

E-cigs better than gum or patches to help people quit smoking

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Electronic cigarettes could increase the number of people who stop smoking compared to nicotine replacement therapy—such as chewing gum and patches—according to research involving the University of East

Anglia.

A new Cochrane review published today also shows that e-cigs help people stop more than just quitting smoking without any treatment.

But the research team say that more evidence is needed on potential long-term harms.

Prof Caitlin Notley, from UEA's Norwich Medical School, said; "Smoking is a significant global health problem. Many people who smoke want to quit, but find it difficult to succeed in the long term. One of the most effective and widely used strategies to help people to give up smoking is to combat the cravings associated with [nicotine addiction](#) by delivering [nicotine](#) through patches and chewing gum.

"Electronic cigarettes have been around in some form for a number of years, but recently their popularity has increased significantly, and they have begun to look and feel less like conventional cigarettes.

"Unlike chewing gum and patches, they mimic the experience of cigarette smoking because they are hand-held and generate a smoke-like vapor when used. This helps to recreate sensations similar to smoking without exposing users or other people to the smoke from conventional cigarettes, and can be used to provide people who smoke with nicotine."

The research team updated a Cochrane Review that compares the effects of electronic cigarettes with other ways of delivering nicotine—such as patches and chewing gum—or with dummy electronic cigarettes that do not contain nicotine or no treatment.

This updated review now includes 50 studies, an increase of 35 studies since it was last published in 2016. Twenty-four of these are uncontrolled studies, but their results support the data from the

randomized controlled trials.

The researchers identified three studies, in 1498 people, that compared nicotine-containing electronic cigarettes with nicotine replacement therapy given as patches or gum. The results showed that more people quit smoking if they used electronic cigarettes containing nicotine than if they used another form of nicotine replacement.

If six people in 100 quit by using nicotine replacement therapy, 10 people in 100 would quit by using electronic cigarettes containing nicotine. This means an additional four people in 100 could potentially quit smoking with nicotine containing electronic cigarettes.

Similar results were seen in another three studies, involving 802 people, which compared nicotine-containing electronic cigarettes with electronic cigarettes that did not contain nicotine.

Evidence from four studies (2312 people) showed that more people who used nicotine-containing electronic cigarettes quit smoking than those who received only behavioral support or no support. If four people in 100 quit with no support, an additional six people in 100 might quit by using nicotine electronic cigarettes.

Prof Notley said: "It is encouraging that we now have more robust clinical trial evidence to draw upon, demonstrating that nicotine containing e-cigarettes can help more people to quit smoking than traditional nicotine replacement therapy. This might be because e-cigarettes mimic the behavior of smoking as well as providing nicotine to ex-smokers who are dependent on nicotine.

"Although we don't yet have long term evidence on health harms of switching to e-cigarettes, the evidence clearly demonstrates that e-cigarettes are much safer than continuing to smoke tobacco. Short term

harms of e cigarettes, such as a [sore throat](#) or feeling nauseous, are of a similar magnitude to the short term side effects of [nicotine replacement therapy](#).

"Given the raising number of coronavirus infections and the approaching winter flu season, it is more important now than ever that smokers are supported to quit. E cigarettes might be a good option for people to try if they have tried and failed to quit in the past."

The research team did not detect any clear evidence of serious harms from nicotine electronic cigarettes. However, evidence about serious harms is uncertain because the overall number of studies was small and serious health problems were very rare in both users and non-users of nicotine electronic cigarettes.

There was no information about the effects of long-term use (more than two years) of nicotine-containing electronic cigarettes. The studies showed that throat and mouth irritation, headache, cough, and nausea are the most commonly reported side effects in the short- to medium-term (up to two years). The studies assessed the potential harms of electronic cigarettes when used to help people who smoke quit smoking, so did not assess other potential harms such as whether electronic cigarettes encourage nicotine use among people who do not smoke.

The lead author of this updated paper, Jamie Hartmann-Boyce from the Cochrane Tobacco Addiction Group, said: "The randomized evidence on [smoking](#) cessation has increased since the last version of the review and there is now evidence that electronic cigarettes with nicotine are likely to increase the chances of quitting successfully compared to nicotine gum or patches.

"Electronic cigarettes are an evolving technology. Modern electronic cigarette products have better nicotine delivery than the early devices

that were tested in the trials we found, and more studies are needed to confirm whether quit rates are affected by the type of electronic cigarettes being used.

"While there is currently no clear evidence of any serious side effects, there is considerable uncertainty about the harms of electronic cigarettes and longer-term data are needed. Scientific consensus holds that electronic cigarettes are considerably less harmful than traditional cigarettes, but not risk-free.

"We are encouraged to see that 20 trials are now underway, and we will be looking for newly published evidence every month from December 2020. It is important that the review continues to provide up-to-date information to people who smoke, healthcare providers and regulators about the potential benefits and harms of [electronic cigarettes](#)."

More information: Hayden McRobbie et al. Electronic cigarettes for smoking cessation and reduction, *Cochrane Database of Systematic Reviews* (2012). [DOI: 10.1002/14651858.CD010216](https://doi.org/10.1002/14651858.CD010216)

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