kreteks[o]	6.8	6.8	5.5	4.6	2.9	3.0	1.6	1.6	—	—	—	—	—	—	—	—	—
Smokeless Tobacco [f,t]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any Vaping [y]	—	—	—	—	—	—	—	—	—	—	27.8	37.3	40.6	39.0	31.5	32.1	+0.6
Vaping Nicotine [y]	—	—	—	—	—	—	—	—	—	—	18.8	29.7	35.3	34.5	26.6	27.3	+0.7
Vaping Marijuana [y]	—	—	—	—	—	—	—	—	—	—	9.5	13.1	20.8	22.1	18.3	20.6	+2.3
Vaping Just Flavoring [y]	—	—	—	—	—	—	—	—	—	—	20.6	25.7	20.3	16.6	11.7	11.8	+0.1
Flavoring Vaping with no Nicotine Vaping [y]	—	—	—	—	—	—	—	—	—	—	7.5	6.0	3.1	1.9	1.2	1.1	-0.1
JUUL [ee]	—	—	—	—	—	—	—	—	—	—	—	—	28.4	26.1	12.2	—	—
Steroids [m,u]	1.4	1.5	1.5	1.5	1.2	1.3	1.5	1.5	1.7	1.0	1.1	1.1	1.0	1.2	0.5	1.3	+0.8 ss
Androstenedione [y]	0.9	1.3	1.1	1.5	0.7	1.0	0.7	1.1	0.9	0.9	0.6	0.5	0.5	§	0.6	1.9	+1.3 ss
Creatine [y]	8.0	8.3	9.1	9.2	8.6	9.5	9.3	10.0	8.8	9.0	8.1	9.3	7.6	7.2	7.4	11.8	+4.4 ss
Legal Use of Over-the-Counter Stimulants																	
Diet Pills [f]	6.7	7.2	6.1	4.3	4.9	5.5	5.3	6.4	5.1	4.5	4.0	3.5	3.1	§	2.5	1.6	-0.9
Stay-Awake Pills [f]	7.6	6.3	4.8	3.2	3.9	3.8	3.2	3.5	2.7	2.5	2.5	2.4	1.8	§	1.5	1.6	0.0
Look-Alikes [f]	2.8	3.1	2.6	1.7	2.2	2.1	1.7	1.4	2.3	1.6	1.5	—	—	—	—	—	—

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

See footnotes following Table 5-4.

TABLE 5-3
Trends in 30-Day Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 30 days

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	*9,400*	*15,400*	*17,100*	*17,800*	*15,500*	*15,900*	*17,500*	*17,700*	*16,300*	*15,900*	*16,000*	*15,200*	*16,300*	*16,300*	*16,700*	*15,200*
Any Illicit Drug [a,b]	30.7	34.2	37.6	38.9	38.9	37.2	36.9	32.5	30.5	29.2	29.7	27.1	24.7	21.3	19.7	17.2
Any Illicit Drug other than Marijuana [a,b,c]	15.4	13.9	15.2	15.1	16.8	18.4	21.7	17.0	15.4	15.1	14.9	13.2	11.6	10.0	9.1	8.0
Marijuana/Hashish	27.1	32.2	35.4	37.1	36.5	33.7	31.6	28.5	27.0	25.2	25.7	23.4	21.0	18.0	16.7	14.0
Inhalants [d]	—	0.9	1.3	1.5	1.7	1.4	1.5	1.5	1.7	1.9	2.2	2.5	2.8	2.6	2.3	2.7
Inhalants, Adjusted [d,e]	—	—	—	—	3.2	2.7	2.5	2.5	2.5	2.6	3.0	3.2	3.5	3.0	2.7	2.9
Amyl/Butyl Nitrites [f,g]	—	—	—	—	2.4	1.8	1.4	1.1	1.4	1.4	1.6	1.3	1.3	0.6	0.6	0.6
Hallucinogens [c]	4.7	3.4	4.1	3.9	4.0	3.7	3.7	3.4	2.8	2.6	2.5	2.5	2.5	2.2	2.2	2.2
Hallucinogens, Adjusted [c,h]	—	—	—	—	5.3	4.4	4.5	4.1	3.5	3.2	3.8	3.5	2.8	2.3	2.9	2.3
LSD [c]	2.3	1.9	2.1	2.1	2.4	2.3	2.5	2.4	1.9	1.5	1.6	1.7	1.8	1.8	1.8	1.9
Hallucinogens other than LSD [c]	3.7	2.3	3.0	2.7	2.4	2.3	2.1	1.7	1.5	1.6	1.3	1.3	1.1	0.7	0.8	0.8
PCP [f,g]	—	—	—	—	2.4	1.4	1.4	1.0	1.3	1.0	1.6	1.3	0.6	0.3	1.4	0.4
MDMA (Ecstasy, Molly) [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	1.9	2.0	2.9	3.9	5.7	5.2	5.8	5.0	4.9	5.8	6.7	6.2	4.3	3.4	2.8	1.9
Crack [i]	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.6	1.4	0.7
Cocaine other than Crack [j]	—	—	—	—	—	—	—	—	—	—	—	—	4.1	3.2	1.9	1.7
Heroin [k]	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.2
With a needle [l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Without a needle [l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Narcotics other than Heroin [m,n]	2.1	2.0	2.8	2.1	2.4	2.4	2.1	1.8	1.8	1.8	2.3	2.0	1.8	1.6	1.6	1.5
Amphetamines [b,m,gg]	8.5	7.7	8.8	8.7	9.9	12.1	15.8‡	10.7	8.9	8.3	6.8	5.5	5.2	4.6	4.2	3.7
Methamphetamine [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crystal Methamphetamine (Ice) [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6

Table continued on next page.

TABLE 5-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 30 days

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	*9,400*	*15,400*	*17,100*	*17,800*	*15,500*	*15,900*	*17,500*	*17,700*	*16,300*	*15,900*	*16,000*	*15,200*	*16,300*	*16,300*	*16,700*	*15,200*
Sedatives (Barbiturates) [m,p]	4.7	3.9	4.3	3.2	3.2	2.9	2.6	2.0	2.1	1.7	2.0	1.8	1.4	1.2	1.4	1.3
Sedatives, Adjusted [m,q]	5.4	4.5	5.1	4.2	4.4	4.8	4.6	3.4	3.0	2.3	2.4	2.2	1.7	1.4	1.6	1.4
Methaqualone [m,r]	2.1	1.6	2.3	1.9	2.3	3.3	3.1	2.4	1.8	1.1	1.0	0.8	0.6	0.5	0.6	0.2
Tranquilizers [c,m]	4.1	4.0	4.6	3.4	3.7	3.1	2.7	2.4	2.5	2.1	2.1	2.1	2.0	1.5	1.3	1.2
Rohypnol [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s]	68.2	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	65.3	66.4	63.9	60.0	57.1
Been Drunk [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes	36.7	38.8	38.4	36.7	34.4	30.5	29.4	30.0	30.3	29.3	30.1	29.6	29.4	28.7	28.6	29.4
Smokeless Tobacco [f,t]	—	—	—	—	—	—	—	—	—	—	—	11.5	11.3	10.3	8.4	—
Any Vaping [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Nicotine [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Marijuana [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Just Flavoring [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flavoring Vaping with no Nicotine Vaping [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
JUUL [ee]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any Nicotine Use [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any Nicotine Use other than Vaping [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [m,u]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0
Legal Use of Over-the-Counter Stimulants																
Diet Pills [f]	—	—	—	—	—	—	—	9.8	9.5	9.9	7.3	6.5	5.8	5.1	4.8	4.3
Stay-Awake Pills [f]	—	—	—	—	—	—	—	5.5	5.3	5.8	7.2	9.6	9.2	9.8	8.5	7.3
Look-Alikes [f]	—	—	—	—	—	—	—	5.6	5.2	4.4	3.6	3.4	2.7	2.7	2.4	2.3
Legal Use of Prescription ADHD Drugs																
Stimulant-Type [aa,bb]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Non-Stimulant-Type [aa,bb]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Either Type [aa,bb]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table continued on next page.

TABLE 5-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 30 days

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	*15,000*	*15,800*	*16,300*	*15,400*	*15,400*	*14,300*	*15,400*	*15,200*	*13,600*	*12,800*	*12,800*	*12,900*	*14,600*	*14,600*	*14,700*	*14,200*
Any Illicit Drug [a,b]	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
Any Illicit Drug other than Marijuana [a,b,c]	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
Marijuana/Hashish	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
Inhalants [d]	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
Inhalants, Adjusted [d,e]	2.6	2.5	2.8	2.9	3.5	2.9	2.9	3.1	2.4	2.4	2.1	1.8	2.3	1.9	2.3	1.7
Amyl/Butyl Nitrites [f,g]	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
Hallucinogens [c]	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
Hallucinogens, Adjusted [c,h]	2.4	2.3	3.3	3.2	4.6	3.8	4.1	4.1	3.9	3.0‡	3.5	2.7	2.7	2.2	2.5	1.8
LSD [c]	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
Hallucinogens other than LSD [c]	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
PCP [f,g]	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
MDMA (Ecstasy, Molly) [f]	—	—	—	—	—	2.0	1.6	1.5	2.5	3.6	2.8	2.4	1.3	1.2	1.0	1.3
Cocaine	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
Crack [i]	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
Cocaine other than Crack [j]	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
Heroin [k]	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
With a needle [l]	—	—	—	—	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3
Without a needle [l]	—	—	—	—	0.6	0.4	0.6	0.4	0.4	0.7	0.3	0.5	0.4	0.3	0.5	0.3
Narcotics other than Heroin [m,n]	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
Amphetamines [b,m,gg]	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
Methamphetamine [o]	—	—	—	—	—	—	—	—	1.7	1.9	1.5	1.7	1.7	1.4	0.9	0.9
Crystal Methamphetamine (Ice) [o]	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

Table continued on next page.

TABLE 5-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 30 days

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	*15,000*	*15,800*	*16,300*	*15,400*	*15,400*	*14,300*	*15,400*	*15,200*	*13,600*	*12,800*	*12,800*	*12,900*	*14,600*	*14,600*	*14,700*	*14,200*
Sedatives (Barbiturates) [m,p]	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
Sedatives, Adjusted [m,q]	1.5	1.2	1.3	1.8	2.3	2.3	2.1	2.8	2.8	3.1	3.0	3.4	3.0	2.9	3.5	3.1
Methaqualone [m,r]	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
Tranquilizers [c,m]	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
Rohypnol [f]	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	—	—	—	—	—
Alcohol [s]	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
Been Drunk [o]	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
Cigarettes	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
Smokeless Tobacco [f,t]	—	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
Any Vaping [y,z]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Nicotine [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Marijuana [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Just Flavoring [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flavoring Vaping with no Nicotine Vaping [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
JUUL [ee]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any Nicotine Use [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Any Nicotine Use other than Vaping [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids [m,u]	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
Legal Use of Over-the-Counter Stimulants																
Diet Pills [f]	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
Stay-Awake Pills [f]	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
Look-Alikes [f]	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
Current, Legal Use of Prescription ADHD Drugs																
Stimulant-Type [aa,bb]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.9	2.3
Non-Stimulant-Type [aa,bb]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.6
Either Type [aa,bb]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	3.7

Table continued on next page.

TABLE 5-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 30 days

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019[ff]	2020	2021	2022	2021–2022 change
Approximate weighted N =	*14,500*	*14,000*	*13,700*	*14,400*	*14,100*	*13,700*	*12,600*	*12,400*	*12,900*	*11,800*	*12,600*	*13,300*	*12,900*	*3,500*	*8,300*	*8,900*	
Any Illicit Drug [a,b]	21.9	22.3	23.3	23.8	25.2	25.2	25.2	23.7	23.6	24.4	24.9	24.0	23.7	22.2	20.6	21.6	+1.0
Any Illicit Drug other than Marijuana [a,b,c]	9.5	9.3	8.6	8.6	8.9	8.4	8.2	7.7	7.6	6.9	6.3	6.0	5.2	4.8	2.9	3.6	+0.7
Marijuana/Hashish	18.8	19.4	20.6	21.4	22.6	22.9	22.7	21.2	21.3	22.5	22.9	22.2	22.3	21.1	19.5	20.2	+0.7
Inhalants [d]	1.2	1.4	1.2	1.4	1.0	0.9	1.0	0.7	0.7	0.8	0.8	0.7	0.9	0.7	0.7	0.7	0.0
Inhalants, Adjusted [d,e]	1.6	1.5	1.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amyl/Butyl Nitrites [f,g]	0.5	0.3	0.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens [c]	1.7	2.2	1.6	1.9	1.6	1.6	1.4	1.5	1.6	1.4	1.6	1.4	1.8	1.8	1.0	1.4	+0.5 s
Hallucinogens, Adjusted [c,h]	2.1	2.6	1.9	2.2	2.3	1.8	1.9	—	—	—	—	—	—	—	—	—	—
LSD [c]	0.6	1.1	0.5	0.8	0.8	0.8	0.8	1.0	1.1	1.0	0.3	0.4	0.4	0.6	0.2	0.2	0.0
Hallucinogens other than LSD [c]	1.4	1.6	1.4	1.5	1.2	1.3	1.0	1.0	0.9	0.7	1.0	0.9	1.0	0.7	0.8	1.1	+0.3
PCP [f,g]	0.5	0.6	0.5	0.8	0.8	0.5	0.4	—	—	—	—	—	—	—	—	—	—
MDMA (Ecstasy, Molly) [f]	1.6	1.8	1.8	1.4	2.3	0.9	1.5‡	1.5	1.1	0.9	0.9	0.5	0.7	0.8	0.2	0.9	+0.8 ss
Cocaine	2.0	1.9	1.3	1.3	1.1	1.1	1.1	1.0	1.1	0.9	1.2	1.1	1.0	0.8	0.3	0.8	+0.4 ss
Crack [i]	0.9	0.8	0.6	0.7	0.5	0.6	0.6	0.7	0.6	0.5	0.6	0.5	0.7	0.4	0.3	0.6	+0.3 s
Cocaine other than Crack [j]	1.7	1.7	1.1	1.1	1.0	1.0	0.9	0.9	1.1	0.6	1.1	1.0	0.9	1.0	0.1	0.8	+0.7 ss
Heroin [k]	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.1	0.3	+0.2 s
With a needle [l]	0.2	0.2	0.1	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.1	0.1	—	—
Without a needle [l]	0.4	0.2	0.3	0.4	0.4	0.2	0.2	0.4	0.3	0.1	0.2	0.1	0.2	0.1	0.1	—	—
Narcotics other than Heroin [m,n]	3.8	3.8	4.1	3.6	3.6	3.0	2.8	2.2	2.1	1.7	1.6	1.1	1.0	0.7	0.3	0.7	+0.4
Amphetamines [b,m]	3.7	2.9	3.0	3.3	3.7	3.3	4.2	3.8	3.2	3.0	2.6	2.4	2.0	1.7	1.0	1.3	+0.2
Methamphetamine [o]	0.6	0.6	0.5	0.5	0.6	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.8	0.1	0.4	+0.3
Crystal Methamphetamine (Ice) [o]	0.6	0.6	0.5	0.6	0.6	0.4	0.8	0.4	0.3	0.4	0.5	0.4	0.4	0.0	0.2	0.3	+0.1

Table continued on next page.

TABLE 5-3 (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs in Grade 12

Percentage who used in last 30 days

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019[ff]	2020	2021	2022	2021–2022 change
Approximate weighted N =	*14,500*	*14,000*	*13,700*	*14,400*	*14,100*	*13,700*	*12,600*	*12,400*	*12,900*	*11,800*	*12,600*	*13,300*	*12,900*	*3,500*	*8,300*	*8,900*	
Sedatives (Barbiturates) [m,p]	2.7	2.8	2.5	2.2	1.8	2.0	2.2	2.0	1.7	1.5	1.4	1.2	1.2	1.2	0.9	1.1	+0.3
Sedatives, Adjusted [m,q]	2.8	2.9	2.6	2.2	1.9	2.1	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [m,r]	0.4	0.2	0.3	0.2	0.2	0.3	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [c,m]	2.6	2.6	2.7	2.5	2.3	2.1	2.0	2.1	2.0	1.9	2.0	1.3	1.3	1.0	0.4	0.7	+0.3 s
Rohypnol [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s]	44.4	43.1	43.5	41.2	40.0	41.5	39.2	37.4	35.3	33.2	33.2	30.2	29.3	33.6	25.8	28.4	+2.5
Been Drunk [o]	28.7	27.6	27.4	26.8	25.0	28.1	26.0	23.5	20.6	20.4	19.1	17.5	17.5	19.8	15.5	16.8	+1.3
Cigarettes	21.6	20.4	20.1	19.2	18.7	17.1	16.3	13.6	11.4	10.5	9.7	7.6	5.7	7.5	4.1	4.0	-0.1
Smokeless Tobacco [f,t]	6.6	6.5	8.4	8.5	8.3	7.9	8.1	8.4	6.1	6.6	4.9	4.2	3.5	§	2.2	3.2	+1.0
Any Vaping [y,z]	—	—	—	—	—	—	—	—	16.3	12.5‡	16.6	26.7	30.9	28.2	24.0	25.6	+1.6
Vaping Nicotine [y]	—	—	—	—	—	—	—	—	—	—	11.0	20.9	25.5	24.7	19.6	20.7	+1.1
Vaping Marijuana [y]	—	—	—	—	—	—	—	—	—	—	4.9	7.5	14.0	12.2	12.4	14.8	+2.3 s
Vaping Just Flavoring [y]	—	—	—	—	—	—	—	—	—	—	9.7	13.5	10.7	8.4	7.4	8.3	+0.9
Flavoring Vaping with no Nicotine Vaping [y]	—	—	—	—	—	—	—	—	—	—	4.2	4.0	2.3	0.8	0.7	1.1	+0.3 s
JUUL [ee]	—	—	—	—	—	—	—	—	—	—	—	—	20.8	12.9	6.8	—	—
Any Nicotine Use [f]	—	—	—	—	—	—	—	—	—	—	25.6	32.5	33.6	§	24.6	24.8	+0.2
Any Nicotine Use other than Vaping [f]	—	—	—	—	—	—	—	—	—	—	20.6	18.5	15.7	§	7.7	8.3	+0.6
Steroids [m,u]	1.0	1.0	1.0	1.1	0.7	0.9	1.0	0.9	1.0	0.7	0.8	0.8	0.7	1.2	0.5	1.3	+0.8 sss
Legal Use of Over-the-Counter Stimulants																	
Diet Pills [f]	3.8	3.7	2.6	2.1	2.4	3.4	2.4	3.6	2.1	2.1	2.4	1.9	1.9	§	1.1	1.1	0.0
Stay-Awake Pills [f]	3.3	2.6	2.3	1.6	2.2	1.9	1.5	1.7	1.2	1.7	1.6	1.2	1.1	§	0.5	0.8	+0.3
Look-Alikes [f]	1.1	1.6	1.0	0.8	1.2	0.8	0.7	0.7	0.9	0.9	0.8	—	—	—	—	—	—
Current, Legal Use of Prescription ADHD Drugs																	
Stimulant-Type [aa,bb]	2.6	2.9	2.9	3.0	3.3	3.8	4.4	3.8	4.0	3.9	3.4	3.5	3.2	3.1	3.4	5.6	+2.2 s
Non-Stimulant-Type [aa,bb]	1.7	1.9	1.5	2.3	1.9	1.8	1.8	2.2	1.5	2.1	2.5	2.6	2.3	1.7	2.3	3.5	+1.2
Either Type [aa,bb]	4.1	4.4	4.3	5.2	5.1	5.5	6.0	5.5	5.3	5.6	5.7	5.9	5.0	4.2	5.2	8.4	+3.2 ss

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

See footnotes following Table 5-4.

TABLE 5-4
Trends in 30-Day Prevalence of Daily Use of Various Drugs in Grade 12

Percentage who used daily in last 30 days

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Approximate weighted N =	*9,400*	*15,400*	*17,100*	*17,800*	*15,500*	*15,900*	*17,500*	*17,700*	*16,300*	*15,900*	*16,000*	*15,200*	*16,300*	*16,300*	*16,700*	*15,200*
Marijuana/Hashish																
Used Daily in Past 30 Days	6.0	8.2	9.1	10.7	10.3	9.1	7.0	6.3	5.5	5.0	4.9	4.0	3.3	2.7	2.9	2.2
Ever Used Daily for Month or More in Lifetime [f]	—	—	—	—	—	—	—	20.5	16.8	16.3	15.6	14.9	14.7	12.8	11.5	10.0
Inhalants [d]	—	*	*	0.1	*	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3
Inhalants, Adjusted [d,e]	—	—	—	—	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.3
Amyl/Butyl Nitrites [f,g]	—	—	—	—	*	0.1	0.1	0.0	0.2	0.1	0.3	0.5	0.3	0.1	0.3	0.1
Hallucinogens [c]	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1
Hallucinogens, Adjusted [c,h]	—	—	—	—	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	*	0.3	0.3
LSD [c]	*	*	*	*	*	*	0.1	*	0.1	0.1	0.1	*	0.1	*	*	0.1
Hallucinogens other than LSD [c]	—	0.1	0.1	*	*	*	0.1	*	*	0.1	*	*	*	*	*	*
PCP [f,g]	—	—	—	—	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.1	0.2	0.1
MDMA (Ecstasy, Molly) [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cocaine	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.3	0.1
Crack [i]	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.2	0.1
Cocaine other than Crack [j]	—	—	—	—	—	—	—	—	—	—	—	—	0.2	0.2	0.1	0.1
Heroin [k]	0.1	*	*	*	*	*	*	*	0.1	*	*	*	*	*	0.1	*
With a needle [l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Without a needle [l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Narcotics other than Heroin [m,n]	0.1	0.1	0.2	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Amphetamines [b,m]	0.5	0.4	0.5	0.5	0.6	0.7	1.2‡	0.7	0.8	0.6	0.4	0.3	0.3	0.3	0.3	0.2
Methamphetamine [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crystal Methamphetamine (Ice) [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1
Sedatives (Barbiturates) [m,p]	0.1	0.1	0.2	0.1	*	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	*	0.1	0.1
Sedatives, Adjusted [m,q]	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Methaqualone [m,r]	*	*	*	*	*	0.1	0.1	0.1	*	*	*	*	*	0.1	*	*
Tranquilizers [c,m]	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*	*	0.1	*	0.1	0.1
Rohypnol [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s]																
Daily [s]	5.7	5.6	6.1	5.7	6.9	6.0	6.0	5.7	5.5	4.8	5.0	4.8	4.8	4.2	4.2	3.7
Been drunk daily [o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5+ drinks in a row in last 2 weeks	36.8	37.1	39.4	40.3	41.2	41.2	41.4	40.5	40.8	38.7	36.7	36.8	37.5	34.7	33.0	32.2
Cigarettes																
Daily	26.9	28.8	28.8	27.5	25.4	21.3	20.3	21.1	21.2	18.7	19.5	18.7	18.7	18.1	18.9	19.1
Half pack or more per day	17.9	19.2	19.4	18.8	16.5	14.3	13.5	14.2	13.8	12.3	12.5	11.4	11.4	10.6	11.2	11.3
Vaping Nicotine [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Marijuana [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Just Flavoring [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco [t,t]	—	—	—	—	—	—	—	—	—	—	—	4.7	5.1	4.3	3.3	—
Steroids [m,u]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.2

Table continued on next page.

TABLE 5-4 (cont.)
Trends in 30-Day Prevalence of Daily Use of Various Drugs in Grade 12

Percentage who used daily in last 30 days

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Approximate weighted N =	*15,000*	*15,800*	*16,300*	*15,400*	*15,400*	*14,300*	*15,400*	*15,200*	*13,600*	*12,800*	*12,800*	*12,900*	*14,600*	*14,600*	*14,700*	*14,200*
Marijuana/Hashish																
Used Daily in Past 30 Days	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
Ever Used Daily for Month or More in Lifetime [f]	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
Inhalants [d]	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1
Inhalants, Adjusted [d,e]	0.5	0.2	0.2	—	—	0.4	0.2	0.9	0.3	0.3	0.1	0.3	0.4	0.4	0.3	—
Amyl/Butyl Nitrites [f,g]	0.2	0.1	0.1	0.2	0.2	0.4	0.1	0.3	0.2	*	0.1	0.3	0.2	0.2	0.2	0.2
Hallucinogens [c]	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.2‡	0.2	0.1	0.1	0.2	0.1	0.1
Hallucinogens, Adjusted [c,h]	0.1	0.1	0.1	—	—	0.4	0.4	0.8	0.2	0.2‡	0.2	0.4	0.5	0.4	0.3	—
LSD [c]	0.1	0.1	0.1	0.1	0.1	*	0.2	0.1	0.1	0.1	0.2	0.1	*	0.2	0.1	0.1
Hallucinogens other than LSD [c]	*	*	*	*	0.1	0.1	0.1	0.1	*	0.1‡	0.1	*	0.1	0.1	*	0.1
PCP [f,g]	0.1	0.1	0.1	0.3	0.3	0.3	0.1	0.3	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1
MDMA (Ecstasy, Molly) [f]	—	—	—	—	—	0.0	0.1	0.2	0.1	*	0.2	*	0.1	0.1	0.1	*
Cocaine	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2
Crack [i]	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Cocaine other than Crack [j]	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Heroin [k]	*	*	*	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*
With a needle [l]	—	—	—	—	0.1	0.2	0.1	*	*	*	*	0.1	0.1	*	0.1	*
Without a needle [l]	—	—	—	—	*	0.1	0.1	0.0	0.0	*	*	0.1	0.1	*	0.1	*
Narcotics other than Heroin [m,n]	0.1	*	*	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2‡	0.3	0.2	0.3	0.2	0.2
Amphetamines [b,m]	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.7	0.5	0.3	0.4	0.3
Methamphetamine [o]	—	—	—	—	—	—	—	—	0.1	0.1	0.1	0.3	0.2	0.2	0.2	*
Crystal Methamphetamine (Ice) [o]	0.1	0.1	0.1	*	0.1	0.1	0.1	*	*	0.1	0.2	0.2	0.1	0.1	0.1	*
Sedatives (Barbiturates) [m,p]	0.1	*	0.1	*	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1
Sedatives, Adjusted [m,q]	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1
Methaqualone [m,r]	*	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	*
Tranquilizers [c,m]	0.1	*	*	0.1	*	0.2	0.1	0.1	0.1	0.1‡	0.1	0.2	0.2	0.2	0.2	0.1
Rohypnol [f]	—	—	—	—	—	0.1	0.0	0.1	0.1	0.1	*	—	—	—	—	—
Alcohol [s]																
Daily [s]	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
Been drunk daily [o]	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
5+ drinks in a row in last 2 weeks	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
Cigarettes																
Daily	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
Half pack or more per day	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
Vaping Nicotine [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Marijuana [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Just Flavoring [y]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco [f,t]	—	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
Steroids [m,u]	0.1	0.1	0.1	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.4	0.2	0.4

Table continued on next page.

TABLE 5-4 (cont.)
Trends in 30-Day Prevalence of Daily Use of Various Drugs in Grade 12

Percentage who used daily in last 30 days

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019[ff]	2020	2021	2022	2021-2022 change
Approximate weighted N =	*14,500*	*14,000*	*13,700*	*14,400*	*14,100*	*13,700*	*12,600*	*12,400*	*12,900*	*11,800*	*12,600*	*13,300*	*12,900*	*3,500*	*8,300*	*8,900*	
Marijuana/Hashish																	
Used Daily in Past 30 Days	5.1	5.4	5.2	6.1	6.6	6.5	6.5	5.8	6.0	6.0	5.9	5.8	6.4	6.9	5.8	6.3	+0.6
Ever Used Daily for Month or More in Lifetime [f]	15.7	15.06	14.89	15.5	17.37	18.2	15.8	13.7	12.4	14.3	13.9	12.3	14.9	§	12.4	13.6	+1.2
Inhalants [d]	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	*	0.0	0.1	0.0	0.0	0.1	0.0
Inhalants, Adjusted [d,e]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Amyl/Butyl Nitrites [f,g]	0.2	0.1	0.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens [c]	0.1	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0
Hallucinogens, Adjusted [c,h]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
LSD [c]	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0
Hallucinogens other than LSD [c]	0.1	0.2	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0
PCP [f,g]	0.1	0.3	0.2	0.2	0.3	0.1	0.1	—	—	—	—	—	—	—	—	—	—
MDMA (Ecstasy, Molly) [f]	0.1	0.1	0.1	0.1	0.2	0.1	0.1‡	0.1	0.1	0.1	*	0.0	0.1	0.1	0.1	0.1	+0.1
Cocaine	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.0
Crack [i]	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	+0.1
Cocaine other than Crack [j]	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	-0.1
Heroin [k]	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0
With a needle [l]	0.1	*	*	0.1	0.1	0.1	*	0.1	0.0	0.0	*	0.1	0.0	0.0	0.0	—	—
Without a needle [l]	*	*	0.1	0.1	0.1	0.1	*	0.1	0.1	0.0	*	0.0	0.0	0.0	0.0	—	—
Narcotics other than Heroin [m,n]	0.2	0.3	0.4	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Amphetamines [b,m]	0.3	0.2	0.3	0.3	0.4	0.3	0.6	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.1	0.2	+0.1
Methamphetamine [o]	*	0.1	0.1	0.1	0.1	*	*	0.1	0.1	0.1	*	0.0	0.1	0.0	0.1	0.0	-0.1
Crystal Methamphetamine (Ice) [o]	0.1	0.2	*	0.1	0.1	0.2	0.1	0.1	0.1	0.1	*	0.0	0.1	0.0	0.0	0.0	0.0
Sedatives (Barbiturates) [m,p]	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Sedatives, Adjusted [m,q]	0.2	0.2	0.2	0.2	0.1	0.3	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [m,r]	*	*	0.1	0.1	*	0.3	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [c,m]	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Rohypnol [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s]																	
Daily [s]	3.1	2.8	2.5	2.7	2.1	2.5	2.2	1.9	1.9	1.3	1.6	1.2	1.7	2.7	0.9	1.5	+0.6 s
Been drunk daily [o]	1.3	1.4	1.1	1.6	1.3	1.5	1.3	1.1	0.8	0.8	1.1	0.7	1.1	0.8	0.4	0.8	+0.4
5+ drinks in a row in last 2 weeks	25.9	24.6	25.2	23.2	21.6	23.7	22.1	19.4	17.2	15.5	16.6	13.8	14.4	16.8	11.8	12.6	+0.8
Cigarettes																	
Daily	12.3	11.4	11.2	10.7	10.3	9.3	8.5	6.7	5.5	4.8	4.2	3.6	2.4	3.1	2.0	1.6	-0.4
Half pack or more per day	5.7	5.4	5.0	4.7	4.3	4.0	3.4	2.6	2.1	1.8	1.7	1.5	0.9	1.4	0.8	0.9	+0.1
Vaping Nicotine [y]	—	—	—	—	—	—	—	—	—	—	—	—	11.6‡	5.2	5.4	6.2	+0.8
Vaping Marijuana [y]	—	—	—	—	—	—	—	—	—	—	—	—	3.5‡	1.6	1.7	2.1	+0.4
Vaping Just Flavoring [y]	—	—	—	—	—	—	—	—	—	—	—	—	2.8‡	1.4	0.8	1.7	+0.9 sss
Smokeless Tobacco [f,t]	2.8	2.7	2.9	3.1	3.1	3.2	3.0	3.4	2.9	2.7	2.0	1.6	1.1	§	0.7	1.1	+0.5
Steroids [m,u]	0.2	0.2	0.2	0.4	0.2	0.3	0.2	0.3	0.3	0.1	0.1	0.2	0.2	0.5	0.0	0.4	+0.4 s

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

See footnotes on the following page.

Footnotes for Tables 5-1 through 5-4

Notes. Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. ' — ' indicates data not available. ' * ' indicates less than 0.05% but greater than 0%. ' ‡ ' indicates that the question changed in the following year. See relevant footnote for that drug. See relevant figure to assess the impact of the wording changes. Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent years is due to rounding. Daily use is defined as use on 20 or more occasions in the past 30 days except for 5+ drinks, cigarettes, and smokeless tobacco, for which actual daily use is measured.

§ Insufficient data for 2020 estimate, due to curtailed data collection during the COVID-19 pandemic.

[a]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), methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders. Due to changes in the amphetamine questions 2013 data are based on half the forms for all grades; *N* is one half of *N* indicated except for 12th grade any illicit use including inhalants which are based on one form; *N* is one sixth of *N* indicated. See the amphetamine note for details. 2014 data based on all forms

[b]Beginning in 1982, the question about amphetamine use was revised to get respondents to exclude the inappropriate reporting of nonprescription amphetamines. The prevalence-of-use rate dropped slightly as a result of this methodological change. 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 in three of the questionnaires. The new wording in 2013 asked "On how many occasions (if any) have you 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 as compared to the old wording; it was 21% higher in 12th grade. 2013 data are based on the changed forms only; *N* is one half of *N* indicated. In 2014 all questionnaires included the new, updated wording.

[c]In 2001 the question text was changed in half of the questionnaire forms. 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. 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. Data based on all forms beginning in 2002. Data for any illicit drug other than marijuana and for hallucinogens are also affected by these changes and have been handled in a parallel manner. For hallucinogens, LSD, and hallucinogens other than LSD data based on five of six forms beginning in 2014; *N* is five sixths of *N* indicated.

[d]Data based on four of five forms in 1976–1988; *N* is four fifths of *N* indicated. Data based on five of six forms in 1989–1998; *N* is five sixths of *N* indicated. Beginning in 1999, data based on three of six forms; *N* is three sixths of *N* indicated.

[e]Adjusted for underreporting of amyl and butyl nitrites. See text for details. Data for the daily prevalence of use are no longer presented due to low rates of inhalant use and fairly stable rates of nitrite use.

[f]Data based on one form; *N* is one fifth of *N* indicated in 1979–1988 and one sixth of *N* indicated beginning in 1989. Data for ecstasy (MDMA) and Rohypnol based on two of six forms beginning in 2002; *N* is two sixths of *N* indicated. Data for Rohypnol for 2001 and 2002 are not comparable due to changes in the questionnaire forms. Data for Rohypnol based on one of six forms beginning in 2010; *N* is one sixth of *N* indicated. The PCP triplet question was dropped in 2014 however the annual use question was moved to another *form; N* is one sixth of *N* indicated. In 2014 a revised question on use of ecstasy (MDMA) including "Molly" was added to one form. The 2013 and 2014 "Original wording" data reported here are for only the questionnaires using the original question wording; *N* is two sixths of *N* indicated. Beginning in 2014 data reported here for the "Revised wording" which includes "Molly" are for only the questionnaires using the revised wording; *N* is one sixth of the *N* indicated in 2014 and three sixths of the *N* indicated beginning in 2015.

[g]Question text changed slightly in 1987.

[h]Adjusted for underreporting of PCP. See text for details. Data for the daily prevalence of use are no longer presented due to low rates of hallucinogen use and fairly stable rates of PCP use.

[i]Data based on one of five forms in 1986; *N* is one fifth of *N* indicated. Data based on two forms in 1987–1989; *N* is two fifths of *N* indicated in 1987–1988 and two sixths of *N* indicated in 1989. Data based on six forms beginning in 1990.

[j]Data based on one form in 1987–1989; *N* is one fifth of *N* indicated in 1987–1988 and one sixth of *N* indicated in 1989. Data based on four of six forms beginning in 1990; *N* is four sixths of *N* indicated.

Footnotes for Tables 5-1 through 5-4 (cont.)

[k] In 1995 the heroin question was changed in half of the questionnaire forms. Separate questions were asked for use with and without injection. Data presented here represent the combined data from all forms.

[l] Data based on three of six forms; *N* is three sixths of *N* indicated.

[m] Only drug use not under a doctor's orders is included here.

[n] 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. Data 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.

[o] 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 of *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, yellows, 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.

[q] Data based on five forms in 1975–1988, six forms in 1989, one form in 1990 (*N* is one sixth of *N* indicated in 1990), and six forms adjusted by one-form data beginning in 1991.

[r] Data based on five forms in 1975–1988, six forms in 1989, and one of six forms beginning in 1990; *N* is one sixth of *N* indicated beginning in 1990.

[s] Data based on five forms in 1975–1988 and on six forms in 1989–1992. In 1993, the question text was changed slightly in three of six forms to indicate that a drink meant more than a few sips. The 1993 data are based on the changed forms only; *N* is one half of *N* indicated. In 1994 the remaining forms were changed to the new wording. Data 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] The prevalence of smokeless tobacco use was not asked of 12th graders in 1990 and 1991. Prior to 1990, the prevalence-of-use question on smokeless tobacco was located near the end of one 12th-grade questionnaire form, whereas after 1991 the question was placed earlier and in a different form. This shift could explain the discontinuities between the corresponding data.

[u] Data based on one of six forms in 1989–1990; *N* is one sixth of *N* indicated. Data based on two of six forms in 1991–2005, and again beginning in 2019; *N* is two sixths of *N* indicated. Data based on three of six forms in 2006-2018; *N* is three sixths of *N* indicated. In 2006, a slightly altered version of this 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] 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] 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 form beginning in 2002; *N* is one sixth of *N* indicated.

[x] Data based on two of six forms in 2000; *N* is two sixths of *N* indicated. Data based on three of six forms beginning in 2001; *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] Prior to 2019, data based on two of six forms; *N* is two sixths of *N* indicated. In 2019, data based on four of six forms; *N* is four sixths of *N* indicated. Beginning in 2020, data based on all available forms except for daily use. Daily use based on two thirds of *N* indicated in 2020. Beginning in 2021, daily use based on all available forms.

[z] 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.

[aa] 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.

Footnotes for Tables 5-1 through 5-4 (cont.)

[bb]For the use of prescrption 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."

[cc]Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

[dd]Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

[ee]In 2019, data based on one of six forms. *N* is one sixth of *N* indicated. In 2020, data based on all available forms. In 2021, data based on 4 of 6 forms. *N* is four sixths of *N* indicated. Beginning in 2022, data based on one of six forms. *N* is one sixth of *N* indicated.

[ff]Drug prevalence results in 2019 combine results from paper-and-pencil surveys with those completed using electronic tablets. In 2019, students in a randomly-selected half of schools completed MTF surveys on paper-and-pencil and students in the other half completed the surveys using electronic tablets. Analysis of this randomized controlled trial demonstrated that these results did not significantly differ across survey mode (Miech, R.A., Couper, M.P., Heeringa, S.G., and Patrick, M.E. The Impact of Survey Mode on US National Estimates of Adolescent Drug Prevalence: Results from a Randomized Controlled Study, Addiction). Results for student attitudes and beliefs in 2019 are based on answers from paper-and-pencil surveys only because these appear more susceptible to survey mode effects.

TABLE 5-5a
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	2019	2020	2021	2022	2021–2022 change
Any Illicit Drug [a,ll]																																	
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	20.4	21.3	15.9	16.6	+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	37.5	37.3	25.0	27.7	+2.7
12th Grade	44.1	40.7	42.9	45.6	48.4	50.8	54.3	54.1	54.7	54.0	53.9	53.0	51.1	51.1	50.4	48.2	46.8	47.4	46.7	48.2	49.9	49.1‡	49.8	49.1	48.9	48.3	48.9	47.8	47.4	46.6	41.3	41.0	-0.3
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	10.8	12.5	8.8	9.3	+0.6
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	13.8	13.2	9.1	9.7	+0.6
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	18.4	17.5	12.8	13.2	+0.3
Any Illicit Drug including Inhalants [a,c,ll]																																	
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	25.4	28.4	22.4	22.2	-0.2
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	39.8	39.7	28.5	31.1	+2.6
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	49.1	47.6	43.3	44.0	+0.8
Abstainers [ll,mm]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	67.9	64.9	63.1	63.9	69.9	67.1	-2.9
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.6	42.7	41.7	40.3	55.8	48.8	-7.0 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.5	26.4	29.7	29.4	35.3	31.0	-4.3 s
Marijuana/Hashish [ll]																																	
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	15.2	14.8	10.2	11.0	+0.8
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	34.0	33.3	22.0	24.2	+2.2
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	43.7	43.7	38.6	38.3	-0.3
Marijuana Under a Doctor's Orders [n,o]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	1.1	1.3	1.0	1.3	1.7	+0.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	1.3	2.0	2.0	1.4	1.6	+0.2
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.2	2.0	§	2.3	3.6	+1.3
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	9.5	12.6	11.3	9.8	-1.5
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	6.8	7.4	7.2	7.5	+0.2
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	5.3	3.8	5.0	5.8	+0.9
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	2.4	3.0	1.8	2.0	+0.2
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	4.7	4.8	3.5	3.4	-0.1
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	6.9	7.5	7.1	7.1	0.0

(Table continued on next page.)

TABLE 5-5a (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	2019[kk]	2020	2021	2022	2021–2022 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	1.6	2.1	1.2	1.0	-0.2
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	3.6	3.8	2.5	2.1	-0.4
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	5.6	5.9	4.9	4.4	-0.5
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	1.7	2.0	1.3	1.7	+0.4
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	3.3	3.4	2.5	2.7	+0.1
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	4.3	4.7	5.3	5.6	+0.4
MDMA (Ecstasy, Molly) [g]																																	
8th Grade	—	—	—	—	—	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‡	2.4	2.3	1.7	1.5	1.6	1.7	1.7	1.0	1.2	+0.2
10th Grade	—	—	—	—	—	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‡	5.2	3.8	2.8	2.8	2.4	3.2	2.6	1.4	1.4	0.0
12th Grade	—	—	—	—	—	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‡	7.9	5.9	4.9	4.9	4.1	3.3	3.6	2.8	3.0	+0.2
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	1.2	1.6	0.6	0.8	+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	2.5	1.6	1.2	0.8	-0.4
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	3.8	4.1	2.5	2.4	0.0
Crack																																	
8th Grade	1.3	1.6	1.7	2.4	2.7	2.9	2.7	3.2	3.1	3.1	3.0	2.5	2.5	2.4	2.4	2.3	2.1	2.0	1.7	1.5	1.5	1.0	1.2	1.2	1.0	0.9	0.8	0.9	0.9	0.9	0.4	0.7	+0.2
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	0.9	0.7	0.7	0.4	-0.2
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	1.7	1.6	1.5	1.3	-0.3
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	1.0	1.3	0.5	0.7	+0.2
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	2.3	1.5	1.0	0.6	-0.4 s
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	3.2	4.0	2.2	2.0	-0.2
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	0.7	0.5	0.5	0.4	-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	0.4	0.3	0.3	0.5	+0.2
12th Grade	0.9	1.2	1.1	1.2	1.6	1.8	2.1	2.0	2.0	2.4	1.8	1.7	1.5	1.5	1.5	1.4	1.5	1.3	1.2	1.6	1.4	1.1	1.0	1.0	0.8	0.7	0.7	0.8	0.6	0.4	0.4	0.5	0.0
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	5.3	5.3	2.3	3.2	+0.9 s

(Table continued on next page.)

TABLE 5-5a (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	2019[kk]	2020	2021	2022	2021–2022 change
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	6.8	8.9	5.8	6.0	+0.2
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	8.2	7.0	5.2	5.4	+0.3
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	7.7	7.3	4.9	5.3	+0.4
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	0.9	1.1	0.3	0.5	+0.2
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	0.7	0.8	0.4	0.6	+0.2
12th Grade	—	—	—	—	—	—	—	—	8.2	7.9	6.9	6.7	6.2	6.2	4.5	4.4	3.0	2.8	2.4	2.3	2.1	1.7	1.5	1.9	1.0	1.2	1.1	0.7	0.8	1.7	0.6	1.1	+0.5
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	1.3	0.2	0.7	0.8	0.0
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	4.2	4.4	3.5	3.6	+0.1
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‡	5.0	4.3	4.4	4.0	4.1	4.3	3.9	3.9	3.9	4.4	3.4	3.0	2.9	2.9	3.0	3.0	3.4	3.5	4.0	3.9	2.5	3.1	+0.6
10th Grade	5.8	5.9	5.7	5.4	6.0	7.1	7.3	7.8	7.9	8.0‡	9.2	8.8	7.8	7.3	7.1	7.2	7.4	6.8	7.0	7.3	6.8	6.3	5.5	5.8	5.8	6.1	6.0	6.0	5.7	4.9	2.6	2.7	+0.1
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	6.1	7.0	3.3	3.3	0.0
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	14.6	14.2	8.8	9.3	+0.4
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	0.6	§	0.3	0.4	+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	0.7	1.4	1.2	0.8	1.1	1.0	0.5	1.0	0.7	0.5	0.9	§	0.6	0.2	-0.4
12th Grade	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s,nn]																																	
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	24.5	25.6	21.7	23.1	+1.4
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	43.1	46.4	34.7	41.1	+6.4 sss
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	58.5	61.5	54.1	61.6	+7.5 sss

(Table continued on next page.)

TABLE 5-5a (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	2019[kk]	2020	2021	2022	2021–2022 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	10.1	10.1	8.3	8.0	-0.3
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	25.5	28.8	17.8	19.8	+1.9
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	40.8	41.7	38.9	36.7	-2.2
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	15.1	18.3	13.8	16.2	+2.4
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	33.2	36.4	24.9	29.0	+4.1 s
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	44.7	§	43.7	46.4	+2.7
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	10.0	11.5	7.0	6.1	-0.9
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	14.2	13.9	10.0	10.2	+0.2
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	22.3	24.0	17.8	16.8	-1.0
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	7.1	7.8	4.6	3.9	-0.7
10th Grade	28.2	26.6	28.1	29.2	27.6	27.4	26.3	22.7	20.4	19.1	19.5	16.9	14.6	13.8	14.5	15.0	15.1	12.2	15.2	16.8	15.6	15.4	14.0	13.6	12.3	10.2	9.1	10.0	9.2	9.3	4.9	5.8	+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	9.8	§	8.6	10.3	+1.8
Any Vaping [bb,cc]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.7	17.5‡	18.5	21.5	24.3	24.1	17.5	18.1	+0.7
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.8	29.0‡	30.9	36.9	41.0	41.0	29.7	29.6	-0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	35.5	33.8‡	35.8	42.5	45.6	47.2	40.5	40.7	+0.2
Vaping Nicotine [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.6	13.5	20.3	22.7	16.6	17.0	+0.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.4	28.6	36.3	38.7	28.4	28.2	-0.2
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.0	34.0	40.8	44.3	38.7	38.8	+0.1
Vaping Marijuana [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	5.5	9.0	10.2	6.5	7.7	+1.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.8	14.2	21.8	22.7	16.5	18.6	+2.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.9	15.6	23.7	27.9	25.7	27.5	+1.8
Vaping Just Flavoring [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.0	19.4	18.9	17.8	12.0	12.8	+0.8
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.5	31.7	28.3	27.7	19.6	18.5	-1.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.7	34.1	29.0	29.8	25.2	23.7	-1.5

(Table continued on next page.)

TABLE 5-5a (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	2019[kk]	2020	2021	2022	2021–2022 change
Flavoring Vaping with no Nicotine Vaping[bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.8	7.8	3.6	1.3	0.8	1.1	+0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.0	7.6	3.7	1.6	0.9	0.7	-0.3
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.1	7.6	3.7	2.1	1.1	0.9	-0.1
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	1.5	2.0	1.2	1.6	+0.4
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	1.6	1.7	0.7	0.9	+0.2
12th Grade	2.1	2.1	2.0	2.4	2.3	1.9	2.4	2.7	2.9	2.5	3.7	4.0	3.5	3.4	2.6	2.7	2.2	2.2	2.2	2.0	1.8	1.8	2.1	1.9	2.3	1.6	1.6	1.6	1.6	2.0	0.8	1.5	+0.7 s
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	5.1	§	4.6	3.8	-0.8
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	3.4	§	3.4	2.6	-0.8
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	—	—	—	—	—	—
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	6.5	5.0	9.0	9.7	+0.7
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	6.6	6.0	7.0	8.5	+1.5
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	7.9	7.5	8.0	11.2	+3.2 s
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	4.5	4.2	2.8	3.5	+0.8
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	5.2	5.1	3.0	3.4	+0.4
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	5.7	4.8	4.5	5.8	+1.3
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	9.8	7.3	11.5	12.0	+0.4
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	9.8	9.3	9.0	10.6	+1.6
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	11.1	9.9	10.9	14.6	+3.7 s

(Table continued on next page.)

TABLE 5-5a (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	2019[kk]	2020	2021	2022	2021–2022 change
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	—	—	—	—	—	—	—	—	—	—
Heroin 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	0.5	0.3	0.4	—	—
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	0.3	0.2	0.3	—	—
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	0.4	0.2	0.2	—	—
Heroin 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	0.4	0.4	0.2	—	—
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	0.3	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	0.4	0.1	0.2	—	—
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	1.2	1.0	0.8	0.7	0.4	0.6	0.8	—	—	—	—	—	—	—	—	—	—	—
JUUL[jj]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.9	16.9	10.3	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.8	30.7	19.8	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.0	36.2	28.5	—	—

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

Note: See footnotes following Table 5-5e.

TABLE 5-5b
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	2019[kk]	2020	2021	2022	2021–2022 change
Any Illicit Drug [a,ll]																																	
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	14.8	15.6	10.2	11.0	+0.9
10th Grade	21.4	20.4	24.7	30.0	33.3	37.5	38.5	35.0	35.9	36.4	37.2	34.8	32.0	31.1	29.8	28.7	28.1	26.9	29.4	30.2	31.1	30.1‡	32.1	29.9	27.9	26.8	27.8	29.9	31.0	30.4	18.7	21.5	+2.8
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	38.0	36.8	32.0	32.6	+0.6
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	6.5	7.7	4.6	4.9	+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	9.1	8.6	5.1	5.7	+0.6
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	11.5	11.4	7.2	8.0	+0.7
Any Illicit Drug including Inhalants [a,c,ll]																																	
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	17.5	18.5	12.6	13.1	+0.5
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	31.7	31.3	19.6	22.7	+3.1 s
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	38.8	38.7	33.2	34.3	+1.1
Marijuana/Hashish [ll]																																	
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	11.8	11.4	7.1	8.3	+1.2
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	28.8	28.0	17.3	19.5	+2.2
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	35.7	35.2	30.5	30.7	+0.2
Synthetic Marijuana [n,o]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	4.0	3.3	3.1	2.7	2.0	1.6	2.7	1.6	1.3	1.5	+0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.8	7.4	5.4	4.3	3.3	2.7	2.9	2.6	2.5	1.6	2.2	+0.5
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	11.3	7.9	5.8	5.2	3.5	3.7	3.5	3.3	2.4	1.8	3.2	+1.4 ss
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	4.7	6.1	4.8	3.6	-1.2
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	2.8	2.9	2.0	2.4	+0.4
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	1.9	1.1	1.8	1.8	0.0
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	1.3	1.7	1.0	1.2	+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	3.1	3.4	2.2	2.1	-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	4.6	5.3	4.1	4.4	+0.4
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	0.9	1.1	0.7	0.6	-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	2.3	2.5	1.5	1.3	-0.2
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	3.6	3.9	2.5	2.5	-0.1

(Table continued on next page.)

TABLE 5-5b (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	2019[kk]	2020	2021	2022	2021–2022 change
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	0.9	1.1	0.8	1.0	+0.3
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	2.1	2.2	1.5	1.6	+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	2.7	2.8	2.9	3.4	+0.5
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	1.1	§	0.7	1.2	+0.5
MDMA (Ecstasy, Molly) [g]																																	
8th Grade		—	—	—	—	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‡	1.5	1.4	1.0	0.9	1.1	1.1	0.8	0.6	0.6	0.0
10th Grade		—	—	—	—	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‡	3.8	2.4	1.8	1.7	1.4	1.7	1.2	0.7	0.7	0.0
12th Grade		—	—	—	—	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‡	5.0	3.6	2.7	2.6	2.2	2.2	1.8	1.1	1.4	+0.2
Salvia [n,o]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7	1.6	1.4	1.2	0.6	0.7	0.9	0.4	0.6	0.8	0.5	0.5	0.8	+0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.7	3.9	2.5	2.3	1.8	1.2	0.9	0.9	0.7	0.9	1.2	0.4	0.8	+0.3
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	5.5	5.9	4.4	3.4	1.8	1.9	1.8	1.5	0.9	0.7	0.7	0.6	0.8	+0.2
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	0.7	0.5	0.2	0.5	+0.3 s
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	1.5	1.1	0.6	0.3	-0.3 s
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	2.2	2.9	1.2	1.5	+0.3
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	0.4	0.2	0.2	0.4	+0.2 s
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	0.6	0.5	0.3	0.2	-0.1
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	1.0	1.2	0.7	0.9	+0.2
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	0.6	0.5	0.2	0.4	+0.2 s
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	1.4	1.0	0.5	0.2	-0.3 s
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	1.9	2.9	0.9	1.3	+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	0.3	0.2	0.2	0.3	+0.1
10th Grade	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.4	1.4	1.4	0.9	1.1	0.7	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.6	0.6	0.5	0.5	0.3	0.2	0.2	0.3	0.2	0.1	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	0.4	0.3	0.1	0.3	+0.2

(Table continued on next page.)

TABLE 5-5b (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	2019[kk]	2020	2021	2022	2021–2022 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	2.7	2.1	1.0	1.7	+0.7 ss
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	1.2	0.9	0.8	0.7	-0.2
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	2.0	1.0	0.9	0.9	0.0
12th Grade	—	—	—	—	—	—	—	—	—	—	—	4.0	4.5	5.0	5.5	4.3	5.2	4.7	4.9	5.1	4.9	4.3	3.6	3.3	3.7	3.4	2.7	2.3	1.7	2.4	0.9	1.9	+1.0 ss
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	0.9	0.5	0.6	0.7	+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	1.1	0.9	0.5	1.0	+0.5
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	1.1	1.2	0.9	1.3	+0.5
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	4.1	5.3	3.0	3.2	+0.3
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	5.2	4.3	2.7	3.1	+0.4
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	4.5	4.3	2.3	2.8	+0.5
Ritalin [k,n,o]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	2.9	2.8	2.6	2.5	2.4	2.6	2.1	1.6	1.8	1.5	1.3	0.7	1.1	0.9	0.6	0.8	0.4	0.5	1.0	0.5	0.6	0.7	+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	0.7	1.0	0.3	0.7	+0.4
12th Grade	—	—	—	—	—	—	—	—	—	—	5.1	4.0	4.0	5.1	4.4	4.4	3.8	3.4	2.1	2.7	2.6	2.6	2.3	1.8	2.0	1.2	1.3	0.9	1.1	1.7	0.5	1.1	+0.6 s
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	2.5	2.7	1.8	2.3	+0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.7	5.3	4.6	4.5	4.4	4.6	5.2	4.2	4.0	4.1	3.1	2.9	1.6	2.9	+1.3 ss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.4	6.5	6.5	7.6	7.4	6.8	7.5	6.2	5.5	4.6	3.9	4.4	1.8	3.4	+1.7 sss
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	0.5	0.5	0.2	0.2	+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	0.5	0.3	0.2	0.3	+0.2
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	0.5	1.4	0.2	0.5	0.4
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	0.6	0.0	0.4	0.3	0.0

(Table continued on next page.)

TABLE 5-5b (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	2019[kk]	2020	2021	2022	2021–2022 change
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	2.5	2.4	1.8	2.0	+0.2
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	1.7	2.0	2.0	2.4	2.2	1.1	1.4	+0.2
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	3.4	2.6	1.3	1.5	+0.3
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	3.4	3.2	1.2	1.5	+0.3
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	8.6	7.6	4.4	5.0	+0.6
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	3.2	4.6	3.5	3.2	-0.3
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	2.6	3.3	2.7	3.9	+1.2 s
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	2.5	3.2	1.7	2.4	+0.7
Rohypnol [r]																																	
8th Grade	—	—	—	—	—	1.0	0.8	0.8	0.5	0.5	0.7	0.3	0.5	0.6	0.7	0.5	0.7	0.5	0.4	0.5	0.8	0.4	0.4	0.3	0.3	0.5	0.4	0.3	0.4	§	0.2	0.2	+0.1
10th Grade	—	—	—	—	—	1.1	1.3	1.2	1.0	0.8	1.0	0.7	0.6	0.7	0.5	0.5	0.7	0.4	0.4	0.6	0.6	0.5	0.6	0.5	0.2	0.5	0.3	0.3	0.6	§	0.2	0.0	-0.2 s
12th Grade	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9‡	1.6	1.3	1.6	1.2	1.1	1.0	1.3	1.0	1.5	1.3	1.5	0.9	0.7	1.0	1.1	0.8	0.7	0.5	§	0.4	0.7	+0.3
GHB [n,w]																																	
8th Grade	—	—	—	—	—	—	—	—	—	1.2	1.1	0.8	0.9	0.7	0.5	0.8	0.7	1.1	0.7	0.6	0.6	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	1.1	1.0	1.4	1.4	0.8	0.8	0.7	0.6	0.5	1.0	0.6	0.5	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	1.9	1.6	1.5	1.4	2.0	1.1	1.1	0.9	1.2	1.1	1.4	1.4	1.4	1.0	1.0	0.7	0.9	0.4	0.3	0.4	§	0.4	0.5	+0.1
Ketamine [n,x]																																	
8th Grade	—	—	—	—	—	—	—	—	—	1.6	1.3	1.3	1.1	0.9	0.6	0.9	1.0	1.2	1.0	1.0	0.8	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	2.1	2.1	2.2	1.9	1.3	1.0	1.0	0.8	1.0	1.3	1.1	1.2	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	2.5	2.5	2.6	2.1	1.9	1.6	1.4	1.3	1.5	1.7	1.6	1.7	1.5	1.4	1.5	1.4	1.2	1.2	0.7	0.7	1.3	0.9	1.2	+0.3
Alcohol [s,nn]																																	
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	19.3	20.5	17.2	15.2	-2.0
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	37.7	40.7	28.5	31.3	+2.8
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	52.1	55.3	46.5	51.9	+5.4 ss

(Table continued on next page.)

TABLE 5-5b (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	2019[kk]	2020	2021	2022	2021–2022 change
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	6.6	7.5	5.7	4.7	-1.0
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	20.2	23.1	13.4	14.6	+1.1
12th Grade	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	50.4	48.0	51.8	47.7	47.9	46.1	45.6	47.0	44.0	42.2	45.0	43.5	41.4	37.7	37.3	35.6	33.9	32.8	36.9	28.8	29.6	+0.8
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	10.7	14.7	10.2	10.1	-0.1
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	26.8	29.6	18.8	22.0	+3.3
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	55.2	55.8	58.4	54.7	53.6	51.8	53.4	47.9	47.0	44.4	44.2	43.6	42.8	40.0	39.6	38.4	37.5	§	32.1	37.5	+5.3
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	7.3	5.7	6.2	4.7	-1.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.5	19.7	16.9	14.3	12.8	10.6	9.9	9.8	8.4	8.3	7.5	7.1	-0.4
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.4	26.4	23.5	20.0	18.3	17.0	16.9	14.7	12.3	12.3	9.9	11.6	+1.7
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	5.6	§	2.1	3.3	+1.2
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	7.8	§	3.4	5.6	+2.3 s
Dissolvable Tobacco Products [e,n]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.1	1.1	0.9	0.7	0.6	0.6	1.1	0.6	0.8	0.8	0.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.2	1.3	1.1	0.9	0.6	1.1	0.8	1.3	0.3	0.9	+0.6 s
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.6	1.9	1.1	1.4	1.1	1.4	1.3	1.1	§	1.1	1.7	+0.6
Snus [e,n]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.4	2.0	2.2	1.9	2.2	1.1	1.3	1.5	1.6	1.2	1.0	-0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	5.2	4.5	4.0	3.0	2.6	3.1	2.3	2.2	1.0	1.5	+0.4
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.9	7.9	7.7	5.8	5.8	5.8	4.2	4.7	2.7	§	2.6	2.4	-0.2
Any Vaping [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.3	17.6	20.1	19.2	13.4	13.8	+0.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.9	32.3	35.7	34.6	22.2	23.8	+1.7
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.8	37.3	40.6	39.0	31.5	32.1	+0.6

(Table continued on next page.)

TABLE 5-5b (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	2019[kk]	2020	2021	2022	2021–2022 change
Vaping Nicotine[bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.5	10.9	16.5	16.6	12.1	12.0	-0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.8	24.7	30.7	30.7	19.5	20.5	+1.0
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.8	29.7	35.3	34.5	26.6	27.3	+0.7
Vaping Marijuana[bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	4.4	7.0	8.1	4.7	6.0	+1.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.1	12.4	19.4	19.1	12.4	15.0	+2.6 s
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.5	13.1	20.8	22.1	18.3	20.6	+2.3
Vaping Just Flavoring[bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.8	15.1	14.7	12.3	7.7	8.2	+0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.3	24.7	20.8	18.4	10.6	11.3	+0.8
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	25.7	20.3	16.6	11.7	11.8	+0.1
Flavoring Vaping with no Nicotine Vaping[bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.5	6.2	3.0	2.0	1.0	1.2	+0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.0	6.4	2.9	2.0	1.0	1.0	0.0
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.5	6.0	3.1	1.9	1.2	1.1	-0.1
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	0.8	1.1	0.5	0.8	+0.3 s
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	0.8	0.9	0.3	0.5	+0.2
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	1.0	1.2	0.5	1.3	+0.8 ss
Androstenedione [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	1.1	1.2	1.0	0.9	0.6	1.0	0.9	0.9	0.8	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	0.5	§	0.6	1.9	+1.3 ss
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	2.0	2.5	3.2	4.3	+1.1
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	5.4	4.5	6.0	10.7	+4.7 sss
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	7.6	7.2	7.4	11.8	+4.4 ss

(Table continued on next page.)

TABLE 5-5b (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	2019[kk]	2020	2021	2022	2021–2022 change
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	3.1	§	2.5	1.6	-0.9
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	1.8	§	1.5	1.6	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.3	1.5	—	—	—	—	—	—	—	—	—	—	—	—
Heroin 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	0.2	0.2	0.1	—	—
10th Grade	—	—	—	—	0.6	0.7	0.7	0.8	0.6	0.5	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.5	0.4	0.2	0.3	0.2	0.1	0.2	0.2	0.1	—	—
12th Grade	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.7	0.6	0.4	0.4	0.5	0.3	0.3	0.2	0.3	0.3	0.1	0.1	—	—
Heroin 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	0.5	0.6	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	—	—
10th Grade	—	—	—	—	0.8	0.9	1.1	1.0	1.1	1.1	0.7	0.8	0.5	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.1	—	—
12th Grade	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	0.8	0.8	0.7	0.8	0.6	1.0	0.5	0.6	0.8	0.7	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	—	—
Bath salts (synthetic stimulants) [n,o]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	0.5	0.4	0.9	0.5	0.9	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.9	0.9	0.7	0.8	0.4	0.5	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	0.9	0.9	1.0	0.8	0.6	0.6	—	—	—	—	—

(Table continued on next page.)

TABLE 5-5b (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	2019[kk]	2020	2021	2022	2021–2022 change
Powdered Alcohol [n,o]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.8	0.8	1.2	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	0.8	1.2	1.0	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7	1.0	1.3	1.4	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—
JUUL[jj]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.7	12.8	6.2	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.7	23.3	9.2	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.4	26.1	12.2	—	—
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 5-5e.

TABLE 5-5c
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	2019[kk]	2020	2021	2022	2021–2022 change
Any Illicit Drug [a,ll]																																	
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	8.5	8.7	5.9	6.5	+0.6
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	19.8	18.2	10.9	12.9	+1.9
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	23.7	22.2	20.6	21.6	+1.0
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	3.4	3.5	2.4	2.5	+0.1
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	4.2	3.7	2.5	2.4	0.0
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	5.2	4.8	2.9	3.6	+0.7
Any Illicit Drug including Inhalants [a,c,ll]																																	
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	9.7	10.2	6.9	7.7	+0.8
10th Grade	13.1	12.6	15.5	20.0	21.6	24.5	24.1	22.5	23.1	23.6	23.6	21.7	20.5	19.3	18.4	17.7	18.1	16.8	18.8	19.4	20.1	19.3‡	20.0	19.1	17.1	16.4	18.0	18.7	20.4	18.7	11.4	13.7	+2.3 s
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	24.1	23.8	21.0	22.6	+1.6
Abstainers [ll,mm]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	87.0	84.2	82.2	82.7	86.9	87.1	+0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	68.9	65.2	64.8	65.4	77.4	75.2	-2.2
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.5	26.3	29.7	29.4	35.3	31.0	-4.3 s
Marijuana/Hashish [ll]																																	
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	6.6	6.5	4.1	5.0	+0.9
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	18.4	16.6	10.1	12.1	+2.1
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	22.3	21.1	19.5	20.2	+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	2.1	2.9	1.8	1.9	+0.1
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	1.1	1.2	0.9	1.2	+0.3
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	0.9	0.7	0.7	0.7	0.0
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	0.6	0.9	0.4	0.5	+0.1
10th Grade	1.6	1.8	1.9	2.4	3.3	2.8	3.3	3.2	2.9	2.3‡	2.1	1.6	1.5	1.6	1.5	1.5	1.7	1.3	1.4	1.6	1.4	1.2	1.1	1.2	0.9	0.9	1.1	0.8	1.3	1.4	0.8	0.7	-0.1
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	1.8	1.8	1.0	1.4	+0.5 s
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	0.4	0.6	0.2	0.2	0.0
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	1.1	1.0	0.4	0.4	0.0
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	1.4	1.4	0.5	0.8	+0.3

(Table continued on next page.)

TABLE 5-5c (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	2019[kk]	2020	2021	2022	2021–2022 change
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	0.4	0.6	0.2	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	0.8	0.9	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	1.0	0.9	0.7	1.0	0.9	1.0	0.7	0.8	1.1	+0.3
MDMA (Ecstasy, Molly) [g]																																	
8th Grade		—	—	—	—	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‡	0.7	0.5	0.3	0.4	0.4	0.5	0.3	0.2	0.2	0.0
10th Grade		—	—	—	—	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‡	1.1	0.9	0.5	0.5	0.4	0.7	0.5	0.1	0.3	+0.2
12th Grade		—	—	—	—	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	1.1	0.9	0.9	0.5	0.7	0.8	0.2	0.9	+0.8 ss
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	0.3	0.1	0.1	0.3	+0.2 s
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	0.6	0.4	0.3	0.2	-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	1.0	0.8	0.3	0.8	+0.4 ss
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	0.2	0.1	0.1	0.3	+0.2 ss
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	0.3	0.3	0.2	0.1	-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	0.7	0.4	0.3	0.6	+0.3 s
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	0.2	0.1	0.1	0.2	+0.1
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	0.6	0.3	0.3	0.1	-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	0.9	1.0	0.1	0.8	+0.7 ss
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	0.2	0.1	0.2	+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	0.2	0.1	0.1	0.2	+0.1
12th Grade	0.2	0.3	0.2	0.3	0.6	0.5	0.5	0.5	0.5	0.7	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.1	0.3	+0.2 s
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	1.0	0.7	0.3	0.7	+0.4
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	2.2	2.2	1.7	1.9	+0.2
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	2.4	1.9	1.4	1.3	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	2.0	1.7	1.0	1.3	+0.2

(Table continued on next page.)

TABLE 5-5c (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	2019[kk]	2020	2021	2022	2021–2022 change
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	0.1	0.0	0.1	0.0
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	0.3	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	0.3	0.8	0.1	0.4	+0.3
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	0.4	0.0	0.2	0.3	+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	1.2	1.2	0.9	1.1	+0.3
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	1.2	1.1	0.4	0.6	+0.2
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	1.3	0.7	0.5	0.6	0.0
12th Grade	1.4	1.0	1.2	1.4	1.8	2.0	1.8	2.4	2.5	2.6‡	2.9	3.3	2.8	3.1	2.9	2.7	2.6	2.6	2.7	2.5	2.3	2.1	2.0	2.1	2.0	1.9	2.0	1.3	1.3	1.0	0.4	0.7	+0.3 s
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	3.6	3.3	2.1	2.6	+0.5
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	0.4	§	0.1	0.2	+0.2
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	0.2	§	0.1	0.0	-0.1
12th Grade	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [s,nn]																																	
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	7.9	9.9	7.3	6.0	-1.3
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	18.4	20.3	13.1	13.6	+0.5
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	29.3	33.6	25.8	28.4	+2.5
Been Drunk [o]																																	
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	2.6	3.4	2.0	1.5	-0.5
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	8.8	9.3	5.4	5.7	+0.3
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	17.5	19.8	15.5	16.8	+1.3

(Table continued on next page.)

TABLE 5-5c (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	2019[kk]	2020	2021	2022	2021–2022 change
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	4.5	6.6	4.6	3.9	-0.8
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	11.1	12.5	7.8	9.7	+1.9
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	31.1	30.5	29.3	29.1	27.4	27.4	24.1	23.1	21.8	21.0	19.9	20.8	18.3	20.2	18.1	18.5	§	15.3	21.2	+5.9 ss
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	2.3	2.2	1.1	0.8	-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	3.4	3.2	1.8	1.7	-0.2
12th Grade	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	26.7	24.4	25.0	23.2	21.6	21.6	20.4	20.1	19.2	18.7	17.1	16.3	13.6	11.4	10.5	9.7	7.6	5.7	7.5	4.1	4.0	-0.1
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	2.5	2.3	1.6	1.2	-0.5
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	3.2	3.5	1.7	2.5	+0.8 s
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	3.5	§	2.2	3.2	+1.0
Large Cigars [ii]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	2.4	1.5	1.5	1.7	1.3	1.5	1.1	0.5	-0.6
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.9	3.4	2.3	2.6	2.8	2.1	1.2	1.3	0.8	-0.5
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.4	7.0	6.5	5.6	5.2	5.3	§	2.3	2.3	0.0
Flavored Little Cigars [ii]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.1	4.1	2.8	2.6	2.6	2.2	2.3	1.0	0.7	-0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	6.1	4.9	4.0	5.3	3.7	3.0	1.5	1.4	-0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.9	11.4	9.5	10.1	8.9	7.7	§	1.9	2.2	+0.2
Regular Little Cigars [ii]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	3.3	1.9	1.6	1.6	1.6	1.4	0.8	0.8	-0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.4	3.8	3.0	3.0	3.1	2.6	2.4	1.2	1.1	-0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.0	7.8	6.1	6.6	5.8	4.9	§	1.8	1.6	-0.2
Any Vaping [bb,cc]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.0	6.2‡	6.6	10.4	12.2	12.5	8.9	8.9	0.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.2	11.0‡	13.1	21.7	25.0	23.5	15.6	17.3	+1.7
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.3	12.5‡	16.6	26.7	30.9	28.2	24.0	25.6	+1.6
Vaping Nicotine [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	6.1	9.6	10.5	7.6	7.1	-0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.2	16.1	19.9	19.3	13.1	14.2	+1.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	20.9	25.5	24.7	19.6	20.7	+1.1

(Table continued on next page.)

TABLE 5-5c (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	2019[kk]	2020	2021	2022	2021–2022 change
Vaping Marijuana [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	2.6	3.9	4.2	2.9	4.2	+1.3 s
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.3	7.0	12.6	11.3	8.4	10.3	+1.9
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.9	7.5	14.0	12.2	12.4	14.8	+2.3 s
Vaping Just Flavoring [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.3	8.1	7.7	6.8	4.6	4.9	+0.3
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.2	13.1	10.5	10.4	6.3	7.4	+1.0
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.7	13.5	10.7	8.4	7.4	8.3	+0.9
Flavoring Vaping with no Nicotine Vaping [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.7	3.6	1.9	1.2	0.9	0.9	0.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.8	4.1	2.0	2.0	0.7	0.8	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.1	7.6	2.3	0.8	0.7	1.1	+0.3 s
Tobacco Using a Hookah [ii]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	2.5	1.6	1.3	0.7	1.1	1.0	-0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	3.0	2.4	2.4	1.0	0.7	1.0	+0.2
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.1	5.0	4.4	4.0	§	1.0	1.8	+0.8
Any Nicotine Use [e,gg]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.3	11.2	9.4	8.7	-0.7
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.0	18.8	15.7	15.1	-0.5
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.6	32.5	33.6	§	24.6	24.8	+0.2
Any Nicotine Use other than Vaping [e,hh]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.9	4.7	3.2	2.7	-0.5
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.3	6.6	4.2	4.2	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	18.5	15.7	§	7.7	8.3	+0.6
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	0.3	0.3	0.2	0.5	+0.4 ss
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	0.4	0.5	0.1	0.3	+0.2 s
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	0.7	1.2	0.5	1.3	+0.8 sss
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	1.9	§	1.1	1.1	0.0

(Table continued on next page.)

TABLE 5-5c (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	2019[kk]	2020	2021	2022	2021–2022 change
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	1.1	§	0.5	0.8	+0.3
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.9	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	2.8	2.0	4.2	4.2	0.0
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.4	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	2.9	2.5	3.6	4.3	+0.7
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.9	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	3.2	3.1	3.4	5.6	+2.2 s
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	1.4	1.4	0.9	1.3	+0.4
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	1.8	1.8	1.5	1.3	-0.2
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	2.3	1.7	2.3	3.5	+1.2
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	3.8	2.7	5.5	5.4	-0.1
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	4.4	4.0	4.8	5.3	+0.4
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	5.0	4.2	5.2	8.4	+3.2 ss
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	—	—	—	—	—	—	—	—	—	—
Heroin 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	0.2	0.0	—	—
10th Grade	—	—	—	—	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.1	0.1	0.2	0.1	0.1	—	—
12th Grade	—	—	—	—	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.1	0.1	—	—

(Table continued on next page.)

TABLE 5-5c (cont.)
Trends in 30-Day Prevalence of Use of Various Drugs in Grades 8, 10, and 12

	Percentage who used in last 30 days																														2021–2022
	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	2019[kk]	2020	2021	2022	change
Heroin 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	0.2	0.0	—	—
10th Grade	—	—	—	—	0.3	0.3	0.4	0.5	0.5	0.4	0.2	0.4	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.0	—	—
12th Grade	—	—	—	—	0.6	0.4	0.6	0.4	0.4	0.7	0.3	0.5	0.4	0.3	0.5	0.3	0.4	0.2	0.3	0.4	0.4	0.2	0.2	0.4	0.3	0.1	0.2	0.1	0.2	0.1	0.1	—	—
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	—	—	—	—	—	—	—	—	—	—	—
JUUL [jj]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.5	6.3	3.3	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.5	12.3	4.6	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.8	12.9	6.8	—	—

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

Note: See footnotes following Table 5-5e.

TABLE 5-5d
Trends in 30-Day Prevalence of Daily Use of Various Drugs and Binge Drinking 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	2019[kk]	2020	2021	2022	2021–2022 change
Marijuana/Hashish																																	
Used Daily in Past 30 Days [aa,ll]																																	
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	1.3	1.1	0.6	0.7	+0.1
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	4.8	4.4	3.2	2.1	-1.0
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	6.4	6.9	5.8	6.3	+0.6
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	14.9	§	12.4	13.6	+1.2
Alcohol [s,aa,nn]																																	
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	0.2	0.4	0.3	0.1	-0.1
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	0.6	1.0	0.4	0.4	0.0
12th Grade	3.6	3.4‡	3.4	2.9	3.5	3.7	3.9	3.9	3.4	2.9	3.6	3.5	3.2	2.8	3.1	3.0	3.1	2.8	2.5	2.7	2.1	2.5	2.2	1.9	1.9	1.3	1.6	1.2	1.7	2.7	0.9	1.5	+0.6 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	0.1	0.2	0.1	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	0.2	0.3	0.1	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	1.1	0.8	0.4	0.8	+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	3.8	4.5	2.8	2.2	-0.5
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	8.5	9.6	5.9	5.9	+0.1
12th Grade	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	28.6	27.9	29.2	27.1	25.4	25.9	24.6	25.2	23.2	21.6	23.7	22.1	19.4	17.2	15.5	16.6	13.8	14.4	16.8	11.8	12.6	+0.8

(Table continued on next page.)

TABLE 5-5d (cont.)
Trends in 30-Day Prevalence of Daily Use of Various Drugs and Binge Drinking 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	2019[kk]	2020	2021	2022	2021–2022 change
10+ Drinks in a Row in Last 2 Weeks [e,ff]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	1.1	1.1	1.7	0.9	1.0	0.6	-0.4
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	3.6	3.3	3.3	2.5	2.1	1.9	-0.2
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	5.3	§	3.2	4.3	+1.1
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	3.2	§	1.3	2.4	+1.1
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	0.8	0.8	0.4	0.3	-0.1
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	1.3	1.2	0.8	0.7	-0.1
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	2.4	3.1	2.0	1.6	-0.4
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	0.2	0.1	0.2	0.1	0.0
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	0.5	0.6	0.3	0.3	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	0.9	1.4	0.8	0.9	+0.1
Vaping Nicotine [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0‡	0.8	1.1	1.2	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.8‡	3.0	2.5	3.3	+0.8
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.6‡	5.2	5.4	6.2	+0.8
Vaping Marijuana [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8‡	0.2	0.4	0.6	+0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0‡	0.9	1.2	1.3	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5‡	1.6	1.7	2.1	+0.4
Vaping Just Flavoring [bb]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2‡	0.4	0.5	0.6	+0.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0‡	1.2	0.9	1.0	+0.1
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8‡	1.4	0.8	1.7	+0.9 sss

(Table continued on next page.)

TABLE 5-5d (cont.)
Trends in 30-Day Prevalence of Daily Use of Various Drugs and Binge Drinking 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	2019[kk]	2020	2021	2022	2021–2022 change
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	0.5	0.5	0.4	0.3	-0.2
10th Grade	3.3	3.0	3.3	3.0	2.7	2.2	2.2	2.2	1.5	1.9	2.2	1.7	1.8	1.6	1.9	1.7	1.6	1.4	1.9	2.5	1.7	2.0	1.9	1.8	1.6	1.0	0.6	1.0	0.9	0.7	0.4	0.7	+0.4 s
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	1.1	§	0.7	1.1	+0.5
Legal Use of Stimulants																																	
Energy Drinks 1 or More Daily [e,z]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18.6	17.7	16.3	14.2	12.8	12.1	11.3	10.1	10.3	10.5	§	13.8	15.0	+1.1
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.6	11.4	10.8	10.3	9.6	7.8	9.2	8.8	9.1	10.5	§	12.6	16.2	+3.6 ss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.3	9.5	9.2	8.2	8.3	7.8	9.8	9.4	10.1	11.6	§	13.1	16.5	+3.4
Energy Shots 1 or More Daily [e,z]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.4	6.8	5.7	5.6	4.2	5.3	4.4	4.0	3.7	4.6	§	3.7	4.5	+0.8
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.3	4.6	4.0	4.0	3.4	2.6	3.3	3.3	3.8	4.1	§	2.6	4.7	+2.1 sss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.3	4.0	2.7	2.5	2.1	3.1	4.1	3.8	4.2	4.1	§	2.9	3.3	+0.4
Either Energy Drinks or Energy Shots 1 or More Daily [e,z]																																	
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.5	18.9	17.2	15.4	13.5	13.0	12.3	11.1	11.4	11.7	§	14.5	16.1	+1.6
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.4	12.4	11.8	11.3	10.1	8.4	10.0	9.5	9.9	11.6	§	13.2	17.5	+4.3 ss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.5	11.0	9.9	9.1	9.3	9.0	10.9	10.9	11.2	12.8	§	14.3	17.5	+3.2

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

Note. See footnotes following Table 5-5e.

Footnotes for Tables 5-5a through 5-5d

Approximate Weighted *N*s	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
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	16,800	16,500	16,100
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	16,200	16,200	16,100
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	14,700	14,200	14,500

Approximate Weighted *N*s	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2017	2018	2019	2020	2021	2022
8th Graders	15,700	15,000	15,300	16,000	15,100	14,600	14,600	14,400	16,900	15,300	15,300	14,000	13,600	3,100	10,700	9,300
10th Graders	15,100	15,900	15,200	14,900	15,000	12,900	13,000	15,600	14,700	13,500	13,500	14,300	14,000	4,800	11,000	11,200
12th Graders	14,000	13,700	14,400	14,100	13,700	12,600	12,400	12,900	11,800	12,600	12,600	13,300	12,900	3,500	8,300	8,900

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.

§ Insufficient data for 2020 estimate, due to curtailed data collection during the COVID-19 pandemic.

[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

(Footnote continued on next page.)

Footnotes for Tables 5-5a through 5-5d (cont.)

reported here for the "Revised wording" are for only the questionnaires which include "Molly;" *N* is two sixths of *N* indicated in 2014 and five sixths of the *N* indicated in 2015. For 12th graders only: Data based on one of six forms in 1996–2001; *N* is one sixth of *N* indicated Data based on two of six forms beginning in 2002; *N* is two sixths of N indicated. In 2014 a revised question on use of 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 5-5a through 5-5d (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 and ; again beginning in 2019; N is two sixths of*N* indicated. Data based on three of six forms in 2006-2018;*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 until 2019. In 2019, data based on two thirds of*N* indicated. 12th grade data based on two of six forms until 2019; N is two sixths of N indicated. In 2019, data based on four of six forms;*N* is four sixths of *N* indicated. Beginning in 2020, data based on all available forms for 8th, 10th, and 12th graders except for daily use. Daily use based on two thirds of N indicated in 2020 and all forms beginning in 2021.

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.

Footnotes for Tables 5-5a through 5-5d (cont.)

[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.

[gg]Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

[hh]Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

[ii]For 8th and 10th graders only: Data based on one third of *N* indicated. For 12th graders only: Data based on one of six forms; *N* is one sixth of *N* indicated.

[jj]For 8th and 10th graders only: In 2019, data based on one sixth of *N* indicated. In 2020, data based on two thirds of *N* indicated. Beginning in 2021, data based on one half of *N* indicated. For 12th graders only: In 2019, data based on one sixth of *N* indicated. In 2020, data based on all forms. In 2021, data based on two thirds of *N* indicated. Beginning in 2022, data based on one sixth of *N* indicated.

[kk]Drug prevalence results in 2019 combine results from paper-and-pencil surveys with those completed using electronic tablets. In 2019, students in a randomly-selected half of schools completed MTF surveys on paper-and-pencil and students in the other half completed the surveys using electronic tablets. Analysis of this randomized controlled trial demonstrated that these results did not significantly differ across survey mode (Miech, R.A., Couper, M.P., Heeringa, S.G., and Patrick, M.E. The Impact of Survey Mode on US National Estimates of Adolescent Drug Prevalence: Results from a Randomized Controlled Study, Addiction). Results for student attitudes and beliefs in 2019 are based on answers from paper-and-pencil surveys only because these appear more susceptible to survey mode effects.

[ll]For 8th and 10th graders only: Beginning in 2021, the question on marijuana use was changed in half of the questionnaire forms to include smoking, vaping, and edibles in the list of examples. Data presented here for 2021-forward based on the forms that included the original question wording. N is one half of N indicated. Any illicit drug use, any illicit drug use including inhalants, and abstainers were also impacted by this change.

[mm]Respondents who report no use of alcohol, marijuana, or nicotine (either vaping or cigarettes).

[nn]A survey change that removed a skip pattern in 2022 resulted in higher levels of inconsistent responses for alcohol use among 8th and 10th grade students. Specifically, as a result of the change adolescents were more likely to indicate an inconsistent pattern (i.e., report lifetime alcohol use early in the survey but then later report that they had never used alcohol). These inconsistent responders were coded as missing in 2022; the skip pattern will be reintroduced into the survey in 2023.

TABLE 5-6a
Trends in Noncontinuation Rates among 12th Graders
Who Ever Used Drug in Lifetime

Percentage who did not use in last 12 months

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Marijuana/Hashish	15.4	15.7	15.6	15.2	15.9	19.1	22.5	24.5	25.8	27.1	25.1	23.8	27.7	29.9	32.3	33.7	34.9	32.8	26.3	19.6	16.8	20.3	22.4	23.6
Inhalants	—	70.9	66.7	65.8	57.5	61.3	66.7	64.8	68.4	64.6	63.0	61.6	59.4	61.1	66.5	61.7	62.5	62.7	59.8	56.5	54.0	54.2	58.4	59.2
Inhalants, Adjusted	—	—	—	—	50.8	55.7	65.5	63.3	64.4	58.4	59.8	55.7	56.5	59.4	62.9	59.5	61.7	62.4	58.2	55.2	52.8	51.4	56.8	57.0
Amyl/Butyl Nitrites	—	—	—	—	41.4	48.6	63.4	63.3	57.1	50.6	49.4	45.3	44.7	46.9	48.5	33.3	†	†	†	†	†	†	†	†
Hallucinogens [a]	31.3	37.7	36.7	32.9	29.8	30.1	32.3	35.2	38.7	39.3	38.8	38.1	37.9	38.2	40.4	37.2	39.6	35.9	32.1	33.3	26.8	27.9	35.1	36.2
Hallucinogens, Adjusted [a]	—	—	—	—	31.2	32.5	35.7	38.0	36.7	40.6	36.9	36.1	36.8	37.0	37.4	38.1	39.0	34.0	31.0	33.3	26.0	26.2	35.1	36.1
LSD	36.3	41.8	43.9	35.1	30.5	30.1	33.7	36.5	39.3	41.3	41.3	37.5	38.1	37.7	41.0	37.9	40.9	34.9	34.0	34.3	28.2	30.2	38.2	39.7
Hallucinogens other than LSD [a]	33.3	42.1	38.4	37.1	36.4	36.7	38.5	41.3	43.8	42.4	44.6	47.4	40.7	48.8	48.8	48.8	45.9	48.5	43.6	36.7	29.6	35.3	38.7	35.2
PCP	—	—	—	—	45.3	54.2	59.0	63.3	53.6	54.0	40.8	50.0	56.7	58.6	38.5	57.1	51.7	41.7	51.7	42.9	33.3	35.0	41.0	46.2
Ecstasy (MDMA)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.6	42.0	37.9
Cocaine	37.8	38.1	33.3	30.2	22.1	21.7	24.8	28.1	29.6	28.0	24.3	24.9	32.2	34.7	36.9	43.6	55.1	49.2	45.9	39.0	33.3	31.0	36.8	38.7
Crack	—	—	—	—	—	—	—	—	—	—	—	—	27.8	35.4	34.0	45.7	51.6	42.3	42.3	36.7	30.0	36.4	38.5	43.2
Cocaine other than Crack	—	—	—	—	—	—	—	—	—	—	—	—	30.0	38.8	38.8	46.5	54.3	50.9	46.3	42.3	33.3	34.4	39.0	41.7
Heroin [b]	54.5	55.6	55.6	50.0	54.5	54.5	54.5	50.0	50.0	61.5	50.0	54.5	58.3	54.5	53.8	61.5	55.6	50.0	54.5	50.0	31.3	44.4	42.9	50.0
With a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.6	37.5	44.4	50.0
Without a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.6	41.2	42.9	50.0
Narcotics other than Heroin [c,d]	36.7	40.6	37.9	39.4	38.6	35.7	41.6	44.8	45.7	46.4	42.2	42.2	42.4	46.5	47.0	45.8	47.0	45.9	43.8	42.4	34.7	34.2	36.1	35.7
Amphetamines [c,e]	27.4	30.1	29.1	25.3	24.4	21.2	19.3	27.2	33.5	36.6	39.7	42.7	43.5	44.9	43.5	48.0	46.8	48.9	44.4	40.1	39.2	37.9	38.2	38.4
Methamphetamine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crystal Methamphetamine (Ice)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.9	57.6	55.2	45.2	47.1	38.5	36.4	47.7	43.4
Sedatives (Barbiturates) [c,f]	36.7	40.7	40.4	40.9	36.4	38.2	41.6	46.6	47.5	50.5	50.0	50.0	51.4	52.2	49.2	50.0	45.2	49.1	46.0	41.4	36.5	35.5	37.0	36.8
Sedatives, Adjusted	35.7	39.5	37.9	38.1	32.2	30.9	34.4	40.1	45.1	50.4	50.8	50.0	52.9	52.6	50.0	—	—	—	—	—	—	—	—	—
Methaqualone [c]	37.0	39.7	38.8	38.0	28.9	24.2	28.3	36.4	46.5	54.2	58.2	59.6	62.5	60.6	51.9	69.6	†	†	†	†	†	†	†	†
Tranquilizers [c,g]	37.6	38.7	40.0	41.8	41.1	42.8	45.6	50.0	48.1	50.8	48.7	46.8	49.5	48.9	50.0	51.4	50.0	53.3	45.3	43.9	38.0	36.1	39.7	35.3
Rohypnol	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	53.3
Alcohol [h]	6.2	6.7	5.9	5.8	5.3	5.7	6.0	6.5	5.7	7.1	7.2	7.4	7.0	7.3	8.8	9.9	11.7	12.2‡	9.1	9.2	8.7	8.5	8.4	8.7
Been Drunk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.4	20.7	20.6	17.8	16.9	16.0	17.1	16.7
Cigarettes [j]	50.1	48.5	49.2	51.3	53.4	57.0	58.6	57.1	57.1	57.9	56.2	56.2	56.2	56.7	56.4	54.4	55.1	55.1	51.7	49.6	47.7	46.4	44.1	46.3
Vaping Nicotine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vaping Marijuana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco [j]	—	—	—	—	—	—	—	—	—	—	—	63.4	64.9	66.1	71.2	—	—	64.7	65.6	63.4	60.4	67.3	61.7	66.5
Steroids [i]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.7	41.4	33.3	47.6	40.0	45.8	34.8	26.3	41.7	37.0

(Table continued on next page.)

TABLE 5-6a (cont.)
Trends in Noncontinuation Rates among 12th Graders
Who Ever Used Drug in Lifetime

Percentage who did not use in last 12 months

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Marijuana/Hashish	23.9	25.2	24.5	24.3	24.3	24.9	25.0	25.6	24.1	24.0	21.9	20.5	20.1	19.5	20.0	20.9	21.8	20.0	17.6	17.6	18.4	19.4	20.8	19.7
Inhalants	63.6	58.5	65.4	61.5	65.2	61.5	55.6	59.4	65.1	62.0	63.8	59.7	60.8	63.6	63.7	70.1	66.6	67.0	68.8	63.9	64.1	70.5	64.6	69.1
Inhalants, Adjusted	62.5	57.5	64.5	60.5	63.1	59.6	54.6	58.7	63.2	60.7	60.1	—	—	—	—	—	—	—	—	—	—	—	—	—
Amyl/Butyl Nitrites	†	†	†	†	†	†	†	†	†	†	†	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens [a]	31.4	37.7‡	34.4	45.0	44.3	36.1	38.2	41.3	35.4	32.3	36.7	35.9	38.0	36.5	41.4	36.9	34.5	35.4	33.9	35.0	34.0	29.0	42.6	37.7
Hallucinogens, Adjusted [a]	31.0	36.0‡	32.8	43.8	40.4	35.4	35.8	39.8	34.9	31.6	35.6	34.5	34.3	35.7	39.9	—	—	—	—	—	—	—	—	—
LSD [a]	33.6	40.5	39.4	58.3	67.8	52.2	48.8	49.0	38.6	31.4	40.9	35.6	33.0	37.5	44.5	33.3	32.5	38.7	33.6	37.7	35.8	33.8	48.7	44.3
Hallucinogens other than LSD [a]	35.8	36.2‡	37.1	41.3	40.0	35.6	38.6	41.4	37.5	35.3	37.7	38.1	41.4	38.7	42.2	40.3	39.5	42.2	38.8	39.6	37.1	40.6	45.6	39.4
PCP	47.1	32.4	48.6	64.5	48.0	†	†	†	†	†	†	†	†	†	†	—	—	—	—	—	—	—	—	—
Ecstasy (MDMA)	30.0	25.5	21.4	29.5	45.8	46.7	44.0	36.8	30.2	30.3	34.8	38.8	33.7	47.5	43.7	35.7‡	39.3	45.4	47.2	46.4	34.3	48.5	59.3	53.7
Cocaine	36.7	41.9	41.5	35.9	37.7	34.6	36.8	32.6	33.0	39.6	44.2	46.2	44.7	43.9	41.8	38.4	36.9	38.2	34.5	40.1	40.7	30.7	51.5	39.2
Crack	41.3	43.6	43.2	39.5	38.9	41.0	43.9	41.7	40.1	43.2	45.4	42.1	45.4	42.5	41.6	37.5	38.6	41.9	39.4	39.5	37.0	25.9	51.5	27.3
Cocaine other than Crack	34.1	41.6	40.5	37.1	37.3	35.6	36.6	34.6	34.3	38.0	44.1	49.0	46.0	46.2	43.5	42.0	36.9	37.7	34.2	41.5	42.0	27.1	57.4	31.6
Heroin [b]	45.0	37.5	50.0	41.2	46.7	40.0	43.9	45.6	39.9	43.1	39.8	45.1	46.4	41.3	42.9	38.9	40.6	55.7	42.2	53.3	37.1	†	72.7	†
With a needle	55.6	†	†	†	42.9	42.9	46.7	37.7	48.6	†	†	40.0	33.6	†	†	36.9	48.0	†	†	†	†	†	†	48.1
Without a needle	44.4	33.3	46.7	50.0	55.6	50.0	39.9	48.1	30.7	53.6	30.9	40.0	46.4	50.0	51.0	†	†	†	†	†	†	†	†	—
Narcotics other than Heroin [c,d]	34.3	34.0	32.3‡	30.7	29.5	29.6	29.4	32.5	30.1	30.8	30.2	33.2	33.0	35.4	36.3	36.0	36.5	38.9	37.8	43.6	49.3	60.3	57.5	48.1
Amphetamines [c,e]	37.4	32.7	32.7	33.9	31.3	33.3	34.5	35.1	34.7	35.8	32.9	33.7	33.2	34.3‡	29.3	32.7	28.8	33.1	36.1	36.5	41.9	42.1	52.4	46.9
Methamphetamine	42.7	45.6	43.5	46.3	48.4	45.2	43.3	43.5	44.3	55.6	50.0	53.7	34.1	37.9	38.6	50.5	42.8	†	†	†	†	†	†	†
Crystal Methamphetamine (Ice)	60.4	45.0	39.0	36.2	48.7	47.5	41.9	46.0	52.0	62.6	54.0	50.9	45.1	49.1	43.0	39.9	54.4	†	†	†	†	†	†	†
Sedatives (Barbiturates) [c,f]	34.8	32.6	34.5	29.5	31.8	34.3	31.8	35.7	33.3	31.5	36.2	35.5	38.4	34.8	36.0	37.6	38.2	41.6	34.8	37.0	41.4	45.0	48.7	43.6
Sedatives, Adjusted	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [c]	†	†	†	†	†	†	†	†	†	†	†	†	†	†	—	—	—	—	—	—	—	—	—	—
Tranquilizers [c,g]	37.6	36.0‡	29.3	32.5	34.3	31.1	31.5	35.5	35.2	30.4	32.5	34.5	35.5	37.1	39.4	36.0	31.7	36.1	37.8	41.5	45.3	55.0	61.9	52.7
Rohypnol	†	†	†	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [h]	7.8	8.8	8.0	8.8	8.5	8.1	8.7	8.5	8.0	9.0	8.5	8.2	9.3	8.5	9.2	8.8	9.0	9.2	9.4	8.9	11.0	10.1	14.1	15.8
Been Drunk	14.6	16.9	16.7	18.2	17.4	14.1	17.0	15.1	16.3	16.7	16.7	18.6	17.4	17.0	16.9	16.8	19.5	19.3	21.5	21.0	19.5	11.4	26.1	19.3
Cigarettes [j]	46.4	49.7	51.6	53.3	54.5	52.6	53.5	54.2	53.2	54.3	53.7	54.5	53.2	56.5	57.3	60.4	63.3	62.8	63.7	67.9	74.2	68.8	76.9	76.4
Vaping Nicotine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.7	12.6	13.5	22.1	31.3	29.6
Vaping Marijuana	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.8	16.2	12.2	20.9	28.8	25.1
Smokeless Tobacco [j]	64.4	67.0	60.3	64.6	61.1	60.3	56.7	60.2	56.4	58.1	48.7	51.5	50.9	54.6	52.8	44.3	53.2	53.2	54.7	58.8	64.5	§	74.3	68.8
Steroids [i]	37.9	32.0	35.1	37.5	40.0	26.5	44.2	35.6	35.5	31.5	32.3	27.1	32.5	30.2	31.5	23.7	27.1	37.0	35.5	28.9	33.7	†	38.7	†

(Table continued on next page.)

TABLE 5-6a (cont.)
Trends in Noncontinuation Rates among 12th Graders
Who Ever Used Drug in Lifetime

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

Notes. ' — ' indicates data not available. ' † ' indicates that the cell entry was omitted because it was based on fewer than 50 twelfth graders who ever used drug in lifetime.
All other cells are based on more than 50 cases. ' ‡ ' indicates that the question changed in the following year. See relevant footnote for that drug.

§This estimate is not presented in 2020 due to small sample size. The survey question for this estimate appears on a randomly-selected 1/6 of the questionnaires, and the number of responses is uniquely small in 2020 when the COVID-19 pandemic halted MTF data collection prematurely and the resulting sample size was only 25% of the target.

[a]In 2001 the question text was changed in half of the questionnaire forms. Other psychedelics was changed to other hallucinogens and shrooms was added to the list of examples. The 2001 data are based on the changed forms only. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for hallucinogens are also affected by these changes and have been handled in a parallel manner. Beginning in 2014 hallucinogens, LSD and hallucinogens other than LSD were based on five of six forms.

[b]In 1995, the heroin question was changed in three of six forms. Separate questions were asked for use with and without injection. Data presented here represent the combined data from all forms.

[c]Only drug use not under a doctor's orders is included here.

[d]In 2002 the question text was changed in half of the questionnaire forms. In the list of examples of narcotics other than heroin, Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet. The 2002 data are based on the changed forms only. In 2003, the remaining forms were changed to the new wording. Beginning in 2003, the data are based on all forms. 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.

[e]In 2009, 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. The remaining forms where changed in 2010. In 2011 the introduction to the question was changed slightly in one of six forms. An examination of the data did not show any effect from the wording change. In 2013 the question wording was chanaged in three of the questionnaires. The new wording in 2013 asked "On how many occasions (if any) have you 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 as compared to the old wording; it was 21% higher in 12th grade. 2013 data are based on the changed forms only; *N* is one half of *N* indicated. In 2014 all questionnaires included the new, updated wording.

[f]For 12th graders only: In 2004 the question text was changed in half of the questionnaire forms. Barbiturates was changed to sedatives, including barbiturates. Goofballs, yellows, reds, blues, and rainbows were deleted from the list of examples; Phenobarbital, Tuinal, Nembutal, and Seconal were added. 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.

[g]In 2001, for the tranquilizer list of examples, Miltown was replaced with Xanax in half of the questionnaire forms. The 2001 data are based on the changed forms only. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms.

[h]In 1993, the question text was changed slightly in half of the questionnaire forms to indicate that a drink meant more than a few sips. The 1993 data are based on the changed forms only. In 1994 the remaining forms were changed to the new wording. Beginning in 1994, the data are based on all forms. 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.

[i]In 2006, the question text was changed slightly in one of the questionnaire forms. An examination of the data did not show any effect from the wording change. The remaining forms were changed in 2007. In 2008 the question text was changed slightly. An examination of the data did not show any effect from the wording change. In 2009 the remaining forms were changed.

[j]Numbers presented here represent percent of lifetime users who have not used in the past 30 days.

TABLE 5-6b
Trends in Noncontinuation Rates among 12th Graders
Who Used Drug 10 or More Times in Lifetime

Percentage who did not use in last 12 months

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Marijuana/Hashish	4.0	4.0	4.1	3.7	4.6	5.4	7.2	7.6	8.3	8.8	7.8	7.9	9.2	9.9	10.6	12.3	10.5	10.9	7.8	5.0	4.7	6.6	7.7	8.2
Inhalants [a]	—	48.9	42.6	34.6	23.8	25.2	23.8	27.2	23.1	23.4	25.8	15.3	21.1	21.5	25.9	24.0	23.7	28.6	21.8	26.4	21.6	24.8	25.2	28.0
Amyl/Butyl Nitrites	—	—	—	—	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†
Hallucinogens [b]	10.8	16.1	15.2	10.8	8.1	8.4	7.7	7.5	13.0	14.1	12.2	11.1	11.9	16.6	21.8	16.5	17.4	11.5	12.1	14.3	10.6	9.0	12.2	16.4
LSD [b,c]	15.2	17.3	18.0	12.2	7.4	6.4	7.1	7.5	15.3	12.1	12.6	12.2	11.5	16.0	21.2	16.0	18.5	11.4	11.9	15.3	11.5	10.5	16.8	20.3
Hallucinogens other than LSD [b]	—	16.6	14.4	13.3	11.5	13.1	7.7	8.2	8.5	14.5	13.7	16.0	15.8	20.1	19.5	22.6	29.3	19.6	16.2	16.0	10.1	15.5	15.9	17.5
PCP	—	—	—	—	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†
Ecstasy (MDMA) [d]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†
Cocaine	7.7	8.2	6.2	3.8	3.1	3.1	3.1	2.9	6.2	3.1	2.5	3.5	7.6	11.4	11.3	19.6	25.3	20.2	14.1	22.9	9.6	8.8	12.0	12.4
Crack [e]	—	—	—	—	—	—	—	—	—	—	—	—	13.4	2.1	5.2	26.2	31.1	15.3	16.4	16.8	6.3	8.3	17.4	19.5
Cocaine other than Crack	—	—	—	—	—	—	—	—	—	—	—	—	10.2	6.1	16.2	18.5	24.3	23.2	14.7	24.1	15.5	13.9	14.6	17.1
Heroin [f]	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†
With a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†
Without a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†
Narcotics other than Heroin [g,h]	9.6	11.6	9.7	9.9	8.7	10.8	10.1	13.5	16.4	15.4	12.2	13.8	15.6	19.3	15.2	15.9	16.1	16.8	16.7	16.8	12.6	11.5	10.1	12.4
Amphetamines [g,i]	8.0	9.8	7.6	7.4	6.1	4.1	4.4	8.4	10.7	12.7	17.5	17.6	17.5	16.0	17.4	18.1	17.2	19.8	13.5	13.8	11.9	10.2	10.8	15.0
Methamphetamine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Crystal Methamphetamine (Ice) [j]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†	†	†	†	†	†
Sedatives (Barbiturates) [g,k]	13.4	16.5	12.9	13.5	11.2	11.7	8.9	12.6	17.7	22.8	20.6	19.7	20.7	23.4	18.0	19.8	19.7	23.4	11.0	14.9	10.9	8.3	11.1	12.5
Sedatives, Adjusted	13.6	16.2	12.4	12.8	8.6	10.5	7.6	8.6	16.4	20.8	23.6	19.7	23.1	25.2	17.3	—	—	—	—	—	—	—	—	—
Methaqualone [g]	13.5	15.9	11.9	13.1	6.1	6.0	4.9	8.0	16.3	23.3	26.7	24.9	32.2	29.8	18.6	—	—	—	—	—	—	—	—	—
Tranquilizers [g,l]	12.0	13.0	11.1	14.4	14.1	14.3	16.3	16.0	14.8	18.8	19.2	15.0	17.1	15.8	11.7	19.3	13.1	21.0	6.7	13.8	6.2	6.9	13.9	13.6
Rohypnol	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†
Alcohol [m]	0.6	0.8	0.6	0.9	0.7	0.8	1.0	0.9	0.9	1.1	1.2	1.0	1.1	1.2	1.5	1.9	1.9	2.3‡	2.5	2.1	2.0	1.6	1.9	1.9
Been Drunk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3	4.1	4.6	3.3	2.8	2.1	3.6	2.8
Cigarettes [o]	16.0	16.7	16.2	17.9	19.6	21.4	20.8	19.1	18.6	18.5	15.9	17.0	17.1	18.2	18.5	18.2	17.4	18.6	16.9	15.9	14.6	13.5	13.1	14.3
Smokeless Tobacco [o]	—	—	—	—	—	—	—	—	—	—	—	21.8	18.4	25.7	26.2	—	—	29.6	25.5	33.1	26.5	27.3	26.2	17.9
Steroids [n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†	†	†	†	†	†	†

(Table continued on next page.)

TABLE 5-6b (cont.)
Trends in Noncontinuation Rates among 12th Graders
Who Used Drug 10 or More Times in Lifetime

Percentage who did not use in last 12 months

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Marijuana/Hashish	8.5	9.0	8.7	9.4	8.4	8.9	8.8	9.2	8.8	7.2	7.7	7.7	6.4	6.6	6.8	7.1	6.6	7.0	4.2	4.2	5.1	5.9	5.1	5.8
Inhalants [a]	27.8	23.0	30.8	25.7	23.8	30.1	12.2	26.3	24.8	19.3	20.7	26.4	23.2	24.4	31.7	33.8	20.7	†	†	41.7	†	†	†	†
Amyl/Butyl Nitrites	†	†	†	†	†	†	†	†	†	†	†	—	—	—	—	—	—	—	—	—	—	—	—	—
Hallucinogens [b]	12.8	12.9‡	12.3	20.0	21.5	12.1	14.3	19.1	13.3	7.3	13.1	12.7	5.4	8.8	14.6	16.6	9.9	4.4	7.4	10.6	7.5	†	39.3	11.3
LSD [c]	14.3	15.7	14.6	28.6	47.8	23.0	16.3	23.4	14.9	5.9	15.8	11.6	4.8	5.5	8.0	7.9	10.6	†	15.2	3.6	13.7	†	47.8	14.2
Hallucinogens other than LSD [b]	13.4	6.2‡	10.8	11.0	18.4	9.7	13.1	17.7	15.3	7.7	15.7	12.9	7.6	8.7	15.2	21.6	12.5	†	8.4	6.5	11.7	†	61.3	†
PCP	†	†	†	†	†	†	†	†	†	†	†	—	—	—	—	—	—	—	—	—	—	—	—	—
Ecstasy (MDMA) [d]	†	†	2.5	8.3	33.2	17.7	12.2	†	18.9	6.8	7.7	18.2	15.5	15.4	‡‡	7.8	7.8	†	†	†	†	†	†	†
Cocaine	12.3	18.1	15.6	11.3	11.8	13.2	10.5	11.9	15.0	14.7	16.3	20.1	21.9	14.9	18.0	11.4	17.8	14.3	11.9	11.7	10.2	†	9.6	4.9
Crack [e]	16.0	13.5	7.1	10.9	12.1	13.7	7.5	18.5	18.4	17.9	14.6	21.9	19.9	15.2	13.2	8.7	17.4	†	†	†	7.2	†	†	†
Cocaine other than Crack	13.1	22.5	14.9	11.7	11.0	15.6	12.4	14.5	11.8	17.5	18.4	19.5	24.8	14.8	17.6	13.5	†	†	15.6	13.6	12.0	†	†	†
Heroin [f]	†	†	†	†	†	†	†	†	†	†	13.5	21.4	14.5	25.5	†	†	†	†	†	†	†	†	†	†
With a needle	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	—
Without a needle	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	—
Narcotics other than Heroin [g,h]	12.2	10.8	9.7‡	8.3	9.2	8.2	8.4	12.2	9.0	9.0	11.1	12.4	9.2	14.2	14.5	13.8	11.5	19.2	16.2	20.3	22.1	†	†	39.8
Amphetamines [g,i]	12.7	11.2	7.7	10.0	8.9	12.9	13.0	11.3	13.8	17.7	13.3	11.2	17.2	16.3‡	9.7	11.9	11.8	13.6	13.4	18.2	21.3	25.9	42.4	52.4
Methamphetamine	12.4	22.8	19.2	23.9	29.1	13.5	21.5	16.9	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†
Crystal Methamphetamine (Ice) [j]	†	†	†	11.2	†	23.1	†	†	†	†	†	†	†	†	†	†	†	†	20.0	†	†	†	†	†
Sedatives (Barbiturates) [g,k]	10.7	7.0	5.6	5.7	6.9	8.5	10.4	11.4	11.9	10.0	11.6	10.3	16.8	10.4	12.2	9.4	14.9	10.6	9.8	10.4	17.3	†	15.5	10.0
Sedatives, Adjusted	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Methaqualone [g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers [g,l]	9.9	5.3‡	8.1	5.8	11.2	7.9	9.8	12.3	10.7	8.7	8.8	10.6	14.4	12.9	15.7	18.1	10.2	14.0	13.6	14.4	19.8	†	34.4	28.1
Rohypnol	†	†	†	†	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol [m]	1.7	1.7	1.3	1.9	1.5	1.3	1.6	1.4	1.2	1.5	1.6	1.6	1.8	1.4	1.7	1.5	1.5	1.2	1.3	1.2	1.6	2.5	2.1	1.7
Been Drunk	1.8	2.6	2.3	2.0	2.9	2.1	2.9	3.1	2.2	2.6	2.9	3.0	2.4	2.0	2.0	2.4	2.3	2.4	1.7	2.8	2.7	5.0	3.9	4.0
Cigarettes [o]	16.1	16.3	17.5	17.3	17.2	15.9	16.7	18.9	17.9	17.9	17.8	18.3	20.0	20.4	21.4	22.8	22.1	24.0	24.0	29.8	42.6	32.2	36.0	37.6
Smokeless Tobacco [o]	20.7	15.1	18.9	20.4	16.2	15.3	15.4	25.1	17.4	16.0	15.6	14.8	18.2	17.6	15.3	7.5	13.9	15.6	22.0	32.2	†	†	35.2	†
Steroids [n]	†	†	†	†	†	†	†	11.9	†	†	†	0.0	†	†	†	†	†	†	†	†	†	†	†	†

(Table continued on next page.)

TABLE 5-6b (cont.)
Trends in Noncontinuation Rates among 12th Graders
Who Used Drug 10 or More Times in Lifetime

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

Notes. ' — ' indicates data not available. ' † ' indicates that the cell entry was omitted because it was based on fewer than 50 twelfth graders who used 10 or more times.
All other cells are based on more than 50 cases. ' ‡ ' indicates that the question changed in the following year. See relevant footnote for that drug.

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

[b]In 2001 the question text was changed in half of the questionnaire forms. Other psychedelics was changed to other hallucinogens, and shrooms was added to the list of examples. The 2001 data are based on the changed forms only. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms. Data for hallucinogens are also affected by these changes and have been handled in a parallel manner. Hallucinogens are unadjusted for underreporting of PCP. Beginning in 2014 hallucinogens, LSD and hallucinogens other than LSD were based on five of six forms.

[c]Based on 55 cases in 2009.

[d]Based on 54 cases in 2005, 55 cases in 2009, 56 cases in 2010, and 57 cases in 2012.

[e]Based on 85 cases in 1987, 54 cases in 1988, and 56 cases in 1989. Crack was included in all six questionnaire forms beginning in 1990. Based on 56 cases in 2013.

[f]In 1995, the heroin question was changed in three of six forms. Separate questions were asked for use with and without injection. Data presented here represent the combined data from all forms. Based on 54 cases in 2009.

[g]Only drug use not under a doctor's orders is included here.

[h]In 2002 the question text was changed in half of the questionnaire forms. In the list of examples of narcotics other than heroin, Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet. The 2002 data are based on the changed forms only. In 2003, the remaining forms were changed to the new wording. Beginning in 2003, the data are based on all forms. 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.

[i]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 2011 the introduction to the question was changed slightly in one of six forms. An examination of the data did not show any effect from the wording change. In 2013 the question wording was chanaged in three of the questionnaires. The new wording in 2013 asked "On how many occasions (if any) have you 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 as compared to the old wording; it was 21% higher in 12th grade. 2013 data are based on the changed forms only; *N* is one half of *N* indicated. In 2014 all questionnaires included the new, updated wording.

[j]Based on 55 cases in 2002 and 56 cases in 2004.

[k]For 12th graders only: In 2004 the question text was changed in half of the questionnaire forms. Barbiturates was changed to sedatives, including barbiturates. Goofballs, yellows, reds, blues, and rainbows were deleted from the list of examples; Phenobarbital, Tuinal, Nembutal, and Seconal were added. 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.

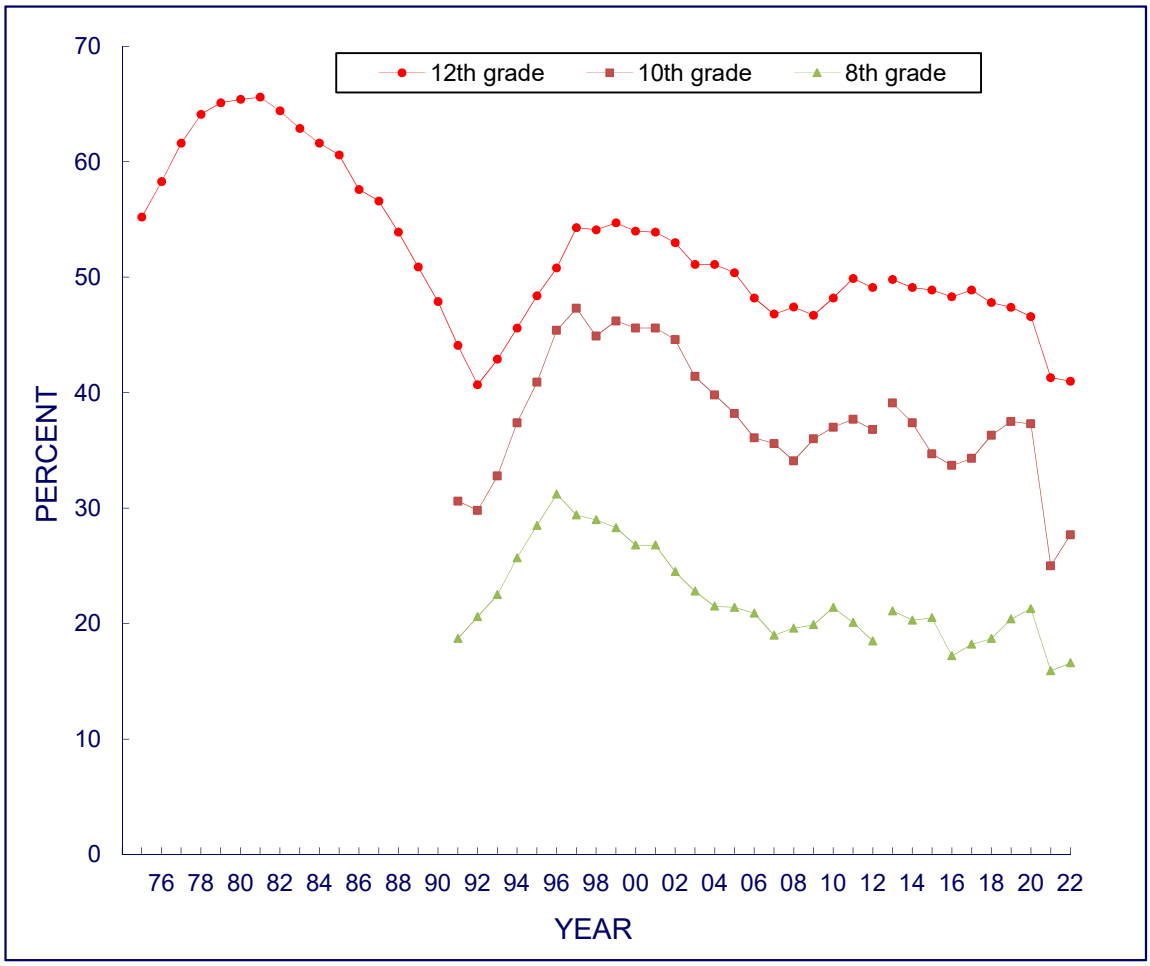
[l]In 2001, for the tranquilizer list of examples, Miltown was replaced with Xanax in half of the questionnaire forms. The 2001 data are based on the changed forms only. In 2002 the remaining forms were changed. Beginning in 2002, the data are based on all forms.

[m]In 1993, the question text was changed slightly in half of the questionnaire forms to indicate that a drink meant more than a few sips. The 1993 data are based on the changed forms only. In 1994 the remaining forms were changed to the new wording. Beginning in 1994, the data are based on all forms. 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.

[n]In 2006, the question text was changed slightly in one of the questionnaire forms. An examination of the data did not show any effect from the wording change. Based on 62 cases in 2006. The remaining forms were changed in 2007. In 2008 the question text was changed slightly. 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. Based on 51 cases in 2010.

[o]Percentage of regular users (ever) who did not use at all in the last 30 days.

FIGURE 5-1a
Any Illicit Drug Use
Trends in Lifetime Prevalence by Grade



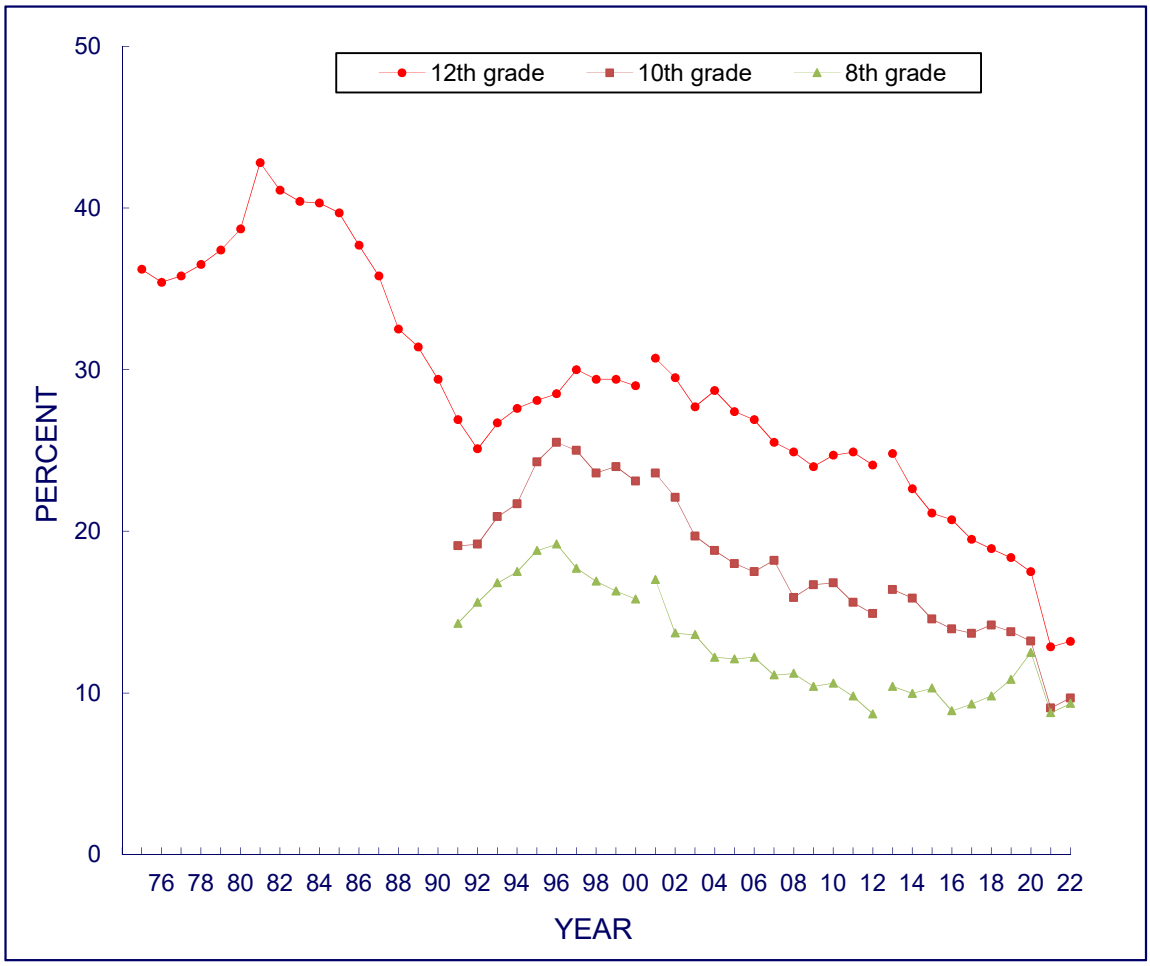
Source. The Monitoring the Future study, the University of Michigan.

Notes. For 12th graders, use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of other narcotics, stimulants, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers which are not under a doctor's orders.

For 8th and 10th graders, use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of stimulants or tranquilizers which are not under a doctor's orders.

Beginning in 2013, revised sets of questions on amphetamine use were introduced, which affected data for any illicit drug use.

FIGURE 5-1b
Any Illicit Drug Use other than Marijuana
Trends in Lifetime Prevalence by Grade



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

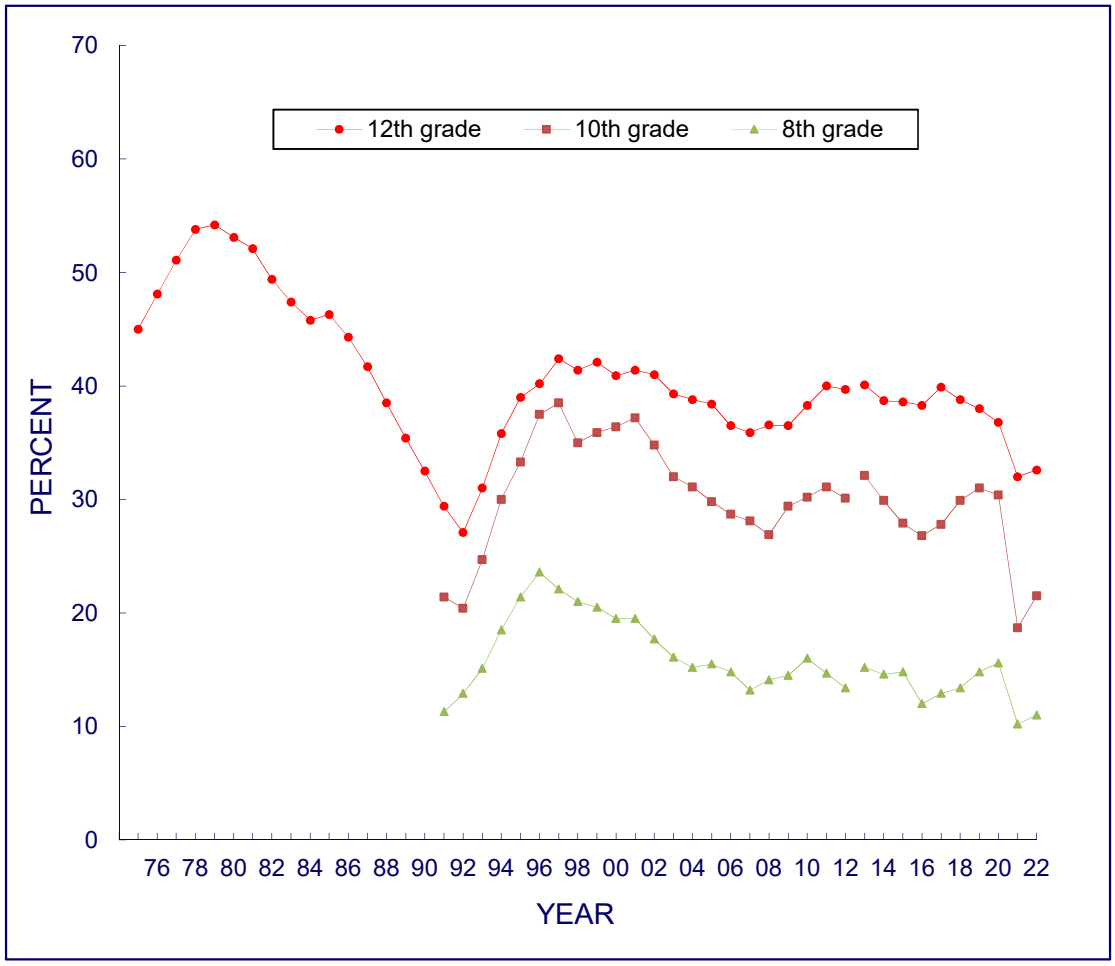
Notes. For 12th graders, use of any illicit drug other than marijuana includes any use of LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of other narcotics, stimulants, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers which are not under a doctor's orders.

For 8th and 10th graders, use of any illicit drug other than marijuana includes any use of LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of stimulants or tranquilizers which are not under a doctor's orders.

Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Data for any illicit drug other than marijuana are affected by these changes.

Beginning in 2013, revised sets of questions on amphetamine use were introduced, which affected data for any illicit drug use other than marijuana.

FIGURE 5-2a
Any Illicit Drug Use
Trends in Annual Prevalence by Grade



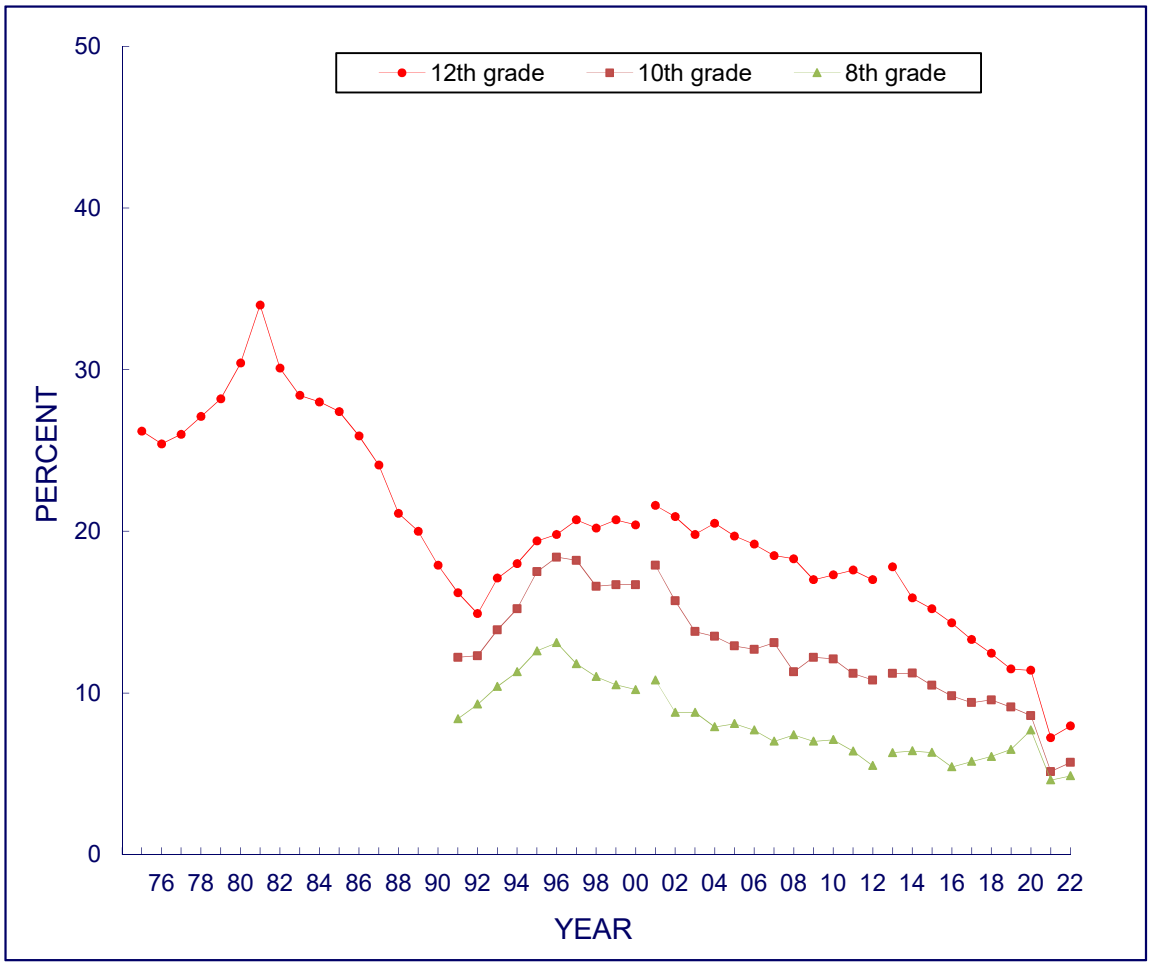
Source. The Monitoring the Future study, the University of Michigan.

Notes. For 12th graders, use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of other narcotics, stimulants, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers which are not under a doctor's orders.

For 8th and 10th graders, use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of stimulants or tranquilizers which are not under a doctor's orders.

Beginning in 2013, revised sets of questions on amphetamine use were introduced, which affected data for any illicit drug use.

FIGURE 5-2b
Any Illicit Drug Use other than Marijuana
Trends in Annual Prevalence by Grade



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

Notes. For 12th graders, use of any illicit drug other than marijuana includes any use of LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of other narcotics, stimulants, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers which are not under a doctor's orders.

For 8th and 10th graders, use of any illicit drug other than marijuana includes any use of LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of stimulants or tranquilizers which are not under a doctor's orders.

Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Data for any illicit drug other than marijuana are affected by these changes.

Beginning in 2013, revised sets of questions on amphetamine use were introduced, which affected data for any illicit drug use other than marijuana.

FIGURE 5-3a
Any Illicit Drug Use Index
Trends in 30-Day Prevalence by Grade

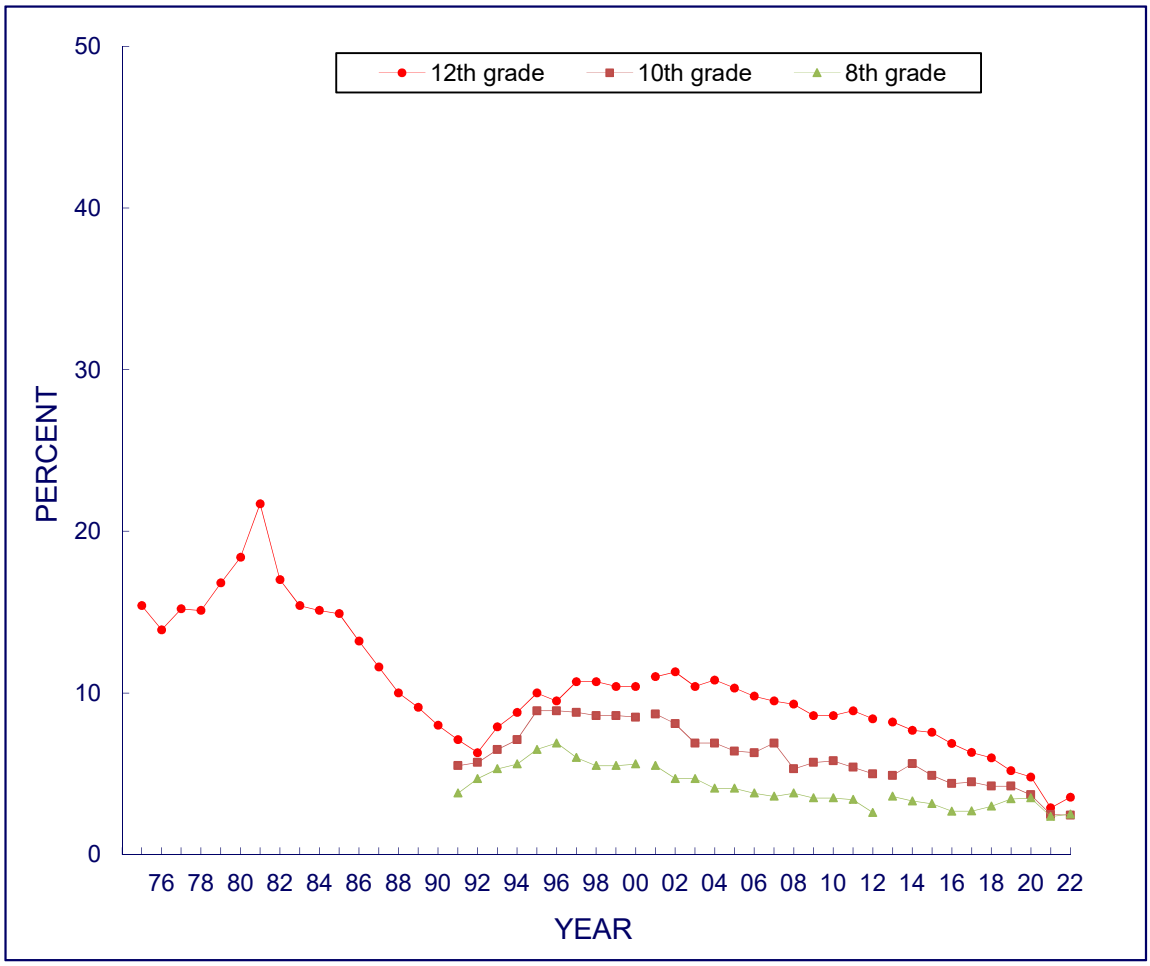
Source. The Monitoring the Future study, the University of Michigan.

Notes. For 12th graders, use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of other narcotics, stimulants, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers which are not under a doctor's orders.

For 8th and 10th graders, use of any illicit drug includes any use of marijuana, LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of stimulants or tranquilizers which are not under a doctor's orders.

Beginning in 2013, revised sets of questions on amphetamine use were introduced, which affected data for any illicit drug use.

FIGURE 5-3b
Any Illicit Drug Use other than Marijuana
Trends in 30-Day Prevalence by Grade



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

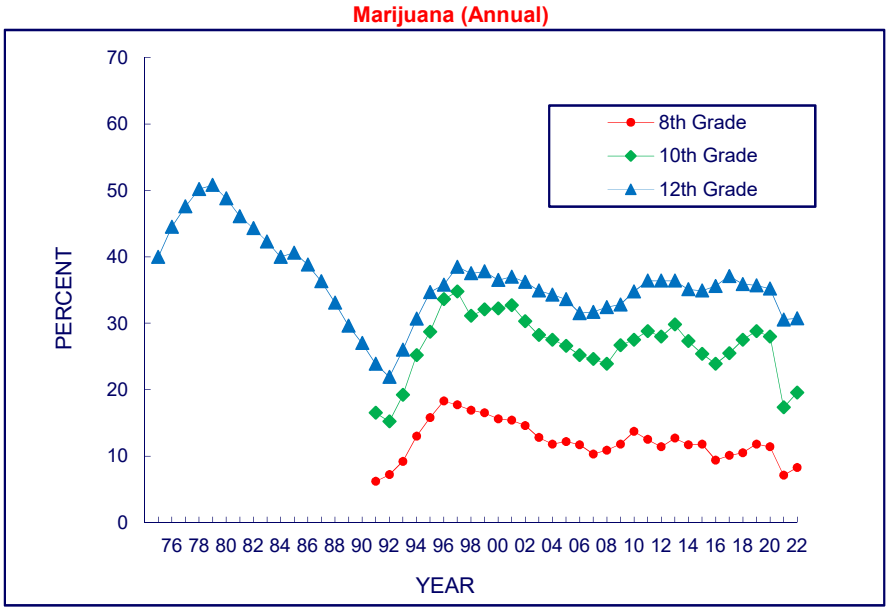
Notes. For 12th graders, use of any illicit drug other than marijuana includes any use of LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of other narcotics, stimulants, sedatives (barbiturates), methaqualone (excluded since 1990), or tranquilizers which are not under a doctor's orders.

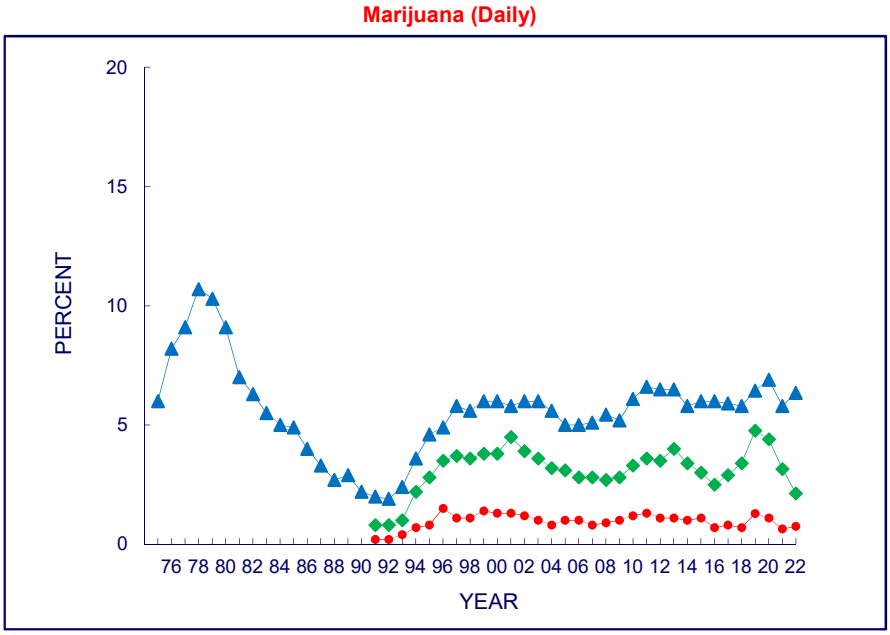
For 8th and 10th graders, use of any illicit drug other than marijuana includes any use of LSD, other hallucinogens, crack, cocaine other than crack, or heroin; or any use of stimulants or tranquilizers which are not under a doctor's orders.

Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Data for any illicit drug other than marijuana are affected by these changes.

Beginning in 2013, revised sets of questions on amphetamine use were introduced, which affected data for any illicit drug use other than marijuana.

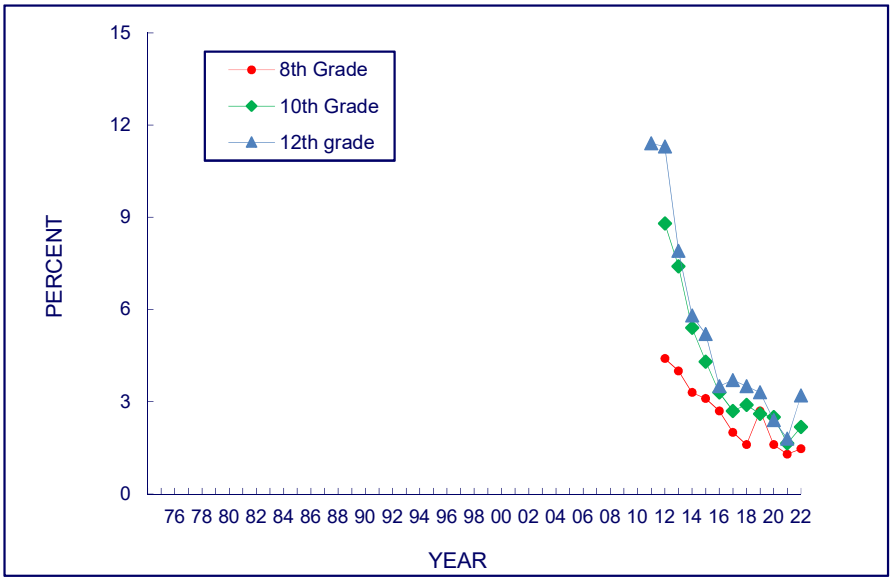
FIGURE 5-4a
MARIJUANA
Trends in Annual Prevalence and 30-Day Prevalence of Daily Use in Grades 8, 10, and 12





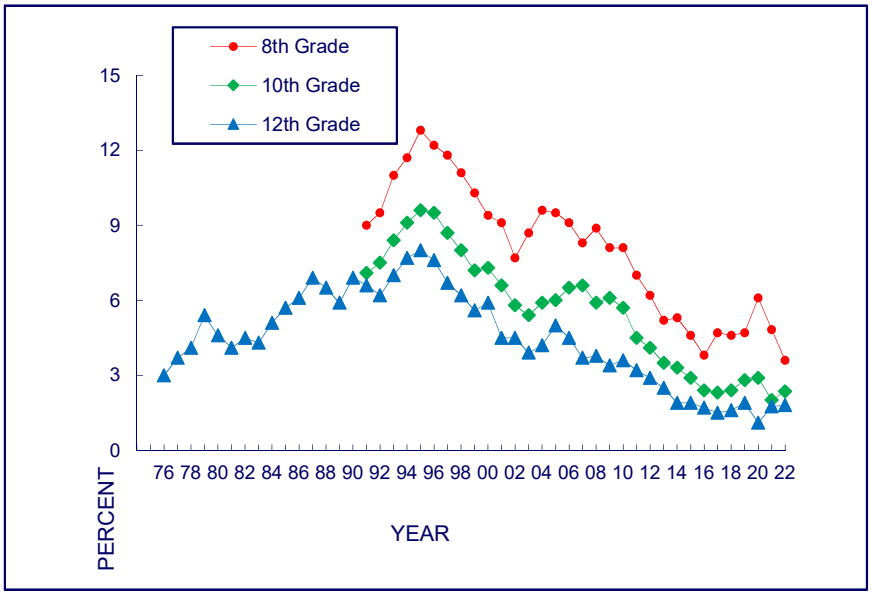
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 5-4b
Synthetic Marijuana
Trends in Annual Prevalence in Grades 8, 10, and 12



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

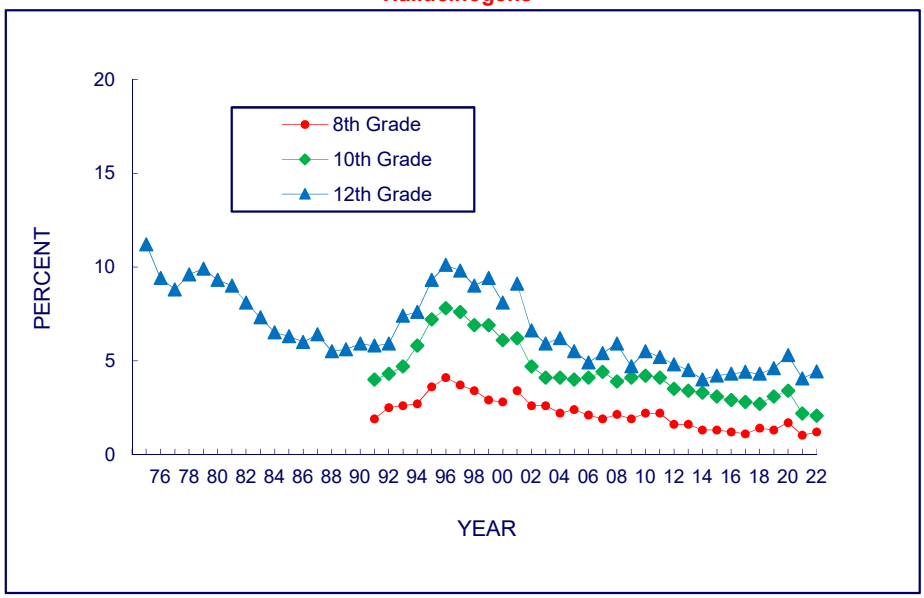
FIGURE 5-4c
INHALANTS
Trends in Annual Prevalence in Grades 8, 10, and 12



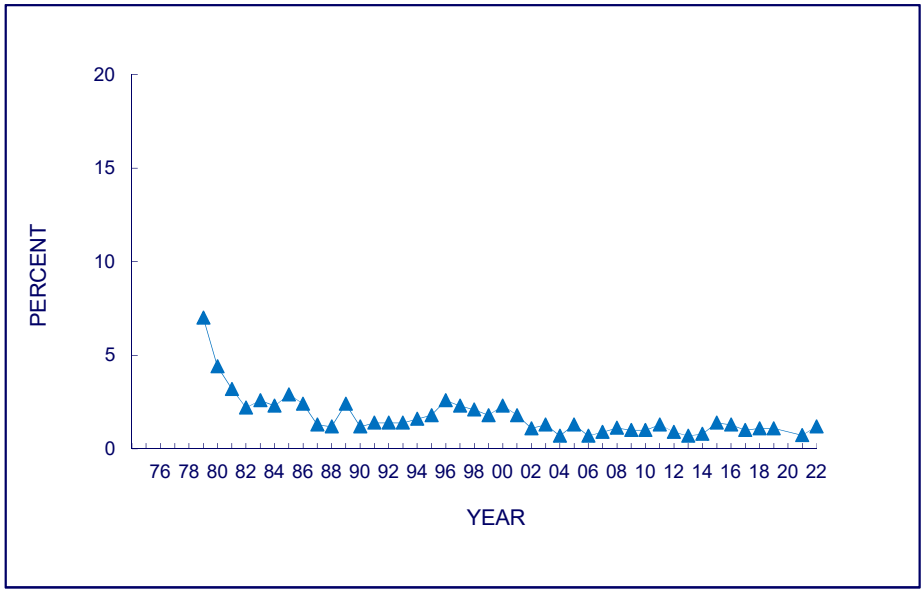
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 5-4d
HALLUCINOGENS AND PCP
Trends in Annual Prevalence in Grades 8, 10, and 12

Hallucinogens [a]



PCP [b,c]



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

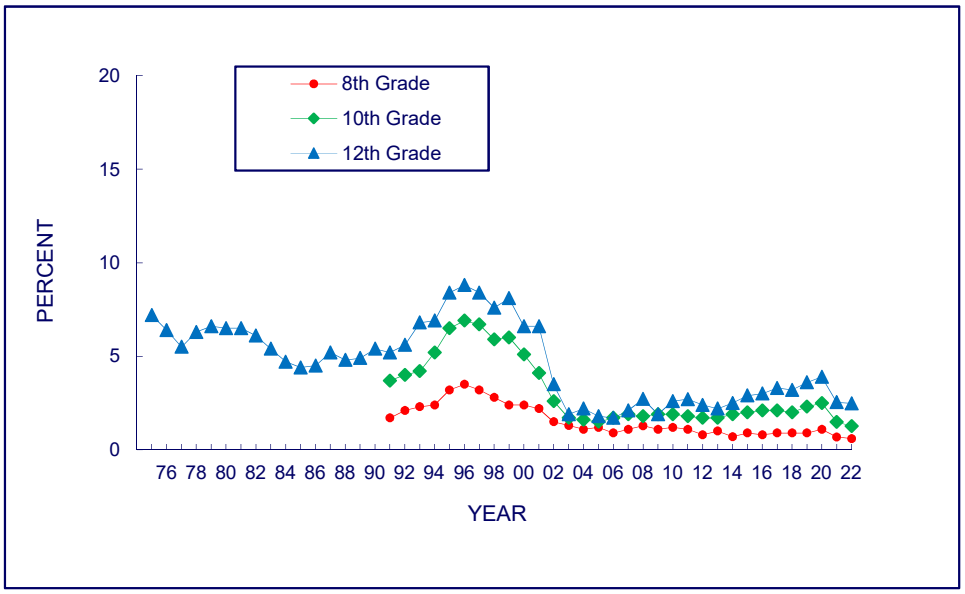
[a]In 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens and shrooms was added to the list of examples. Data for hallucinogens were affected by these changes. From 2001 on, data points are based on the revised question.

[b]Eighth and 10th graders are not asked about PCP use.

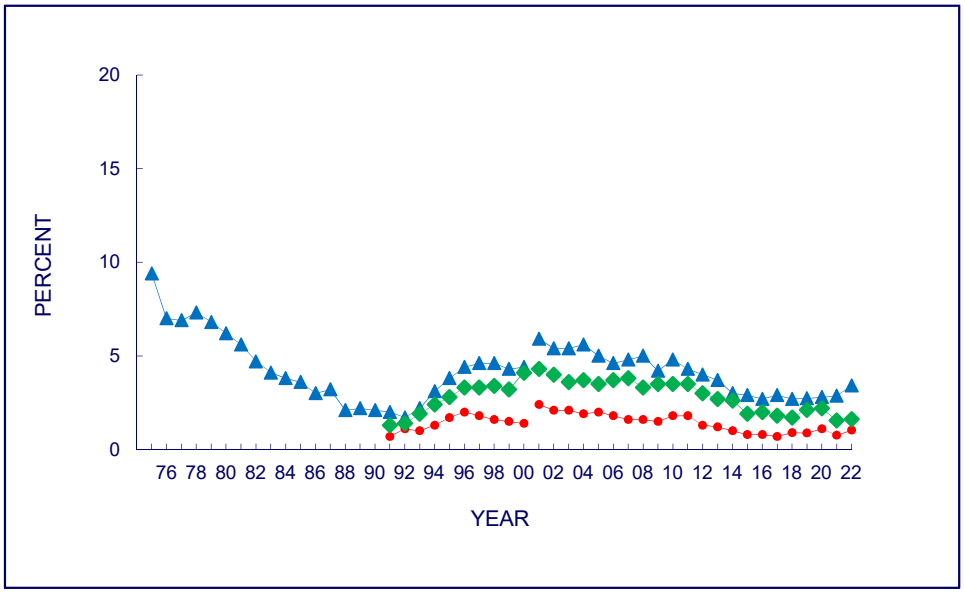
[c]This estimate not presented in 2020 due to insufficient data.

FIGURE 5-4e
LSD AND HALLUCINOGENS OTHER THAN LSD
Trends in Annual Prevalence in Grades 8, 10, and 12

LSD



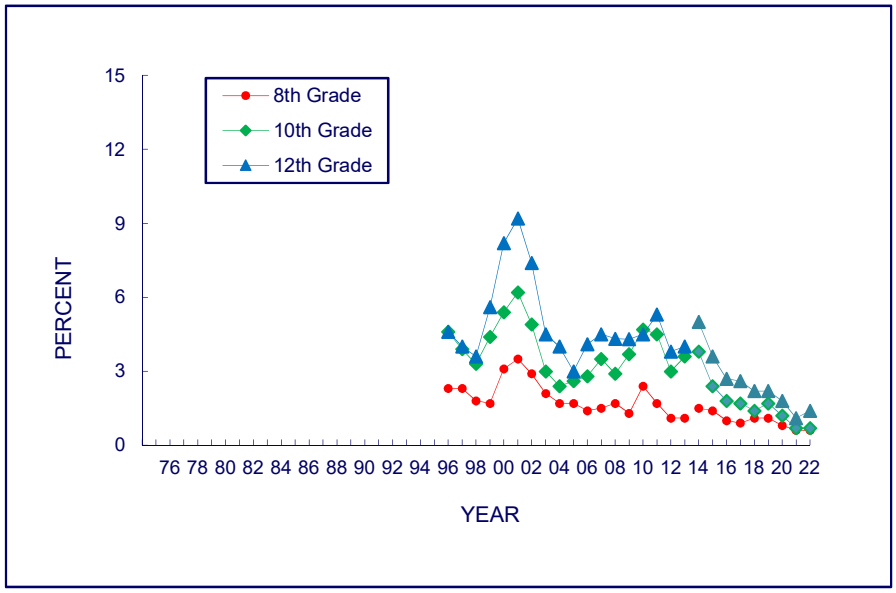
Hallucinogens other than LSD [a]



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

[a]In 2001, a revised set of questions on other hallucinogen use was introduced. Other psychedelics was changed to other hallucinogens and shrooms was added to the list of examples. From 2001 on data points are based on the revised question.

FIGURE 5-4f
ECSTASY (MDMA)
Trends in Annual Prevalence in Grades 8, 10, and 12

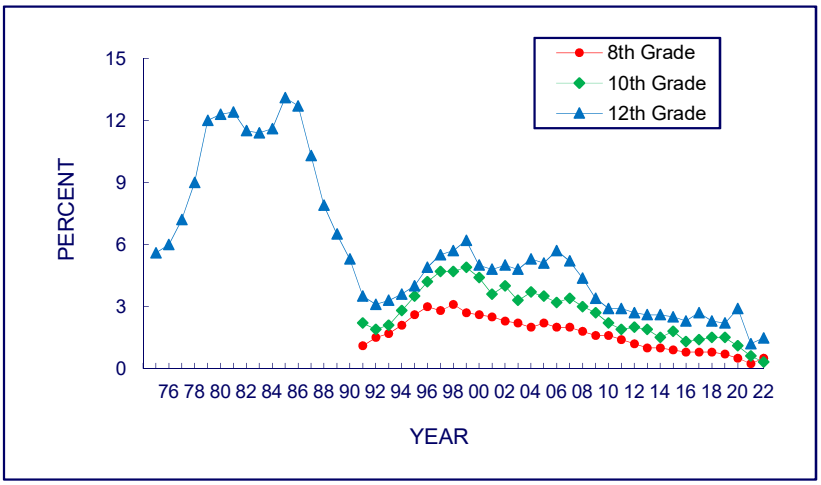


Source: The Monitoring the Future study, the University of Michigan.

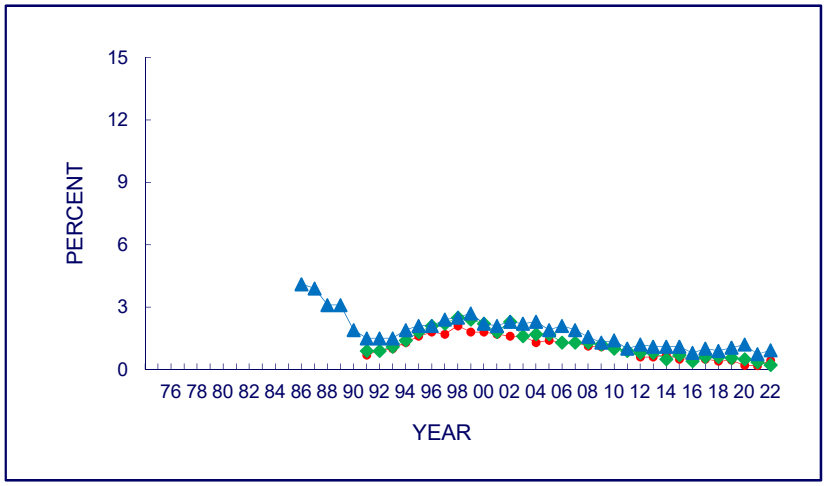
Notes. In 2014, the text was changed on one of the questionnaire forms for 8th, 10th, and 12th graders to include "molly" in the description. The remaining forms were changed in 2015.

FIGURE 5-4g
COCAINE, CRACK, AND COCAINE OTHER THAN CRACK
Trends in Annual Prevalence in Grades 8, 10, and 12

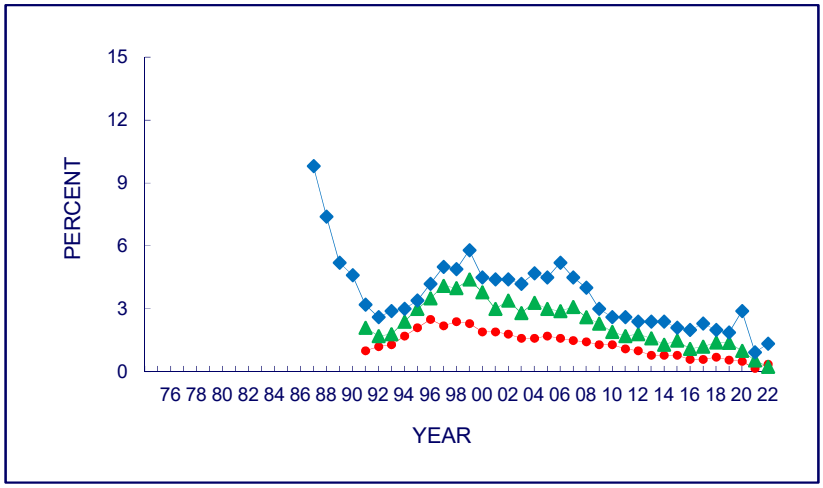
Cocaine



Crack

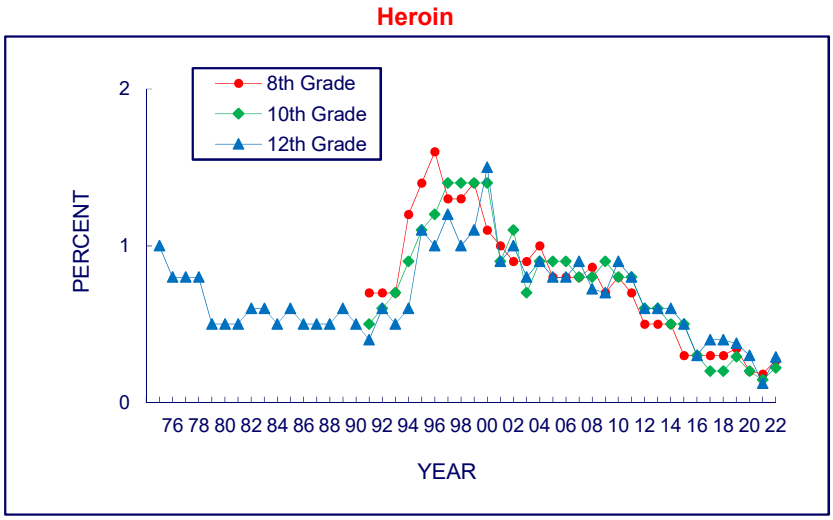


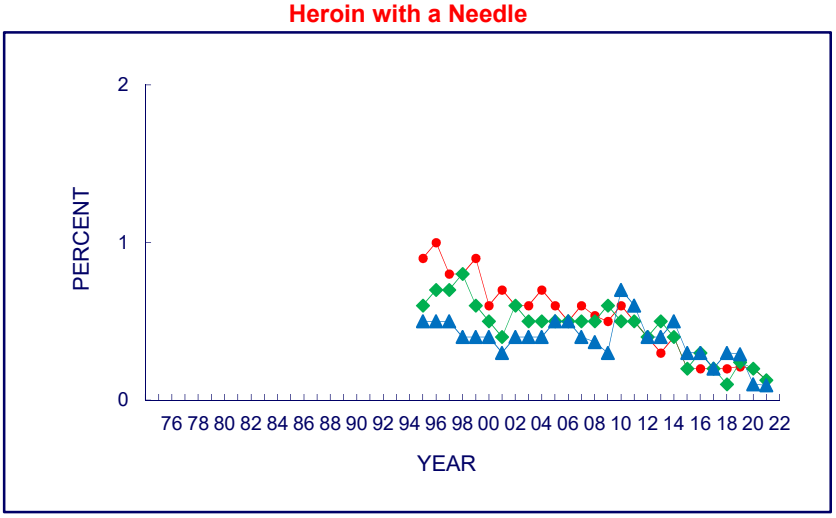
Cocaine other than Crack

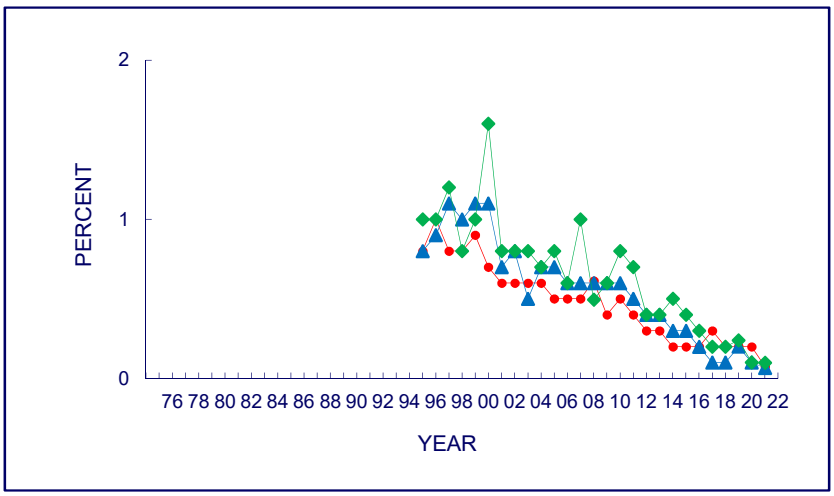


Source. The Monitoring the Future study, the University of Michigan.

FIGURE 5-4h
HEROIN
Trends in Annual Prevalence in Grades 8, 10, and 12

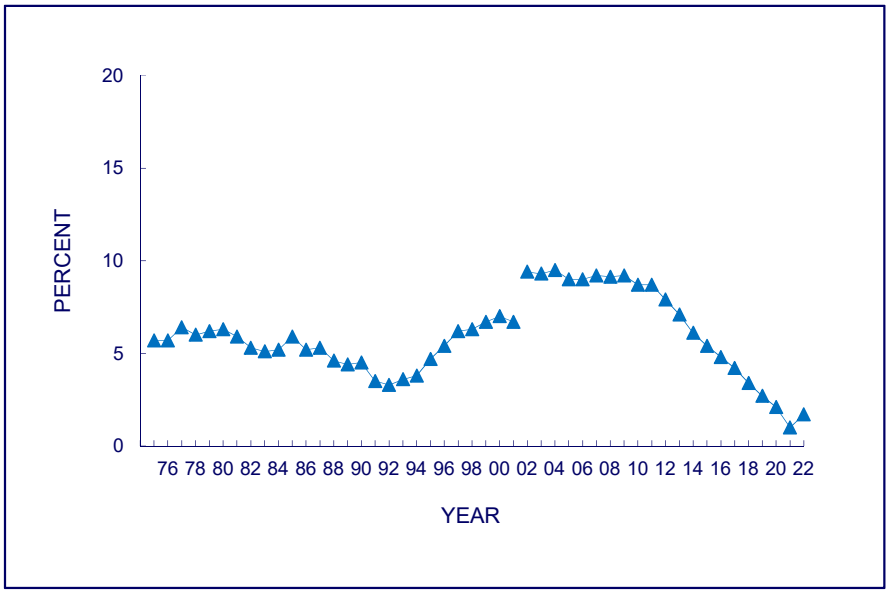






Source. The Monitoring the Future study, the University of Michigan.

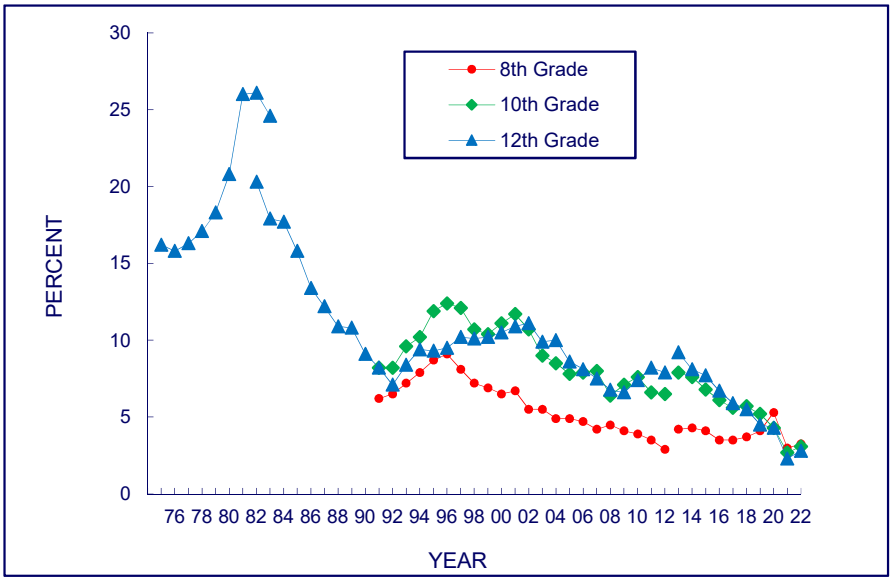
FIGURE 5-4i
NARCOTICS OTHER THAN HEROIN [a]
Trends in Annual Prevalence in Grade 12



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

[a]Data for 8th and 10th graders are not reported for use of narcotics other than heroin. In 2002, a revised set of questions on other narcotic use was introduced. Talwin, laudanum, and paregoric were replaced with Vicodin, OxyContin, and Percocet in the list of examples. From 2002 on, data points are based on the revised question.

FIGURE 5-4j
AMPHETAMINES [a]
Trends in Annual Prevalence in Grades 8, 10, and 12



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

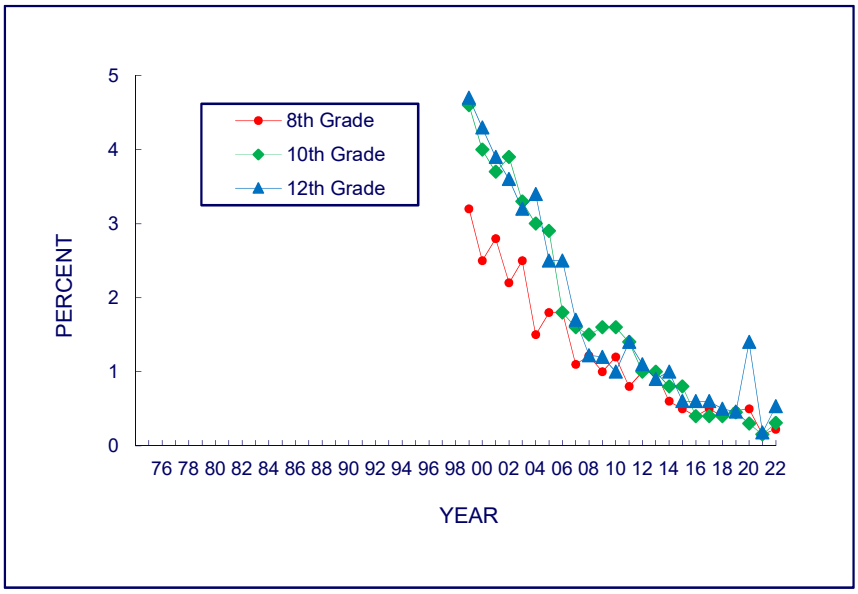
[a]Beginning in 1982, the lines connect percentages that result if nonprescription stimulants are excluded. In 2013, the text was changed on some of the questionnaire forms for all three grades, with the remaining forms changed in 2014. Data presented here include only the changed forms.

FIGURE 5-4k

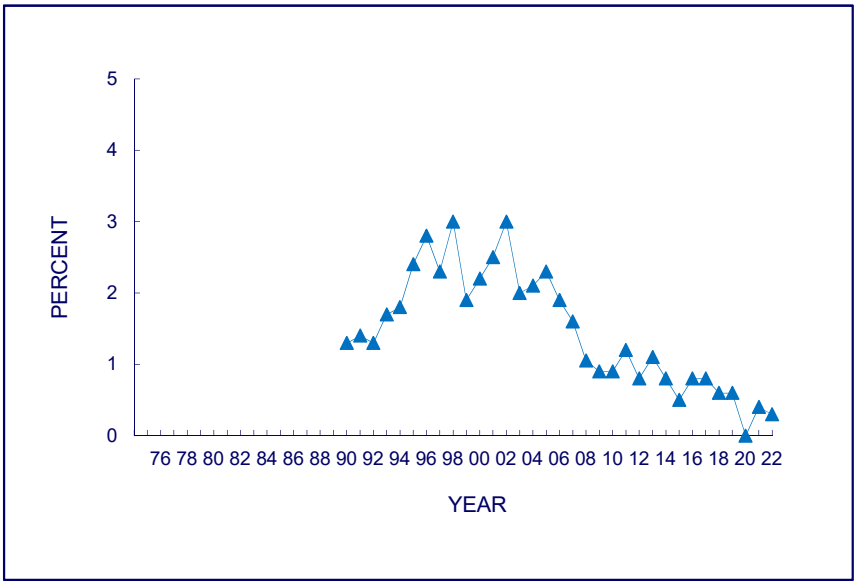
METHAMPHETAMINE AND CRYSTAL METHAMPHETAMINE (ICE)

Trends in Annual Prevalence in Grades 8, 10, and 12

Methamphetamine



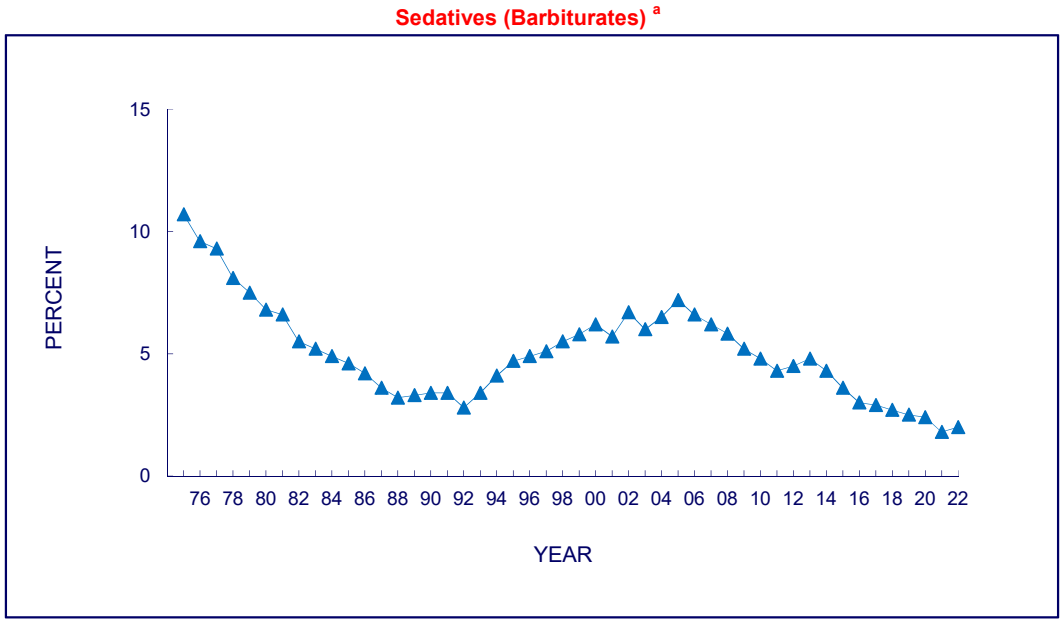
Crystal Methamphetamine (Ice) [a]



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

[a]Eighth and 10th graders are not asked about crystal methamphetamine use.

FIGURE 5-4l
SEDATIVES (BARBITURATES)
Trends in Annual Prevalence in Grade 12



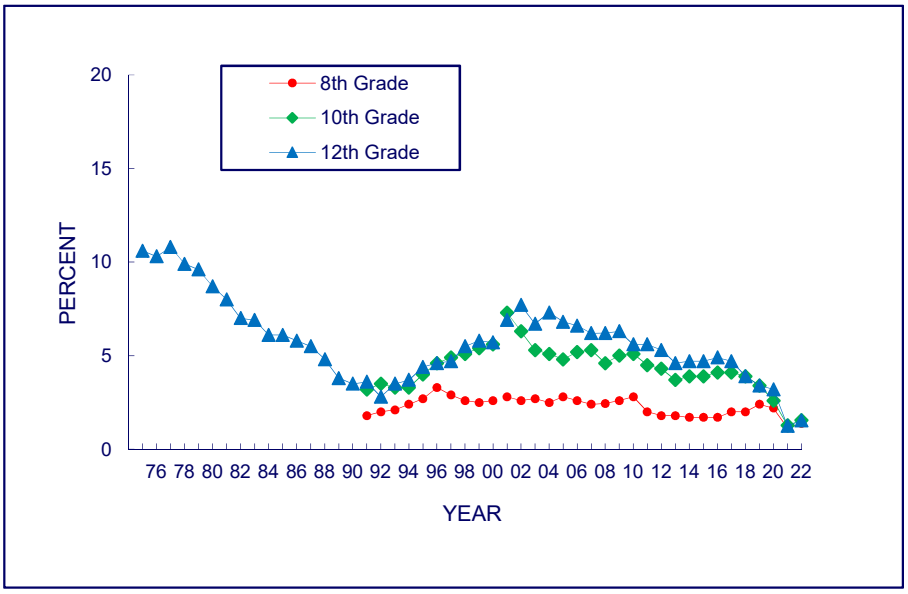
Source. The Monitoring the Future study, the University of Michigan.

[a]In 2004 the question text was changed. Goofballs, yellows, reds, blues, and rainbows were deleted from the list of examples. Phenobarbital, Tuinal, and Seconal were added. An examination of the data did not show any effect from the wording change.

FIGURE 5-4m

TRANQUILIZERS[a]

Trends in Annual Prevalence in Grades 8, 10, and 12



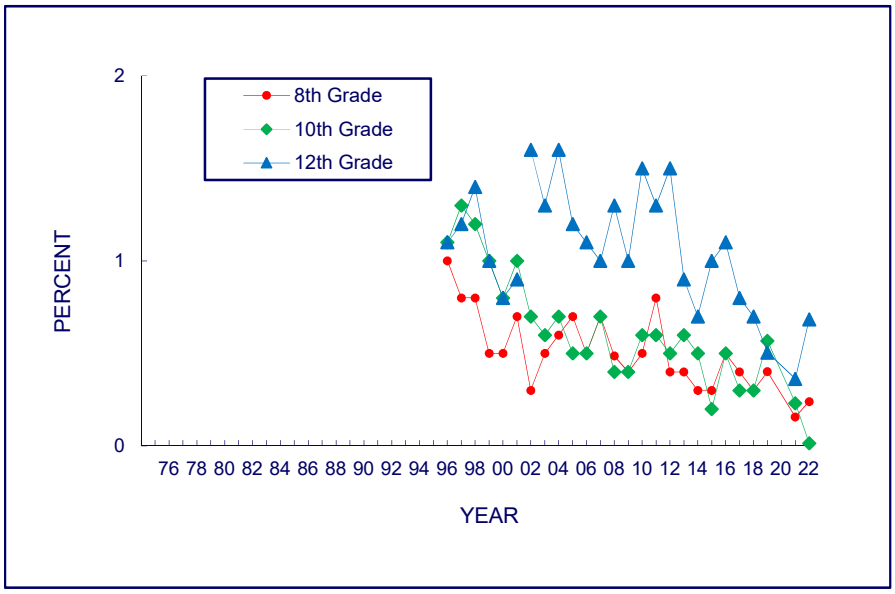
Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2001, a revised set of questions on tranquilizer use was introduced in which Xanax replaced Miltown in the list of examples. From 2001 on data points are based on the revised question.

FIGURE 5-4n

ROHYPNOL[a,b]

Trends in Annual Prevalence in Grades 8, 10, and 12



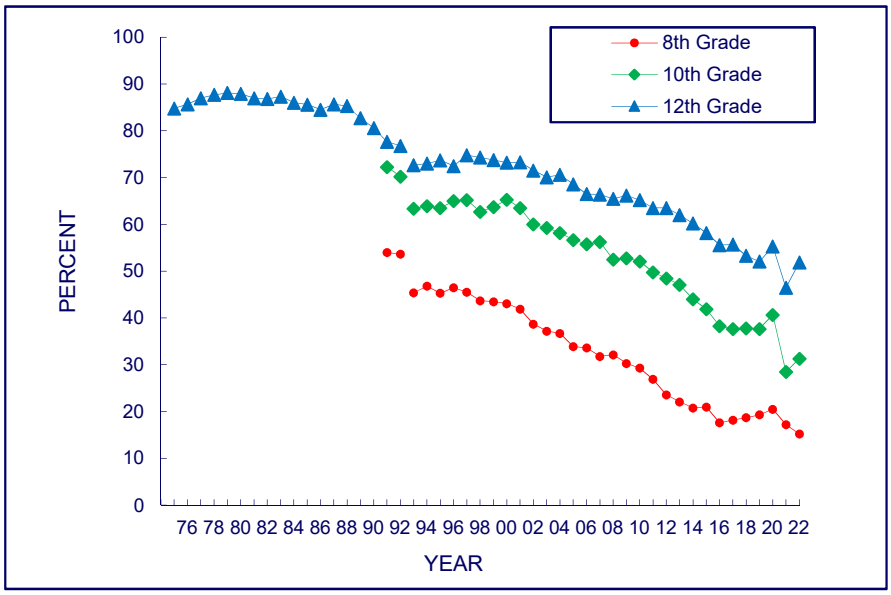
Source. The Monitoring the Future study, the University of Michigan.

[a]For 12th graders only, Rohypnol data for 2001 are not comparable with data for 2002 due to changes in the questionnaire forms.

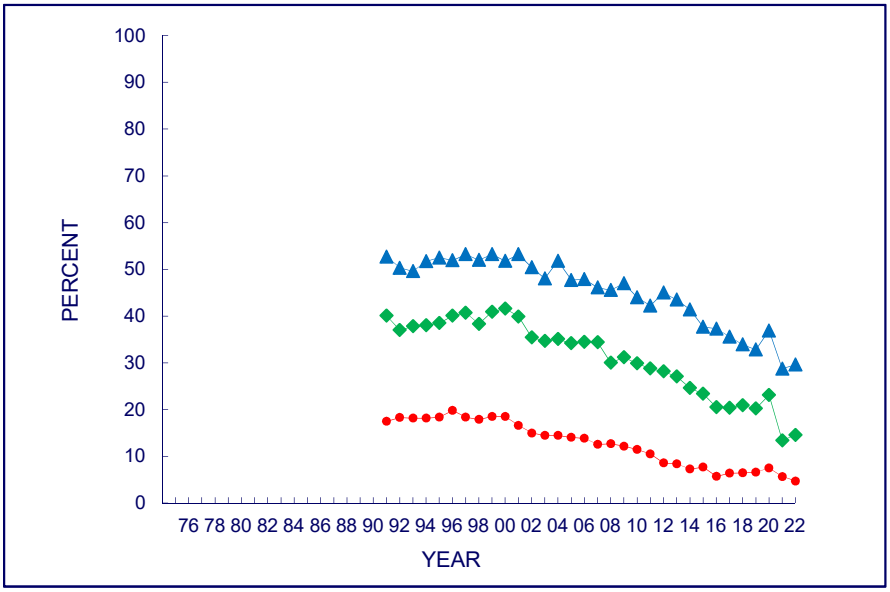
[b]Estimates not presented in 2020 due to insufficient data.

FIGURE 5-4o
ALCOHOL AND BEEN DRUNK
Trends in Annual Prevalence in Grades 8, 10, and 12

Alcohol [a]



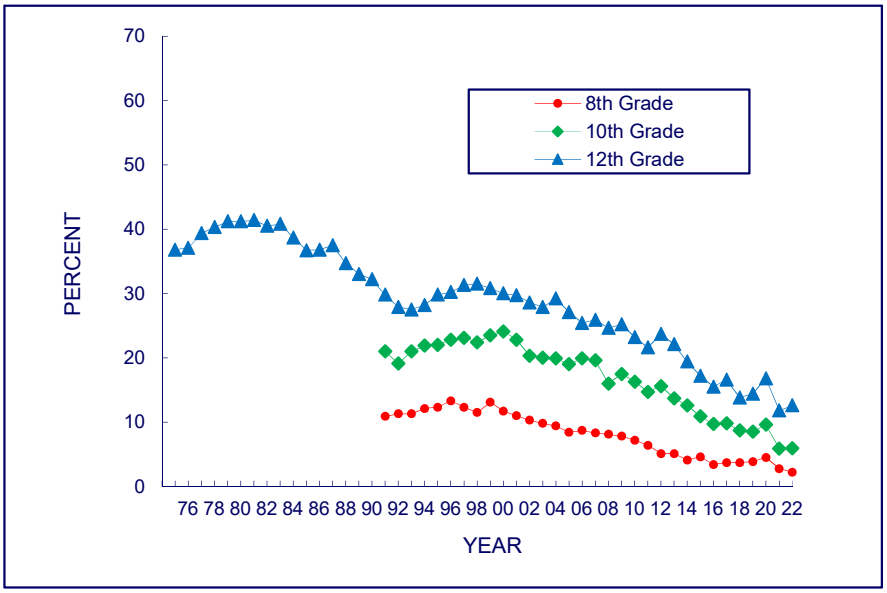
Been Drunk



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

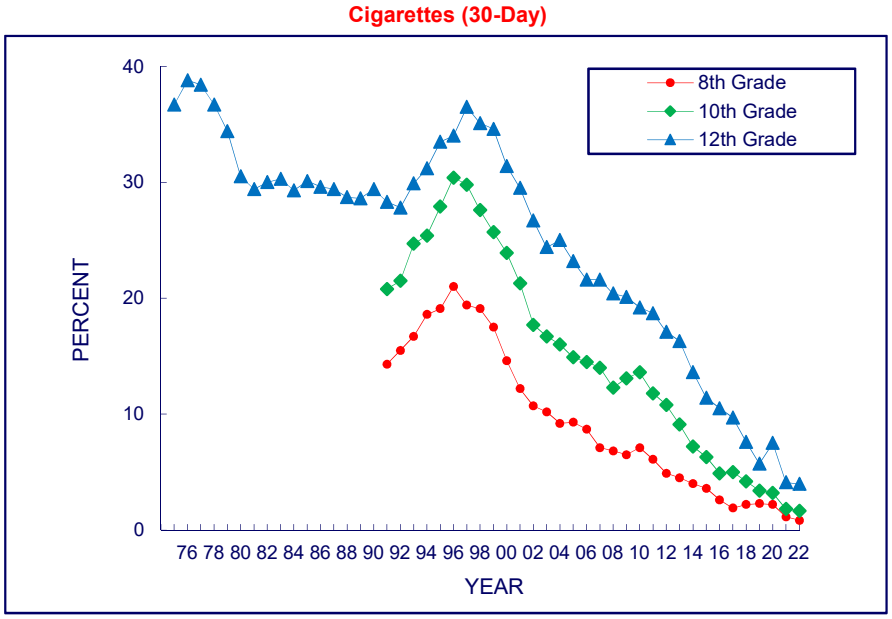
[a]In 1993, a revised set of questions on alcohol use was introduced indicating that a drink meant more than a few sips. From 1993 on, data points are based on the revised question.

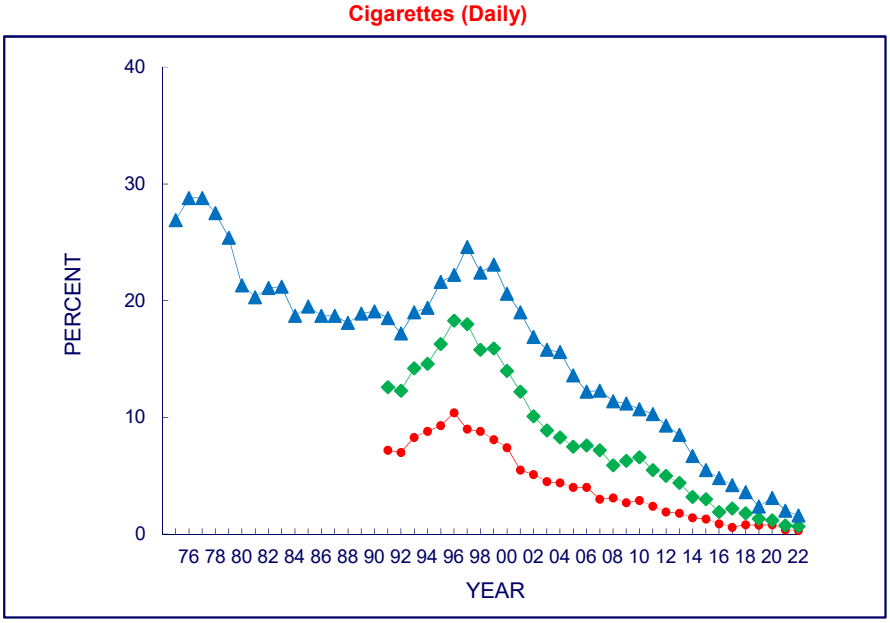
FIGURE 5-4p
FIVE OR MORE DRINKS IN A ROW
Trends in 2-Week Prevalence in Grades 8, 10, and 12



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

FIGURE 5-4q
CIGARETTES
Trends in 30-Day Prevalence and 30-Day Prevalence of Daily Use in Grades 8, 10, and 12

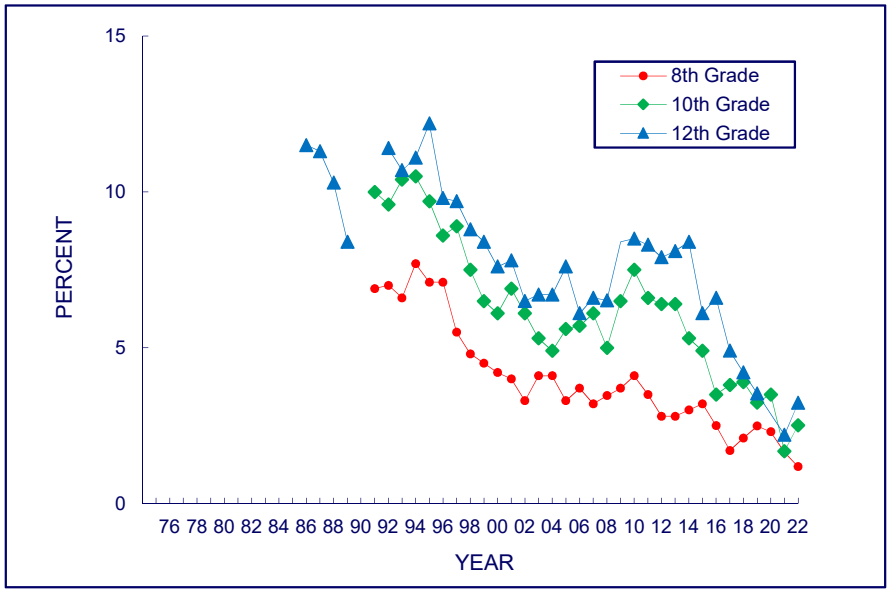




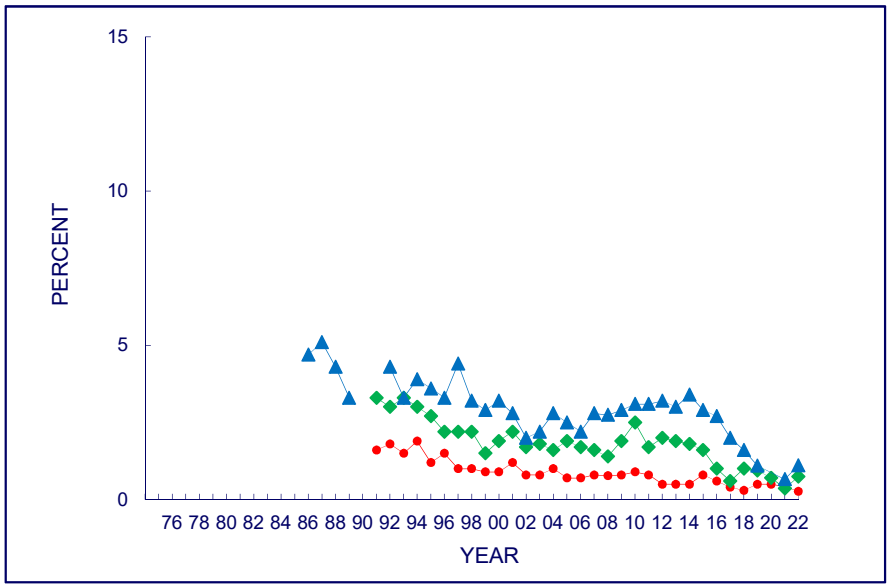
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 5-4r
SMOKELESS TOBACCO
Trends in 30-Day Prevalence and 30-Day Prevalence of Daily Use in Grades 8, 10, and 12

Smokeless Tobacco (30-Day) [b]



Smokeless Tobacco (Daily) [a,b]

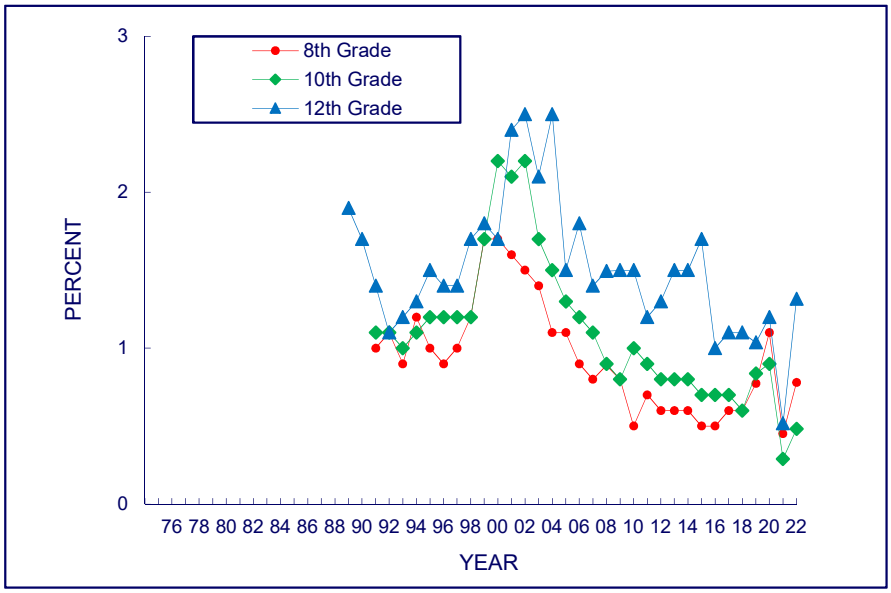


Source. The Monitoring the Future study, the University of Michigan.

[a]Twelfth graders: Smokeless tobacco data not available in 1990 or 1991.

[b]This estimate not presented for 12th graders in 2020 due to insufficient data.

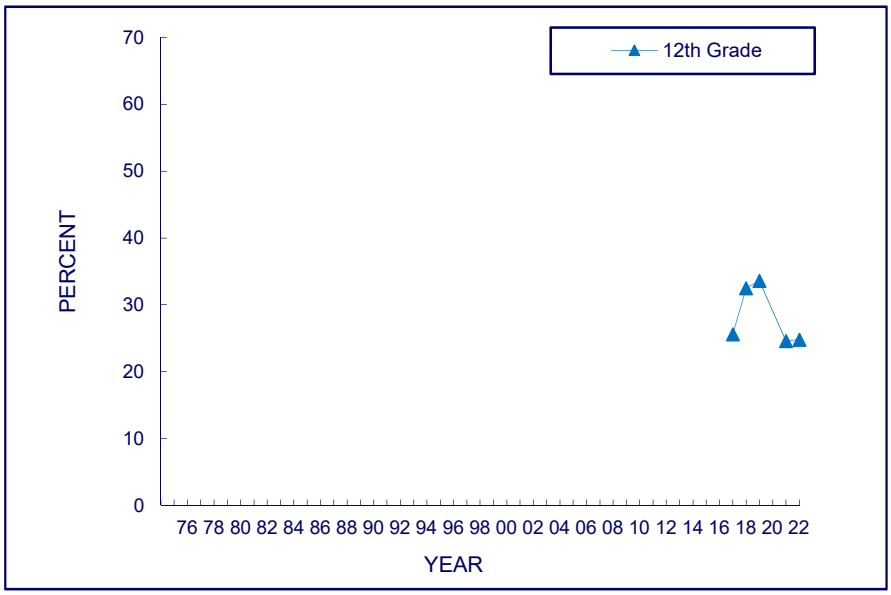
FIGURE 5-4s
STEROIDS
Trends in Annual Prevalence in Grades 8, 10, and 12



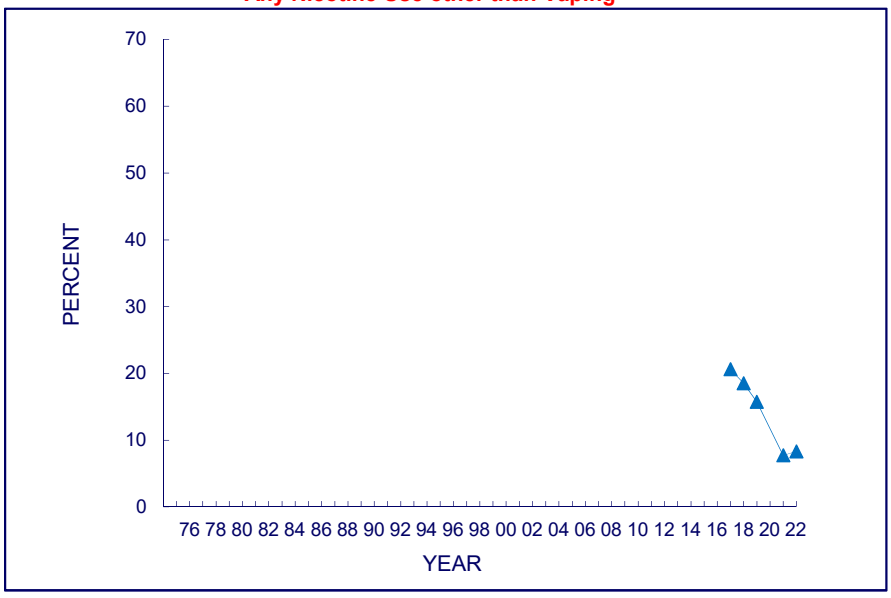
Source. The Monitoring the Future study, the University of Michigan.

FIGURE 5-4t
ANY NICOTINE USE AND
ANY NICOTINE USE OTHER THAN VAPING
Trends in 30-Day Prevalence
in Grade 12

Any Nicotine Use [a,c]



Any Nicotine Use other than Vaping [b,c]



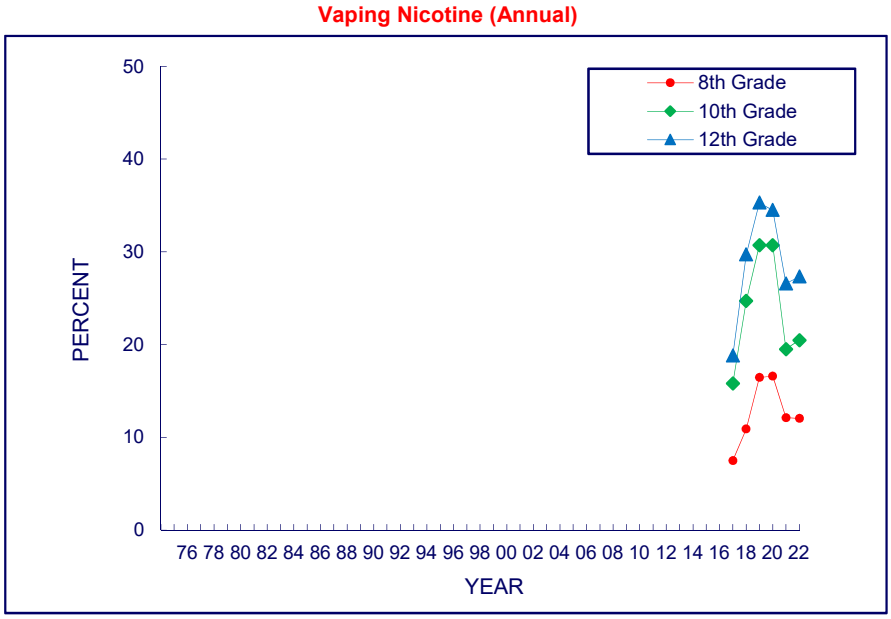
Source. The Monitoring the Future study, the University of Michigan.

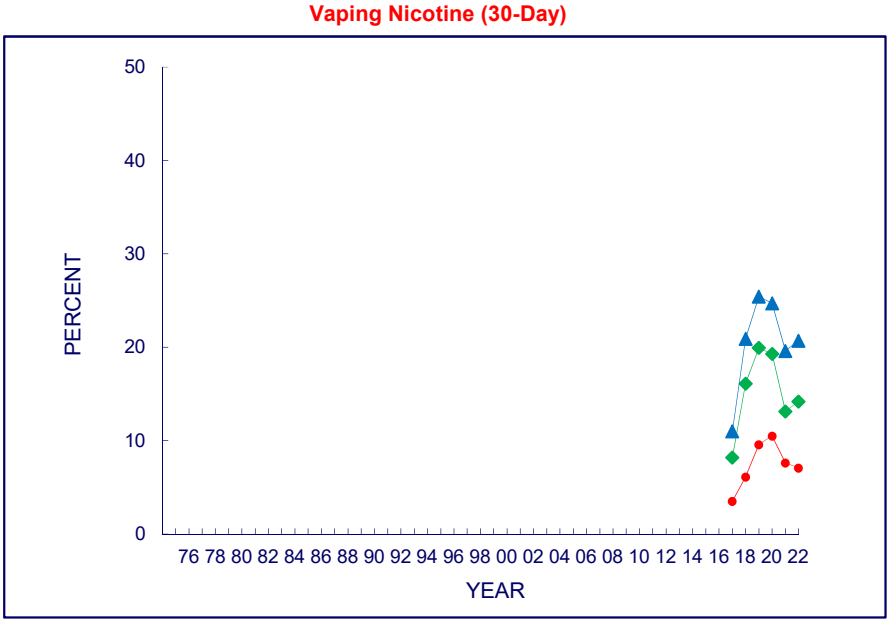
[a]Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, smokeless tobacco, or vaping nicotine.

[b]Includes use of any of the following: cigarettes, large cigars, flavored small cigars, regular small cigars, tobacco using a hookah, or smokeless tobacco.

[c]This estimate not presented in 2020 due to insufficient data.

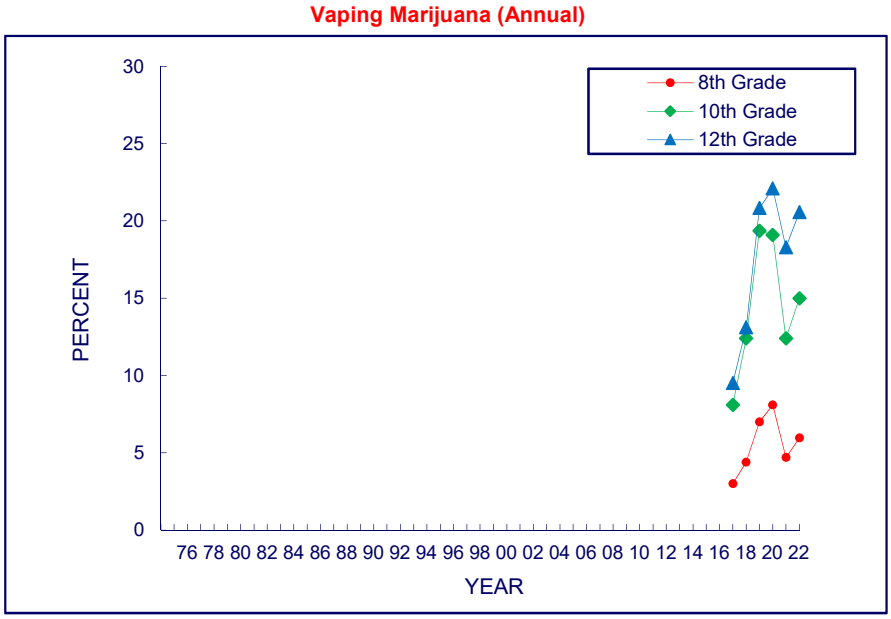
FIGURE 5-4u
VAPING NICOTINE
Trends in Annual and 30-Day Prevalence in Grades 8, 10, and 12

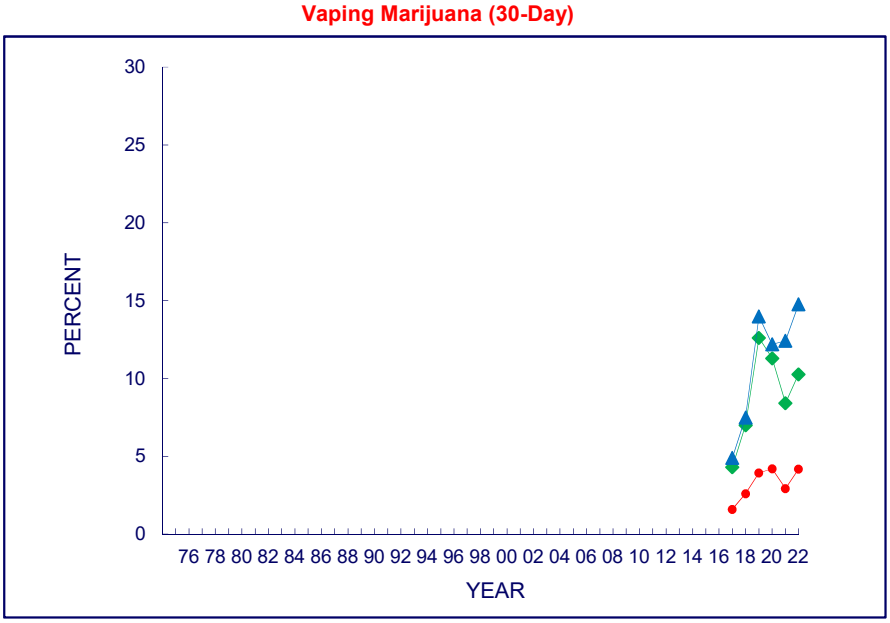




Source. The Monitoring the Future study, the University of Michigan.

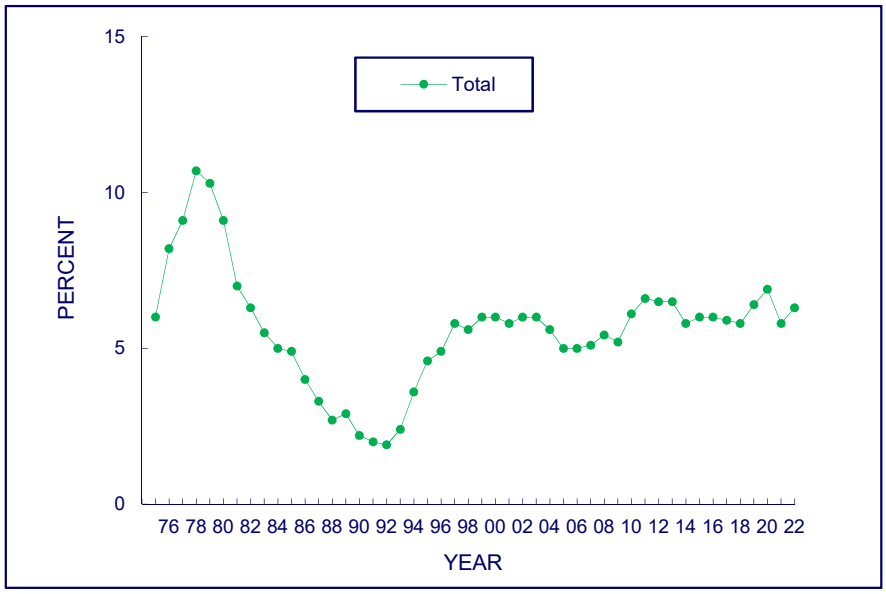
FIGURE 5-4v
VAPING MARIJUANA
Trends in Annual and 30-Day Prevalence in Grades 8, 10, and 12

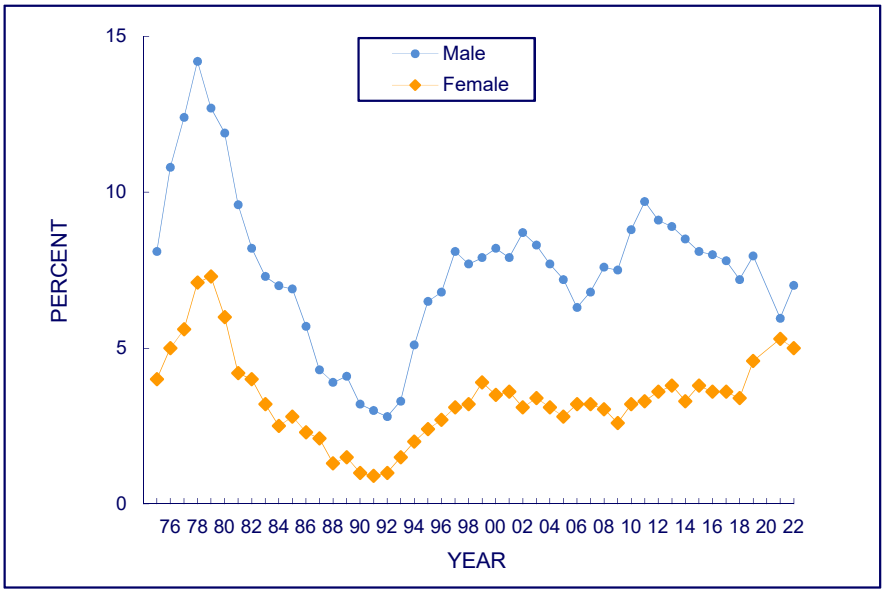




Source. The Monitoring the Future study, the University of Michigan.

FIGURE 5-5a
MARIJUANA
Trends in 30-Day Prevalence of Daily Use in Grade 12
by Total and by Gender [a]



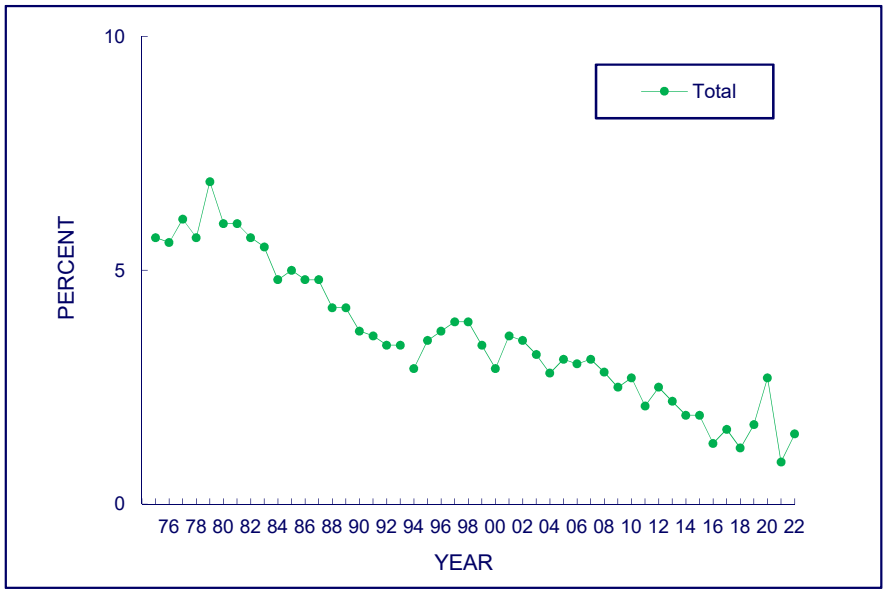


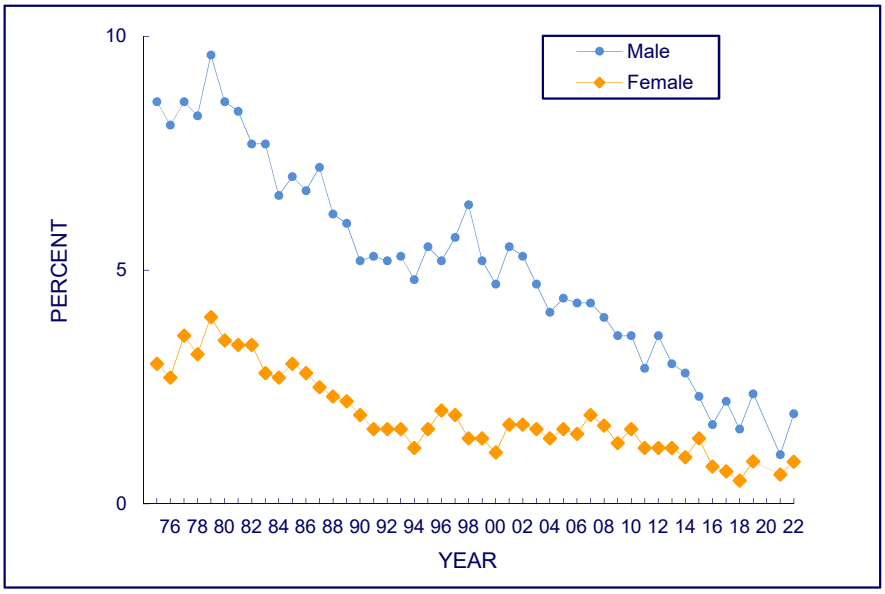
Source. The Monitoring the Future study, the University of Michigan.

Note. Daily use for marijuana is defined as use on 20 or more occasions in the last 30 days.

[a]Estimates not presented by gender in 2020 due to insufficient data.

FIGURE 5-5b
ALCOHOL [a]
Trends in 30-Day Prevalence of Daily Use in Grade 12
by Total and by Gender [b]





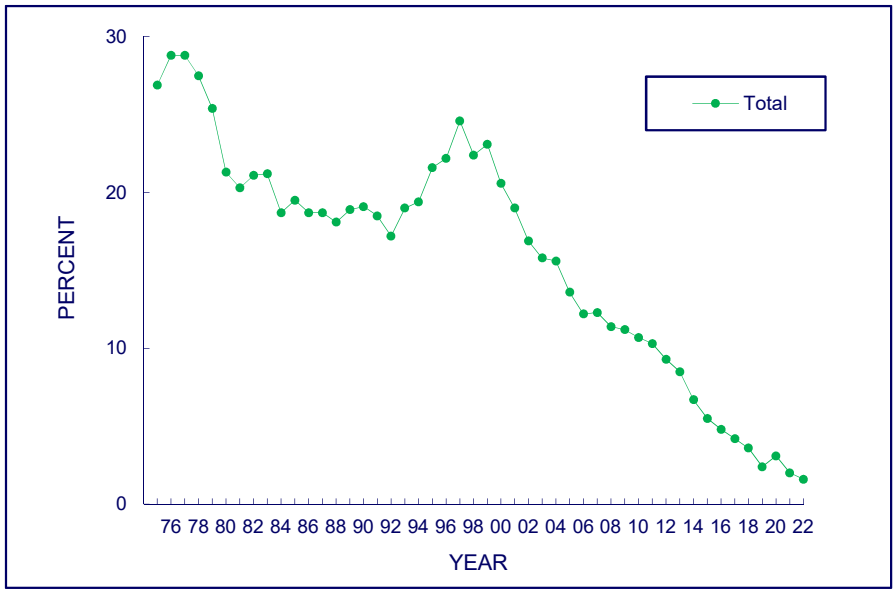
Source. The Monitoring the Future study, the University of Michigan.

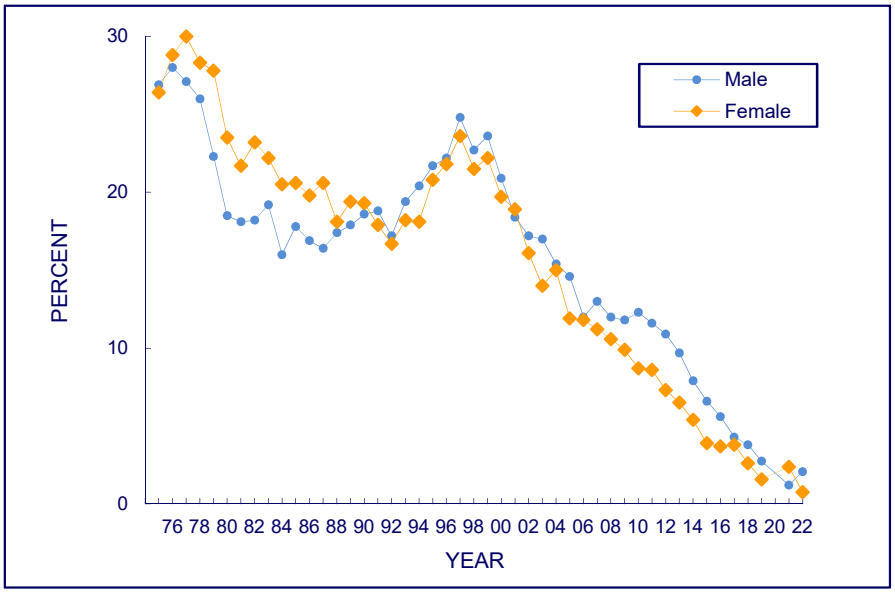
Note. Daily use for alcohol is defined as use on 20 or more occasions in the last 30 days.

[a]In 1993, a revised set of questions on alcohol use was introduced indicating that a drink meant more than a few sips. From 1993 on, data points are based on the revised question.

[b]Estimates not presented by gender in 2020 due to insufficient data.

FIGURE 5-5c
CIGARETTES
Trends in 30-Day Prevalence of Daily Use in Grade 12 by Total and by Gender [a]



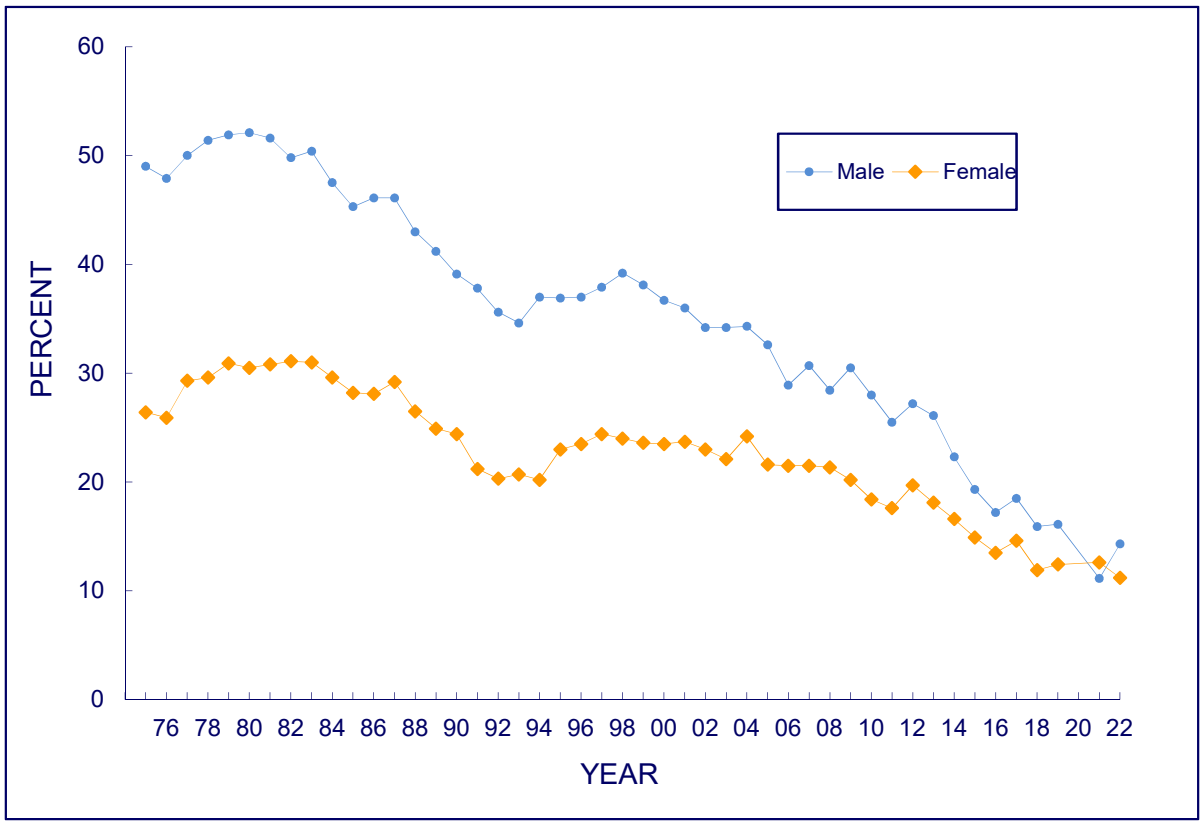


Source. The Monitoring the Future study, the University of Michigan.

Note. Daily use for cigarettes is defined as smoking one or more cigarettes per day in the last 30 days.

[a]Estimates not presented by gender in 2020 due to insufficient data.

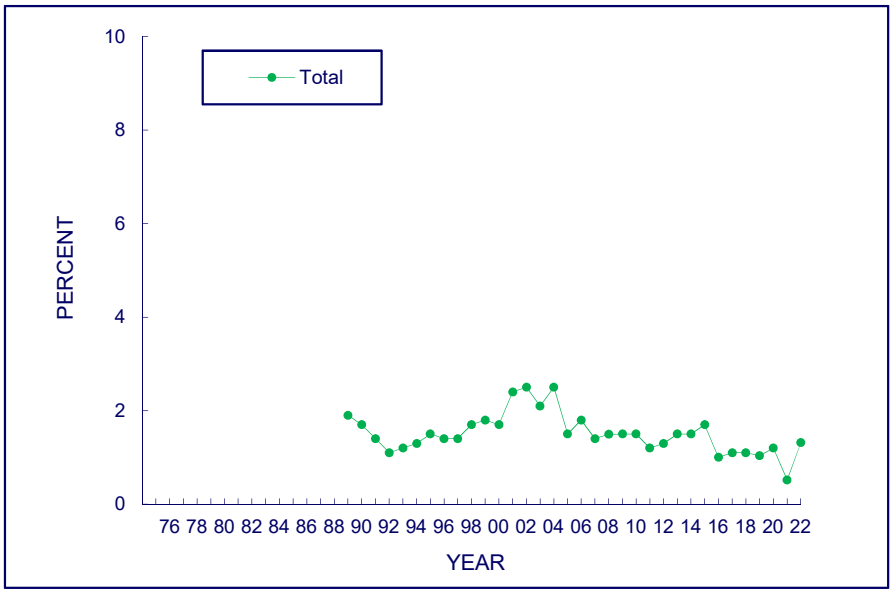
FIGURE 5-6a
ALCOHOL
Trends in 2-Week Prevalence of Heavy Drinking in Grade 12 by Gender [a]

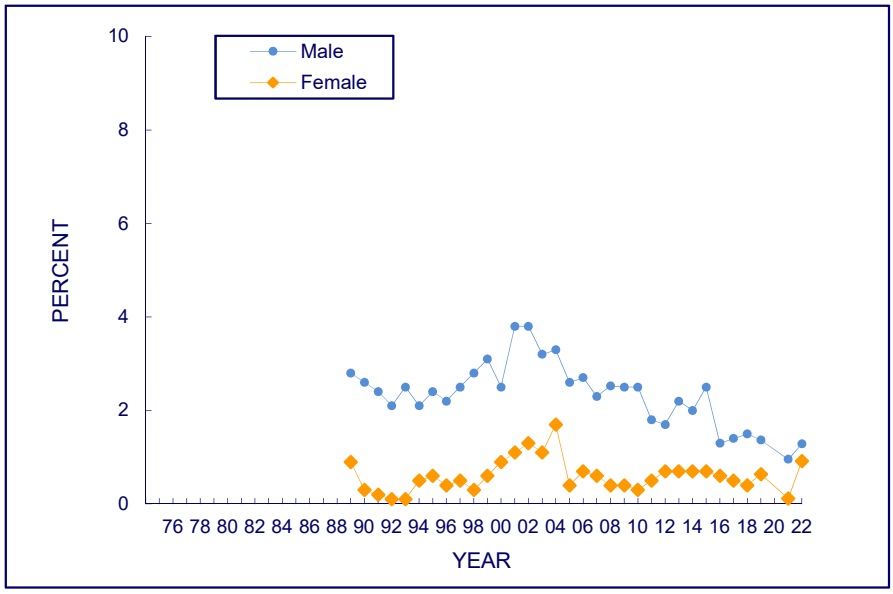


Source. The Monitoring the Future study, the University of Michigan.

[a]Estimates not presented by gender in 2020 due to insufficient data.

FIGURE 5-6b
STEROIDS
Trends in Annual Prevalence in Grade 12
by Total and by Gender [a]





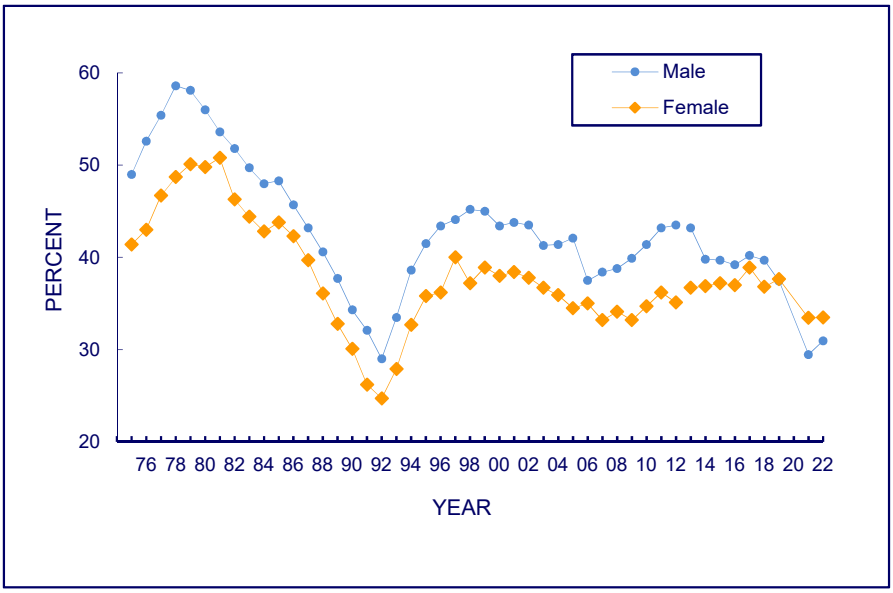
Source. The Monitoring the Future study, the University of Michigan.

Note. Daily use for marijuana is defined as use on 20 or more occasions in the last 30 days.

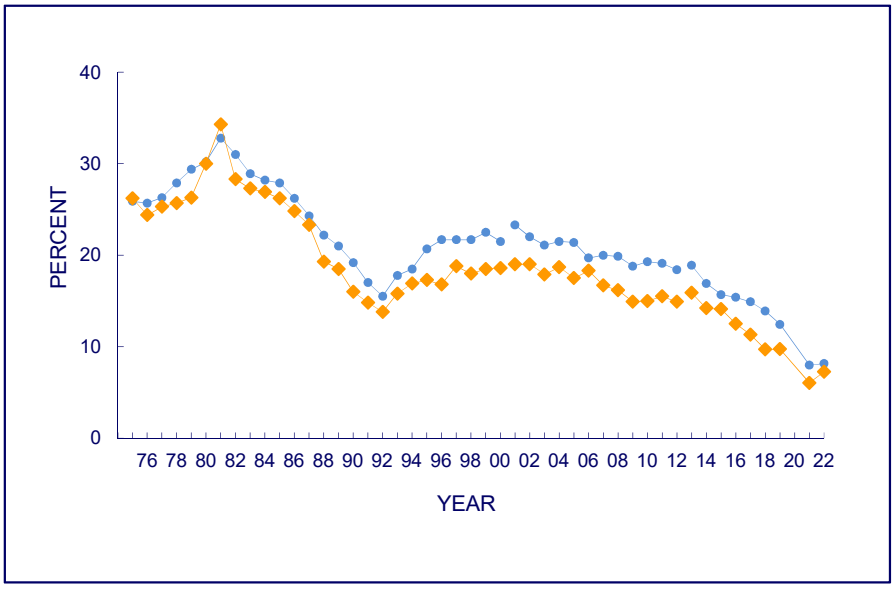
[a]Estimates not presented by gender in 2020 due to insufficient data.

FIGURE 5-7
AN ILLICIT DRUG USE INDEX
Trends in Annual Prevalence in Grade 12 by Gender [b]

Any Illicit Drug [a]



Any Illicit Drug other than Marijuana [a]



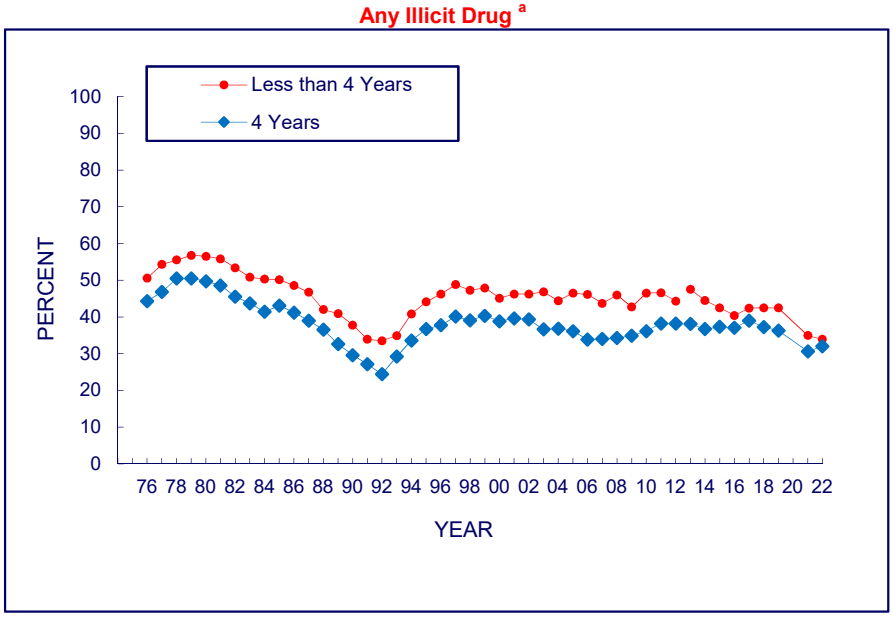
Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Data for any illicit drug other than marijuana are affected by these changes. In 2013, revised sets of questions on amphetamine use were introduced. Any illicit drug and any illicit drug other than marijuana are affected by this change.

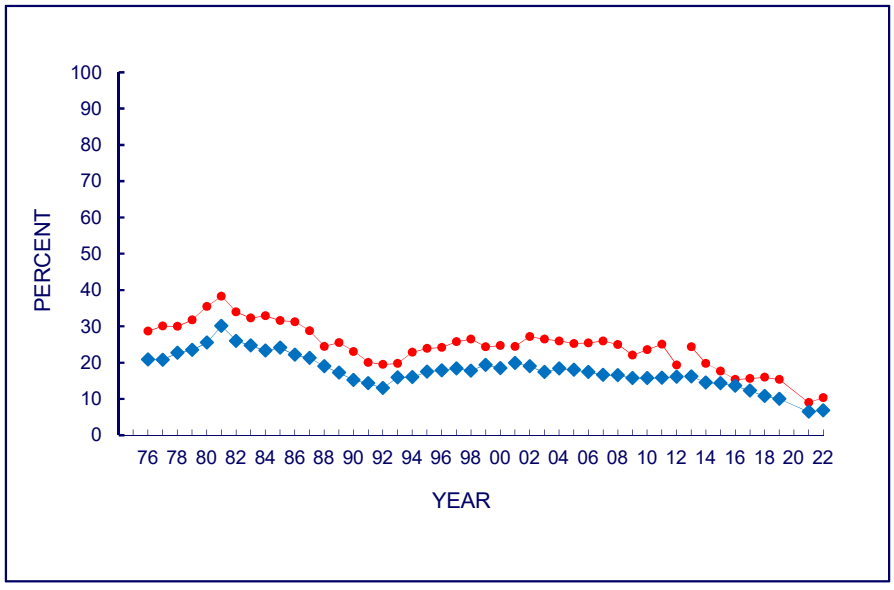
[b]Estimates not presented by gender in 2020 due to insufficient data.

FIGURE 5-8
AN ILLICIT DRUG USE INDEX
Trends in Annual Prevalence in Grade 12
by College Plans [b]

Any Illicit Drug [a]



Any Illicit Drug other than Marijuana [a]

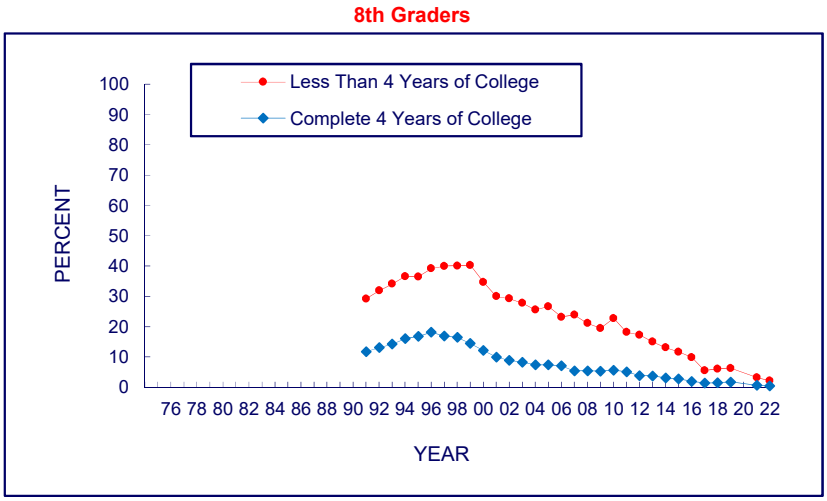


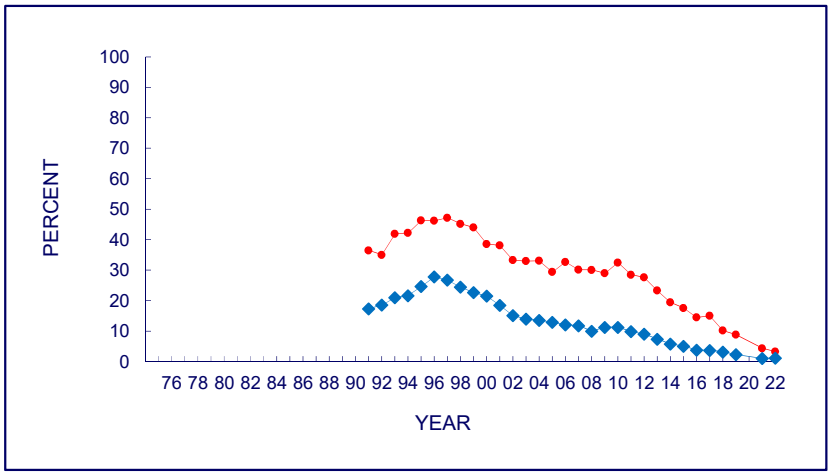
Source. The Monitoring the Future study, the University of Michigan.

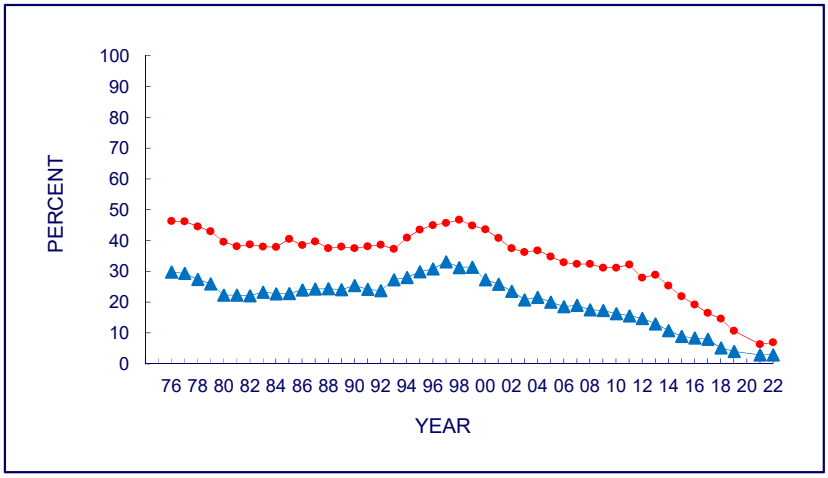
[a]Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Data for any illicit drug other than marijuana are affected by these changes. In 2013, revised sets of questions on amphetamine use were introduced. Any illicit drug and any illicit drug other than marijuana are affected by this change.

[b]Estimates not presented by college plans in 2020 due to insufficient data.

FIGURE 5-9
CIGARETTES
Trends in 30-Day Prevalence in Grades 8, 10, and 12 by College Plans [a]



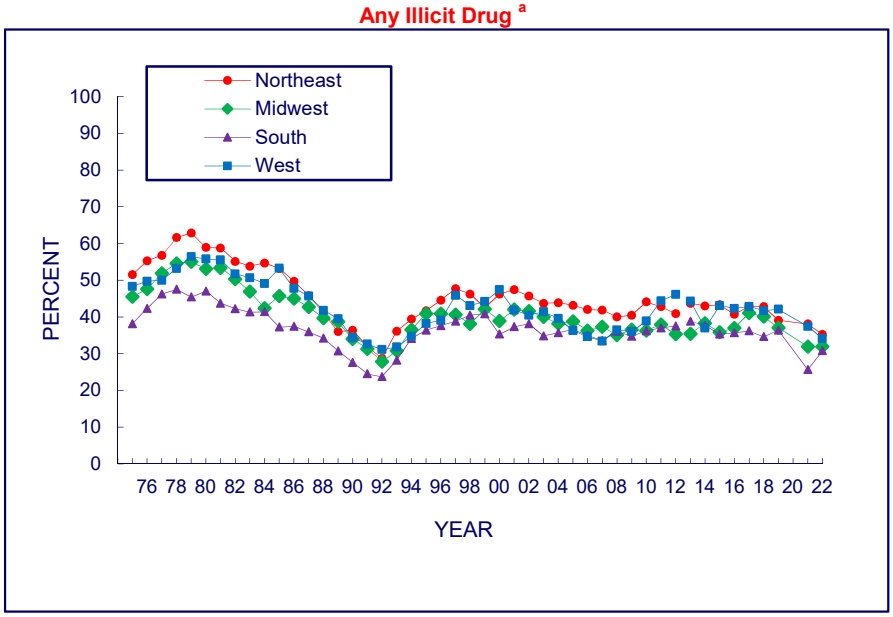


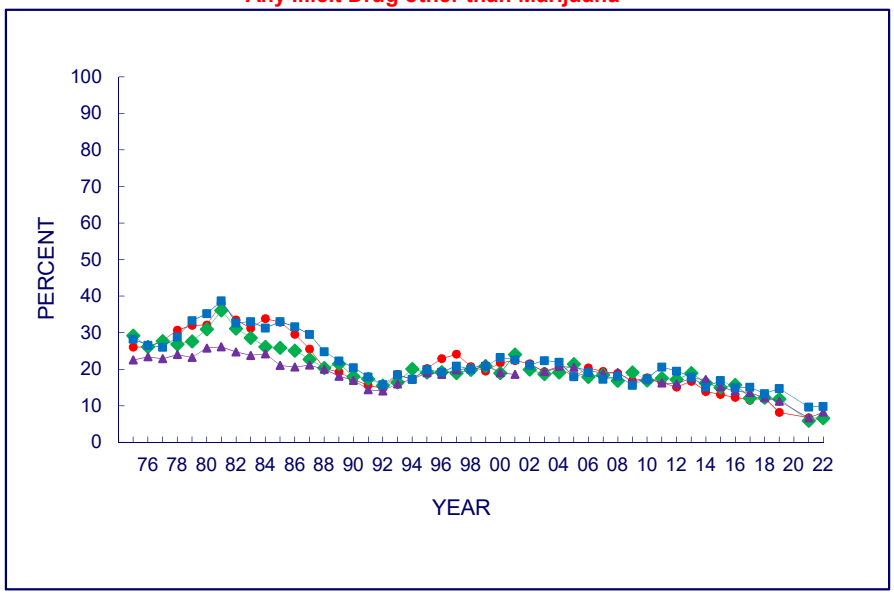


Source. The Monitoring the Future study, the University of Michigan.

[a]Estimates not presented by college plans in 2020 due to insufficient data.

FIGURE 5-10a
AN ILLICIT DRUG USE INDEX
Trends in Annual Prevalence in Grade 12
by Region of the Country [b]



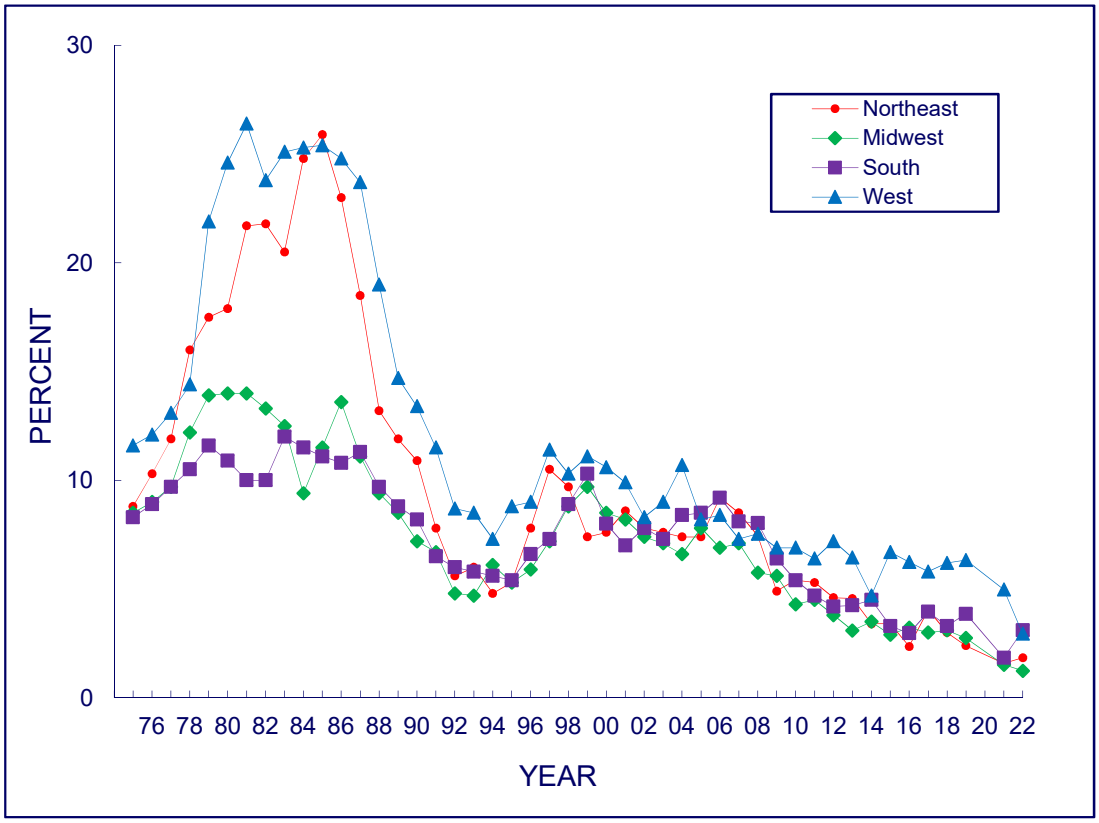


Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Data for any illicit drug other than marijuana are affected by these changes. In 2013, revised sets of questions on amphetamine use were introduced. Any illicit drug and any illicit drug other than marijuana are affected by this change.

[b]Estimates not presented by geographic region in 2020 due to insufficient data.

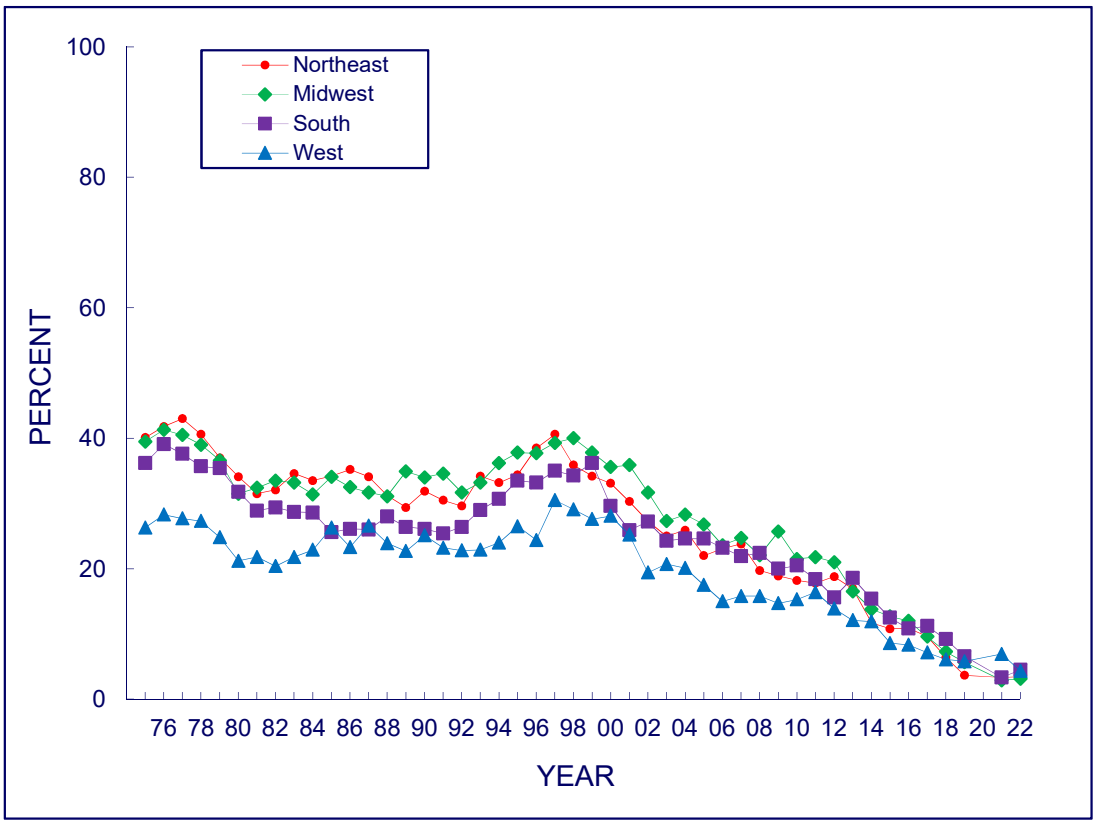
FIGURE 5-10b
COCAINE
Trends in Lifetime Prevalence in Grade 12
by Region of the Country [a]



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

[a]Estimates not presented by geographic region in 2020 due to insufficient data.

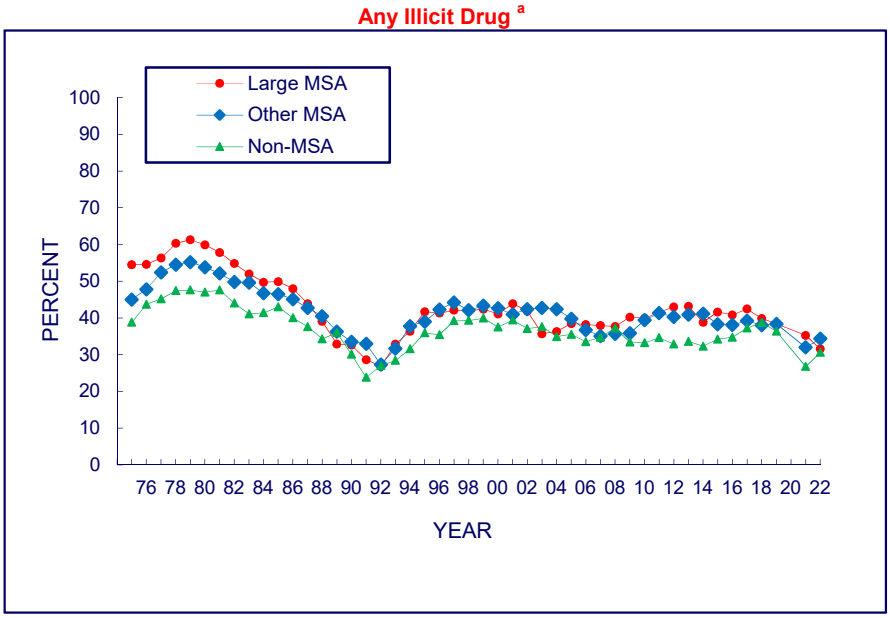
FIGURE 5-10c
CIGARETTES
Trends in 30-Day Prevalence in Grade 12
by Region of the Country [a]

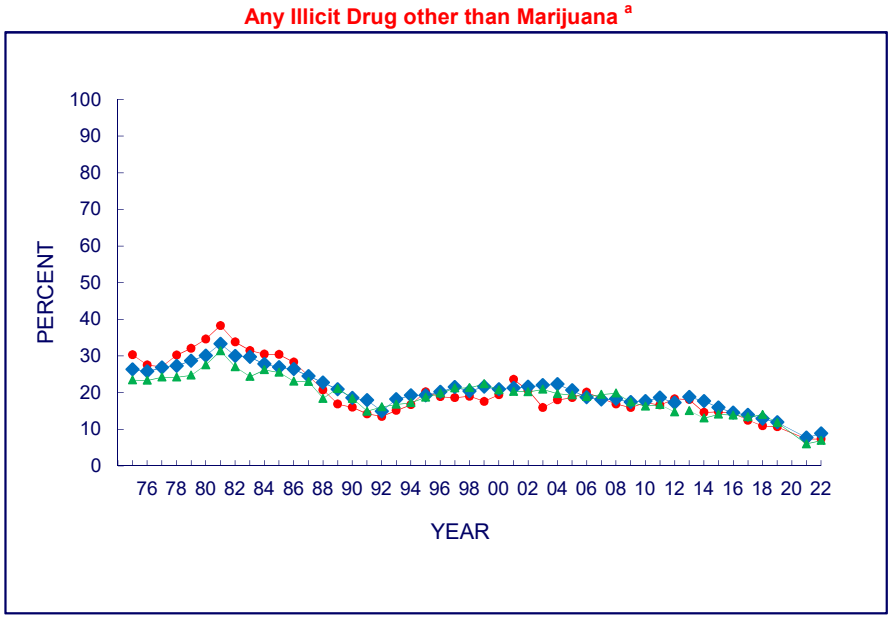


Source. The Monitoring the Future study, the University of Michigan.

[a]Estimates not presented by geographic region in 2020 due to insufficient data.

FIGURE 5-11a
AN ILLICIT DRUG USE INDEX
Trends in Annual Prevalence in Grade 12
by Population Density [b]





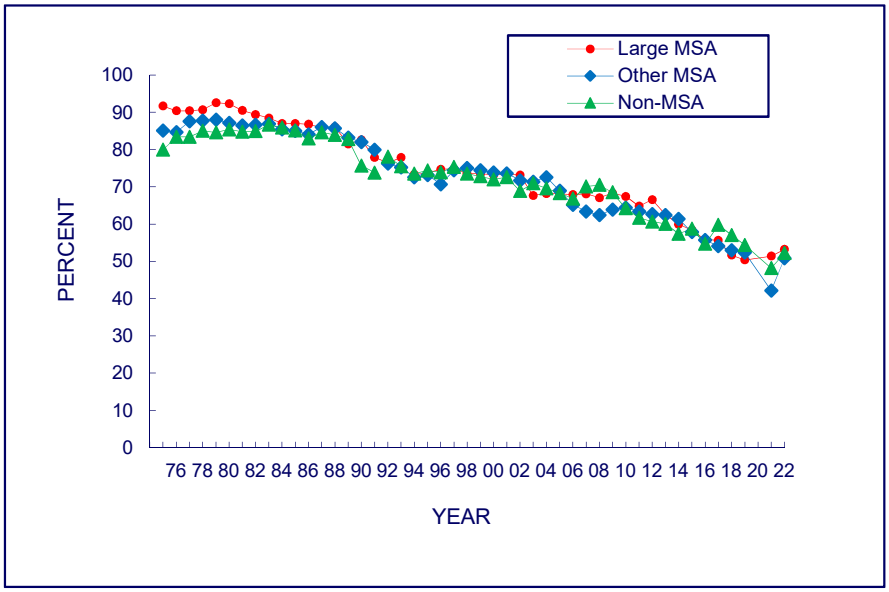
Source. The Monitoring the Future study, the University of Michigan.

[a]Beginning in 2001, revised sets of questions on other hallucinogen and tranquilizer use were introduced. Data for any illicit drug other than marijuana are affected by these changes. In 2013, revised sets of questions on amphetamine use were introduced. Any illicit drug and any illicit drug other than marijuana are affected by this change.

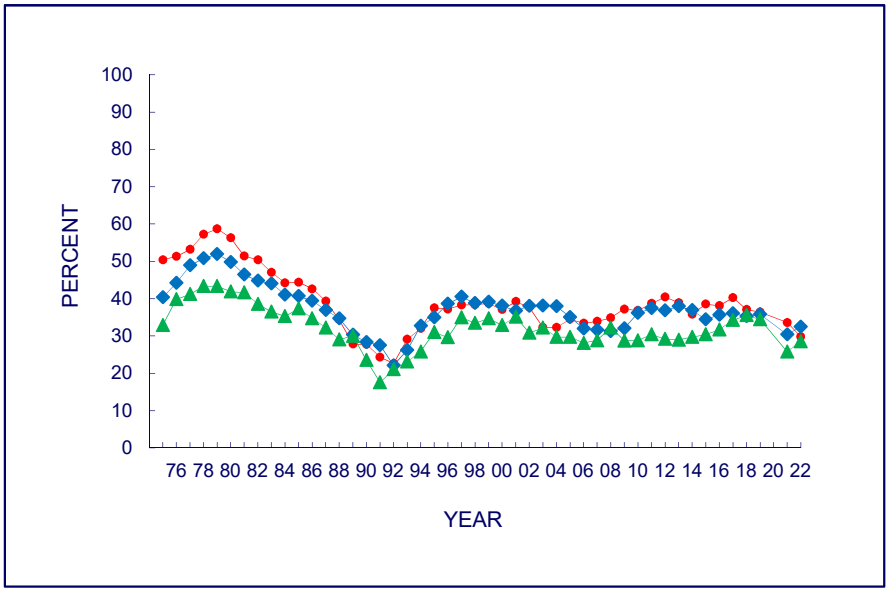
[b]Estimates not presented by population density in 2020 due to insufficient data.

FIGURE 5-11b
ALCOHOL AND MARIJUANA
Trends in Annual Prevalence in Grade 12
by Population Density [b]

Alcohol [a]



Marijuana

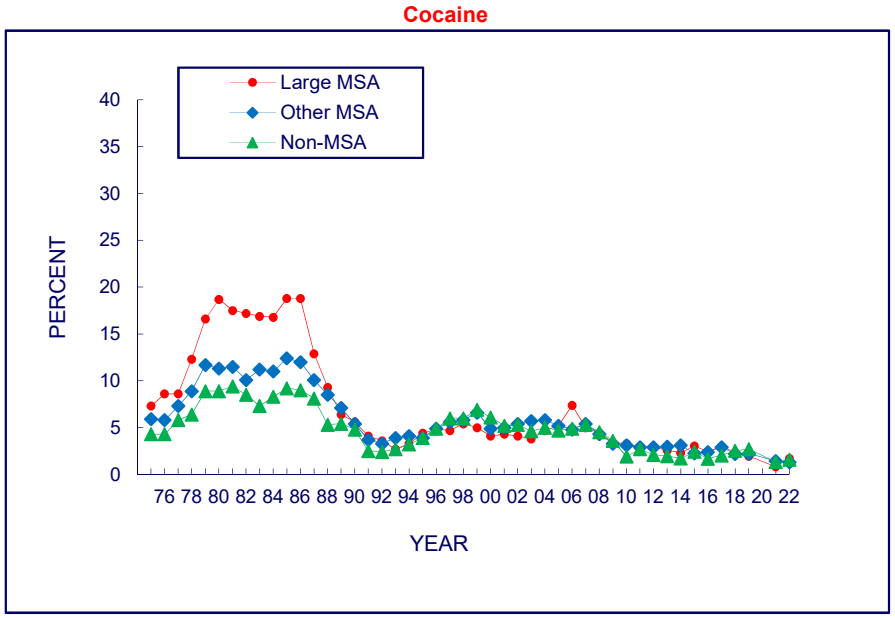


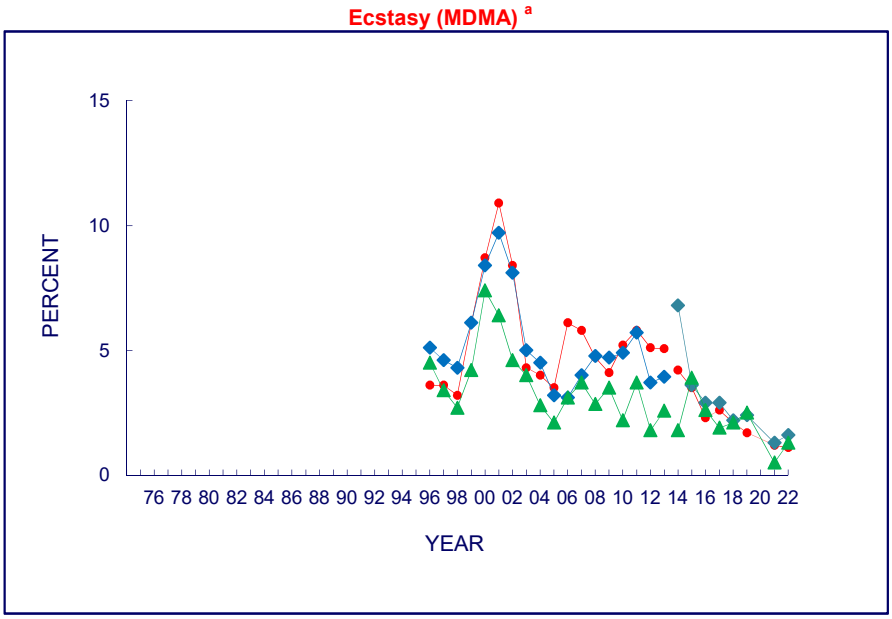
Source. The Monitoring the Future study, the University of Michigan.

[a]In 1993, a revised set of questions on alcohol use was introduced indicating that a drink meant more than a few sips. From 1993 on, data points are based on the revised question.

[b]Estimates not presented by population density in 2020 due to insufficient data.

FIGURE 5-11c
COCAINE AND ECSTASY (MDMA)
Trends in Annual Prevalence in Grade 12
by Population Density [b]



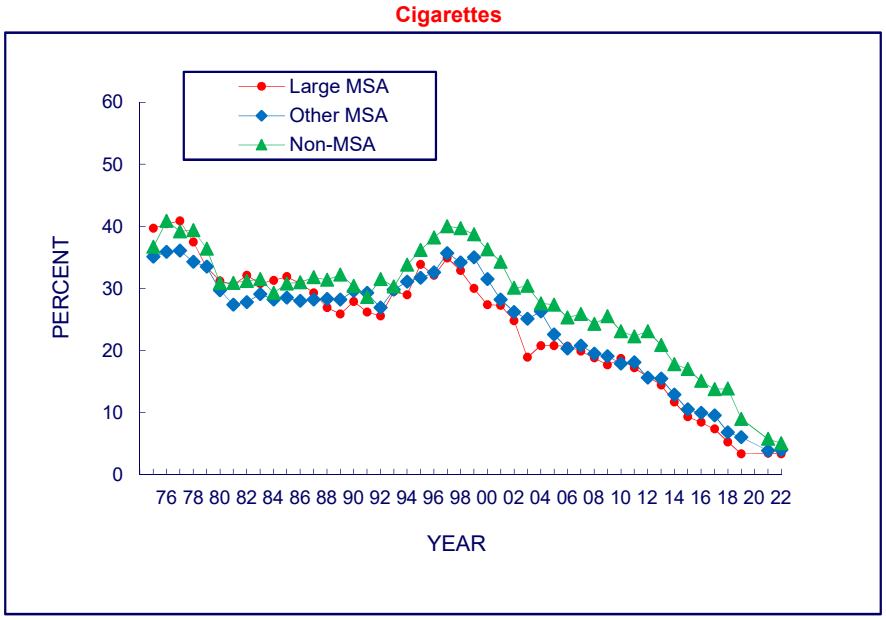


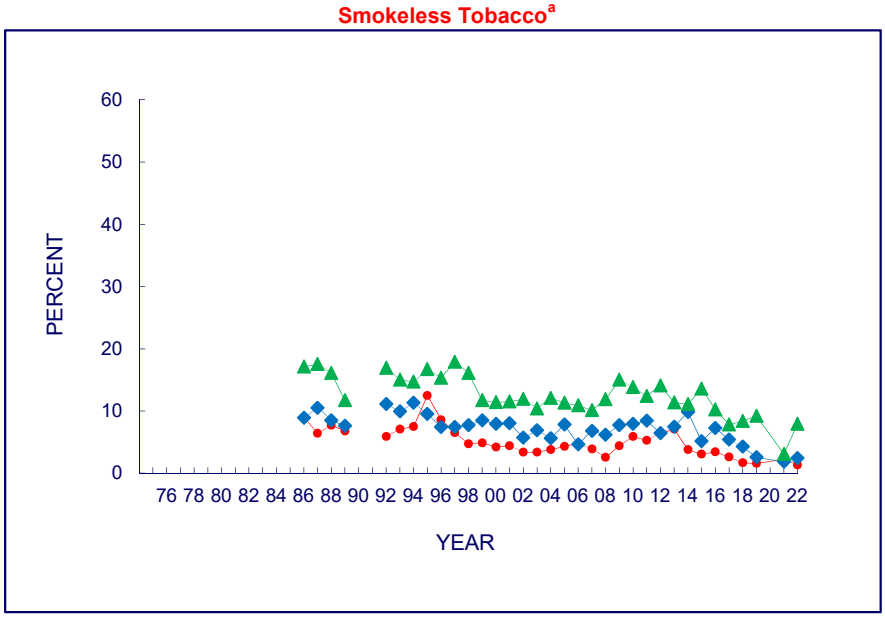
Source. The Monitoring the Future study, the University of Michigan.

[a]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.

[b]Estimates not presented by population density in 2020 due to insufficient data.

FIGURE 5-11d
CIGARETTES AND SMOKELESS TOBACCO
Trends in 30-Day Prevalence in Grade 12
by Population Density [b]



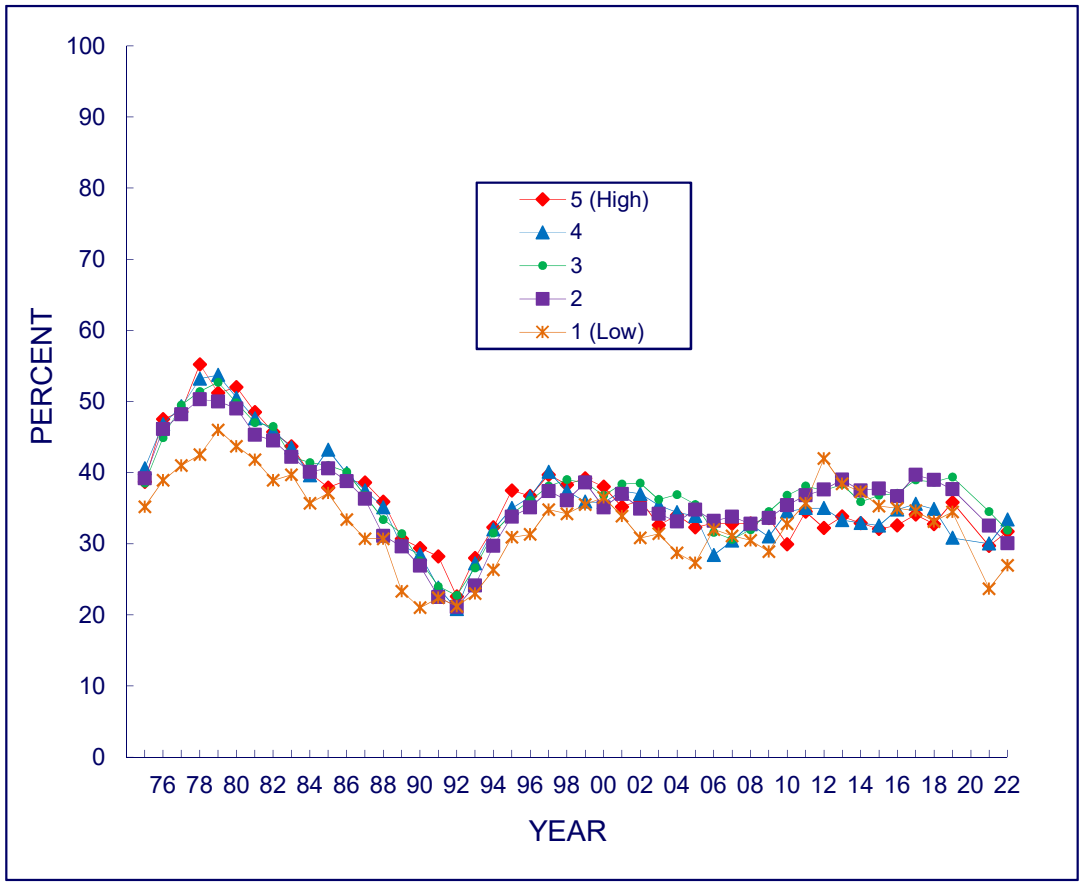


Source. The Monitoring the Future study, the University of Michigan.

[a]The question on smokeless tobacco was not asked in 1990 or 1991.

[b]Estimates not presented by population density in 2020 due to insufficient data.

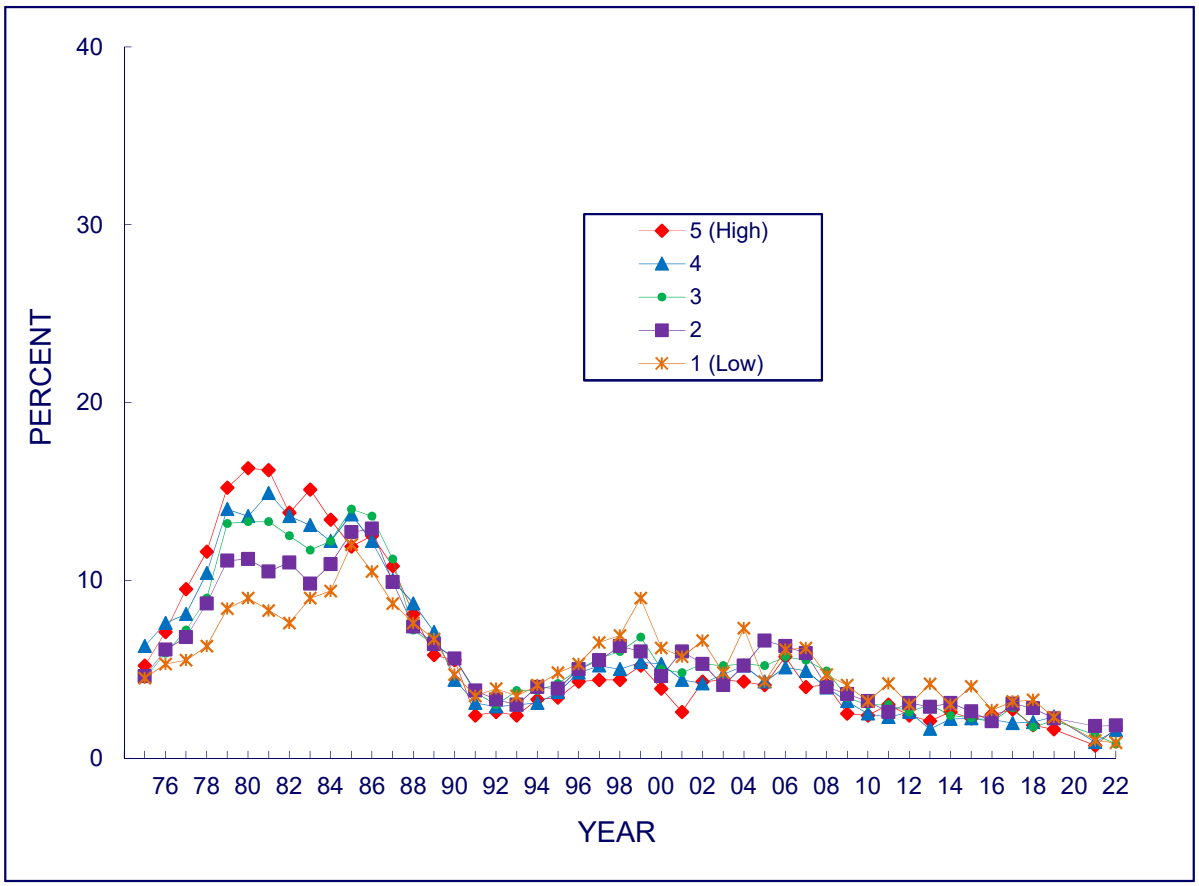
FIGURE 5-12a
MARIJUANA
Trends in Annual Prevalence in Grade 12
by Average Education of Parents [a]



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

[a]Estimates not presented by parental education in 2020 due to insufficient data.

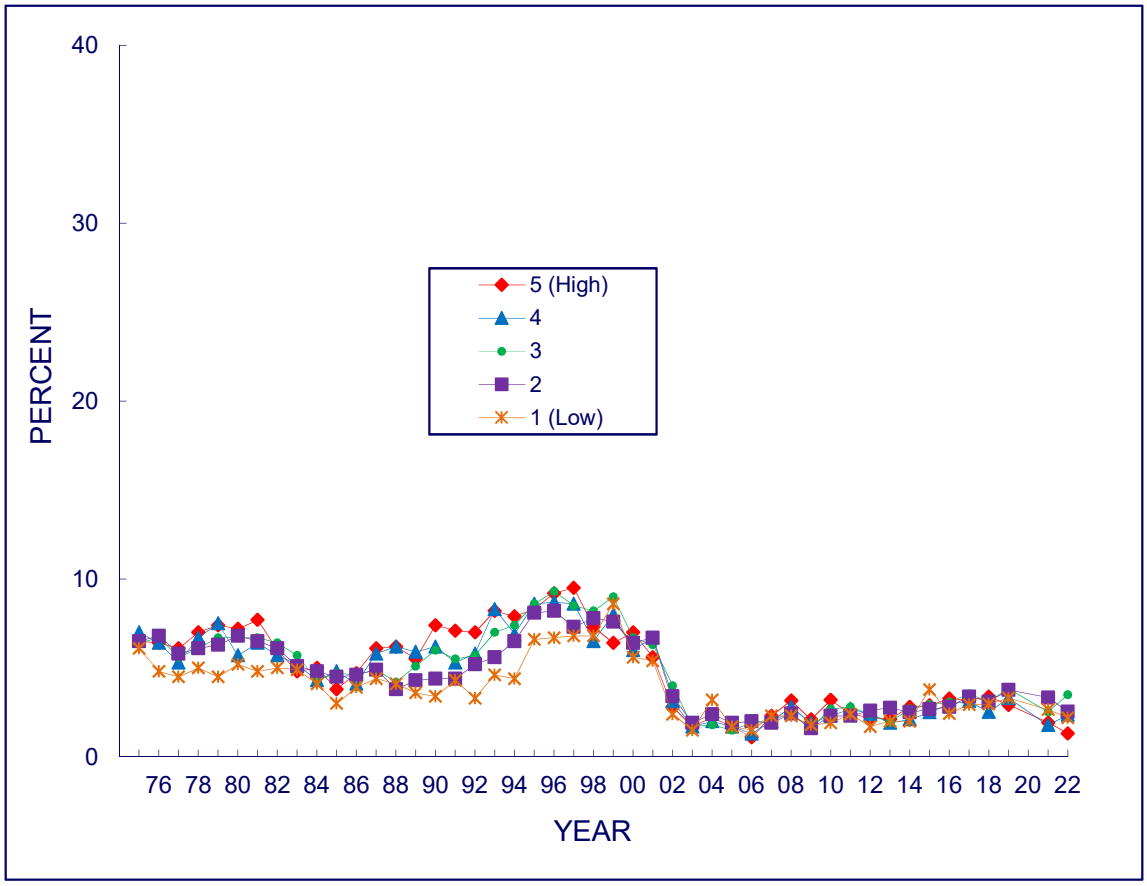
FIGURE 5-12b
COCAINE
Trends in Annual Prevalence in Grade 12
by Average Education of Parents [a]



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

[a]Estimates not presented by parental education in 2020 due to insufficient data.

FIGURE 5-12c
LSD
Trends in Annual Prevalence in Grade 12
by Average Education of Parents [a]



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

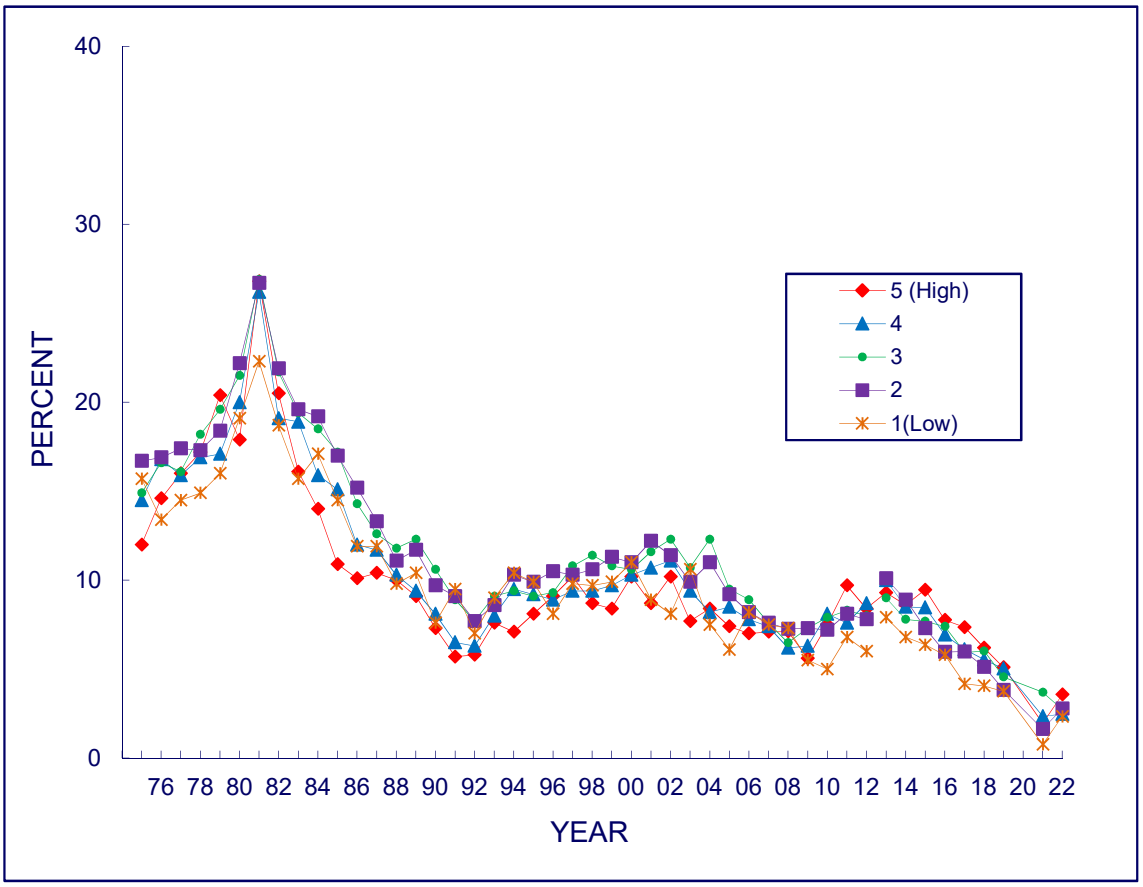
[a]Estimates not presented by parental education in 2020 due to insufficient data.

FIGURE 5-12d

AMPHETAMINES[a]

Trends in Annual Prevalence in Grade 12

by Average Education of Parents [b]



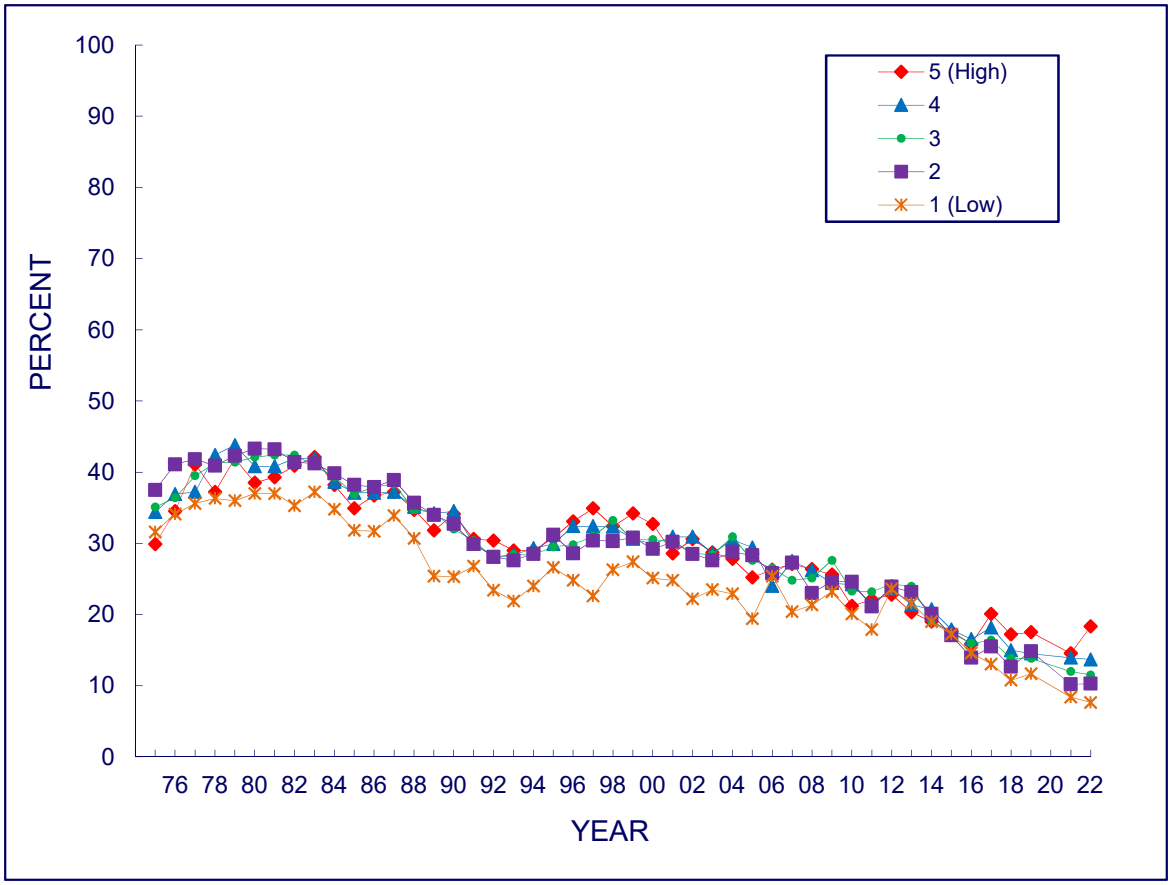
Source. The Monitoring the Future study, the University of Michigan.

Note. Beginning in 1982, the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of nonprescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

[a]In 2013, the text was changed on some of the questionnaire forms for all three grades, with the remaining forms changed in 2014. Data presented here include only the changed forms.

[b]Estimates not presented by parental education in 2020 due to insufficient data.

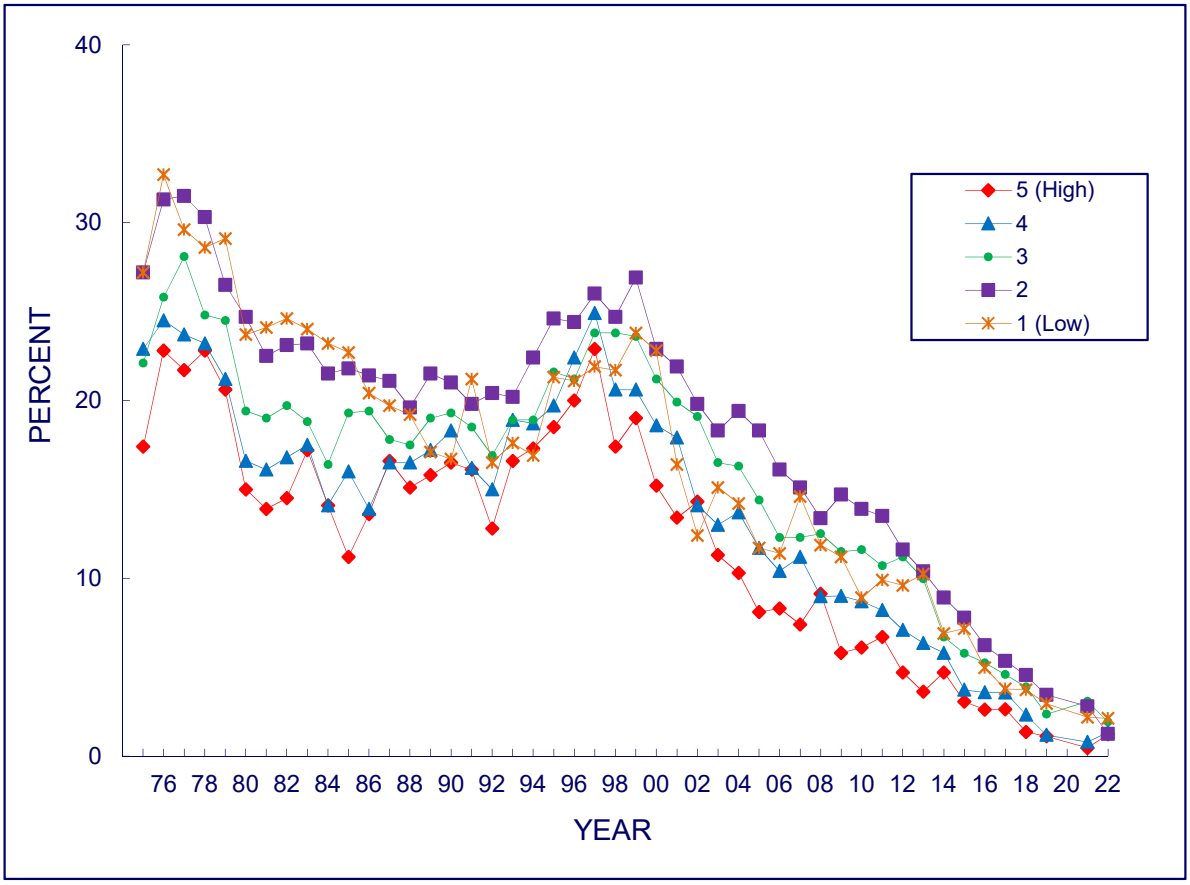
FIGURE 5-12e
ALCOHOL
Trends in 2-Week Prevalence of 5 or More Drinks in a Row in Grade 12
by Average Education of Parents [a]



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

[a]Estimates not presented by parental education in 2020 due to insufficient data.

FIGURE 5-12f
CIGARETTES
Trends in Daily Prevalence in Grade 12
by Average Education of Parents [a]

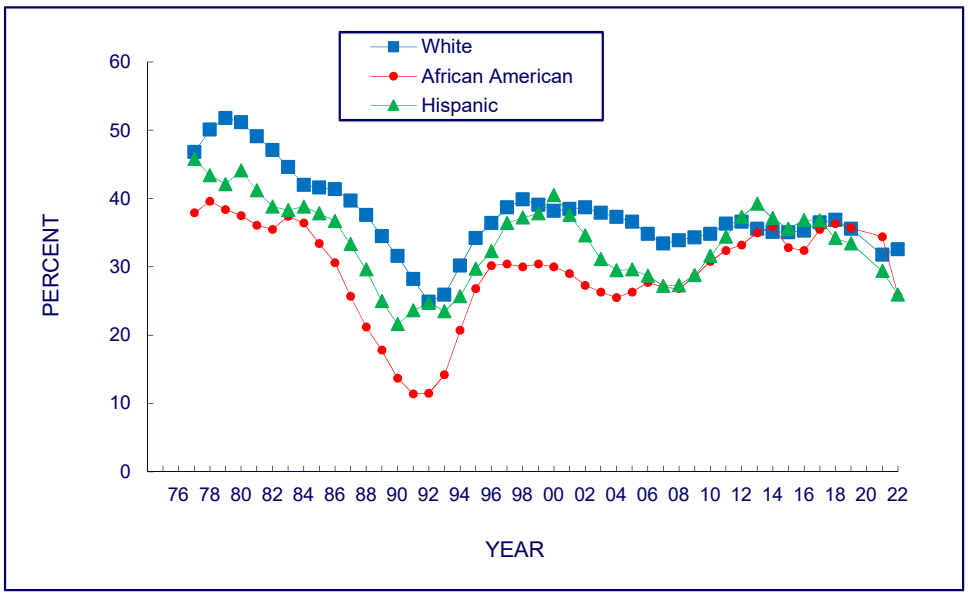


Source. The Monitoring the Future study, the University of Michigan.

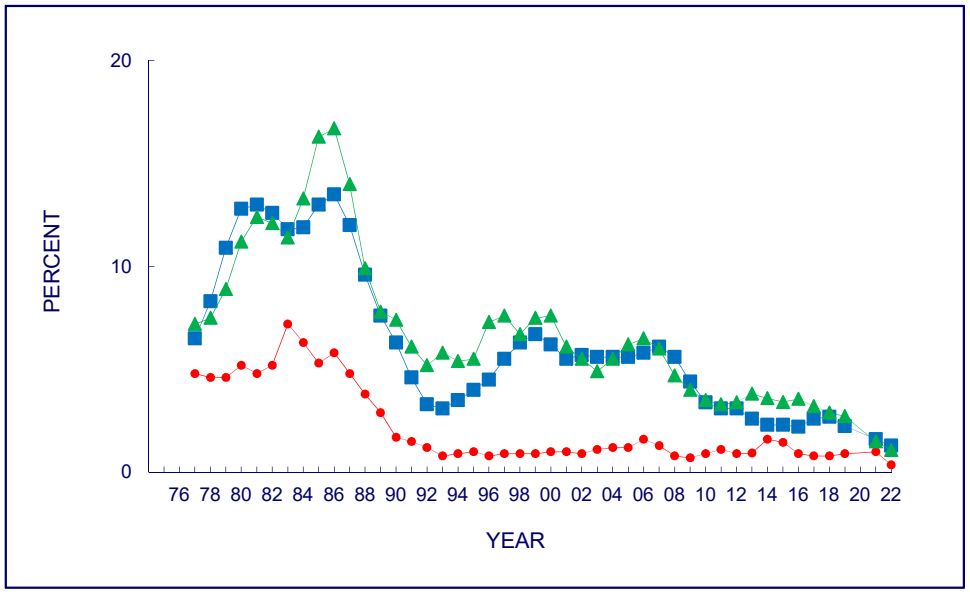
[a]Estimates not presented by parental education in 2020 due to insufficient data.

FIGURE 5-13a
MARIJUANA AND COCAINE
Trends in Annual Prevalence in Grade 12
by Race/Ethnicity [b]
(Two-year moving average [a])

Marijuana



Cocaine



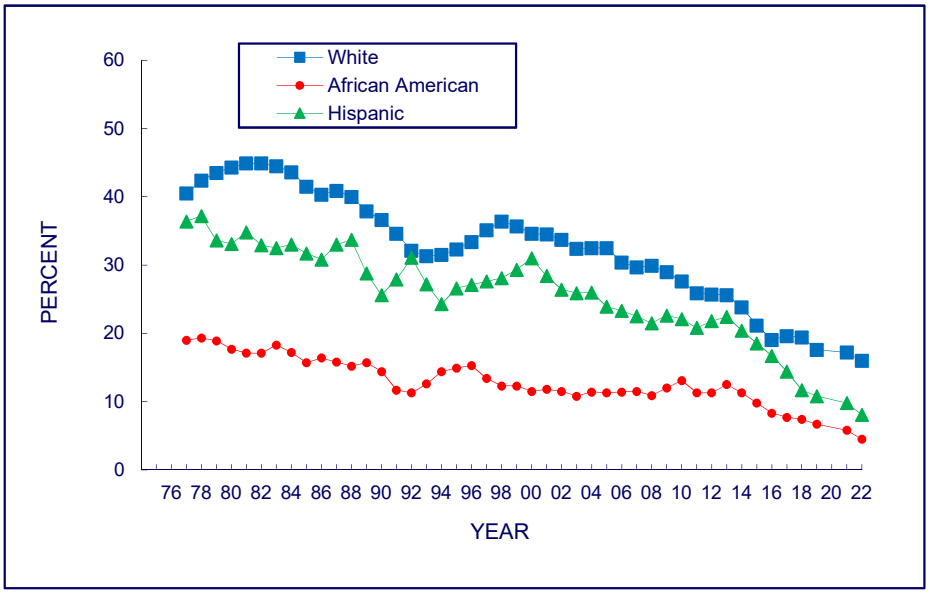
Source. The Monitoring the Future study, the University of Michigan.

[a]Each point plotted here is the mean of the specified year and the previous year.

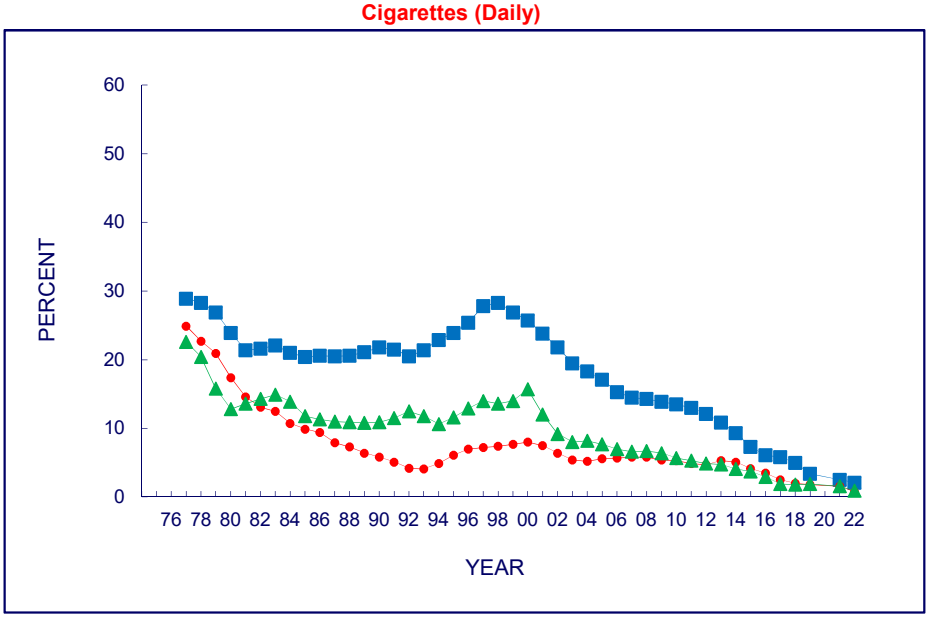
[b]Estimates not presented by race/ethnicity in 2020 due to insufficient data.

FIGURE 5-13b
ALCOHOL AND CIGARETTES
Trends in Prevalence in Grade 12
by Race/Ethnicity [b]
(Two-year moving average [a])

Five or More Drinks in a Row in Last Two Weeks



Cigarettes (Daily)



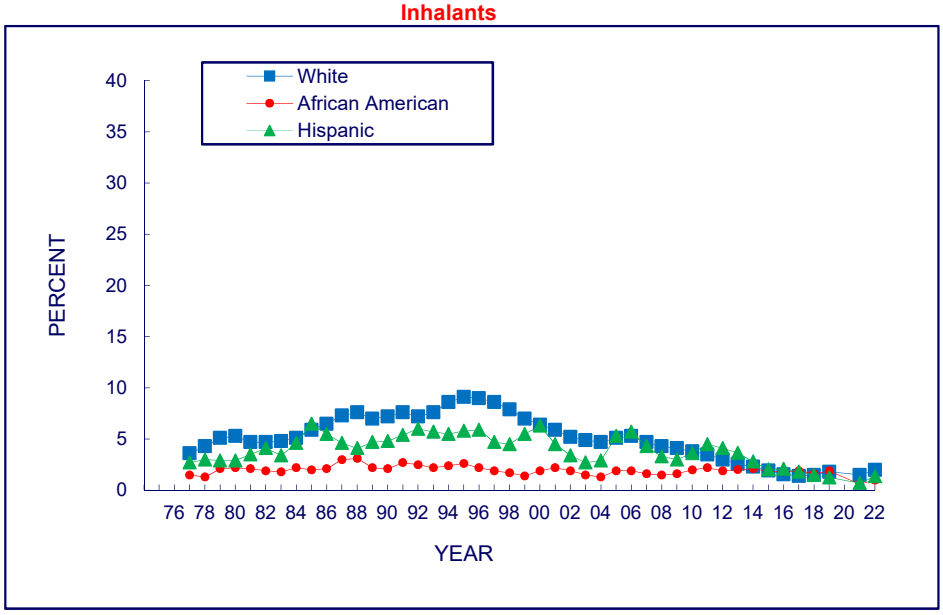
Source. The Monitoring the Future study, the University of Michigan.

[a]Each point plotted here is the mean of the specified year and the previous year.

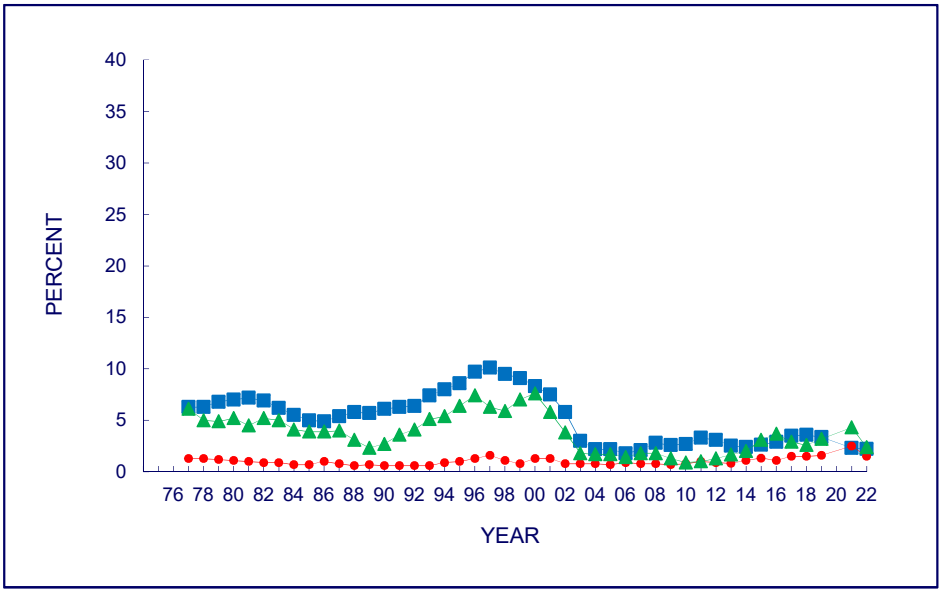
[b]Estimates not presented by race/ethnicity in 2020 due to insufficient data.

FIGURE 5-13c
INHALANTS AND LSD
Trends in Annual Prevalence in Grade 12
by Race/Ethnicity [b]
(Two-year moving average [a])

Inhalants



LSD



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

[a]Each point plotted here is the mean of the specified year and the previous year.

[b]Estimates not presented by race/ethnicity in 2020 due to insufficient data.

Chapter 6:
Data is forthcoming May 31, 2023

Chapter 7:
Data is forthcoming May 31, 2023

Chapter 8:
Data is forthcoming May 31, 2023

Chapter 9:
Data is forthcoming May 31, 2023

Chapter 10:
Data is forthcoming May 31, 2023

Appendix A:
Data is forthcoming May 31, 2023

Appendix B:
Data is forthcoming May 31, 2023

Appendix C:
Data is forthcoming May 31, 2023

Appendix D:
Data is forthcoming May 31, 2023

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

Institute for Social Research
The University of Michigan
2023