

E-Cigarette Supplement

Information and Facts for Educators and Youth

Part of the exemplary Project ALERT curriculum developed by RAND

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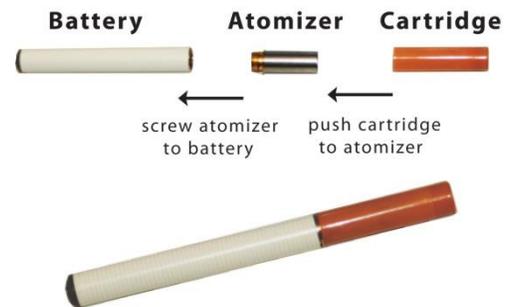
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Electronic Cigarettes Information and Facts Educators and Youth

What Is An Electronic Cigarette?

An electronic cigarette, e-cigarette, or “e-cig,” is what’s known as an *electronic nicotine delivery system* (ENDS). The device uses a coil to heat up an “e-liquid” (also called “e-juice” or “juice”) containing nicotine and other chemicals and turns it into an aerosol (or “mist”) that you inhale into the lungs. Some of the devices look like a cigarette and others are more customized and are called *e-pens, e-hookahs, mods, or tanks*.

When a person uses these devices it is referred to as “vaping,” because when the user inhales the heated aerosol and then breathes it out (exhales), it looks like a cloud of vapor. E-cigs are battery-powered, and in some models the user can adjust the temperature of the heating element in the liquid to control things like taste, intensity, and vapor output.



Why Do Teens “Vape”?

Some teens choose to vape because they think using an e-cig might be safer for their health than regular cigarettes. Others think that vaping could be a way to reduce or to stop smoking regular cigarettes. Others may be influenced by ads, by attractive packaging, and because celebrities might use them. Perhaps they like to perform smoke-like tricks with the vapor or they like the various flavors in the e-liquid, many of which are sweet and appealing. Another reason why teens may continue to vape is because they are addicted to nicotine, perhaps from smoking regular cigarettes or chewing tobacco.

How Do Teens Use E-Cigs?

Inhaling an e-cigarette is similar to inhaling a regular cigarette. The difference is that when the user puts the device to their lips and inhales, a heating coil is activated which turns the vaporizing fluids into an aerosol, allowing the lungs to breathe in a variety of chemicals, including highly addictive nicotine, and exhale a mist or “vapor.” Some models are disposable after normal use over a short period of time. Others are reusable and must be regularly re-filled with liquid nicotine. Vaping can be an expensive habit, with the cost to purchase the device itself, replacement parts and batteries, and the vaporizing fluid. This can easily add up to about \$850 per year for a regular user.

Are E-Cigs Legal for Teens?

In most states, it is illegal to purchase or use e-cigs (or regular cigarettes) if you are under 18 (the minimum age in four states is 19, and in California and several other places including New York City, state and local officials have raised the legal age to 21). For this reason, many places that carry e-cigarettes, parts, and fluids will not sell to minors.

Where Do Teens Use E-Cigs?

Many cities do not allow e-cigs to be used in public places. They often fall under the same local laws that restrict the use of tobacco in public places. This is due to concerns about the health effects, not only for the person using these devices, but also for others who are nearby (the issue of second-hand smoke). Schools, movie theaters, sporting events, airplanes, theme parks, and many other public places that teens frequent have banned their use. E-cigarette use most likely occurs in private residences and social events.

Why Is It Dangerous To Use E-Cigs?

E-cigarette fluid contains nicotine. Nicotine is a highly-addictive drug, producing cravings similar in intensity to drugs like heroin and cocaine. When they first hit the market, e-cigs were not regulated by the U.S. Food and Drug Administration (FDA); the amount of nicotine they contain has been very different among brands, meaning users haven't really known the actual doses of nicotine they're getting, and high doses can speed up the process of addiction. This may start to change, since, in 2016, the FDA started to regulate e-cigarettes in the same way they regulate traditional cigarettes.

Many teens that use e-cigarettes admit that they had never used traditional cigarettes. One concern is that teens are more likely to smoke regular cigarettes once they become addicted to e-cigs in order to continue receiving their nicotine fix. Although not everyone who uses e-cigarettes will become addicted right away, it is likely to happen, especially with repeated use. This creates risks for healthy teen brain development, which is not complete until around age 25. Nicotine also increases heart rate and blood pressure, causes lung irritation, and can make asthma worse.

E-cigarette liquids contain cancer-causing and other toxic chemicals, including formaldehyde, arsenic, aluminum, and lead. Inhaling these chemicals deep into the lungs is very risky. The chemicals can cause birth defects and reproductive harm over time.



Manufacturers and marketers are specifically targeting teens. The liquid nicotine is combined with chemical flavorings such as bubble-gum, cherry, and chocolate, making e-cigs appealing to children and youth. Problems with how the devices work are also a concern. Research shows that the nicotine liquid containers can leak. They are also not required to be child-proof, and if a child is exposed to the liquid through the mouth, skin, or eyes, it can poison them. Even a little exposure to the nicotine liquid can cause death in young children.

Important Questions Answered

I have heard e-cigarettes will help people to quit smoking regular cigarettes.

This has not been proven. Research has shown that after a short time from switching to e-cigarettes, a person begins to use both traditional cigarettes and e-cigarettes, which introduces even more nicotine into their system. Some studies have looked at e-cigarettes as a way for adults to quit smoking, but there is no research proving that e-cigs help teens quit smoking. In fact, some studies show the opposite effect: teens that use e-cigarettes are more likely to start smoking regular cigarettes.

Isn't vaping better for you than smoking cigarettes?

Neither is a good choice. Both are addictive, come with serious health risks, and cost a lot of money. And some studies show that once you begin to vape you have a much greater chance of using regular cigarettes, and taking on all the risks associated with traditional smoking.

There are lots of ads and information about vaping. Who should I believe?

The cigarette and vaping industries are big businesses. They will do everything they can to sell their products. Like anything that has to do with your health and well-being, it's important to educate yourself with current and reliable information. Ask yourself, "Does this person or organization have the experience and authority to make these claims? Do they benefit financially from the product that is being sold? Do they have my best interests in mind?" Be wise, and don't automatically accept what you read and hear—check the facts. You can begin with our list of research studies below. Other trustworthy sources for information are the [Centers for Disease Control and Prevention](#) (CDC) and the [National Institute on Drug Abuse \(NIDA\)](#).

How come there are ads on TV and in magazines for e-cigarettes?

When e-cigs first began to be sold, there wasn't much research available about their safety. Up until recently, companies have been allowed to advertise their products without restrictions because the products have not been closely regulated by the U.S. Food and Drug Administration. (Traditional cigarettes are closely regulated by the FDA, and TV advertising for them has been banned for several decades. Magazine ads are still allowed.)

The rules are changing. In 2016, the FDA began to more thoroughly regulate all tobacco products, including vaporizers, vape pens, hookah pens, e-cigarettes, e-pipes, and all other ENDS. They now regulate the manufacture, import, packaging, labeling, advertising, promotion, sale, and distribution of ENDS.

As time goes on, more reliable information will become available about the harmful effects of these products. In the meantime, we already have enough information to conclude that the choice to use e-cigs comes with serious health risks.

I heard that a lot of teens are using e-cigarettes?

There has been an increase in the number of teens who have tried e-cigarettes in the past few years. This is a concern because of the possibility of becoming addicted to nicotine, and because other harmful chemicals in e-cigs can cause health problems. However, most teens do not use e-cigs or regular cigarettes. In fact, a recent survey of about 15,000 8th graders found that 86% had never used an e-cig in the past year.

Resources

See more information at:

- www.drugabuse.gov/publications/drugfacts/electronic-cigarettes-e-cigarettes
- www.notsosafe.org
- www.drugfree.org/join-together/vaping-tricks-increase-teens-attraction-e-cigarettes/
- [The Center for Disease Control's Tobacco Information and Source Page, put out by the Office on Smoking and Health](#)
- <http://www.tobacco.org>
- <https://www.thetruth.com/articles/hot-topic/e-cigs-and-vapingStillblowingsmoke.org>
- <http://www.fda.gov/TobaccoProducts/Labeling/ucm388395.htm>

Stay up-to-date with current research:

- <http://search.cdc.gov/search?query=e-cig&utf8=%E2%9C%93&affiliate=cdc-main>

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