

Alcohol Poisoning Among BC Youth



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Background

The legal drinking age in British Columbia (BC) is 19-years-old, yet youth often have their first alcoholic drink before they reach this age.¹

Alcohol can affect the developing brain, which continues to develop until the mid-20s—which is why there are policies restricting alcohol consumption by youth.² Although alcohol use among underage youth has been declining,^{1,3} alcohol poisoning continues to be prevalent in this age group.⁴

This study looked at alcohol poisoning among BC youth 16-years-old or younger who were treated at the BC Children's Hospital's emergency department (ED) between 2011 and 2019.*

Youth and Alcohol

Overview

Around one-third (34%) of the total poisonings treated at BC Children's Hospital were alcohol-related. All reported that they had intended to consume alcohol, but the majority of the poisonings were unintentional. The median patient age was 15-years-old.** The youngest patient was 11-years-old and the oldest patient was 16-years-old.

When and where

Youth reported consuming alcohol in the evening and into the morning hours, between 6:00 PM and 5:59 AM, on weekends (Friday, Saturday, and Sunday). Youth most often consumed alcohol with friends or peers. Most poisonings occurred in homes, while one-fifth of youths reported being on the road or street.

Females were more likely than males to visit the ED for alcohol poisoning. More males reported binge drinking than females. 49% of males reported binge drinking: consuming

five or more standard drinks, and 40% of females reported binge drinking: consuming four or more standard alcoholic drinks. Females mostly consumed only distilled alcohol, such as rum, vodka, and tequila, while males had more variety, consuming spirits, fermented alcohol (e.g., beer, wine, cider), or a mix of both.

A standard drink:⁵

- Beer: 5% alcohol by volume (ABV); 12 oz or 341 ml
- Cider or Cooler: 5% ABV; 12 oz or 341 ml
- Wine: 12% ABV; 5 oz or 142 ml
- Spirits: 40% ABV; 1.5 oz or 43 ml

39% of males and 40% of females combined alcohol with other substances. Cannabis was the substance most frequently co-ingested, followed by illicit drugs and medication.

Male youth were more likely to receive help from bystanders than friends and family, and female youth were more likely to receive help from bystanders and friends, rather than from family members.

Around **1/3** (34%) of the total **poisonings treated** at BC Children's Hospital were **alcohol-related**



* Note: Alcohol poisoning varies in severity and is dependent on the person consuming the alcohol and factors including tolerance, physical weight and height, and conditions before and after consumption (food intake, etc). Symptoms of alcohol poisoning can be similar to those who are "drunk." For this factsheet, a diagnosis of "alcohol poisoning" was coded based on a review of discharge notes and physician documentation.

** The median is the middle number in a sorted, ascending or descending, list of numbers. It may be interpreted as the "middle" value.

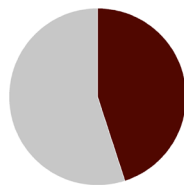
Youth most often consumed alcohol on **evenings and weekends**, with **friends or peers**, in **homes**



Over **one-fifth** (22%) of youth who went to the ED for poisoning **consumed cannabis** at the same time as alcohol



Almost **half** (44%) of all BC youth (ages 12 to 19) have **consumed alcohol** in the past year¹



The average age of **first-time alcohol use** by BC youth was **14** years of age^{1,11}



Negative effects of alcohol consumption

Signs of alcohol poisoning* include nausea and/or vomiting, a decreased level of consciousness, slurred speech, reduced inhibition, slowed reflexes, and impaired attention and judgment. Signs of more severe cases include clammy skin, low body temperature, slow and laboured breathing, and incontinence (loss of bladder control). In rare cases, severe alcohol poisoning can lead to death.^{6,7}

Females are generally more sensitive to the effects of alcohol than males. Continued abuse of alcohol is associated with impediments in brain development,⁸ depression and anxiety,⁹ and social problems.¹⁰ Furthermore, younger alcohol users are more likely to experiment with other psychoactive substances¹¹ and face a greater risk of developing alcohol-related disorders in adulthood.¹²

Symptoms of alcohol poisoning:^{6,7}



Nausea/
vomiting



Impaired
attention



Slowed
reflexes



Reduced
inhibition



Decreased
consciousness



Slurred
speech

Preventing Alcohol Poisoning

Alcohol poisoning does not often result in long term harm, but symptoms can require emergency department care. Long-term and frequent consumption of alcohol can have negative consequences on overall health.

- ☑ Practice harm reduction: encourage youth to plan ahead, have a meal before drinking alcohol, and to not mix alcohol with other substances, such as cannabis and illicit drugs.
- ☑ Encourage youth to be aware of how characteristics such as age, sex, body weight, how much and what they eat before drinking, their drinking pace, and their immediate environment can impact their drinking outcome.
- ☑ Be involved in your children's lives—talk to them about alcohol use, symptoms of alcohol poisoning, and have conversations about underage drinking.
- ☑ If you see someone unconscious/losing consciousness from alcohol use, do not leave them alone. Roll them onto their side so they are not at risk of choking on their vomit: tilt their head back and tuck a hand under their chin so their airway is clear. Bend their top leg and bottom arm. Call 911 if you cannot wake them.¹³

Study Details

Data was provided by the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP). CHIRPP is an ED surveillance system that collects information on all injuries, including poisoning. Data include alcohol poisonings treated in the ED at BC Children's Hospital between January 1, 2011, and December 31, 2019. The hospital's electronic health information system and patient's health records were reviewed to collect additional information on their drinking practices.

**For more information,
[read the article here.](#)**

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