

Interventions for quitting vaping

Findings from the January 2025 Cochrane review

What are the best ways to help people to stop vaping nicotine? Do the interventions have any unwanted effects compared to continued vaping?

This briefing document brings you the most up-to-date information on the potential benefits and harms of interventions to help people who vape nicotine to stop. This evidence comes from our latest Cochrane Review. Cochrane is a non-profit organisation that reviews all of the available evidence on a particular topic. Our findings help people to make healthcare decisions. This review is funded by Cancer Research UK.

Key findings

- Text message-based interventions may help young people to stop vaping when compared to no or minimal support; however, more evidence is needed.
- Varenicline may help people to stop vaping when compared to no or minimal support; however, more evidence is needed.
- We don't know whether other interventions can help people to stop vaping for six months or more.
- We need more information on potential harms of interventions and whether they cause people to return to, or take up, smoking tobacco

Why is this topic important?

Nicotine vapes expose users to less of the substances that cause diseases that are present in tobacco cigarettes. However, vaping is likely to cause more harm than not vaping. Some people vape nicotine to help them quit smoking; however, some people who vape nicotine have never smoked. People may want to stop using vapes containing nicotine, but may find it difficult due to the addictive properties of nicotine.

What do we want to find out?

There is limited advice available on the best ways to stop nicotine vaping. We bring together up-to-date information to see what tools have been tested for this purpose and whether they can help people to stop vaping. We also look at any harms these interventions may cause, including whether they could cause more people to smoke tobacco.

What treatments might help people to stop vaping?

Medicines including nicotine replacement therapy (gums, patches, etc.), varenicline, bupropion, and cytisine are already used to help people stop smoking. They could also be used to help people stop vaping. Behavioural approaches could include counselling, text messaging, online support, or print-based information. Other approaches could include reducing the time spent vaping or the amount of nicotine in the e-liquids used.

What are we doing?

Each month we search for studies that provide people who vape nicotine with help to quit vaping and look at the effects of this. We look for randomized controlled trials, where the treatments people received were decided at random. This type of study usually gives the most reliable evidence about the effects of a treatment. To keep the information up-to-date we search for evidence each month. This is called a living systematic review. In our latest full review (searches up to 24th April 2024) we found 9 studies in 5209 people who vaped.

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What are nicotine vapes?

Vapes (also known as electronic cigarettes or e-cigarettes) are handheld devices that heat liquid that usually contains nicotine and flavourings. Liquids are stored in a disposable or refillable cartridge, reservoir or 'pod'. Vapes allow users to inhale nicotine in a vapour rather than smoke.

How did we decide if the studies and results were reliable?

For each study we assessed how well the study had been designed by asking questions like: Were the groups decided at random? Did people know which groups they were in? Were the interventions equally intensive? How were the outcomes measured (e.g., were the results self reported or assessed with a reliable tool)? How many people dropped out of the study?

We also graded how certain we were in our main findings of: 1) stopping vaping; 2) serious harms; and 3) the effect on tobacco cigarette use. We stated whether we had high, moderate, low or very low certainty in our findings. With high certainty we are very confident that what we have reported is the true effect. With low certainty the true effect may be substantially different from our estimate.

What did we want to find out?

- How many people stopped using nicotine vapes at least 6 months after study start (also measured between 3 & 6 months)
- Change in tobacco smoking at least 6 months after study start (also measured between 3 & 6 months)
- How many people experienced unwanted effects of treatment, at least one week after treatment started
- Change in biological markers (e.g., blood pressure, markers of harm)

Weight and alcohol use?

In response to public feedback we are looking at the effect of quitting vapes on weight and alcohol use. At the moment there is not enough information on these to draw any conclusions.

Health measures

We also look at information on health measures, e.g., lung function and blood pressure. Very few studies have looked at health outcomes. In those that did, there was no indication that the interventions posed more risks than nicotine vaping. We need more evidence on health measures.

SEARCH UPDATE...we will update this box monthly with information on eligible studies we have found in our searches each month.

At a glance

How do interventions compare?	NRT	Control	Cytisine	Control	Varenicline	Control	Nicotine/ vaping reduction	Minimal support	Text message	No/ minimal support
Stopping vaping at 6 months					✓					✓
Stopping vaping at 3-6 months			✓							
Change in tobacco cigarette (at 6 months)										
Carbon monoxide										
Heart rate										
Blood pressure										
Blood oxygen										
Levels of toxicants										
Change in weight										
Change in alcohol use										
Serious harms										
Less serious harms										

Key

✓	Favours
-	No clear evidence of a difference between groups
	Lack of evidence
*	Not pooled

Disclaimer: the views and opinions expressed therein are those of the review authors and do not necessarily reflect those of the funder.