

# Teens and Vaping

## What Caring Adults Should Know About Electronic Cigarette Use

**E-cigarettes (e-cigs)**, also known as “vapes,” are designed to deliver nicotine, flavorings, THC (marijuana) and other additives through a liquid that turns into a vapor.

**Vaping** is the act of inhaling and exhaling vapor produced by an e-cigarette. It is called vaping because of the vapor cloud given off during use.

- Many youth use the term *Juuling* (named after a vape device called JUUL).

(CDC, 2018)

**A Small Device... A BIG PROBLEM**

Over **10.7 million** youth ages 12-17 are at-risk for using e-cigarettes.

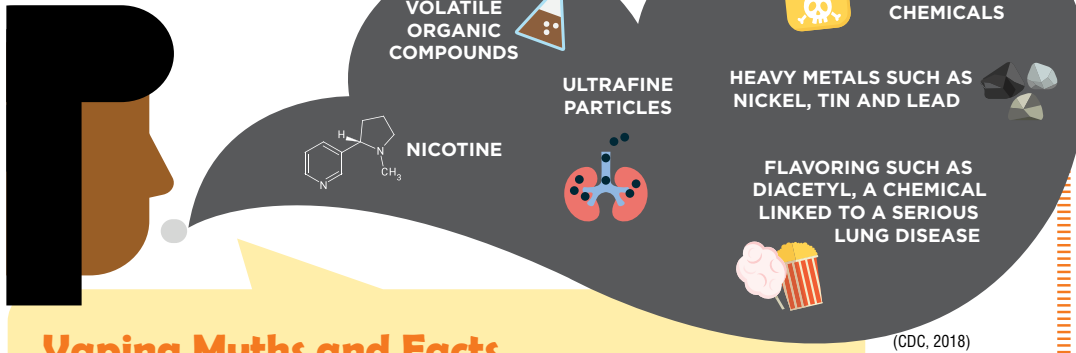
(Center for Tobacco Products, 2015)

### RISKS FOR YOUTH:

- Between 2017 and 2018, vaping among high school students increased by 78%.
- E-cigarettes are the most commonly used tobacco product among teens ages 12 to 18.
- All JUUL e-cigs have a high level of nicotine. A typical cartridge, or “pod,” contains about as much nicotine as a pack of 20 regular cigarettes.
- E-cigs pose a higher risk for developing “popcorn lung,” a serious lung disease that causes coughing, shortness of breath and symptoms similar to chronic obstructive pulmonary disease (COPD).
- As of November 2019, the U.S. has had 2,051 hospitalizations, with the death toll rising to 39, due to vaping-related causes.
- Nicotine exposure can negatively impact learning, memory, attention and long-term respiratory health, as well as potentially increase impulsivity and the development of mood disorders.

(American Lung Association, 2016; CDC, 2018; CDC, 2019a)

### EXPOSURE TO TOXIC SUBSTANCES



(CDC, 2018)

### Vaping Myths and Facts

- Myth: “It’s just water vapor.” Fact:** Vaping can expose the user’s lungs to harmful chemicals such as formaldehyde and carcinogens.
- Myth: “It’s just flavoring.” Fact:** Vapes get their flavors from chemicals. While these flavorings are safe to eat in food, they are NOT safe to inhale.
- Myth: “Vapes don’t have nicotine.” Fact:** Most vapes DO contain nicotine. Some vapes claim they are nicotine-free but are not.
- Myth: “Nicotine isn’t that bad for me.” Fact:** Nicotine exposure during teen years disrupts brain development and causes permanent damage.
- Myth: “There’s no way I’ll become addicted.” Fact:** Vaping, like cigarettes, delivers nicotine to the brain in as little as 10 seconds. A teen’s brain is still developing, making it more vulnerable to nicotine addiction.
- Myth: “Just because I vape doesn’t mean I’m going to smoke cigarettes.” Fact:** Evidence suggests teens who vape are more likely to try smoking cigarettes in the future.

(Ambrose et al., 2014; CDC, 2018; CDC, 2019a)

In 2018, more than **3.6 MILLION** U.S. middle and high school students used e-cigarettes in the past 30 days, including:

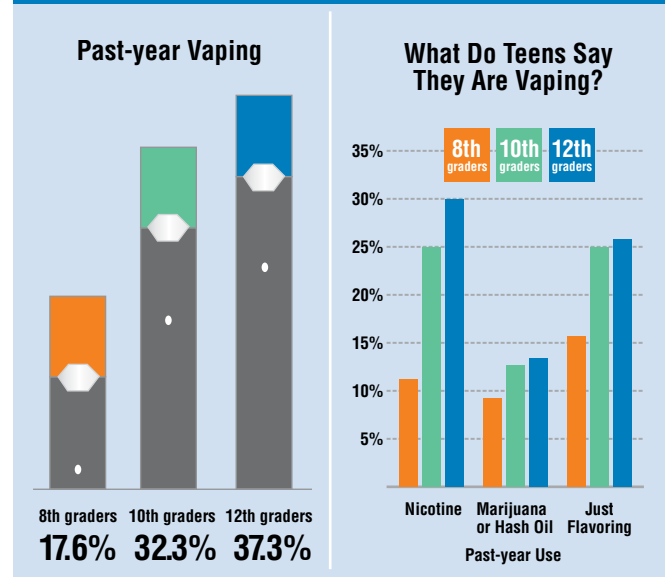
**4.9%** MIDDLE SCHOOL STUDENTS

**20.8%** HIGH SCHOOL STUDENTS



(CDC, 2018)

### Teens Using Vaping Devices in Record Numbers



(NIH, 2019)



**Meagan Scott, Ph.D.**  
Assistant Professor/4-H Youth Development Specialist

**Chloe Krinke, M.Ed., LAPC, NCC**  
NDSU Center for 4-H Graduate Assistant from 2015-2019

**Katelyn Yliniemi, B.A.**  
NDSU Center for 4-H Graduate Assistant

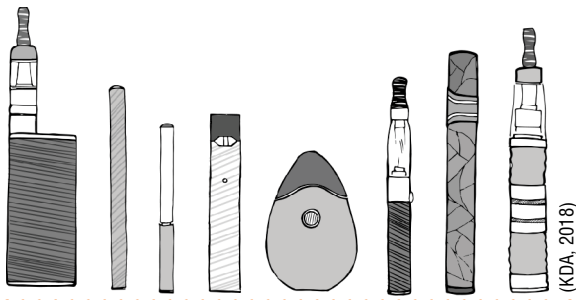
# E-cigarette use has become an epidemic among our nation's young people.

(CDC, 2019b)

## Most Common Reasons Youth Use E-cigs:

- ◆ Their friends, classmates or family members use
- ◆ Availability of flavors, such as mint, candy or fruit
- ◆ Believe e-cigs are less harmful than other forms of tobacco, such as cigarettes
- ◆ Some emit very low amounts of vapor, making them easier to use discreetly than cigarettes
- ◆ Access: online purchasing and retail locations do not implement strict age verification processes
- ◆ Social media attention and mass marketing directed at youth make it more appealing
- ◆ To experiment, out of boredom or curiosity or to relieve stress

(Pentz et al., 2015)



(KDA, 2018)

Vape devices can look like regular cigarettes, cigars or pipes, while others resemble USB sticks, guitar picks and small cellphones.

(Partnership for Drug-Free Kids, 2018)

## THE BOTTOM LINE:

Set a good example by being tobacco-free. If you use tobacco products, it is never too late to quit. Talk to a health-care professional, or for free help, visit <https://smokefree.gov> or call 1-800-QUIT-NOW. Educate teens and get the conversation about vaping started:

- Get the “Talk with Your Teen about E-cigarettes” sheet. This tip sheet offers facts and practical ways to start conversations about the risks of e-cigarette use with your child.
- Download the NDSU Extension publication: “A Parent’s Role in Substance Use Prevention: Tips for Talking to Youth of All Ages” (YD1912) to understand your role as a caregiver and what you can do to prevent the use of e-cigarettes.
- Access the new and free “Quitting E-cigarette Texting Program” for teens, adults or parents of teens with e-cigarette addictions.

## HERE ARE SOME SIGNS YOUR TEEN MAY BE VAPING:



(Partnership for Drug-Free Kids, 2018; Ruthless Vapor, 2019)



Calls to poison control centers involving e-cigs jumped from one per month in 2010 to 215 per month in 2014. The liquid in e-cigs can be toxic if someone drinks, sniffs or touches it. Children under 5 years old made up more than half of the poisoning cases.

Poison Control Center:  
**(800) 222-1222**

(Scholastic, 2015)

## REFERENCES:

Ambrose, B., Rostron, B., Johnson, S., Portnoy, D., Apelberg, B., Kaufman, A., & Choiniere, C. (2014). Perceptions of the relative harm of cigarettes and e-cigarettes among U.S. youth. *American Journal of Preventive Medicine*, 47, 53-60. [www.sciencedirect.com/science/article/pii/S0749379714001834](http://www.sciencedirect.com/science/article/pii/S0749379714001834)

American Lung Association. (2016). [www.lung.org/about-us/blog/2016/07/popcorn-lung-risk-ecigs.html](http://www.lung.org/about-us/blog/2016/07/popcorn-lung-risk-ecigs.html)

Centers for Disease Control and Prevention (CDC). (2018). [www.cdc.gov/tobacco/basic\\_information/e-cigarettes/about-e-cigarettes.html](http://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html)

Centers for Disease Control and Prevention (CDC). (2019a). [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/severe-lung-disease.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html)

Centers for Disease Control and Prevention (CDC). (2019b). [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/surgeon-general-advisory/index.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/surgeon-general-advisory/index.html)

Center for Tobacco Products. (2015). [www.scholastic.com/youthvapingrisks/pdfs/YoutheCigarettePreventionInfographic\\_FINAL.PDF](http://www.scholastic.com/youthvapingrisks/pdfs/YoutheCigarettePreventionInfographic_FINAL.PDF)

Kansas Dental Association (KDA). (2018). [www.ksdental.org/home/news-details/2018/12/19/u.s.-surgeon-general-releases-advisory-on-e-cigarette-epidemic-among-youth](http://www.ksdental.org/home/news-details/2018/12/19/u.s.-surgeon-general-releases-advisory-on-e-cigarette-epidemic-among-youth)

Minnesota Department of Health. (2019). [www.health.state.mn.us/communities/tobacco/ecigarettes/docs/schooltoolkit.pdf](http://www.health.state.mn.us/communities/tobacco/ecigarettes/docs/schooltoolkit.pdf)

News in Health (NIH). (2019). <https://newsinhealth.nih.gov/2019/02/vaping-risks-among-teens>

Partnership for Drug-Free Kids. (2018). <https://drugfree.org/article/how-to-talk-with-your-kids-about-vaping>

Pentz, M., Shin, H., Riggs, N., Unger, J., Collison, K., & Chou, C. (2015). Parent, peer, and executive function relationships to early adolescent e-cigarette use: A substance use pathway? *Addictive Behaviors*, 42, 73-78. <https://www.sciencedirect.com/science/article/pii/S0306460314003724>

Ruthless Vapor. (2019). [www.ruthlessvapor.com/blogs/ruthless-e-liquid/teen-vaping#section5](http://www.ruthlessvapor.com/blogs/ruthless-e-liquid/teen-vaping#section5)

Scholastic. (2015). <http://headsup.scholastic.com/students/e-cigarettes-what-you-need-to-know>

**Reviewed by:** Extension Agents  
Vanessa Hoines, Liz Larson,  
Alice Westby, Amelia Doll,  
Caroline Homan, Cindy Klapperich,  
Chloe Krinke, M.Ed., LAPC, NCC;  
Kim Bushaw, Extension Family  
Science Specialist; Brady Weaver,  
Tobacco Prevention and Control

## ADDITIONAL RESOURCES:

- ◆ American Lung Association
- ◆ U.S. Surgeon General
- ◆ “The Real Cost” Youth E-Cigarette Prevention Campaign
- ◆ My Life My Quit

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, [ndsu.eoaa@ndsu.edu](mailto:ndsu.eoaa@ndsu.edu). This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.