

E-CIGARETTES A GROWING CONCERN

WHAT ARE E-CIGARETTES?

An electronic cigarette is an oral device that can be used to simulate smoking and that produces an aerosol of nicotine and/or other substances.

THEY TAKE MANY FORMS

E-cigarettes are also known as e-hookahs, hookah pens, vape pens, vaporizers, e-cigars, and e-pipes.



4 REASONS TO BE CONCERNED ABOUT E-CIGARETTES

They produce more than just water vapor

- Secondhand aerosol can contain nicotine, ultrafine particles, heavy metals, and cancer-causing chemicals.¹
- Communities have come to expect clean indoor air; e-cigarette use threatens this standard and makes enforcement confusing.

They haven't been proven safe

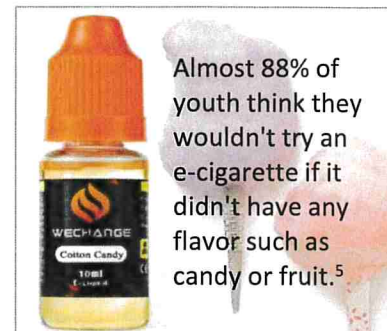
- Studies have found some e-cigarettes contain high levels of formaldehyde and diacetyl, chemicals harmful to the human body.²
- Contents vary widely and don't always match the ingredients or amounts listed on labels.³

They aren't approved to help smokers quit

- No e-cigarette has been approved by the FDA as a cessation device.
- E-cigarette users often continue to smoke regular cigarettes as well as use e-cigarettes.⁴

They appeal to youth

- In Wisconsin, 13% of high school students currently use e-cigarettes, surpassing the use of conventional cigarettes.⁵
- E-cigarettes are the most commonly used tobacco product among youth, a cause for concern since nicotine is known to have harmful effects on adolescent brains.⁶
- Alarming, e-cigarette use is associated with increased intentions to smoke conventional cigarettes.⁷



1 E-cigarettes: A scientific review. Contemporary Reviews in Cardiovascular Medicine. Circulation, 2014

2 Evaluation of Electronic Cigarette Liquids and Aerosol for the Presence of Selected Inhalation Toxins. Nicotine & Tobacco Research, September 2014.

3 Chemical Evaluation of Electronic Cigarettes. Tobacco Control. February 2014.

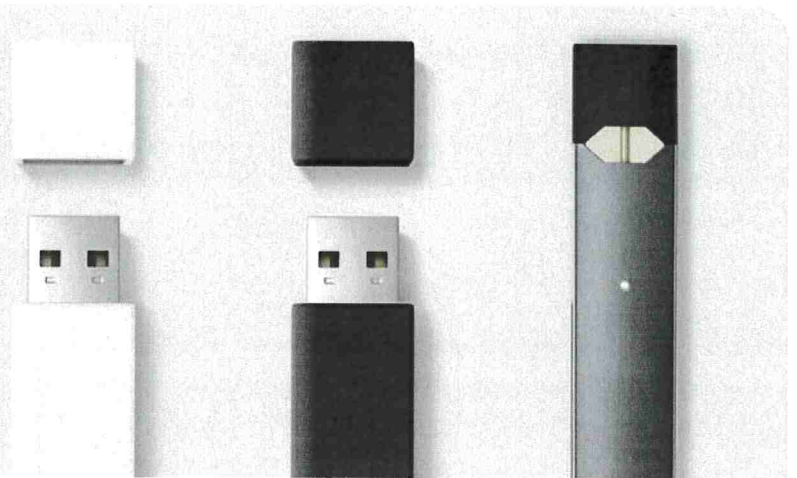
4 Electronic Cigarettes and Conventional Cigarette Use Among US Adolescents: A Cross-sectional Study. JAMA Pediatr. March 2014.

5 2016 Wisconsin Youth Tobacco Survey

6 The health consequences of smoking—50 years of progress. US Department of Health and Human Services, CDC, 2014

7 Intentions to smoke cigarettes among never-smoking US middle and high school electronic cigarette users: National Youth Tobacco Survey, 2011-2013. Nicotine & Tobacco Research, February 2014.

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-cigarettes¹



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”

¹Wang 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

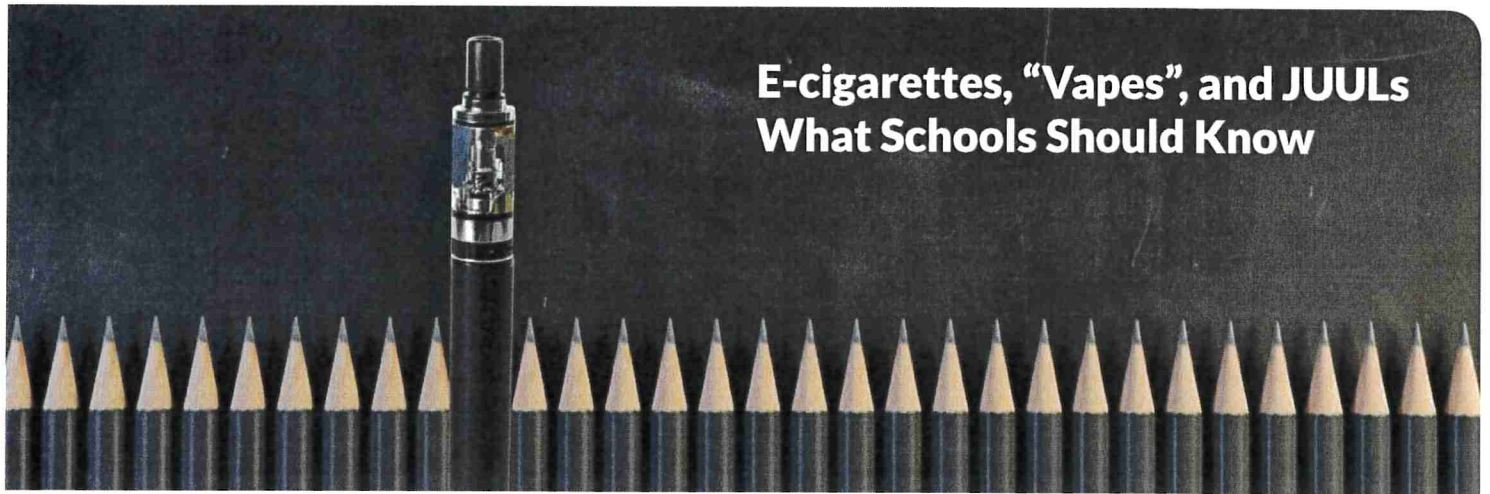
Lung HelpLine and Tobacco Quitline is a telephone support line available in over 200 languages, and is a free service allowing callers access to expert staff, including registered nurses, respiratory therapists, pharmacists and certified tobacco cessation specialists.

 **1-800-LUNG-USA (1-800-586-4872) or www.Lung.org/helpline.**

 Learn more about these and other programs at **www.Lung.org**.

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

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






What are these products?

- E-cigarettes are battery-powered devices that use a heating element to heat e-liquid, typically containing nicotine, from a cartridge that produces a chemical-filled aerosol.
- Many e-liquids or “e-juice” come in fruit flavors, making them appealing to kids.

E-cigarettes come in many forms and can look like everyday products like pens, USB flash drives, phones and tubes of lipstick.

- Currently, the most popular e-cigarette among teens is the JUUL, which looks like a USB flash drive and produces little visible aerosol when being used. Many JUUL pods contain high levels of nicotine - one JUUL pod claims to contain roughly the same amount of nicotine as one pack of cigarettes.

Most common reasons kids use e-cigarettes include:²

-  **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”

Are e-cigarettes less harmful than cigarettes?

- The Surgeon General has concluded that e-cigarette aerosol is not safe.
- E-cigarettes contain harmful and potentially harmful ingredients, including formaldehyde and acrolein, which can cause irreversible lung damage. They also contain nicotine.
- E-cigarettes can be used for delivery of marijuana and other illicit drugs.
- FDA has found no e-cigarette to be safe and effective in helping people quit; in fact, more than half of all adult e-cigarette users continue to use regular cigarettes.

Is youth e-cigarette use really an epidemic?

The FDA has called e-cigarette use among teens an epidemic with no signs of abating.

- E-cigarettes are the most commonly used tobacco products among kids, with nearly 12 percent of high school students nationwide using e-cigarettes and about 20 percent using at least one tobacco product.¹

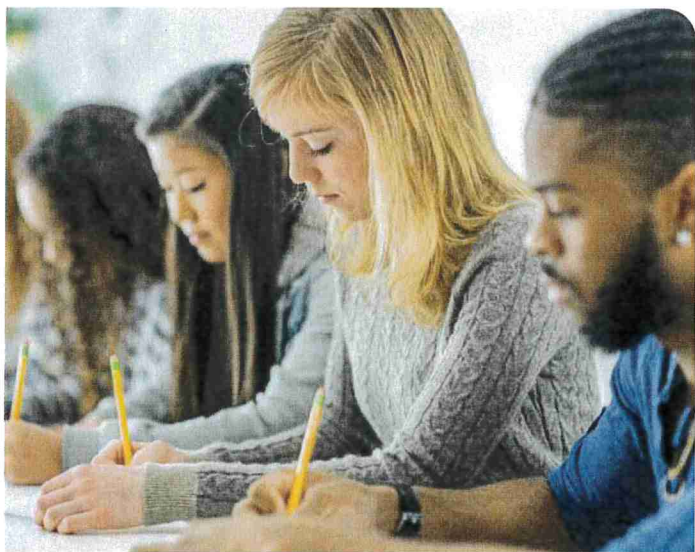
¹ Wang TW, Gentzke A, Sharapova S, Cullen KA, Ambrose BK, Jamal A. Tobacco Product Use Among Middle and High School Students — United States, 2011–2017. MMWR Morb Mortal Wkly Rep 2018;67:629–633. DOI: <http://dx.doi.org/10.15585/mmwr.mm6722a3>

² Tsai J, Walton K, Coleman BN, et al. Reasons for Electronic Cigarette Use Among Middle and High School Students — National Youth Tobacco Survey, United States, 2016. MMWR Morb Mortal Wkly Rep 2018;67:196–200. DOI: <http://dx.doi.org/10.15585/mmwr.mm6706a5>

Impact of e-cigarette use on teens

The bottom line: e-cigarette use is unsafe, especially for young people.

- Schools should work with their students to help educate them about the potential long-term consequences of using e-cigarettes.
- Kids often don't realize that they are harming their lungs and their brains by using e-cigarettes.
- Kids may not realize that the products they are using contain nicotine, which is highly addictive and can harm adolescent brain development.
- It's not just harmless water vapor: secondhand emissions from e-cigarettes can contain nicotine; ultrafine particles; flavorings such as diacetyl, a chemical linked to serious lung disease; volatile organic compounds such as benzene, which is found in car exhaust; and heavy metals, such as nickel, tin and lead.
- The e-cigarette industry is currently using many of the same tactics that worked to sell traditional cigarettes for decades.
- These products are designed to appeal to and be used by teens and can go undetected by adults.



1-800-LUNGUSA | Lung.org

What should schools do to protect their students from these products?

- Institute and enforce comprehensive tobacco-free campus policies, including all e-cigarettes. Punitive policies aren't effective. Many of our youth are already addicted to nicotine through these tobacco products and therefore efforts are needed to help kids quit. Schools should offer programs on-site to help students quit or connect them with resources to support them in breaking free from their addiction.
- Ensure all teachers, administrators and staff know the different kinds of e-cigarettes on the market and the dangers they pose to young people.
- Participate in the "Real Cost Campaign." FDA's tobacco prevention campaign which now features ads to educate teens on dangers of e-cigarettes. Schools can take advantage of free print materials and web content from the campaign.


What resources does American Lung Association offer to address this issue?

- Not on Tobacco (N-O-T) is the American Lung Association's teen smoking cessation program and helps teens who want to quit, and provides the tools, information and support to quit for good.
- The 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.

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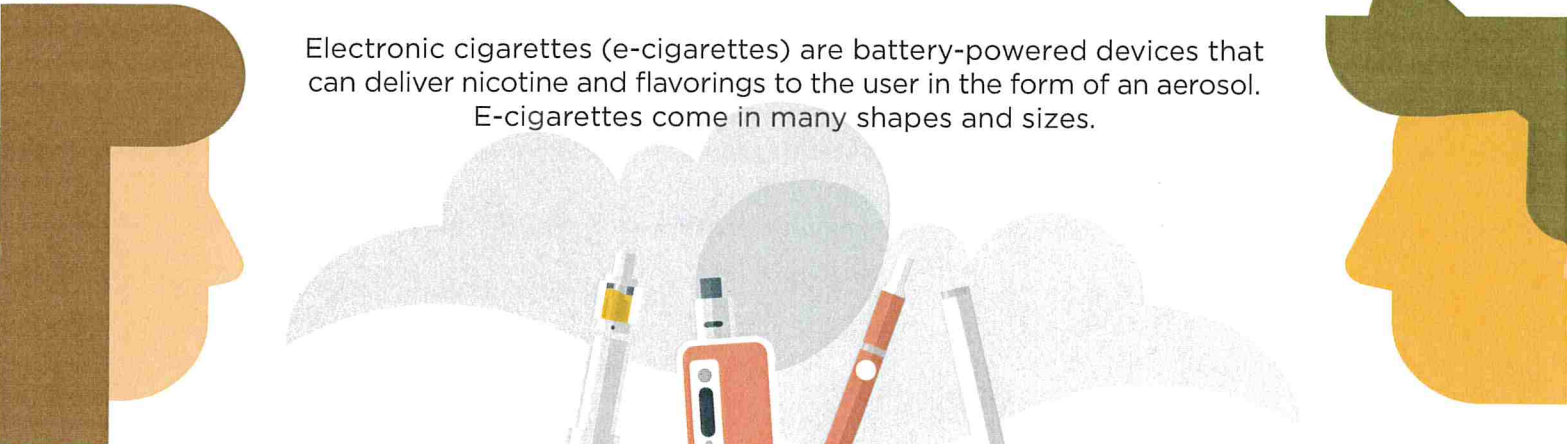
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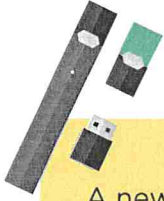
E-CIGARETTES SHAPED LIKE USB FLASH DRIVES: INFORMATION FOR PARENTS, EDUCATORS, AND HEALTH CARE PROVIDERS



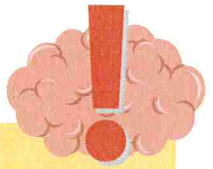
Electronic cigarettes (e-cigarettes) are battery-powered devices that can deliver nicotine and flavorings to the user in the form of an aerosol. E-cigarettes come in many shapes and sizes.




WHAT'S THE BOTTOM LINE?




A new e-cigarette shaped like a **USB** flash drive is being used by students in schools.



Nicotine is highly addictive and can **harm brain development**, which continues until about age 25.



The use of any tobacco product — including e-cigarettes—is **unsafe** for young people.



Parents, educators, & health care providers can help prevent and reduce the use of all tobacco products, including e-cigarettes, by young people.


>> **Learn HOW** in this fact sheet.

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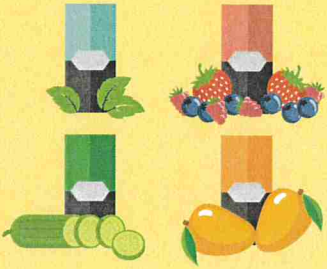
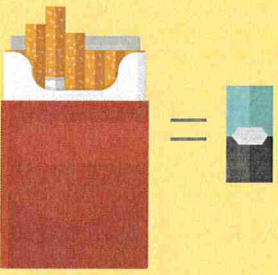
U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

AN INCREASINGLY POPULAR E-CIGARETTE DEVICE, CALLED JUUL, IS SHAPED LIKE A USB FLASH DRIVE.



Use of JUUL is sometimes called "JUULing."

JUUL's nicotine liquid refills are called "pods." JUUL is available in several flavors such as Cool Cucumber, Fruit Medley, Mango, and Mint.

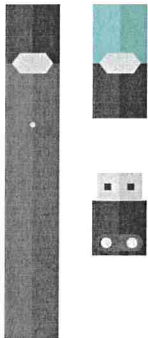
All JUUL e-cigarettes have a high level of nicotine. According to the manufacturer, a single JUUL pod contains as much nicotine as a pack of 20 regular cigarettes.



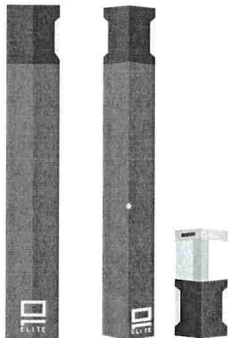
JUUL became available for sale in the United States in 2015. As of December 2017, JUUL is the top-selling e-cigarette brand in the United States.

News outlets and social media sites report widespread use of JUUL by students in schools, including in classrooms and bathrooms.

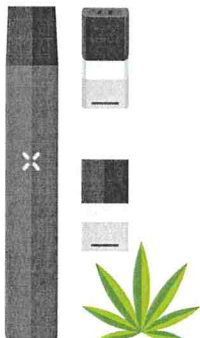
Other devices are becoming available that look like USB flash drives. Examples include the MarkTen Elite, a nicotine delivery device, and the PAX Era, a marijuana delivery device that looks like JUUL.



JUUL



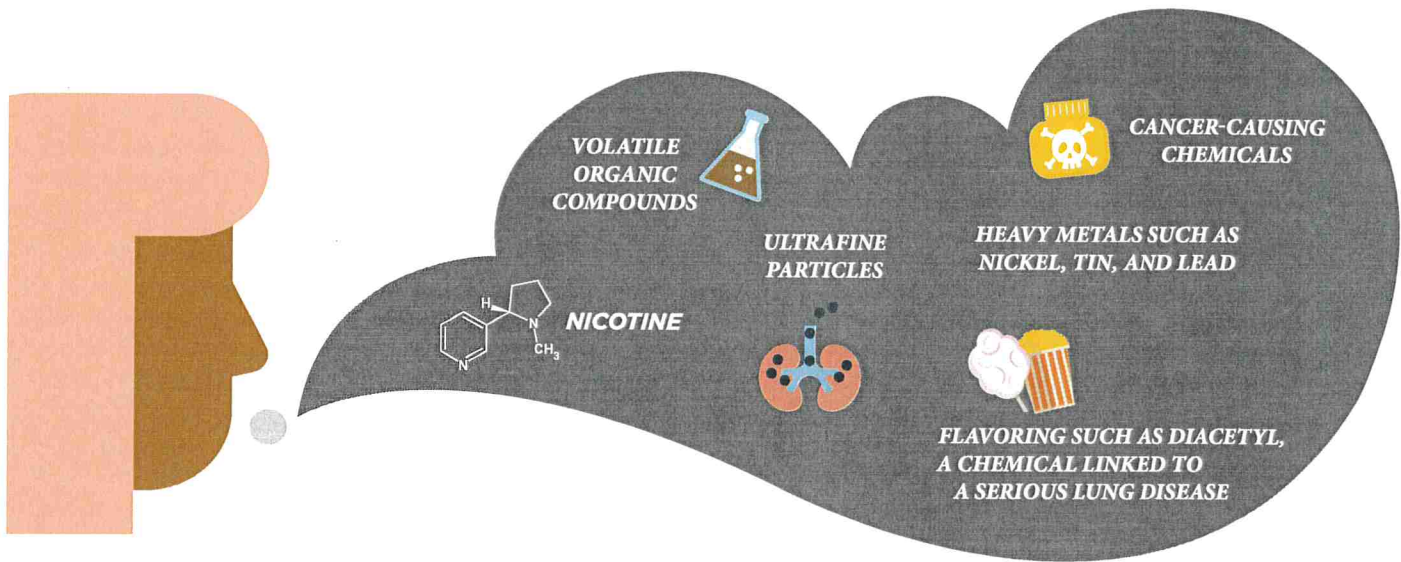
MarkTen Elite



PAX Era

E-CIGARETTE USE IS NOT SAFE FOR YOUNG PEOPLE.

E-cigarette aerosol is not harmless. It can contain harmful ingredients. However, e-cigarette aerosol generally contains fewer harmful chemicals than smoke from burned tobacco products, like regular cigarettes.



Most e-cigarettes contain ***nicotine***, which is highly addictive and can ***harm brain development***, which continues until about ***age 25***.



YOUNG PEOPLE WHO USE E-CIGARETTES MAY BE MORE LIKELY TO GO ON TO USE REGULAR CIGARETTES.



PARENTS, EDUCATORS, AND HEALTH CARE PROVIDERS CAN HELP PREVENT AND REDUCE THE USE OF E-CIGARETTES BY YOUNG PEOPLE.



PARENTS CAN:

- » Learn about the different shapes and types of e-cigarettes and the risks of all forms of e-cigarette use for young people.
- » Talk to their children about the risks of e-cigarette use among young people. Express firm expectations that their children remain tobacco-free.
- » Set a positive example by being tobacco-free.



EDUCATORS CAN:

- » Learn about the different shapes and types of e-cigarettes and the risks of all forms of e-cigarette use for young people.
- » Develop, implement, and enforce tobacco-free school policies.
- » Reject youth tobacco prevention programs sponsored by the tobacco industry. These programs have been found to be ineffective for preventing youth tobacco use.



PEDIATRIC HEALTH CARE PROVIDERS CAN:

- » Ask about e-cigarettes, including devices shaped like USB flash drives, when screening patients for the use of any tobacco products.
- » Warn patients about the risks of all forms of tobacco product use, including e-cigarettes, for young people.

PARENTS,
EDUCATORS, AND
HEALTH CARE
PROVIDERS
CAN HELP



What is JUUL?

JUUL is a new type of e-cigarette that has surged in popularity since its introduction in 2015. JUUL is already the **most widely purchased e-cigarette brand**, representing **nearly half** of the market share in the last quarter of 2017.¹ Despite the fact that its purchase, possession, and use is illegal for minors under 18 years old, JUUL is **especially popular among youth**.

Discreet

JUUL has two components: a rechargeable battery and a detachable cartridge of e-juice called a JUULpod. JUUL's small size and its **close resemblance to a USB flash drive** adds to its youth appeal and allows kids to **discreetly use** and **easily hide the device**. Customizable "wraps" or skins" featuring different colors and patterns add to the device's concealability.¹



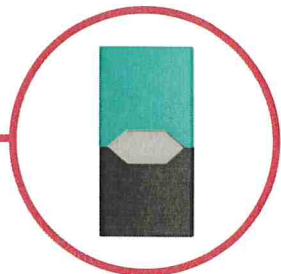
Image from TruthInitiative.org



Image from OhGizmo.com



Images from Amazon.com



Each JUULpod contains **200 puffs** and on average **costs less than a pack of cigarettes**.²

Image from JuulVapor.com

Appealing to Youth



JUULpods come in kid-friendly flavors such as **Cool Mint, Fruit Medley, and Mango**.¹

Nearly 9 out of 10 Wisconsin youth say they probably **wouldn't try an e-cigarette if it wasn't flavored**.³

Image from EJuceConnect.com



JUUL users have a **significant social media presence** through outlets such as YouTube, Twitter, Snapchat, and Instagram, increasing JUUL's **exposure to young people**.¹

Image from YouTube.com

"JUULing"

Youth and young adults refer to JUUL use as **"JUULing"** instead of "vaping" or "e-cigarette use".²

Not Harmless

JUUL's **highly concentrated levels of nicotine** have been engineered to mimic the kick of cigarettes with less of the harshness that comes with cigarette smoke.²

Nicotine is **highly addictive**, and it can have lasting effects on adolescent brain development, including permanently lowering impulse control and damaging parts of the brain that control attention and learning.^{1,4} Research suggests that youth are **up to seven times more likely** to use other forms of tobacco if they use e-cigarettes like JUUL.⁵



Nicotine in one JUULpod = Total nicotine in a pack of cigarettes!²

Image from SMEHarbinger.net

¹ Bach, Laura. *JUUL and Youth: Rising E-Cigarette Popularity*. Campaign for Tobacco-Free Kids; Washington, DC: 2018. <https://www.tobaccofreekids.org/assets/factsheets/0394.pdf>.

² JUUL 101: The Next Generation of E-Cigarettes. Stanford Medicine Tobacco Prevention Toolkit; Stanford, CA: 2018. <https://med.stanford.edu/content/dam/sm/tobaccoprevention-toolkit/documents/ecigarettes/unit6/juul-101.pptx>.

³ Wisconsin Youth Tobacco Survey: High School and Middle School Fact Sheets. Wisconsin Tobacco Prevention and Control Program; Madison, WI: 2016. High School: <https://www.dhs.wisconsin.gov/publications/p01624.pdf>. Middle School: <https://www.dhs.wisconsin.gov/publications/p01624a.pdf>.

⁴ Know the Risks: E-Cigarettes and Young People. U.S. Department of Health and Human Services; Washington, DC: 2018. <https://e-cigarettes.surgeongeneral.gov/knowtherisks.html>.

⁵ Bold KW, Kong G, Camenga DR, Simon P, Cavallo DA, Morean ME, Krishnan-Sarin S. *Trajectories of E-Cigarette and Conventional Cigarette Use Among Youth*. Pediatrics; Itasca, IL: 2018. <http://pediatrics.aappublications.org/content/141/1/e20171832>.