PRACTICE | FIVE THINGS TO KNOW ABOUT ...

E-cigarettes

Mehdi Aloosh MD MSc, Janice Johnston RN MEd, Bart Harvey MD PhD

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1 E-cigarette use is increasing in Canada, especially among youth

The ever use of battery-powered electronic nicotine delivery systems devices or e-cigarettes by Canadians aged 16–17 years increased from 29.3% in 2017 to 37% in 2018 (and reported use on at least 15 of every 30 days increased from 2.1% to 3.6%). Moreover, the prevalence and frequency of vaping increased among never and experimental smokers in parallel with the rise of use of JUUL (an e-cigarette with high nicotine concentration).¹

2 E-cigarette use is strongly associated with the initiation and ongoing use of cigarette smoking

Current evidence indicates that among those aged 14–30 years, non-smokers who use e-cigarettes have a greater than 3-fold increase (23.2% v. 7.2%) in the initiation and use of cigarette smoking.² This difference suggests that for every 6 nonsmokers using e-cigarettes, 1 of them will begin smoking cigarettes.

3 E-cigarettes are an additional smoking cessation tool
A recent randomized clinical trial provides evidence supporting e-cigarettes as an effective smoking cessation tool.³

4 E-cigarettes are unregulated products with potentially dangerous health effects

Long-term, direct health risks caused by using e-cigarettes are expected to take many years to become apparent. However, nicotine is highly addictive. Moreover, of great concern, recent findings have suggested that e-cigarette exposure may result in serious pulmonary effects.⁴

Clinicians should ask about e-cigarette use

Because of the evidence regarding the effect of e-cigarette use on the initiation of smoking, consistent with Canadian Task Force on Preventive Health Care recommendations,⁵ physicians should, as appropriate, consider counselling nonsmokers on this and other health risks of e-cigarettes during primary care visits. In addition, for those who have successfully used e-cigarettes as a smoking cessation aid, clinicians should support the cessation of e-cigarette use, considering the current epidemic of vaping-related pulmonary illnesses.⁴

References

- Hammond D, Reid JL, Rynard VL, et al. Prevalence of vaping and smoking among adolescents in Canada, England, and the United States: repeat national cross sectional surveys. BMJ 2019;365:l2219.
- Soneji S, Barrington-Trimis JL, Wills TA, et al. Association between initial use of e-cigarettes and subsequent cigarette smoking among adolescents and young adults: a systematic review and meta-analysis. *JAMA Pediatr* 2017;171:788-97.
- Hajek P, Phillips-Waller A, Przulj D, et al. A randomized trial of e-cigarettes versus nicotine-replacement therapy. N Engl J Med 2019;380:629-37.
- Christiani DC. Vaping-induced lung injury. N Engl J Med 2019 Sept. 6 [Epub ahead of print]. doi: 10.1056/NEJMe1912032.
- Thombs BD, Jaramillo Garcia A, Reid D, et al.; Canadian Task Force on Preventive Health Care. Recommendations on behavioural interventions for the prevention and treatment of cigarette smoking among school-aged children and youth. CMAJ 2017;189:E310-6.

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Affiliations: Department of Health Research Methods, Evidence, and Impact (Aloosh), McMaster University; City of Hamilton (Johnston, Harvey), Public Health Services, Hamilton, Ont.; Dalla Lana School of Public Health (Harvey), University of Toronto, Toronto, Ont.

Correspondence to: Bart Harvey, bart.harvey@hamilton.ca

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