



# Behind the Smokescreen: Five Things You Should Know About E-Cigarettes

## Q: What are e-cigarettes?

**A:** E-cigarettes are popular battery-powered smoking devices that heat a liquid into an aerosol pod for users to inhale and exhale like a cigarette. E-cigarettes have many names and vary in shape and size. Also referred to as vape pens, JUULs, tank systems and mods, they can look like a regular cigarette or have additional components for recharging.



## Q: Do e-cigarettes contain nicotine?

**A:** Yes, in most cases. The e-liquid in most e-cigarettes contains nicotine, the same addictive drug that is in regular cigarettes and other tobacco products. However, nicotine levels are not the same from e-cigarette to e-cigarette and not all labels list accurate nicotine amounts. Just one e-cigarette pod can have more nicotine than an entire pack of tobacco cigarettes. Even e-cigarettes that claim to be nicotine-free can contain nicotine.

## Q: What is in the aerosol (vapor) of an e-cigarette?

**A:** Although the term “vapor” may sound harmless, the aerosol that comes out of an e-cigarette is not water vapor. E-cigarette vapor can contain substances that are addictive and can cause lung disease, heart disease and cancer, including flavoring chemicals (like diacetyl, which is linked to lung disease), metals (like lead) and other cancer-causing chemicals.



## Q: Can e-cigarettes help people quit smoking?

**A:** E-cigarettes have not been approved by the FDA as a quit-smoking aid. Research shows limited evidence of e-cigarettes working as an effective option to help smokers quit. There are other proven, safe and effective methods for quitting smoking like behavioral counseling and approved medications. Talk with your doctor, nurse, or a trained counselor to figure out the best strategies for you.

## Q: Are e-cigarettes as harmful as regular cigarettes?

**A:** E-cigarettes are just as harmful for youth, young adults and pregnant women as cigarette smoking. The amount of nicotine varies from e-cigarette to e-cigarette and in some cases, just one e-cigarette pod can have more nicotine than an entire pack of regular cigarettes.

# E-Cigarettes and Youth: What Parents Should Know



As of 2018, the [U.S. Surgeon General declared e-cigarette use among youth to be a national health epidemic](#) and urged action to stop the use of e-cigarettes among teens and adolescents. E-cigarettes, like cigarette smoking, can be especially harmful for [developing babies](#), children, pregnant women and young adults into their 20's in terms of brain development, behavioral risks and addiction.

## Key statistics

- One in five teens have reported vaping nicotine, according to the National Institutes of Health reports.
- In 2015, more than a quarter of students in grades six through 12 and more than a third of young adults had tried e-cigarettes.
- E-cigarette use in youth dramatically increased in 2018 compared to 2017:
  - 48 percent increase of e-cigarette use by middle school students.
  - 78 percent increase in e-cigarette use by high school students.
- Three to five percent of all babies that come from mothers that used e-cigarettes have severe birth defects, according to the CDC and FDA.

[Read the Surgeon General's advisory](#)



## Lasting effects

Youth and young adults are uniquely at risk for lasting effects of exposing their developing brains to nicotine. Risks include nicotine addiction, mood disorders and permanent lowering of impulse control. In addition to nicotine, e-cigarettes are known to contain chemicals that can impact brain development, not to mention cause [irreversible lung damage and lung disease](#). They may also contain heavy metals like lead, flavorings linked to lung disease, small particles that can be inhaled deep into the lungs and other cancer-causing chemicals.

## Talk with your children about e-cigarettes

E-cigarette use among youth has reached epidemic proportions and has even reversed years of progress made to reduce tobacco use in youth. Learn more about e-cigarettes among youth on the following pages, including recommendations on how to talk with your kids about the health risks associated with e-cigarettes.

Sources: National Institutes of Health reports, Mayo Clinic, [smokefree.gov](http://smokefree.gov), [ecigarettes.surgeongeneral.gov](http://ecigarettes.surgeongeneral.gov)

## E-cigarettes, “Vapes”, and JUULs What Parents Should Know



### Are e-cigarettes less harmful than cigarettes?

*There is no FDA oversight of the manufacturing of these products – which means there is no oversight regarding potentially harmful ingredients.*

- E-cigarettes almost always contain harmful ingredients including nicotine.
- Acrolein, a known ingredient of many e-cigarettes, causes irreversible lung damage. Nicotine exposure during adolescence and can harm the developing brain.
- The most popular e-cigarette among teens is JUUL
  - All JUUL pods contain some nicotine – something many youth don’t realize.
  - According to the manufacturer, one JUUL pod may contain as much nicotine as a pack of cigarettes.
- No e-cigarette has been found to be safe and effective by FDA in helping smokers quit.

### Is there a difference between e-cigarettes and JUULing?

- No. JUULs may look different, but they’re actually a type of e-cigarette.
- E-cigarettes are battery powered and deliver nicotine through a liquid which turns into an aerosol.
- The e-liquids come in fruit flavors that appeal to youth.

*JUUL is more discrete and looks like a USB drive. Other e-cigarettes may look like phones.*

- Cartridge-based e-cigarettes like JUUL contain nicotine salts that do not produce vapor or visible emissions when the device is used and may make the product even more addictive.
- JUUL claims that some of its pods have roughly as much nicotine as an entire pack of cigarettes.

### How bad is the e-cigarette epidemic?

Most common reasons youth use e-cigarettes<sup>1</sup>



**39%**

Use by “friend or family member”



**31%**

Availability of “flavors such as mint, candy, fruit, or chocolate”



**17%**

Belief that “they are less harmful than other forms of tobacco such as cigarettes”

<sup>1</sup>Wang TW, Gentzke A, Sharapova S, Cullen KA, Ambrose BK, Jamal A. Tobacco Product Use Among Middle and High School Students – United States, 2011–2017. MMWR Morb Mortal Wkly Rep 2018;67:629–633. DOI: <http://dx.doi.org/10.15585/mmwr.mm6722a3>

## Does the American Lung Association agree with the Food and Drug Administration that youth use of e-cigarettes has reached an epidemic?

- Yes, the American Lung Association agrees that e-cigarette use among youth has reached epidemic levels.
- American Lung Association has been asking the FDA to take action on e-cigarettes for a decade.
- E-cigarettes are the most commonly used tobacco products among youth and have been for several years now.
- Many youth don't realize how they are harming their lungs and their brains by using e-cigarettes.

*Several years ago, one study estimated there were about 7,700 flavors of e-cigarettes on the market at that time.*



## How is the American Lung Association helping your children?

- The American Lung Association urges the Food and Drug Administration to take meaningful action to crack down against products that target youth.
- The Lung Association and our partners filed a lawsuit against FDA for its delay of reviewing products currently for sale.
- The American Lung Association is working to implement proven effective policies that will reduce youth from e-cigarettes, including raising the minimum age of sale to 21 and increasing the price of products.
- Education programs available
  - Not on Tobacco (N-O-T) is the American Lung Association's teen smoking cessation program and helps teens who want to quit, providing the tools, information and support to quit for good.
  - Alternative to Suspension program is offered as an option to students who face suspension for violation of school tobacco-use policy and is administered by an adult facilitator in either a one-on-one or group format in a school or community-based setting.

### Contact

Lung HelpLine and Tobacco Quitline is a telephone support line available in over 200 languages, and is a free service allowing callers access to expert staff, including registered nurses, respiratory therapists, pharmacists and certified tobacco cessation specialists.



1-800-LUNG-USA (1-800-586-4872) or [www.Lung.org/helpline](http://www.Lung.org/helpline).



Learn more about these and other programs at [www.Lung.org](http://www.Lung.org).

Contact your local American Lung Association office for information on youth leadership groups and other youth tobacco initiatives. **1-800-LUNGUSA**