

Health Effects of Vaping

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October 30, 2019



DEPARTMENT OF
**PUBLIC HEALTH
AND WELLNESS**



Objectives

What is vaping and how does it work?

Why is it so popular?

What's going on in the news recently?

**1st generation
device**



**2nd generation
device**



**3rd generation
device**



Brief History

1st Generation: Imitate traditional tobacco cigarettes; closed devices

2nd Generation: User modifiable hardware and substance (choice of liquids)

3rd Generation: Even more modifiable (dry and liquid substances); better hardware; looks nothing like a cigarette, can look like a pen or a flash drive

The background image shows several JUUL product boxes and a JUUL device. The boxes are white with the JUUL logo and text like 'the alternative for adult smokers' and 'JUUL device USB charger'. One box has a blue circle with 'JUUL pods sold separately'. A silver JUUL device is leaning against the boxes. A semi-transparent white circle is overlaid on the left side, containing the title and list.

Hardware Variety

- Varies throughout based on:
 - What substance you are vaping
 - Commercial needs
 - Re-useable vs. Disposable
 - Costs
 - Consumer needs
 - Portability
 - Medicinal vs. Recreational

Substance Variety

- Dry or Wet
 - Dry: herbs, oils, and wax concentrates
 - Wet: e-liquid or vape juice
- Nicotine (vaping) or THC (dabbing)
- Flavors



Popularity

Flavors, flavors, and flavors

- Common reason for youth and adults to try vaping
- Flavors in traditional cigarettes were banned in 2009 because children were more likely to try them
- Vaping pods come in flavors like bubble gum and cotton candy which appeal to children
- Nationally, 95% of adult smokers started before they were 21

Portability and Affordability

- Discrete
- Cheaper than traditional tobacco products (varies from state to state)
- Minors report easily accessing these products despite being underage

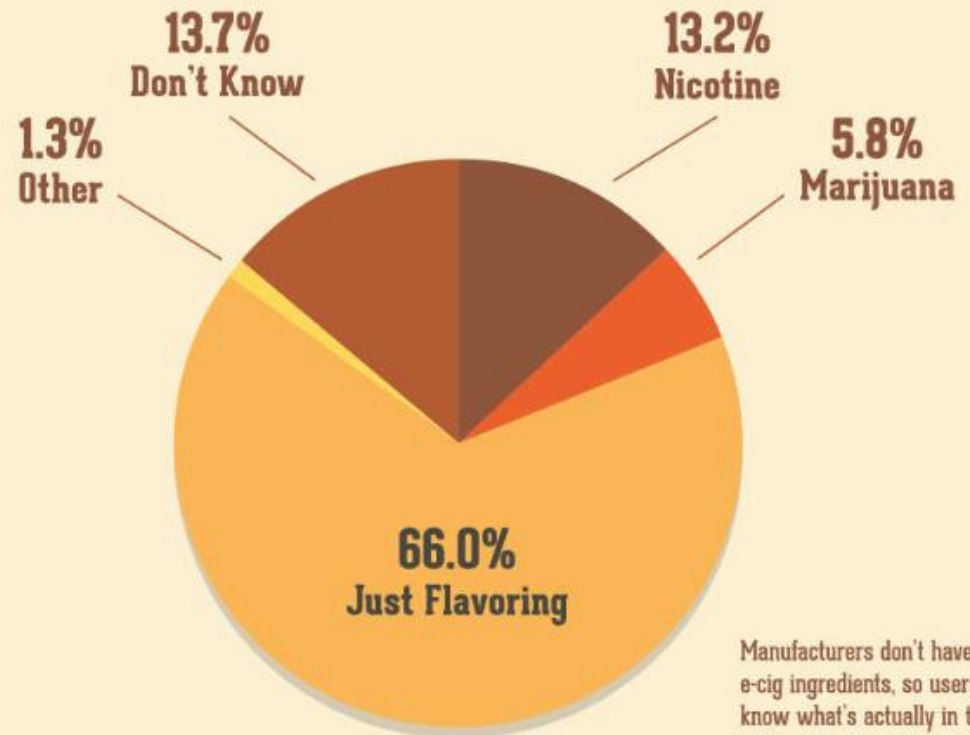
Cool Factor

- While cigarettes have become less “cool” over the last couple of decades, kids now experience peer pressure to vape
- There was an 800% increase in vaping among middle and high schoolers between 2011 and 2015, and the trend continues

Among Kentucky Youth

- In 2017:
 - 15.1% of middle schoolers reported ever using e-cigs
 - 44.5% of high schoolers reported ever using e-cigs

WHAT DO TEENS SAY IS IN THEIR E-CIG?³



What is actually in e-cigs:

- 99% contain nicotine
- heavy metals
- volatile organic compounds
- cancer-causing compounds
- Substances that are safe to eat but not inhale, such as oils and diacetyl
- ??? Many ingredients are undisclosed

6 SIGNS THAT YOUR CHILD MAY BE VAPING



Increased secrecy



Disappearing money



Unwillingness to
stay home



Increased thirst



Desire for spicy or
salty foods

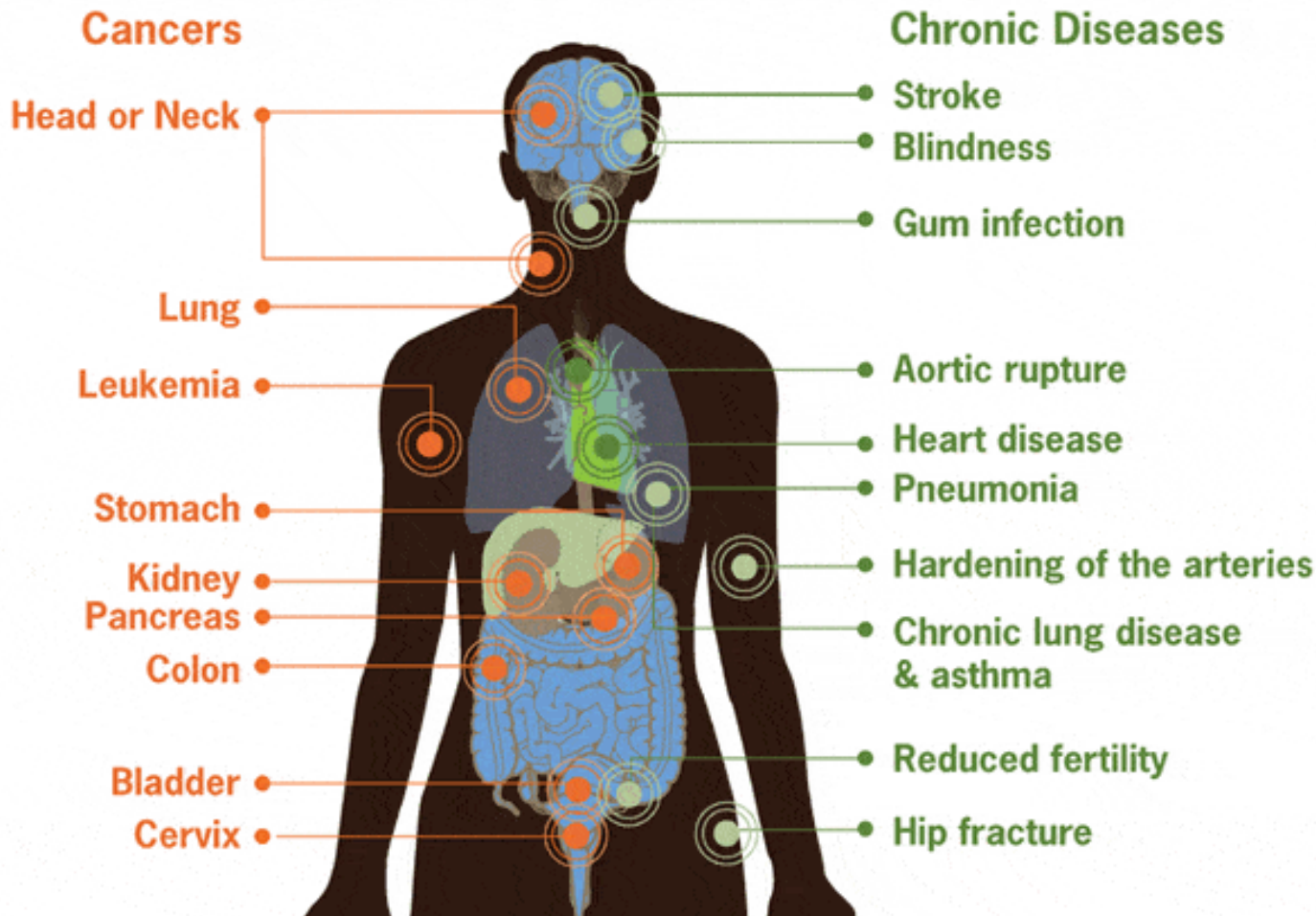


Increased irritability or
mood changes

Beaumont

Long Term Risks of E-cigarette Use

Smoking can damage every part of the body



Source: Foundation 4 A
Healthy KY

Nicotine damages the developing brain of adolescents, teenagers and young adults.

Nicotine exposure reduces impulse control and impairs learning, both immediately and long-term.

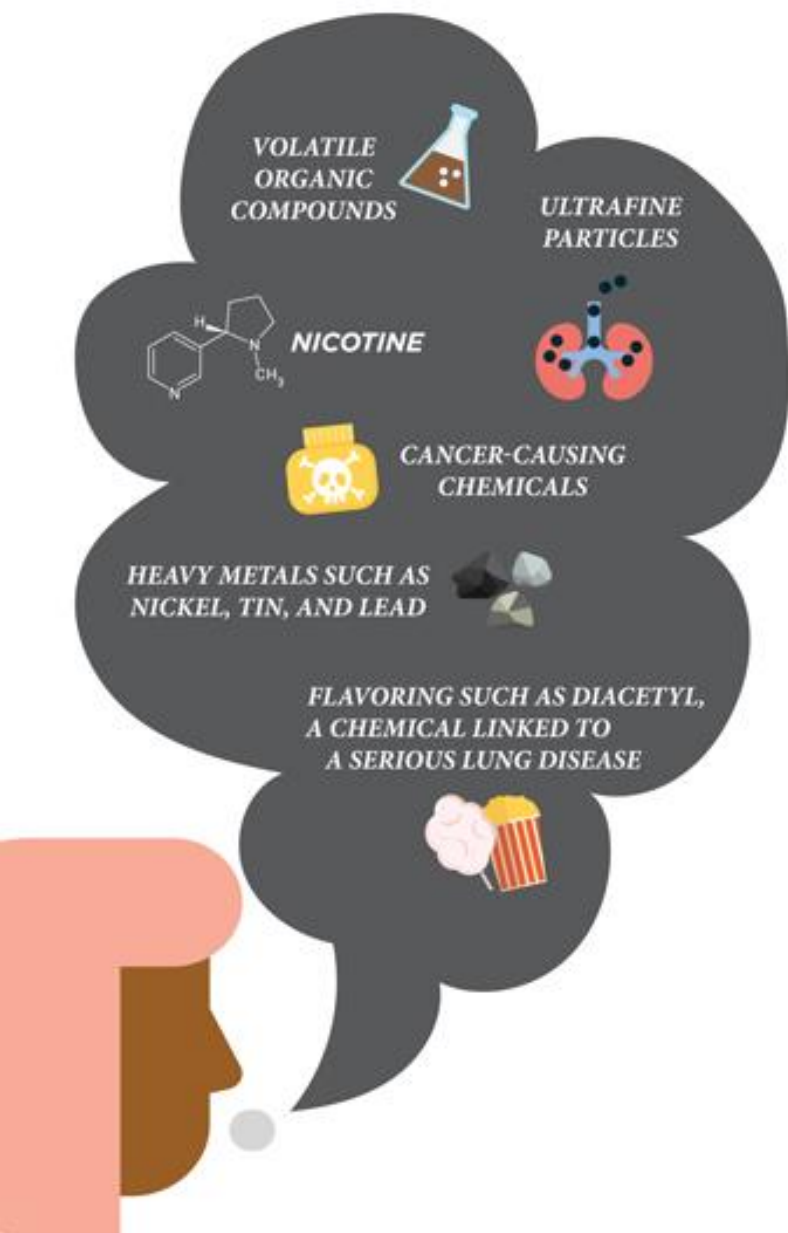
E-cigarette use **damages the heart** and the neural cells in the brain stem.

The FDA is investigating incidences of **seizures** connected with e-cigarette use, possibly tied to the high number of pods youth often go through in a day. Each pod has at least as much nicotine as an entire pack of cigarettes.

Recent studies show links **to heart disease, seizures, cancer and stroke.**



Source: Foundation 4 A Healthy KY



E-cigarettes contain **heavy metals** and flavorings such as **diacetyl** which causes **popcorn lung**, an incurable lung disease.

E-cigarettes also include **cancer causing chemicals, volatile organic compounds, and other particles**

Research shows that teens who use e-cigarettes are **twice as likely to become adult smokers.**

Source: Foundation 4 A Healthy KY

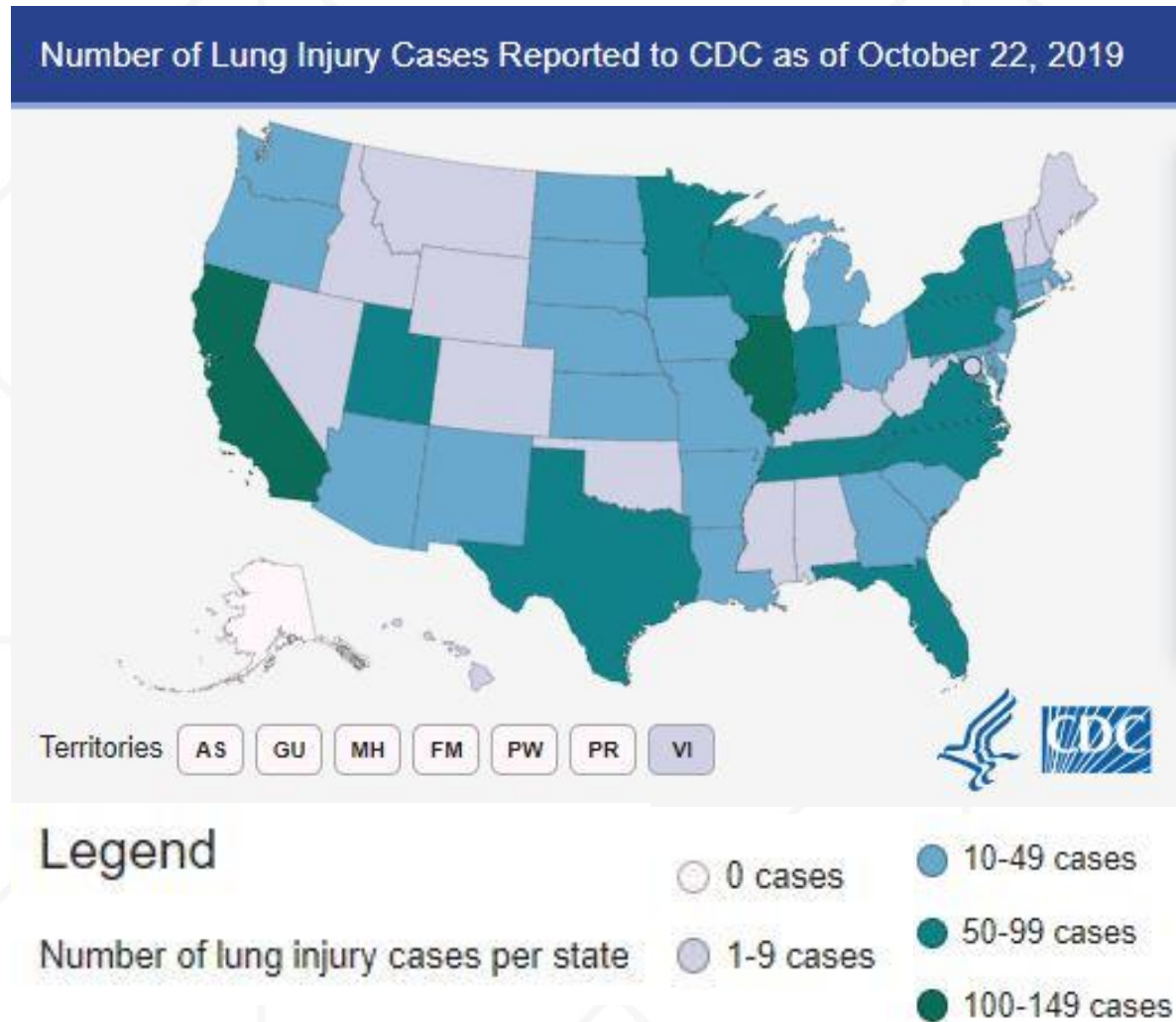
Current Outbreak of
Lung Disease
Associated with
E-Cigarette Use

CDC has named the disease “e-cigarette or vaping product use associated lung injury”, aka **EVALI**

Associated symptoms, developing over a few days to weeks, are:

- Cough, shortness of breath, or chest pain
- Nausea, vomiting, or diarrhea
- Fatigue, fever, or abdominal pain
- Breathing problems that result in hospital admission

- More than 1604 cases and 34 deaths (as of 10/22/19).
- Cause has not been identified, though all report vaping or e-cig usage.
 - No specific vaping-related product is linked to all cases



Current Outbreak of Lung Disease Associated with E-Cigarette Use

What we know about the outbreak:

- Some cases report buying vaping products from non-official or licensed sources.
- Both THC and non-THC products are reported by cases.
- Variety of experience/background with vaping among cases.
- No infectious or other disease-causing agent was detected among the cases.

What we do not know:

- Why individuals are getting sick and/or dying.

Current Outbreak of Lung Disease Associated with E-Cigarette Use

What we are currently doing:

- Health Alerts have gone out to physicians and healthcare providers in the state and nationally to be on the lookout for possible cases and to report them.
- We held a press conference on Sept 30 to raise awareness about the harms and share resources for quitting
- Locally, we are coordinating with the state health department and local healthcare providers on case investigations and surveillance.

What the Public Should Know

- Stop vaping.
- If you vape, do not alter the products or use THC/dab
- Vaping is not safe. The ingredients are not regulated, we don't know everything in them, and the ingredients we do know include poisons.
- If you experience symptoms, contact a health care provider immediately.
- Discuss the outbreak with kids. Prevent them from starting or help them quit.
- Contact LMPHW for free smoking/vaping cessation classes with FDA approved nicotine replacement. Call 574-STOP

Health Effects of E-Cig/ Vaping Use

For current traditional tobacco users:

- E-cigarettes are not safe
- E-cigarettes are not FDA approved smoking cessation tools
- Very few people quit both cigarettes and e-cigs, many people end up smoking both or switching to e-cigs

For everyone:

- Over 1600 people have become seriously ill and 34 people have died
- Nicotine is highly addictive and harms brain development in adolescents
- Some flavorings, for example diacetyl, are safe to eat but are very dangerous when inhaled
- E-cigs can contain heavy metals, volatile organic compounds and cancer-causing compounds
- Others, including small children, are again being exposed to second-hand smoke

E-Cigarettes and Youth

Addressing an Epidemic | Education, Panel, Q & A

November 6 | 4-6pm

duPont Manual High School Auditorium

120 W Lee St | Louisville KY, 40208

Emcee: Claire Ramsey, Middle School Student

Panelists:

- Mayor Greg Fischer
- Dr. Aruni Bhatnagar
- Dr. Sarah Moyer, Director LMPHW
- Eva Stone, Manager JCPS Health Services
- Dr. Patricia Purcell, Pediatrician
- Dr. Douglas Latz, Allergy & Immunology
- Ben Chandler, CEO Foundation 4 A Healthy Kentucky

For More Info: Tracy Monks, Community Impact Director (502) 371-6019

Questions?

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Call 574-STOP for free
smoking/vaping cessation classes



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