

The Vaping Epidemic



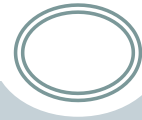
PRESENTED BY:
CHRISTOPHER RUSSELL, MSED
MARCH 08, 2019



NORTHPOINTE
C O U N C I L

your path to a brighter tomorrow

Not just a local problem*



- **12th graders** in past 30 days:
- Nicotine Vaping:
 - 21% in 2018
 - 11% in 2017
- **10th graders** in past 30 days :
- Nicotine Vaping:
 - 16% in 2018
 - 8% in 2017
- **8th graders** in past 30 days :
- Nicotine Vaping:
 - 6.1% in 2018
 - 3.5% in 2017

In total, approximately **1.8 million** more teen users than 2017.

E-cigarette & Vaping Two Truths & A Myth

Two Truths and a Myth – Round 1

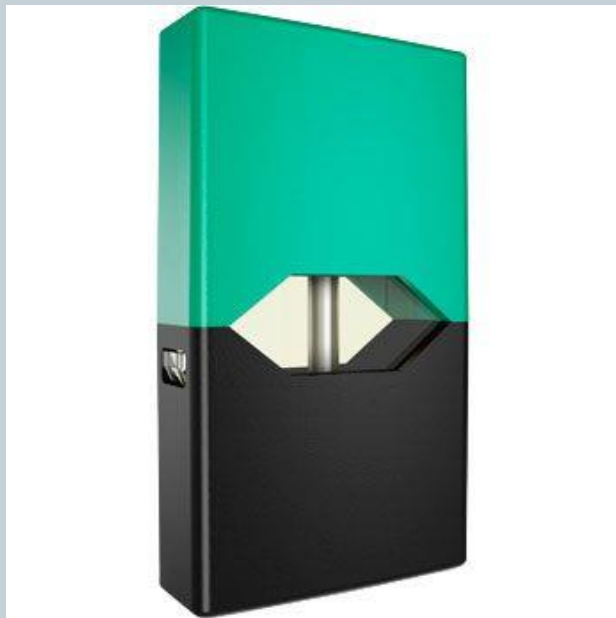


1. Many pod-based e-cigarettes do not contain nicotine.
2. People can experience secondhand exposure to the vapor released from e-cigarettes.
3. The mist released from e-cigarettes is similar to fog machine mist.

*Pod-based e-cigarettes **do** contain nicotine.*



One pod contains the equivalent nicotine of one pack of cigarettes.



*<https://truthinitiative.org/news/6-important-facts-about-juul>

Two Truths and a Myth – Round 2



1. When using e-cigarettes, there is a risk of explosion of electronics and batteries.
2. The FDA currently regulates the chemical ingredients in e-cigarettes and what is listed on the labels of e-liquid/e-juice.
3. The heat generated in an e-cigarette can create formaldehyde from the liquid, and rip metals from the side of the device, which are delivered to the lungs.

The FDA does not currently regulate the chemical ingredients and labels.

In fact, the FDA also does not regulate:

- The amount of different chemicals that can be used to make e-juice
- The cleanliness of facilities that produce e-juice



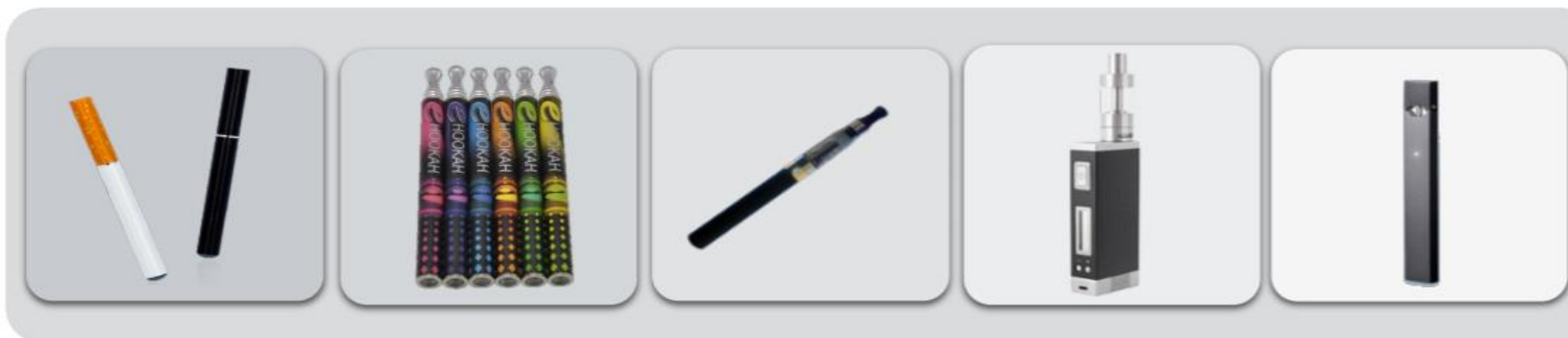
E-cigarettes and Vaping Devices



Harm-reduction for adults who currently smoke.
Harm-inducing for youth.



E-Cigarettes & Vape Pens Generations



Cig-a-Like

E-cigarettes came onto the market around 2007.

Most delivered nicotine and were disposable.

Variations

Variations on the first e-cigarettes included products like e-hookah and rechargeable versions.

Vape Pens

These have batteries that can reach higher temperatures, have refillable e-liquid cartridges, and allow users to regulate the frequency of inhalations.

Mods

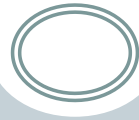
Large size, modifiable e-cigarettes allow for more aerosol, nicotine, and other chemicals to be breathed into the lungs, at a faster rate.

Pod-Based

These e-cigarettes are shaped like USBs and contain pods with higher amounts of nicotine than previous generations.



Detection/Signs of abuse



- Possession of e-cigarette and/or paraphernalia
- Wafts of fruity or mysterious odors
- Unfamiliar objects; odd looking pen, flash drive
- New sensitivity to caffeine
- Increased thirst
- Nosebleeds
- Metallic wires and cotton wicks
- Discarded atomizers
- Interesting batteries and chargers
- Behavioral changes
- Changes in friends

Schools



- **Concerns:**

- The device itself looks like a pen or flash drive
- Blow vapor into backpacks or sweaters during class
- Odor doesn't stick to clothing long; cloud dissipates quickly
- Classrooms; bathrooms; locker rooms; lockers; dances; sporting events
- Students aren't aware of risks and consequences

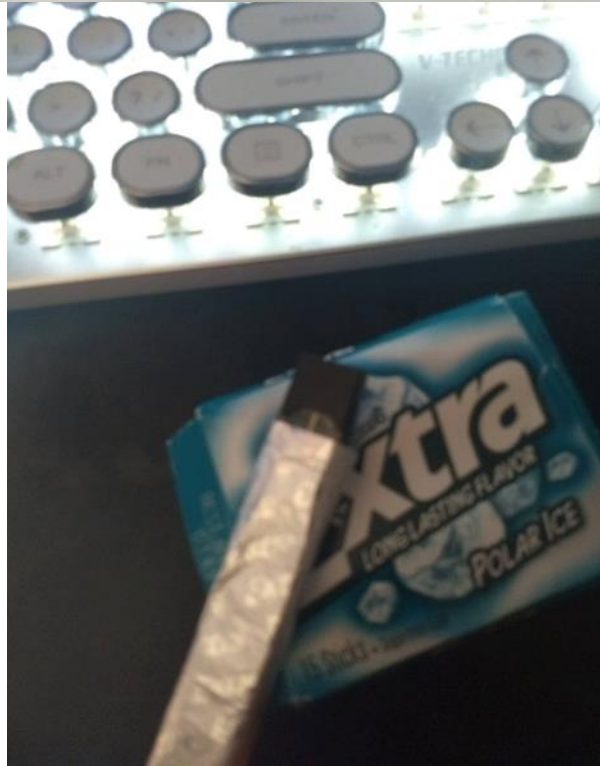
- **Suggestions:**

- Monitor bathrooms, locker rooms, hallways, sporting events, dances
- Student, faculty, parent education and awareness
- E-cigarette/Vaping policies
- Ask to use a suspicious device
- Restrict access: some schools do not allow flash drives in order to limit confusion
- Some schools have taken the main doors to bathrooms off



<https://www.youtube.com/watch?v=oeIBtkyvzCM>:
5 BEST PLACES TO HIDE YOUR VAPE / JUUL

<https://www.youtube.com/watch?v=tgma5zPRZeU>:
BEST PLACES TO HIDE YOUR VAPE / JUUL #2







Vaprrwear: VAPE ANYTHING. VAPE ANYWHERE.



1 IT WORKS:



SLIP THE POD ADAPTER OVER YOUR FAVORITE DEVICE.



PLUG THE POD ADAPTER INTO THE UNIVERSAL CONNECTOR



CONNECT THE POD ADAPTER AND UNIVERSAL CONNECTOR TIGHTLY ONTO YOUR FAVORITE DEVICE. ENJOY HOURS OF VAPOR GOODNESS.

JUUL® AND PAX ERA®



VAPE ANYTHING.
VAPE ANYWHERE.
LIVE LIFE ELEVATED.

The Concerns for Youth



- **Easy to obtain:** online; numerous smoke and vape shops
- **Hard to detect:** minimal odor; easy to conceal; easy to vape illegal substances
- Marketing seems to target youth
- Vapor vs. aerosol
- Other substances
- Popcorn lung: small airways become irreversibly scarred and constricted
 - Named from the condition developed by factory workers who inhaled artificial butter flavor during production
- Long-term effects are unknown
 - Unfortunately this generation of youth will be the body of evidence we learn from

THIS

IS THE VAPE
YOU'VE BEEN
WAITING FOR

my
blu | Click. Vape. Repeat.

©2018 Fusion. NOT FOR SALE TO MINORS. WARNING: This product contains nicotine. Nicotine is an addictive chemical. JUUL, myblu, and Click. Vape. Repeat. are trademarks of Fusion Holdings, LLC.

myblu.com

Pack the
Essentials

WARNING: This product contains nicotine. Nicotine is an addictive chemical.

E-liquid or food product?



FDA, FTC warn companies to stop misleading kids

The Concerns



- Not FDA-approved as smoking cessation aid (NRT, Chantix)
- E-liquids are unregulated
 - Labels are non-existent or false (nicotine amount, other ingredients)
 - Often do not know what is in the e-liquid
 - Over 7,000 flavors: flavoring chemicals, and may or may not contain nicotine
 - Labeling is confusing/misleading: 5% strength=very high level of nicotine but sounds like a low percentage
- E-liquids ingredients:
 - Nicotine
 - Propylene glycol (food preservative)
 - Glycerine (liquid sweetener)
 - Flavorings
 - ✦ Some ingredients that are found in conventional cigarettes
 - ✦ Chemicals identified in e-cigarettes may be toxic

Where Else Can You Find These Chemicals?

Propylene glycol → Antifreeze



Acetone → Nail Polish Remover



Ethylbenzene → Pesticides



Formaldehyde → Embalming



Nicotine → Cigarettes



Rubidium → Fireworks

The Concerns for Youth

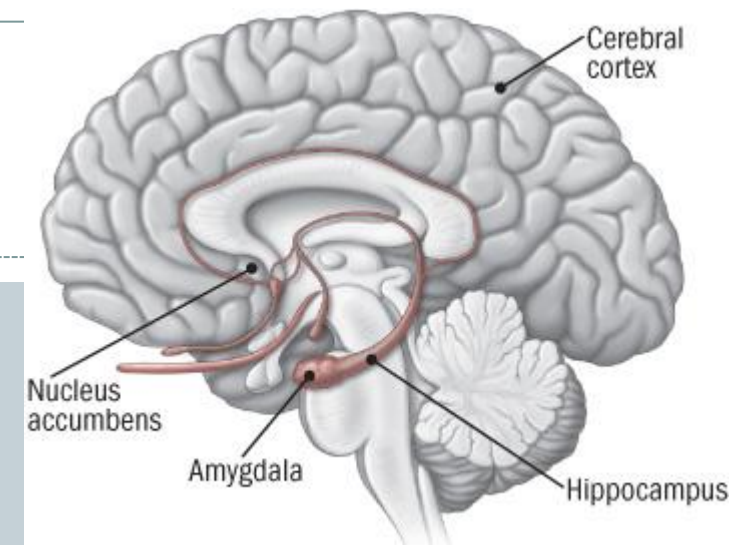


- 2014-2015 NIH study: teens who had used e-cigarettes **before 9th grade** were more likely to start **smoking traditional cigarettes** within the next year
 - Dual-users
 - More likely to experiment with other substances
- **Brain development affected**
 - Attention and learning
 - Impulse control
- Exposure to nicotine
 - E-juices contain varying levels of nicotine
- Nicotine **addiction rates increasing** for the first time in decades

Addiction: Chronic Brain Disease



- Nicotine stimulates the pleasure centers of brain
- Causes release of dopamine which causes feeling of pleasure
- Nicotine creates a flood of dopamine and intense feelings; more than the body can naturally produce
- Brain senses extra dopamine and in response decreases the amount it makes
- Person will have harder time making enough dopamine to have natural (baseline) feelings of pleasure without nicotine present
- Need to use nicotine in order to feel normal
- Brain also creates a memory of the nicotine and creates an appetite for it
- When person stops intaking nicotine, the nicotine level drops quickly which causes body to crave the substance



Prevention



- Talk to students/parents/guardians
- Classroom presentations
- Ask and **listen** with support; open-ended questions
- Role model; deglamorize vaping
- Get their perspective; ask before suggesting why not
- Health risk facts aren't the whole story
- Share your concerns
- Empower them to make decisions and resist peer pressure
- Use teachable moments
- Set clear expectations
- On-going conversation vs. 1 time

Resources



- (“Amazing Vape Trick Compilation”) <https://www.youtube.com/watch?v=zVXR7xttUeo>
- <https://www.fda.gov/TobaccoProducts/PublicHealthEducation/PublicEducationCampaigns/TheRealCostCampaign/ucm20041242.htm>
- <https://www.businessinsider.com/vaping-e-cig-health-effects-toxic-metals-lead-teen-bodies-2018-3>
- <https://www.v2.com/blog/2013/11/the-best-hiding-places-for-your-electronic-cigarettes-and-other-stuff/>
- <https://drugfree.org/parent-blog/the-teen-vaping-trend-what-parents-need-to-know/>
- <https://drugfree.org/drug/e-cigarettes-vaping>
- <https://vapingdaily.com/health/vaping-and-parenting/>
- <https://drugfree.org/parent-blog/know-kid-vaping-marijuana/>
- <https://www.drugabuse.gov/news-events/news-releases/2015/08/teens-using-e-cigarettes-may-be-more-likely-to-start-smoking-tobacco>
- <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm620185.html>
- <https://e-cigarettes.surgeongeneral.gov/getthefacts.html>
- Tobacco Prevention Toolkit, Division of Adolescent Medicine, Stanford University; www.tobaccopreventiontoolkit.stanford.edu
- Campaign for Tobacco-Free Kids, June 19, 2018; Electronic Cigarettes: An Overview of Key Issues
- <http://pediatrics.aappublications.org/content/early/2018/11/01/peds.2018-0486>



- National Institute on Drug Abuse; National Institutes of Health; U.S. Department of Health and Human Services; Electronic Cigarettes (E-cigarettes) July 2018
- GASP of Colorado (Group to Alleviate Smoking Pollution) www.gaspforair.org
- <https://www.vox.com/2018/9/12/17850598/fda-juul-vaping>
- <https://www.nytimes.com/2018/02/14/well/family/how-to-talk-with-teenagers-about-vaping.html>
- <https://www.juul.com/youth-education-awareness-and-prevention>
- <https://consumer.healthday.com/cancer-information-5/electronic-cigarettes-970/kids-who-vape-face-toxin-dangers-study-finds-731630.html>
- <https://medicalxpress.com/news/2016-06-e-cigarettes-illicit-drugs.html>
- <https://www.npr.org/sections/health-shots/2017/12/04/568273801/teenagers-embrace-juul-saying-its-discreet-enough-to-vape-in-class>
- https://www.washingtonpost.com/national/health-science/the-juuls-so-cool-kids-smoke-it-in-school/2018/03/26/32bb7d80-30d6-11e8-b6bd-0084a1666987_story.html?noredirect=on&utm_term=.0317711d45da
- <https://news.psu.edu/story/527326/2018/07/03/impact/medical-minute-hazards-juuling-or-vaping>
- <https://vapingdaily.com/health/vaping-and-parenting/>
- <https://www.nih.gov/news-events/news-releases/vaping-popular-among-teens-opioid-misuse-historic-lows>
- <https://truthinitiative.org/news/what-is-juul>