

# Smokefree New Zealand by 2025: Are E-Cigarettes the Answer?

How effective are e-cigarettes at leading to smoking cessation?

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## The Issue and Setting:

Cigarette smoking is one of the leading causes for preventable death and illness throughout the world, and New Zealand is no exception to this. The Ministry of Health has set a target for New Zealand to become a smokefree nation by 2025, but as 600,000 people still choose to smoke, there is plenty of work to be done (Smokefree New Zealand, 2017).

Nicotine replacement therapy has been a go-to for many smokers when they intend to give up the habit, but traditional methods of NRT (gum, patches and lozenges) do not prove to be consistently efficacious. E-cigarettes provide a modern approach to achieving this goal, as these devices provide a completely different experience for their user when compared to other forms of nicotine replacement therapy (Caponnetto, Campagna, Papale, Russo & Papale, 2012).

### About E-Cigarettes:

Electronic cigarettes (e-cigarettes, e-cigs, vaper) are a small, handheld device that are designed to look like a cigarette. Usually an e-cigarette is comprised of a battery, a heating element and a cartridge that contains a nicotine glyceryl solution. The nicotine solution is commonly flavoured to produce many different tastes and scents, and also comes in varying concentrations of nicotine (Nelson *et al.*, 2015).

As the solution does not contain any tar or other chemicals that are commonly found in tobacco cigarettes, and combustion is not required to produce the vapour, it can be argued that e-cigarettes are a healthier alternative to tobacco cigarettes (Nelson *et al.*, 2015).

### Evidence/Literature Review:

- The increased popularity of e-cigarettes and the lower price when compare to traditional cigarettes are two of the reasons why smokers are choosing e-cigarettes to help them quit smoking (Rahman, Hann, Wilson, Mnatzaganian & Worrell-Carter, 2015).
- The physical rituals associated with smoking a cigarette are replicated with an e-cigarette. This has proven to be a stand out feature of why smokers are choosing e-cigarettes, as the physical and habitual needs such as holding a cigarette are able to be satisfied by the user (Caponnetto *et al.*, 2013).
- E-cigarettes are a very effective method for harm-reduction, as the formulation of the e-cigarette has much less potential for harm than traditional cigarettes. Also, as combustion is not required to release the nicotine, no smoke is produced, therefore any by products that are released as an effect of combustion are not released either (Oh & Kacker, 2014).

### Recommendations:

- Within a population of smokers who are willing to quit and have not found traditional NRT useful, short term use of e-cigarettes could be recommended to aid in achieving smoking cessation.
- When using e-cigarettes for smoking cessation, a gradual decrease in nicotine concentration should be recommended to users so that eventually, they can completely stop using the e-cigarette.
- It should be known that e-cigarettes should only be recommended for use in smokers and not in non-smokers, as the physiological impact that their use has on this population has not yet been thoroughly researched.

### References:

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Picture of lungs: [https://pngtree.com/freepng/red-lung\\_3510812.html](https://pngtree.com/freepng/red-lung_3510812.html)



### Rationale:

Cigarette smoking continues to be one of the leading causes of preventable death and illness throughout the world, and as around 5000 people living in New Zealand die every year due to smoking or smoking related illness, New Zealand is no exception to this (Ministry of Health, 2017). Although the current rates of people who smoke in New Zealand have dropped since previous years, in order to reach the Ministry of Health's goal of becoming a Smokefree nation by 2025, a lot of people are yet to give up the habit.

Electronic cigarettes are a relatively new concept to the world of nicotine replacement therapy, so I chose to do my literature review on this topic to investigate the effectiveness of their use to lead to smoking cessation, and to expand my knowledge around this area.

I chose to present my findings in a poster form as I feel that it is a very effective medium for sharing information with other members of the public. Academic posters can be an eye-catching, creative and detailed means of presenting and communicating research findings, and have the additional benefit of being displayed in places that people will see and read them (Schneider, Whitehead, LoBiondo-Wood & Haber, 2014).

In the table below, I have refined my search question by using the PECOT model. This model is a tool used in research studies to describe the different elements that are required to create a well-formed clinical question (Schneider *et al.*, 2014).

Using the PECOT model below, I formulated the following research question: "In adults aged between 18 and 60, can e-cigarette use lead to complete smoking cessation rather than harm reduction?"

PECOT category	Information relating to question	Explanation
Population	Adults between the ages of 18 and 50 years old who are going through smoking cessation.	This is the age range that most adults attempt to quit smoking within. Gender and ethnicity was not specified as this may have limited my study findings.
Exposure	Use of e-cigarettes to lead to complete smoking cessation.	I will research and look at articles where the effectiveness of e-cigarettes to and in smoking cessation has been studied and compared to harm reduction.
Comparison	Use of e-cigarettes to aid in harm-reduction.	E-cigarettes are a proven method of harm reduction for people who have previously smoked tobacco cigarettes.
Outcome	Smoking cessation successfully achieved by using e-cigarettes.	E-cigarettes are an increasingly popular form of nicotine replacement therapy.
Time	6-12 months.	Complete smoking cessation (without relapse) usually takes between 6 and 12 months.

### References:

- Ministry of Health. (2017). *Health effects of smoking*. Retrieved from <https://www.health.govt.nz/your-health/healthy-living/addictions/smoking/health-effects-smoking> 1/3/18
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