

E-CIGARETTES: MOTIVATION, AGE, AND IMPLICATIONS

Electronic cigarettes (e-cigarettes or vapes) are battery-powered devices that deliver nicotine by heating a nicotine-containing liquid, which is then inhaled as an aerosol. They are also known as electronic nicotine delivery systems (or ENDS), and they include vape pens, pod-mods, e-pens, e-pipes, e-hookahs, and e-cigars.

Motivations for e-cigarette use may vary by age group. Many teens are attracted to the flavored products and savvy packaging. Youth and young adults are subjected to aggressive marketing efforts as well. Some adults in their 20s and 30s have turned to e-cigarettes in efforts to quit smoking combustible cigarettes, often preferring them over other cessation approaches such as nicotine patches, gum, or inhalers. They may also perceive a lack of harm from e-cigarettes.

ARE E-CIGARETTES HARMFUL FOR YOUR HEALTH?

Use of e-cigarettes has increased in popularity among adolescents and young adults, prompting heightened concern about the potential risks of long-term use. Although research suggests that major e-cigarette brands are less toxic and less harmful overall than combustible cigarettes, they still contain a number of metals and chemicals with unknown long-term effects from inhalation. Furthermore, the use of e-cigarettes poses a risk for developing nicotine dependence for those with no previous smoking experience.

For teens and young adults, e-cigarette use may serve as a pathway to nicotine addiction and possible uptake of combustible cigarettes.

SDRG IS AT THE FOREFRONT OF NEW FINDINGS ON E-CIGARETTES AND HEALTH

Recent studies conducted by researchers at SDRG have focused on e-cigarette use and health across the teens, 20s, and 30s. This lifespan approach is informative, as risks of use may vary widely by life stage. For teens and young adults, e-cigarette use may serve as a pathway to nicotine addiction and possible uptake of combustible cigarettes. Adults in their 30s may turn to e-cigarettes in efforts to quit smoking, but the evidence for the success of this strategy is mixed. Below, we spotlight several recent e-cigarette studies conducted by SDRG staff across three long-term research projects: the Community Youth Development Study, the Seattle Social Development Project, and The Intergenerational Project.

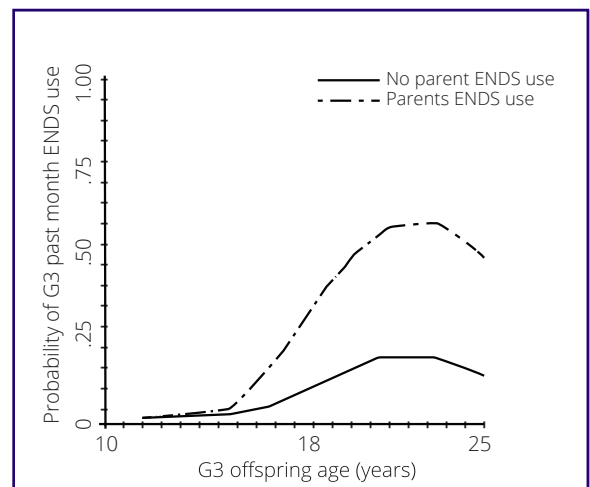


Fig. 1. The association between parents' past-month ENDS use and the predicted probability of their children's past-month ENDS use from age 10-25.

OUR FINDINGS FOR DIFFERENT AGE GROUPS

Age Group	Project	Key Findings	Implications
Early 20s	Community Youth Development Study	Previous nonsmokers who used e-cigarettes at age 21 were twice as likely use combustible cigarettes at age 23. ¹	The use of e-cigarettes among nonsmokers may lead to nicotine addiction and new combustible cigarette use.
Age 30-39	Seattle Social Development Project	<p>Personal negative smoking norms and beliefs in the 30s about the social costs of smoking predicted less combustible cigarette use but did not relate to e-cigarette use.²</p> <p>Smokers in their 30s who used e-cigarettes were less likely to quit or cut down on their use of combustible cigarettes.³</p> <p>Smokers in their 30s who replaced some or all of their use of combustible cigarettes with e-cigarettes reported better health and functioning by age 39.⁴</p>	<p>Antismoking beliefs and norms—such as smoking being a “disgusting” habit—may not readily translate to e-cigarettes. Prevention programs should consider other approaches, including emphasizing the costs of nicotine addiction whether or not accompanied by tobacco smoke.</p> <p>E-cigarettes may often not be helpful for smokers seeking to quit. Rather, smokers who use e-cigarettes may find it more difficult to quit or cut down on smoking.</p> <p>Smokers who switch to vaping may have more opportunities for healthy engagement. These opportunities can promote healthier behaviors among nicotine users approaching midlife.</p>
Intergenerational	Seattle Social Development Project—The Intergenerational Project	Youth in their teens and 20s were more likely to use e-cigarettes if their parents used e-cigarettes, regardless of their parents’ combustible cigarette use (Fig. 1). ⁵ Youth also were more likely to use e-cigarettes if they viewed e-cigarettes as safe for their health.	Reducing parent e-cigarette use may help to prevent e-cigarette use in teens and young adults. Providing accurate information about the risks of e-cigarette use may also help reduce teen and young adult e-cigarette use.

RECENT SDRG ARTICLES ABOUT E-CIGARETTES

- Epstein, M., Bailey, J. A., Kosterman, R., Rhew, I. C., Furlong, M., Oesterle, S., & McCabe, S. E. (2021). E-cigarette use is associated with subsequent cigarette use among young adult nonsmokers, over and above a range of antecedent risk factors: A propensity score analysis. *Addiction, 116*, 1224-1231.
- Kosterman, R., Epstein, M., Bailey, J. A., Oesterle, S., Furlong, M., & Hawkins, J. D. (2021). Adult social environments and the use of combustible and electronic cigarettes: Opportunities for reducing smoking in the 30s. *Nicotine & Tobacco Research, 23*, 518-526.
- Kosterman, R., Epstein, M., Bailey, J. A., Furlong, M., & Hawkins, J. D. (2021). The role of electronic cigarette use for quitting or reducing combustible cigarette use in the 30s: Longitudinal changes and moderated relationships. *Drug and Alcohol Dependence, 227*, 108940.
- Kosterman, R., Epstein, M., Bailey, J. A., & Hawkins, J. D. (2022). Is e-cigarette use associated with better health and functioning among smokers approaching midlife? *Drug and Alcohol Dependence, 234*, 109395.
- Bailey, J. A., Epstein, M., & Kosterman, R. (2022). Parent ENDS use predicts adolescent and young adult offspring ENDS use above and beyond parent cigarette use. *Addictive Behaviors, 125*, 107157.

FUNDING INFORMATION

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