



**We're Not in Kansas
Anymore**

**Vaping and E-cigs
and Juuling, Oh My!**

E-cig Use is an Epidemic

According to the 2018 Monitoring the Future study, in 10th and 12th grade the annual increases in e-cigarette use was the largest

ever recorded for any substance

in the 44 years that Monitoring The Future has tracked adolescent drug use.

Vaping and E-cigs and Juuling, OH MY!

- E-cigarettes are now the top high-risk substance used by teenagers
- E-cigarettes contain nicotine and hundreds of other harmful chemicals
- Nicotine harms the developing brain and rewires it
- Nicotine primes the adolescent brain for addiction
- Schools are seeing a sharp increase in problems associated with e-cigs

Extra, Extra, Read All About It!

THE WALL STREET JOURNAL.

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



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

M I L W A U K E E
JOURNAL SENTINEL

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

The New York Times

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

TobaccoFreeKids.org



What Are E-cigarettes?

- They come in many shapes and sizes
- Most have a battery, a heating element, and a place to hold a liquid
- E-cigarettes produce an aerosol



Electronic Nicotine Delivery Systems

- E-Cigarettes,
- Personal vaporizers
- Vape pens
- e-hookah
- Vaping devices
- mod **systems**
- pod **systems**
- Juul (brand name)

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.

What is THE JUUL?

- The most popular e-cigarettes among youth
- Launched in 2015
- A growing brand of e-cigarettes

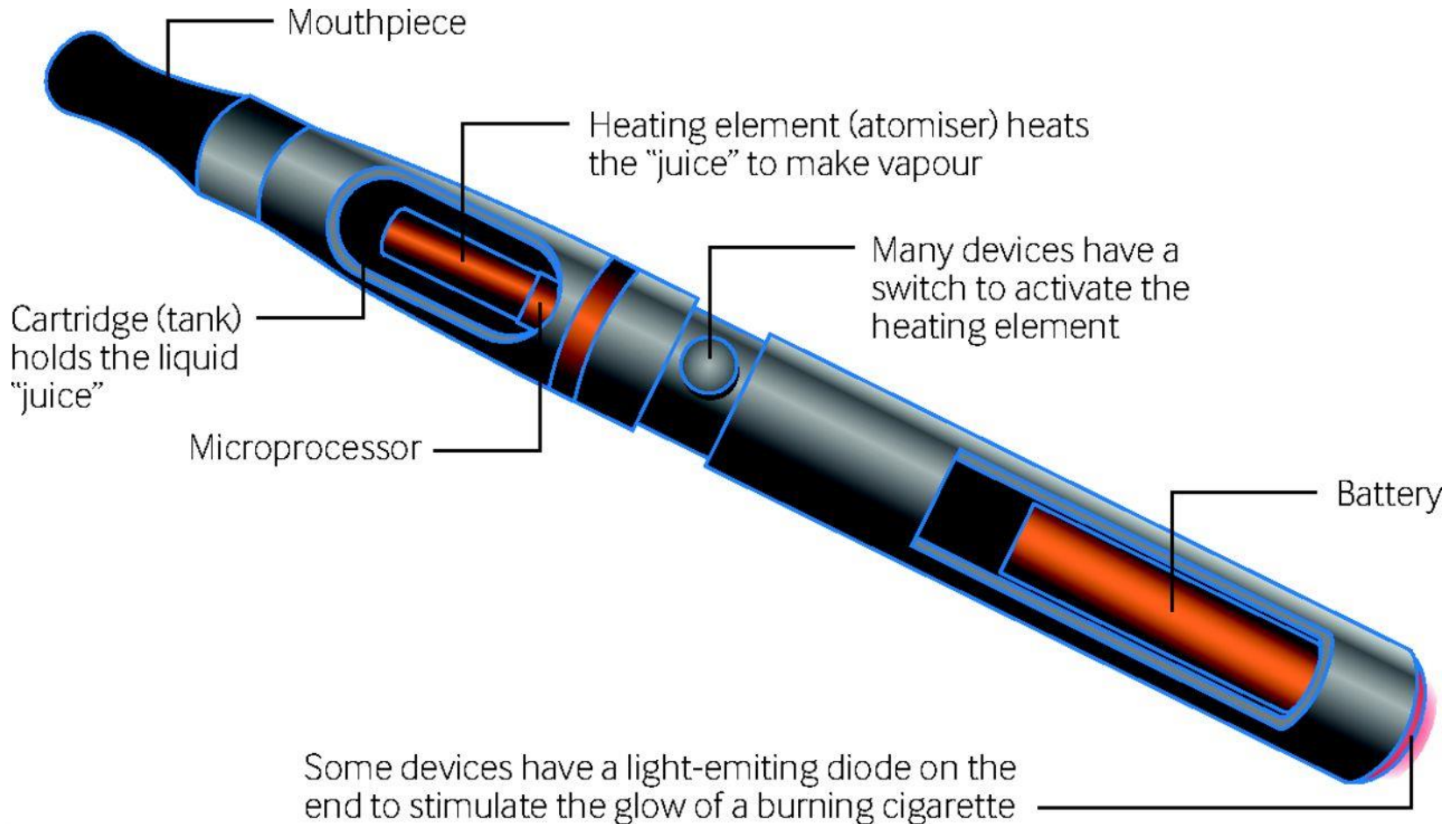
The Juul Not to be Confused with Jewel



Small and Sleek



How do they work?



E-cigarette and Vape Pen Components



Battery

The battery is the energy source of the device and powers the atomizer

Atomizer

The atomizer is the heating element that heats the e-liquid and is often coil shaped

E-Liquid

Sometimes called e-juice, this is put into the device and often contains flavors and nicotine

Cartridge

The cartridge (tank) holds the e-liquid and may also hold the atomizer

Aerosol

Heating e-liquid inside the device creates an aerosol that is inhaled into the body and out into the air

Follow the Yellow Brick Road??

Hopefully Not!



National Youth Use

YOUTH E-CIGARETTE USE

- 3.6 million middle school & high school students currently use e-cigarettes
- ↑ 1.5 million from last year
- ↑ 78% among high school students
- ↑ 48% among middle school students

CRACKING DOWN

SOURCE: NATIONAL YOUTH TOBACCO SURVEY

**FDA: E-CIG USE SPIKED 78% AMONG HIGH SCHOOLERS
AND 48% AMONG MIDDLE SCHOOLERS SINCE LAST YEAR**

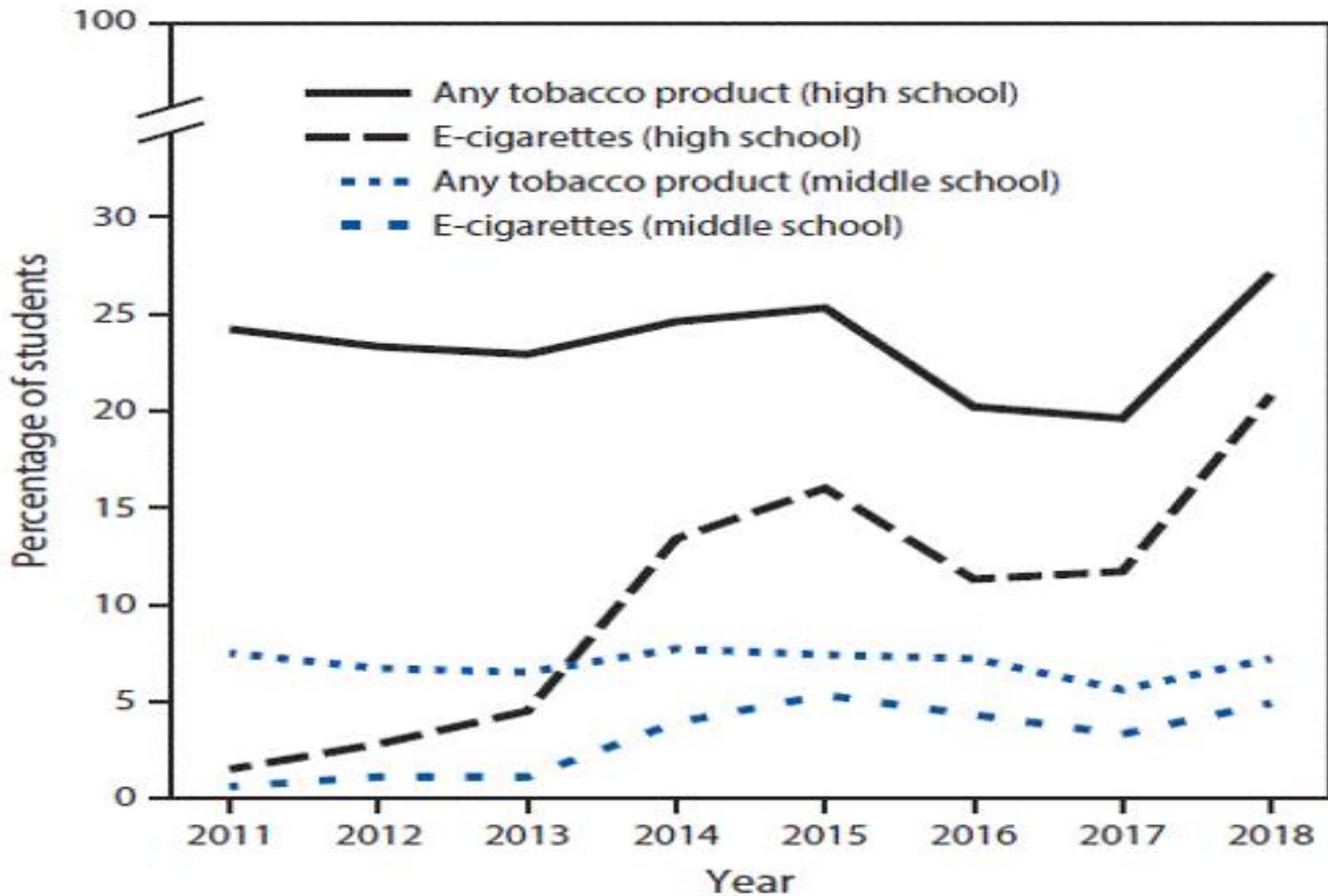
CNN

DOW ▼ -172.31

According to the National Institute on Drug Abuse

**31 percent of vaping device users
started smoking within six months,
compared to 8 percent of non-users.**

Toto, We're Not in Kansas Anymore...



E-cigarettes = Quit Smoking?



In Fact . . .

- Use of e-cigarettes has been shown to predict future cigarette use among youth who have never smoked cigarettes.
- Multiple research studies have demonstrated e-cigarette users are twice as likely to become cigarette smokers.



Undoing Public Health Gains

Social acceptance of e-cigarettes could re-normalize the use of regular cigarettes — especially among adolescents.

This is exactly what the manufacturers of e-cigs want to see.

Flavors = New Nicotine Users



The Yellow Brick Road of the Past

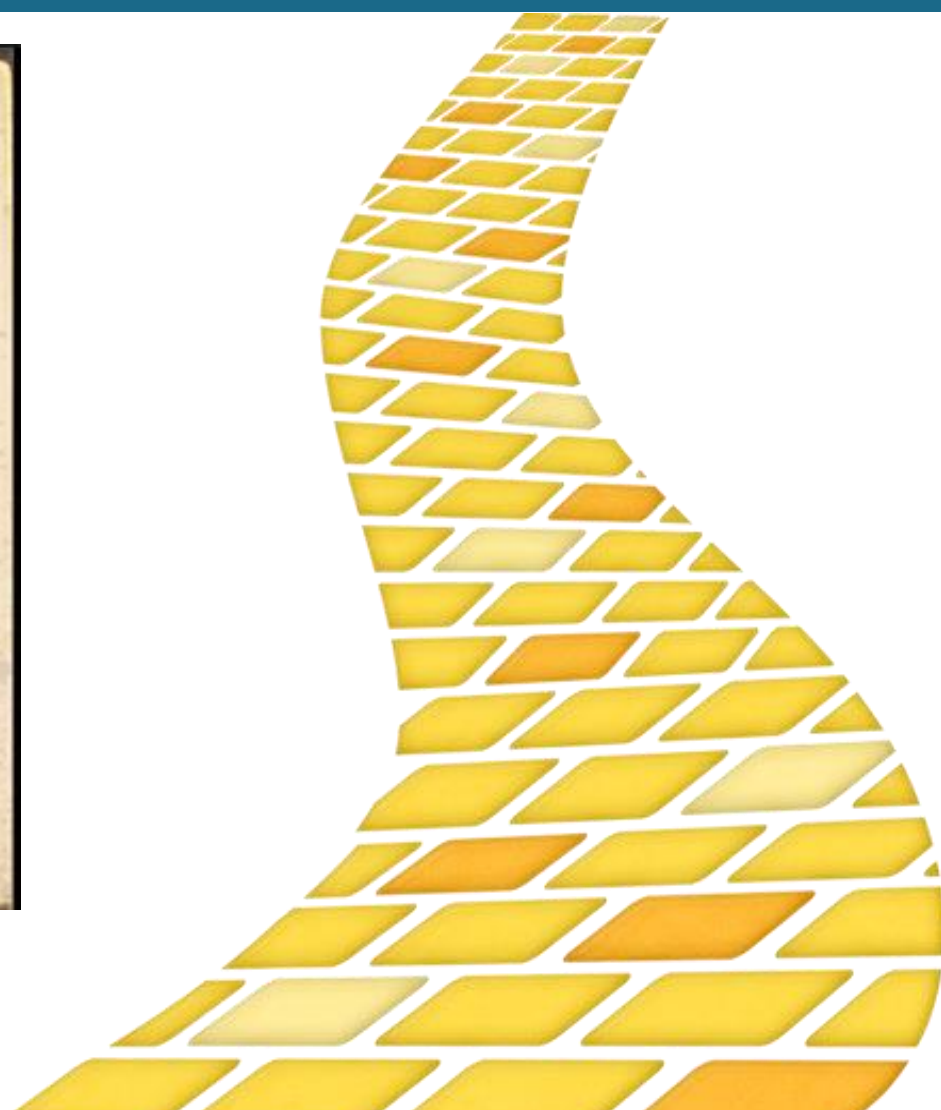
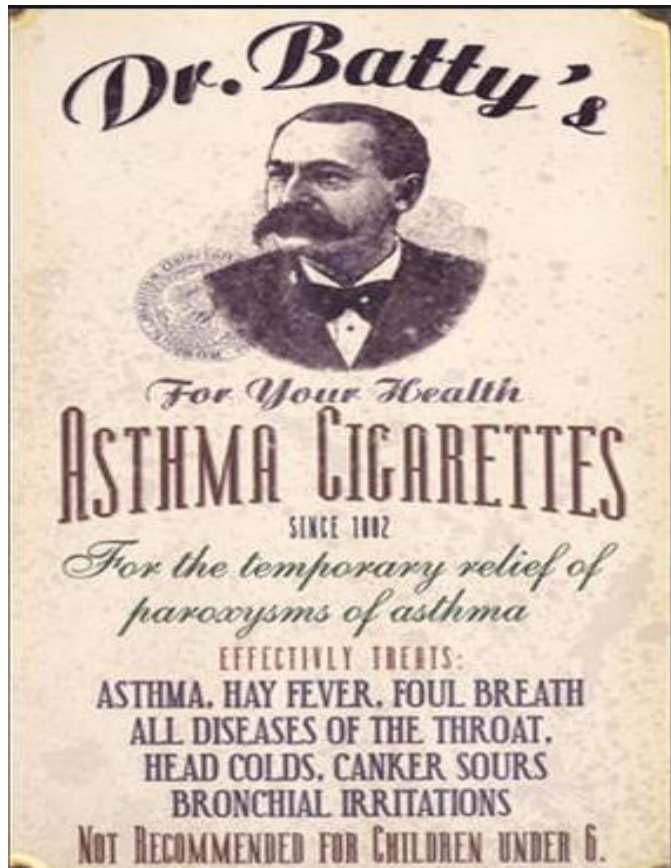
Doctor Recommended: It's Good for You



What do you notice about these ads?



Toto's Favorite



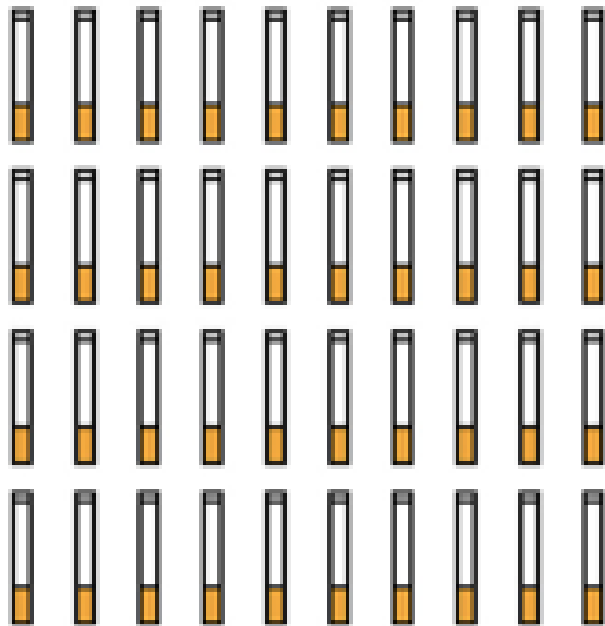
Aimed at Youth?



???



Nicotine in One Juul Pod



=



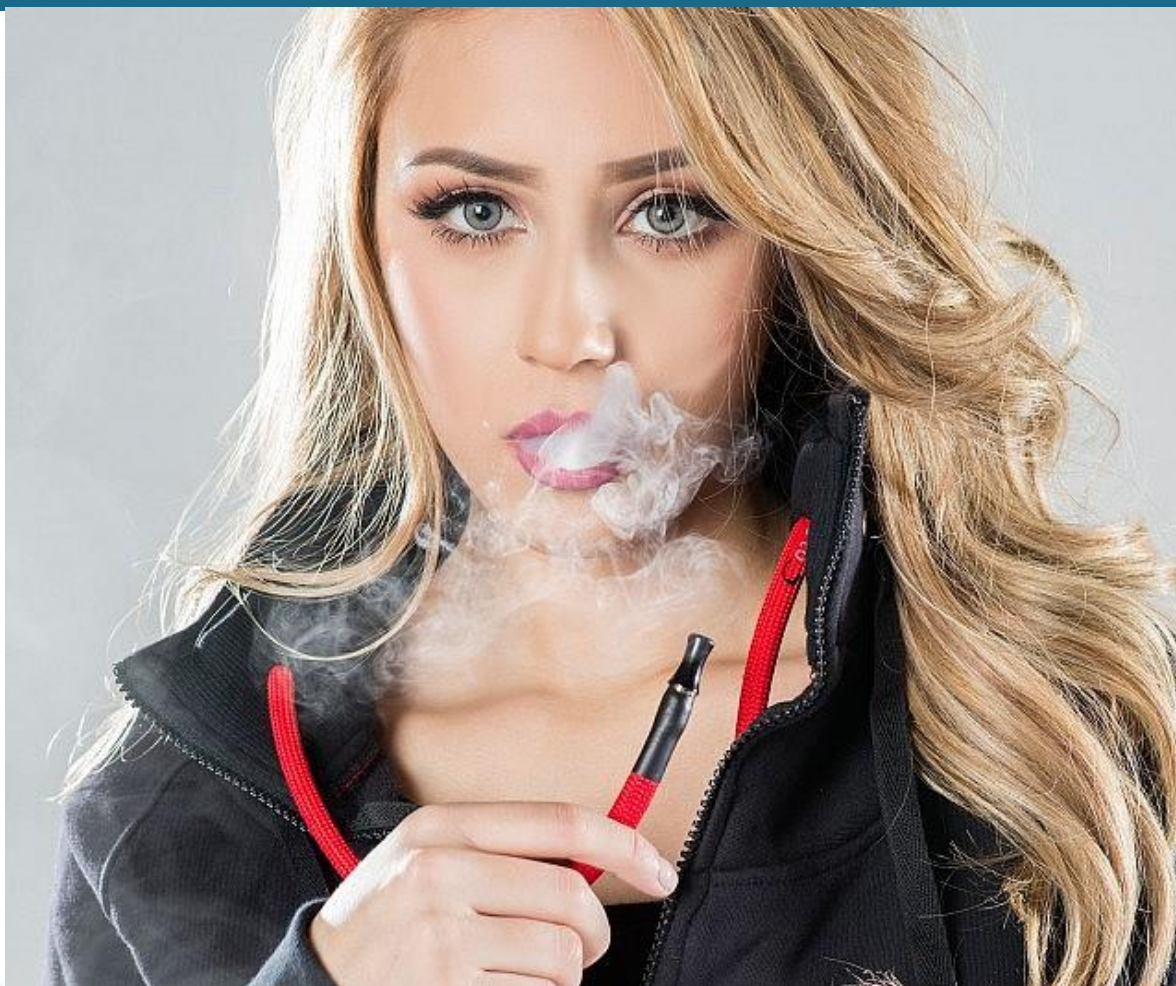
1-2
packs of
cigarettes, or

20-40
cigarettes
are equal to

1
juul pod

Source: Vox.com

Wearables



Nicotine Harms the Developing Brain

- Addiction is a form of learning, where the brain learns to connect a stimulus with a response.
- Each time a new skill or memory is learned, stronger connections – or synapses – are built between brain cells.
- Young people build synapses faster than adults.

The Developing Brain

Nicotine changes the way these synapses are formed.

Youth exposed to nicotine are at higher risk for addiction than are adults because youth brains are still forming and making permanent connections.

What is in the Aerosol?

- 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
- Cancer-causing chemicals
- Heavy metals such as nickel, tin, and lead



Who Owns E-cigarettes?

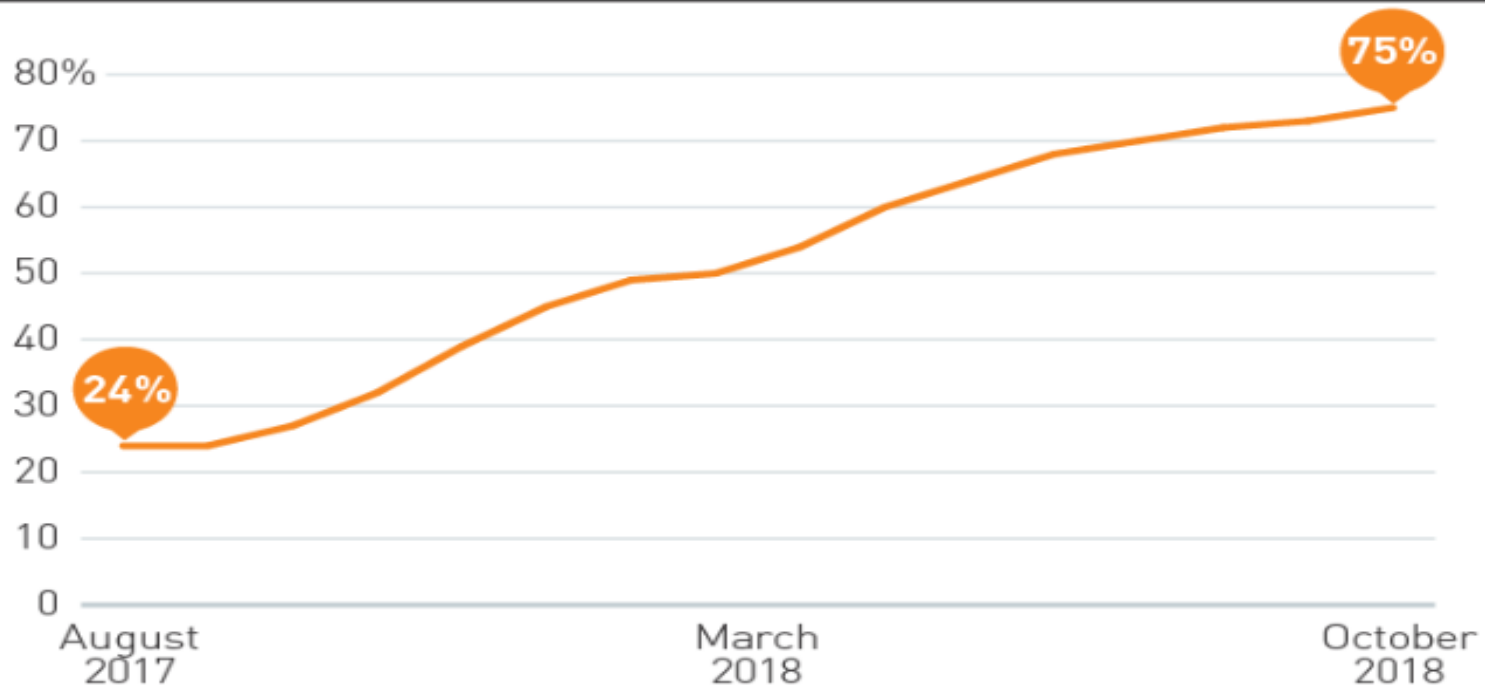


Who Owns JUUL?

- Juul Labs
- Altria (parent company of Phillip Morris) purchased a 35% stake in JUUL in December 2018.
- This puts the value of JUUL at more than \$38 Billion

JUUL is a Manufacturer's Dream Come True

JUUL sales as a percentage of all e-cigarette sales



Source: Nielson: Tobacco "All Channel" Data. August 2017-October 2018

Health Impacts of Vaping - Lungs

- Increased cough, wheeze and pneumonia
- Worsens asthma
- Disables protective cells

Harmful Chemicals

- Carcinogens like formaldehyde
- Heavy metals like lead
- Volatile Organic Compounds

Health Impacts of Vaping - Heart

Enzyme changes that can harm
heart and blood vessels

There is No Place Like Home!

Parents/Adults

- <https://kidshealth.org/en/parents/e-cigarettes.html>
- <https://health.usnews.com/wellness/family/articles/2018-10-02/what-parents-can-do-about-teens-vaping>
- <https://drugfree.org/article/how-to-talk-with-your-kids-about-vaping/>
- <https://www.realsimple.com/work-life/family/kids-parenting/what-to-do-if-you-suspect-your-teen-is-juuling>

All You Do is...

Follow the Yellow Brick Road!

- <https://www.nytimes.com/2018/12/18/health/vaping-teens-nicotine.html>
- <https://e-cigarettes.surgeongeneral.gov>
- <https://healthychildren.org>
- <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Richmond-Center/Pages/Electronic-Nicotine-Delivery-Systems.aspx>

For Youth:

- <https://takingdowntobacco.org>
- <https://teen.smokefree.gov>

We Made it Back to Kansas!

Q and A

LeeAnn Mortensen, MPH

Lmortensen@HazeldenBettyFord.org

763 509-3813

www.hazeldenbettyford.org

Have Courage!

Talk to your teen about E-cigarettes

- Know the Facts before you talk
- Be patient and ready to listen
- Set a positive example by being tobacco-free

Some Wizardly Answers to Questions

Why don't you want me to use e-cigarettes?

- Science shows that e-cigarettes contain ingredients that are addictive and could harm different part of your body
- Right now, your brain is still developing, which means you are more vulnerable to addiction. Most e-cigarettes contain nicotine and using nicotine can change your brain to make you crave more nicotine. It can also affect your memory and concentration. I don't want that for you!

More Answers from The Wizard

- E-cigarettes contain chemicals that are harmful. When people use e-cigarettes, they breathe in tiny particles that can harm their lungs.
- I don't say this to scare you, but I want you to have the facts because nothing is more important to me than your health and safety.

Aren't E-cigarettes Safer Than Conventional Cigarettes?

- Because your brain is still developing, scientific studies show that it isn't safe for you to use any tobacco product that contains nicotine, including e-cigarettes.
- Whether you get nicotine from an e-cigarette or a cigarette, it's still risky.
- Some e-cigarette batteries have even exploded and hurt people.

I thought E-cigs Didn't Have Nicotine – Just Water and Flavoring?

- I used to think that too. But most e-cigarettes have nicotine. There are also other chemicals in them that can be harmful.
- Let's look at the Surgeon General's website on e-cigarettes (E-cigarettes.SurgeonGeneral.gov) together so you can see for yourself.
- The cloud that people exhale from e-cigarettes can expose you to chemicals that are not safe to breathe.

What's the Big Deal About Nicotine?

- Your brain is still developing until about age 25. The Surgeon General reported that nicotine is addictive and can harm your brain development.
- Using nicotine at your age may make it harder for you to concentrate, learn, or control your impulses.
- Nicotine can even train your brain to be more easily addicted to other drugs like meth and cocaine.

I (or my friends) Have Tried E-cigs and it was No Big Deal.

- I appreciate your honesty. In the future, I hope you (or your friends) will stay away from e-cigarettes and other tobacco products, including cigarettes. Science shows that e-cigarettes contain ingredients that are addictive and could harm different parts of your body.
- Next time we go to the doctor, let's ask about the risks of nicotine, e-cigarettes, and other tobacco products

You Used Tobacco, So Why Shouldn't I?

- If I could live my life over again, I never would have started smoking. I learned that people who smoke cigarettes are much more likely to develop, and die from, certain diseases than people who don't smoke. This was really scary, so I quit smoking.
- Quitting was really hard, and I don't want you to go through that. The best thing is to not start at all.

Cigna Behavioral Health Awareness

If you are a Cigna customer and have questions about Substance Use treatment or about your benefits and how to use them, please contact:

Chantelle Hoogland – 888.244.6293 x 329159

Lisa Osborne – 770.779.2023