



E-Cigarettes and Public Health

Background

- The advent of electronic cigarettes (e-cigarettes) and the dramatic rise of their use especially in adolescents and young adults continues to be of significant concern. E-cigarettes have been the most popular tobacco product for youth and adolescents in the United States since 2014 and attract youth to different avenues for nicotine addiction.²
- There is increasing evidence that the use of e-cigarettes may catalyze transition to the use of combustible tobacco products or recreational drugs, particularly in young adults.^{3,4}
- The long-term health effects of e-cigarettes and the net public health effect associated with their use remain unclear. A 2018 review of the latest research on e-cigarettes found that e-cigarette aerosol contains fewer numbers and lower levels of toxicants than combustible tobacco cigarettes, but the evidence suggests that e-cigarettes are not without adverse biological effects; however, they are likely to pose less risk than continuing to smoke cigarettes.⁶ More recently an analysis of adults in the PATH study from 2013-2019, found exclusive e-cigarette users had no higher cardiovascular disease risk than non-users, and dual-users of e-cigarettes and cigarettes had significantly higher cardiovascular disease risk similar to that of exclusive cigarette users.⁹ However, in adolescent e-cigarette users, there is increasing evidence of heart and vascular changes that increase the risk of cardiovascular disease.¹⁰ Therefore, the cardiovascular health impacts of longer term use of e-cigarettes remains unknown.

Fast Facts:

1. In 2022, 14.1% (2.14 million) of high school students and 3.3% (380,000) of middle school students reported being current e-cigarette users.¹ In adults, an estimated 3.7% (9.1 million) regularly use e-cigarettes, with highest use in 18-24 year-olds.⁵
2. Almost 85% of youth e-cigarette users use flavored e-cigarettes, with 69% of them reporting fruit flavors as the most preferred flavor.⁷
3. Between February 2020 and October 2022, there was a 39.3% increase in e-cigarette sales and a 55.4% increase in flavored e-cigarette sales.⁸

The American Heart Association's Position

- The American Heart Association supports further research to develop novel cessation products that can be approved by the FDA's Center for Drug and Evaluation Research.¹¹ According to the 2016 National Academies of Science, Engineering, and Medicine report there is not substantial evidence to support that e-cigarettes serve as an effective cessation aid in comparison to other FDA approved smoking cessation treatments.⁸
- The American Heart Association supports the development of strong regulation at the federal, state, and local levels to protect against youth access and initiation, re-initiation by former smokers, and initiation by those who have never smoked.¹¹ These regulations should address issues such as marketing and advertising, elimination of all flavors regardless of the electronic nicotine delivery system (ENDS), and retailer compliance in not selling to minors.¹¹
- The American Heart Association advocates for further investigation of the safety of ENDS and the elimination of all flavors, including menthol, by the FDA.¹¹

Policy At A Glance: E-Cigarettes

FDA Policy for Flavored ENDS: In January 2020, the FDA issued a new policy that removed some flavored prefilled pod- or cartridge-based e-cigarettes from the market. The policy was developed in response to the dramatic increase in youth e-cigarette use and increased appeal of “sweet, fruity, and minty” flavorings. The FDA policy prohibited the sale of flavored cartridge-based ENDS. However, the policy did not apply to menthol- or tobacco-flavored cartridge-based ENDS, and any flavored disposable e-cigarettes, or e-liquids used in refillable open tank systems. Menthol continues to be one of the most common flavor additives used for e-cigarette products with a reported increase from 10.7% to 61.8% among prefilled-e cigarettes between 2019 and 2020.⁶ In the 2022 NYTS survey, 26.6% of adolescent current e-cigarette users reported using menthol flavored e-cigarettes.

For more information and resources from the American Heart Association’s policy research department on tobacco please visit: <https://www.heart.org/en/about-us/policy-research>.

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