



## **Written Submission to the Health Canada Consultation: Strict regulation of edible cannabis, extracts and topicals**

**February 2019**

## Foreword

The Canadian Paediatric Society (CPS) is pleased to submit the following recommendations in response to the proposed regulations for edible cannabis, cannabis extracts, and cannabis topicals released in the Canada Gazette, Part I in December 2018. Additional recommendations for responsible legislation pertaining to the use, access, storage and packaging of cannabis, particularly as it relates to the paediatric population can be found on both the CPS and Caring for Kids websites.<sup>1</sup>

## Context

**Given the serious risks to health and development of children and youth, it is essential that the regulation of additional cannabis products prioritizes the safety and well-being of Canada's young people.**

Cannabis use during adolescence can cause functional and structural changes to the developing brain, leading to damage. Cannabis use during this age group is strongly linked to: cannabis dependence and other substance use disorders; the initiation and maintenance of tobacco smoking; an increased presence of mental illness, including depression and psychosis; impaired neurological development and possible cognitive decline; and diminished school performance and lifetime achievement.

Rates of acute medical care and hospitalization for younger children who have ingested cannabis unintentionally are increasing. Data from the Canadian Institute for Health Information (CIHI) shows that the number of emergency room visits because of cannabis overdoses in Ontario has almost tripled — from 449 in 2013-14, to nearly 1,500 in 2017-18.<sup>2</sup> In Alberta, the number has nearly doubled over the same timeframe, from 431 to 832.<sup>3</sup>

Just two recent examples of this growing trend include a young girl in Comox, BC who was hospitalized after [accidentally ingesting gummy bears](#) infused with cannabis in October 2018, and two children, aged five and two in Brandon, MB who had to be taken to hospital for treatment after [eating a cannabis-infused chocolate bar](#) as recently as February 2019.

## Incidence and Prevalence

Although cannabis use among Canadian youth aged 15-24 has been declining since 2008, cannabis use in this age group is almost three times higher than that of adults.<sup>4</sup> According to the Canadian Tobacco,

---

<sup>1</sup> Grant C, Bélanger R. Cannabis and Canada's children and youth. *Paediatr Child Health* 2017;22(2): 98-102, <https://www.cps.ca/en/documents/position/cannabis-children-and-youth>; Canadian Paediatric Society, "Marijuana: What parents need to know", <https://www.caringforkids.cps.ca/handouts/marijuana-what-parents-need-to-know>.

<sup>2</sup> Nicholson K. "Spike in cannabis overdoses blamed on potent edibles, poor public education." *CBC News* 28 Aug 2018, <https://www.cbc.ca/news/health/cannabis-overdose-legalization-edibles-public-education-1.4800118>.

<sup>3</sup> Ibid.

<sup>4</sup> Canadian Centre on Substance Use and Addiction. "Canadian Drug Study: Cannabis" Aug 2017, <https://www.cpha.ca/sites/default/files/uploads/resources/cannabis/ccsa-canadian-drug-summary-cannabis-2017-en.pdf>.

Alcohol and Drugs Survey 2015, the prevalence of past-year cannabis consumption was 17.5% among 15- to 17-year-olds and 28.4% among those aged 18 to 24.<sup>5</sup> Regional variations in the frequency of cannabis use exist, with Atlantic and Western provinces reporting higher use than other regions.<sup>6</sup> Indigenous youth are particularly at risk; nearly two-thirds of 15- to 19-year-old Inuit participants from a study in Nunavik, Québec, self-reported past-year use.<sup>7</sup>

**A concerning inverse relationship exists such that as the perceived harm related to cannabis decreases, the frequency of cannabis use increases.**<sup>8</sup> This is a particularly worrying trend that will require significant investments in public education on the risks of cannabis use for youth, as well as long-term and comprehensive monitoring and evaluation to track and respond to trends in cannabis use by those under the age of 25.

## The Effects of Cannabinoids on the Adolescent Brain

Scientific research over the last 15 years has established that the human brain continues to develop into a person's early 20s. As a result, **youth are particularly vulnerable to the effects of cannabis.** As the proposed regulations in the Gazette note, this is because **THC affects the same components in the brain that direct brain development.** The frontal cortex, responsible for higher order cognitive processes such as judgment and decision making, undergoes rapid change during adolescence, and as such, is more susceptible to THC.<sup>9</sup>

Structural changes on MRI have also been documented in youth who use cannabis regularly. They show lower brain volumes, different folding patterns and thinning of the cortex, less neural connectivity and lower white matter integrity, all of which indicate damage by THC.<sup>10</sup> Functional MRI studies in adolescents who use cannabis regularly have demonstrated increased neural activity, which means the brain is working harder to perform tasks.

Regulation of cannabis and additional cannabis products must also reflect the elevated risks associated with the fact that marijuana available today is two to four times higher than from typical products used 40 years ago. **The elevated THC concentrations in marijuana, and in the diverse range of new cannabis products available today (particularly cannabis concentrates such as shatter, dabs and wax) magnifies the impact of cannabinoids on the adolescent brain.**

---

<sup>5</sup> Rotermann M, Macdonald R. Analysis of trends in the prevalence of cannabis use in Canada, 1985 to 2015. Statistics Canada 2018, <https://www150.statcan.gc.ca/n1/pub/82-003-x/2018002/article/54908-eng.htm>.

<sup>6</sup> WHO, 2012.

<sup>7</sup> Brunelle N, Plourder C, Landry M, et al. Patterns of psychoactive substance use among youths in Nunavik. *Indigene* 2010;2:1-12.

<sup>8</sup> Boak A, Hamilton Ha, Adlaf EM, Mann RE. Drug Use Among Ontario Students, 1977-2015: Detailed OSDUHS Findings. CAMH Research Document Series, No. 41. Toronto: Centre for Addiction and Mental Health, 2015.

<sup>9</sup> George T, Vaccarino F, eds. Substance Abuse in Canada: The Effects of Cannabis Use During Adolescence. Ottawa: Canadian Centre on Substance Abuse, 2015.; Blakemore SJ. Teenage kicks: Cannabis and the adolescent brain. *Lancet* 2013;381(9870):888-9.; Anderson VA, Anderson P, Northan E, Jacobs R, Catroppa C. Development of executive functions through late childhood and adolescence in an Australian sample. *Dev Neuropsychol* 2001;20(1):385-406.

<sup>10</sup> Lisdahl KM, Wright NE, Kircher-Medina C, Maple KE, Schollenbarger S. Considering cannabis: the effects of regular cannabis use on neurocognition in adolescents and young adults. *Curr Addict Rep* 2014;1(2):144-56.

## Edible Cannabis Intoxication

Consuming cannabis-infused edibles poses a heightened risk for toxicity as absorption can take hours, compared with minutes when smoking.<sup>11</sup> An individual who does yet feel an effect may over-consume, particularly if they are a naïve user or if the product does not have clear and prominent labelling including THC concentration, recommended dosage, and usage warnings.

**Of particular concern regarding the safety and regulation of edible cannabis is the unintended consumption of edibles, particularly those that look like sweets such as chocolate bars, cookies and gummy bears, by young children.** In Colorado, rates of unintentional ingestion in children <9 years of age increased by 34% after legalization.<sup>12</sup> 35% of these cases required hospitalization for overdose symptoms, including severe drowsiness and respiratory depression.<sup>13</sup>

In the months since legalization, there has already been an increase in both children and adults seeking treatment in hospitals for overdose symptoms. In order to curb this trend and ensure overdoses and accidental ingestion rates do not spike further following the legalization of additional cannabis products, **strict regulations are needed concerning packaging and labelling, as well as increased investments in public education on the risks of cannabis use, particularly for adolescents.**

## Conclusion

Youth should not use cannabis recreationally because of the seriousness of its many potentially harmful effects. These effects are present in the entire population; however, the developing brain is especially sensitive to the negative consequences of cannabis use. Canadian youth are at significant risk for developing cannabis use disorder and, possibly, for doubling their risk of having a psychotic illness. Where cannabis, and cannabis edibles in particular, have been legalized in the United States, children are requiring emergent medical care at greater rates due to unintentional ingestion.

The legalization of additional cannabis products will have a significant impact on the health of Canada's young people. Clear and comprehensive safeguards are necessary. **While the proposed regulations presented in the Gazette I recognize the need to ensure packaging is child-resistant and products are not appealing to kids, significantly stronger regulations are necessary in order to responsibly protect the health and safety of children and youth.**

## Recommendations

Cannabis use has a real and significant impact on the health, development and well-being of children and youth. For this reason, it is essential that any regulation of cannabis and additional cannabis products prioritizes the unique needs of children and youth, focuses on minimizing risk, and significantly strengthens public education efforts. **Perhaps of greatest concern regarding the proposed regulations for additional cannabis products is the subjective requirement that products “must not be appealing**

---

<sup>11</sup> Friese B, Slater Md, Annechino R, Battle RS. Teen use of marijuana edibles: A focus group study of an emerging issue. J Prim Prev 2016;37(3):303-9.

<sup>12</sup> Wang GS, Le Lait MC, Deakynne SJ, Bronstein AC, Bajaj L, Roosevelt G. Unintentional pediatric exposures to marijuana in Colorado, 2009-2015. JAMA Pediatr 2016;170(9):e160971.

<sup>13</sup> Ibid.

**to kids”**. The Task Force recommended much stronger recommendations than have been proposed in the Gazette, arguing that **any product that resembles or mimics familiar food items, or is packaged to look like candy, should be prohibited. The CPS recommends enforcing this recommendation and banning edibles that are in any way attractive to children**. Doing so will help to reduce accidental consumption and overdose and will decrease the appeal of cannabis products for children and youth.

The CPS also endorses the following relevant recommendations presented by the Task Force:

- Any product deemed to be appealing to children, including products that resemble or mimic familiar food items, or that are packaged to look like candy, should be prohibited;
- Mixed products should be prohibited; including cannabis infused alcoholic beverages and cannabis products with tobacco, nicotine or caffeine;
- Strategies should be developed to encourage consumption of less potent cannabis;
- A flexible legislative and regulatory framework should be enabled at the federal level, which could adapt to new evidence and establish rules for limits on THC or other components;
- The Government of Canada should develop and implement factual public education strategies to inform Canadians about the risks of problematic use and provide guidance on lower-risk use

In addition, the CPS recommends the following measures to protect children and adolescents from the harms associated with recreational cannabis use and additional cannabis products:

- Consider limiting the concentration of THC in cannabis and additional cannabis products that 18- to 25-year-olds can purchase legally
- Enact and rigorously enforce regulations on the cannabis industry to limit the availability and marketing of cannabis to minors. These regulations must:
  - Mandate and enforce a ban on the marketing of additional cannabis products using strategies or venues that attract children and youth, including (but not limited to) edibles, ‘giveaways’ and promotion through social media
  - Mandate strict labelling standards for all cannabis products, including a complete and accurate list of ingredients and an exact measure of THC and CBD concentrations
  - Mandate package warnings for all cannabis products, including known and potential harmful effects of exposure (e.g., to young children and the fetus during pregnancy)
  - Mandate and enforce strict marketing and promotional standards, including a ban on all cannabis industry-related advertising and on the sponsorship of events, activities or permanent facilities by the cannabis industry
- Fund public education campaigns to reinforce that cannabis is not safe for children and youth by raising awareness of the harms associated with cannabis use and dependence. These campaigns should be developed in collaboration with youth leaders and should include messages from young opinion-leaders
- Increase funding for the research, prevention and treatment of substance use in adolescents and young adults
- Increase funding for mental health promotion and treating mental illness in this group
- Consult with Indigenous communities on adapting legislation, preventative measures and/or interventions to meet local conditions and cultural requirements
- Actively monitor the impacts on youth of changes to cannabis legalisation

## About the CPS

The Canadian Paediatric Society is the national association of paediatricians, committed to working together to advance the health of children and youth by nurturing excellence in health care, advocacy, education, research and support of its membership. Founded in 1922, the CPS is a voluntary professional association that represents more than 3,300 paediatricians, paediatric subspecialists, paediatric residents, and others who work with and care for children and youth. The CPS is governed by an elected Board of Directors representing all provinces and territories.