

Inhalational Lung Injury Related to E-Cigarettes

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Disclosures

No conflicts of interest

Views presented are mine, not those of
Dartmouth-Hitchcock Medical Center or the
White River Junction VA Medical Center



60 year old male smoker presents one day after using e-cigarettes



Cough, short of breath, fevers



3 days later, feeling better

How e-cigarettes work

Light

Simulates cigarette glow, indicates when device is ready for use and works as battery indicator.

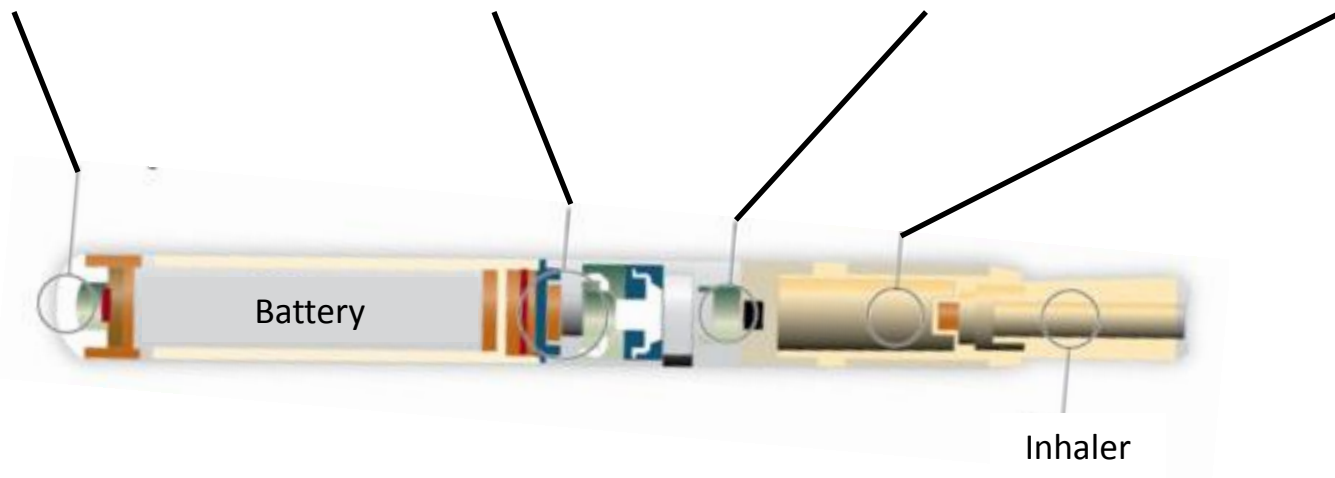
Electronic components

Include control circuits, pneumatic airflow sensor.

Vaporizer

Atomizes the nicotine smoking liquid in the liquid container.

Flavor cartridge



Diacetyl

Diacetyl is a chemical agent added to foods and some e-cigarette liquids to provide a “buttery” flavor

Human and animal studies have shown a range of toxicities when diacetyl is inhaled

Many workers in a microwave popcorn factory that used a diacetyl rich flavoring experienced increased cough, shortness of breath and worsening of asthma

A few of those workers developed irreversible severe lung damage, “*Bronchiolitis Obliterans*”, which can be fatal

Summary

The use of e-cigarettes in the United States is increasing rapidly

Some artificial flavorings in e-cigarettes contain diacetyl, a known cause of lung toxicity

This case adds to the growing body of research that suggests e-cigarettes pose a public health risk

I do not recommend the use of e-cigarettes as a smoking cessation tool