

Study finds e-cigarette users now more likely to quit traditional cigarettes

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A new paper in *Nicotine & Tobacco Research* finds that smokers who switch to electronic cigarettes are now more likely to stop smoking regular cigarettes. In the past, smokers who began using electronic cigarettes mostly continued smoking. The [paper](#) is titled, "Divergence in cigarette discontinuation rates by use of electronic nicotine delivery systems (ENDS): Longitudinal findings from the U.S. PATH Study Waves 1-6."

Electronic [nicotine](#) delivery systems first emerged on the U.S. market in 2007. The first e-cigarettes resembled conventional cigarettes (in appearance) and used fixed low-voltage batteries. Beginning in 2016, manufacturers introduced e-liquids containing nicotine salt formulations. These new e-cigarettes became widely available. These nicotine salts are lower in pH than freebase formulations, which allows manufacturers to increase nicotine concentration while avoiding harshness and bitterness.

Past population-level research provided conflicting findings on whether vaping helps people who smoke combustible cigarettes to quit smoking. Some research suggests improved cigarette quitting-related outcomes with [e-cigarette use](#), while other research suggests the opposite.

Inconsistent findings may be due to differences in the samples and measures considered, differences in the analytic approaches of researchers used, the rapidly changing product environment, or policy contexts.

The researchers here examined differences in real-world trends in population-level cigarette discontinuation rates from 2013 to 2021, comparing U.S. adults who smoked combustible cigarettes and used e-cigarettes with U.S. adults who smoked combustible cigarettes and did not use e-cigarettes.

Using data from among adults (ages 21+) in the Population Assessment of Tobacco and Health (PATH) Study, a national longitudinal study of tobacco use from people from all over the United States, the researchers found that between 2013 and 2016, rates of discontinuing cigarette smoking among adults in the U.S. population were statistically indistinguishable between those who used e-cigarettes and those who did not. Cigarette discontinuation rates were 15.5% for those who used e-cigarettes and 15.6% for those who did not.

But the quit rates changed in subsequent years; the researchers here found that between 2018 and 2021 only 20% of smokers who did not use e-cigarettes stopped smoking combustible cigarettes, but some 30.9% of smokers who used e-cigarettes stopped smoking combustible cigarettes.

The paper notes that the full study period spanned a time in the United States when the e-cigarette marketplace was expanding; salt-based nicotine formulations gained market share in 2016 and vaping products became available with increased nicotine yields over time.

This was also a period in which state and federal governments restricted tobacco in various ways, including increasing the tobacco-purchase age to 21 and restricting flavored e-cigarettes.

"Our findings here suggest that the times have changed when it comes to vaping and [smoking cessation](#) for adults in the US," notes study first author, Karin Kasza, an assistant professor of oncology in the Department of Health Behavior at Roswell Park Comprehensive Cancer Center in Buffalo, NY.

"While our study doesn't give the answers as to why vaping is associated with cigarette quitting in the population today when it wasn't associated with quitting years ago, design changes leading to e-cigarettes that deliver nicotine more effectively should be investigated. This work

underscores the importance of using the most recent data to inform public health decisions."

More information: Karin Kasza et al, Divergence in cigarette discontinuation rates by use of electronic nicotine delivery systems (ENDS): Longitudinal findings from the U.S. PATH Study Waves 1-6, *Nicotine & Tobacco Research* (2024). DOI: [10.1093/ntr/ntae027](https://doi.org/10.1093/ntr/ntae027)

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