

Evidence brief 2: ENDS use reduces smoking

The best way to assess the evidence that ENDS use reduces smoking is to look at all the different types of evidence together. It all points towards ENDS having a powerful effect on suppressing adult smoking via five main effects:

1. The people who use e-cigarettes are more likely to quit smoking, and success rates increase over time as smokers become familiar with e-cigarettes as an alternative.
2. More people are willing to try ENDS to quit smoking because it does not require them to give up nicotine to secure significant health, welfare, and economic gains. This is easier to achieve than abstinence from nicotine.
3. People who would not otherwise try to quit are drawn into smoking cessation via ENDS uptake and gradual migration away from smoking. These are known as “accidental quitters”.
4. Young adults who would otherwise have become smokers diverted into ENDS use and never started smoking.
5. Adults, including recent quitters, who may have relapsed to smoking turn to vaping instead.

Randomised controlled trials show ENDS to be more effective than nicotine replacement therapies and at least as good as pharmacotherapies at achieving smoking cessation in trial conditions.

- The January 2024 Cochrane review examined 88 studies and, based on seven studies that met its strict inclusion criteria, concluded that vaping nicotine was 59% more effective for quitting than nicotine patches and gum.¹
- A review of 363 studies by the UK National Institute for Health Research found that vaping was the most effective single quitting aid.²
- A 2023 Cochrane review of all smoking cessation therapies concluded that nicotine ENDS and varenicline were the two most effective treatments for quitting smoking.³

Observational and population studies. Smokers switching to ENDS are replacing cigarettes with a much lower-risk way of taking nicotine – they are making a different consumer choice rather than taking a smoking cessation medication. Smoking cessation rates using vaping *increase* over time as smokers adjust to exclusive e-cigarette use.⁴ In contrast, conventional quit approaches have *declining* quit rates over time as abstinence gives way to relapse back to smoking.⁵ Vaping is associated with increased quitting in observational studies,^{4 6 7} and population studies.^{8 9 10}
¹¹Significant use of ENDS policy is reflected in national smoking rates.^{12 13 14} Japan has seen dramatic decreases in smoking, attributable to heated tobacco products.^{15 16}

Economic data. There is also substantial evidence from economic data that ENDS function as cigarette substitutes. In a paper for FCTC COP-7, WHO concluded, “*ENDS/ENDS and cigarettes are substitutes*”.¹⁷ Economic evidence supports WHO’s claim. There are pronounced substitution effects between combustibles such as cigarettes and smoke-free alternatives.^{18 19 20 21 22 23 24 25 26} Substitution should be expected: both meet user demands for nicotine, ENDS with much lower risk.

“Accidental quitters.” Vaping is also the only quitting aid to assist smokers with no intention of quitting (‘accidental quitters’).^{27 28 29} That is important because this group is most likely to continue smoking and,

therefore, is most at risk of serious disease and premature death.

Impact versus efficacy. Controlled trials can give insights on “efficacy” (how likely someone using the product is to quit smoking. But they can’t say much about how many people will use the product. ENDS have the potential for a substantial positive public health *impact*, a function of individual effectiveness multiplied by the number of people willing to try. There is evidence that ENDS have made such an impact at the population level in terms of sharper declines in cigarette smoking than originally expected. For example, US adult smoking prevalence is now lower than anticipated from pre-ENDS era trends – with the most significant declines in smoking occurring in the age groups with higher uptake of ENDS (i.e., adults under 44 years of age).³⁰

Guidance for healthcare providers. The UK National Centre for Smoking Cessation and Training produces high quality guidance in the use of vaping products to quit smoking for good.³¹

User testimony. Thousands of users provide eloquent testimony of their success in quitting smoking using ENDS. These provide compelling accounts of tobacco harm reduction at the individual level.³² Though often dismissed as anecdotes, these first-person accounts of experience are in fact rich in detail and a compelling strand of evidence that triangulates well with trials, observational data, trends and economic analysis.

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