

Electronic cigarettes for smoking cessation: do they work?

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Background

Tobacco use is one of the biggest threats to world health. It kills more than 8 million people annually.² Primary care is an important point of contact for patients and there is evidence that primary care physicians play an important role in smoking cessation.³ Smoking cessation treatment options involve behavioural support, nicotine replacement medications and now also include electronic cigarettes. The question addressed in this review was, what is the best method of treatment?

Clinical bottom line

In order to support people who would like to stop smoking, the most effective tool currently available is the use of nicotine electronic cigarettes. This intervention was shown to be more effective than nicotine replacement therapy such as gum or patches. It was also shown to be more effective than other forms of electronic cigarettes that did not contain nicotine and more effective than behavioural interventions designed to help people quit smoking (Table 1).¹

Table 1. Safety and effect of nicotine electronic cigarettes for smoking cessation.

Outcome measured	Success	Evidence	Harms
Comparison	Nicotine electronic cigarette vs nicotine replacement therapy		
Smoking cessation at 6 months to 1 year (confirmed with biochemical validation)	People using nicotine electronic cigarettes were significantly more likely to stop smoking than those using nicotine replacement therapy	This evidence is of high quality and is based on 2378 participants from 7 studies	There was no difference in the number of serious or non-serious adverse events between the groups.
Comparison	Nicotine electronic cigarette vs non-nicotine electronic cigarette		
Smoking cessation at 6 months to 1 year (confirmed with biochemical validation)	People using nicotine electronic cigarettes were significantly more likely to stop smoking than those using non-nicotine electronic cigarettes	This evidence is of moderate quality and is based on 1447 participants from 5 studies	It is important to note all subjects involved in this research were smokers. There are known adverse events related to electronic cigarettes in non-smokers ²
Comparison	Nicotine electronic cigarette vs behavioural/no support for smoking cessation		
Smoking cessation at 6 months to 1 year (confirmed with biochemical validation)	People using nicotine electronic cigarettes were significantly more likely to stop smoking than those offered behavioural support or offered no support	This evidence is of very low quality and is based on 3126 participants from 7 studies	

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