

**TIME**

# Vaping May Be Worse for Heart Health Than Tobacco Cigarettes, New Study Finds



Hollie Adams/Bloomberg—Getty Images

BY **MARKHAM HEID**

NOVEMBER 11, 2019

**E**-cigarettes may be more harmful to a smoker's heart than traditional tobacco cigarettes. That's the finding of new research from Cedars-Sinai Medical Center in Los Angeles, presented today (Nov. 11) at an American Heart Association scientific conference.

The Cedars-Sinai team compared the hearts of 10 non-smokers to the hearts of 10 tobacco smokers and 10 e-cigarette smokers. All the people in the study were younger than 40, and all were otherwise healthy. In response to a mild bout of exercise, measures of blood flow increased in the hearts of the non-smokers. Among the tobacco smokers, this increase was blunted. But among the e-cigarette smokers, there was no increase at all. “This suggests e-cigarettes cause an abnormality that impedes blood flow regulation in the heart,” says Dr. Florian Rader, coauthor of the study and a heart specialist at Cedars-Sinai’s Smidt Heart Institute.

While many people rightly associate cigarettes with lung cancer, smoking-related heart disease actually kills more Americans each year. **A 2014 report** from the Office of the Surgeon General concluded that smoking causes approximately one in four cardiovascular disease deaths in the U.S., **which works out** to roughly 210,000 deaths each year. Lung cancer, meanwhile, kills **approximately** 140,000 Americans annually. If e-cigarettes turn out to be worse for a smoker’s heart than tobacco cigarettes, the health implications are enormous.

Rader says his study was too small to provide definitive answers, and that some of the blood-flow results of the e-cigarette smokers resembled that of tobacco smokers, and vice versa. Also, he and his coauthors did not control for the use of THC, a marijuana compound that is also often ingested through vaping. “But the [heart-function test] averages were very different for the e-cigarette smokers compared to the tobacco smokers,” he says. “For e-cigarette smokers, I would say this provides another cautionary note, and it’s also justification for larger research studies.”

This is among the first studies on the heart-health effects of e-cigarettes, though **some observational studies** have found that **vaping is associated with a higher risk or heart attack**. But it’s one of many recent reports linking **vaping to serious health concerns**.

**A paper** published today in the *Archives of Disease in Childhood* documents the case of a U.K. adolescent who nearly died of vaping-induced allergic reaction.

The previously healthy 16-year-old boy checked into the hospital after developing a fever, cough, and breathing problems that did not improve after a week of antibiotic treatment. He soon went into respiratory failure, and required emergency heart and lung support as well as IV antibiotics and steroids. He spent 35 days in the hospital, and his symptoms did not fully resolve for 14 months.



## Get The Brief.

Sign up to receive the top stories you need to know right now.

I can confirm I have read and accept the Terms Of Use.

**SIGN UP NOW**

You may unsubscribe from email communication at any time. See our Privacy Policy for further details.

“It was a sudden and catastrophic illness,” says Dr. Jayesh Bhatt, coauthor of the case study and a respiratory pediatrician at Nottingham Children’s Hospital. Once the boy had recovered, he told his doctors that he had recently started vaping using two types of flavored liquid. They performed skin-prick allergy tests using the two liquids, and the boy’s symptoms worsened. They diagnosed him with hypersensitivity pneumonitis—a type of out-of-control lung inflammation likely triggered by one of the e-cigarette chemicals he’d inhaled.

It’s not known how many people have developed vaping-induced hypersensitivity pneumonitis or other health problems, mostly because doctors

have only recently started looking out for e-cigarette-related health issues. But, Bhatt says, “I have had more than one colleague tell me that they have seen similar cases.” He says the takeaway message is that vaping and e-cigarettes likely come with serious health risks, including some that doctors have only begun to identify.

Others echo his warnings, especially when it comes to the long-term effects of vaping. “We simply don’t know what will happen 20 or 30 years down the road in people who are vaping because these devices and products haven’t been around that long,” says Dr. Brandon Larsen, a lung-health expert and pathologist at the Mayo Clinic in Arizona.

In a [paper](#) published last month in the *New England Journal of Medicine*, Larsen and colleagues conclude that lung inflammation caused by an inhaled toxin or toxins seems to be the root issue in many people who develop vaping-related lung illness. He says many—but not all—of these cases have involved THC or other cannabis chemicals, including CBD oil. It’s not yet clear which vaping chemicals are hazardous, although the US Centers for Disease Control and Prevention recently found evidence that [vitamin-E additives may be to blame](#) in many cases. It’s also not yet clear whether e-cigarettes are a safer alternative to tobacco cigarettes, Larsen says.

The jury’s still out on vaping. But the evidence linking e-cigarettes to major health concerns is piling up.

**CONTACT US AT [EDITORS@TIME.COM](mailto:EDITORS@TIME.COM).**

**TIME**