



Severe lung disease linked to e-cigarettes and vaping in the U.S.

E-cigarettes and severe lung disease – An overview of this unforeseen epidemic

In early August 2019, the U.S. Centers for Disease Control and Prevention (CDC) issued a Clinician Outreach and Communication Activity urging clinicians to report possible cases of unexplained vaping-associated pulmonary illness to their state/local health departments. Since October 2019, over 1,000 U.S. cases have been reported.

Typically, patients with this illness present with respiratory symptoms that include:

- Cough
- Shortness of breath
- Fatigue
- Chest pain

Other non-respiratory symptoms include:

- Fever
- Weight loss
- Nausea
- Diarrhea

A causative infectious agent has not been identified in any of the cases and in some of the cases the patients developed progressive respiratory compromise often requiring mechanical ventilation. Fortunately most improved following treatment with corticosteroids.

All patients reported vaping in the weeks and months leading up to their symptoms and many indicated that they had vaped tetrahydrocannabinol containing products (or THC, a psychoactive component of the marijuana plant). To date however, the CDC has not been able to identify any single

specific causative agent nor has any product been conclusively linked to this syndrome.

Many of the THC containing vaping products tested by the U.S. Food and Drug Administration (FDA) as part of the ongoing investigation into this outbreak were found to contain significant amounts of Vitamin E acetate. Vitamin E acetate is a substance present in topical consumer products or dietary supplements, but data is limited about its effects after inhalation. Nevertheless, the FDA does advise that inhalation of Vitamin E acetate be avoided. Therefore, given that users are unable to know whether THC vaping products may contain Vitamin E acetate, the FDA advises e-cigarette users refrain from vaping THC oil.

Since 2018, there has been an explosion of vaping among American teenagers with many of them never having smoked. In 2018, a federal survey found that 21% of high school seniors had vaped within the previous 30 days compared to 11% the previous year. The CDC considers vaping by anyone under age 25 to be unsafe due to the ongoing physical growth and development that occurs until this age.

Following those findings and until further guidance by the CDC, Hannover Re rates e-cigarette users/vapers as tobacco users.

The CDC continues to monitor and investigate cases of lung disease and injury related to e-cigarettes and vaping. Up to date information and CDC communications can be found on their website.

References

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Contact



Nico van Zyl
AVP and Medical Director
Tel. +1 (720) 279-5050
nico.vanzyl@hlramerica.com

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