

# Cannabis Poisoning Among BC Children



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## Background

The recreational use of cannabis—also known as marijuana, weed, or pot—became legal in Canada in October 2018.<sup>1</sup> This drug is commonly used among Canadian youth.<sup>2</sup>

This psychoactive substance can elicit feelings of euphoria when consumed in moderation,<sup>3</sup> but can have negative effects if too much is consumed or if the users are inexperienced. Young children are vulnerable to poisoning from inadvertently consuming cannabis and products containing cannabis (e.g., edibles, topicals).<sup>4</sup>

This study looked at cannabis poisonings among children aged 16 years or younger who were treated at the BC Children's Hospital's Emergency Department before and two-months after legalization.

## Children and Cannabis (0-11-years-old)

Compared to intentional use, few poisonings resulted from unintentional ingestion of cannabis. However, early research suggests that very young children are at greater risk of more serious side effects from consuming cannabis.<sup>5</sup>

The median age\* for unintentional ingestion of cannabis leading to poisoning was 3 years old. In all cases, cannabis products unintentionally ingested belonged to the child's parents or siblings and were left lying around. These included edibles (e.g., brownies, chocolate, candy), topicals, and cannabis cigarettes.

Most unintentional ingestions occurred on the weekend (Saturday and Sunday). In all cases, unintentional exposure to cannabis occurred at the child's home.

Children are vulnerable to **cannabis poisoning** due to their **fast metabolism** and **low body weight**.<sup>4,6</sup>



**12.5%** of all poisoning-related **emergency department visits** were because **cannabis** was consumed intentionally



Rates of cannabis consumption among Canadians 15 years and older **peaked briefly after legalization**, but have since **returned to levels similar to before legalization**.<sup>10-12</sup>

Common signs of **cannabis poisoning** include:<sup>7-9</sup>



vomiting



dizziness



slurred speech



decreased consciousness



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**One-fifth** of **grade 7 to 12 students** across Canada reported **past cannabis use** <sup>2</sup>

The median age\* for **intentional cannabis use** leading to poisoning was **15** years of age 

## Teens and Cannabis (12–16-years-old)

The majority of cannabis poisonings among youth resulted from intentional use.

Poisoned teens most frequently reported inhaling cannabis, such as through a blunt, joint, bong, pipe, or vaporizer. Edible use leading to poisoning was infrequent.

Most poisonings involved the use of cannabis with one or more other psychoactive substances. These included alcohol, illicit drugs, and/or medication with alcohol being the most popular co-ingested substance.

Both cannabis-only and co-ingestion poisonings were more prevalent on weekdays. Most reported consuming cannabis with peers and in residential spaces (i.e., at home or at a friend's house).

The risk of poisoning **increases** when **substances**, such as alcohol,



are consumed at the **same time** or **before or after cannabis**

<sup>13</sup>

### Study Details

Data was provided by the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP). CHIRPP is an emergency department (ED) surveillance system that collects information on all injuries, including poisoning. Data was collected from the emergency department of BC Children's Hospital for cannabis-related injuries between January 1, 2016 and December 31, 2018.

For more information, visit: <https://bit.ly/37kA3DE>

## Preventing Cannabis Poisoning

Although cannabis poisoning does not often result in long-term harm, the symptoms can require emergency department care. To prevent poisoning:

- Properly store all cannabis products out of the reach of young children.
- Have a conversation about cannabis use, its health risks, symptoms of cannabis poisonings, and harm reduction behaviours.
- Recognize the signs of cannabis poisoning so you can intervene as a bystander.
- If you suspect symptoms of cannabis poisoning, call the BC Drug and Poison Information Centre (1-800-567-8911).

\* The median is the middle number in a sorted, ascending or descending, list of numbers and can be more descriptive of that data set than the average. For a data set, it may be thought of as the "middle" value.

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### References

1. HealthLink BC. Cannabis [Internet]. 2018 [cited 2019 May 15]. Available from: <https://www.healthlinkbc.ca/health-feature/cannabis>
2. Health Canada. Summary of results for the Canadian Student Tobacco, Alcohol and Drugs Survey 2018-19 (CSTAD) [Internet]. 2019 [cited 2020 Jan 5]. Available from: <https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey/2018-2019-summary.html>
3. Sharma P, Murthy P, Bharath MMS. Chemistry, metabolism, and toxicology of cannabis: Clinical implications. *Iran J Psychiatry*. 2012;7(4):149-56.
4. Guidet C, Gregoire M, Le Dreau A, Vrignaud B, Deslandes G, Monteil-Ganière C. Cannabis intoxication after accidental ingestion in infants: urine and plasma concentrations of <sup>11</sup>-9-tetrahydrocannabinol (THC), THC-COOH and 11-OH-THC in 10 patients. *Clin Toxicol [Internet]*; 2019 [cited 2019 Jun 1]. Available from: <https://doi.org/10.1080/15563650.2019.1655569>
5. Murti M. Pediatric presentations and risks from consuming cannabis edibles. *B C Med J [Internet]*. 2017 [cited 2020 May 14];59(8):398-399 COHP. Available from: <https://www.bcmj.org/cohp/pediatric-presentations-and-risks-consuming-cannabis-edibles>
6. Meier MH, Docherty M, Leischow SJ, Grimm KJ, Pardini D. Cannabis concentrate use in adolescents. *Pediatrics*. 2019;144(3):e20190338. doi: <https://doi.org/10.1542/peds.2019-0338>
7. Murphy K. "Greening out": treating cannabis-related problems in the ED. *Nurs Made Incred Easy*. 2017;15(6):47-50.
8. Chen YC, Klig JE. Cannabis-related emergencies in children and teens. *Curr Opin Pediatr*. 2019;31(3):291-6.
9. Ashton HC. Pharmacology and effects of cannabis: a brief review. *Br J Psychiatry*. 2001;178(2):101-6.
10. Statistics Canada. National Cannabis Survey, first quarter 2019. *The Daily*, May 2. Statistics Canada catalogue no. 11-001-X [Internet]. 2019. Available from: <https://www150.statcan.gc.ca/n1/daily-quotidien/190502/dq190502a-eng.htm>
11. Statistics Canada. National Cannabis Survey, second quarter 2019. *The Daily*, August 15. Statistics Canada catalogue no. 11-001-X [Internet]. 2019. Available from: <https://www150.statcan.gc.ca/n1/daily-quotidien/190815/dq190815a-eng.htm>
12. Statistics Canada. National Cannabis Survey, third quarter 2019. *The Daily*, October 30. Statistics Canada catalogue no. 11-001-X [Internet]. 2019. Available from: <https://www150.statcan.gc.ca/n1/daily-quotidien/191030/dq191030a-eng.htm>
13. Singh AK. Alcohol interaction with cocaine, methamphetamine, opioids, nicotine, cannabis, and  $\gamma$ -hydroxybutyric acid. *Biomedicines [Internet]*. 2019 Mar 7 [cited 2019 Jul 15];7(16):1-31. Available from: <https://www.mdpi.com/2227-9059/7/1/16>