

Electronic Cigarette or Vaping Associated-Lung Injury (EVALI)* Epidemic

Centers for Disease Control (CDC) - Updated October 22nd, 2019

The CDC and FDA, alongside state health agencies have reported a multistate outbreak of respiratory symptoms and diseases associated with electronic cigarette (e-cigarette) use.

- At least 34 deaths have been reported in 24 states.
- Additionally, at least 1,604 confirmed and probable cases of vaping associated pulmonary illness (VAPI) reported by 49 states, the District of Columbia, and the U.S. Virgin Islands.

**The American Thoracic Society refers to the current epidemic as Vaping-Associated Pulmonary Illness. EVALI is official term used by the CDC.*

Reported Health Effects Associated with Vaping

Individuals who are currently vaping and experiencing respiratory symptoms or other health effects are advised to stop vaping and contact their health care providers. A list of common symptoms reported include:

- Shortness of breath
- Cough
- Chest pain
- Fatigue
- Headache
- Nausea
- Abdominal pain
- Diarrhea
- Fever
- Weight loss



CDC Recommendations to the Public

- Individuals using e-cigarettes who have the above symptoms should promptly seek medical attention.
- E-cigarette products should not be bought off the street (e.g. black-market).
- Devices and refill fluids should not be modified for vaping.
- E-cigarette products should not be used by anyone not currently using tobacco products.
- Adult smokers attempting to quit should use evidence-based treatments, such as counseling and FDA-approved medications.
- CDC encourages the public to submit detailed reports of any unexpected tobacco or e-cigarette-related health or product issues to the FDA (<https://www.safetyreporting.hhs.gov>).
- UCR students interested in donating e-liquids on campus for chemical analysis can contact My Hua (mhua002@ucr.edu).



What are electronic cigarettes?

- E-cigarettes deliver nicotine and flavored chemicals in an aerosol to users.
- There are thousands of e-cigarette devices and refill fluids available.
- These devices include e-cigarettes, e-hookahs, e-pipes, e-cigs, vape pens, disposable e-cigarettes, etc.
- Recent products include high nicotine pod-styles (e.g. JUUL, Sourin, and other pods) and cannabinoid vape pens (marijuana, THC concentrates, CBD oils, etc.) too.



What are refill fluids?

E-cigarette refill fluids (e-liquids) commonly contain propylene glycol, glycerin, nicotine and a wide range of flavored chemicals. The inhalation safety of flavored chemicals in e-liquids is not well understood.

Health Information

The short and long-term health effects of e-cigarettes are still being evaluated by scientists and researchers.

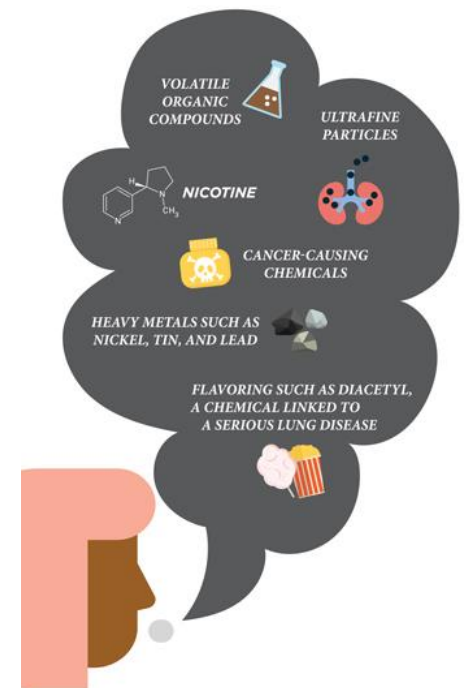
The nicotine in e-cigarettes can:

- › Be highly addictive, toxic, and have adverse health effects if inhaled, swallowed or absorbed by the skin
- › Pose a health hazard to pregnant women and their developing babies
- › Harm adolescent brain development
- › Be a gateway use of cigarettes and tobacco products in adolescents.

E-cigarette aerosols contain a variety of flavored chemical and other substances that can be harmful to human health.

- › **Cancer-causing chemicals such as formaldehyde** have been detected in the aerosols
- › **Metals such as lead and nickel** have been detected in the aerosol. Some are particles that can penetrate the lungs causing lung damage.
- › **Flavor chemicals are often present at high concentrations** in e-cigarettes. They also have limited inhalation safety data, and some have been shown to be toxic to lung cells

E-cigarettes also been reported to cause fires and serious injury by explosion attributed to defective batteries and improper charging.



References

U.S. Department of Health and Human Services. E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2016.

Center for Disease Control and Prevention. CDC Newsroom Releases, Press Release. CDC, states update number of cases of lung disease associated with e-cigarette use, or vaping. 2019. [WWW Document]. URL: <https://www.cdc.gov/media/releases/2019/s-1010-vaping-injury-update.html> (accessed 10.30.2019).