

# Trends in Drug Abuse among Minnesota Youths

By Carol Falkowski

## ABSTRACT

Young people have long been confronted with choices about whether to use alcohol and other drugs. Today, however, they are having to make those decisions at a younger age, and they are encountering substances that were unheard of by members of their parents' generation. This article describes trends in abuse of alcohol, marijuana, synthetic marijuana, and prescription drugs among youths in the United States and Minnesota.

Growing up in the 21st century is no easy task. Although young people have long faced choices about whether to use drugs or alcohol, several things have changed since their parents' time. For one thing, young people are getting their first exposure to many substances at a younger age. Many children are first approached about using marijuana by the age of 13 and about using alcohol by 15. And getting high is no longer a choice between drinking a beer or smoking a marijuana joint. Today, the choices are many, and new substances are being introduced on a regular basis. Finally, young people no longer have to seek out the shady-looking person in order to purchase drugs. Some drugs can be purchased online using a parent's credit card. Herbs sprayed with synthetic marijuana, for example, easily can be bought over the Internet.

Physicians who work with youths need to be aware of the trends in drug

abuse in order to be able to discuss the issue with their patients and to be alert to signs of abuse. This article describes those trends among young people in the United States and Minnesota and the extent to which progress is being made in combating abuse of alcohol and other drugs. It specifically looks at substances that have long been, and continue to be, abused as well as those that are relatively new.

## Alcohol

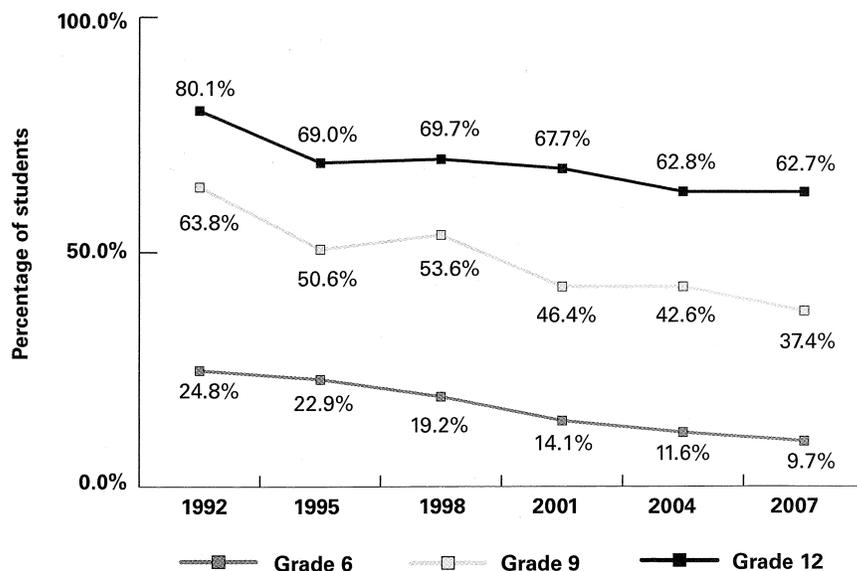
Alcohol is still the most widely used mood-altering substance consumed by

adults and youths in the United States and Minnesota. A standard drink equals 0.6 oz. of pure ethanol or 12 oz. of beer, 8 oz. of malt liquor, 5 oz. of wine, or 1.5 oz. (a "shot") of 80-proof distilled spirits or liquor (eg, gin, rum, vodka, or whiskey). Alcohol consumption affects every organ in the body and can damage a developing fetus. Alcohol can impair brain function and motor skills. When used heavily, alcohol increases the risk of stroke, cancer, and liver disease.

In 2008, 51.6% of youths in the United States ages 12 years and older were

Figure 1

**Percentage of Minnesota Sixth through 12th Graders Who Have Used Alcohol One or More Times in the Past Year**



Source: Minnesota Student Surveys

current users of alcohol (they had used alcohol at least once during the 30 days prior to being surveyed). Almost one-fourth (23.3%) were binge drinkers, which is defined as consuming five or more drinks within two hours. Almost one-fourth (23.3%) drank heavily, which is defined as consuming five or more drinks on five or more occasions in the past month.<sup>1</sup>

In the past, the rate of alcohol use among Minnesota youths exceeded the rate of alcohol use reported on national surveys. In 1992, for example, 80.1% of high school seniors in Minnesota reported using alcohol during the past year (Figure 1), compared with 76.8% nationally. Over the years, alcohol use among youths has declined, and eventually the gap between the percentage of teens in Minnesota and the percentage in the nation who consumed alcohol closed. By 2007, the trend had reversed: 62.7% of high school seniors in Minnesota reported alcohol use in the past year, compared with 66.4% nationally.<sup>2,3</sup>

The progress in reducing alcohol use among youths cannot be attributed to any single intervention or policy. Rather, it is the result of applying a combination of proven practices, many of which have been found to produce changes in social norms around drinking. Effective prevention programs are those that have been found to promote strong family bonds and effective parenting, increase parental involvement and monitoring, promote academic success, promote involvement in school and religious organizations, and reinforce conventional norms about drug use. They also discourage early onset of drug and alcohol use and address poor social and coping skills, affiliations with deviant peers, and perceptions that drug use is approved of in school, among peers, and in the community.

The Minnesota Department of Human Services' Alcohol and Drug Abuse Division funds community-based prevention efforts throughout the state. The division awards funding for programs that use proven methods to change community norms and, therefore, behaviors around drinking. These programs usually involve

coordinated efforts that target schools, peers, families, and entire communities.

In spite of the progress on reducing alcohol consumption and abuse, however, alcohol remains readily available to teens, with 92% of high school seniors nationwide saying it was "fairly easy" or "very easy" to get in 2009.<sup>3</sup>

## Marijuana

Marijuana is the most commonly used illegal drug in the United States. Almost 98 million Americans over the age of 12 have tried marijuana at least once. For young people, it remains easy to obtain. In 2009, 81% of high school seniors nationwide reported that marijuana was "fairly easy" or "very easy" to get.<sup>3</sup>

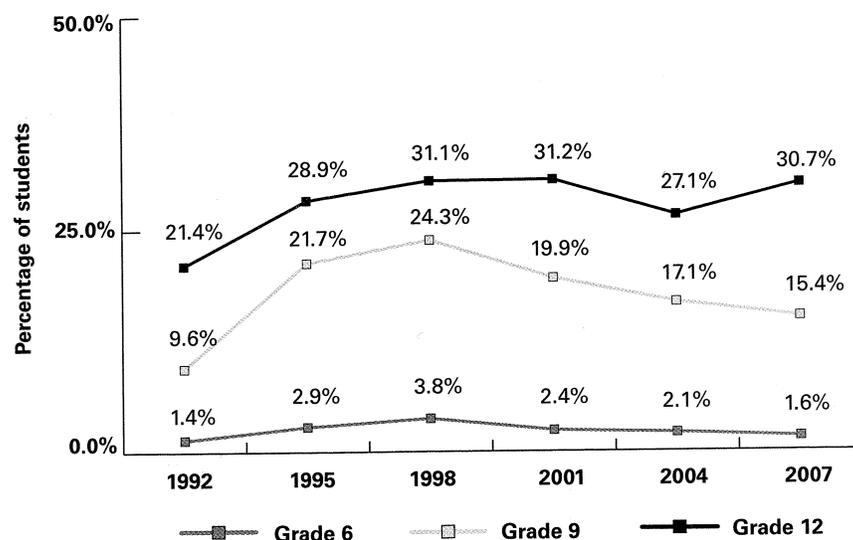
The short-term effects of marijuana use include distorted perceptions, memory impairment, euphoria, and impaired cognitive function and problem-solving ability. Long-term marijuana use can lead to addiction in some people. Chronic users who try to quit report irritability, craving, anxiety, and sleep problems.<sup>4,5</sup> In addition, exposure to marijuana smoke can potentially contribute to the development of respiratory cancers and can adversely affect the body's immune system.<sup>6,7</sup>

Patterns in marijuana use among Minnesota students are similar to national trends. Nationwide, nearly 42% of high school seniors have tried marijuana at least once.<sup>3</sup> In 2007, 31.7% of 12th graders in the United States had used marijuana in the past year, compared with 30.7% in Minnesota.<sup>2,3</sup> Although marijuana use has remained fairly steady among high school students in Minnesota (Figure 2), one concern is that marijuana may be a "gateway drug"—that its use may lead to experimenting with harder drugs. Longitudinal studies of drug-use patterns indicate that most young people who use other drugs first use alcohol, tobacco, and marijuana.<sup>8</sup> Studies of 300 pairs of identical and fraternal twins also found that those who started using marijuana before age 17 were more likely to develop drug problems and use drugs later on in life than the twin who did not.<sup>5</sup>

Nationwide in 2007, almost 288,000 patients entered addiction-treatment programs reporting marijuana as their primary drug of abuse. Although not everyone who uses marijuana becomes addicted, some users cannot control their use and become preoccupied with obtaining and using the drug.<sup>9</sup>

Figure 2

**Percentage of Minnesota Sixth through 12th Graders Who Have Used Marijuana One or More Times in the Past Year**



Source: Minnesota Student Surveys

## Synthetic Marijuana

Known as K2 or Spice, new herbal mixtures that are intended to mimic the effects of marijuana showed up across the United States in late 2009.

K2 is sold online and is readily available in “head shops” under names such as “Smoke XXXX,” “Stairway to Heaven,” “Karma Kind,” or “California Dreams.” These products are sold as incense. The labels claim it is not for human consumption, but users know what they are purchasing. Users light up these concoctions and smoke them in a pipe just as they would marijuana.

These new products are seen as a legal alternative to marijuana, and they are becoming increasingly popular among youths. They are loose mixtures of herbs allegedly sprayed with synthetic cannabinoids, the active ingredients in marijuana. The synthetic spray is known as JWH-018, although other chemical compounds could be used. There currently is no approved medical use for synthetic marijuana.

A growing number of K2-related incidents are being reported to poison-control centers nationwide, according to the American Association of Poison Control Centers’ National Poison Data System. Poison control centers in the United States received 761 calls about these products between January 1, 2010, and July 23, 2010, alone. In Minnesota, the Hennepin Regional Poison Center documented 16 cases between January and July of 2010. Half of the reports came from health care facilities; the patients ranged in age from 14 to 43 years. A number of people who have presented to emergency departments after using K2 or similar products have experienced high blood pressure, nausea, and an increased heart rate. Several have reported tremors as well.

Nine states have banned or criminalized possession of these products; other states, including Minnesota, are attempting to do so.

## Prescription Drugs

In the United States, 15.2 million people ages 12 and older took prescription pain

relievers, tranquilizers, stimulants, or sedatives for nonmedical purposes at least once in 2008.<sup>10</sup>

Classes of prescription medications that are commonly abused include:

- Opioids—hydrocodone (Vicodin), oxycodone (OxyContin), propoxyphene (Darvon), hydromorphone (Dilaudid), and meperidine (Demerol);
- Central nervous system depressants—pentobarbital sodium (Nembutal), diazepam (Valium), and alprazolam (Xanax); and
- Stimulants—dextroamphetamine (Dexedrine), methylphenidate (Ritalin and Concerta), and amphetamines (Adderall).

Health care providers, patients, and pharmacists all play a role in preventing prescription drug abuse. Doctors need to screen for it, watch for too-frequent requests for refills, and be cognizant of patients “doctor shopping” in order to obtain medications. They need to inform parents about the growing popularity of pain medications among youths and advise them to closely control and monitor use if their children receive prescriptions for such drugs. Parents who are prescribed pain medications themselves should be instructed to guard their pain medications as well and to dispose of unused amounts. In addition, pharmacists can provide education to patients and participate in Minnesota’s new prescription monitoring program to see if similar medications are being prescribed for one patient by multiple doctors.

Although abuse of prescription drugs among youths has increased since 2000—and received considerable attention in the media—the trend has stabilized in recent years, according to the University of Michigan’s Monitoring the Future study, which examines behaviors, attitudes, and values of secondary school students, college students, and young adults in the United States.<sup>3</sup>

Adderall, which is used to treat ADHD, was reported as a drug of abuse in the past year by 2%, 6%, and 5% of students in grades 8, 10, and 12, respectively, in the 2009 report. Vicodin abuse was re-

ported by 3%, 8%, and 10% of students in grades 8, 10, and 12, respectively. And the OxyContin abuse was reported by 2%, 5%, and 5% of students in grades 8, 10, and 12, respectively.

In terms of availability, 38% of 12th graders reported sedatives as being “fairly easy” or “very easy” to get in 2009. In addition, 47% reported amphetamines, 21% reported tranquilizers, and 36% reported narcotics other than heroin as “fairly easy” or “very easy” to get.<sup>3</sup> Although directly comparable data are lacking for Minnesota, there is no reason to believe the responses would be different here.

Prescription drugs have gained popularity particularly among youths who are already drug abusers, as they are often viewed as safer and believed to have more predictable effects than street drugs. According to the 2001 National Survey on Drug Use and Health, 63% of youths who had used prescription drugs nonmedically in the past year had also used marijuana during that period, compared with 17% of youths who had not used prescription drugs nonmedically in the past year. These associations are still considered relevant today.

The dangers of prescription drug abuse are many. These drugs do not arrive in a user’s hand in a clearly labeled bottle; their use in combination with alcohol increases the unpredictability of the effect they will have; and there is potential for overdose with narcotics.

## Conclusion

Whenever a young person is turning to alcohol or other drugs to address a certain emotional state, he or she is not attending to the emotional, cognitive, and psychological tasks of growing up. We now know that the prefrontal cortex portion of the human brain does not fully develop until a person reaches their mid-twenties. This means the average adolescent simply lacks the impulse control and assessment skills to “use responsibly.”

Physicians have a role to play in counseling youths and parents about alcohol and other drug abuse and in monitoring their patients for signs of abuse. In order

to assist them, the National Institute on Drug Abuse, part of the National Institutes of Health, last year launched NIDAMED ([www.drugabuse.gov/nidamed](http://www.drugabuse.gov/nidamed)), a comprehensive physician outreach initiative. This initiative provides primary care physicians and other health care providers with resources to screen patients for tobacco, alcohol, illicit, and nonmedical prescription drug use. Other NIDAMED resources include a quick reference guide and a comprehensive resource guide for clinicians.

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Carol Falkowski is author of the book *Dangerous Drugs: An Easy-to-Use Reference for Parents and Professionals* (Hazelden Publishing 2003). She is the drug strategy officer at the Minnesota Department of Human Services.

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