



TEEN VAPING

Teen vaping has become increasingly widespread over the last few years. Research from the National Institute on Drug Abuse shows that the number of teens vaping nicotine has doubled or tripled since 2017. And the number of teens vaping marijuana is also on the rise.

This complete guide for parents includes the latest information on teens and vaping, including facts about vaping for kids, whether vaping is safe for teens, and how to tell if your kid is vaping.

What Is Vaping?

Vaping refers to the act of inhaling and exhaling the aerosol, or vapor, created by a vaping device. A vaping device includes a mouthpiece, a battery, a heating component, and a cartridge that contains the e-liquid or e-juice. The e-liquid contains the drug being inhaled—either nicotine or THC, the psychoactive chemical in [marijuana](#), combined with flavorings and other chemicals.

The battery in the vaping device powers the heating component, which heats up the e-liquid, also known as vape juice. As a result, the device produces water vapor. Users inhale this vapor into their lungs. Types of vaping devices include the following:

- E-cigarettes, which resemble traditional cigarettes—also called e-cigs, hookah pens, vape pens, or ENDS (electronic nicotine delivery systems)
- Advanced personal vaporizers (also known as “mods”), customized by the user
- Vape pens, which look like large fountain pens.

Teens and Vaping: Teen Vaping Statistics

How many teens are vaping? The number has skyrocketed over the last few years. The most recent [Monitoring the Future study](#)'s statistics on teens and e-cigarettes show 25 percent of high school seniors vape nicotine—as compared to 11 percent in 2017. Furthermore, 19 percent

In addition, 12 percent of high school seniors vape marijuana and 11 percent of 10th graders vape marijuana, the study found. And between 2017 and 2019, the prevalence of past 30-day marijuana vaping doubled or tripled in both these grades, as well as for 8th graders.

Is Vaping Bad for Teens?

Many people think the smoke produced by vaping is harmless water vapor. In fact, vape “smoke” contains:

- Nicotine, shown to increase the risk of cancer, heart disease, stroke, lung diseases, diabetes, and chronic obstructive pulmonary disease
- Ultrafine particles that can be inhaled deep into the lungs
- A [Harvard study](#) found that the vaping flavoring chemical called diacetyl is linked to a condition called “popcorn lung,” which causes scarring and obstruction in the lungs
- Cancer-causing chemicals
- Heavy metals, such as nickel, tin, and lead.

Moreover, the CDC reports that the vaping-related lung disease known as [EVALI](#) (e-cigarette, or vaping, product use-associated lung injury) resulted in the hospitalization of some 3,000 people and 68 deaths as of early 2020, when prevalence of the disease peaked. EVALI was associated with Vitamin E acetate found in some vaping products containing THC.

Teen Vaping Health Risks

The health risks of teen vaping are both short and long term. Increased likelihood of cancer may prove to be one of the most significant long-term vaping health risks. A study published in the journal *Pediatrics* [found substantially increased levels](#) of five carcinogenic compounds in the urine of teenagers who vape. In addition, a [study](#) found that some common chemicals used to flavor vape juice could damage endothelial cells, the cells that line blood vessels and lymph vessels.

Along with these long-term health risks of teen vaping, there are also short-term effects of vaping, including:

- Nicotine dependence, which can lead to disruptions in [brain development and chemistry](#)
- Increase in shortness of breath, coughing, and fevers
- Acid reflux
- Higher likelihood of contracting lipoid pneumonia, which occurs when fatty substances are inhaled into the lungs.

In addition, teen vaping may lead to health risks associated with risky behavior. Surveys show that e-cigarette use is associated with [high-risk behaviors](#) among high school students. Researchers found that injury, violence, substance use, and sexual activity were more likely among vapers.

Why Do Teens Vape?

Why is vaping so popular among teens and young adults? There are several reasons:

- Teens see friends and family members use them.
- Companies design packaging to enhance the appeal of vaping for teens. For example, vape cartridges are available in candy, fruit, and dessert flavors, like doughnut, cotton candy, apple pie, chocolate, cherry, “Belgian waffle,” “strawberry milk,” watermelon, bubble gum, etc. And labels of “vape sauce” resemble candy

wrapper designs, like Jolly Ranchers and Blow Pops. In addition, companies promote vaping with campaigns that appeal to teens.

- Young people believe that vaping products are safer than other forms of nicotine consumption, such as cigarettes. While vaping aerosol doesn't include all the contaminants in tobacco smoke, it does contain many dangerous chemicals (see below).
- Vaping is easier to hide from parents than smoking. They don't give off as much smoke as traditional cigarettes. Also, unlike traditional [cigarettes](#), e-cigarettes are odorless or have a sweet smell. Plus, vaping devices often resemble pens or electronic equipment, so it's easier for teens to use them without getting caught. For example, Juul designers wanted to make their product appear as if it was a flash drive.
- Vaping products are cheaper and easier to acquire than traditional tobacco products.

In short, vaping and vaping accessories are marketed to attract teens and young adults, and the research shows that it's working.

Is Vaping a Gateway Drug?

Multiple studies show that teen vaping, whether nicotine or marijuana vaping, [primes the brain](#) for more drug use and addiction—the definition of a gateway drug. One [study](#) followed 2,500 ninth-grade students from 10 Los Angeles high schools. Those who had used e-cigarettes at least once were more likely to start smoking cigarettes within the next year. Moreover, teens who vape are taking in even more nicotine than they would get from traditional cigarettes. E-cigarette users can buy extra-strength cartridges that have a higher concentration of nicotine. Or they can increase the e-cigarette's voltage so they inhale larger amounts of vapor. In fact, some e-liquid products contain nearly 50 milligrams of nicotine per milliliter of liquid—more than four times the milligrams of nicotine in a cigarette.

Moreover, teens frequently vape marijuana instead of or in addition to smoking e-cigarettes. And vaping cannabis has [a stronger effect](#) than smoking it. That's why vaping may increase the incidence of marijuana being used as a gateway drug: Users quickly build tolerance to the drug. As a result, they may be more prone to experiment with other,

more dangerous drugs to achieve the effect previously produced by marijuana.

These high dosages of nicotine and marijuana act on the brain in ways similar to other substances of abuse. Like other drugs, nicotine releases dopamine in the brain. In fact, research suggests that nicotine may be as addictive as heroin and cocaine. Hence, teen vaping carries a high risk of [addiction](#). Therefore, it primes the brain for addiction to even more potent drugs in the future.

How to Tell If Your Kid Is Vaping

Because e-cigarettes do not have a smoky odor, it's harder to tell when teens are using them. However, there are other ways to identify teen vaping in your home. Some of the signs your kid is vaping include:

- Bloodshot eyes
- Increased thirst, because vaping dehydrates the mouth and throat
- Nosebleeds
- Adding extra salt or spices to food as a result of “vaper’s tongue”—a reduction in the ability to perceive flavor
- Chronic cough due to the irritated lung tissue
- Vaping paraphernalia in their room—for example, items that look like USB drives or other electronic devices
- Sweet scents from the flavored vape liquid
- Being secretive and intensely protective of their privacy
- Irritability and moods swings as a result of withdrawal symptoms.

Should I Let My Teenager Vape?

The short answer is no. Given the health risks, the potential for addiction, and the way in which vaping acts as a gateway drug, vaping is not safe for teens.

Once they understand the facts about teen vaping, parents can take steps to help prevent their kids from vaping health risks. In

particular, [communication between parents and teens](#) is key in supporting good choices and [positive coping mechanisms](#). Here are some tips for addressing issues regarding teens and vaping.

- **Start an open conversation.** If you know or suspect your teen is vaping, or simply want to start the conversation, ask questions without being angry, preachy, or judgmental. Find out if they know others who are vaping, if they're curious about trying it, or if they have tried it. If yes, ask them why they are vaping. Is it due to peer pressure, or are they are feeling anxious and trying to find ways to stay calm? Continue this open dialogue over time to make sure your teen knows that you care about what they're doing.
- **Give them language to combat peer pressure:** Support teens to strategize ways to deflect the pressure to vape. For example, they might say simply, "No, thanks," or they could "blame" it on you: "My parents would kill me if I vaped!" They can also choose to spend time with friends who don't vape.
- **Educate them on the safety of vaping.** Make sure your teen has information about what is in vape and how those chemicals can affect them, as well as the [health risks](#) of using nicotine and THC. Share the research on how vaping can lead to cigarette smoking and using other dangerous drugs.
- **Set a good example.** If parents don't want their teens to vape or smoke, they shouldn't do so either. Teens will have a hard time believing that vaping is dangerous if they see adults doing it.
- **Make sure teens get the help they need.** If anxiety or depression is prompting your teen's vaping, they may need the support of a mental health professional to help them find healthy coping mechanisms. Moreover, if they have become addicted to nicotine or dependent on marijuana, they will need support to quit the vaping habit, along with therapy to address the underlying causes of substance abuse. Many therapists offer telehealth appointments. Your family doctor is one good place to start.

Sources:

Arteriosclerosis, Thrombosis, and Vascular Biology. 2018;38:1607–1615. *Pediatrics*. 2018 Apr; 141(4). *Pediatrics*. 2017 Feb. 139(2).