

Southern Illinois Drug Awareness Conference
Back Bigger Better

Vaping: Don't Let it Cloud Your Future

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Welcome!

- ▶ Lifelong resident of Southern Illinois.
- ▶ Behavioral Health Nurse since 2013.
- ▶ BSN from Mckendree University in 2020.
- ▶ MSN, FNP from Maryville University in 2023.
- ▶ Currently the onsite provider for The Fellowship House Campus of Centerstone in Anna, IL

Key Points

- ▶ What is Vaping?
- ▶ Vaping devices.
- ▶ Why do people vape?
- ▶ How popular is vaping?
- ▶ Vaping vs. Smoking.
- ▶ What is Nicotine?
- ▶ Cycles of Nicotine Addiction.
- ▶ How does vaping affect overall health?
- ▶ Vaping related illnesses.
- ▶ Affects on the adolescent brain.
- ▶ Impact of vaping on substance abuse.
- ▶ Government regulation.
- ▶ Prevention.



Let's Talk Vaping!

What is Vaping?

- ▶ Vaping consists of inhaling and exhaling aerosol, also known as vapor.
- ▶ Vapor is produced by electronic device such as an “electric cigarette (e-cigarette)”, “vape”, or similar device.
- ▶ 1930’s first patent for an “electronic vaporizer”.
 - ▶ Intended for medicinal purposes.
- ▶ 1979 first vape pen commercialized.
- ▶ Marketed as “Favor” cigarettes.
- ▶ In 2003, 1st modern vape pen known was released in Beijing
- ▶ In 2006, the modern vape pen was released in the US.
- ▶ By 2020, the vape, known as the Juul gained worldwide popularity.



Vaping Devices



What does a device consist of?

[vaping devices - Search Images \(bing.com\)](#)



[juul - Search Images \(bing.com\)](#)

A JUUL? What is that?

- ▶ Most used vape device among adolescents.
- ▶ Can contain the same amount of Nicotine as 20 regular cigarettes in just one pod.
- ▶ According to the CDC, approximately two-thirds of Juul users aged 15-24 are unaware the devices contain nicotine.



What's the
attraction?



Puffing
Poison?



What is in the Juice?

- ▶ Flavored chemicals such as propylene glycol and glycerin.
- ▶ Varying levels of nicotine.
- ▶ Vitamins and essential oils.
- ▶ THC oil.
- ▶ Methamphetamine.

How Popular is Vaping?

In 2019, it was projected that by 2023, vaping products would generate \$48 billion in sales.

National Health Interview Survey

- ▶ In 2021, 4.5% of adults aged 18 and over were current electronic cigarette (e-cigarette) users, with e-cigarette use highest among adults aged 18-24 (11.0%).
- ▶ Current e-cigarette use varies by race and Hispanic origin; among all adults aged 18 and over, the percentage of users who are White, non-Hispanic adults (5.2%) was higher than Asian non-Hispanic (2.9%), Black or African American non-Hispanic (2.4%), and Hispanic or Latino (3.3%) adults.
- ▶ E-cigarette use among adults aged 18 and over generally declined with increasing family income.
- ▶ Adults aged 18-24 and 25-44 were more likely to be dual users of e-cigarettes and cigarettes compared with adults aged 45 and over.

Vaping vs. Smoking



Cigarette Smoking

- ❖ Over 7, 000 chemicals.
- ❖ Carcinogenic compounds.
- ❖ Stigma.
- ❖ Known affect on health.

Vaping

- ❖ Contains organic compounds such as Benzene.
- ❖ Nickle, tin, and lead.
- ❖ Less expensive.
- ❖ More social appeal.
- ❖ Unknown affect on health.



Cycles of Nicotine Addiction

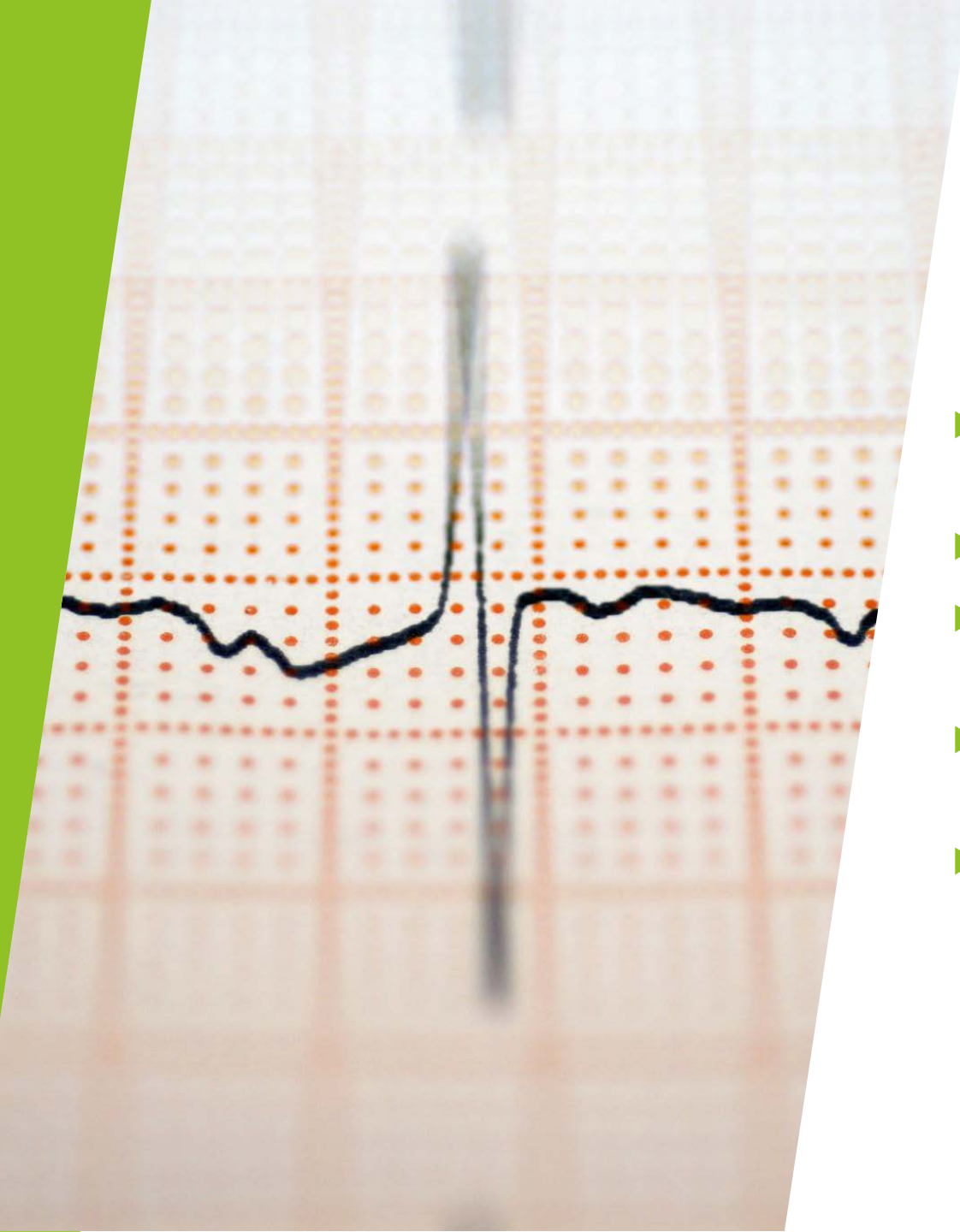


Nicotine Addiction

- ▶ Extremely addictive substance, especially for children.
- ▶ Addiction occurs quickly.
- ▶ Changes brain chemistry in the developing brain.
- ▶ Significantly increases risk of addiction to other substances.
- ▶ Thought to be more addictive than Heroin and Meth.



Affect of Nicotine on Overall Health



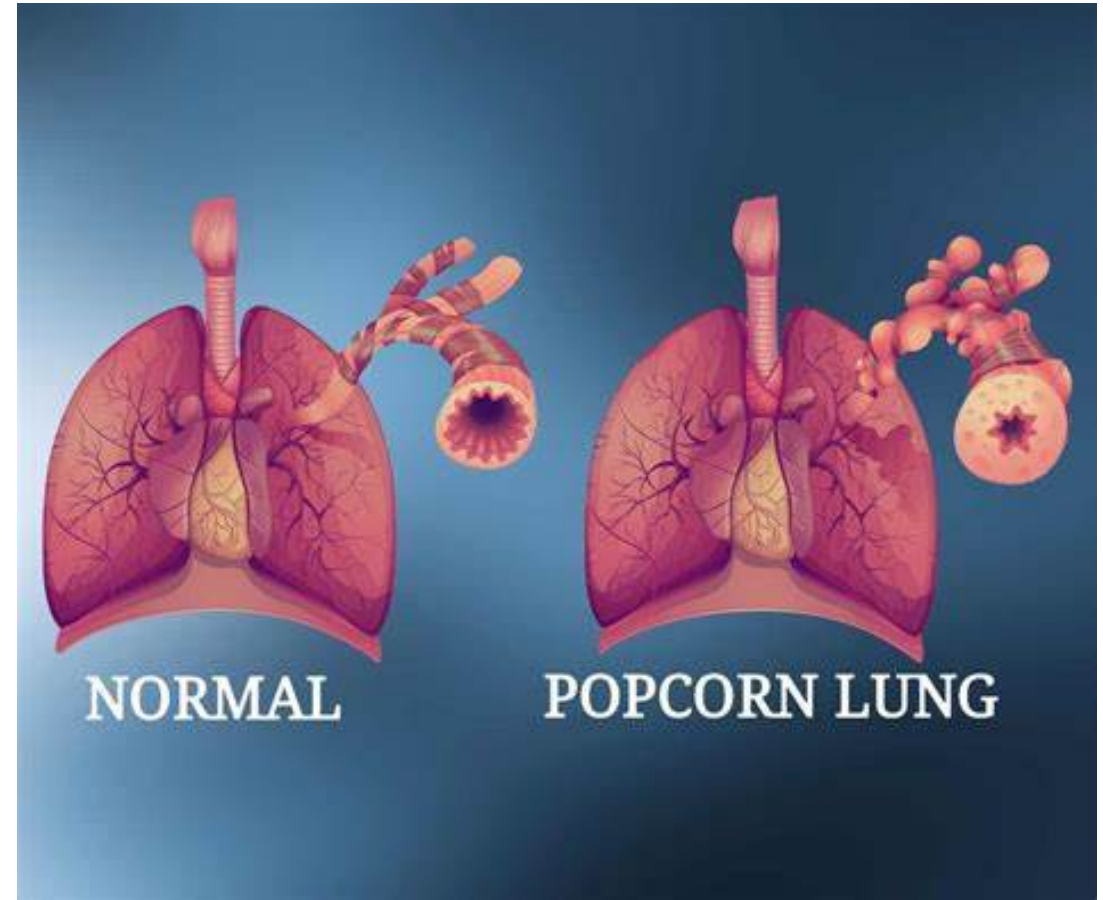
- ▶ Increases blood pressure, pulse, and respirations.
- ▶ Increased Cardiovascular events.
- ▶ Chronic Obstructive Pulmonary Diseases (COPD).
- ▶ Increases risk of cancer of various organs.
- ▶ Affects reproductive organs.



Vaping Related Illnesses

Bronchiolitis Obliterans “Popcorn Lung”

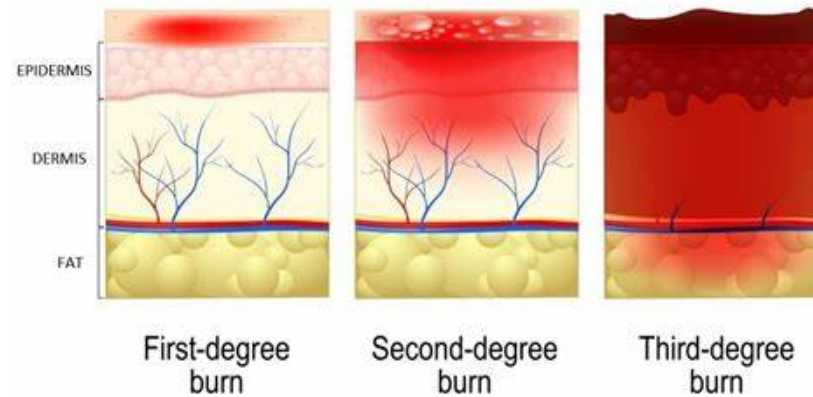
- ▶ Diacetyl, found in the majority of “vape juice” is linked to “Popcorn Lung”.
- ▶ Diacetyl was originally used to simulate butter flavoring in microwave popcorn, prior to being removed from the market.
- ▶ Chemicals that are inhaled cause scarring in the tissues of the lungs, known as the bronchioles.
- ▶ Bronchioles are the smallest tubules, with alveoli being tiny air sacks in the lungs.
- ▶ Results in irreversible scarring, thickening, and narrowing of the airway.
- ▶ Symptoms are similar to the symptoms of Chronic Obstructive Pulmonary Disease (COPD).
- ▶ Coughing, wheezing, and shortness of breath result.
- ▶ The first known case due to vaping was an adolescent.



[popcorn lung - Search Images \(bing.com\)](https://www.bing.com/images/search?q=popcorn+lung)

Additional Dangers of Vaping

- Hard metal lung disease.
- Gastrointestinal disruption.
- Increased risk of Communicable diseases due to effect on immune system.
- Linked to increased cases of COVID-19 among adolescents.
- Increased risk of burns due to device explosions.



- Most common burn areas were thigh hand, genitals, and face.
- Ranges from second to third degree burns.



Impact on Adolescents

The Affect on the Development of the Brain

- ▶ Nicotine can hinder the growth of the adolescent brain until approximately the age of 25.
- ▶ High risk of going on to using regular cigarettes.
- ▶ More likely to use THC and other drugs.



What is the impact of Vaping on Substance Use?

- ▶ Numerous websites, blogs, and forums have aided individuals in ways to modify the components of vapes to deliver illicit substances such as Methamphetamine.
- ▶ Soluble methamphetamine can be easily aerosolized with a boiling point of 212 degrees Celsius.
- ▶ Allows individuals to discretely consume the drug in public.
- ▶ An increase in patient reports in the last year.
- ▶ Researchers first reported the use of Methamphetamine in vape devices in 2019.

Government Regulation



State and Federal Regulation

- ▶ On January 2nd, 2020, the U.S. Food And Drug Administration (FDA) finalized an enforcement policy that prohibits the sale of prefilled cartridge e-cigarettes in any flavor other than tobacco or menthol, unless authorized by FDA.
- ▶ Several states and communities have restricted the sale of flavored tobacco products, including menthol-flavored products.
- ▶ No current restriction on advertising.
- ▶ No current requirement for products to be kept behind the counter.
- ▶ No current warning labeling reflecting explosion hazard.



What Can
You Do?



Prevention

- ▶ Education and awareness.
- ▶ Reduced access and availability.
- ▶ Early detection.
- ▶ Compassionate, health-based interventions.
- ▶ Promote cessation and other ways to address mental health.



Resources

- Marques, P., Piqueras, L., & Sanz, M. J. (2021). An updated overview of e-cigarette impact on human health. *Respiratory research*, 22(1), 151.
<https://doi.org/10.1186/s12931-021-01737-5>
- Seitz, C. M., & Kabir, Z. (2018). Burn injuries caused by e-cigarette explosions: A systematic review of published cases. *Tobacco prevention & cessation*, 4, 32.
<https://doi.org/10.18332/tpc/94664>
- [Quick Facts on the Risks of E-cigarettes for Kids, Teens, and Young Adults | CDC](#)
- <https://www.lung.org/blog/popcorn-lung-risk-ecigs>



Thank you for joining me!

Questions? Comments?