

Prevention C+olumn

VAPING – JULY 2020

Vaping: A good option when trying to quit smoking?

15% of Canadians have tried a vaping product and **32%** say they have used it as a quit-smoking aid.¹

Vaping is the act of inhaling and exhaling an aerosol produced by a vaping product, such as an electronic cigarette.

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Who are the vapers in Canada?

According to the 2017 [Canadian Tobacco, Alcohol and Drugs Survey](#),¹ conducted among Canadians 15 years and older:

- **15% of Canadians** had tried a vaping product
- Among Canadians who used a vaping product in the 30 days prior to the survey, **65% were smokers** and **20% were former smokers**
- 32% of vaping product users reported that they had used it as a **quit-smoking aid**
- **34%** (about one-third) **of high school students** had tried a vaping product
- In 2017, the global cigarette market was estimated to be about 43 times that of the vaping market (USD \$785 billion vs. USD \$18 billion). However, certain experts anticipate a **growth upsurge of the global e-cigarette market**, which could reach [\\$30 billion by 2022](#). ■

WHO INVENTED THE ELECTRONIC CIGARETTE?

In 1965, Herbert A. Gilbert was granted a patent for the [smokeless non-tobacco cigarette](#) drawing he had prepared. It was only in May 2018 that vaping products containing nicotine could be legally sold in Canada. ■



Does nicotine cause cancer?

The idea that nicotine is linked to cancer is a myth. Health Canada clearly states that [nicotine is not known to cause cancer](#). However, nicotine does cause dependence, regardless of whether you're smoking a cigarette or using an e-cigarette. ■

Who are the smokers in Canada?

In 2018, [4,926,800 Canadians](#) used tobacco products (cigarettes). That works out to 15.8% of the Canadian population. About [70% of these smokers](#) wanted to quit. 50% tried, but only 5% managed to remain smoke-free for six months or more. As well, up to 25% of smokers who try to "butt out" with a smoking cessation aid (patch, vape device, gum, etc.) and support from others actually manage to do so. ■

What are the differences between a cigarette and an e-cigarette?

The main difference between a cigarette and an e-cigarette comes down to **combustion**. That's because when burned, plant materials produce toxic substances such as tar, carbon monoxide and fine particles that cause various health problems, including cancer. Lighting a cigarette can lead to major health problems! No combustion occurs with e-cigarettes, when used properly. The device heats a liquid into a vapour, which then turns into aerosol and is inhaled. It is important to prevent overheating of the liquid and to ensure adequate entry of air.

Another difference between cigarettes and vaping lies in the **release of nicotine**. Nicotine is released much more quickly with regular cigarettes than with e-cigarettes. A smoker wanting to switch to e-cigarettes will have to use the device more often to get the same amount of nicotine as from a regular cigarette. ■



1. Vaping in Canada: what we know. Health Canada. Consulted on 2020-03-16. Click: <https://www.canada.ca/en/health-canada/services/smoking-tobacco/vaping/canada.html>

Are e-cigarettes an option?

Absolutely, but [certain conditions must be met in order to be successful](#).

1. **Avoid smoking and vaping during the same period.** That's because if you continue to smoke while vaping, the carcinogenic risk of cigarettes is maintained, and that is not what you want.
2. **Wean yourself off nicotine gradually** to achieve your ultimate objective of quitting for good. Doing so will allow you to minimize the possible appearance of side effects in the medium and long terms, which are currently not well known.

The ultimate goal of controlling the use of regular cigarettes is to reduce the risk of the smoking-related diseases. The best thing by far would be for smoking to be eliminated altogether. Yet, many smokers try unsuccessfully to quit with the tools currently available to them. [E-cigarettes are used](#), because they reduce exposure to the toxic and cancer-causing substances of cigarette smoke. ■

VAPING IS NOT HARMLESS^{2,3}

Different chemical products have been recognized as being toxic to e-cigarette users. One of them, **diacetyl**, is used to enhance the flavour of e-cigarettes. This compound becomes toxic when heated and has been associated with an increase in lung disease. Fortunately, Health Canada has taken the measures necessary to limit its use. **Vitamin E**, another substance used in e-cigarettes, has also increased the occurrence of lung disease, as it becomes toxic when heated. It is used in certain vaping products containing cannabis. These two substances have been identified, but bear in mind the fact that vaping products may contain other chemical compounds for which clear information as to their impact on lung health is not yet available. Health Canada is monitoring the situation closely.

That said, to be on the safe side, use e-liquids with ingredients that meet **United States Pharmacopeia (USP)** standards and therefore have a higher level of purity. These products are available in specialty vape stores.⁴ For more information on the risks of vaping and e-cigarette use, visit [the Health Canada website](#). ■



E-cigarette explosions and fires: Is that really a thing?

Fires and explosions actually have been caused by defective e-cigarette batteries. However, vaping devices are regulated under the Canada Consumer Product Safety Act. If you notice a safety problem with a vaping device, report it to Health Canada. The agency will monitor these products and ensure that the necessary corrections are made, to ensure the safety of users. ■

In conclusion

Health Canada's position is clear: If you are a smoker, vaping is a less harmful option than smoking. But remember that vaping is not harmless. It can also increase your exposure to certain chemical compounds that can pose a health risk. If you want to quit smoking, and the other options don't work for you, vaping is one you might try. Talk it over with your doctor and your pharmacist. They can give you the support you need. ■

2. Risks of vaping. Health Canada. Consulted on 2020-03-16. Click: <https://www.canada.ca/en/health-canada/services/smoking-tobacco/vaping/risks.html>

3. Juneau, Martin. Le point sur les cas récents de maladies pulmonaires graves liées au vapotage (French only). Prevention Watch, Montreal Heart Institute. Consulted on 2020-03-16. Click: <https://observatoireprevention.org/2019/09/26/le-point-sur-les-cas-recents-de-maladies-pulmonaires-graves-liees-au-vapotage/>

4. Morissette, Mathieu. Vapoter pour arrêter de fumer... Peut-on minimiser les risques? (French only) Info-RQESR. November 2019. Click: http://www.rqesr.ca/stock/tra/rqesr_vapotage.pdf