

TEEN VAPING AND LUNG DISEASE: WHAT'S THE PROBLEM?

WHAT WE KNOW SO FAR:

- As of September 24th, 2019, 46 states and 1 U.S. territory have reported approximately 805 cases of severe lung disease associated with the use of e-cigarettes.
- 12 deaths have been confirmed in California (2), Florida, Georgia, Illinois, Indiana, Kansas (2), Minnesota, Mississippi, Missouri, and Oregon.
- CDC has received complete sex and age data on 373 cases: 72% of cases are male; 67% of cases are 18-34 years old; 16% are under 18 years, 38% of cases are in people 21 years or younger and 17% are 35 years or older, making this a teen and adult problem.
- More cases are expected as CDC and FDA advisories are encouraging the medical community to report suspected cases.

Of the approximately 80 cases identified with patient information: about 69 are in Wisconsin and Illinois, 6 are in Utah, and 5 are in North Carolina. The CDC will update the public when information becomes available from the remaining cases, or new cases develop.

WHAT DO ALL THESE CASES HAVE IN COMMON?

- **All confirmed cases** have a reported history of e-cigarette product use.
- Most but not all of the cases have reported a history of using e-cigarette products containing THC. Many patients have reported using THC and nicotine. Some have reported the use of e-cigarette products containing only nicotine.
- No evidence points to an infectious cause of the severe lung disease.
- The cause of the severe lung disease is unknown. No single e-cigarette product type, nicotine liquid, cannabinoid, or other additive is conclusively linked to the disease.

CLINICAL FEATURES:

Among the 450 cases, three major groups of symptoms have been associated with this outbreak:

1. **Chest symptoms** appear to occur over several days to several weeks and includes:

- Cough
- Chest pain
- Shortness of breath

2. **Abdominal symptoms** preceding chest symptoms and includes:

- Nausea
- Vomiting
- Diarrhea

3. Other **symptoms** include:

- Increased heart rate (tachycardia)
- Fever and/or chills
- Fatigue



POSSIBLE DIAGNOSIS?

‘VAPING-ASSOCIATED LUNG INJURY’

Vaping-associated lung injury is the term currently used to describe lung abnormalities associated with vaping, typically seen on chest imaging. This disease describes four major lung imaging patterns: acute eosinophilic pneumonia, diffuse alveolar damage, organizing pneumonia, and exogenous lipid pneumonia.

Eighteen of the cases who used cannabinoid oil developed acute exogenous lipid pneumonia. Exogenous lipid pneumonia is a lung disease caused by inhaling chemicals containing lipids (hydrocarbon or oil based products). These lipids cause an inflammatory response within the small alveolar spaces in the lungs.

WHAT CAN PARENTS AND YOUTH DO:

- **STOP/DO NOT USE E-CIGARETTE/ JUUL PRODUCTS UNTIL THE EPIDEMIC IS OVER**
- It's important to communicate to your children about the dangers of vaping-associated lung injury. Visit these websites for tips on starting the conversation.
 - [How to talk with your kids about vaping](#)
 - [Surgeon General: Parent tip sheet on e-cigarettes](#)
- If you use e-cigarette products, or your child vapes, and you experience or notice any of the symptoms described above, **seek medical care immediately**.
- Regardless of the ongoing investigation:
 - Youth and young adults **should not** use e-cigarette products; Visit the CATCH Global Foundation to learn about CATCH My Breath, [a Free 5th-12th grade E-cigarette prevention program](#).
 - Women who are pregnant **should not** use e-cigarette products.
 - If you do use e-cigarette products, you should not buy street products (for example, e-cigarette products with THC or other cannabinoids).
 - You should not modify e-cigarette products or **add any substances to these products** that are not intended by the manufacturer.
 - Adult smokers who are attempting to quit tobacco products should use evidence-based treatments, including counseling and FDA-approved medications; see [CDC: Ways to Quit Smoking](#). If you need help quitting tobacco products, including e-cigarettes, contact your doctor or other medical provider.

Updated Sources:

- MMWR: [Severe Pulmonary Disease Associated with Electronic-Cigarette-Product Use – Interim Guidance](#)
- MMWR: [Notes from the Field: Outbreak of Electronic-Cigarette Associated Acute Lipoid Pneumonia—North Carolina, July–August, 2019](#)
- [What's the Bottom Line about Electronic Cigarettes?](#)
- [What's the Bottom Line on the Risks of E-cigarettes for Kids, Teens, and Young Adults?](#)
- New England Journal of Medicine: [Christiani, D. C. \(2019\). Vaping-Induced Lung Injury.](#)
- New England Journal of Medicine: [Henry TS et al \(2019\). Imaging of vaping-associated lung disease.](#)
- [CDC Media Statement: CDC, FDA, States Continue to Investigate Severe Pulmonary Disease Among People Who Use E-cigarettes](#)
- [FDA's Information on Vaporizers, E-cigarettes, and other Electronic Nicotine Delivery Systems](#)[external icon](#)[external icon](#)
- Michael & Susan Dell Center for Healthy Living : [JUUL fact sheet](#), [vaping become epidemic among students](#).