

Expert discusses health effects of vaping on youth

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Federal health officials have so far identified 450 possible cases of severe respiratory illnesses reported after use of e-cigarette products in 33 states, with six deaths. Although more information is needed to

determine the cause of the illnesses, there is speculation that at least some are due to contamination of cannabis products with a vitamin E extract.

"The hope for e-cigarettes from a public health standpoint was that they would be a less harmful alternative for adult cigarette smokers. Unfortunately, these products have had limited appeal for adult smokers and major appeal for young people," said Michael Steinberg, professor of medicine at Rutgers Robert Wood Johnson Medical School and director of the Tobacco Dependence Program at the Rutgers University Center for Tobacco Studies.

"The recent, severe health effects in young users largely stem from people manipulating, modifying and tampering with an already unregulated device. In many cases, patients reported the use of THC-containing [e-cigarette](#) products, and additives to these products may be responsible," Steinberg said.

Steinberg talked to Rutgers Today about the health considerations surrounding the use of e-cigarettes.

Who should not use e-cigarettes?

Centers for Disease Control and Prevention says children and teens, young adults, pregnant women and adults who do not currently use tobacco products should not use e-cigarettes. The brain continues to develop well into your twenties and is particularly susceptible to the effects of nicotine. Nicotine exposure to the brains of developing animals has resulted in longer-term behavioral problems. Levels of nicotine vary greatly among different devices, with some products having levels equal to or higher than cigarettes. There is also a fear that because nicotine is so addictive, young people who start with e-cigarettes could transition to traditional tobacco products.

The biggest concern is the appeal that e-cigarettes have for young people and the lack of long-term research studying the adverse health outcomes of vaping. Only 8 percent of U.S. high school students report using cigarettes—an all-time low—but 21 percent report using e-cigarettes in the past month, an all-time high. These devices often appeal to young people with their vibrant colors and fun flavors, and they often come in inconspicuous shapes that parents may not recognize.

What does the vaping liquid contain?

Most electronic nicotine delivery systems use propylene glycol, along with various flavorings and addictive [nicotine](#). The flavorings, such as mango, strawberry and vanilla, were originally designed to be eaten—not inhaled. Certain pulmonary illnesses have been associated with the inhalation of certain flavorings.

Some constituents of e-cigarette vapor come from modifications and additions made by users themselves, as we have seen in recent respiratory illness cases. Anyone who uses e-cigarette products should not buy them "off the street" and should not modify e-cigarette products or add any substances not intended by the manufacturer.

What are the symptoms that e-cigarette users reported before being diagnosed with respiratory illnesses?

In the cases of illness that appear to be related to vitamin E extract added to cannabis liquid, patients reported breathing difficulty, shortness of breath and/or chest pain before hospitalization. Some reported mild to moderate gastrointestinal [illness](#), including vomiting and diarrhea, or other symptoms such as fever or fatigue.

If you use e-cigarette products, monitor yourself for symptoms such as cough, shortness of breath or chest pain and promptly seek medical attention if you have concerns about your health.

Provided by Rutgers University

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