

The National Society of Dental Practitioners and the Dentist's Advantage Insurance Program for Dentists

RISK MANAGEMENT ALERT

What dentists should know about vaping and e-cigarette products

Recently, cases of severe lung disease associated with using e-cigarettes, or “vaping”, have led to the CDC, FDA, and state and local health departments to urge people to stop vaping.¹ As of October 8, 2019, 1,299 lung injury cases associated with vaping have been reported to CDC from 49 states, the District of Columbia, and 1 U.S. territory. Of further concern, 26 deaths have been confirmed in 21 states.²

It should be noted that while some cases in each of the states are similar and appear to be linked to e-cigarette product use, more information is needed to determine what is causing the respiratory illnesses.² In response, the FDA created a [Consumer Update](#) to provide information for consumers to help protect themselves, as well as a new webpage, [Lung Illnesses Associated with Use of Vaping Products](#), that provides an overview of these incidents and the FDA's actions to date, as well as recommendations for consumers, health care providers and state health departments.^{3,4} While much is still unknown about the potential oral health problems caused by vaping, given these troubling reports, dentists should inform their patients about the risks of e-cigarette products.

Vaping increasing among younger people

E-cigarette use is rapidly expanding throughout the United States, mainly driven by increased usage among teenagers and young adults. Although individuals of all ages are at risk for harms related to vaping, concerns about how vaping affects young people who are still growing and developing are even more pressing. Adolescents are the largest growing population of e-cigarette users.⁵ In September, [the FDA revealed](#) that 27.5 percent of high school students were current users of e-cigarettes in 2019, up from 20.8 percent in 2018 and 11.7 percent in 2017.⁶ By contrast, only 3.2 percent of U.S. adults were current e-cigarette users in 2018.⁷

What we know about the health risks

Further studies are needed to fully understand the short and long-term effects of vaping, but there are already some indications of how e-cigarette use can be detrimental to oral health. There is little regulation of e-cigarettes and no standards to control the levels of contaminants, including carcinogens. The liquid in e-cigarettes commonly include nicotine, which affects gingival blood flow, cytokine production, neutrophil and other immune cell function, as well as other chemicals that are toxic to enamel and soft tissue and can cause xerostomia.⁸ E-cigarette explosions and fires also pose a risk to users and may cause damage to the dentition and soft tissues of the mouth.^{5,9} In addition to the troubling cases of severe lung disease, there are other concerns about nicotine-induced seizures, heart health risks, and chronic obstructive pulmonary disease (COPD).¹⁰

In addition to discussing the potential risk factors associated with e-cigarette use and vaping, dentists can advise their patients of the following information regarding e-cigarettes:

- E-cigarettes should not be used by children, adolescents, pregnant women, or adults who do not currently use other tobacco products.¹¹
- Patients should not use vaping products containing tetrahydrocannabinol (THC), or any vaping products bought off the street.²
- Patients currently using e-cigarettes should monitor themselves for symptoms including:
 - Cough
 - Shortness of breath
 - Chest pain²
- Patients should promptly seek medical advice if they have concerns about their health.²
- Adult smokers who are attempting to quit should be referred to a physician for evidence-based treatment.²
- Users should not buy e-cigarette products "off the street," nor should they modify or add any substances to e-cigarette products.¹
- Users can decrease the chances of a battery explosion or fire by following the manufacturer's instructions for charging the battery and only charging it with the unit that was sold with the device.⁵

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