

VAPING

FACTS ABOUT E-CIGARETTES

Vapes that contain nicotine are the most used tobacco products among youth. Vaping can harm youth, yet millions of them vape regularly. This is why it is important to help youth understand that vaping puts them at risk for addiction and other health consequences.

This fact sheet provides basic information about this public health concern.

VAPES ARE TOBACCO PRODUCTS.

Vapes that contain nicotine are a type of tobacco product called electronic nicotine delivery systems (ENDS). Other names for vapes may include e-cigarettes, e-cigs, vape pens, vaporizers, and e-pipes. Popular brands include Puff Bar, JUUL, Vuse, and SMOK. These vapes can contain high levels of nicotine, a highly addictive drug. Under federal law, consumers must be age 21 or older to buy vape products.

Vapes come in many shapes and sizes. Some look like cigarettes, cigars, or pipes. Others look like everyday objects, such as flash drives or asthma inhalers, which can make them easy for youth to hide from parents and teachers.



VAPES CONTAIN BATTERIES AND “E-LIQUID.”

Vapes use a substance called e-liquid that may contain nicotine, the same highly addictive chemical found in tobacco. E-liquid also may contain flavorings, propylene glycol, vegetable glycerin, and other ingredients. Other names for e-liquid include “e-juice” and “vape juice.”

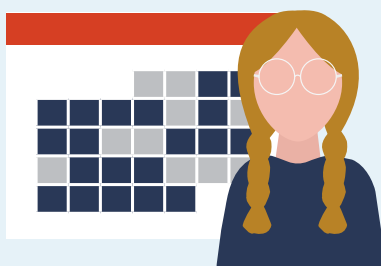
Vapes have different shapes and designs but generally work in similar ways. They contain batteries and heat e-liquid to create an aerosol that the user inhales. When exhaled, the aerosol may appear as a thick cloud, or it may be hard to see. Some vapes are rechargeable for long-term use; others are disposable after short-term use.



VAPING AMONG YOUTH IS A PUBLIC HEALTH CONCERN

In 2021, the annual National Youth Tobacco Survey found that 2 million youth use e-cigarettes. Many teens vape on a regular basis, and most choose flavored vapes. For example, 44 percent of ENDS users in high school are vaping on 20 or more days a month, and **28 percent use e-cigarettes every day**. More than 8 percent of middle school students who vape use e-cigarettes every day. These high rates of youth vaping suggest a strong dependence on nicotine.

44% of ENDS users in high school vape at least 20 days per month



YOU CAN HELP PREVENT YOUTH VAPING

Talking with teens about the risks and harmful effects of vaping may help them avoid use and addiction. Parents and teachers can focus on the facts and help youth stay safe.

- 1 Share the facts.**
Clear up teens’ misperceptions about vaping. Share facts about the health effects of vaping.
- 2 Model healthy habits.**
Create a tobacco-free home. If you need help quitting, **visit [smokefree.gov](https://www.smokefree.gov)**.
- 3 Help keep vapes away from youth.**
Remind adults not to buy vapes for youth.
- 4 Understand the dangers.**
Know the symptoms of nicotine addiction, such as an inability to stop vaping or feeling anxious or irritable due to cravings when not vaping. These may signal a teen needs help.

Key Results From the 2021 National Youth Tobacco Survey



1.72 MILLION
HIGH SCHOOL
students currently
vape

28%
vape daily

86%
use flavored vapes



320,000
MIDDLE SCHOOL
students currently
vape

8%
vape daily

79%
use flavored vapes



VAPING CAN BE HARMFUL TO YOUTH.

Vaping is not harmless. It carries real health and safety risks, including addiction and other negative health effects. Teens who vape may experience coughing, wheezing, nausea, vomiting, headaches, and dizziness.



Nicotine exposure and addiction are harmful for youth.

- Nicotine can rewire a teen's brain to crave more nicotine and can create addiction.
- Brain changes related to nicotine exposure may have effects on attention, learning, and memory that promote addiction to the drug.
- Teens who vape may become addicted to nicotine faster than teens who smoke cigarettes.
- Teens who vape are more likely to start smoking. Cigarette smoke includes a mix of chemicals that cause serious disease and death.



ENDS can cause environmental harm.

- Vape batteries and e-liquid can hurt the environment. When people throw away vapes in their household trash or a public trash can, nicotine solution in e-liquid can seep into the ground or water and become dangerous for people and animals.



Vaping may be harmful to lungs.

- Vaping can expose users to toxic chemicals and metal particles—such as lead, chromium, and nickel—that can harm the lungs.
- Some chemicals found in cigarette smoke—such as formaldehyde, acrolein, and acetaldehyde—also are found in some e-cigarette aerosols. Inhaling these chemicals can cause irreversible lung damage.



E-liquid is dangerous, and ENDS can explode.

- E-liquid that contains nicotine may be toxic if swallowed. Accidental exposure to e-liquids in children can lead to nicotine poisoning and even death.
- ENDS can explode and cause serious injuries. The cause of explosions is not always clear, but the problem may be related to the batteries in these devices.

MORE INFORMATION ABOUT VAPING

Check out the U.S. Food and Drug Administration's (FDA) Center for Tobacco Products (CTP) website for a wide range of information about vaping. Find tips on how people can keep themselves, their families, and the environment safe and healthy. The site also features facts and statistics, research, and legal and regulatory information about ENDS. **Visit www.fda.gov/tobacco**

ADDITIONAL RESOURCES

FDA Resources

Order and download FREE materials at FDA's CTP Tobacco Education Resource Library. The website contains many items for public health professionals and the public about tobacco products, e-cigarettes, and related information. Posters, fact sheets, flyers, and syndicated web content are available. **Visit digitalmedia.hhs.gov/tobacco**

Resources for Teachers

Start an honest conversation about vaping. FDA has developed a series of resources for educators to discuss and learn about vaping. **Visit digitalmedia.hhs.gov/tobacco/exhibit_booths/educators**

Resources for Youth

Get the most accurate, up-to-date information about the harmful effects of tobacco use so you know the real cost of smoking, vaping, and other tobacco use. "The Real Cost" website includes facts on all types of tobacco products, as well as links to numerous videos about the harms of tobacco use. **Visit therealcost.betobaccofree.hhs.gov**

Help With Quitting

Help youth quit with Smokefree Teen. The website features a Quit Vaping section with resources to help teens quit and stay vape-free. **Visit teen.smokefree.gov/quit-vaping**

Request a CTP Speaker

Want to hear more about vapes from a CTP expert? Find out how to request a CTP speaker for your next event. **Visit <https://bit.ly/3jk1x45>**

Report a Safety Issue

Report problems with a tobacco product, such as undesired health or quality problems, at the FDA Safety Reporting Portal. **Visit <https://bit.ly/3De7XJN>**