

A person is shown from the chest up, standing on a staircase and exhaling a large, dense cloud of white vapor. The person is wearing a dark shirt and is looking upwards. The background is dark, and the staircase railing is visible. The overall tone is dark and moody.

E-CIGARETTES & VAPING: What You Need to Know

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WHAT ARE
E-CIGARETTES
AND VAPING?

ARE
E-CIGARETTES
DANGEROUS?

ARE
E-CIGARETTES
ADDICTIVE?

CAN
E-CIGARETTES
HARM
NONUSERS?

Directions:
Pull the tab until
the dot lines up
with the desired
topic above, then
read the answer
in the window.

WHAT EVERYONE
SHOULD KNOW
ABOUT



Vaping & E-Cigarettes



WHAT TO KNOW

Electronic cigarettes (e-cigarettes) are devices people use to heat a liquid cartridge, which releases a vapor that is inhaled. They're composed of a battery, atomizing device, and e-liquid (the liquid in the cartridge). Using e-cigarettes is called "vaping," since they produce vapor, not smoke.

What do you know about
e-cigarettes and vaping?

Introduction

- What is vaping or e-cigarettes? What are the different names of these products and what are the main differences between them?
- What do they look like?
- Who is using these products?
- Why is vaping so popular?
- Vaping and the new subculture
- Dangers of vaping versus regular cigarettes
- Addiction, dependence, and the gateway theory
- New vaping crisis: Marijuana (THC & CBD)
- How to get help to quit!

WHAT ARE E-CIGARETTES?

- ✓ E-cigarettes are known by many different names
 - “E-cigs”
 - “E-hookahs”
 - “Mods”
 - “Vape pens”
 - “Vapes”
 - “Tank systems”
 - “Electronic nicotine delivery systems” (ENDS)
- ✓ Some look like regular cigarettes, cigars, or pipes
- ✓ Some resemble pens, USB sticks, and other everyday items

Electronic Nicotine Delivery Systems (ENDS)



E-Cigarettes



Hookah Pens

E-Cigars



Vape Pens



E-Pipes



E-Hookahs

At least 450 brands

How do e-cigarettes work?

- ✓ First, a liquid is heated
- ✓ This “e-liquid” usually contains nicotine (the addictive drug) plus other chemicals, oils, metals, and flavors that help make the aerosol
- ✓ Users inhale this aerosol into their lungs
- ✓ Bystanders can also breathe in this aerosol when the user exhales into the air (2nd hand smoke)
- ✓ E-cigarettes can also be used to deliver other drugs, such as THC or CBD
- ✓ E-liquids are not regulated! (which means you can never be sure what they contain and can be VERY harmful)

E-pipe



E-cigar



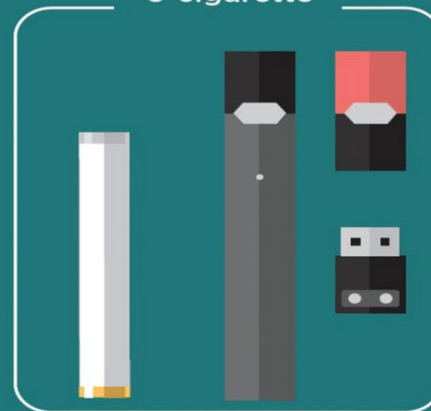
Large-size
tank devices



Medium-size
tank devices

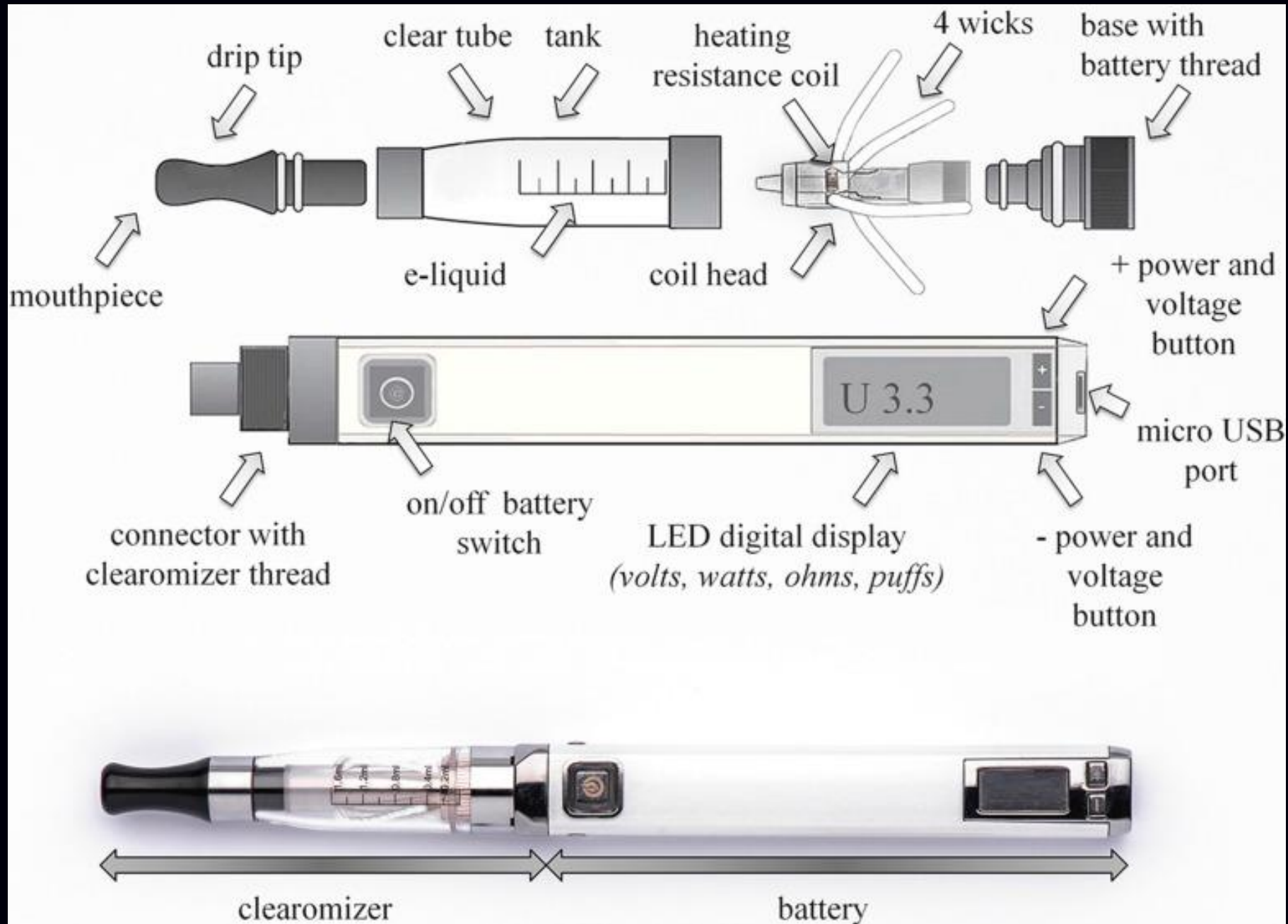


Rechargeable
e-cigarette

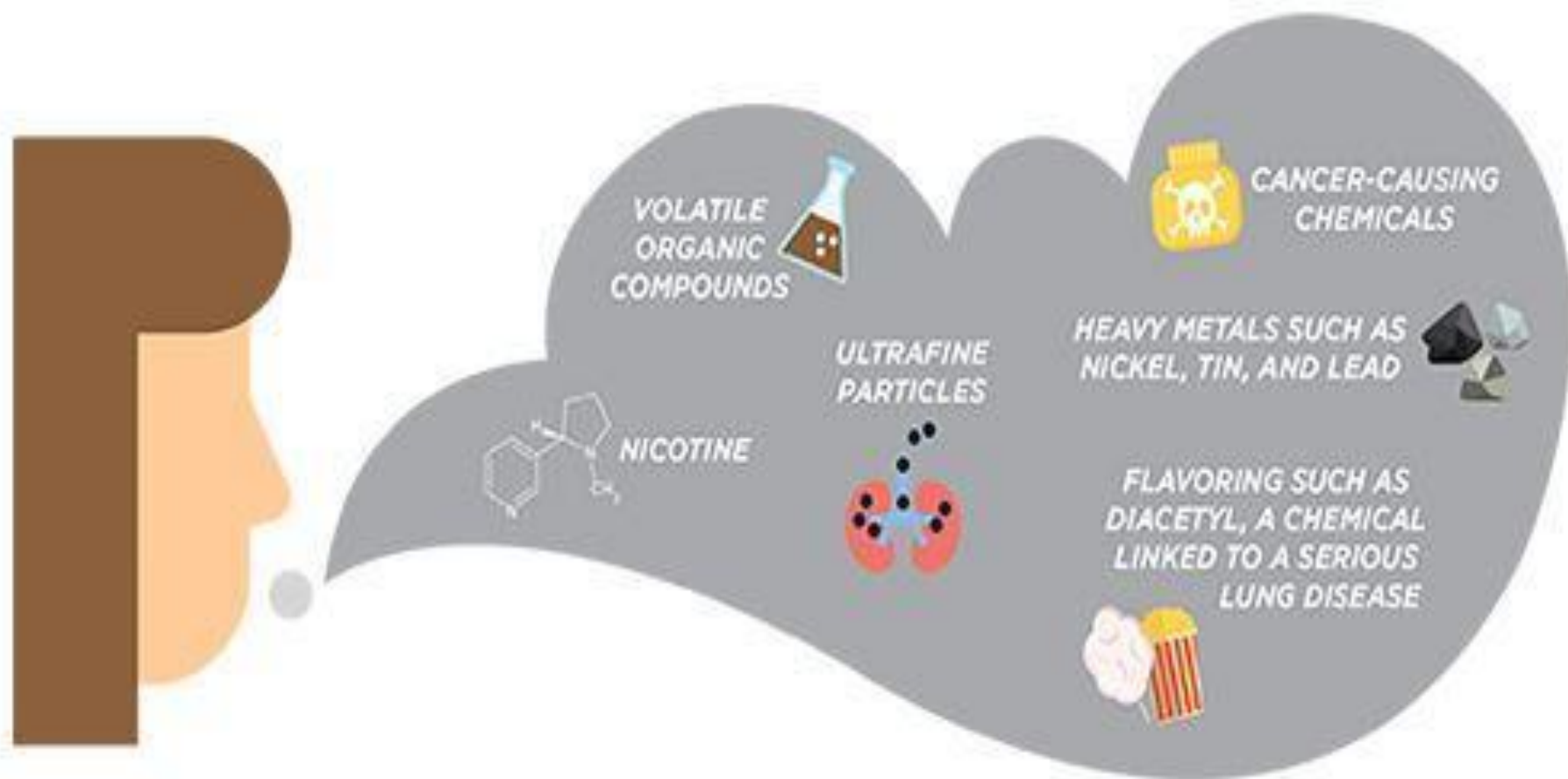


Disposable
e-cigarette





What is in e-cigarette aerosol?



Aerosol and Other Risks

The aerosol from e-cigarettes is not harmless. It can contain harmful and potentially harmful chemicals, including nicotine; ultrafine particles that can be inhaled deep into the lungs; flavoring such as diacetyl, a chemical linked to a serious lung disease; volatile organic compounds such as benzene, which is found in car exhaust; and heavy metals, such as nickel, tin, and lead. Scientists are still working to understand more fully the health effects and harmful doses of e-cigarette contents when they are heated and turned into an aerosol, both for active users who inhale from a device and for those who are exposed to the aerosol secondhand. Another risk to consider involves defective e-cigarette batteries that have been known to cause fires and explosions, some of which have resulted in serious injuries. Most of the explosions happened when the e-cigarette batteries were being charged.



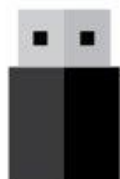


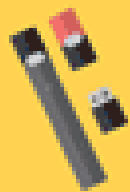


Sales of JUUL, an e-cigarette shaped like a flash drive, grew more than **SEVEN-FOLD** during 2016 - 2017.



JUUL was the most commonly sold e-cigarette in the US by the end of 2017.





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



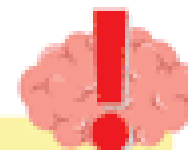
Electronic cigarettes (e-cigarettes) are battery-powered devices that can deliver nicotine and flavorings to the user in the form of an aerosol. E-cigarettes come in many shapes and sizes.



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.





TEACHERS AND PARENTS:
That USB Stick Might
Be an *E-cigarette*

WHO IS USING?



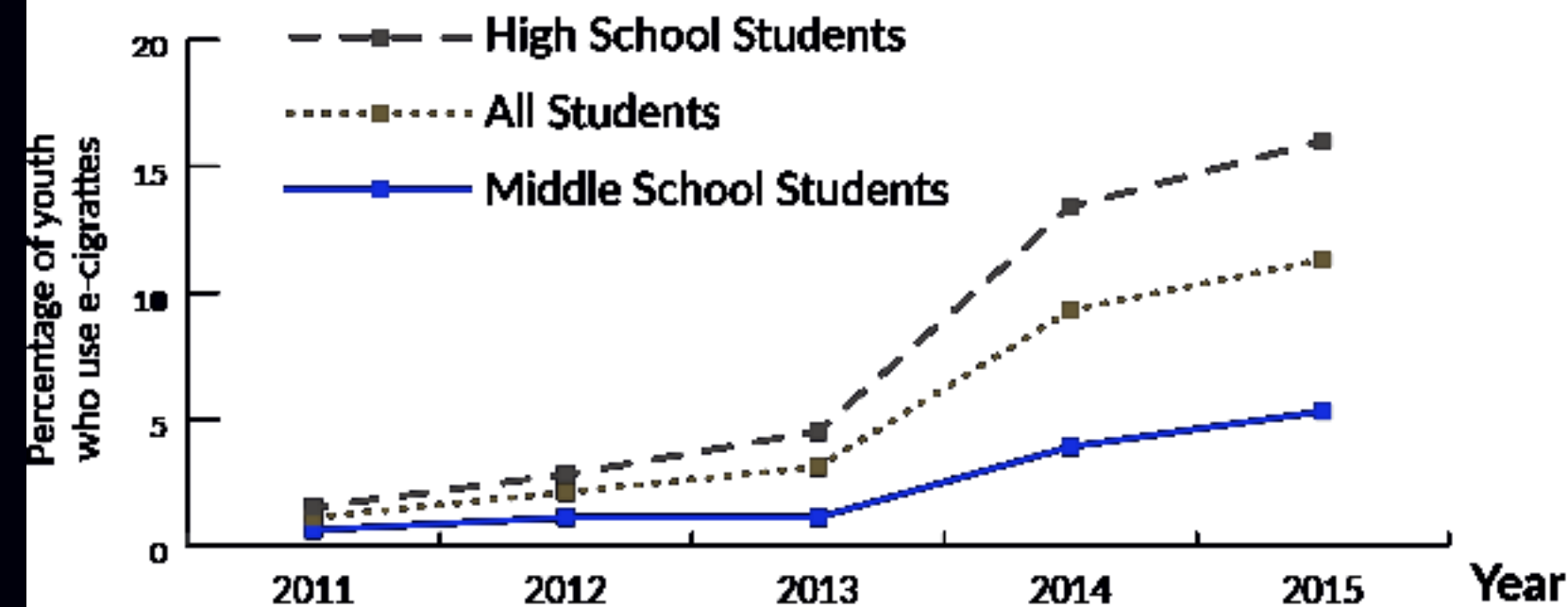


In 2013, more than
a quarter million
middle and high
school students
never smoked
regular cigarettes
but **had** used
e-cigarettes...

3 times
as many as 2011!



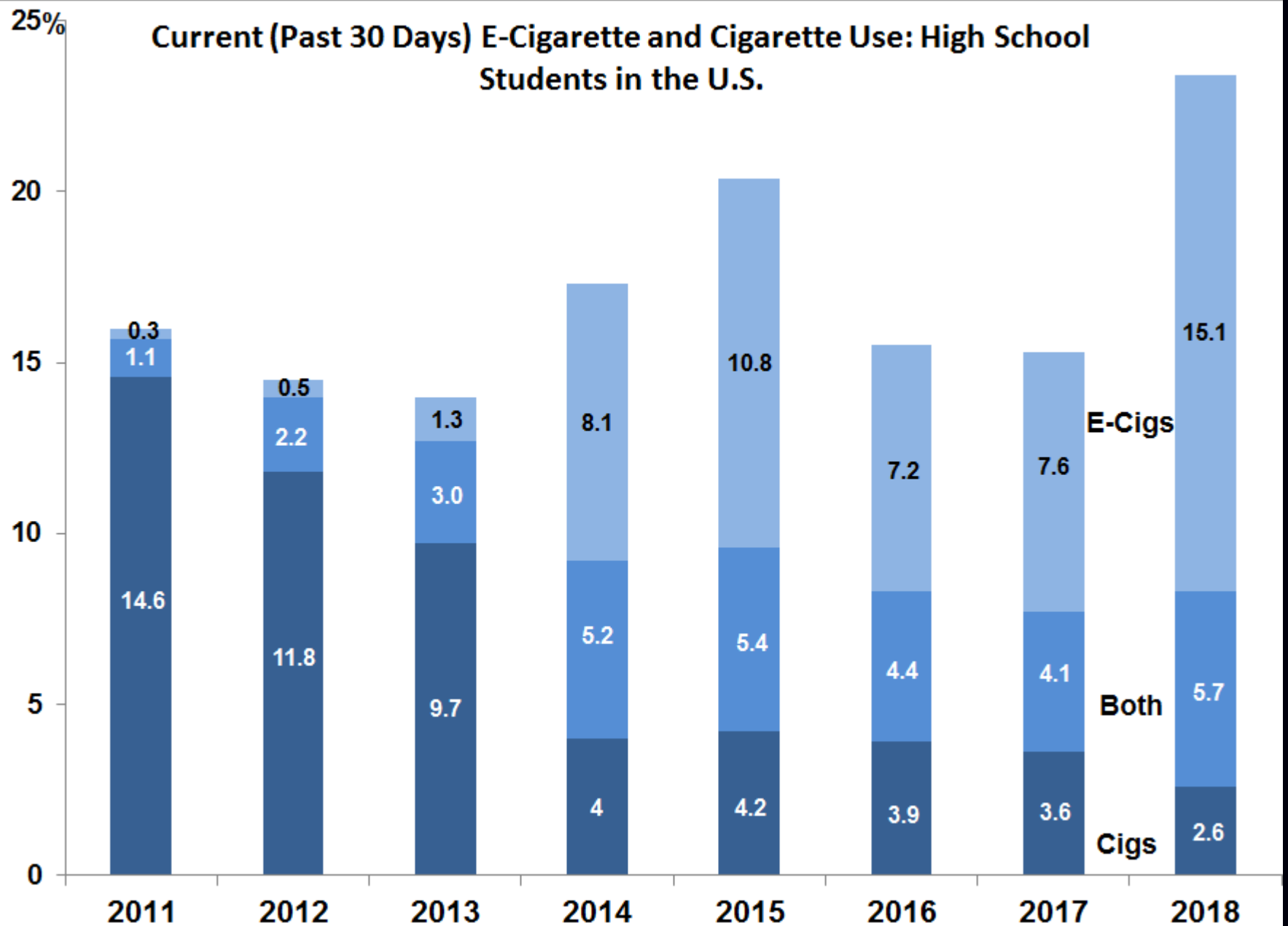
Growth in E-Cigarette Use



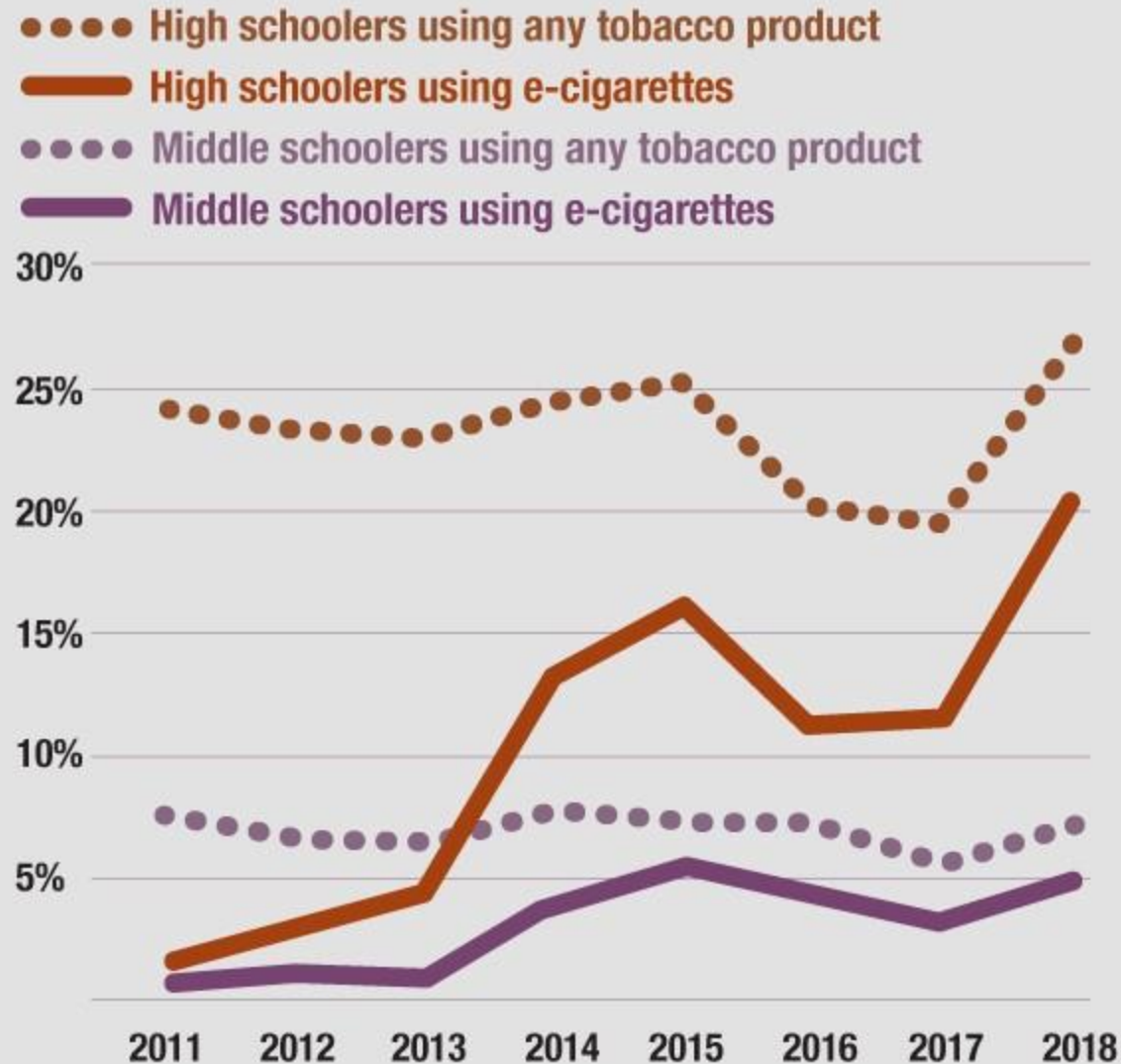
Source: National Youth Tobacco Survey 2011-2015

Notes: In 2014, changes were made to the e-cigarette measure to enhance its accuracy.

Current (Past 30 Days) E-Cigarette and Cigarette Use: High School Students in the U.S.



Youth Vaping Skyrockets



GRAPHIC BY ROBERT ROY BRITT

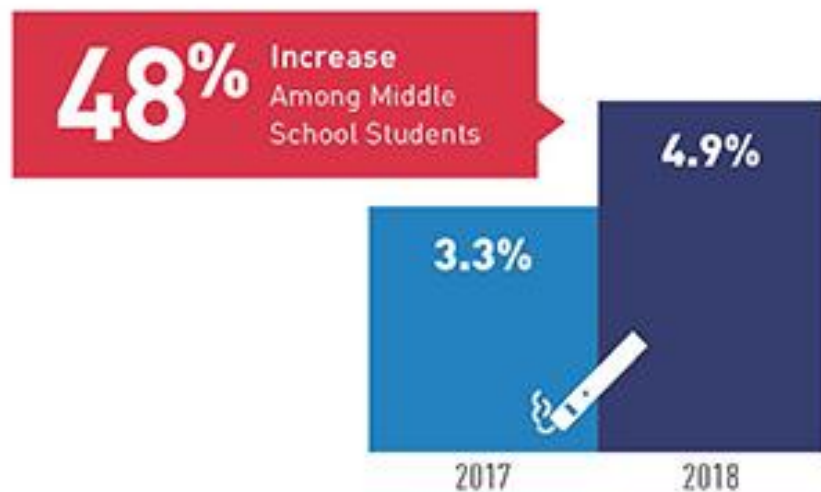
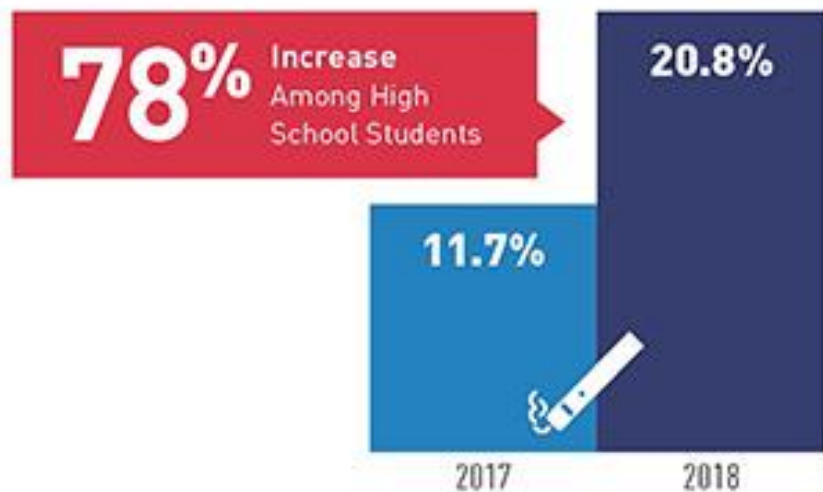
SOURCE: CDC

LUMINATE

Current e-cigarette use among middle and high school students **increased alarmingly** between 2017 and 2018.

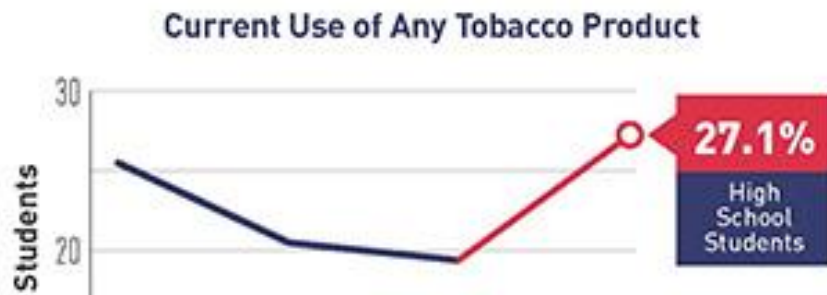
Here is a breakdown of the recent findings:

SURGE IN YOUTH CURRENT E-CIGARETTE USE — 1.5 Million More Students Used E-Cigarettes in 2018 vs 2017

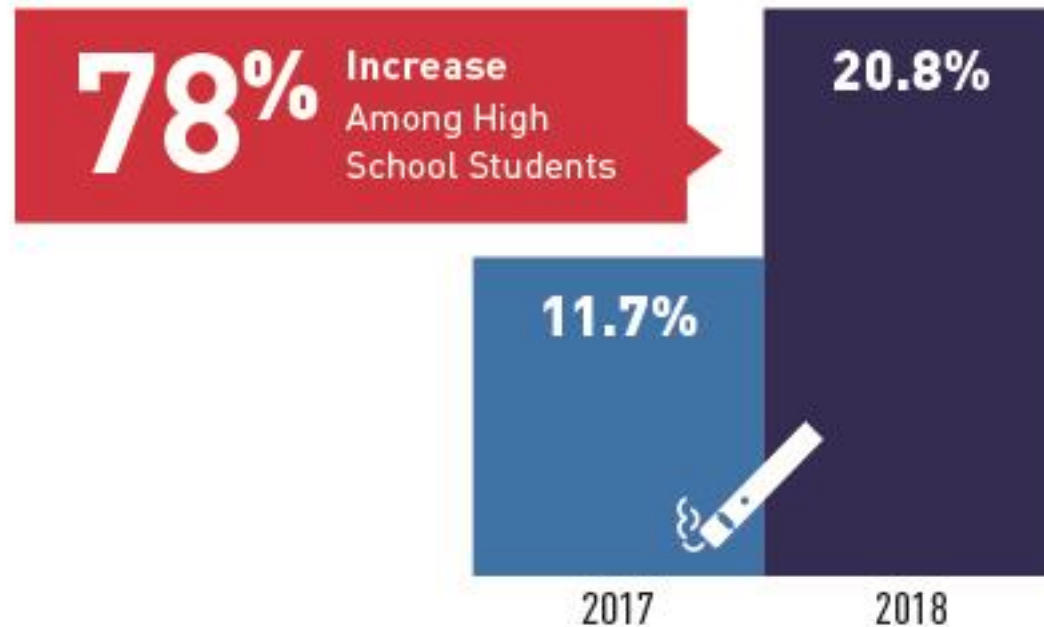


AMONG HIGH SCHOOL CURRENT E-CIGARETTE USERS — Rise in Frequency and Use of Flavors

E-CIGARETTE USE SURGE LED TO UPTICK IN OVERALL TOBACCO USE — Reversing Previous Declines



SURGE IN YOUTH CURRENT E-CIGARETTE USE



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%

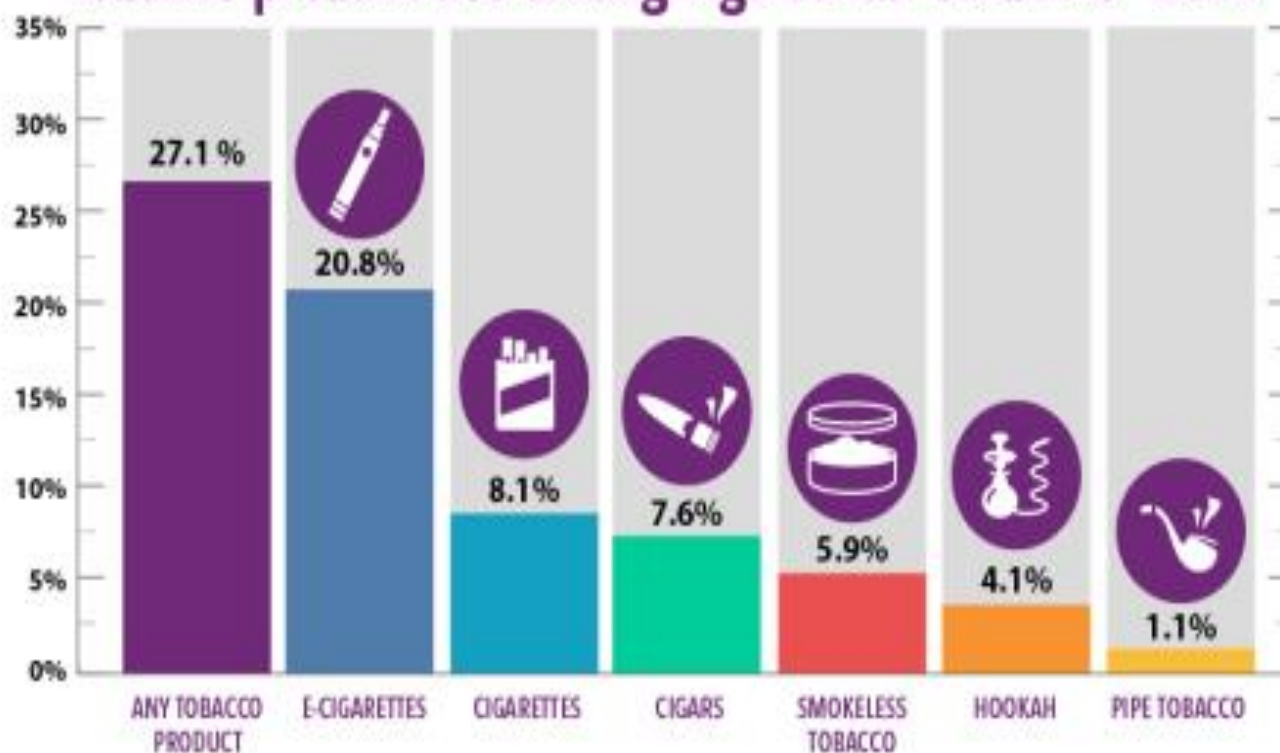
MIDDLE SCHOOL STUDENTS

20.8%

HIGH SCHOOL STUDENTS



Tobacco product use among high school students—2018



SOURCE: Tobacco Product Use Among Middle and High School Students — United States, 2011–2018. Morbidity and Mortality Weekly Report (MMWR), February 2019.

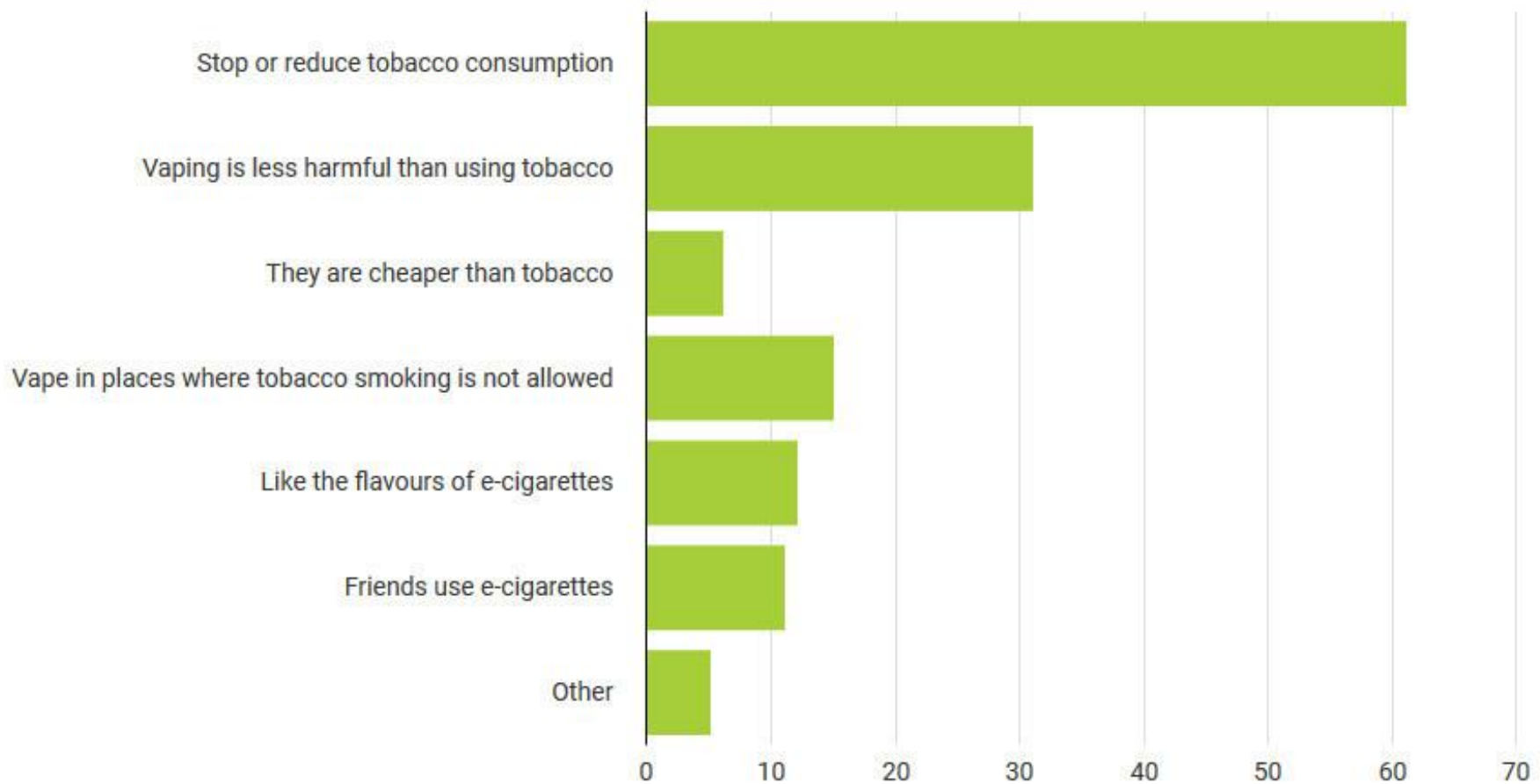
Vital^{CDC}signs[™]

www.cdc.gov/vitalsigns/youth-tobacco-use

11/18/2018



WHY IS VAPING SO POPULAR?



VAPING IS POPULAR

- ✓ “Everybody’s doing it”
- ✓ Easy to obtain
- ✓ Not regulated by the government
- ✓ No restrictions to indoor use
- ✓ Most youth e-cigarette users are never smokers (even though e-cigarettes were initially intended to help smokers quit cigarettes!!!)
- ✓ Youth who use e-cigarettes are more likely to go on and use regular cigarettes with higher risk for long term tobacco use
- ✓ E-cigarette advertising has skyrocketed

LOVE
YOUR
LUNGS

YOU!



BFA
IMAGES MATTER.

bfa.com/
1547306



Nicotine for teens?! **NOT OKAY, BIG TOBACCO!**

Flavored e-cigarettes hook teens on nicotine to replace smokers. This year, 263,000 teens have used e-cigarettes but have never smoked.



00 x 196 STC



POWER OF TV ADVERTISING

Memorable

Kids are **+50%** more likely to remember a television advert than an online advert.

Enjoyable

6 in 10 kids report that they actually enjoy watching TV ads, **+74%** higher than online adverts.

Emotive

When asked to mention a favourite TV ad, **9 out of 10** spontaneously mentioned a TV advertisement.

Attention Grabbing

64% of kids say that TV adverts catch their attention **+60%** higher than online advertising.

Generate Conversation

Kids are **2x** as likely to talk to their parents about TV adverts than Online ones.

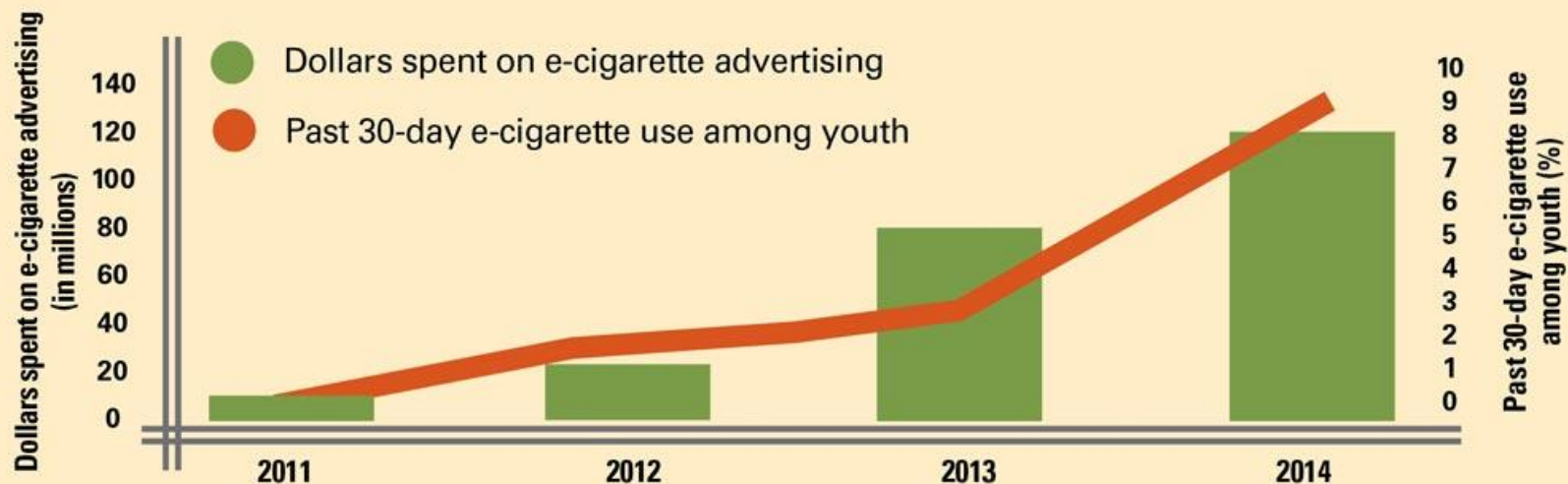
Relevant

57% of parents say they are more engaged with adverts if its on a kids channel



1166 x 770 *la innovations*

E-cigarette use among youth is rising as e-cigarette advertising grows



SOURCE: National Youth Tobacco Survey, 2011-2014; Kim et al (2014), Truth Initiative (2015).



E-CIGARETTE ADS

REACH NEARLY

4 IN 5

U.S. MIDDLE AND
HIGH SCHOOL
STUDENTS

More than 20 million youth saw
e-cigarette ads in 2016.

PERCENT OF STUDENTS EXPOSED TO E-CIGARETTE ADS

2014	68.9
2015	73.0
2016	78.2

YOUTH EXPOSURE TO E-CIGARETTE ADS, 2016



RETAIL STORES

68.0% 17.7 MILLION



INTERNET

40.6% 10.6 MILLION



TELEVISION

37.7% 9.7 MILLION



NEWSPAPERS & MAGAZINES

23.9% 6.2 MILLION

Efforts to reduce youth exposure to e-cigarette ads are
important to prevent and reduce youth use of these products.

Source: National Youth Tobacco Survey



Youth Exposure to Advertising and E-Cigarette Use

Greater exposure to e-cigarette ads is associated with higher odds of youth e-cigarette use. Most e-cigarettes contain **NICOTINE**, which can cause **ADDICTION**, may harm brain development, and could lead to continued tobacco product use among youth.

Efforts to reduce youth exposure to tobacco advertising are crucial to prevent all forms of tobacco use among youth.

SOURCE: Pebarakis, April 2014



Sources of E-Cigarette Advertising



14.4 million

youth are exposed
at retail stores



10.5 million

youth are exposed
through the internet



9.6 million

youth are exposed
through TV/movies



8 million

youth are exposed
through magazines
and newspapers

SOURCE: CDC Vital Signs, January 2014

bit.ly/YouthTobaccoUse



VAPING IS POPULAR

✓ E-cigarette advertising:

- Attracting low-risk youth that would never have started smoking
- Gateway to traditional cigarettes and other drugs, such as marijuana and cocaine
- High schoolers are more likely to use flavored e-cigarettes
- 1st time users most likely to try flavored e-cigs
- Most youth are not vaping to quit smoking
- Easy for youth to purchase online
- “Newer, healthier, cheaper, & easier to use”





THE FLAVOR TRAP

How Tobacco Companies Are Luring Kids
with Candy-Flavored E-Cigarettes and Cigars

American Academy
of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



VAPING IS POPULAR

✓ Advertising themes:

- “freedom”
- “good taste”
- “romance”
- “sexuality”
- “sociability”
- “healthy”

VAPING AND THE NEW SUBCULTURE









Vaping Competitions



Harms of Vaping

- ✓ Unknown long-term side effects
- ✓ Likely to cause lung disease like regular cigarettes
- ✓ We have already seen many patients with **asthma and bad lung disease needing to be hospitalized** due to vaping
- ✓ There are carcinogens in e-liquid (chemicals that can cause cancer)
- ✓ Youth are getting addicted to nicotine at such a young age
- ✓ Once addicted at a young age, it is so much harder to quit!

On One of our patients....



https://m.facebook.com/GoodMorningAmerica/videos/962204384132504/?refsrc=https%3A%2F%2Fm.facebook.com%2F59306617060%2Fposts%2F10156833175372061&_rdr

NICOTINE LEVELS



1 JUUL Pod = 1 Cigarette Pack

WHAT ARE THE HEALTH EFFECTS OF USING E-CIGARETTES?

SCIENTISTS ARE STILL LEARNING ABOUT THE LONG-TERM HEALTH EFFECTS OF E-CIGARETTES. HERE IS WHAT WE KNOW NOW.

1 Most e-cigarettes contain nicotine, which has known health effects

- » Nicotine is highly addictive.
- » Nicotine is toxic to developing fetuses.
- » Nicotine can harm adolescent brain development, which continues into the early to mid-20s.
- » Nicotine is a health danger for pregnant women and their developing babies.



2 Besides nicotine, e-cigarette aerosol can contain substances that harm the body.

- » This includes cancer-causing chemicals and tiny particles that reach deep into lungs. However, e-cigarette aerosol generally contains fewer harmful chemicals than smoke from burned tobacco products.



3 E-cigarettes can cause unintended injuries.

- » Defective e-cigarette batteries have caused fires and explosions, some of which have resulted in serious injuries.
- » In addition, acute nicotine exposure can be toxic. Children and adults have been poisoned by swallowing, breathing, or absorbing e-cigarette liquid.



The Truth Initiative: Vaping is experimenting on yourself!

truthinitiative.org



Adverse effects of vaping

Brain

- Addiction

Eyes

- Irritation
- Blurry vision
- Wounds and burns in case of e-cigarette explosion

Mouth and airways

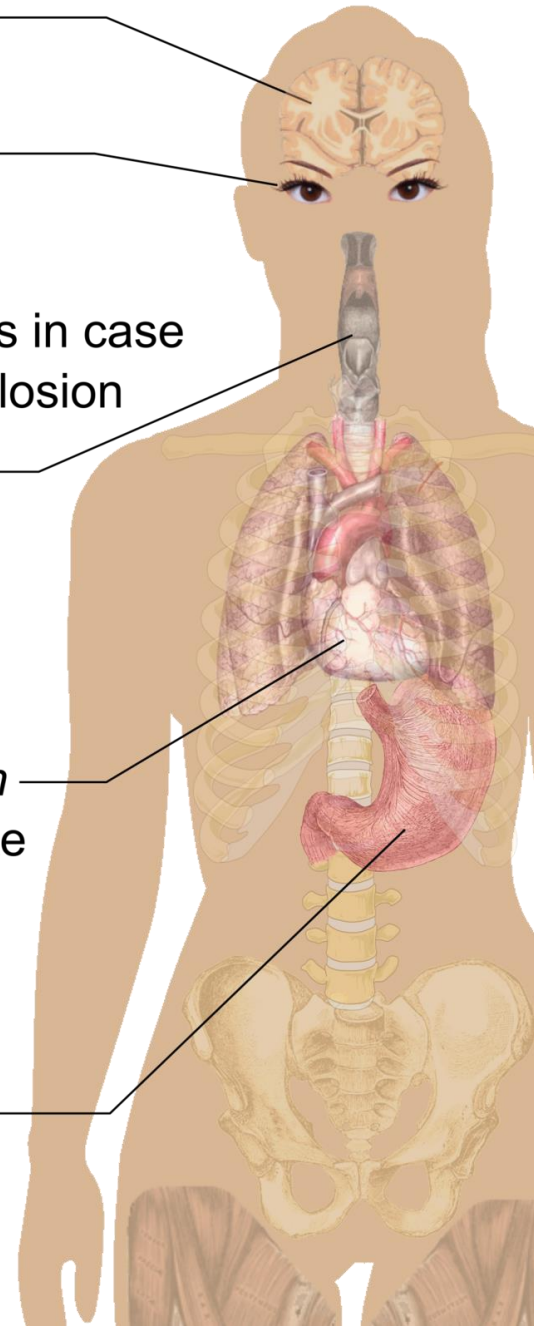
- Irritation
- Cough
- Increased airway resistance

Heart and circulation

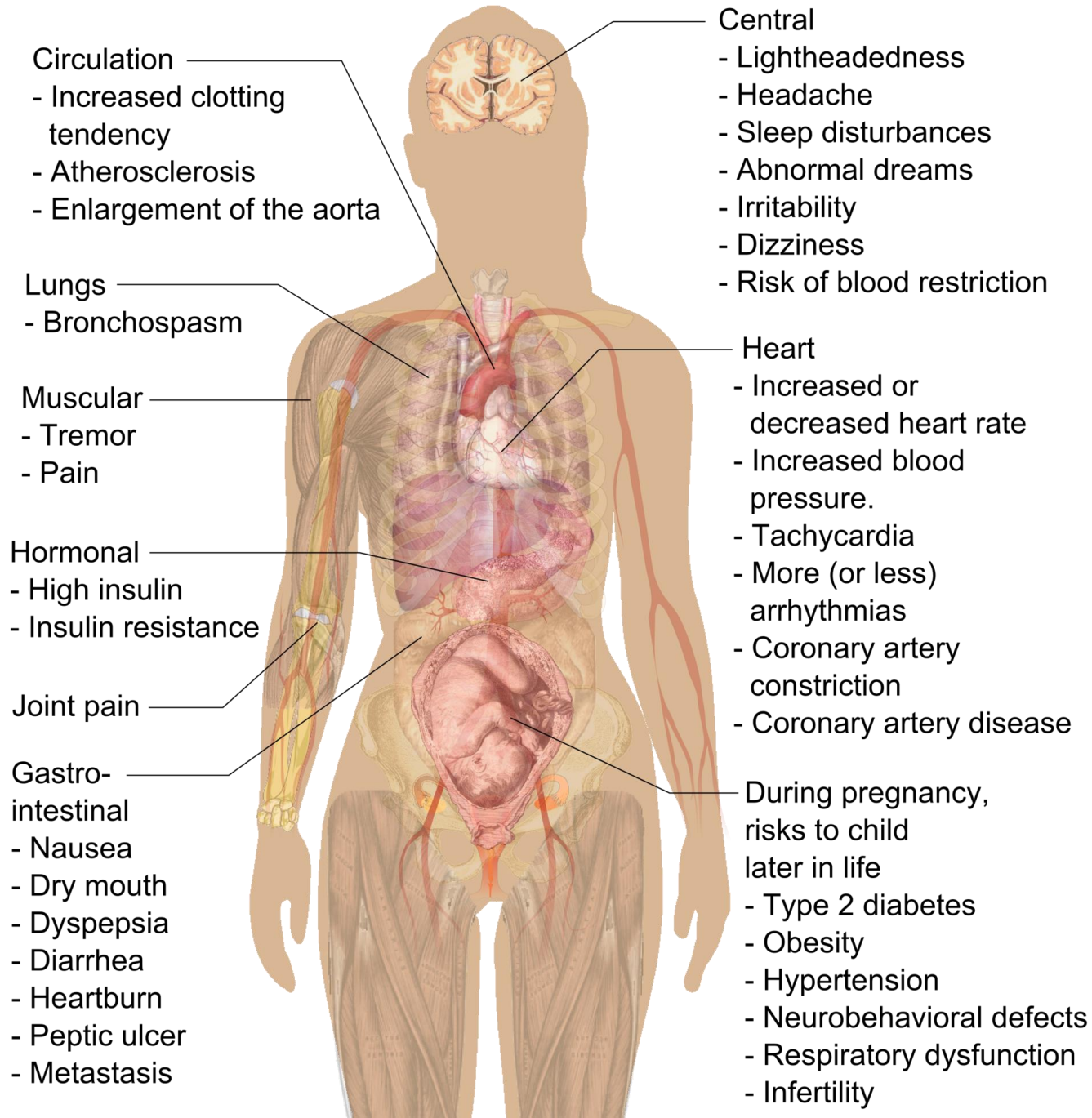
- Increased heart rate
- Chest pain
- Increased blood pressure

Stomach

- Vomiting
- Nausea
- Pain



Side effects of nicotine



ARE E-CIGARETTES LESS HARMFUL THAN REGULAR CIGARETTES?



VS



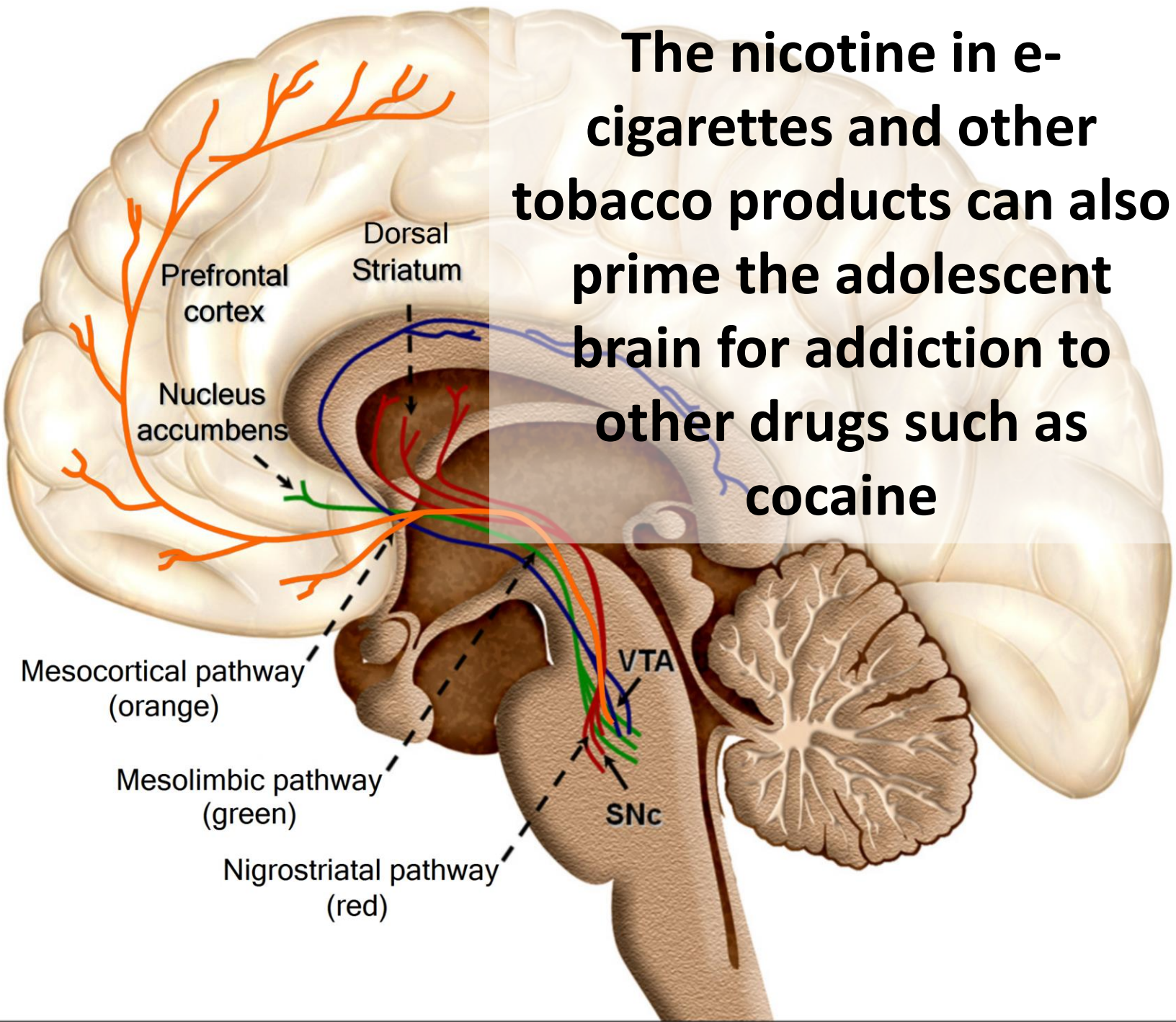
YES, but that doesn't mean e-cigarettes are safe.

E-cigarette aerosol generally contains fewer toxic chemicals than the deadly mix of 7,000 chemicals in smoke from regular cigarettes. However, e-cigarette aerosol is not harmless. It can contain harmful and potentially harmful substances, including nicotine, heavy metals like lead, volatile organic compounds, and cancer-causing agents.

ADDICTION, DEPENDENCE, AND THE **GATEWAY THEORY**

- ✓ **Most e-liquids contain nicotine, which is the highly addictive chemical in all tobacco products**
- ✓ **Nicotine is harmful to the body as we have seen**
- ✓ **NICOTINE HARMS THE DEVELOPING BRAIN OF YOUTH AND YOUNG ADULTS**
- ✓ **The human brain continues to grow until the age of 25, but this is markedly impaired by nicotine**

The nicotine in e-cigarettes and other tobacco products can also prime the adolescent brain for addiction to other drugs such as cocaine

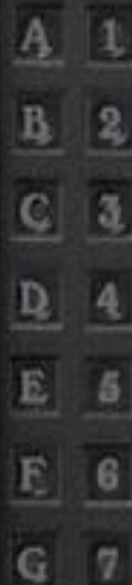


It's not like you can
buy a new brain.



The human brain is the last organ to fully develop, at around age 25.
Nicotine in e-cigarettes can harm brain development and lead to
addiction in youth and young adults. Let's protect our kids.

Learn how at www.CDC.gov/e-cigarettes





M I L W A U K E E
JOURNAL SENTINEL

**“JUULing is the New Teen Vaping Fad
Taking Over School Bathrooms”**

THE WALL STREET JOURNAL.

**“Schools and Parents Fight a
Juul E-Cigarette Epidemic”**

The New York Times

**“‘I Can’t Stop’: Schools Struggle
With Vaping Explosion”**

CNN

**“Vaping Now An Epidemic Among
US High Schoolers”**

TobaccoFreeKids.org



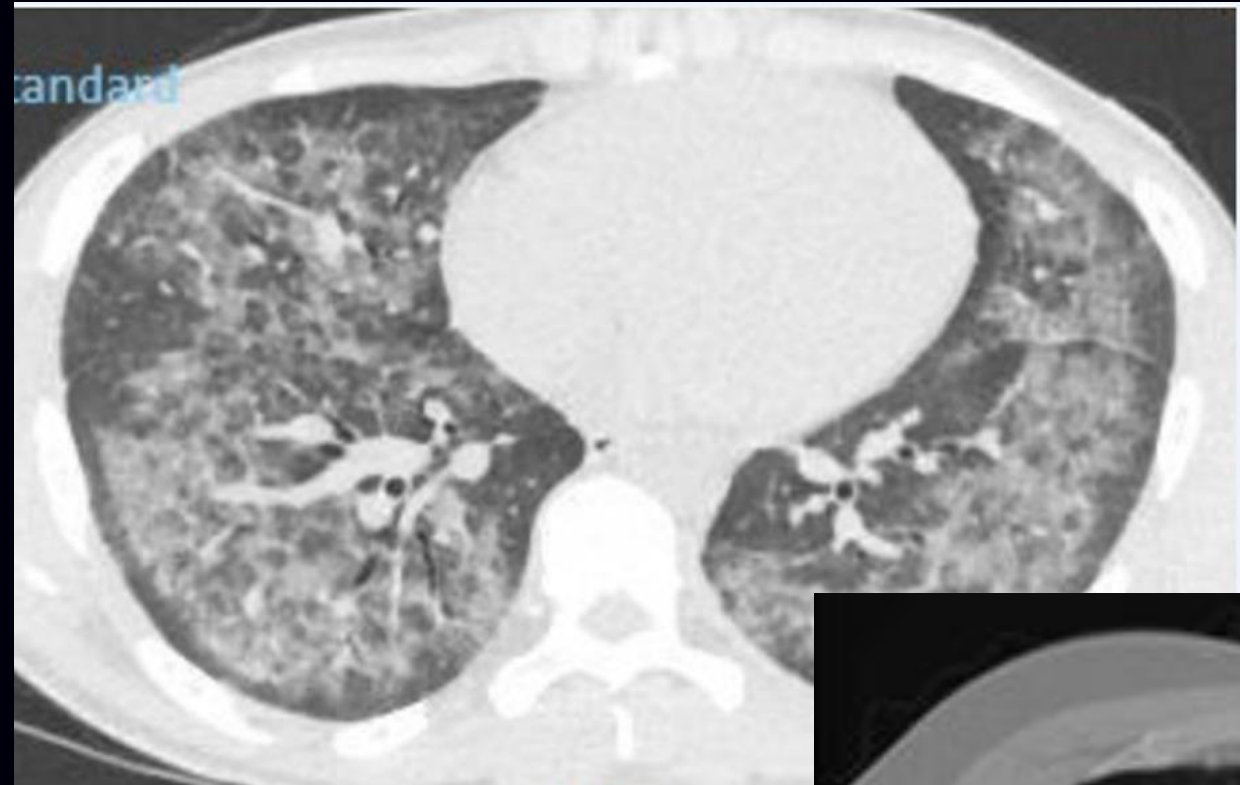
ADDICTION, DEPENDENCE, AND THE GATEWAY THEORY

- ✓ **Nicotine addiction:**
 - **Decreases impulse control**
 - **Increases risk of mood disorders and other psychiatric illnesses**
 - **Decreases attention span**
 - **Decreases learning ability**
 - **PRIMES THE DEVELOPING BRAIN FOR ADDICTION TO ALCOHOL AND OTHER DRUGS, SUCH AS MARIJUANA, COCAINE, AND OPIOIDS!**

NEW VAPING CRISIS

- ✓ Severe lung injury caused by vaping
- ✓ Patients develop fevers, cough, difficulty breathing, low oxygen levels, abdominal pain, diarrhea, and fatigue (tiredness)
- ✓ More than 500 cases across the country
- ✓ Almost 100 cases in NY
- ✓ 9 deaths reported as of earlier this week
- ✓ Mostly related to vaping THC, but about 5-10% are due to vaping regular e-cigarettes (e.g., JUULS)
- ✓ Symptoms persist even weeks after last vaping

standard





**NO SMOKING
NO VAPING**

PARENTS CAN PREVENT AND REDUCE THE USE OF E-CIGARETTES BY YOUNG PEOPLE

TALK TO YOUR KIDS ABOUT VAPING

- With the tremendous increase of youth using e-cigarettes and the intense marketing on local radio and online, it may seem that vaping is a safe alternative to cigarettes, but these products can cause serious health effects.

WHAT DO YOU KNOW ABOUT VAPING?

DO YOU HAVE FRIENDS THAT VAPE?

HAVE YOU SEEN ADVERTISEMENTS FOR VAPING PRODUCTS?

PEOPLE HAVE DIFFERENT REASONS FOR VAPING, DO YOU KNOW WHY SOME OF YOUR FRIENDS CHOOSE TO VAPE?

- ✓ Recognize that your child may already have first-hand observations or experiences to have opinions about vaping.
- ✓ Be positive, ask open-ended questions rather than repeat negative statements.
- ✓ Share YOUR concerns with your child, they will appreciate your care, even when speaking about products with potential harm.

● PARENTS CAN:

- ✓ Learn about the different types of e-cigarettes and the risks of vaping for young people.
- ✓ Talk to their children about the risks of vaping among young people.
- ✓ Express firm expectations that their children remain tobacco-free.

PARENT TIP

DO NOT ACCUSE YOUR CHILD OF VAPING.

CONSEQUENCES

KNOW THE RISKS, KNOW THE LAWS

Since 2016, Hawai'i State law has prohibited the sale or furnishing of tobacco products including ESDs and e-liquids to anyone under 21 years of age. It is also illegal for anyone under 21 to possess or use tobacco products or e-cigarettes. There is a \$500.00 fine for anyone who furnishes tobacco or e-cigarette products to anyone under the age of 21 (§712.1258 and §321.212 Hawai'i Revised Statutes).

VAPING COULD MEAN TROUBLE AT SCHOOL

Hawaii schools treat vaping devices as tobacco products, and they are considered contraband. Youth may be suspended or expelled for having them at school.

FOR ADDITIONAL RESOURCES & REFERENCES, VISIT:

[HEALTHYHAWAII.COM/TOBACCO-FREE/VAPING](https://www.healthyhawaii.com/tobacco-free/vaping)

Download the PDF of the parent tip sheet from the Centers for Disease Control and Prevention (CDC) at:



→ [e-cigarettes.surgeongeneral.gov/documents/SGR_ECig_ParentTipSheet_508.pdf](https://www.e-cigarettes.surgeongeneral.gov/documents/SGR_ECig_ParentTipSheet_508.pdf)

E-CIGARETTE GUIDANCE

FROM THE CENTERS FOR DISEASE CONTROL AND PREVENTION

- Persons who use e-cigarette products should not buy these products off the street and should not modify e-cigarette products or add any substances that are not intended by the manufacturer.
- E-cigarette products should never be used by youths, young adults, pregnant women, or by adults who do not currently use tobacco products.
- Adult smokers who are attempting to quit should use evidence-based smoking cessation treatments, including counseling and FDA-approved medications; those who need help quitting tobacco products, including e-cigarettes, should contact their medical provider.

How to get help quitting

- Tobacco control center at Northwell Health:
(516) 466-1980
- www.teen.smokefree.gov
- www.tobaccofreekids.org
- www.truthinitiative.org
 - #DITCHJUUL



Want more information, help quitting or get involved?

Contact us!

- mmakaryus1@northwell.edu
- aiakovou12@northwell.edu

