

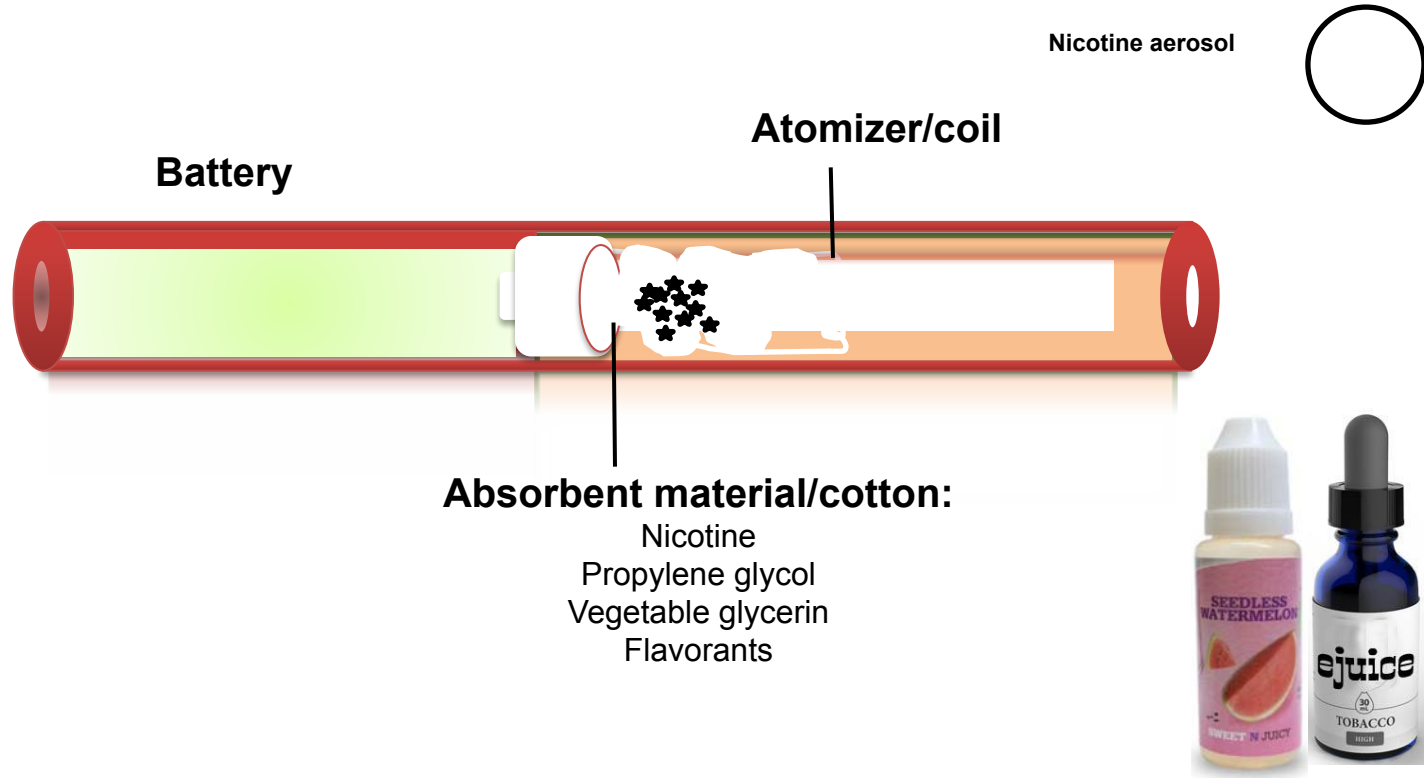


Unit 1: So, What's Really In These E-Cigarettes/Vape Pens?



STANFORD
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What Are E-Cigarettes?



E-Juice/E-Liquid



**E-Cigarette/Vape
Pen Liquid
Ingredients**

Propylene Glycol
Vegetable Glycerin
Nicotine
Flavoring Chemicals

Definitions



GAS: a substance with indefinite expansion. When you let a gas out of it's bottle, it will usually keep spreading out until it's completely mixed with the air.



VAPOR: it can mean the same as gas, but it may also be used to describe a visible exhalation, such as steam or fog. "Vapor" isn't as precise a term as "gas" or "aerosol."



AEROSOL: a mixture of liquid particles suspended in a gas. Instead of just mixing with the air like a pure gas, aerosols can leave drops behind.

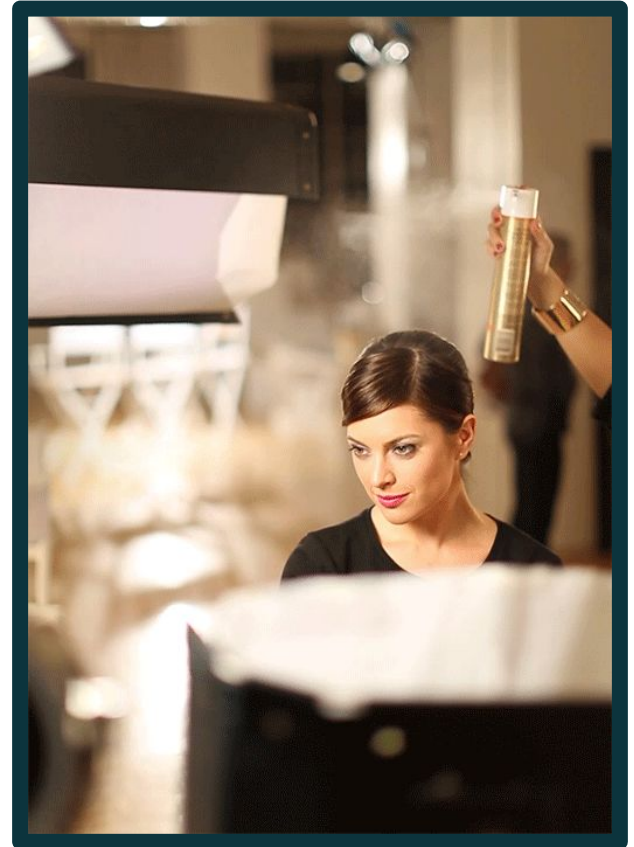


Do you think e-cigarettes/vape pens create a vapor, a gas, or aerosol?

It's an Aerosol, Not a Vapor



Vapor or Aerosol





**Why does it matter that e-cigarettes/vape pens
create aerosols?**

E-Cig Aerosol Composition

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

- Chlorobenzene
- Crotonaldehyde
- Propionaldehyde
- Benzaldehyde
- Valeric acid
- Hexanal
- 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
- 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

All of these have been found in e-cig aerosol

Compounds in yellow are from FDA 2012, Harmful and Potentially Harmful Substances – Established List

Where Else Can You Find These Chemicals?

Propylene glycol □ Antifreeze



Acetone □ Nail Polish Remover



Ethylbenzene □ Paints, Pesticides



Formaldehyde □ Embalming



Nicotine □ Cigarettes



Rubidium □ Fireworks



What is Thirdhand Smoke?



SHS



THS

Indoor Surfaces

Thirdhand Smoke





Unit 2: What's So Bad About E-Cigarettes and Vape Pens?

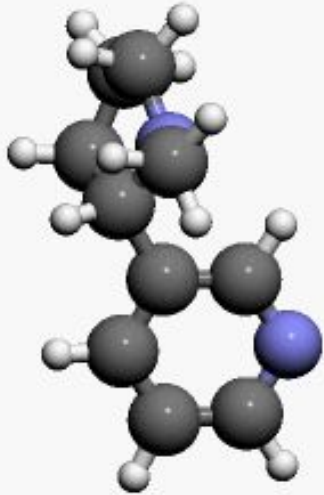


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What is Nicotine?

Nicotine Molecule



- Drug
- Stimulant
- Highly Addictive
- Causes changes in brain chemistry
- Found in tobacco products

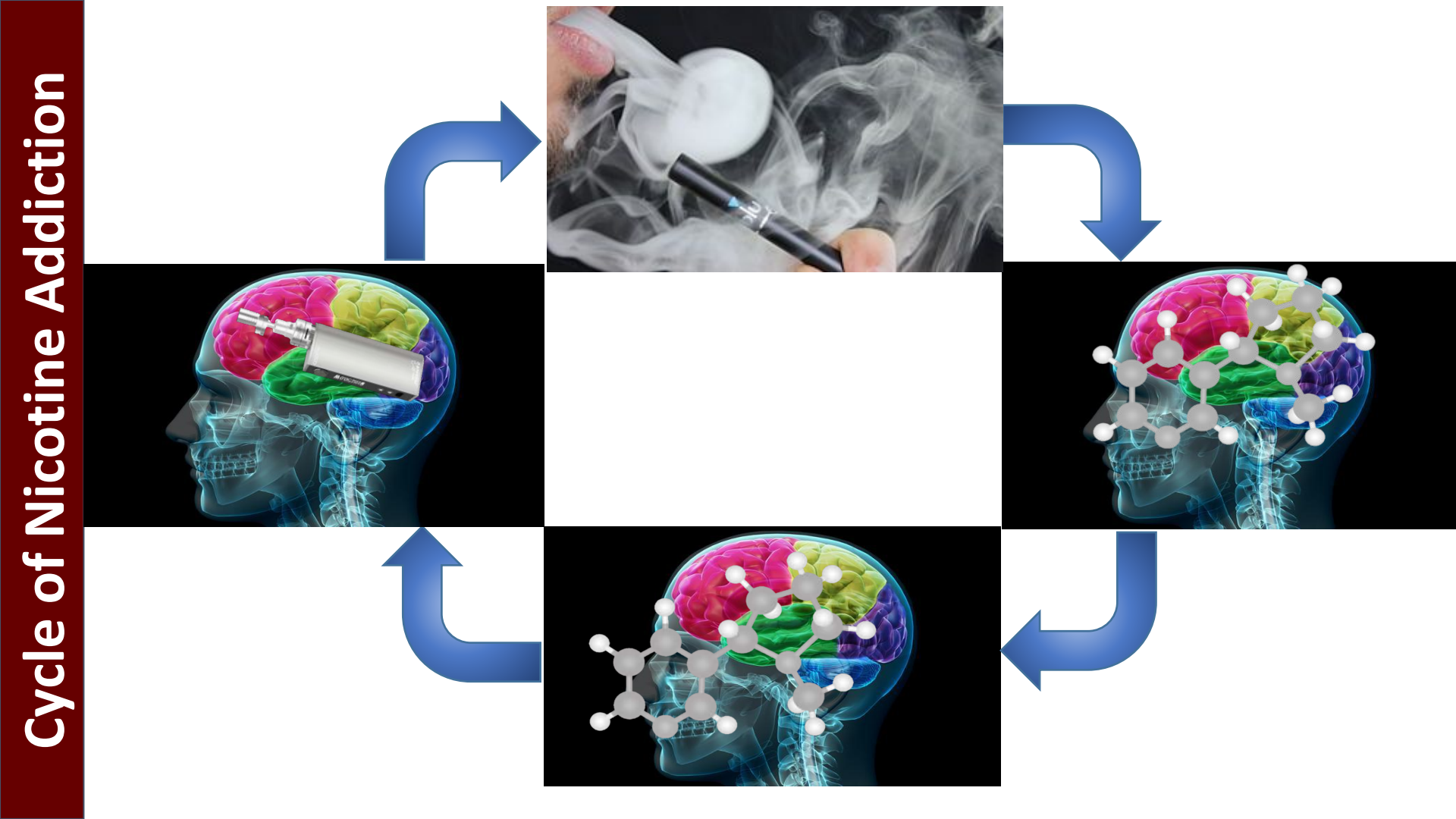
If nicotine is unsafe, why do you think people still choose to use products that have nicotine?

Where Can You Find Nicotine?



Nicotine in the Brain







#1 Flavor Selection with 19 Flavors!



What's Your Taste?

Choose E-cigarette Cartridge From 7
Delicious Flavors by XEO E-cigarettes!

World's Most Powerful E-cigarette
Available in 7 Flavors!!



Variety

Chicken Waffles



Cytotoxic Flavors

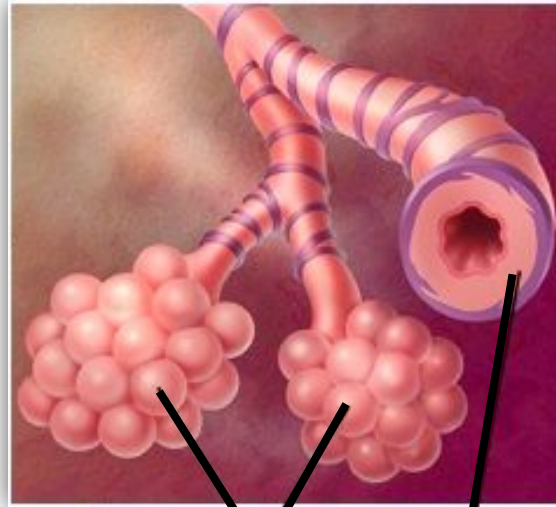
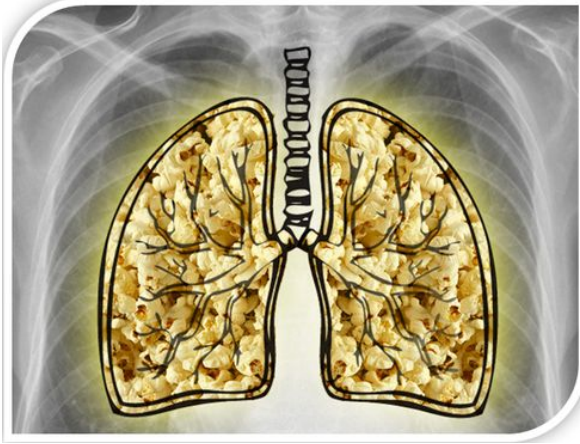
Cinnamon flavors may contain:

Cinnamaldehyde,
2-Methoxycinnamaldehyde

Cherry flavors may contain: Benzaldehyde

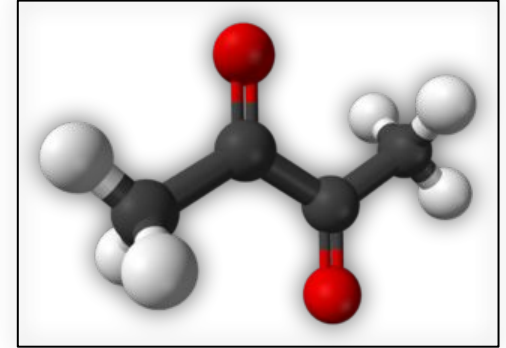


Popcorn Lung

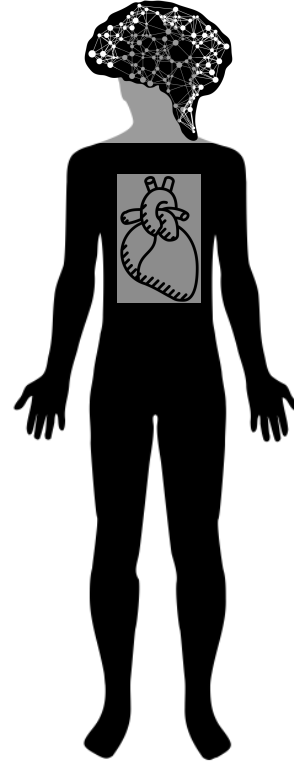
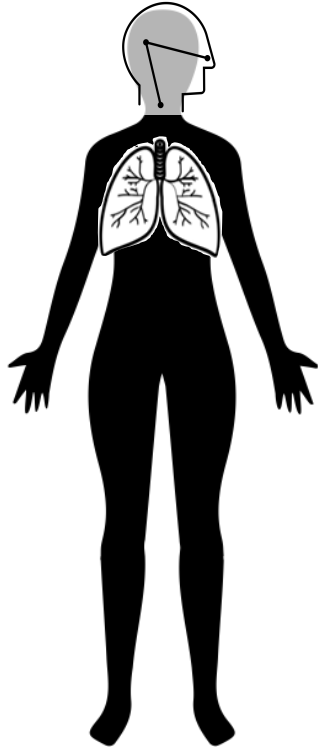


Alveoli & Bronchioles
Experience scarring

Diacetyl

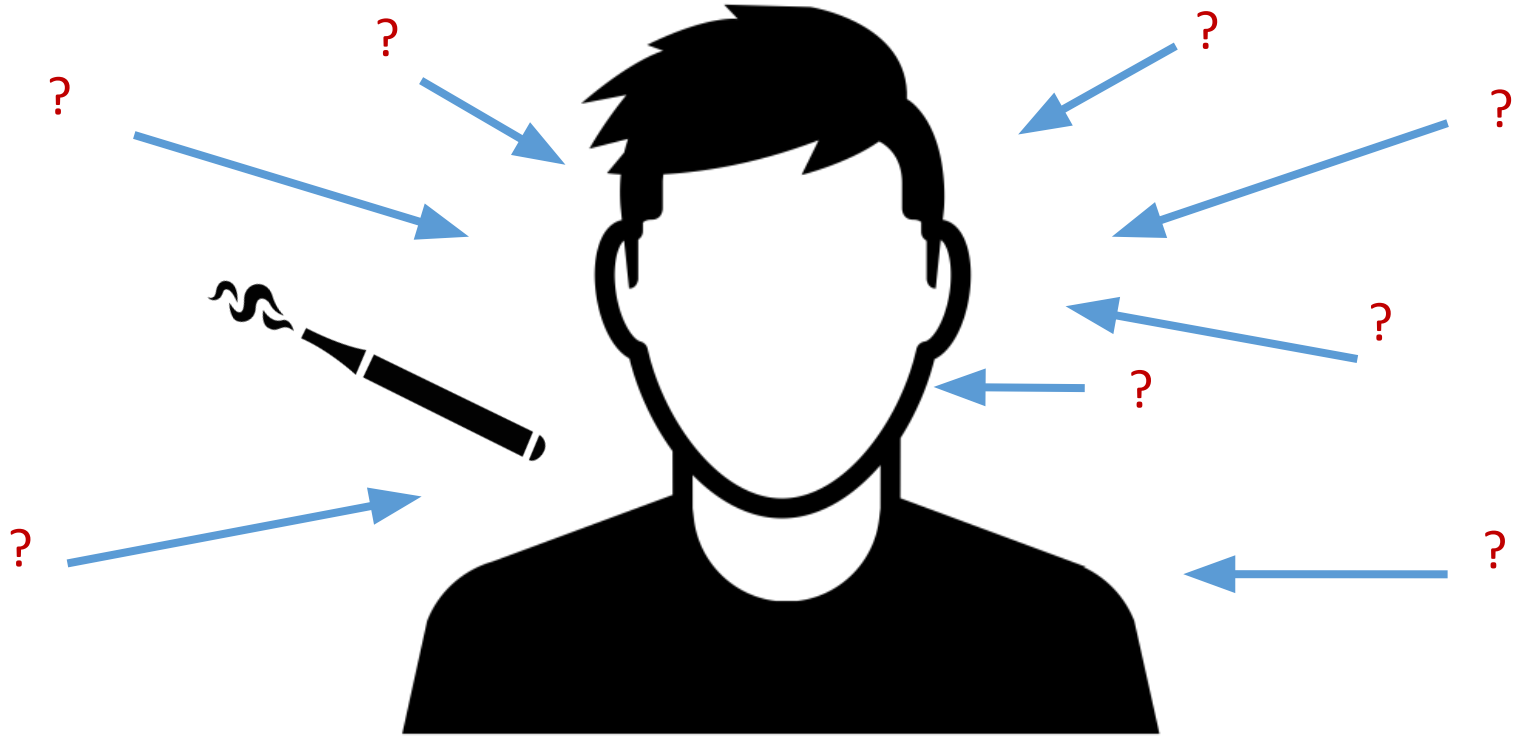


Health Risks to E-cig User

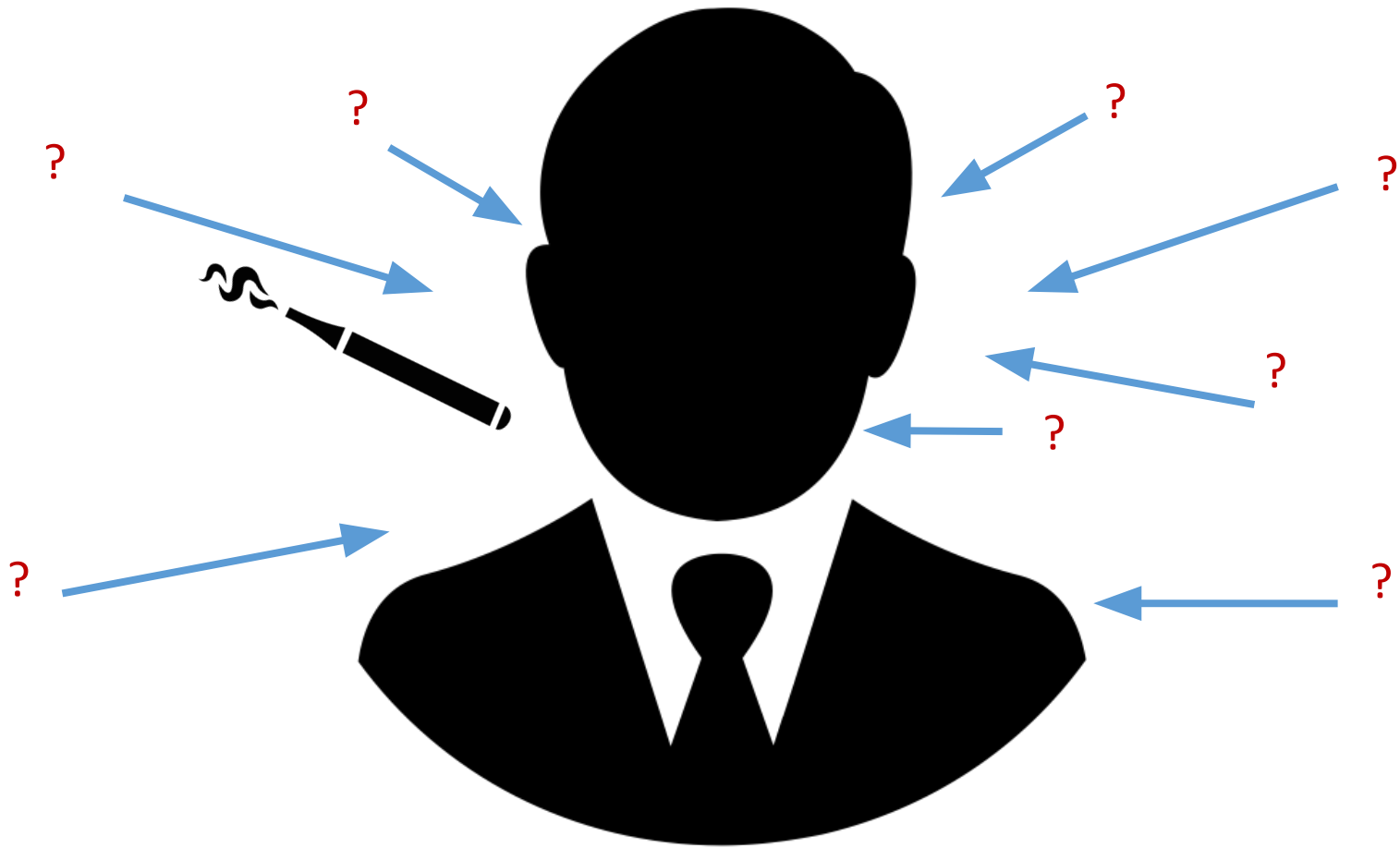


Effects of E-Cigs

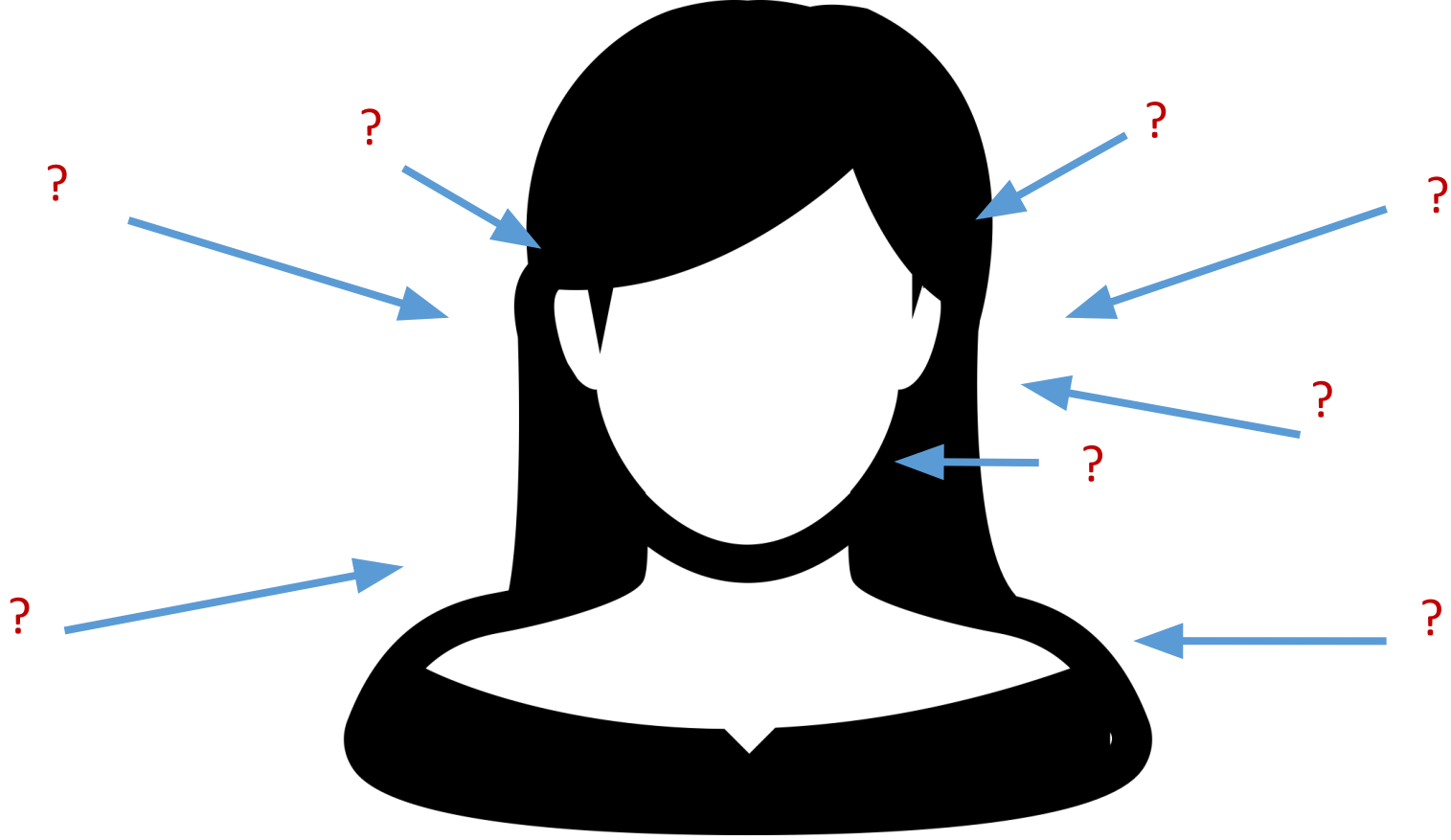




**Why do you think people your age use
e-cigs/vapes?**



Why do you think adults use e-cigs/vapes?



**Why do you think people your age DON'T
use e-cigs/vapes?**

The Usual Suspects



Who is going to replace the old smokers?





YOUNG PEOPLE YOUR AGE

88% of adult smokers started before 18



“Today's teen-ager is tomorrow's potential regular customer and the overwhelming majority of smokers first begin to smoke while in their teens. . .”

-March 31, 1981 Philip Morris Report (1)

“At least a part of the success of Marlboro Red during its most rapid growth period was because it became the brand of choice among teenagers who then stuck with it as they grew older. ”

-March 31, 1981 Philip Morris Report (2)



“The ability to attract new smokers and develop them into a young adult franchise is key to brand development.”

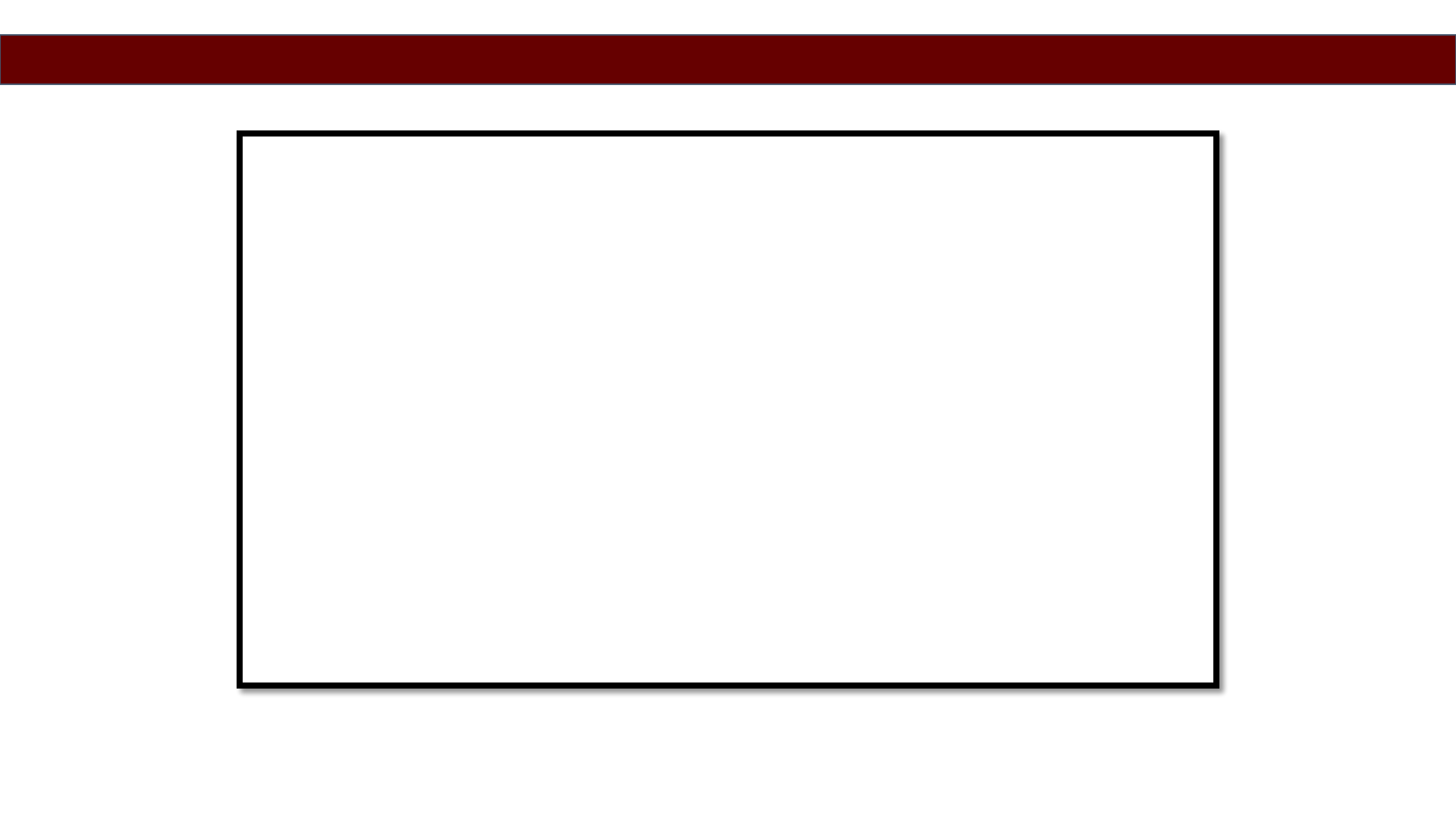
-1999 Philip Morris Report (3)

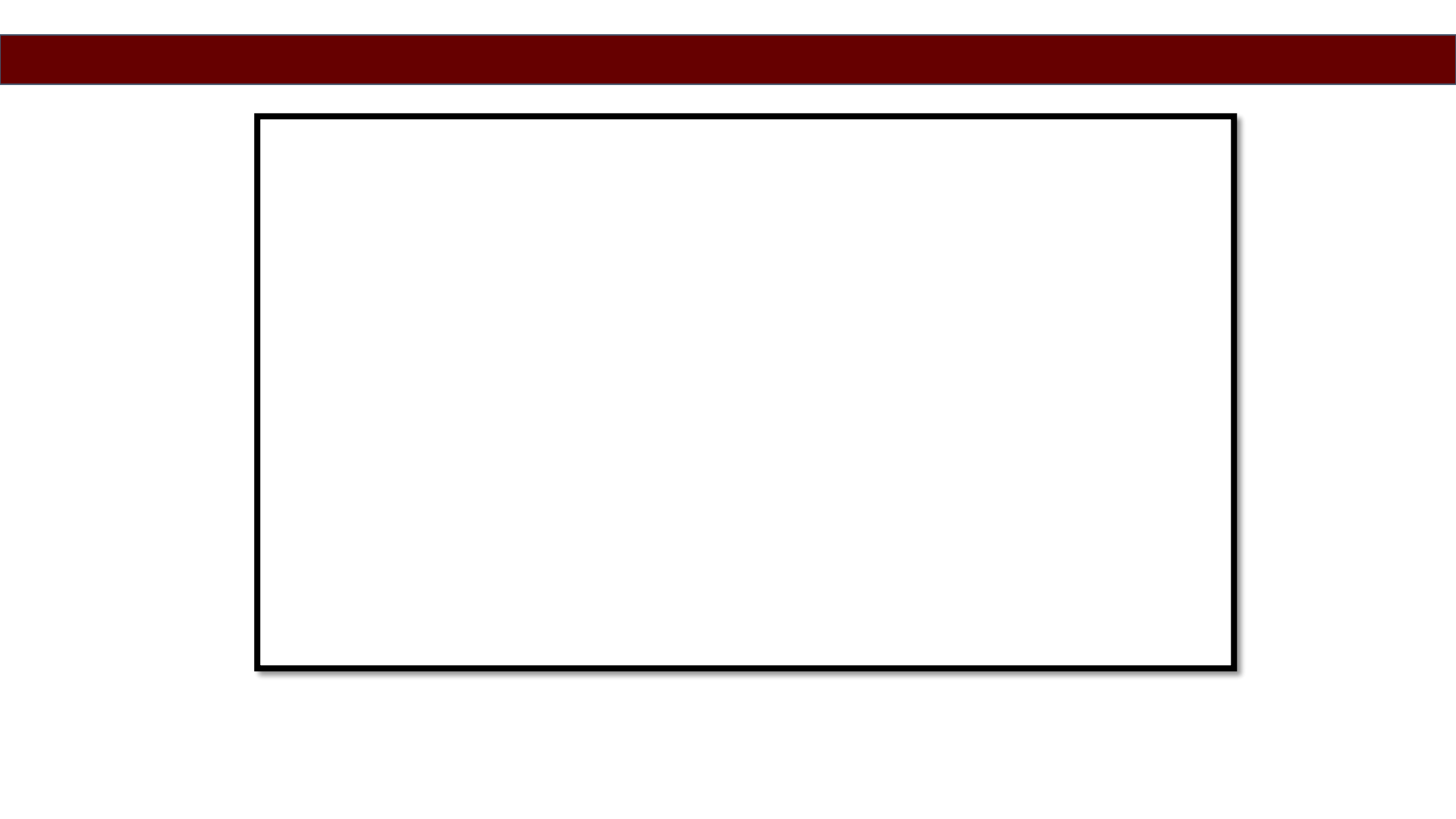
“They represent tomorrow's cigarette business. . . As this 14-24 age group matures, they will account for a key share of the total cigarette volume -- for at least the next 25 years.”

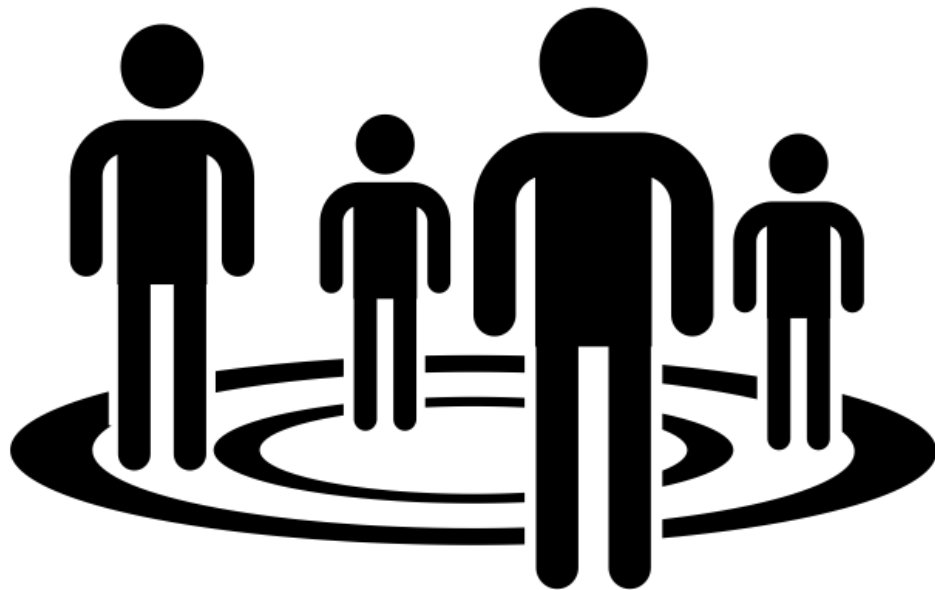
-September 30, 1974 R.J. Reynolds Tobacco Co (4)

How are e-cig manufacturers
reaching young people?







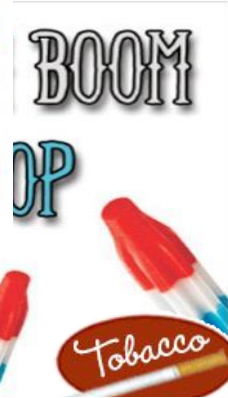


What is a *target audience*?

“Trendy” Products



Flavors



#1 Flavor Selection with 19 Flavors!



What's Your Taste?

Choose E-cigarette Cartridge From 7 Delicious Flavors by XEO E-cigarettes!!

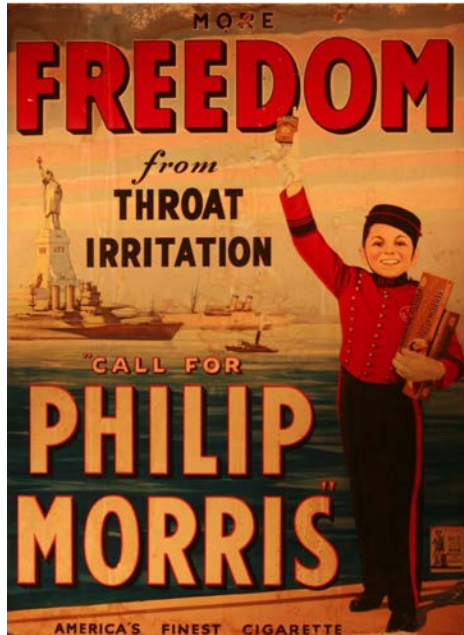
World's Most Powerful E-cigarette Available in 7 Flavors!!



[illegible]

Cigarettes vs. E-cigs/Vapes Ads

Philip Morris Ad [1941]



Blu Ad [2013]

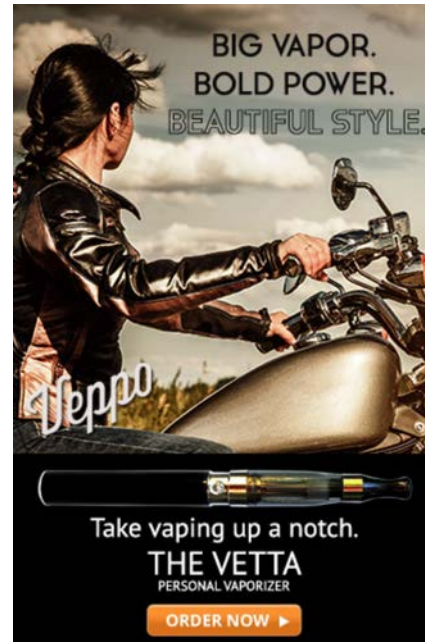


Cigarettes vs. E-cigs/Vapes Ads

Camel Ad [1993]



Veppo Ad [2013]



Cigarettes vs. E-cigs/Vapes Ads

Chesterfield Ad [Date Unknown]



**GENEVIEVE
36-21-36**

Finding pretty young ladies who smoke Chesterfield King to decorate these pages is not at all difficult. For example, we simply took our camera to the shore, opened a pack of Chesterfield Kings (an infallible lure) and out of the waves stepped Genevieve.

"Call me Jenny," she said as we snapped the picture, "and give me a wonderful Chesterfield King." Why are they wonderful? Because Chesterfield King has the advantages of extra length—and more. Only this king gives you the taste of 21 great tobacco—tobacco too wild to filter, pleasure too good to miss.

Jenny is an excellent summer, by the way, and very proud of it. In fact, she says she'll challenge any reader to 100 yards free style. Any takers? Just send us 2100 empty Chesterfield King packs and we'll see if she's still gone.

**CHESTERFIELD
KING
21-20**

South Beach Smoke Ad [Date Unknown]



**HOT
SUMMER
SAVINGS!
20% OFF
CARTRIDGES**

SOUTH BEACH SMOKE

SHOP CARTRIDGES »



Two Truths and a Myth

- Many e-cigs do not contain nicotine.
- People can experience secondhand exposure to the vapor released from e-cigs.
- The mist released from e-cigs is similar to fog machine mist.

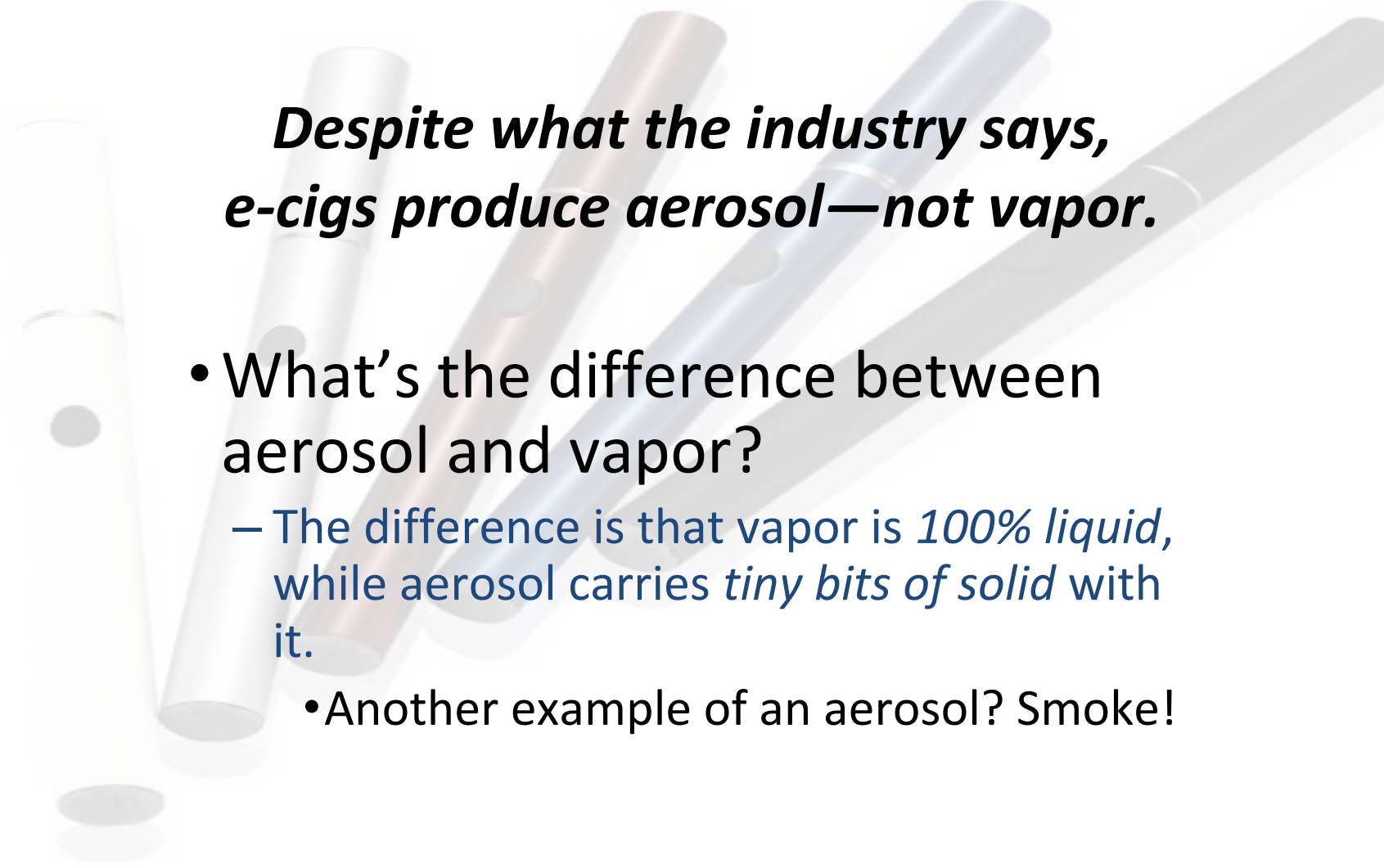
Four e-cigarettes are shown diagonally across the frame. From left to right, they are white, silver, blue, and grey. Each has a small circular button near the mouthpiece. The background is white with soft shadows.

E-cigs do contain nicotine.

- The amount of nicotine it contains can also be misleading.
 - Research shows the amount of nicotine advertised can be a lot more or a lot less than what's really there.

Two Truths and a Myth

- E-cigs only produce vapor.
- The vapor from e-cigs contains the nicotine, the flavor-containing chemicals, and a chemical that creates the mist you exhale.
- Some flavor chemicals, when inhaled, have been known to cause scarring in the lungs, a condition known as “popcorn lungs”.

Four e-cigarettes are shown in the background, slightly out of focus. They are arranged diagonally from the top left to the bottom right. The colors are white, silver, blue, and grey.

***Despite what the industry says,
e-cigs produce aerosol—not vapor.***

- What's the difference between aerosol and vapor?
 - The difference is that vapor is *100% liquid*, while aerosol carries *tiny bits of solid* with it.
 - Another example of an aerosol? Smoke!

Two Truths and a Myth

- Laws against selling to minors change from place to place.
- More and more schools are banning e-cigs.
- E-cigs can be used anywhere (including indoors).

E-cigs cannot be used anywhere.

- In fact, many regulations ask e-cig users to respect the *same* laws cigarette users follow.



Two Truths and a Myth

- When using e-cigs, there is a risk of explosions of electronics and batteries.
- The FDA currently regulates the chemical ingredients in e-cigs and what is listed on the labels.
- The heat generated in an e-cig can create formaldehyde from the liquid, and rip metals from the side of the device. This is 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

