

# E-cigarette use in adolescents

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## **1 Rates of use of e-cigarettes that contain nicotine (“vaping”) by adolescents in Canada continue to be among the highest in the world<sup>1</sup>**

In the Canadian Student Tobacco, Alcohol and Drugs Survey 2021–2022, 29.4% of students in grades 7–12 reported trying an e-cigarette, with 8.1% vaping nicotine daily.<sup>2</sup>

## **2 Adolescents acquire highly concentrated nicotine vaping products despite national and provincial regulations in Canada**

The minimum age to legally purchase vaping products ranges across Canada, from 18 to 21 years. The maximum nicotine concentration in vaping products is 20 mg/mL, but unregulated products with higher concentrations are widely available. Vaping often delivers higher nicotine concentrations than conventional cigarettes, and nicotine delivery varies among vaping products.<sup>3,4</sup>

## **3 Adolescents should be asked about vaping in all health care settings<sup>5</sup>**

For youth who vape, management should include education on risks, including nicotine addiction, respiratory and neurodevelopmental complications, and unknown long-term safety.<sup>1,3,5,6</sup>

## **4 In addition to behavioural interventions for vaping cessation, adolescents can be offered nicotine replacement therapy (NRT)<sup>4,5</sup>**

Nicotine replacement therapy delivers pharmaceutical-grade nicotine with low risk of misuse owing to slower absorption.<sup>4</sup> No randomized controlled trials have evaluated NRT for vaping cessation.<sup>3</sup> Nicotine replacement therapy is recommended for adolescents with moderate to severe nicotine use disorder, based on evidence of effectiveness for adult smoking cessation, the severe harms of tobacco dependence, and lack of evidence of serious NRT-associated harm in adolescents.<sup>4,5</sup>

## **5 Judicious initiation of NRT is necessary, owing to unpredictable nicotine exposure from vaping**

Combining a nicotine patch (7–21 mg) with a short-acting NRT product (2–4 mg gum, 1–2 mg lozenge) for breakthrough cravings is advised.<sup>4</sup> Clinicians should collaborate with each patient to determine an appropriate initial dosage based on level of nicotine dependence and titrate accordingly to manage withdrawal symptoms.<sup>4</sup> Follow-up should be frequent, to reassess cravings and withdrawal symptoms, tolerability of NRT, motivation, barriers, and comorbid mental health concerns.

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