Marijuana and e-cigarettes can cause harm in more ways than you may think. Do you ask your patients about their marijuana or e-cigarette use? The numbers may surprise you.

In the past year, my staff and I have seen a dramatic increase in the use of both marijuana and electronic cigarettes, or e-cigarettes, among our patients, consistent with nationwide trends. As a result, we now include very specific questions about their use on our intake forms as well as in our patient interviews.

Marijuana

Marijuana use has been on the rise among adolescents for many years. From 2008 to 2009, the rate of current illicit drug use among young adults aged 18 to 25 climbed 8%, from 19.6% to 21.2%, driven largely by a 10% rise in marijuana use (from 16.5% to 18.1%).¹ At the time of that survey, 16.7 million people aged 12 years and older had used marijuana in the past month. When speaking to my own patients, I find that adolescents (and adults) in my practice generally regard marijuana use as equivalent to alcohol use in their daily lives; this underestimation of harm is echoed in national surveys as well. However, marijuana has evolved since it first gained wide popularity in the United States in the 1960s. Through genetic manipulation, the potency of marijuana has doubled from 1998 to 2008.¹ Marijuana is now a very different drug than it once was, with a much higher potential for addiction and harm. Studies have suggested an association between chronic marijuana use and increased rates of anxiety, depression, suicidal thoughts, and schizophrenia. Other research has shown marijuana smoke to contain carcinogens and to be an irritant to the lungs. In a prospective birth cohort study, researchers showed that, among adolescent initiators of marijuana use in New Zealand, persistent cannabis use was associated “with neuropsychological decline broadly across domains of functioning, even after controlling for years of education, suggesting a neurotoxic effect of cannabis on the adolescent brain.”²

Electronic Cigarettes

Use of electronic cigarettes, or e-cigarettes, is on the rise as well. E-cigarettes, also known as vaping pens or hooka pens, are being aggressively marketed to younger users. According to the CDC, e-cigarettes are battery-powered devices that provide doses of nicotine and other additives to the user in an aerosol.³ E-cigarette cartridges typically contain nicotine; a component to produce the aerosol, generally either propylene glycol or glycerol; and flavorings, such as fruit, mint, or chocolate.³ The percentage of high school students who reported ever using an e-cigarette rose from 4.7% in 2011 to 10% in 2012.⁴ Altogether in 2012, more than 1.78 million middle and high school
It is well known that early addiction to nicotine, regardless of the delivery system, is more likely to produce addictive behavior. The effects of nicotine on the adolescent brain are quite different than those in adults, according to Theodore Slotkin, PhD. “Adolescence represents a unique period of vulnerability for nicotine-induced mis-programming of brain cell development and synaptic function. Effects of nicotine on critical components of reward pathways and circuits involved in learning, memory and mood are likely to contribute to increased addictive properties and long term behavioral problems seen in adolescent smokers.”

No Regulation Means Bigger Problems

Currently, e-cigarettes are not regulated by the FDA. As a result, manufacturers are not accountable for the accuracy or consistency of the dose of nicotine and are not limited by the laws prohibiting the marketing of tobacco products to teens. Testing of e-cigarette cartridges has shown highly variable and inconsistent nicotine content, often higher than indicated by the label. In addition, a significant percentage of teens believe that flavored vaping pens do not contain nicotine, and many also believe that vaping is good for you.

While cigarette companies say they don't market to kids, e-cigarettes flavored with cherry, strawberry, vanilla, and cookies and cream milkshake are clearly not aimed at adult users. In addition, advertisements such as the one shown here, which appeared in *Sports Illustrated’s* swimsuit edition, are clearly aimed at making the use of these devices sexy to younger users. In targeting younger consumers, e-cigarette manufacturers (often subdivisions of “big tobacco”) are actively recruiting a new generation of nicotine addicts.

The health hazards of e-cigarettes are concerning for teens, but also worrisome is the opportunity for younger siblings to get their hands on the liquid nicotine cartridges, which are not required to be childproof. The candy and fruit flavors appeal to young children, and evidence backs this up. The CDC recently reported a 41.7% increase in monthly calls to poison control centers involving e-cigarettes from September 2010 to February 2014. More than half (51%) of these monthly calls involved children 5 years and younger. Poisoning from liquid nicotine can occur through ingestion, inhalation, or absorption through the skin or eyes and can be deadly.

Vaping Pens

Not only are teens using more marijuana and more e cigarettes, there is a growing use of vaping pens for smoking marijuana. Many “vaping” devices are able to accept alternatives to nicotine cartridges, including marijuana, dried herbs, and essential oils. Because there is no ash or smoke
produced by e-cigarettes, there is little to no smell. That makes marijuana use via these devices almost undetectable. There are a remarkable number of articles in the press in which comments are made to the effect that vaping marijuana makes it possible to get high almost anywhere, including in school.

A New Era of Drug Use

In short, we are facing a new era in teen drug use and accessibility. Clearly, increases in nicotine and marijuana use are not as worrisome as the heroin epidemic sweeping the United States, but their use is significant. While we are gynecologists and obstetricians, not pediatricians or family doctors, we nonetheless care for the whole patient.

In the case of adolescents, drug use, school performance, psychological state, and sexual activity are all intricately related. We can’t confine ourselves to “just” the gynecological issues. As physicians, we have an obligation to address these more global issues with our teen patients as well.

References:


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