



E-CIGARETTES AND CESSATION

Leading public health authorities in the U.S. have found that there is not enough evidence to recommend e-cigarettes for tobacco cessation, and no e-cigarette has received approval from the FDA to be sold as a tobacco cessation product.

- The 2020 Surgeon General Report on Smoking Cessation, released in January 2020, concluded that “there is presently inadequate evidence to conclude that e-cigarettes, in general, increase smoking cessation.” The Surgeon General also cautions that because e-cigarettes are not a single product, but “a continually changing and heterogeneous group of products” that “are used in a variety of ways,” it is difficult to make broad generalizations about the efficacy of e-cigarettes for smoking cessation based upon any one study or any one product.¹
- The U.S. Preventive Services Task Force (USPSTF), which makes recommendations about the effectiveness of specific preventive care services after a thorough assessment of the science, recently updated its recommendation statement on tobacco smoking cessation adults and concluded that “the current evidence is insufficient to assess the balance of benefits and harms of electronic cigarettes (e-cigarettes) for tobacco cessation in adults...The USPSTF recommends that clinicians direct patients who use tobacco to other tobacco cessation interventions with proven effectiveness and established safety.”²
- In December 2023, the World Health Organization (WHO) issued a call to action on e-cigarettes, stating, “[e]lectronic cigarettes as actually used in the population as consumer products have not been proven to be effective for cessation at the population level and may lead to ongoing nicotine dependence.”³
- The Centers for Disease Control and Prevention (CDC) state that, “While e-cigarettes have the potential to benefit some people and harm others, scientists still have a lot to learn about whether e-cigarettes are effective for quitting smoking.”⁴
- In a court brief from 2019, the FDA stated that, “the claim that vaping helps smokers quit in meaningful numbers remains unproven.”⁵ FDA is the federal agency charged with determining what products are effective at helping smokers quit.
- A 2018 report from the National Academies of Sciences, Engineering, and Medicine (NASEM) concluded, “[o]verall, there is limited evidence that e-cigarettes may be effective aids to promote smoking cessation.”⁶

In January 2024, the Cochrane Library’s Tobacco Addiction Group published an updated review of the evidence regarding the role of e-cigarettes in quitting smoking.⁷ The review found that nicotine e-cigarettes can help people stop smoking for at least six months. However, the review has several limitations which limit its utility. For example, just seven studies (which merit concerns of their own) are relied upon to reach the main conclusion regarding the effectiveness of nicotine e-cigarettes for cessation. The review itself acknowledges that the results are limited and that more evidence is needed, particularly about the effects of newer types of e-cigarettes.

Several studies have found that e-cigarette use is not associated with successful quitting.⁸

- A 2022 study published in *Tobacco Control* did not find an additional cessation benefit from the use of e-cigarettes for quitting.⁹ Analyzing FDA’s Population Assessment of Tobacco and Health (PATH) survey data Waves 3-5 (2016-2019), researchers found that recent former smokers who’d used e-cigarettes to

quit had a significantly lower rate of staying quit from cigarette smoking compared to those who'd used either no e-cigarette products or specifically, used any NRT/pharmaceutical aid. Similarly, lower rates for staying quit from any tobacco products, including e-cigarettes, were also found among those who'd used e-cigarettes to quit compared to 1) those who'd used no e-cigarette products, and 2) those who'd used any NRT/pharmaceutical aids.

- Another study also analyzing FDA's PATH survey Waves 3 and 4 (2015-2016; 2016-2017) found that there were no significant differences between rates of successful smoking cessation for electronic nicotine delivery systems (ENDS) (16.2%), nicotine replacement therapy (NRT) (16.1%), non-NRT medications (varenicline and bupropion) (17.7%), and a combination of NRT and non-NRT medication (14.8%).¹⁰ It also found that none of the survey participants who had used ENDS as a cessation aid with or without other methods had become ENDS-only users by follow-up, while 37.6% had become dual users of both cigarettes and ENDS.
- A 2018 study did not find any evidence that ENDS help adult smokers quit at a higher rate than smokers who did not use these products despite ENDS users being more likely to make a quit attempt. In fact, the authors state that "findings indicate that, at the time of this study, ENDS under "real world" use and conditions may have suppressed or delayed quitting among some adult smokers." Specifically, of the 27 percent of smokers who reported using ENDS at baseline, about 90 percent were still smoking at one year follow-up. Moreover, the study found that ENDS users quit at a lower rate than non-ENDS users regardless of frequency or duration of ENDS use, device type, quitting as reason for use, or e-liquid flavor.¹¹
- A 2020 meta-analysis of 55 studies also found that e-cigarette use was not significantly associated with smoking cessation. The analysis did find that daily e-cigarette use was associated with increased smoking cessation while less than daily e-cigarette use was associated with significantly less smoking cessation.¹²
- Two studies released in 2020 that analyze data from FDA's PATH survey reinforce findings from earlier studies that using e-cigarettes is not more effective in helping smokers quit compared to NRT or other FDA-approved pharmacotherapies. Of concern, these studies also showed that the majority of participants who either tried or successfully used e-cigarettes to quit smoking were still using e-cigarettes at follow-up, suggesting that e-cigarettes may contribute to ongoing nicotine dependence.¹³
- E-cigarette companies may claim that adult smokers are the target audience, but that is not who is using the product. *E-cigarettes have become increasingly popular among youth and young adults, while there has been no significant uptake among older adults.*
 - Over 2.1 million middle and high school students are current e-cigarette users.¹⁴
 - More than half of 18-24 year-old e-cigarette users (61.4%) have never smoked cigarettes.¹⁵
 - Data from the 2021 NHIS show that 4.5% of adults currently used e-cigarettes.¹⁶ Of concern, overall, nearly 60% of adult e-cigarette users are still smoking cigarettes or have never been smokers.¹⁷
- Also of concern, according to the 2021 National Health Interview Survey (NHIS), more than 1 in 4 adult e-cigarette users (29.4%) report using both e-cigarettes and cigarettes (dual use).¹⁸ Some research has found that dual use of e-cigarettes and cigarettes can reduce a smoker's chance of quitting compared to not using e-cigarettes at all.¹⁹
- Several evidence-based treatment options are available to help adult smokers quit. There are seven FDA approved tobacco cessation medications on the market today that are proven effective, in addition to cessation counseling, which has also been identified as an effective cessation tool. No e-cigarette has been approved or even reviewed for smoking cessation purposes by the Food and Drug Administration.

No e-cigarette manufacturer has ever even applied to FDA with evidence that e-cigarettes are effective at helping smokers quit.

- While we should keep an open mind about the potential for e-cigarettes as a cessation tool, we need science to back this up. And any potential that e-cigarettes may have at helping smokers quit cannot come at the expense of large-scale youth use. E-cigarettes are addicting kids, putting their health at risk and threatening decades of progress in reducing youth tobacco use. As the former FDA Commissioner, Scott Gottlieb said, *“If by opening a path for e-cigs to be an alternative for adult smokers, all we end up doing is hooking a new generation of kids on nicotine, we’ll have failed in our purpose. We’ll have swapped one public health tragedy for a new one.”*²⁰

There is limited evidence to suggest that flavored e-cigarettes play a beneficial role in helping adult smokers quit.

- For all the discussion about flavors being necessary to help someone switch from cigarettes to e-cigarettes, there is little evidence to support it.²¹ Public health authorities in the U.S., including the CDC, have not found enough evidence to recommend e-cigarettes, including any flavored e-cigarette, for tobacco cessation.²²
- A systematic review that examined consumer preference for various e-cigarette attributes found “inconclusive evidence” as to whether flavored e-cigarettes assisted quitting smoking,²³
- There is no evidence that adults who say they quit using flavors would not be able to quit without the flavors. Just because some adults may like flavors, it does not mean flavors are needed to help them quit.
- On the other hand, the evidence is clear that flavors attract youth. According to the 2023 National Youth Tobacco Survey, 89.4% of youth e-cigarette users use flavored e-cigarettes.²⁴ According to another national survey, the Population Assessment of Tobacco and Health (PATH), 70 percent of youth e-cigarette users say they use e-cigarettes “because they come in flavors I like.”²⁵
- No e-cigarette manufacturer has published a single randomized controlled trial on the effectiveness of their product for cessation, let alone the efficacy of *flavored* e-cigarettes.
 - If a manufacturer has evidence that a flavored e-cigarette helps smokers quit and does not appeal to kids, then the manufacturer should submit that evidence to the FDA for review and get authorization to sell that product. Not a single manufacturer has done so.

There is some research which suggests that some types of e-cigarettes used under certain conditions may help smokers quit. For example, studies have found that daily or frequent e-cigarette use is associated with increased smoking cessation.²⁶ Other research suggests that that e-cigarettes may be effective at helping smokers quit traditional cigarettes when combined with behavioral support or when used as part of a clinical program.²⁷ While these findings may seem promising, unfortunately, this research does not reflect real world experience and how most e-cigarette users use the product. A significant percentage of e-cigarette users do not use e-cigarettes daily and most e-cigarette users are not using e-cigarettes as part of a clinical intervention or combined with other cessation support. As a result, these e-cigarette users are less likely to stop smoking cigarettes. Also of note, several studies suffer from important limitations, which limit their utility.

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