

E-cigarette use increases risk of conventional cigarette use

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Teens who use e-cigarettes are more likely to go on to smoke conventional cigarettes than non-users, according to a new study.

Researchers also found conventional cigarette use does not predict future e-cigarette use.

“Findings suggest prevention and intervention efforts and policies targeting youth e-cigarette use may be needed to reduce future conventional tobacco use among youth,” authors wrote.

Researchers surveyed the same group of 808 high school students in Connecticut in 2013, 2014 and 2015, asking about their use of conventional cigarettes and e-cigarettes in the past 30 days. They detailed their findings in the article “Trajectories of E-cigarette and Conventional Cigarette Use Among Youth” (Bold KW, et al. *Pediatrics*. Dec. 4, 2017, <https://doi.org/10.1542/peds.2017-1832>).

Students who recently used e-cigarettes were more than seven times as likely as non-users to smoke conventional cigarettes in the second year, according to the study. Those using e-cigarettes in year two were nearly four times as likely to be smoking conventional cigarettes in year three.

However, the inverse did not hold true. Smoking conventional cigarettes did not make students more likely to subsequently use e-cigarettes. The relationships between the two types of cigarettes held up in both unadjusted and adjusted models.

Researchers also found use of both types increased over time. The percent of students who smoked conventional cigarettes increased from roughly 4.8% in the first year to 8.5% in the third year. Likewise, 8.9% used e-cigarettes initially, and 14.5% did so by the end of the study.

The amount they smoked also increased. By 2015, 26% of the conventional cigarette smokers were deemed heavy users, up from 10.3% in 2013. Heavy use of e-cigarettes rose from 15.3% to 20.5%.

While the study could not determine the cause of the links, authors said e-cigarettes may attract teens due appealing flavors, perceptions they are less harmful and easy access online. Once hooked on nicotine, they may turn to conventional cigarettes, which may deliver it more efficiently, according to the study.

Roughly 3 million U.S. adolescents use e-cigarettes. Researchers called for more prevention and intervention efforts.

“The rising frequency of recent e-cigarette use among youth over time is concerning, especially in light of evidence that e-cigarette use is a significant risk factor for future cigarette use,” authors wrote.

Jonathan D. Klein, M.D., M.P.H., FAAP, scientific director of the AAP Julius B. Richmond Center of Excellence, wrote a [related commentary](#) in which he stressed the importance of preventing teens from being exposed to nicotine in any form.

“Local and national jurisdictions can act through Tobacco 21 actions, smoke-free movie interventions, comprehensive flavor bans, clean indoor air laws, and rapid inclusion of alternative products in strong protection for all non-smokers,” Dr. Klein wrote. “Acting now on these policy strategies can and will lower youth smoking and youth e-cigarette use.”

Resources

- [AAP Julius B. Richmond Center of Excellence e-cigarette website](#)
- [AAP policy Electronic Nicotine Delivery Systems](#)
- [Information for parents about e-cigarettes from HealthyChildren.org](#)
- [Pediatrics e-cigarette article collection](#)
- [Surgeon general’s interactive website about e-cigarettes for parents and others who work with youths](#)

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