

# Ottawa Council on Smoking or Health

## Strengthening the City of Ottawa's Smoke-Free Bylaws: Prohibiting Vaping Indoors and Outdoors

### Risks to E-Cigarette Users

- Health Canada has not approved e-cigarettes as a nicotine replacement therapy.<sup>1</sup>
- The sale of e-cigarette products containing nicotine is illegal in Canada, but many retail outlets continue to sell them.<sup>2</sup>
- Nicotine is a “highly addictive and toxic substance.”<sup>3</sup>



- Canada does not have federal consumer protection laws regulating e-cigarette manufacturing, labelling, sales, or marketing.
- Studies of e-cigarettes, cartridges, and liquid refills found misleading labels. Some products labelled as nicotine-free contained nicotine, and some products contained higher amounts of nicotine than declared on the label.<sup>4,5</sup>
- There is not yet a body of scientific evidence proving that e-cigarettes help smokers to quit and stay smoke-free.<sup>6,7,8</sup>
- Some studies found that e-cigarettes are associated with less quitting among smokers.<sup>9,10</sup>

- The long-term consequences of vaping are unknown.<sup>11</sup>
- Propylene glycol, a main ingredient in e-cigarettes, is “a known irritant” when inhaled.<sup>12,13</sup>
- A scientific study found that 39 out of 51 e-cigarettes and liquid refills tested contained diacetyl, a flavouring chemical associated with bronchiolitis obliterans, a severe and debilitating lung disease.<sup>14</sup>
- Another study of 97 e-cigarettes found that most contained “formaldehyde and acetaldehyde chemicals which are known to cause cancer and are linked to genetic damage, birth defects, and reduced fertility.”<sup>15</sup>
- One study also found that the chemicals in e-cigarettes may cause DNA damage which could lead to cancer.<sup>16</sup>

### Exploding E-Cigarettes

- Although e-cigarette explosions are rare (at least 25 incidents in the U.S. since 2009),<sup>17</sup> they have caused “significant physical harm to users” and fires.<sup>18,19</sup>
- A 16-year-old in Lethbridge, Alberta suffered broken teeth and extensive burns to his face, tongue, and throat after his e-cigarette exploded in January 2016.<sup>20</sup>
- An 18-year-old in Kitchener, Ontario was driving when his e-cigarette exploded in March 2016. “The vehicle was engulfed in flames when emergency crews arrived on scene.”<sup>21</sup>



A car driven by an 18-year-old caught fire on March 14, 2016 in Kitchener, Ontario after an e-cigarette exploded.<sup>22</sup> Photo reprinted with permission from The Waterloo Region Record.

***“Lithium batteries in electronic cigarettes have exploded and caused traumatic... thermal injuries and blast injuries. Locations of injury included extremities (from storing the device in the pockets) and oral/maxillofacial (from device exploding during use). Two patients were carrying the device in their pockets when they spontaneously exploded, causing third-degree burn injuries to their legs and second-degree burn injuries to their genitalia and/or hands. The third individual was using the device when it exploded. He was initially intubated for airway protection and suffered traumatic avulsion and fracture of several teeth and lacerations of the tongue and upper lip, requiring suture repair.”<sup>23</sup>***

- The U.S. Fire Administration warns that in cases where individuals use e-cigarettes to smoke marijuana, “separating hash oil from marijuana is a hazardous process that is often done illegally in hotels and homes. First responders should be aware of this practice and the hazards that it presents.”<sup>24,25</sup>

## Risks to Pregnant Women, Children, and Youth

- **Nicotine is toxic** to pregnant women, fetuses, children, and adolescents.<sup>26</sup>
- New international scientific evidence states that since nicotine can harm lung and brain development, **people who have never smoked, youth, and pregnant women should not use e-cigarettes.**<sup>27, 28,29</sup>
- There are numerous reported cases of nicotine poisoning from e-cigarettes in children under the age of 5 years.<sup>30</sup>
- An 18-month-old died in December 2014 after swallowing liquid nicotine.<sup>31</sup>

## E-Cigarette Use Among Youth

- Adolescents who use e-cigarettes can become addicted to **nicotine which can damage their developing brain.**<sup>32,33</sup>
- Some adolescents use e-cigarettes to consume illegal drugs, such as marijuana. **“Early onset of cannabis use has a tremendous impact on the structure and functioning of the teenage brain.”**<sup>34</sup>
- Some school boards in Canada have passed policies prohibiting e-cigarette use inside classrooms and on school grounds because students were vaping during classes.<sup>35,36</sup>

***“More than half of Canadian youth trying e-cigarettes have never smoked which suggests that youth are experimenting with e-cigarettes rather than using them to quit smoking. Youth who do not see adults smoking or vaping will be less likely to view these as normal social behaviours, and, thereby, are less likely to start themselves.”<sup>37</sup>***

- A survey in 2015 found that 23% of students in grades 7 to 12 in Ontario had tried an e-cigarette. (Prevalence of ever use varied by grade.)<sup>38</sup>
- Another survey in 2015 found that 11.7% of students in grades 7 to 12 in Ontario used e-cigarettes, compared to 8.6% of students who used tobacco cigarettes.<sup>39</sup>
- Among students in grades 9 to 12 who used an e-cigarette in 2015, 19% said they tried smoking it with marijuana, hash oil, or wax.<sup>40</sup>
- The prevalence of e-cigarette use in Canada is highest among youth and young adults. 20% of youth (aged 15-19) and young adults (aged 20-24) surveyed had tried an e-cigarette.<sup>41</sup>
- Using e-cigarettes in public places and workplaces undermines municipal and provincial smoke-free legislation.

***“Nicotine from e-cigarettes has been found to stick to surfaces and second-hand and third-hand risks associated with nicotine exposure persist in indoor settings where e-cigarettes are used. Although the levels of compounds detected in the environment are low overall, there may be health risks associated with passive exposure.”<sup>53</sup>***

## **Risks to Bystanders: Second-Hand Vapour**

- 9.6% of Ottawa residents have asthma.<sup>42</sup>
- 17% of 12- to 19-year olds in the Champlain region have asthma.<sup>43</sup>
- 60% of Canadians with asthma do not have their symptoms under control,<sup>44</sup> thus putting them at increased risk of attacks if exposed to second-hand vapour.
- “Exposure to fine particulates in the aerosol generated by e-smoking may impair respiratory function in users and bystanders.”<sup>45,46</sup>
- “E-devices generate substantial amounts of fine particulate matter, toxins and heavy metals at levels that can exceed those observed for conventional cigarettes.”<sup>47,48</sup>
- Scientific studies found that e-cigarette vapour contains toxins including: nicotine, fine particulate matter, carbonyls, volatile organic compounds, carcinogenic aldehydes, carcinogenic tobacco-specific nitrosamines, and heavy metals (tin, nickel, copper, lead, chromium).<sup>49,50,51,52</sup>

## **Big Tobacco and E-Cigarettes**

- Tobacco companies in the U.S. have purchased electronic cigarette companies and are developing their own e-cigarette brands.<sup>54</sup>
- Tobacco and e-cigarette companies market e-cigarettes to youth.<sup>55,56</sup>
- Tobacco companies use the same tactics to market tobacco and e-cigarette products.<sup>57</sup>
- E-cigarettes have been on the market for more than ten years. If e-cigarettes successfully helped individuals to quit smoking and stay smoke-free as some individuals claim, then why is the tobacco industry still making record profits in 2016?<sup>58</sup> And why have cigarette sales and smoking rates not significantly decreased over the past decade?

## Cigarette Sales and Smoking Rates in Canada Have Plateaued

- Data from the Government of Canada shows that total cigarette sales in Canada<sup>59</sup> have plateaued over the past decade:

YEAR	TOTAL CIGARETTE SALES IN CANADA
2006	30,217,191,194
2007	28,704,713,382
2008	27,559,382,153
2009	28,627,507,225
2010	31,653,615,884
2011	31,653,615,884
2012	31,347,437,105
2013	31,467,896,967
2014	29,478,234,315

- Data from Statistics Canada shows that the smoking rate in Canada<sup>60</sup> has also plateaued:

YEAR	SMOKING RATES IN CANADA
2010	20.8%
2011	19.9%
2012	20.3%
2013	19.3%
2014	18.4%

## Canadian Jurisdictions Prohibiting E-cigarette Use Indoors and Outdoors

- Provinces:**<sup>61</sup>
  - Prince Edward Island<sup>62</sup>
  - Nova Scotia<sup>63</sup>
  - New Brunswick<sup>64</sup>
  - Manitoba (awaiting proclamation)<sup>65</sup>
  - Quebec<sup>66</sup>
  - British Columbia (limited to school property and health board property)<sup>67</sup>
- Municipalities:** More than a dozen communities<sup>68</sup> including:
  - Ottawa, Ontario (inside municipal buildings, on outdoor municipal property, and on OC Transpo buses and properties)<sup>69</sup>
  - Uxbridge, Ontario<sup>70</sup>
  - Essex, Ontario<sup>71</sup>
  - Innisfil, Ontario<sup>72</sup>
  - Lasalle, Ontario<sup>73</sup>
  - Tecumseh, Ontario<sup>74</sup>
  - Edmonton, Alberta<sup>75</sup>
  - Calgary, Alberta<sup>76</sup>
  - Red Deer, Alberta<sup>77</sup>
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<sup>63</sup> *The Nova Scotia Legislature. Bill No. 60 Smoke-free Places Act (amended) and Tobacco Access Act (amended) \**

An Act to Amend Chapter 12 of the Acts of 2002, the Smoke-free Places Act, and Chapter 14 of the Acts of 1993, the Tobacco Access Act \*

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<sup>64</sup> Bill 44 An Act to Amend the Smoke-Free Places Act. New Brunswick. <http://www.gnb.ca/legis/bill/FILE/58/1/Bill-44-e.htm>

<sup>65</sup> The Legislative Assembly of Manitoba. Bill 30 The Non-Smokers Health Protection Amendment Act (E-Cigarettes). <https://web2.gov.mb.ca/bills/40-4/b030e.php>

<sup>66</sup> Assemblée Nationale Québec. Bill No. 44: An Act to bolster tobacco control. <http://www.assnat.qc.ca/en/travaux-parlementaires/projets-loi/projet-loi-44-41-1.html>

<sup>67</sup> Legislative Assembly of British Columbia. Bill 14-2015 Tobacco Control Amendment Act, 2015. <https://www.leg.bc.ca/parliamentary-business/legislation-debates-proceedings/40th-parliament/4th-session/bills/first-reading/gov14-1>

<sup>68</sup> Non-Smokers' Rights Association. Jurisdictions in Canada with Bylaws/Legislation that Prohibit the use of Electronic Cigarettes. January 1, 2016. [http://database.nonsmokersrights.ca/wp-content/uploads/2016/02/E\\_cigs\\_Jan-1\\_16.pdf](http://database.nonsmokersrights.ca/wp-content/uploads/2016/02/E_cigs_Jan-1_16.pdf)

<sup>69</sup> The City of Ottawa. Use of e-cigarettes and 'vaping' not permitted on city properties. News release. March 13, 2015. <http://ottawa.ca/en/news/use-e-cigarettes-and-vaping-not-permitted-city-properties>

<sup>70</sup> The Corporation of the Township of Uxbridge. Bylaw No. 2015-055. <http://town.uxbridge.on.ca/sites/default/files/2015-055%20-%20Smoking%20By-law.pdf>

<sup>71</sup> The Corporation of the Town of Essex. Bylaw Number 1228. Being a By-law to prohibit smoking on any property owned or leased by the Town of Essex. [http://www.essex.ca/en/townhall/resources/Smoke-Free\\_Public\\_Spaces\\_-\\_By-Law\\_1228.pdf](http://www.essex.ca/en/townhall/resources/Smoke-Free_Public_Spaces_-_By-Law_1228.pdf)



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<sup>72</sup> The Corporation of the Town of Innisfil. BY-LAW NO. 111-13 A By-Law of The Corporation of the Town of Innisfil to Prohibit Smoking and Use of Tobacco Products at all designated Town of Innisfil Outdoor Sports and Recreational Spaces.  
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<sup>73</sup> The Corporation of the Town of Lasalle. Bylaw Number 7775. [https://icreate-essex.esolutionsgroup.ca/231110\\_LaSalle/en/our-community/resources/Bylaw\\_-\\_To\\_Prohibit\\_Smoking\\_of\\_Tobacco\\_in\\_public\\_spaces.pdf](https://icreate-essex.esolutionsgroup.ca/231110_LaSalle/en/our-community/resources/Bylaw_-_To_Prohibit_Smoking_of_Tobacco_in_public_spaces.pdf)

<sup>74</sup> The Corporation of the Town of Tecumseh. By-law number 2014-60.  
<http://www.tecumseh.ca/sites/default/files/BYLAW%202014-60.pdf>

<sup>75</sup> City of Edmonton, Bylaw 14614 Public Places Bylaw.  
[http://www.edmonton.ca/bylaws\\_licences/C14614.pdf](http://www.edmonton.ca/bylaws_licences/C14614.pdf)

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<sup>78</sup> City of Vancouver. Bylaw No. 11076 A By-law to amend health By-law No. 9535 regarding electronic cigarettes. <https://www.leg.bc.ca/parliamentary-business/legislation-debates-proceedings/40th-parliament/4th-session/bills/first-reading/gov14-1>