

# A summary of the Cochrane review:

## Electronic cigarettes for smoking cessation

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## Can electronic cigarettes help people stop smoking, and are they safe to use for this purpose?

### *Background*

Electronic cigarettes (ECs) are electronic devices that produce an aerosol (commonly referred to as vapour) that the user inhales. This vapour typically contains nicotine without most of the toxins smokers inhale with cigarette smoke. ECs have become popular with smokers who want to reduce the risks of smoking.

This review aimed to find out whether ECs help smokers stop smoking, and whether it is safe to use ECs to do this.

### *Study characteristics*

This is an update of a previous review. The first review was published in 2014 and included 13 studies. For this update, we searched for studies published up to January 2016 and found 11 new studies. Only two of the included studies are randomized controlled trials and followed participants for at least six months. These provide the best evidence. The remaining 22 studies either did not follow participants for very long or did not put people into treatment groups so could not directly compare ECs with something else. These studies can tell us less about how ECs might help with quitting smoking but can tell us about short-term safety. The two randomized trials, conducted in New Zealand and Italy, compared ECs with and without nicotine. We judged these studies to be at low risk of bias. In one study, people wanted to quit smoking, while in the other study they did not. The trial in people who wanted to quit smoking also compared ECs to nicotine patches.

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## Key results

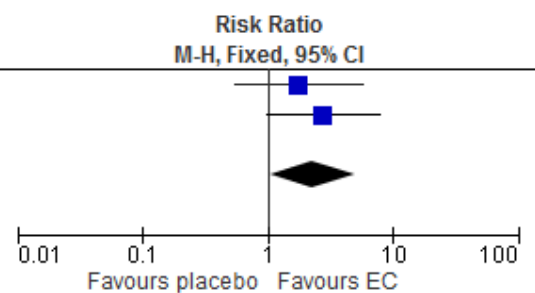
Combined results from two studies, involving 662 people, showed that using an EC containing nicotine increased the chances of stopping smoking in the long term compared to using an EC without nicotine. We could not determine if EC was better than a nicotine patch in helping people stop smoking, because the number of participants in the study was low. More studies are needed to evaluate this effect. The other studies were of lower quality, but they supported these findings. None of the studies found that smokers who used EC short- to mid-term (for two years or less) had an increased health risk compared to smokers who did not use ECs.

## Quality of the evidence

The quality of the evidence overall is low because it is based on only a small number of studies, although these studies were well conducted. More studies of ECs are needed. Some are already underway.

### The effect of nicotine electronic cigarettes on smoking cessation in comparison to placebo electronic cigarettes. Risk ratios and 95% Confidence Intervals (CI) calculated using the Mantel-Haenszel fixed effect method

Study or Subgroup	Experimental		Control		Weight	Risk Ratio	
	Events	Total	Events	Total		M-H, Fixed, 95% CI	M-H, Fixed, 95% CI
Bullen 2013	21	289	3	73	47.3%	1.77	[0.54, 5.77]
Caponnetto 2013a	22	200	4	100	52.7%	2.75	[0.97, 7.76]
<b>Total (95% CI)</b>		<b>489</b>		<b>173</b>	<b>100.0%</b>	<b>2.29</b>	<b>[1.05, 4.96]</b>
Total events	43		7				
Heterogeneity: $\text{Chi}^2 = 0.30$ , $\text{df} = 1$ ( $P = 0.58$ ); $I^2 = 0\%$							
Test for overall effect: $Z = 2.09$ ( $P = 0.04$ )							



#### Citation:

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