Vitamin E acetate found in all lung fluid samples tested from injured vapers



reader comments

173 with 77 posters participating

Share this story

All 29 samples of lung fluids tested from vaping device users with severe lung injuries contained the oily additive vitamin E acetate, according to data published by the Centers for Disease Control and Prevention on Friday.

“These new findings are significant,” Anne Schuchat, CDC principal deputy director, told reporters in a press conference. It is the first time that a potentially toxic

substance has been found directly at the site of injury in the lungs of vaping device users.

The severe lung injuries have puzzled health officials for months as a nationwide outbreak of the vaping-related illnesses erupted. Health officials now refer to the condition as EVALI, or “e-cigarette, or vaping, product use–associated lung injury.”

As of November 5, the CDC has tallied 2,051 confirmed and probable EVALI cases in 49 states, the District of Columbia, and the US Virgin Islands. Of those cases, 39 were fatal from 24 states and the District of Columbia.

Despite ongoing federal and state investigations into the cases, the cause or causes of the injuries have been elusive. So far, investigators have determined that most cases appear to be associated with the use of vaping products containing tetrahydrocannabinol (THC), the primary psychoactive ingredient in marijuana. Many of the injured also reported using counterfeit or black-market products containing THC, notably those marketed as “Dank Vapes.”

Slippery suspect

Vitamin E acetate has also been eyed before. In September, health officials in New York announced that the supplement was found at “very high levels” in nearly all the THC-containing liquids linked to illnesses in the state. But investigators have been reluctant to pin the blame on vitamin E acetate, noting that not all illness-related products have turned up the additive.

The new data paints a more damning picture for the oil. For the study, health investigators collected bronchoalveolar lavage fluid samples–that is fluid flushed into and then recollected from the lung through a tube inserted into the mouth or nose. Between August and October of 2019, doctors in

10 states collected samples from 29 EVALI patients, two of whom had died.

Officials tested the samples for a variety of substances, including mineral oils, plant oils, diluent terpenes, cannabinoids, and nicotine, as well as a common component of lung secretions.

Vitamin E acetate was the only substance tested for that showed up in all 29 samples. THC was found in 23 of 28 samples tested, and nicotine was found in 16 of 26 samples. But results for the other substances were all below the level of detection.

Vitamin E acetate is found in lotions, shave gels, lip balms, shampoos, soaps, and anti-aging creams, as well as oral supplements. It usually does not cause harm when swallowed, but its effects when inhaled have not been extensively studied. Some earlier work by non-CDC researchers has suggested that it could interfere with normal lung function when inhaled, Schuchat noted to reporters Friday.

In the new study, published in the CDC's Morbidity and Mortality Weekly Report, researchers concluded:

> *Based on these data from 29 patients, it appears that vitamin E acetate is associated with EVALI; however, it is possible that more than one compound or ingredient could be a cause of lung injury, and evidence is not yet sufficient to rule out contribution of other toxicants to EVALI.*

Until more data is available, the agency advised vape users against using products containing vitamin E acetate as well as those containing THC, particularly if they're from "informal" sources.

https://arstechnica.com/?p=1599113