

Vaping, Marijuana & Lung Health Impacts

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CONFLICTS OF INTERESTS

- None

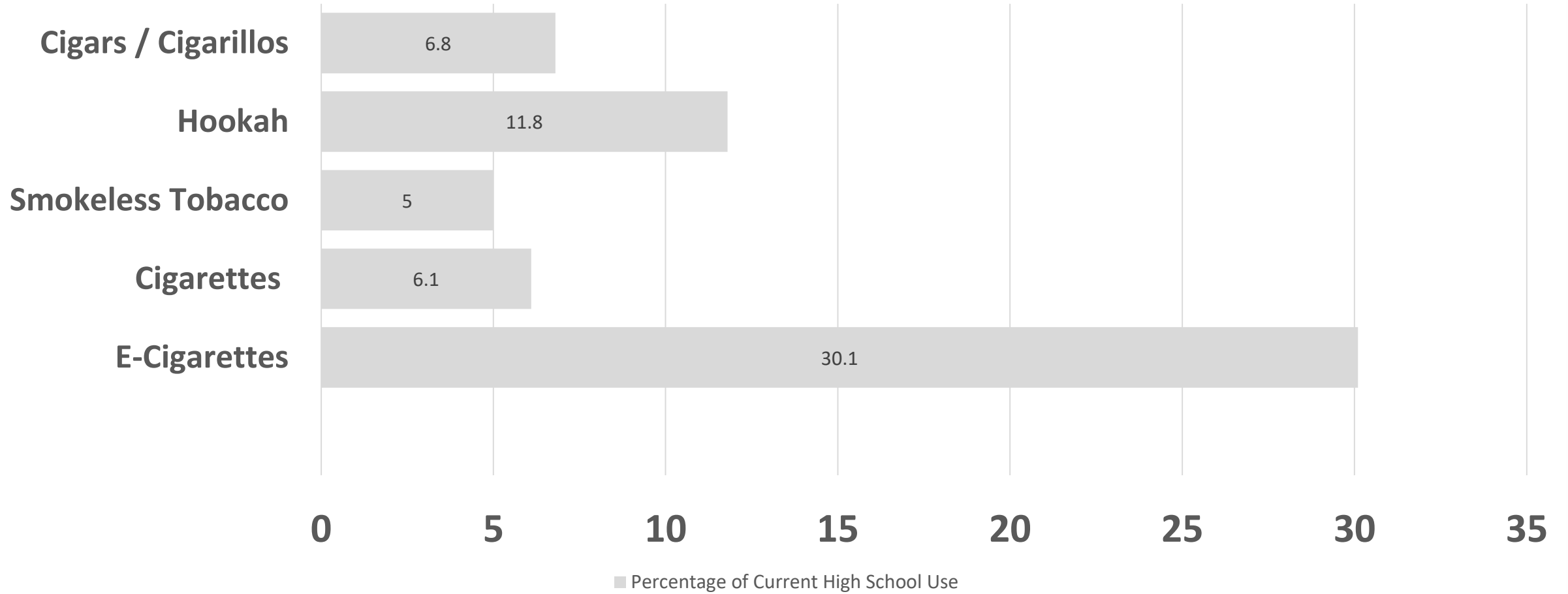
TOBACCO

FREE

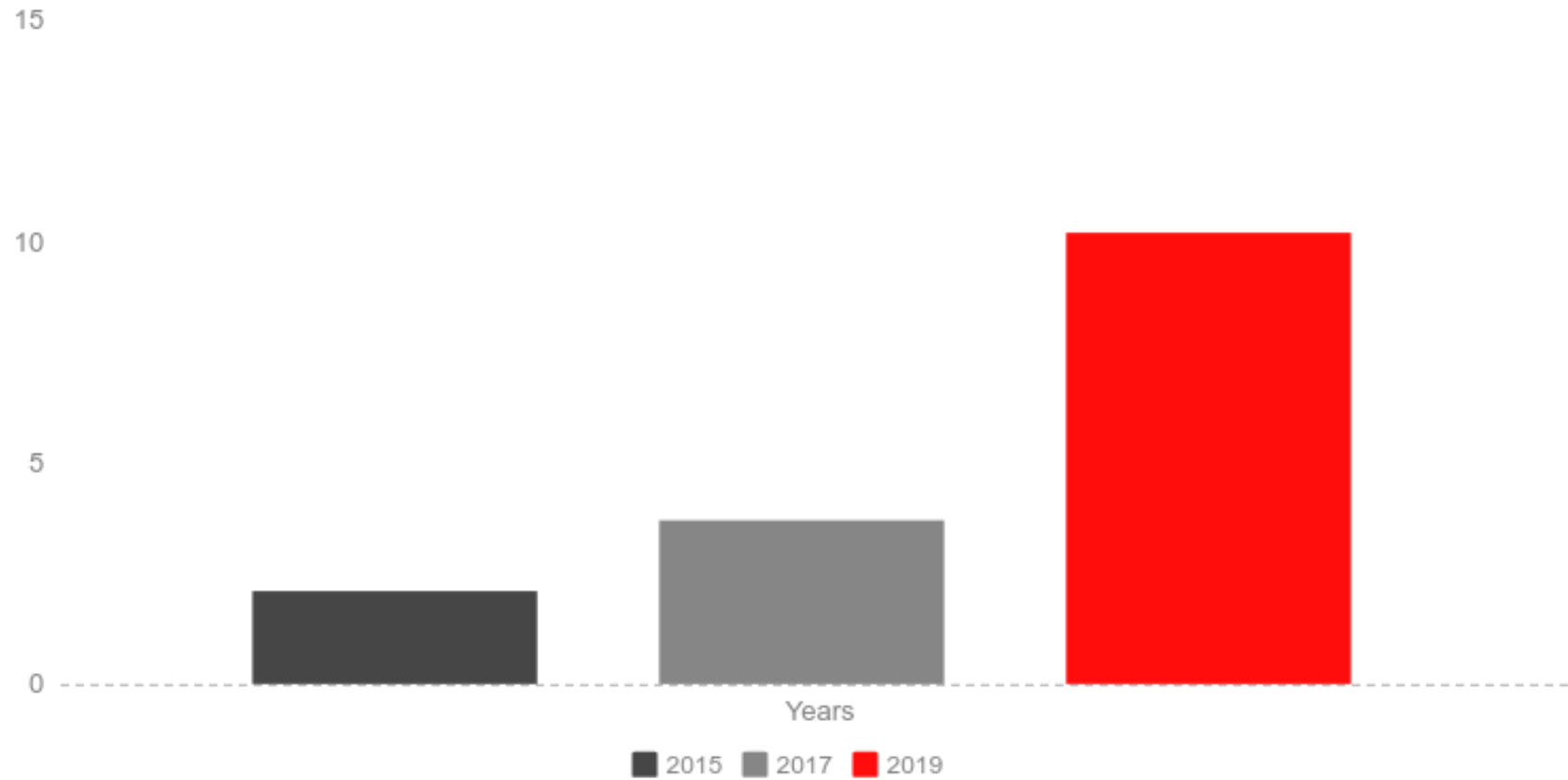
RHODE

ISLAND

Current Rhode Island High School Use

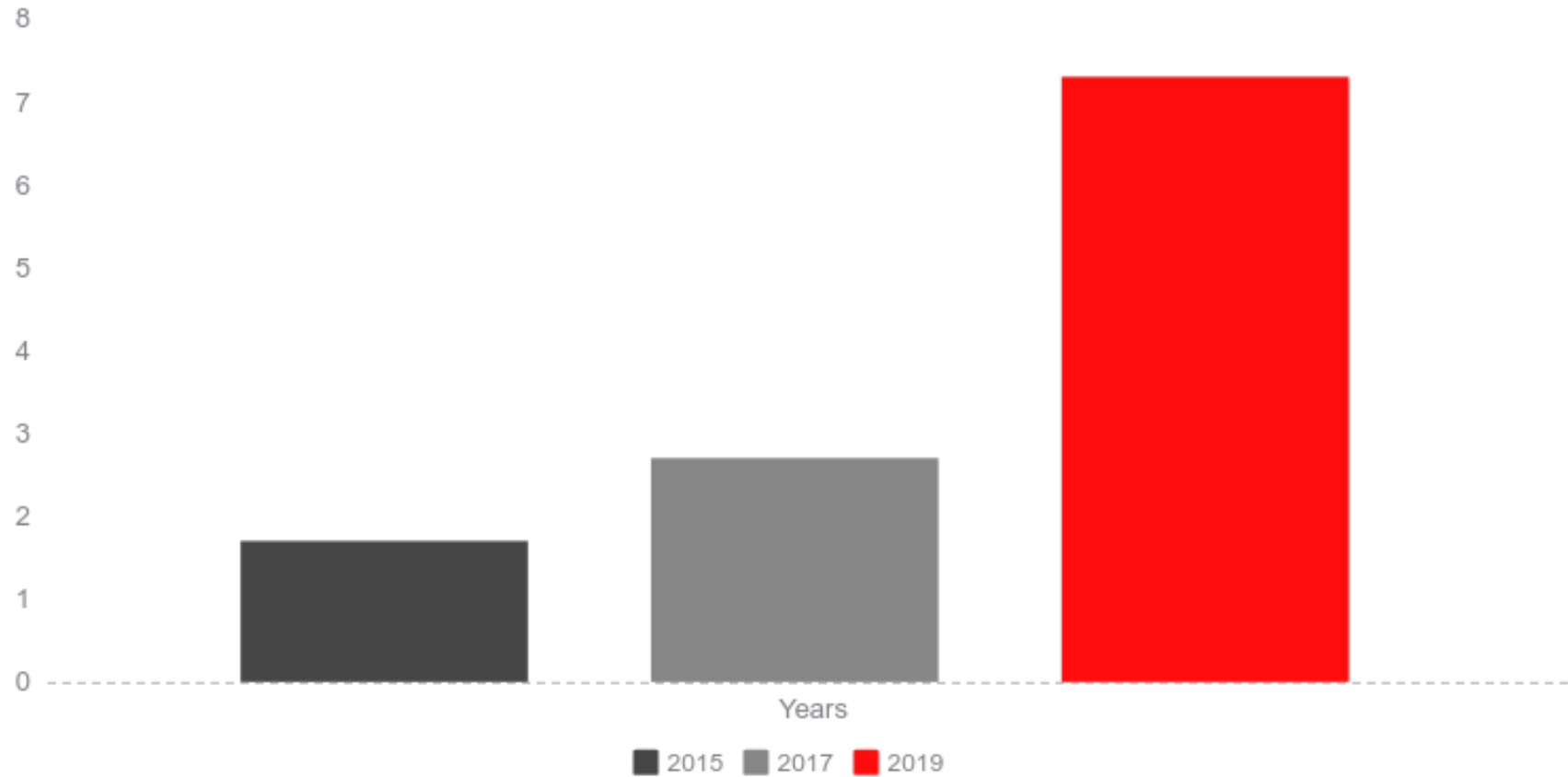


RI HS Students that Used E-cigarettes at least 20 times in the last 30 days



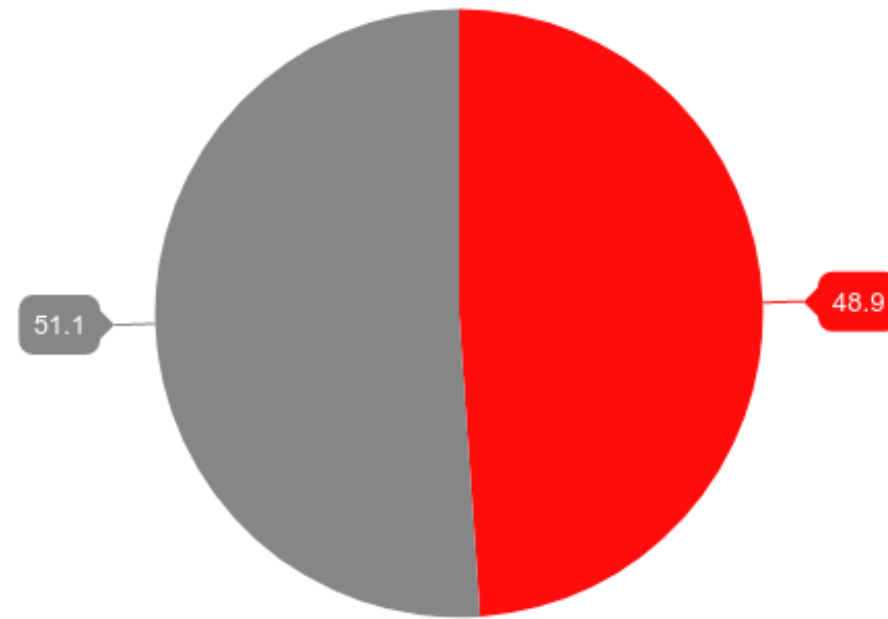
2019 Youth Risk Behavior Survey Data

RI HS Students that used E-cigarettes daily



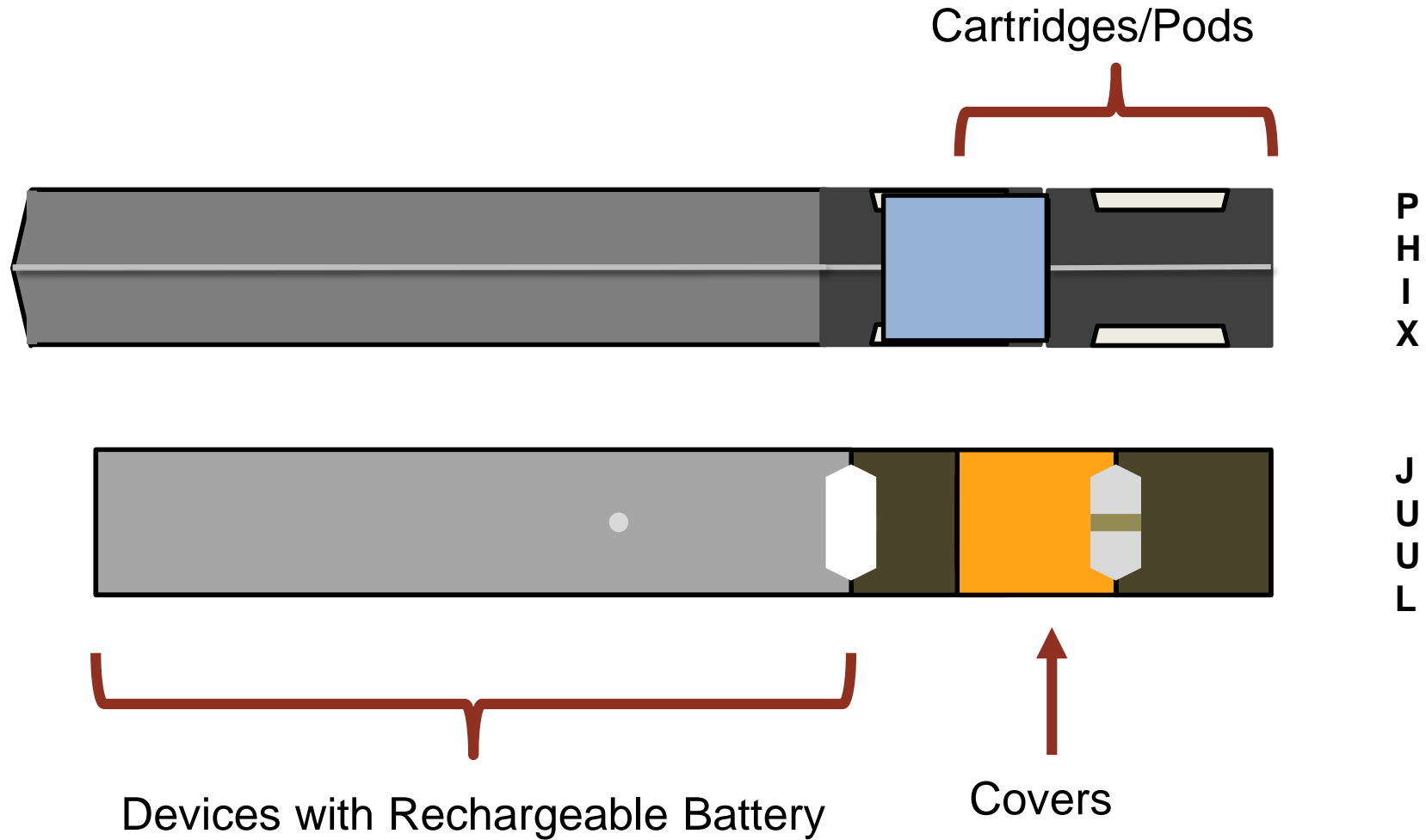
2019 Youth Risk Behavior Survey Data

RI High School Students that have tried an E-cigarette in 2019



■ Have Tried (48.90%) ■ Have not tried (51.10%) 2019 Youth Risk Behavior Survey Data

Anatomy of a Pod-based System



tobaccopreventiontoolkit.stanford.edu

E-Cigarette / Vape Pen Aerosol Composition

- Propylene glycol
- Glycerin
- Flavorings (many)
- Nicotine
- NNN
- NNK
- NAB
- NAT
- Ethylbenzene
- Benzene
- Xylene
- Toluene
- Acetaldehyde
- Formaldehyde
- Naphthalene
- Styrene
- Benzo(b)fluoranthene
- Chlorobenzene

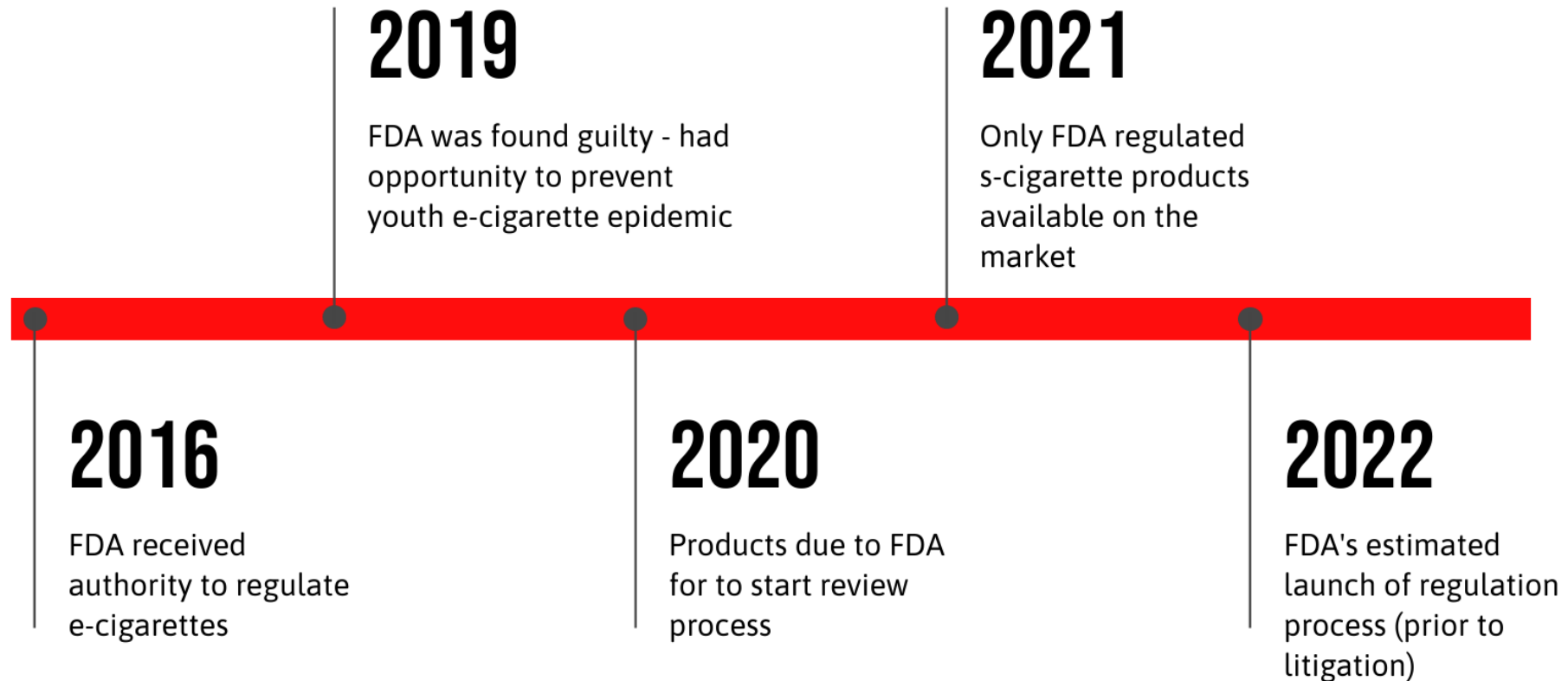
- Propionaldehyde
- Benzaldehyde
- Valeric acid
- Hexanal
- Fluorine
- Anthracene
- Pyrene
- Acenaphthylene
- Acenaphthene
- Fluoranthene
- Benz(a)anthracene
- Chrysene
- Retene
- Benzo(a)pyrene
- Indeno(1,2,3-cd)pyrene
- Benzo(ghi)perylene
- Acetone
- Acrolein

- Silver
- Nickel
- Tin
- Sodium
- Strontium
- Barium
- Aluminum
- Chromium
- Boron
- Copper
- Selenium
- Arsenic
- Nitrosamines,
- Polycyclic aromatic hydrocarbons
- Cadmium
- Silicon
- Lithium

- Lead
- Magnesium
- Manganese
- Potassium
- Titanium
- Zinc
- Zirconium
- Calcium
- Iron
- Sulfur
- Vanadium
- Cobalt
- Rubidium
- Crotonaldehyde









All of these have been found in e-cigarette/vape pen aerosol

FDA Regulation Timeline





Nicotine Equivalent

		Amount	Equivalent
1 pack cigarettes		20 cigarettes <i>(contains 8mg per cigarette, but only inhale 1mg)</i>	
1 JUULpod		0.7 mL pod <i>"5% nicotine by volume"</i>	
1 PHIX pod		1.5 mL pod <i>"5% nicotine by volume"</i>	
1 Suorin pod		2 mL cartridge <i>"5.4% nicotine by volume "</i>	

Stronger E-cigarettes









Salt-based nicotine



Freebase nicotine



Nicotine Equivalent

		Amount	Nicotine Effect
1 pack cigarettes		20 cigarettes <i>(contains 8mg per cigarette, but only inhale 1mg)</i>	
1 JUULpod		0.7 mL pod <i>"5% nicotine by volume"</i>	
1 PHIX pod		1.5 mL pod <i>"5% nicotine by volume"</i>	
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What are the Health Risks of E-Cigarettes?



The American Lung Association is very concerned that we are at risk of losing another generation to tobacco-caused diseases as the result of e-cigarettes.

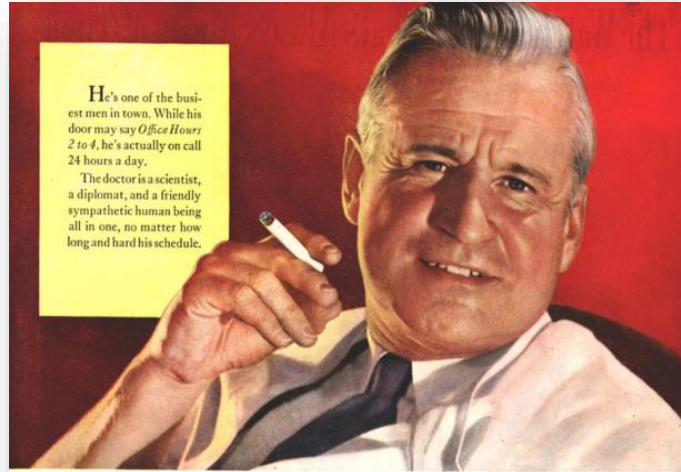
Usual Suspects

JUUL
SMOKING EVOLVED



Altria





He's one of the busiest men in town. While his door may say *Office Hours 2 to 4*, he's actually on call 24 hours a day.

The doctor is a scientist, a diplomat, and a friendly sympathetic human being all in one, no matter how long and hard his schedule.

According to a recent Nationwide survey:

MORE DOCTORS SMOKE CAMELS THAN ANY OTHER CIGARETTE

DOCTORS in every branch of medicine—113,597 in all—were queried in this nationwide study of cigarette preference. Three leading research organizations made the survey. The gist of the query was—What cigarette do you smoke, Doctor?

The brand named most was Camel!

The rich, full flavor and cool mildness of Camel's superb blend of costlier tobaccos seem to have the same appeal to the smoking tastes of doctors as to millions of other smokers. If you are a Camel smoker, this preference among doctors will hardly surprise you. If you're not—well, try Camels now.



Your "T-Zone" Will Tell You...

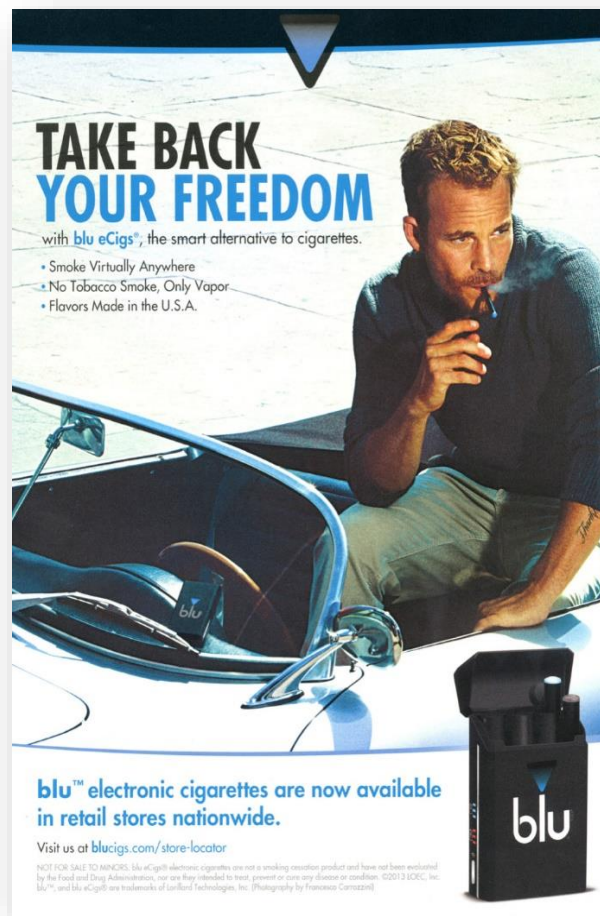
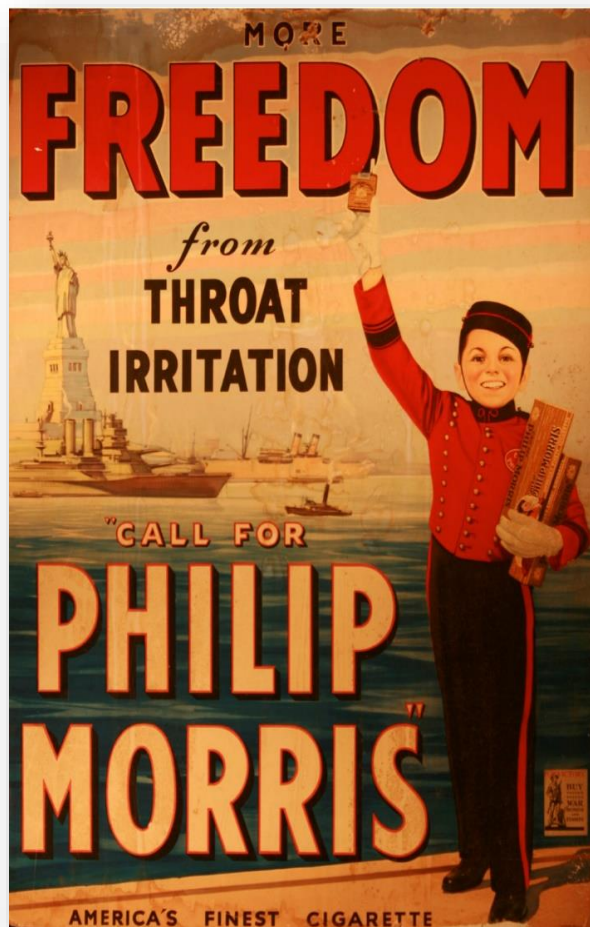
T for Taste...
T for Throat...

that's your proving ground for any cigarette. See if Camels don't suit your "T-Zone" to a "T."

CAMELS Costlier Tobaccos

Viceroy's FILTER the Smoke!

As your Dentist, I would recommend **VICEROYS**



WHY QUIT? SWITCH TO BLU

blu is the smart choice for smokers wanting a change. Take back your freedom to smoke when and where you want without ash or smell. blu is everything you enjoy about smoking and nothing else. Nobody likes a quitter, so make the switch today.

Visit blucigs.com



* New blu Smart Pack

PREMIUM ELECTRONIC CIGARETTE

18+ only. CALIFORNIA PROPOSITION 65 - Warning: This product contains nicotine, a chemical known to the state of California to cause birth defects or other reproductive harm.



What are the Health Risks of E-Cigarettes?

E-CIGARETTES ARE **NOT** A QUIT SMOKING PRODUCT



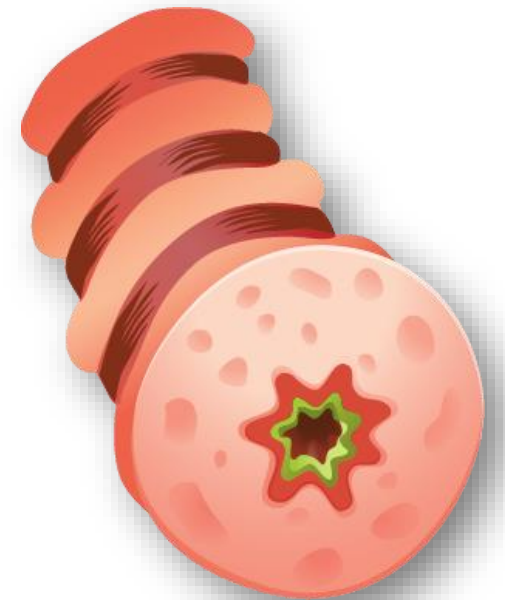
The Food and Drug Administration has not found any e-cigarette to be safe and effective in helping smokers quit.

If you vape you are
4x MORE LIKELY
to start smoking cigarettes

Marijuana and Lung Health

The Impact of Marijuana on Lung Health

- The National Academies of Science, Engineering and Health concluded that regularly smoking marijuana leads to chronic bronchitis.
- Smoking marijuana damages the lungs and suppresses the immune system, making people more susceptible to lung infections.
- Marijuana smoke has been shown to injure the cell linings of the large airways and can lead to symptoms such as chronic cough, phlegm production, wheeze and acute bronchitis.
- More research must be done in order to determine whether smoking marijuana causes lung cancer.



Exposure to Secondhand Marijuana Smoke is Not Safe

- The American Lung Association supports measures to require completely smokefree environments, including from marijuana.
- A study comparing firsthand and secondhand marijuana smoke to tobacco cigarette smoke found:
 - Secondhand marijuana smoke contains many of the same toxins and carcinogens found in directly inhaled marijuana smoke, in similar amounts if not more.
 - Secondhand marijuana smoke contains toxins and tar, which could cause harmful health effects, especially among children and people with asthma and other lung diseases.



Medical Marijuana

- Medical marijuana uses the marijuana plant or chemicals in it to treat diseases or conditions.
- The FDA has limited approved cannabidiols such as Marinol and Epidiolex oral solution, which contains a purified drug substance cannabidiol, one of more than 80 active chemicals in marijuana, for treatment of two rare and severe forms of epilepsy, Dravet syndrome and Lennox-Gastaut syndrome.
- The American Lung Association believes medical marijuana should be subjected to the same Food and Drug Administration standards of efficacy and safety as any pharmaceutical agent promoted for purposes of alleviating the symptoms of disease.
- The American Lung Association supports research into the health effects of marijuana use, including any potential risks of medical marijuana use.



“Vaping” Marijuana

- There is little known on the potential lung health effects of inhaling marijuana or products made from it through routes other than smoking. However:
 - Use of a vaporizer (heating dried marijuana plant material to release a mix of water and cannabinoids) may reduce exposure to other compounds and toxins, although “street marijuana” often includes ammonia and pesticides, and too-hot temperatures lead to more “tar”.
 - Use of “vape-pens” to inhale cannabis concentrates or liquids may have similar respiratory health effects as e-cigarette use.
 - “Dabbing” (inhaling flash-vaporized cannabis concentrates) may also cause respiratory problems



"Green Crack"
wax

"Ear Wax"

Butane Hash Oil
(BHO)

Hash Oil Capsules

"Budder"

"Shatter"



These concentrates are made by extracting THC and other compounds **from cannabis using chemical solvents or mechanical separation**





Intro to Butane Hash Oil

Different types of smoking devices can be used to inhale the fumes or vapor of wax. Some of the more popular are electronic vaporizers, or pens. These devices can be used to smoke hashish, hash oil, marijuana oil, marijuana or wax and are available at most smoke shops, head and bong shops.

The pens are powered by a rechargeable battery. Just press the button, an indicator light comes on to inform you that your wax, oil or whatever you are using is heating up.



Wax

It is reported that DEA agents have seen users suffer the onset of psychosis and possibly brain damage as a result of the exposure to high concentrations of THC.



PAXLABS

Latest Outbreak of EVALI

CDC Recommendations

- **CDC recommends that you do not use THC-containing e-cigarette, or vaping, products.**
- **CDC also recommends that people should not:**
 - **Buy any type of e-cigarette, or vaping, products, particularly those containing THC from informal sources like friends, or family, or in-person or online dealers.**
 - **Modify or add any substances such as vitamin E acetate to e-cigarette, or vaping, products that are not intended by the manufacturer, including products purchased through retail establishments.**
- **Since the specific cause or causes of lung injury are not yet known, the only way to assure that you are not at risk while the investigation continues is to consider refraining from use of all e-cigarette, or vaping, products.**
- **Adults using e-cigarettes to quit smoking should not go back to smoking; they should weigh all risks and benefits and consider utilizing approved NRT**

Approved NRT

NRT Types	How to Get Them	How to Use Them
Patch	Over the Counter	Place on the skin Gives a small and steady amount of nicotine
Gum	Over the Counter	Chew to release nicotine Chew until you get a tingling feeling, then place between cheek and gums
Lozenge	Over the Counter	Place in the mouth like hard candy Releases nicotine as it slowly dissolves in the mouth
Inhaler	Prescription	Cartridge attached to a mouthpiece Inhaling through the mouthpiece gives a specific amount of nicotine
Nasal Spray	Prescription	Pump bottle containing nicotine Put into nose and spray

How Do We Address this Epidemic?

Addressing the Epidemic: American Lung Association Leadership

HELPING SMOKERS QUIT USING PROVEN & EFFECTIVE METHODS

The American Lung Association can help you quit for good!



YOU
GOT
THIS

YOU CAN QUIT JUULING. TEXT HOPE4RI TO 88709 FOR HELP.



Addressing the Epidemic: American Lung Association Leadership

STATES AND LOCALITIES CAN WORK TO FILL THE VOID

- While FDA delays, states and localities can and should act
 - Smokefree protections
 - Tobacco 21 policies
 - Helping smokers quit
 - Funding tobacco prevention programs
 - Increase tobacco taxes
 - Prohibiting flavors in all products
 - Do more to help smokers and e-cigarette users quit

 **AMERICAN LUNG ASSOCIATION.**

What States Can Do To Reduce E-Cigarette Use

	1. Increase tobacco taxes and equalize rates across all tobacco products—including e-cigarettes
	2. Include e-cigarettes in comprehensive smokefree air laws
	3. Raise the minimum age of sale for all tobacco products to 21
	4. Require coverage for comprehensive quit-smoking treatments and counseling
	5. Fully fund state tobacco prevention and education programs per CDC recommendations
	6. Fully fund mass-media campaigns aimed at preventing youth tobacco use, and urging current tobacco users to quit
	7. States and localities have the authority to restrict the use of flavored tobacco products. So why hasn't yours?

1-800-LUNGUSA | Lung.org



About

Tobacco: The Basics

E-Cigs/Vapes & Pod-Based

Hookah

Smokeless

Nicotine Addiction

Positive Youth Development

Resource Directory



Check out our new



The Tobacco Prevention Toolkit



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THE VAPE TALK

[THE DANGERS](#)

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IF YOU DON'T PROTECT

YOUR KIDS FROM VAPING,

WHO WILL?



899



48

RESOURCES ON E-CIGARETTES IN ONE PLACE

E-Cigarettes

The American Lung Association is very concerned that we are at risk of losing another generation to tobacco-caused diseases as the result of e-cigarettes. The Lung Association remains extremely troubled about the rapid increase of youth using these products and has repeatedly called upon the Food and Drug Administration (FDA) to increase their oversight and scrutiny of these products to protect kids.

What Are E-Cigarettes?

Electronic cigarettes, or e-cigarettes, include e-pens, e-pipes, e-hookah, and e-cigars are known collectively as ENDS – electronic nicotine delivery systems. According to the FDA, e-cigarettes are devices that allow users to inhale an aerosol containing nicotine or other substances.

Unlike traditional cigarettes, e-cigarettes are generally battery-operated and use a heating element to heat e-liquid from a refillable cartridge, releasing a chemical-filled aerosol.

Thank you!

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