Study finds flavors play a role in initiation, addiction to e-cigarette use
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E-cigarette vapor smoke. Credit: American Heart Association

Flavors motivate individuals to start using electronic cigarettes (e-cigarettes) and are also associated with a stronger perception of being addicted to e-cigarettes, according to new research from the Tobacco Center for Regulatory Science of the American Heart Association, the leading voluntary health organization devoted to a world of longer, healthier lives.

Researchers surveyed about 1,500 U.S. e-cigarette users, aged 18 and older, to determine whether different types of flavors played a role in getting them to start and to continue vaping. Current users were defined as those who had used e-cigarettes within the previous week and for six months or longer and had used e-cigarettes on at least 20 occasions in their lifetime, regardless of whether they had smoked combustible cigarettes.

Nearly a third of respondents said flavors available in e-cigarettes was a major reason they started vaping. Young adults aged 18-24 were nearly twice as likely as people aged 35-44 to identify flavors as the major reason they took up e-cigarette use. Respondents who had never smoked traditional cigarettes were more likely than current or former cigarette smokers to list flavors as a primary reason they started using e-cigarettes.

"Our findings add to the growing evidence that the components within e-cigarettes can have a major impact on why people start and continue to use these products—and that impact is even more significant in younger people," said Rose Marie Robertson, M.D., a study co-author, American Heart Association Deputy Chief Science and Medical Officer and co-director of the Association's Tobacco Center for Regulatory Science.

"Regulations restricting flavors, including banning all flavored e-cigarettes, could help lessen the appeal of these products to youth and prevent them from starting an addictive and life-threatening tobacco habit."

While flavor was the most often cited reason for starting e-cigarettes use among young adults, it was the third most common reason for starting to use e-cigarettes overall (29.5%), with about 44% citing e-cigarettes as an alternative to cigarettes and more than 31% viewing them as a less harmful option when compared to other tobacco products.

"This doesn't make much sense when you realize that the many flavors being included in e-cigarettes have not been proven to be safe when heated and inhaled and some of the few that have been tested have clear damaging effects," Robertson said.

Flavors also contributed to the continued practice of vaping, as users of flavored e-cigarettes reported greater satisfaction and self-perceived addiction than users of non-flavored e-cigarettes.

People who used flavored e-cigarettes were twice as likely to report high satisfaction compared to those who did not use flavors, with those using mint or menthol flavors nearly three times more likely to report satisfaction than those who did not use...
flavors.

People who used flavored e-cigarettes were nearly three-and-a-half times more likely to say they were addicted to these products compared to those who did not use flavors.

Other findings from the study include:

- People who had never smoked traditional cigarettes were nearly twice as likely as current and past cigarette smokers to cite flavors as a reason they began using e-cigarettes—never-smokers were 58% more likely than former smokers and 46% more likely than current smokers to start using e-cigarettes because of flavors.
- About 63% of e-cigarette users typically used flavors other than tobacco (including fruit, mint/menthol, sweet, candy and coffee), with about 24% usually using tobacco flavors and about 13% using non-flavored e-cigarettes.
- Fruit was the most popular flavor among all respondents, with nearly half of those aged 18-24 listing it as their top choice. Tobacco was more popular among those 45 and older. Overall, fruit and candy flavors were significantly more popular in younger age groups, while tobacco and mint/menthol flavors were favored in older age groups.
- While respondents over age 45 reported the highest perception of their own addiction to using e-cigarettes, they were only half as likely to report satisfaction with e-cigarette use as users 18-24.

"These findings are especially disturbing when you consider the many kid-friendly flavor options that entice younger users to first try e-cigarettes and the high levels of nicotine available in the most popular e-cigarettes that now fuel addiction to these products," said Robyn L. Landry, APR, lead author of the study, American Heart Association Executive Vice President of Strategy Integration and a co-investigator with the Association's Tobacco Center for Regulatory Science. "On top of that, the images on e-cigarette packaging often mimic kids' candy products, sodas or cereals, with similar names to match. We know nearly 90 percent of smokers first try a tobacco product by age 18. But if people don't start using tobacco by age 26, they're likely to never start. We need to address the aspects like flavors that can attract young people to take that first step to using e-cigarettes."

In 2013, the Food and Drug Administration and the National Institutes of Health awarded grants to create Tobacco Centers of Regulatory Science across the nation. As one of the grant recipients, the American Heart Association works closely with the other centers to pursue research that can provide evidence to inform tobacco product regulation.


Provided by American Heart Association