

# Understanding Substance Use

## Educator's Guide



## Acknowledgements

The Educator's Guide and the accompanying series of video modules have been designed to support and equip educators with information and resources to promote well-being and reduce substance related harms among youth.

The series includes the following modules:

- Understanding Substance Use
- Understanding Stigma
- Understanding Cannabis Vaping
- Understanding Alcohol
- Understanding Impaired Driving

The Educator's Guide and modules were developed by the Canadian Centre on Substance Use and Addiction (CCSA) with support and funding from Durham District School Board, Durham Catholic District School Board and Kawartha Pine Ridge District School Board to support educators' learning on the topic of substance use.

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# Introduction

## Overview

The Canadian Centre on Substance Use and Addiction (CCSA) codeveloped the Understanding Substance Use video series and an accompanying Educator's Guide with the Durham District School Board, Durham Catholic District School Board and Kawartha Pine Ridge District School Board to help educators learn about substance use. By increasing knowledge and awareness of substance use, these resources help educators promote well-being and reduce substance-related harms in young people.

## The Role of Schools, Educators and Youth Allies

Schools play an important role in promoting the health and well-being of young people. Besides supporting academic learning, they also provide a safe environment for the personal and social development of youth and for them to establish lower-risk substance use behaviours.

Educators are uniquely positioned to influence students' health and well-being, and promote healthy lifestyle choices (Pan-Canadian Joint Consortium for School Health, 2015). As an educator, you do not have to be an expert on substance use, but you can develop knowledge and skills to effectively support students and their caregivers.

Conversations around substance use can be difficult and not all educators may be comfortable or feel ready to have them. It's okay to be unsure about how to navigate these conversations. This guide and accompanying modules have been designed as a step towards increasing your knowledge and providing resources to get you ready and feel more confident to engage with youth about substance use.

## About the Video Modules and Educator's Guide

The video modules and this accompanying guide have been developed for professionals in educational settings working with youth from grades 6 to 12, including teachers, guidance counsellors, social workers, coaches, administrators and other staff who may benefit from this training. The modules and guide can be used for independent or small group learning.

These resources are organized into five key topic areas:

### Part 1: Understanding Substance Use

This section explores the basics of substance use, including the spectrum of use and substance use disorders. It also covers factors that can increase the risk of developing a substance use disorder, how to reduce harms associated with substance use and how educators can support youth.

### Part 2: Understanding Stigma

This section describes what substance use stigma is, the different types of stigma, how stigma can be a barrier for people seeking and receiving care, and the role we can all play to reduce substance use stigma and promote compassion and understanding.

### Part 3: Understanding Cannabis Vaping

This section covers what cannabis vaping is, the harms associated with vaping cannabis, and strategies to reduce risk.

**Part 4: Understanding Alcohol**

This section explores what alcohol is and how it affects people. It describes different alcohol products, the health risks and harms associated with drinking alcohol, and ways to reduce risk.

**Part 5: Understanding Impaired Driving**

This section covers impaired driving in Canada and how substances affect driving performance. It provides information about the risks, harms and consequences of driving while impaired, the enforcement of impaired driving laws, and how to support youth to lower their risks of driving impaired.

***How to Use the Video Modules and Educator's Guide***

Use this guide with the five video modules. The guide provides in-depth information on key concepts, exercises for self-reflection or group discussions, and resources for further reading.

***What this Guide Does and Does Not Do***

Using this guide will help you understand substance use, providing you with knowledge and tools to support your students and other educators.

This guide has not been designed for classroom activities or to replace curriculum on these topics.

This resource does not provide the knowledge or training needed to diagnose or treat substance use disorder, nor to offer specific substance use services.

If you suspect or become aware of a student in need of substance use services, please consult your school counsellor, psychologist, social worker, mental health lead, principal or a healthcare professional to ensure appropriate care is made available. Refer to page 74, Support and Services for further resources.

## Terminology

Throughout the video modules and this guide, various terms are used for key concepts on substance use, stigma, cannabis vaping, alcohol and impaired driving. Please review these terms to better understand the concepts.

### **2SLGBTQQIA+**

This acronym refers to two-spirit, lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual, and other sexually and gender diverse people. 2SLGBTQQIA+ youth are at higher risk of substance use disorder (Canadian Mental Health Association [CMHA], Ontario, n.d.-a).

### **addiction**

Addiction refers to psychoactive substance use that becomes a habit or compulsive despite negative health and social effects. Addiction is present when it is difficult to stop using a psychoactive substance due to neurological changes caused by the substance. Addiction is a treatable, chronic health condition, like diabetes or cancer (American Society of Addiction Medicine, 2019).

While the term addiction is still widely used, it is increasingly considered stigmatizing. It is best to use clinically accurate, person-first terminology such as a **person with a substance use disorder**.

### **adverse childhood experiences**

Adverse childhood experiences (ACEs) are negative, stressful and traumatizing events that are experienced before the age of 18 years. These events can increase health risks across the lifespan (Alberta Family Wellness Initiative, n.d.-a).

### **alcohol by volume**

Alcohol by volume (ABV) is a measurement of the amount or concentration of alcohol in an alcoholic drink. It is measured as a percentage. The higher the ABV, the more alcohol a beverage contains and the stronger it is. For example, a beer labelled “5% ABV” means that 5% of the volume of the drink is pure alcohol (Drinkaware, 2020).

### **alcohol poisoning**

Alcohol poisoning, also known as alcohol over-intoxication, is what happens when a person consumes more alcohol than their body can handle. Alcohol poisoning is very serious and can lead to brain damage or even death if not treated quickly.

### **alcohol use disorder**

Alcohol use disorder (AUD) is a medically diagnosed and treatable chronic health condition, like diabetes or arthritis. AUD can be mild, moderate or severe. People who experience AUD are not able to control their alcohol use, even when it has negative effects on their physical and mental health, and other aspects of their life. This is because the heavy use of alcohol can cause physiological changes to the brain that affect the reward system and decision making (Alberta Family Welfare Initiative, n.d.-e; Harvard Health, 2019).

### **blood alcohol content**

Blood alcohol content (BAC) is a measurement of the amount of alcohol in a person's blood. It is measured as milligrams (mg) per 100 millilitres (mls) of blood. When driving, the prohibited level for alcohol is 80 mg in 100 mls of blood, expressed as 0.08 BAC (Justice Canada, 2021a).

**cannabis**

Cannabis, also commonly called marijuana, weed or pot, is a product made from the cannabis plant. It is best known for its psychoactive or intoxicating effects called a “high.” Cannabis is the preferred term as some of the other commonly used names have been associated with the discrimination and marginalization of certain groups or identities.

**cannabidiol**

Cannabidiol (CBD) is the component in cannabis that does not produce a high but can lead to drowsiness. It is being studied for its potential health benefits and medical applications. While research is ongoing, not enough is presently known about the effectiveness of CBD for treating or managing health conditions.

**concurrent disorder**

In this guide, a concurrent disorder is when a person has a mental health condition and a substance use disorder. This could include a person with depression and a cannabis use disorder, a person with bipolar disorder who engages in problematic use of alcohol, and so on (CMHA, National, 2018; CMHA, Ontario, n.d.-b).

**flavoured, purified alcoholic beverages**

Flavoured, purified alcoholic beverages are high-sugar, high-alcohol pre-mixed drinks sold in single serving containers. The sweetness of these beverages can mask the flavour of alcohol, making them particularly appealing to young people, but also dangerous, since they can lead to unintentional overconsumption. Although new legislation now limits the amount of alcohol allowed in one single serving container, they still pose considerable risks to young people (Health Canada 2019f).

**gender**

“Gender refers to the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people. It influences how people perceive themselves and each other, how they act and interact, and the distribution of power and resources in society. Gender identity is not confined to a binary (girl/woman, boy/man) nor is it static; it exists along a continuum and can change over time” (Canadian Institutes of Health Research, 2020).

**harm reduction**

Harm reduction is an evidence-based approach to reduce the negative consequences associated with substance use without necessarily needing a person to stop using substances (CMHA, Ontario, n.d.-c). Examples of harm reduction practices include overdose prevention sites, needle distribution programs, reducing use or switching to less toxic substances (CMHA, Ontario, n.d.-c; National Harm Reduction Coalition, 2020a).

**lived and living experience of substance use**

“Lived experience refers to people who have used one or more substances and who are currently in recovery. Living experience refers to people who are currently using one or more substances” (CCSA, n.d.-a).

**impairment (driving)**

Impairment (driving) Is when consumption of a substance affects a person’s ability to drive safely. An impairing amount of a substance is a blood concentration level at which driving becomes dangerous for nearly all people.



**impaired driving**

Impaired driving is the operation of any motorized vehicle, including cars, motorcycles, all-terrain vehicles, snowmobiles, jet skis, boats, airplanes, even e-scooters and e-bikes, after consuming an amount of alcohol, other drugs or a combination of both that affect your ability to drive safely. Impaired driving is an offence under the *Criminal Code* in Canada and is a serious public health and safety issue.

**alcohol-impaired driving**

Alcohol-impaired driving is operating any motorized vehicle after consuming an amount of alcohol that affects your ability to drive safely. In Canada, we use blood alcohol content (BAC) to measure impairment. The *Criminal Code* of Canada sets the allowable BAC limits for drivers in Canada. If a driver is found to have a BAC between 0.05 and 0.08, they are subject to non-criminal penalties (see short-term administrative sanctions). If a driver is found with a BAC at or above 0.08, they are subject to criminal penalties and non-criminal penalties. New and young drivers face penalties if they are found with any amount of alcohol in their blood.

**drug-impaired driving**

Drug-impaired driving is operating any motorized vehicle after consuming an amount of a psychoactive substance that affects your ability to drive safely. This includes illicit drugs like cocaine and heroin, legal drugs such as cannabis, and prescription and over-the counter medications like some cold medicines. Drug-impaired driving is a criminal offence in Canada. New drivers face penalties if they are found with any amount of psychoactive drug in their blood.

**Low-Risk Alcohol Drinking Guidelines**

The Low-Risk Alcohol Drinking Guidelines (LRDGs) provide recommendations on alcohol consumption limits based on standard drinks to support people in reducing alcohol-related harms should they choose to drink. The LRDGs “recommend that youths delay starting to drink alcohol for as long as possible” or at least until the legal drinking age (CCSA.2014a).

**naloxone**

Naloxone is a medication known as an opioid antagonist. It is used to counter the effects of an opioid overdose (National Harm Reduction Coalition, 2020b). Naloxone kits are available free of charge at many pharmacies without a prescription, and training on using the kit is available online.

**novice driver**

In a graduated licensing system, a novice driver is a new or young driver who has not completed all the necessary stages to be considered a fully licensed driver in their province or territory. Novice drivers have certain restrictions when driving, which could include that they be accompanied by a fully licensed driver, that they cannot drive between midnight and 5:00 a.m. and that they cannot drive after consuming any amount of alcohol or drugs (zero-tolerance policy).

**overdose**

Overdose, also known as drug poisoning or alcohol poisoning, “happens when a toxic amount of a drug, or a combination of drugs overwhelms the body” (National Harm Reduction Coalition, 2020c).

**over-intoxication**

Over-intoxication happens when a person consumes more of a drug than their body can handle. Over-intoxication (as opposed to overdose) is a term often used with substances where the risk of fatality is lower (such as cannabis or alcohol), but over-intoxication can be very serious and can lead to mental and physical harm that may require medical attention.

**over-the-counter-medications**

Over-the-counter-medications are drugs you can buy from a pharmacy without needing a prescription. Examples of over-the-counter drugs are cold, flu and allergy medications.

**polysubstance use**

The act of consuming more than one drug at a time. This includes using prescription medications in combination with other drugs, including alcohol.

**problematic substance use**

Problematic substance use is use that begins to have negative effects or consequences on the individual, family, friends or society. It occurs when a person continues to use one or more substances despite these negative effects, or it is difficult for them to stop using substances despite these negative effects. These negative effects can include:

- Engaging in risky or out-of-character behaviour; for example, driving a car after using a psychoactive substance or engaging in unprotected sex.
- Withdrawal and loss of social connections.
- Missing school or declining grades.
- Physical harms such as respiratory problems from substances that are inhaled.
- Mental health impacts, such as anxiety or depression.

**psychoactive substances**

Psychoactive substances affect a person's cognition, mood or emotions when used. Examples include alcohol, opioids and cannabis (World Health Organization, n.d.).

**recovery (substance use disorder)**

"Recovery is a dynamic process towards well-being that is free of stigma and discrimination and is unique to individual strengths, cultures and experiences. Recovery is supported by collaboration among services across many levels, including communities, sectors and systems. It extends beyond the individual and involves family, peers and workplaces. Recovery is multidimensional, involving all aspects of physical, social, mental, emotional and spiritual health" (CCSA, n.d.-b) and can look different for everyone.

**recovery capital**

Recovery capital includes the resources available to a person to initiate and sustain their recovery and well-being. Examples include having access to supportive social relationships, a job, stable housing, and treatment and recovery supports (Recovery Capital Conference of Canada, n.d.).

**sex**

"Sex refers to a set of biological attributes in humans and animals. It is primarily associated with physical and physiological features including chromosomes, gene expression, hormone levels and function, and reproductive/sexual anatomy. Sex is usually categorized as female or male, but there is variation in the biological attributes that comprise sex and how those attributes are expressed" (Canadian Institutes of Health Research, 2020).

**short-term administrative sanctions**

Short-term administrative sanctions are temporary penalties applied by provincial and territorial jurisdictions to people who drive under the influence of alcohol, other drugs or both. They can be applied to drivers who are impaired below the *Criminal Code* limits, as well as those above. For example, a driver found with a BAC between 0.05 and 0.08 may not face criminal charges but could face administrative sanctions. These sanctions can include temporary licence suspension, vehicle impoundment, fines and administration fees (CCSA, 2021i).

**substance use**

Substance use is the self-administration of a psychoactive substance, such as alcohol, cannabis, opioids or other substances.

**substance use disorder**

Substance use disorder is substance use that becomes compulsive despite negative health and social effects. Previously called addiction, substance use disorder is the clinical term for a health condition in which it is difficult for a person to stop using psychoactive substances due to neurological changes caused by the substance being used. Substance use disorder is a medically diagnosed and treatable chronic health condition, like diabetes or cancer.

**tetrahydrocannabinol (THC)**

THC is the primary component in cannabis that produces the high and impairing effects (e.g., impaired concentration, short-term memory and motor skills). If a person becomes over-intoxicated from using cannabis, it is because they have consumed more THC than the body can tolerate.

**well-being**

“Well-being may be defined as the experience of health, happiness and life satisfaction. It will appear differently from one individual to another, with each having their own definition of what well-being means to them. Well-being can encompass a range of indicators, including physical, emotional and mental health; meaning and purpose in life, connections with others, and the ability to manage stress” (CCSA, n.d.-b).

**withdrawal**

Withdrawal is the physical and mental effects a person experiences when they reduce their intake of or stop using a substance they are dependent on. “Symptoms of withdrawal can range from mild (e.g., anxiety, poor sleep) to severe or potentially life-threatening (e.g., hallucinations, seizures). Withdrawal management, also known as detoxification, helps people who are physically dependent on a substance or substances to safely withdraw from them” (CCSA & Canadian Executive Council on Addictions, 2017).

**youth**

Depending on the source, the terms “youth” and “young people” can refer to people between the ages of 12 and 30 years old. For the purposes of this guide, we will be using these terms to refer people between the sixth grade and the final year of high school.

# PART 1: Understanding Substance Use

## Module Introduction

This section provides you with an overview of substance use, including the spectrum of use, descriptions and examples of problematic substance use and substance use disorders, risk factors, and strategies for reducing harms and supporting youth.



To get started, watch the video module [Understanding Substance Use](#). Once completed, work through this section of the guide and complete the reflection exercises.

### Key concepts and takeaways:

- Substance use varies from person to person and occurs along a spectrum.
- Some may use substances and never experience problematic substance use or a substance use disorder.
- Substance use disorder is not a choice but a complex medical condition that can affect the structure and function of the brain.
- Numerous factors can increase the risk of developing problematic substance use or a substance use disorder. These include genetic profile, family history of substance use disorder, socioeconomic influences and trauma.
- Not all people who have risk factors or who use substances develop problematic use or a substance use disorder.
- People who experience adverse childhood experiences (ACEs) are at increased risk of having poorer outcomes in learning, relationships, and physical and mental health, including substance use.
- ACEs can be prevented, and their effect can be minimized.
- Problematic substance use and substance use disorders are treatable.

## Youth Substance Use

Youth may begin experimenting with substances from an early age. According to a survey of people in Canada who are in recovery from a substance use disorder, the average age of first use was 13 years old (McQuaid et al., 2017).

Alcohol and cannabis are the most common and frequently used substances among youth. For most, substance use is experimental or occasional and low risk. However, a minority develop problematic use and experience substance-related harms. Young people are more likely to engage in risky forms of use (e.g., impaired driving) and experience harms as a result. Youth who use substances at an early age and engage in heavy patterns of use are also at risk of developing dependence that can continue into adulthood (CCSA, 2007).

### Reasons youth may use substances:

- curiosity
- peer pressure
- boredom
- to relieve stress, anxiety or pain
- to feel good
- to enhance academic or physical performance
- rebellion

### Spotting signs of youth substance use:

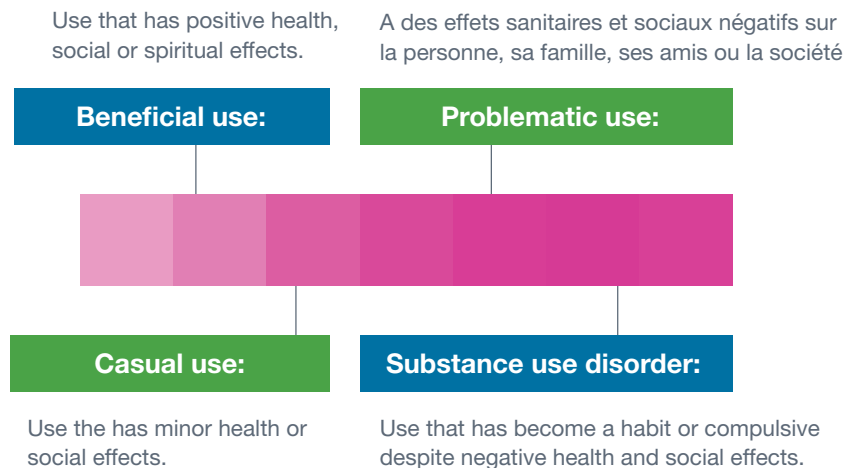
- **Changes in personality or mood:** uncommunicative or withdrawn, angry or aggressive, loss of inhibitions, a lack of motivation
- **Physical health and appearance:** unusually tired, slurred or quick speech, frequent illness, sudden weight loss or gain, seizures or vomiting, unusual smells on their clothes or breath, neglected personal hygiene and appearance
- **Behavioural changes:** change in their relationships with family or friends, secretive behaviour or a desire to be left alone, make excuses, declining grades or frequent absences from school, problems with money (Ali et al., 2011)

While some of these signs may be associated with expected behaviour in youth, many are also symptoms of substance use. If you suspect substance use or if you become aware of a youth in need of substance use services, please consult your school counsellor, psychologist, social worker, mental health lead, principal or a healthcare professional to ensure appropriate care is made available.

## Spectrum of Use

Substance use can be seen on a spectrum (sometimes called the continuum of use). This spectrum ranges from not using substances at all, to occasional use, to experiencing a substance use disorder (School Mental Health Ontario, n.d.).

As you can see in the figure below, there are many points on this spectrum. People can move back and forth along the spectrum in their lifetime. People can also be at different points on the spectrum for different substances at any given time. For example, a person may use alcohol occasionally but engage in problematic use of cannabis.



### REFLECTION EXERCISE

- Consider the spectrum of use for various substances, including alcohol and cannabis. Identify three examples of youth substance use along the spectrum.  
*Examples:*
  - Beneficial use: prescribed medication to manage ADHD*
  - Casual use: occasional use of cannabis*
  - Problematic use: combining ADHD medication with alcohol*
- How might a young person move along the spectrum from occasional use to problematic use? How do you think this would affect the young person?  
*Examples:*
  - Using alcohol to manage social anxiety could lead to increased frequency of use*
  - Effect: no diminishment in social anxiety, which may lead to further alcohol use*
- What can educators do if they suspect a young person is engaging in problematic use?  
*Examples:*
  - Show compassion and understanding*
  - Create opportunities for open and nonjudgmental conversations*

## Problematic Use and Substance Use Disorder

Familiarize yourself with the definitions of [problematic substance use](#) and [substance use disorder](#) in the Terminology section of this guide.

Not all people who use substances experience problematic use or develop a substance use disorder. In fact, the risk of this happening is different for every individual and can be influenced by numerous factors, including:

- Genetics
- Experiencing trauma and chronic stress, particularly during childhood
- Having a family history of substance use disorder
- Socioeconomic influences, such as poverty, isolation, discrimination and racism

The Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> Edition (DSM-5), includes substance use disorder in its diagnostics and criteria codes (American Psychiatric Association, 2013).

**Dr. Nora Volkow, director of the National Institute on Drug Abuse in the United States, explains substance use disorder as a chronic condition of the brain:**

“The brain adapts and responds to the environments and conditions in which a person lives. When we speak of addiction as a chronic condition of the brain, it thus includes an understanding that some individuals are more susceptible to drug use and addiction than others, not only because of genetic factors but also because of stress and a host of other environmental and social factors in their lives that have made them more vulnerable” (Volkow, 2015).

One way of understanding problematic substance use and substance use disorder is the presence of the four Cs:

- **Compulsion:** compulsive behaviours or repeated attempts to seek out the substance despite negative or harmful effects
- **Cravings:** physical cravings for a substance that feel the same as the need for water or food
- **Consequences:** continuing to use a substance despite negative consequences
- Loss of **Control:** being unable to control use including trying to stop and not being able to

When all four Cs are present, a person is thought to be using substances problematically and would likely meet the criteria for a substance use disorder.

## Brain Development, Substance Use and Adverse Childhood Experiences

### **Brain Development**

Brain development is determined by more than just our genes. Recent research shows that the experiences we have in our early years also shape how our brains develop. These early experiences change the physical architecture of the developing brain, which has consequences for our physical and mental health throughout life (Alberta Family Wellness Initiative and Palix Foundation, n.d.).

Exposure to positive experiences and interactions with caregivers builds strong brain architecture, which is the foundation for healthy brain development and supports resilience. A child's positive experiences and interactions with caregivers will help ensure better physical and mental health throughout the child's lifetime (Alberta Family Wellness Initiative and Palix Foundation, n.d.).

[The Brain Story](#) is a free, interactive course by the Alberta Family Wellness Initiative that teaches us about the important connections between our early experiences, brain health and long-term health outcomes, including substance use (Alberta Family Wellness Initiative, n.d.-b).

**Serve-and-return interactions** between children and their caregivers are important for brain development. These interactions are explained below.

"Serve and return works like a game of tennis or volleyball between child and caregiver. The child 'serves' by reaching out for interaction—with eye contact, facial expressions, gestures, babbling, or touch. A responsive caregiver will 'return the serve' by speaking back, playing peekaboo, or sharing a toy or a laugh.

"These back-and-forth exchanges are the building blocks of children's early brain development. They help children learn how to control their emotions, cope with stress, and learn skills that will serve as a foundation for later development. A caregiver who is sensitive and responsive to a young child's signals provides an environment rich in serve-and-return experiences" (Alberta Family Wellness Initiative, n.d.-c).

This is not only important in childhood but also in adolescence. Not all children and youth have experience with these serve-and-return interactions in their family life. Other caregivers, including teachers, can help through activities and games that emphasize interactivity and responsiveness (Alberta Family Wellness Initiative, n.d.-c).



### The Role of Stress

As the video stated, stress also shapes how our brains develop. While **positive stress**, such as the first day of school, can be healthy if there are supportive adults present to prepare a child for future challenges, **negative stress**, such as losing a loved one, can have a negative impact on brain development. Supportive adults can help buffer this stress response from negative stress.

When a supportive caregiver is not there to buffer a child's response to repeated stressful experiences, **toxic stress** "can weaken the architecture of the brain and interrupt a child's healthy development" (Alberta Family Wellness Initiative, n.d.-d). Toxic stress can be caused by abuse, neglect, substance use disorders or mental health conditions among parents; and violence and chaotic environments (Alberta Family Wellness Initiative, n.d.-d). When these events occur before the age of 18, they are called **adverse childhood experiences (ACEs)** (CCSA, n.d.-c), which will be discussed further below.

Children and adolescents who experience ACEs are at greater risk of developing physical and mental health problems later in life, including problematic substance use or substance use disorder.

Want to know more about these concepts?

CCSA and Alberta Family Wellness Initiative's [Brain Builder's Learning Cards](#) provide more details.



One of the most powerful lessons from the Brain Story is that it does not require major effort to build a **resilient brain** (CCSA et al., 2019). It just takes a **caring interaction with children or adolescents**. This means educators can play a significant role in their students' lives by just doing their day-to-day job in a compassionate and caring way.

### ACES and Substance Use

The brain continues to develop throughout adolescence and into early adulthood until the age of 25. Areas of the brain that control planning, decision-making and self-regulation, the **executive functions**, are the last to mature (CCSA et al, 2019). These parts of the brain are more vulnerable to impairment by external stressors, including ACEs, which may lead people who experience ACEs to have difficulty coping with anxiety, mood and stress in adolescence and later life (Alberta Family Wellness Initiative, n.d.-e).

These factors can increase a person's risk of engaging in unhealthy coping mechanisms, including substance use, and of developing problematic substance use or a substance use disorder. The earlier in their life a person uses substances, the higher the risk of harm, including dependence that can lead to a substance use disorder.

Sometimes the impacts of trauma and ACEs are generational and ongoing, as with colonization or systemic racism. Canada's residential school system for Indigenous children and the resulting generational cycles of trauma and problematic substance use demonstrate the impact of ACEs on life outcomes.

## REFLECTION EXERCISE

- Why do you think some young people use substances, such as alcohol and cannabis, to cope with stress, anxiety or challenges in their lives?

*Examples:*

- *peer influence, relaxation*

- Pouvez-vous nommer trois stratégies d'adaptation saines qu'ils pourraient utiliser?

*Examples:*

- *exercise, relaxation techniques*

- Comment les éducateurs peuvent-ils aider les jeunes pendant les périodes stressantes?

*Examples:*

- *active listening, acknowledging accomplishments, modelling compassion*

## Building Resilience and Reducing Harm

### **Resilience**

Resilience is the ability to cope with life's challenges in a healthy way. Resilience skills, such as managing stress and regulating our emotions, can be learned and built on throughout our lives. The younger we start building resilience, the better.

A key way to build resilience is through positive interactions and supportive relationships with trusted adults. As mentors and trusted sources of information, educators are uniquely positioned to help young people develop resilience (Alberta Family Wellness Initiative, n.d.-f).

### **How Educators Can Support Youth to Build Resilience:**

- Educate youth about social and emotional skills, such as healthy relationships, boundaries and safe expression of sexuality
- Connect youth with caring adults through mentoring and after-school programs
- Reduce the stigma around seeking help for substance use, mental health, and family and relationship challenges
- Intervene when you suspect youth are at risk of immediate or long-term harm

The negative impacts of ACEs can be minimized, and resilience can be built by creating safe, nurturing relationships, environments and communities for youth and their families.

## REFLECTION EXERCISE

- What are some of the ways you can create a safe and nurturing environment with your students?

*Examples:*

- *developing trust, owning your mistakes, using non-stigmatizing language*

### **Harm Reduction and Recovery**

Just as there are many pathways to substance use, there are also many pathways to a healthier relationship with substances. One size does not fit all. For some people this means abstinence. For others it means managing their substance use while reducing harms and working toward improved health, social connections and quality of life.

Like substance use, recovery exists on a spectrum. Recovery is a personal journey toward well-being. This journey is unique to each individual and extends beyond any single person. Recovery involves collaboration and support from family and friends, health and social services, employment, stable housing and the wider community. This combination of personal and external resources that can help start and maintain recovery is called **recovery capital** (White & Cloud, 2008).

We may only associate harm reduction with substance use when, in fact, we practise harm reduction in our everyday lives. Using an oven mitt when cooking, wearing a seatbelt when driving, wearing a helmet when playing sports and not driving after drinking alcohol are all examples of harm reduction practices. Can you think of any more?

For substance use, harm reduction reduces the health and social harms associated with use without a person necessarily needing to stop completely. Examples of substance use harm reduction include **overdose prevention sites** and **needle exchange programs** (CMHA, Ontario, n.d.-c).

### **Withdrawal**

Please review the definition of [withdrawal](#) in the Terminology section.

Withdrawal symptoms can be a barrier to getting well because a person with a substance use disorder may continue using the substance to avoid experiencing them. These symptoms can include anxiety, tremors, poor sleep, hallucinations, racing heartbeat, high blood pressure and seizures.

If you want to refer someone for help or would like to seek help for your own substance use, please call the toll-free Ontario helpline at 1-866-531-2600 or visit [www.connexontario.ca](http://www.connexontario.ca).

### ***Harm Reduction in Focus: Opioid Overdose Prevention and Response***

Opioids like fentanyl, morphine and hydromorphone are medications that are mainly prescribed to help relieve pain or to manage an opioid use disorder. However, they are also available on the illegal market. Illegal opioids are those that are made, shared or sold illegally (CCSA, 2021a).

Whether they are prescribed by a doctor or obtained on the illegal market, use of any opioid comes with risks. Opioids affect how your brain controls your breathing. If you take more opioids than your body can tolerate, you will start to show signs and symptoms of an overdose (CCSA, 2021b).

#### **Signs of an opioid overdose:**

- ▶ Slow, weak or no breathing
- ▶ Blue lips or nails
- ▶ Dizziness or confusion
- ▶ Drowsiness or trouble staying awake
- ▶ Can't be woken up
- ▶ Choking or gurgling sounds (Government of Canada, 2019)

See also: [Know How to Recognize an Opioid Overdose](#) (Government of Canada, 2018a).

Overdose prevention and response provides training and naloxone kits for people who use opioids and those who might respond to someone having an overdose as a result of opioid use.

Naloxone is a medication that can temporarily reverse the effects of an opioid overdose, providing time to get emergency medical attention by calling 911. This [video](#) from the Canadian Pharmacists Association (2017) shows you how to administer naloxone.

Want to know more about opioids and supporting people with their substance use? See CCSA's suite of resources:

- [What Are Opioids?](#) [poster] (CCSA, 2021a)
- [Opioids and Pain Management](#) [poster] (CCSA, 2021b)
- [Canada's Opioid Crisis: What You Should Know](#) [poster] (CCSA, 2021c)
- [Canada's Opioid Crisis: How You Can Help](#) [poster] (CCSA, 2021d)
- [Finding Quality Care in Canada: Drug and Alcohol Treatment Guide](#) (CCSA & Canadian Executive Council on Addictions, 2017)

## How Educators Can Support Youth

Here are some ways that you can support youth in learning about substance use and its links to trauma and early life experiences:

- Create a safe space and opportunities for open, nonjudgmental conversations about the spectrum of substance use. This can help reduce stigma, fear and shame around discussing substance use-related issues while allowing youth to see you as an ally.
- Create opportunities to discuss the relationship between mental health, ACEs and substance use. A positive teacher–student relationship can encourage engagement and learning.
- Talk with students about resilience and work with them to identify healthy coping skills to build resilience against stress.

## Additional Resources

Topic Area	Resource
Problematic substance use, substance use disorders and youth	<a href="#">Understanding Substance Use Disorders and Problematic Substance Use</a> (Centre for Innovation in Campus Mental Health, 2018)
Spectrum of substance use	<a href="#">Learn More: Substance Use and Addiction</a> (School Mental Health Ontario, n.d.)
Cannabis and youth	<a href="#">Cannabis and Canada's children and youth</a> (Grant et al., 2017)
Alcohol use and youth	<a href="#">Alcohol and Health: Alcohol and Adolescents</a> (Alberta Health Services, n.d.)
Risk factors for problematic substance use or substance use disorder	<a href="#">What Are the Risk Factors?</a> (Families for Addiction Recovery, n.d.-a)
Trauma and the brain	<a href="#">How Trauma Impacts the Brain: Reducing Stigma Around Addiction and Substance Use</a> (Community Addictions Peer Support Association, 2020a)
Brain development, trauma, ACEs and resilience	<a href="#">The Brain Story Toolkit</a> (Alberta Family Wellness Initiative, n.d.-g)
Preventing ACEs	<a href="#">Preventing Adverse Childhood Experiences</a> (Centers for Disease Control and Prevention, 2021)
Treatment options	<a href="#">Finding Quality Addiction Care in Canada: Drug and Alcohol Treatment Guide</a> (CCSA & Canadian Executive Council on Addiction, 2017)
Culturally safe approaches to health and wellness	<a href="#">Soar Above Stigma</a> (First Peoples Wellness Circle, et al., n.d.) Thunderbird Wellness app (available at Google and Apple play stores) Thunderbird podcast <a href="#">Mino bimaadiziwin</a> .

## PARTIE 2 : Understanding Stigma

### Module Introduction

This section provides you with information about substance use stigma, the different types of stigma, how stigma can prevent people from seeking and receiving care, and the role everyone can play to reduce stigma.



Watch the video module [Understanding Stigma](#).

Once completed, work through this section of the guide and complete the reflection exercises.

### Key concepts and takeaways:

- Substance use stigma is widespread.
- Stigma exists at three levels: structural, social and individual (self).
- Stigma is complex and can be compound or intersectional stigma.
- Stigma is harmful and a barrier to seeking help.
- Words matter, and language is a powerful tool for change.
- Using person-first language focuses on the person, not their condition.
- Educators have a positive impact when they use non-stigmatizing language and behaviour.

Note: In this section we will be exploring stigma and its impacts on people. For some people who have experienced stigma, this could generate strong or distressing emotions. If you experience strong, distressing or long-lasting emotions due to the content in this section, we encourage you to seek support, both personal and professional, through your support networks.

## What Is Stigma?

**Stigma** is when someone **sees** a person or group of people in a negative way because of a perceived characteristic or shared attribute. It is a negative stereotype: an oversimplified belief or idea about a person or group of people (CCSA, n.d.-d).

**Discrimination** is when someone **treats** a person or group of people in a negative or harmful way because of a perceived characteristic or shared attribute. It is the behaviour that results from a negative stereotype (CMHA, Ontario, (n.d.-d).

People may experience stigma and discrimination because of their age, disability, religion, gender identity, sexual orientation, race, Indigenous identity, housing insecurity or because they use substances. These stereotypes may be compounded if an individual holds many of these identities and experiences.

## What Is Substance Use Stigma?

People who use substances and people with lived experience of substance use are highly stigmatized in Canada and around the world. The 2015 Canadian results of the World Values Survey showed that “people with drug use disorders are more highly stigmatized than any other stigmatized group, with approximately 80% of respondents indicating they would not want someone with a drug use disorder living in their neighbourhood” (Stuart, 2019, p. 79).

Both people who are actively using substances and people in recovery can experience substance use stigma. Stigma prevents people who use substances from seeking and receiving help. It affects their ability to access services and can influence the quality of care and support they receive.

**The use of certain drugs is more stigmatized than others, as is the method of administering a drug. For example, opioids are more stigmatized than alcohol. A person who injects drugs experiences greater levels of stigma than someone who uses drugs through smoking (Paquette, et al., 2018).**

Some people believe that substance use disorder is a moral failing, a choice or a criminal issue rather than a **treatable health condition**. Substance use disorder is a **medically recognized condition**, like diabetes or an eating disorder. Evidence shows that repeated or prolonged use of substances can change the brain and affect behaviour, including the ability to make decisions and control impulses (American Psychiatric Association, 2020).

Those who believe substance use is a moral issue tend to view stigma as a way to reduce harmful behaviours (Stuart, 2019). This view sees the person using the substance as being at fault and does not see the fault in a system that marginalizes people. Stigma may also be used to exercise control over marginalized groups. However, research shows that these strategies do not work well for discouraging substance use and are deeply harmful to people who use substances (Lee & Boeri, 2017).

## REFLECTION EXERCISE

- What about you? Looking back, have you ever treated a person with a substance use disorder in a negative way? What happened? What do you think was the effect of the interaction on the other person?  
*Examples:*
  - *using stigmatizing language to describe them, treating them with less compassion, judging them*
- Knowing what you now know about problematic substance use and substance use disorder, are there any misconceptions you've held about people who use substances?  
*Examples:*
  - *it's their choice, it's a moral failing, they could get well if they really wanted to*

## Types of Stigma

There are three types of stigma:

1. Structural stigma through policies and practices of organizations and institutions, including schools;
2. Social or interpersonal stigma from family, friends and people you encounter in daily life; and
3. Self-stigma.

Let's explore each type of stigma in more detail.

### Structural Stigma

Structural stigma occurs when society devalues people who are part of a specific group, and this devaluation is reproduced and legitimized by institutions, policies and practices that discriminate against them.

Public perceptions, negative labels and misconceptions resulting from substance use stigma can influence how policy makers make decisions and allocate resources. In turn, this can affect the availability of services, research funding and laws (CCSA, n.d.-d).

Structural stigma creates inequities, including unequal access to health care, housing and educational and employment opportunities.

Examples of structural stigma include:

- Limited funding for research into and treatment of substance use disorders (Families for Addiction Recovery, n.d.-b);
- Long wait times for treatment, especially when compared with other health conditions;
- Lower quality of care and worse health outcomes (Public Health Agency of Canada, 2020a);
- Punitive treatment, such as suspending a student for being impaired at school;
- School-based public health programs that avoid discussing substance use and mental health problems; and
- Criminalization of certain types of substance use. Having a criminal record affects one's ability to find employment, housing, etc., which perpetuates cycles of poverty, housing insecurity and hopelessness.



### Example of Structural Stigma: Criminalization of Substance Use

When a parent is arrested for substance use, it can have a devastating effect on a child. Child welfare practices (e.g., taking children of parents who use substances) and the family court system can make families feel frightened and ashamed rather than supported. Having a parent in prison or being removed from a parent's care undermines a child's sense of safety and stability, and it can be a risk factor for later substance use and mental health conditions. CCSA's online module, [Insights on Substance Use](#) (CCSA, n.d.-e), provides more information.

### Social Stigma

Also known as interpersonal stigma, social stigma occurs in our everyday interactions with people, like showing negative attitudes toward people who use substances or using negative language in conversations about them. It can come from people we know well, such as friends, family and co-workers, and from people who offer services to the public, like healthcare professionals, first responders and government representatives.

Social stigma leads to negative attitudes and behaviours, prejudice and discrimination, and exclusion of the stigmatized group.

Examples of social stigma include:

- Using negative labels such as “drug addict” or “pot head,” or using homophobic or racist slurs;
- Using victim-blaming stereotypes such as “addicts are lazy and weak”;
- Ignoring or dismissing people;
- Seeing people as less deserving by thinking or saying things like “they are not normal people” or “they are not like us”;
- Seeing harmful stereotypes in movies, on TV and on social media;
- Offering substandard goods and services; and
- Healthcare and social service providers treating people who use substances harshly or cynically.

Children and youth learn from those around them, including from educators and other youth. You can set an example by modelling inclusive and non-stigmatizing behaviour and language.

**Media socialization** is one way substance use stigma becomes normalized in our society. Images in the media teach adults and children how to think about people with mental health conditions or substance use disorders, and what will happen to them if they develop one or both conditions. There are harmful stereotypes of people who use substances in movies, on TV and on social media. For example, images may include street-involved people and discarded syringes, which perpetuate the belief that substance use only happens to marginalized people.

[Changing the Narrative](#) provides examples of media images and wording that is negative and stereotypical, and provides up-to-date information, sources and experts (including people with lived and living experience) to help in “Changing the Narrative” when talking about substance use in the media.

## REFLECTION EXERCISE

*The following exercises are personal self-reflections. If participating in a group setting, you are encouraged to share only what you feel comfortable with and not to share any details that could identify specific individuals.*

- What are your perceptions about people with problematic substance use? Where do you think these perceptions come from?

*Examples:*

- media, friends, colleagues

- Looking back on either your professional or personal experiences, has there ever been a time when you used a negative label or a stereotype to describe someone? What were you thinking at the time? How do you feel about it now?

*Examples:*

- alcoholic, junkie, user

### Self-Stigma

Self-stigma occurs when a person believes and internalizes the negative things that are said about them, causing shame and self-hatred.

Youth may be particularly susceptible to self-stigma. For children and youth, the opinions of their peers and fitting in socially are important. When children and youth are bullied or excluded because of a perceived difference from others, it can be harmful to their self-esteem and self-worth.

Internalizing negative beliefs about oneself during this sensitive period of brain development can have a lasting impact on health and social outcomes, especially if a supportive adult is not there to confide in.

Children and youth who are stigmatized by their peers can experience social isolation and a decrease in their quality of life. They may avoid seeking help due to fear of being judged or stigmatized further for speaking up. This may lead to the development or worsening of mental health conditions, such as anxiety or depression, and increase the likelihood of using substances to cope with these stressors. If a young person is already using substances, self-stigma may lead them to conceal their substance use or use substances alone (Families for Addiction Recovery, n.d.-b). This can increase a person's risk of experiencing substance-related harms such as overdose and prevent them from seeking support.

Examples of self-stigma:

- Feeling ashamed, embarrassed or inferior to others because you have a mental health condition;
- Feeling that your substance use disorder is your fault;
- Feeling that you do not deserve help even though you are struggling;
- Feeling that no one cares about you or that you are a burden to others; and
- Concealing your substance use for fear of being judged.

**Stereotypes are an example of stigmatizing behaviour. Children are often stereotyped early in life with labels that can follow them into adolescence and even adulthood (e.g., "geek," "bro," "shady"). Sometimes stereotypes contribute to bullying, which can lead to stress and anxiety.**

Since the majority of mental health conditions begin during young adulthood, youth are a high-risk group for being stigmatized and experiencing self-stigma. However, self-stigma is learned and therefore can be unlearned.

### REFLECTION EXERCISE

- What are examples of identities, characteristics and experiences that can be stigmatized in our society?

*Examples:*

- *body size, skin colour, religion*

- What might stigmatizing actions or behaviour look like in school?

*Examples:*

- *teasing, bullying, exclusion*

- How do you think being stigmatized makes people feel?

*Examples:*

- *ashamed, judged, worthless*

### Intersectional Stigma

Intersectional stigma, also known as compound stigma, occurs when a person experiences stigma for multiple reasons (e.g., gender identity, sexual orientation, substance use, racial or Indigenous identity). These multiple stigmas **intersect** in the individual, deepening or worsening their experience of stigma and oppression.



### Stigma and Gender

Gendered perceptions of people who use substances affect individuals' experiences of stigma.

- Research shows that women and girls who use substances face stigmatization because they are not adhering to the gender appropriate role of the "good girl." Women who use substances during pregnancy are judged as having "moral failings" and internalize stigma as shame and guilt (Lee & Boeri, 2017).
- Men are more likely to be sentenced for drug-related crimes and receive harsher sentences compared with women (Curry & Corral-Camacho, 2008).

## Impacts of Stigma

### ***Stigma Is a Barrier to Asking for Help***

Stigma is a major barrier to well-being and good health. It prevents youth from discussing their substance use. Fear of being shamed or judged by others can prevent them from asking for and receiving help, which may lead them to become more isolated and disconnected from their families and friends. It can affect their ability to access services and influence the quality of care and support they receive. It also plays a role in maintaining substance use disorder and increases the likelihood of recurrence of substance use.

Stigma prevents youth from discussing their substance use, as well as seeking and receiving the support they need to get well. This can have serious implications for their health and well-being.

Healthcare and social service providers' lack of understanding of the complex causes of substance use disorder may leave parents feeling responsible for their child's substance use, resulting in shame and self-stigma. Families may isolate themselves from their communities and social networks for fear of being judged (Families for Addiction Recovery, n.d.-b).

#### **MISCONCEPTION ALERT**

*"Using drugs is a choice, youth just need to stop."*

Starting to use substances is sometimes a choice because some youth start using substances for relaxation or to relieve emotional or physical pain. However, stigma can worsen substance use because it prevents them from seeking help and can increase the frequency of use.

[Families for Addiction Recovery](#) and [Moms Stop the Harm](#) are two organizations that provide knowledge, information and resources to help parents support their children through problematic substance use and substance use disorder.

### ***Stigma Affects the Quality of Services***

People with problematic substance use or substance use disorder may receive substandard service from people who offer goods and services (e.g., retail workers), including healthcare and social services (e.g., government staff, community service providers, physicians, nurses).

Negative attitudes toward people who use substances are common among health professionals (van Boekel, et al., 2013). Research has found that clinicians judged individuals more harshly if they were described as being a "substance abuser" rather than a person with a "substance use disorder" (Kelly et al., 2015). Substance use stigma within the Canadian healthcare system contributes to poorer outcomes among people who use substances (van Boekel, et al., 2013).

Examples of stigma impacting the quality of services include:

- A person attending the emergency department may not be seen as quickly due to the assumption that they are only there to seek medications or that it is their own fault that they are sick.
- Being talked down to or treated harshly by service providers may cause a person who uses substances to avoid using that service in the future.
- If a person feels judged or dismissed by those delivering a service, they may not ask questions to help them make informed decisions about the service or care they receive.

Just like any other health condition, individuals with problematic substance use or substance use disorder are entitled to the most effective treatment available.

#### **MISCONCEPTION ALERT**

*“Why don’t people who use substances just get help?”*

Stigma in the healthcare system makes people feel isolated, rejected and dismissed by providers, which can lead them to avoid such services.

#### **Stigma Increases Substance Use Harms**

Fear of being judged or stigmatized by family, friends and peers can cause youth to conceal their substance use and use in isolation. This can increase their risk of experiencing substance-related harms, such as overdose or drug poisoning.

#### **MISCONCEPTION ALERT**

*“People who use substances are unpredictable, criminal and dangerous. They should be locked up.”*

People from any group or background can experience problematic substance use or substance use disorder — they are your friends, your neighbours, your family members. Stigma hurts them because it prevents them from speaking about their condition, keeping it hidden. This increases the likelihood of using substances alone, a known risk for accidental drug poisoning.

## Words Matter

When talking about problematic substance use or substance use disorder, the **language we use matters**.

It matters because:

- Certain terms affect our unconscious attitudes or beliefs as well as our understanding, actions and decisions. This is called implicit cognitive bias. To illustrate this, Dr. John Kelly of Harvard Medical School studied the use of terms “substance user” and “substance abuser” among medical practitioners. He found that respondents were more likely to see a substance user as somebody who deserves treatment, while seeing a substance abuser as somebody who deserves punishment (Kelly & Westerhoff, 2010).
- What we say triggers what we think and how we think about it — and it does the same for others.
- Changing our language can be a first step in making it easier for someone to ask for help.

These are all reasons why using **person-first language** is important. When we remove dehumanizing labels from our vocabulary, we begin to see the **person** at the centre of every story.

Here are some terms to change:

- Instead of “addict,” say “person with a substance use disorder” or “person with living experience of a substance use disorder”
- Instead of “former addict,” say “person with lived experience of a substance use disorder”
- Instead of “binge drinker,” say “person who engages in heavy episodic drinking”
- Instead of “overdose,” say “drug poisoning”
- Instead of “relapse,” say “recurrence of use”
- Instead of “recreational drug user,” say “person who uses substances for nonmedical reasons” or “person who uses substances occasionally”

There may be times when you need to explain why you choose to use these person-first terms rather than more common, stigmatizing labels. If so, explain that you want to make a difference by using “words that respect the dignity of all people who use substances, focuses on the medical nature of substance use disorders and promotes well-being rather” than inflicting harm (CCSA & Community Addictions Peer Support Association, 2019, p. 8).

Here are some examples to get you thinking about changes you can make to the words you use.

Instead of this ...	Say this ...
"You've been drinking a lot lately. Why can't you just stop? You know I'm concerned."	"I notice you're drinking more than usual. Have you noticed the change, or do you have any concerns? If so, is there anything I can do to help?"
"I have been clean for six months."	"I haven't taken any substances in six months."
"Substance abuse affects Canadians from all walks of life."	"Canadians from all walks of life are impacted by the use of substances."
"Relapse means you need to restart the recovery process." "They lied. They said they were sober but they're using again."	"Life can be difficult. Emotional pain, trauma and changing life patterns can be challenging for a person navigating their recovery. I understand a person's pathway to well-being is often not linear and recurrences can and do occur with some people as they work on change."
"Do you know what to do if you see an overdose?"	"Do you know how to help a person who's suffered a drug poisoning?"
"I think they're high on the job; they should be fired."	"I think they may have a substance use problem. We should explore whether there is anything we can do to help them get into a better space. Don't we have a policy that keeps the workplace safe and cares for someone who is ill?"
"I can smell alcohol on them. They're in our emergency room all the time. They'll probably feel fine soon."	"This person may have been using substances. They deserve a full medical assessment."

(CCSA & Community Addictions Peer Support Association, 2019, p. 9)

To change the narrative, next are some examples of how you might respond when you are discussing problematic substance use or substance use disorder with others.

When you hear...	You could say...
"When I see those addicts downtown, I can't imagine why they don't do something about their lives. You'd think they'd show a little self-respect; it's disgusting how they choose to live."	"What someone suggested to me was to imagine a child in front of me who had done their very best. Then ask myself what problems they must have encountered as they grew up, and be dealing with today, to be suffering so much. Once I started doing that, it struck me that they must be leading a life they never imagined. I wonder if there is something we can do to help. At the very least, we can offer our respect for their humanity and use person-first language."
"Well I see Fred's finally back at work. It's been 28 days, so it's a no-brainer where he's been. I wouldn't have the nerve to show my face if they had to send me to detox. He must be really desperate for money to have come back. Keep an eye on your stuff."	"I was worried about Fred's health as well. I read up on substance use disorders so I could have a better understanding of what he's going through. Did you know that stigma is one of the largest barriers to getting help? I think that's why the company has medical benefits that cover substance use disorders to support them in getting help, so we don't lose valuable employees to a health condition. I'm going to make a point of welcoming Fred back to work to help encourage him."
"I don't know what Suzy was thinking last night. The last thing she said to me before the party was that she had to get home early to get her kids. Then there she was smashed, refusing to leave and it was embarrassing to be seen with her."	"It sounds to me like Suzy was thinking about her family and responsibilities. I was concerned about her health. I read some material on substance use disorders and one of the indicators is losing the ability to act according to personal values. This inability may be a sign of a serious health issue. I'm going to share some information with her, as well as my concerns for her well-being."

(CCSA & Community Addictions Peer Support Association, 2019, p. 10)

## REFLECTION EXERCISE

- Think of one stigmatizing word you can start replacing with a person-first term and formulate a sentence with that more compassionate word (CCSA, n.d.-d).

*Example:*

- replace "addict" with "person with living experience"
- Reflect on your recent interactions with people who use substances. Did your language help or hinder? Were there unconscious stereotypes or attitudes that influenced the way you spoke? How could you have said things differently in a way that was more positive? What difference might that have made to the outcome of the situation for that person?
- Think of a scenario where you witness someone stigmatizing people who use substances. Take a moment to think about how you could change the narrative using non-stigmatizing language and behaviour.

*Example:*

- You're at a holiday dinner and a family member starts to talk about "addicts."
- You're in the ER for a minor injury when a man walks in. He appears to be intoxicated and a nurse says something judgmental to him.



## How Educators Can Help End Stigma

The video *Understanding Stigma* outlines some things educators can do to help end stigma. We've outlined some more below.

### ***Be Brave, Speak Up and Encourage Your Students To Do the Same***

It takes courage to address stigmatizing attitudes and behaviours, but open conversations can help break down barriers and start to change attitudes.

- Notice how people around you talk about substance use disorders.
- Make it known that you don't accept stigmatizing language.
- Encourage others to use person-first and medically correct language.
- Voice your concerns if you see stigmatizing practices or policies where you work.
- Support student voices and leadership in addressing stigma.

### ***Foster Self-Care and Self-Acceptance***

Having **positive self-esteem** can help counteract self-stigma among youth. Teachers can help students by supporting them in making decisions and solving problems, encouraging students to contribute to the school or community, and letting students know that it is OK to make mistakes (Brooks, 2009). For more information, see [How can teachers foster self-esteem in children](#).

**Practising self-care and making positive choices** is important for children and youth. The Centre for Addiction and Mental Health poster (2019) provides ideas on [Six ways to practise self-care](#), including eating well, getting enough sleep, moving your body and talking with others.

### ***Model Hope and Compassion***

You model hope when you spread the message that substance use disorder is a treatable health condition with attainable and sustainable positive outcomes. You demonstrate compassion when you acknowledge the person, not the stereotype.

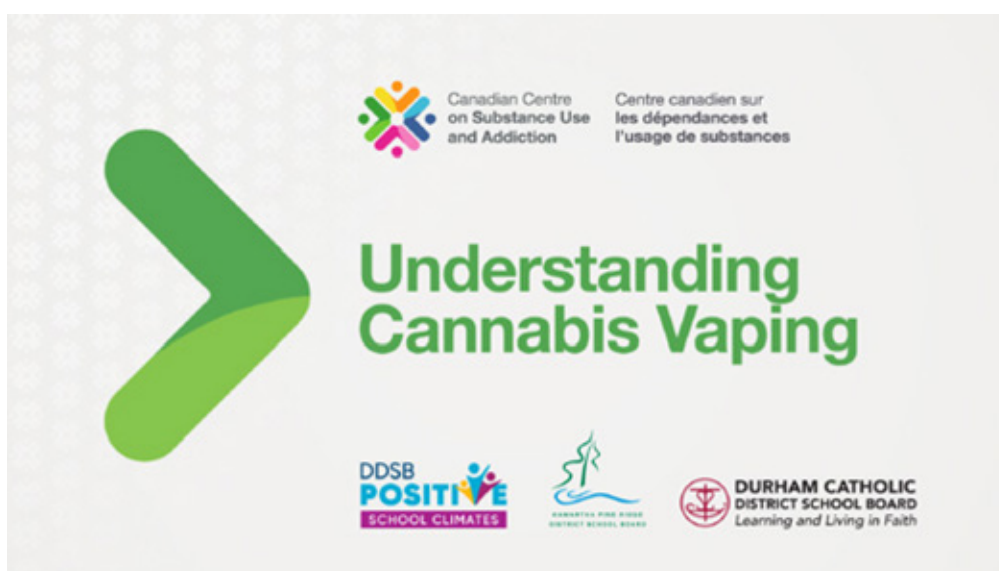
## Additional Resources

Topic Area	Resource
The science of substance use disorder	<a href="#">Insights on Substance Use: Understanding the Science on Substance Use Disorder</a> (CCSA, n.d.-e)
Stigma and language	<a href="#">Overcoming Stigma Through Language: A Primer</a> (CCSA & Community Addictions Peer Support Association, 2019) <a href="#">When It Comes to Substance Use Words Matter</a> (CCSA, 2017a) <a href="#">Changing the Language of Addiction</a> (CCSA, 2017b) <a href="#">Overcoming Stigma: Online Learning</a> (CCSA, n.d.-f) <a href="#">Let Us Tell You About Name-Calling</a> (Association communautaire d'entraide par les pairs contre les addictions, 2019a) <a href="#">Words Matter</a> (Association communautaire d'entraide par les pairs contre les addictions, 2020b) <a href="#">Gord's Story</a> (Association communautaire d'entraide par les pairs contre les addictions, 2019b)
Stigma and substance use	<a href="#">Turning Voices into Action</a> (Kittel Canale & Munn, 2005) <a href="#">Parler de la consommation de substances de manière humaniste, sécuritaire et non stigmatisante : une ressource pour les organisations canadiennes des professionnels de la santé et leurs membres</a> (Public Health Agency of Canada, 2020b)
Stigma and youth	<a href="#">Stomp Out Stigma</a> (ACSM – division de Calgary, sans date)
Stigma and health care	<a href="#">A Primer to Reduce Substance Use Stigma in the Canadian Health System</a> (Public Health Agency of Canada, 2020a)
Self-care and self-esteem	<a href="#">Supporting Minds: An Educator's Guide to Promoting Students' Mental Health and Well-being</a> (Ontario Ministry of Education, 2013) <a href="#">How can teachers foster self-esteem in children?</a> (Brooks, 2009) <a href="#">Mental Health Resources in Schools</a> (ACSM – division de l'Ontario, sans date [e])

## PART 3: Understanding Cannabis Vaping

### Module Introduction

This section provides you with information about cannabis and cannabis vaping, harms and risks associated with vaping cannabis, and strategies to reduce the risks of youth vaping cannabis. This section does **not cover vaping other substances, such as nicotine.**



Watch the video [Understanding Cannabis Vaping](#). Once completed, continue working through the guide and complete the reflection exercises.

#### Key concepts and takeaways:

- Cannabis affects everyone differently.
- Youth who start to use cannabis at a young age and use it daily or almost daily have a higher risk of developing mental and physical health harms and social problems.
- Vaping comes with risks.
- Vaping may create new chemicals that could be harmful to a person's lungs and brain.
- Most cannabis vapes use cannabis concentrates that have high amounts of THC. Consuming high amounts of THC in a short period of time can lead to over-intoxication.
- Frequent and heavy use can lead to cannabis dependence or cannabis use disorder.
- Vaping devices that are defective or modified can cause injury, including burns.
- When educating youth, discuss the reasons why some people vape cannabis, the risks of vaping and how youth can lower their risks if they choose to vape cannabis.

## Cannabis and Vaping Among Youth in Canada

Cannabis is the second most commonly used substance among youth in Canada, after alcohol. As mentioned in the video, students who took part in the 2019 Canadian Student Tobacco, Alcohol and Drug Survey were, on average, 14 years old when they first used cannabis. Among youth who used cannabis, 42 percent said they vaped it; an increase of 12 percent from 2016 (Health Canada, 2019d).

Cannabis use varies among youth. Many never use it, some may experiment or use it occasionally without experiencing long-term harms, while others may develop problematic use and experience long-term harms.

Youth want the facts about cannabis to be able to make informed choices about its use. A Canadian study on cannabis and youth found that the “just say no” approach does not resonate with youth. Youth prefer evidence-based information that is unbiased (i.e., that includes both positive and negative aspects of cannabis use) (CCSA, 2017c). Before we look at cannabis vaping in more detail, let's look at the basics of cannabis.

### What Is Cannabis?

Cannabis — also commonly called marijuana, weed or pot — is a product made from the cannabis plant. It is most often used for its intoxicating effects. This is known as a “high” and is described as feelings of euphoria, bliss, happiness and relaxation. Some people may also use it for medical purposes, including to relieve insomnia, pain and nausea when other treatments have not worked. More research is needed to understand how effective cannabis is for these purposes (Konefal, et al., 2019).

### What Are THC and CBD?

Cannabis contains more than 100 chemical compounds called cannabinoids. The two best-known compounds are:

**THC** (tetrahydrocannabinol) is the primary “psychoactive” component of cannabis that produces the high. The potency of cannabis tends to depend on how much THC it contains.

**CBD** (cannabidiol) does not produce a high but can cause drowsiness. CBD is being researched for its potential medical application (Konefal, et al., 2019).

### What Are the Effects of Using Cannabis?

The effects of cannabis can vary from person to person and with each use. It also depends on the amount used and the method of use. In addition to feeling high, cannabis use can lead to unwanted or negative effects, both in the short and long term.

Short-term negative effects can include anxiety, paranoia and slowed reaction times. These effects can impair a person's ability to make decisions and safely operate a vehicle. It is not safe to drive after using cannabis.

Long-term effects can include problems with memory, concentration and decision-making. It can also worsen existing mental health conditions and increase the risk of cannabis dependence or cannabis use disorder. Youth who start using cannabis at a young age and use daily or almost daily have an increased risk of developing mental and physical health harms and social problems, including cannabis dependence or cannabis use disorder.

### Cannabis for Medical Purposes

When other treatments haven't worked, a health professional may authorize the use of cannabis for particular medical conditions. For example, it may help people who experience certain types of pain, or relieve nausea in people having treatment for cancer (Kalant & Porath-Waller, 2016).

Cannabis for medical purposes can only be accessed with a prescription from a healthcare professional, whereas recreational cannabis can be purchased by anyone over the age of 18 depending on their province or territory from a federally licensed retailer.

**Remember that no matter how or why it is used, cannabis use comes with risks.**

The table below provides an outline of the short- and long-term effects of using cannabis.

Short-term effects can include:	Long-term effects can include:
<ul style="list-style-type: none"> <li>• Euphoria — feeling happy and relaxed</li> <li>• Short-term memory loss</li> <li>• Feeling light-headed or drowsy</li> <li>• Paranoia</li> <li>• Anxiety</li> <li>• Increased appetite</li> <li>• Impaired judgment and coordination</li> </ul>	<ul style="list-style-type: none"> <li>• Risk of cannabis dependence or cannabis use disorder</li> <li>• Difficulties with memory, concentration and the ability to think and make decisions</li> <li>• Increased anxiety and depression</li> <li>• Risk of developing psychosis and schizophrenia (this risk is greater among those who have a personal or family history of these disorders)</li> <li>• Increased risk of lung disease when inhaled.</li> </ul>

### Cannabis-Impaired Driving

Data shows that more people drive under the influence of cannabis than alcohol. In fact, it is the second most common cause of substance-related traffic fatalities following alcohol (Kalant & Porath-Waller, 2016).

Cannabis can impair a person's ability to drive a vehicle because it affects coordination, reaction times and decision-making. It is not safe to drive after using cannabis.

[The High Way Home?](#) is “a choose your own adventure” style website that takes young people through virtual scenarios and decisions about cannabis use and driving (CCSA, n.d.-g).

## REFLECTION EXERCISE

- What type of questions do young people in your personal and professional lives have about cannabis? How capable do you feel in answering their questions? What can you do when faced with a question you don't know the answer to?

#### Examples:

- *be honest that you don't know the answer*
  - *consult with a knowledgeable expert or research through a reputable source online*
- Think about the short- and long-term negative effects of cannabis listed in the table above. How might they impact a young person's life at home and at school?

#### Examples:

- *difficulty completing schoolwork, decline in academic performance*
  - *ignoring responsibilities at school, home or work*

## Methods of Cannabis Use

### Inhaling

Cannabis products including dried cannabis and some cannabis extracts can be smoked in a joint, a pipe or a bong, or vaporized (“vaped”) using an electronic vaporizer. Inhalation is the most common method of consumption (CCSA & Canadian Coalition for Seniors’ Mental Health, 2020).

### Ingesting

Edible cannabis products, such as cannabis-infused food, drinks and cannabis oils are consumed through eating and drinking. Cannabis oral sprays and tinctures are extracts that are placed under the tongue or inside the cheek. When cannabis is ingested, it can take much longer for the effects to be felt (CCSA, 2019a).

**Want to know more about edible cannabis? These resources can help:**

[7 Things You Need to Know About Edible Cannabis](#) (CCSA, 2019b)

[Edible Cannabis: Always Read the Label](#) [infographic] (CCSA, 2019c)

The infographic [Cannabis: Inhaling vs Ingesting](#) (CCSA, 2019a) can help you to learn more about the effects of these methods of cannabis use.

Inhaling		Ingesting
You will feel the effects from within <b>seconds to a few minutes</b> of inhaling.	Start of Effects	You will feel effects within <b>30 minutes to two hours</b> of ingesting.
Full effects can peak within <b>30 minutes</b> .	Peak Effects	Full effects can peak <b>within four hours</b> .
Effects can last up to six hours after use. Some residual effects can last up to <b>24 hours</b> .	Length of Effects	Effects can last up to <b>12 hours after use</b> . Some residual effects can last up to <b>24 hours</b> .

### Topical Cannabis

“Cannabis topicals such as oils and creams are intended for application to the skin, hair or nails” (CCSA, 2019d).

“These products may be marketed for medical (managing pain, arthritis, etc.) and cosmetic purposes (skin, nail and hair care). Presently, there is no scientific evidence to support their effectiveness” (CCSA & Canadian Coalition for Seniors’ Mental Health, 2020).

It’s important to remember that using cannabis daily or almost daily can affect mental and physical health, regardless of the method used.

## REFLECTION EXERCISE

- Think about the methods of cannabis use discussed in this section. Can you identify potential risks associated with inhaling and ingesting cannabis?

**Examples:**

- *inhaling: long-term smoking or vaping may increase harms to lung health*
- *ingesting: delayed reaction can increase the risk of over-intoxication if more edibles are consumed over a short period of time*

**Cannabis, Sex and Gender**

Evidence shows that sex and gender affect how young people use cannabis, as well as the risks and harms associated with its use. For example, cannabis use is more common in boys and men than in girls and women. Research also suggests that females are more sensitive to the effects of cannabis than males, which means that they may become intoxicated more quickly. Evidence also shows that females can transition from occasional use to dependence faster than males (Greaves, et al., 2019).

The Centre of Excellence for Women's Health report on [Sex, Gender and Cannabis](#) provides a more detailed look at this topic (Greaves, et al., 2019).

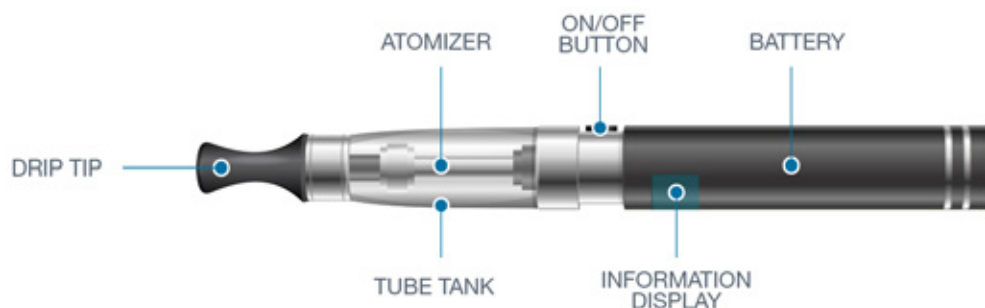
**What Is Cannabis Vaping?**

Vaping is a method of consuming cannabis through inhalation.

Vaping heats the cannabis product to create a fine mist or vapour that is inhaled. (This is unlike smoking, which burns cannabis to create smoke.) While vaping does not involve burning or combustion, it still exposes you to chemicals that are created in the heating process. These chemicals can be harmful to lung health (CCSA, 2019e).

Most vaping devices (also called vapes) are reusable and have a rechargeable battery and removable parts. Some devices are meant for single use only, although these devices are less common.

Vapes typically have a mouthpiece, heating element, a wicking material that draws liquid into the coil (the element and wicking material together are known as an atomizer) and chamber or tank that stores the substance. This image shows the components of a typical vaping device.

**Common names for vapes:**

mods  
vapes  
vape pens  
sub-ohms  
e-hookahs  
e-cigarettes

## REFLECTION EXERCISE

- Have you seen young people vaping at school or in your community? What kind of vaping devices do they use?
- Why might young people choose to vape cannabis rather than smoke it?

*Examples:*

- *easier to conceal the device and smell*
- *flavours*

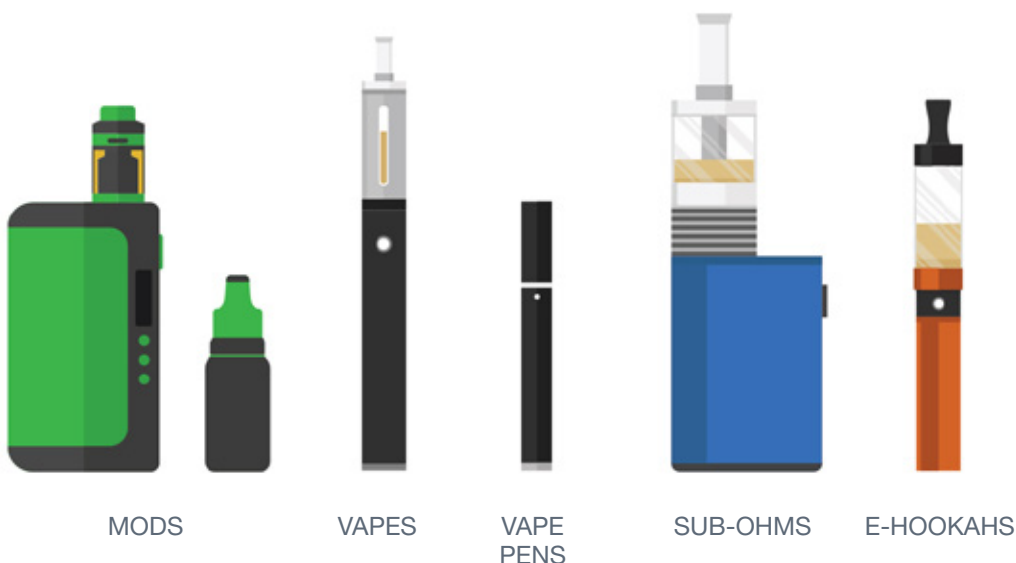
## Cannabis Vaping Products

There are a variety of different cannabis vaping products available from licensed retailers. Cannabis vaping products can:

- Contain THC, CBD or both.
- Be a liquid (often called an “e-liquid”), an oil or a solid (like a wax), or dried cannabis flower.
- Come in different flavours, such as candy, fruit or desserts, which makes these products more appealing to youth.

The amount of THC and CBD found in cannabis vaping products varies. Oils and wax, known as concentrates, typically have higher levels of THC, ranging from 50 to 80 percent and sometimes even 99 percent. Other products, like dried cannabis flower, typically contain lower levels of THC, such as from 10 to 25 percent THC. If someone is new to vaping cannabis, it is recommended to avoid high-strength extracts and instead start with one or two puffs of a vape with 100 mg/g (10 percent) or less of THC (CCSA, 2019d).

The images below show you a range of cannabis vaping devices.





### What are the risks of purchasing illegal cannabis?

“Purchasing cannabis products from illegal sources can have health and safety risks, as the quality and purity of the product cannot be guaranteed, and it can be contaminated with other substances (e.g., pesticides, metals, fungi, other drugs, etc.). In addition, the THC level of an illegal cannabis product will be unknown or potentially falsely represented, increasing the risk for over-intoxication and poisoning. In Canada, legal cannabis is strictly regulated and inspected for quality while illegal cannabis is not. If you buy cannabis illegally, you do not know what you are getting” (Fleming, K. & McKiernan, A., 2020, p. 26).

## What Are the Harms and Risks of Vaping Cannabis?

Whether it is smoked, vaped or ingested, using cannabis comes with risks, particularly for the developing adolescent brain. In this section we will look at the risks of using cannabis, paying particular attention to those linked to cannabis vaping. Refer back to page 33 for an overview of the short and long-term effects of cannabis use.

Youth who start vaping cannabis at a young age and use it daily or almost daily over a long period of time have an increased risk of developing mental and physical health harms as well as social problems (Fleming & McKiernan, 2020).

- **Vaping may create new chemicals, through the heating process, that could be harmful to the lungs and brain.** Although earlier evidence suggested that vaping is less harmful to the lungs than smoking, new studies have emerged linking cannabis vaping, especially unregulated products from the illegal market, to severe lung and pulmonary illnesses (Renard, 2020). More research is required to better understand these harms.
- **Although rare, defective vaping devices can catch fire or explode, leading to burns and injuries.** This can also happen when devices are modified to use substances other than what they were intended for (Caring for Kids, 2020a).
- **Most cannabis products used in vapes are concentrates containing high amounts of THC.** Using higher strength products can lead to over-intoxication, also known as greening out (Caring for Kids, 2020a).
- **Using cannabis products daily or almost daily can also increase the risk of developing a tolerance to cannabis.** This means higher strength products are needed to feel the same effects (Fleming & McKiernan, 2020).
- **Using cannabis at a young age, daily or almost daily over a long period of time can increase the risk of developing cannabis dependence or cannabis use disorder.** (Fleming & McKiernan, 2020).

- **Youth are also particularly vulnerable to the mental health harms associated with cannabis use**, including difficulties with thinking and memory and the worsening of existing mental health conditions such as depression. It can also increase the risk of psychosis and schizophrenia, especially in people with a family history of mental illness (CCSA, 2020a). From 2006 to 2015, hospitalizations in Canada for cannabis-related mental and behavioural disorders increased two and a half times, from 2.11 per 100,000 to 5.18 per 100,000 (CCSA, 2020a). Psychotic disorder was the most common clinical condition among those treated for cannabis use, accounting for a third of these hospitalizations (CCSA, 2020a).

**Cannabis use disorder** is a medically recognized health condition. It affects 10% of people who use cannabis and is more frequent in men than women (Greaves, et al., 2019).

## Cannabis in focus

### Did you know you can't overdose on cannabis?

Vaping large quantities of cannabis is not life-threatening, compared with other substances like alcohol or opioids that can result in people dying from an overdose. However, vaping large quantities of cannabis can lead to serious health problems, including nausea, vomiting, paranoia, delusions or psychosis (Singh, et al., 2011).

### What do I do if a youth is over-intoxicated or greening out?

"How cannabis affects you will depend on the amount you use. Using too much cannabis can lead to over-intoxication and poisoning, also known as 'greening out'" (Fleming & McKiernan, 2020, p. 23). This can cause severe anxiety or panic, an increased heart rate, nausea and vomiting, and paranoia.

- If you suspect it is a medical emergency (e.g., if the youth has passed out), lie them on their side and call 911.
- Bring them to a safe place.
- If they are awake and not vomiting, give them fruit juice or water.
- If they are panicky or paranoid, stay with them to provide reassurance and support.
- Encourage them to take slow, deep breaths.

### Signs a youth may be experiencing problems with cannabis

It can be difficult to determine if a youth is experiencing problems with cannabis. Changes in behaviour can be a sign and an opportunity to start a conversation (School Mental Health Ontario & Centre for Addiction and Mental Health, 2020b).

- Difficulty with completing schoolwork or decline in academic performance
- Ignoring responsibilities at school, home or work
- Difficulties with memory, concentration, thinking, learning, handling emotions and decision making
- More withdrawn, secretive or dishonest
- Conflicts at school, home or work
- Participating less or giving up activities and hobbies they used to enjoy
- Changes in mood (e.g., anger, irritable, anxious, paranoid) (Ali, et al., 2011)

These behaviour changes can also be signs and symptoms of other health, mental health and social issues that can benefit from adult or professional intervention.

### REFLECTION EXERCISE

- Do you think youth are aware of and understand the harms associated with cannabis vaping? How do you know? Which risks and harms do you think youth are more aware of? Which are they less aware of?
- What are common misconceptions that you think youth have about cannabis vaping?

*Examples:*

- *vaping is safer than smoking*
- *you can't get addicted to cannabis when vaping*

## Strategies to Support Youth to Reduce Their Risk

When it comes to cannabis and vaping, or any other substance, youth are doing their own research, but the information they find is not always accurate or based on science. Educators are uniquely positioned to equip youth with the evidence and information students need to make informed choices about vaping cannabis.

Youth may vape cannabis for many reasons, such as to experience a high, have fun, be more social, fit in, cope with stress and anxiety or help with sleep. Whatever their reasons for using cannabis, provide opportunities for youth to learn about cannabis and vaping. This section explores ways educators can support youth to reduce their risk of cannabis-related harms through having safe, unbiased conversations.

### Just Say No to “Just Say No” Campaigns

School-based abstinence programs for substance use, like D.A.R.E. in the United States, have been found to not be effective (Singh, et al., 2011). A Canadian study on cannabis and youth found that the “just say no” approach does not resonate with youth, and youth prefer evidence-based information that is unbiased (i.e., it includes positive and negative aspects of cannabis use) (CCSA, 2017c).

### Starting the Conversation

Before you start a conversation with a young person about cannabis vaping, consider the following points (Fleming & McKiernan, 2020):

- Create a safe, judgment-free space where youth can feel accepted, valued, respected and supported.
- Be empathetic and present in your conversations with youth.
- Use language that encourages openness, trust and understanding — an approach that feels more like a two-way conversation, not an interview.
- Avoid language that could be stigmatizing, like stoner, addict or user.
- Understand the questions and concerns of youth. Avoid jumping to conclusions.
- Focus on the facts.

### Having the Conversation: Questions

Here are some questions you can ask youth about cannabis and vaping (Centre for Addiction and Mental Health [CAMH] & Canadian Research Initiative in Substance Misuse, 2018):

- What are the reasons you choose to vape cannabis (if a youth is already using it)?
- If you're using cannabis to cope with stress or anxiety, can you think of any healthier ways to cope?
- What do you think responsible cannabis use looks like? Why?
- Could vaping cannabis be harmful? Why?
- What do you think risky or unhealthy cannabis use looks like? Why?
- When do you think cannabis use might become problematic or harmful for a person?
- Is cannabis addictive? How do you know?
- Can you overdose with cannabis? How do you know?

*Talking Pot with Youth: A Cannabis Communication Guide for Youth Allies* (Fleming & McKiernan, 2020) can support youth allies to have unbiased, safe and non-judgmental conversations with young people about cannabis.

### Having the Conversation: Key Messages

Here are some **key messages** that you can use to talk to youth about cannabis:

1. **Delay using cannabis as long as possible.** The brain continues to develop until the age of 25. Early cannabis use can affect the health of your brain, including memory, attention and how you think and learn. Cannabis use can also increase the risk of psychosis and schizophrenia, especially if you or your family have a history of mental illness (Fleming & McKiernan, 2020).
2. **Avoid mixing cannabis with alcohol and other substances.** Mixing cannabis with other substances can lead to unwanted effects, such as over-intoxication. This may also require a visit to the hospital (Fleming & McKiernan, 2020).
3. **Don't drive after using cannabis and don't get in a vehicle with a driver who has used cannabis.** Cannabis affects coordination and judgment, which can make it more difficult to react. If using cannabis, plan alternative ways for getting home or consider staying at a friend's house (Fleming & McKiernan, 2020).
4. **If using cannabis, use products low in THC and try to limit how often and how much cannabis you use.** Consuming products high in THC, such as concentrates, can increase the risk for over-intoxication. Frequent and long-term use can also increase the risk for mental and physical harms, such as depression, anxiety, cannabis dependence and cannabis use disorder (CAMH et al., 2018).
5. **Understand the reasons why you are using cannabis.** If you are using cannabis to cope with stress and anxiety or to help you sleep and relax, identify alternative or healthier options to help you manage this. It could be talking with a friend, trusted adult or counsellor, meditating, exercising, or focusing on activities and hobbies that you enjoy.

## REFLECTION EXERCISE

- Why might a young person feel hesitant or uncomfortable seeking information, discussing cannabis, or vaping with a supportive person in their lives? What barriers might exist for these young people?
- As an educator or youth ally, what things can you do to put them at ease?  
*Examples could include:*
  - *model compassion and understanding*
  - *create opportunities for open and nonjudgmental conversations*
- How might your personal opinions and perspectives about cannabis and vaping influence your discussions with youth?

## Additional Resources

Topic Area	Resource
Cannabis (general)	<a href="#">Public Education (Cannabis)</a> (CCSA, 2021e) <a href="#">Are There Risks to Vaping Cannabis?</a> (video) (CCSA, 2021k) <a href="#">How to Reduce the Risks of Cannabis Vaping</a> (video) (CCSA, 2021j)
Vaping (general)	<a href="#">COVID-19 and Cannabis Smoking and Vaping: Four Things You Should Know</a> (CCSA, 2020b) <a href="#">Vaping Linked with Severe Lung Illnesses</a> (CCSA, 2019e) <a href="#">Vaping</a> (Canadian Paediatric Society, 2021) <a href="#">Vaping: What elementary school educators need to know</a> (School Mental Health Ontario & Centre for Addiction and Mental Health, 2020c) <a href="#">Talking with your teens about vaping</a> (Caring for Kids, 2020a)
Cannabis and youth	<a href="#">Cannabis: What Parents Need to Know</a> (Caring for Kids, 2020b) <a href="#">Cannabis: What Parents/Guardians and Caregivers Need to Know</a> (School Mental Health Ontario & Centre for Addiction and Mental Health, 2020b) <a href="#">Talking Pot With Youth: A Cannabis Communication Guide for Youth Allies</a> (Fleming & McKiernan, 2020) <a href="#">Cannabis in Canada: Get the Facts</a> (Government of Canada, 2018b) <a href="#">Discussion Guides</a> (Ontario Physical and Health Education Association, n.d.-a) <a href="#">Cannabis Resources</a> (Ontario Physical and Health Education Association, n.d.-b) <a href="#">Cannabis: What Educators Need to Know</a> (School Mental Health Ontario & Centre for Addiction and Mental Health, 2020a)

## PART 4 Understanding Alcohol

### Module Introduction

This section provides you with information about alcohol consumption, alcohol products and effects, the risks associated with drinking alcohol, and how educators can support youth to lower these risks should they choose to drink.



To get started, watch the video module [Understanding Alcohol](#). Once completed, work through this section of the guide and complete the reflection exercises.

#### Key concepts and takeaways:

- Drinking any amount of alcohol comes with risks, particularly for youth.
- Youth who start drinking alcohol early and who engage in high-risk drinking behaviour, such as binge drinking, have a greater risk of developing physical and mental health issues and social problems.
- Alcohol affects decision making, which can make people more vulnerable to health and safety risks such as injury, violence and driving after drinking alcohol.
- How alcohol affects an individual varies from person to person and with each use, and depends on a number of physiological factors including a person's sex assigned at birth and bodyweight.
- Youth are more likely to engage in high-risk drinking, such as pre-drinking and binge drinking. This behaviour puts them at greater risk of experiencing negative impacts related to alcohol.
- Drinking high strength alcohol products, such as flavoured or purified alcoholic beverages and liquor, over a short period of time can lead to over-intoxication and alcohol poisoning.
- Youth who begin using alcohol early and those who engage in high-risk drinking have a greater risk of developing an alcohol use disorder.

- Youth and young adults who have high risk drinking patterns, such as frequent binge drinking, increase their risk of developing chronic illnesses later in life. Such illnesses can include cancer, stroke, and heart and liver disease.
- Educators can create a safe, judgment-free space to facilitate open, evidence-based conversations with youth about alcohol. They can also play a role in challenging the normalization of alcohol use that we see in our social context and media through being aware of what they model.

## Alcohol Use Among Youth in Canada

Alcohol is the most widely used psychoactive substance in Canada. It is also the most used substance among Canadian youth. As mentioned in the video, almost half (44%) of young people in grades 7 to 12 said they consumed alcohol in 2018–2019, according to the Canadian Student Tobacco, Alcohol and Drug Survey (CSTADS). They were on average 13 years old when they first tried alcohol (Health Canada 2019d).

Although alcohol is widely considered to be socially acceptable, drinking any amount of alcohol comes with considerable risks for young people because their bodies and brains are not yet fully developed. Drinking alcohol during adolescence can negatively impact how the brain develops. The earlier a person begins drinking alcohol, the greater their risk of having mental and physical health concerns that raise their risk of developing chronic illness and mental health conditions later in life (CCSA, 2014a; CCSA, 2018a).

Alcohol consumption also poses serious risks to a young person's health and safety, especially if they engage in high-risk drinking behaviours such as binge drinking. It increases the likelihood of a youth engaging in risk-taking behaviour like driving after drinking alcohol. It also raises the risk of them experiencing other negative consequences, including injuries, violence or becoming over-intoxicated (CCSA, 2014a; CCSA, 2018a).

The cumulative effects of alcohol consumption also take a toll on society. In 2017 alone, alcohol use by people of all ages living in Canada cost the Canadian economy \$16.6 billion across areas such as health care, criminal justice and lost productivity. That's \$455 per person in Canada (Canadian Substance Use Costs and Harms Scientific Working Group, 2020).

Adolescence is a crucial time when young people explore boundaries and decision making on their path towards independence. When it comes to alcohol, youth don't want to be lectured to by the adults in their lives; they want to have the facts at their fingertips so they can make their own choices (CCSA 2021f).

## Youth Drinking Patterns

Alcohol use among youth varies. Many young people don't drink alcohol at all, some may drink occasionally without any long-term issues, while others may develop problematic use and go on to experience long-term harms.

Young people choose to drink alcohol for a variety of reasons. Many choose to drink alcohol to have a good time, to relax or to be less stressed. Others may drink to socialize, relieve boredom or because of peer pressure (CCSA, 2018b). Whatever their reasons for using alcohol, youth and young adults up to the age of 24 are more likely than other age groups to engage in occasional, high-risk drinking, such as binge drinking, pre-drinking before going out and playing drinking games, than to drink regularly in moderation (CCSA, 2014a; Meister et al. 2018).

Reasons youth may drink alcohol:

- to have a good time
- to relax or de-stress
- to relieve boredom
- to be social
- to fit in or in response to pressure from peers



Although rates of binge drinking have declined in recent years, almost a quarter of young people in grades 7 to 12 who took part in the Canadian Student Tobacco Alcohol and Drugs Survey (CSTADS) reported having five or more alcoholic drinks on one occasion (Health Canada, 2019d). This trend extends to young people in post-secondary school. Students reported consuming on average four and a half drinks on a “typical drinking day” in the past month, according to the 2019–2020 Canadian Postsecondary Education Alcohol and Drug Use Survey (CPADS). On their “heaviest drinking day” they averaged almost seven drinks (Health Canada, 2019c).

Youth who engage in high-risk drinking behaviours are at greater risk of experiencing the negative effects of alcohol use. These include injuries, blackouts and intoxication in the short term. Longer-term effects include impacts on brain development, and physical and mental health issues later life (CCSA, 2014a; CCSA, 2018a; Drug Free Kids, 2019). We'll look at the effects, risks and harms of alcohol consumption in more detail in the next section of this chapter.

### Binge drinking in youth

Youth and young adults tend to drink more often and in larger quantities than other age groups. This behaviour puts them at greater risk of engaging in high-risk drinking behaviours such as binge drinking (CCSA, 2014a; Meister et al., 2018).

**Binge drinking** can be defined “as consuming more than three (females) or four (males) standard drinks on a single occasion” (Meister et al., 2018). It's also known as heavy episodic drinking, excessive drinking and high-risk drinking.

**“Pre-drinking”** (also called “pre-loading” or “pre-gaming”) is one of the most common high-risk drinking behaviours seen in young people. Pre-drinking is when people drink at home, at a private residence or public space before going to a party, event or bar. Studies indicate that many young people pre-drink to save money and to socialize with their friends (Østergaard et al., 2013; Meister et al., 2018). Pre-drinking is risky for young people because it takes place in an uncontrolled environment. It has been associated with the consumption of large quantities of alcohol and other negative consequences such as blacking out, injuries and over-intoxication (Barry et al., 2013; Fairlie et al. 2015).

**Drinking games** are a particularly high-risk drinking behaviour because they can lead to extreme levels of alcohol consumption and severe intoxication over a short period of time. In drinking games, rules dictate when and how much a person should drink and they can become competitive. Drinking games can have fatal consequences and should be avoided by youth.

**Blackouts** are a form of memory loss that can occur during a portion of the drinking period or the entire period (CCSA, 2018c; Hingson et al., 2016; Wetherill & Fromme, 2016). Blacking out is characterized as a different state of consciousness where individuals are able to interact with their environment, but do not form long-term memories associated with their actions.

A CCSA study of post-secondary students sought to understand more about high-risk drinking behaviour in young adults. A report on the study, *Heavy Episodic Drinking Among Post-secondary Students: Influencing Factors and Implications* (2018c), looks at this topic in more detail.



## REFLECTION EXERCISE

- Why do you think some young people engage in risky drinking behaviour, such as binge drinking and pre-drinking?
- What are some of the negative consequences associated with binge drinking?

*Examples:*

- *blacking out, getting injured*
- *affects brain development*

## What Is Alcohol?

Alcohol, also known as ethanol, is the psychoactive substance found in beer, wine and spirits. It is made by fermenting or distilling grain, fruit or vegetables. Although the ingredients, taste, appearance and alcohol content of alcohol products vary widely, their effects on the body are the same (CAMH, 2012).

### What's in a name?

Alcohol is also called booze, juice and liquor.

Common terms for getting drunk include buzzed, hammered, smashed, loaded and wasted.

## What Happens When You Drink Alcohol?

Alcohol is a depressant drug that acts on the central nervous system. This means it affects how the brain functions and communicates with the rest of the body. Alcohol can impact everything from your breathing and heart rate to the way you behave, move and think (CAMH, 2012).

Some people may consume alcohol for its intoxicating effects, or to get “drunk.” People often describe feeling relaxed, euphoric and less inhibited during the early stages of alcohol intoxication. The effects of moderate intoxication can range from impaired attention to slowed reflexes or coordination to double or blurred vision to unsteady or staggering walk. With severe intoxication, people may experience vomiting, inability to stand, loss of consciousness and even death (CAMH, 2012).

A person's blood alcohol concentration — the amount of alcohol in the blood — increases with the amount of alcohol consumed in a given period of time. The more alcohol in the blood, the greater the intensity of its effects on the body.

How alcohol affects someone varies from person to person and with each use. The effects depend on several factors, including (Health Canada, 2021a):

- age
- sex assigned at birth
- body weight
- the amount of food consumed before drinking alcohol
- speed of consumption (drinking faster results in higher peak blood alcohol concentration)
- the amount or strength of alcohol consumed
- whether other substances (e.g., cannabis) have been consumed alongside alcohol
- how often and how much you drink

For example: after drinking the same amount of alcohol, those assigned as females at birth and individuals with lower bodyweight will have a higher blood alcohol concentration than those assigned as male at birth and people who are heavier. This means they will feel the effects of alcohol more intensely and for a longer time. People inexperienced with drinking alcohol, such as youth, are at risk of over-consuming alcohol since they may drink too much and too fast without understanding the strength of alcohol, how alcohol works and how it may affect their body.

### **What Are the Short- and Long-term Negative Effects of Alcohol?**

Alcohol consumption can lead to many unwanted short- and long-term negative effects and harms. In the short-term, euphoria and a sense of happiness and relaxation may be experienced. Drinking high amounts of alcohol on one occasion can lead to dizziness, vomiting, memory loss, blackouts and over-intoxication, which can cause death. Drinking alcohol also increases risks to a youth's health and safety. Alcohol increases the likelihood of engaging in risky behaviour such as driving after drinking. It also raises the risk of experiencing other negative consequences including hangovers, doing something embarrassing, missing commitments such as school, injuries, accidents and violence or causing harm to others (CCSA, 2014a; Health Canada, 2021a).

The long-term effects of alcohol consumption are equally concerning. Drinking frequently (daily or almost daily) and drinking beverages with high alcohol content during adolescence can impact brain and body development, and lead to memory and learning difficulties. Youth who start using alcohol at a young age and those who engage in regular high-risk drinking are at greater risk of experiencing chronic physical illness, social challenges, and mental health and substance use concerns during their lifetime (CCSA, 2014a; CCSA, 2018a).

Alcohol consumption is linked to many types of cancer. CCSA's publication *Cancer and Alcohol* notes that "drinking as little as one drink a day on average can increase the risk for developing cancer of the breast, colon and rectum, esophagus, larynx, liver, mouth and pharynx" (CCSA, 2014b).

The table below gives an overview of the short- and long-term effects of consuming alcohol. (CAMH, 2012; CCSA, 2019f):

<b>Short-term effects can include:</b> <i>Note that short-term effects designated with an * are associated with drinking high amounts of alcohol on one occasion.</i>	<b>Long-term effects can include:</b> <i>Note that long-term effects are associated with frequent and heavy drinking over several years.</i>
Euphoria — feeling relaxed and happy	Increased risk of some types of cancer (e.g., liver, mouth, throat, breast, colon, rectum)
*Vomiting	Mental health issues
*Blurred vision	Dependence and alcohol use disorder
*Loss of coordination, dizziness	Social problems
*Slurred speech	Issues with learning and memory
*Lower inhibitions, increased risk-taking (e.g., impaired driving)	Loss of appetite, malnourishment and vitamin deficiencies
*Increased risk of accidents, injuries, causing harm to others	Increased risk of chronic illness (e.g., liver and heart disease, stroke, pancreatitis)
*Blackouts	
*Memory loss	
*Coma, death	

### What do I do if a youth is over-intoxicated or showing signs of alcohol poisoning?

Alcohol over-intoxication, also known as alcohol poisoning, can happen when a person consumes more alcohol than the body can handle. When a person becomes over-intoxicated on alcohol the body's basic life-support functions (e.g., heart rate, breathing, temperature control) start to shut down. Alcohol poisoning is serious. It can lead to brain damage and even death if not treated quickly.

Signs and symptoms of alcohol poisoning (CAMH, 2012):

- vomiting
- cold, clammy skin
- low body temperature, blue tinged skin
- confusion, stupor
- seizures
- slow heart rate and breathing
- becoming unconscious

If you suspect someone may be over-intoxicated, you need to act fast. When it comes to alcohol poisoning, every second counts (Government of Canada, 2021b):

1. Check in with the person by talking to them or gently shaking them.
2. If they do not respond, call for help (911). If you ask for help and have other drugs on you, you are protected by the Good Samaritan Law.
3. Sit them down, or if they are unable to sit up, lay them on their side in the [recovery position](#) (St. John Ambulance, 2016).
4. Do not leave them alone.
5. Try to find out if they've taken other substances and how much.

These steps are quoted from the Public Health Agency of Canada poster (2021), [Hey, Are You OK?](#) The poster walks you through what to do in an alcohol emergency.

### Alcohol, sex and gender

Sex assigned at birth and gender affect how people consume and react to alcohol, as well as the longer-term risks and harms associated with its use.

Although males tend to drink alcohol more frequently and in larger quantities than females, this gap appears to be narrowing. The number of females in Canada who report using alcohol in the past 12 months (in surveys) has risen considerably in recent years (Fourtin et al., 2015; Health Canada, 2018; Statistics Canada, 2019).

In the most recent CTADS survey (Health Canada, 2018), prevalence of drinking among males (79.5%) and females (76.9%) was similar (CCSA, 2019f). Among youth in grades 7–12 who participated in the 2019 CSTADS survey, the percentage of boys (43%) and girls (45%) who drink was also about the same (Health Canada, 2019d).

Females are more sensitive to the intoxicating effects of alcohol than males. They may feel the effects more intensely and for longer, even when they have consumed a similar or smaller amount of alcohol. This is because males tend to weigh more than females and have more of the enzyme that breaks down alcohol in their bodies. Females also appear to be more susceptible than males to the health issues associated with alcohol consumption such as heart disease, breast cancer, alcoholic hepatitis and stroke, and hepatitis (CCSA, 2014a; Centre for Excellence for Women's Health, 2017a).

## Pregnancy and alcohol

It isn't safe to drink any amount of alcohol if you are pregnant. This is because alcohol can harm how the baby develops in the womb, as well as its health at birth and later in life.

When a person who is pregnant drinks alcohol, it passes from the blood into the placenta and to the baby. A baby is still developing so is unable to process alcohol in the same way as an adult. The more a person drinks during pregnancy and the more alcohol a baby is exposed to, the greater the risks to its development and health.

Drinking alcohol during pregnancy can increase the risk of (Centre of Excellence for Women's Health, 2017b):

- miscarriage or stillbirth.
- having a baby born premature
- having a baby with low birthweight
- having a baby with fetal alcohol spectrum disorder or fetal alcohol syndrome

**Fetal alcohol spectrum disorders (FASD)** are the range of physical, neurological, behavioural and emotional health effects and disabilities that can happen when a child is exposed to alcohol in the womb. Alcohol can cause damage to the developing brain and body. FASD can range from mild to severe. Heavy drinking during pregnancy can cause lifelong disabilities at the most serious end of the FASD spectrum (Centre of Excellence for Women's Health, 2017b; CAMH, n.d.-a).

How to reduce the risks:

- If you are pregnant or are planning to become pregnant, the safest thing is not to drink alcohol at all to keep the risks to the baby low.
- If you discover you are pregnant, stop drinking alcohol as soon as possible.
- If you choose to drink non-alcoholic beer, check it contains no alcohol, rather than "low alcohol."

## REFLECTION EXERCISE

- While most youth don't drink alcohol or drink on occasion, some may experience problematic use such as drinking alcohol regularly and in large amounts. How might problematic alcohol use impact a young person's life at school and at home?  
*Examples:*
  - *blacking out, getting injured*
- Can you think of three symptoms of alcohol poisoning? How would you respond if you suspected a youth had alcohol poisoning?

## Alcohol Products

Alcohol products vary widely in appearance, taste and strength due to the different ingredients and processes used to make them. The alcohol content of a drink is determined by how long it is left to ferment and whether it is distilled.

**Fermented drinks** like beer, wine and cider have a relatively lower alcohol content between 0.5 to 20%. Beers, for example, can vary widely in strength. A lower alcohol content beer at 4% has more than 40% less alcohol than a 7% beer (CCSA, 2019f).

**Distilled alcoholic drinks** known as spirits or hard liquor, such as whisky and vodka, have a higher alcohol content — from 25% or more. In addition to fermentation, spirits go through a process called distillation that removes water and increases the concentration of alcohol. This creates stronger flavour profiles in the drink. Spirits can be consumed neat, which means straight with nothing mixed with them, or mixed with a non-alcoholic beverage to create a longer drink (CCSA, 2019f).

**Flavoured, purified alcoholic beverages** are highly sweetened, pre-mixed drinks that can have a high alcohol content. The sugar and flavouring can make them particularly appealing and dangerous to youth. It can be easy for youth to over-consume these drinks because they come in single serving containers and the sweet flavourings can mask the taste of alcohol and lead to overconsumption (Health Canada, 2019e).

**Energy drinks** are highly caffeinated, sweetened non-alcoholic drinks that have become popular with youth. Youth may mix alcohol with energy drinks for their stimulating effects. In the 2018–2019 CSTAD survey, 16% of youth in grades 7 to 12 reported drinking an energy drink on the same occasion as alcohol (Health Canada, 2019d). Studies suggest that youth who already consume energy drinks are more likely to mix them with alcohol than those who do not drink energy drinks (Doggett et al., 2019). Consumption of energy drinks has been linked with health concerns in youth including anxiety, headaches and, in severe cases, seizures and even death; when mixed with alcohol, the health risks increase considerably (Hammond, 2018).

Drinking stronger alcohol products, such as spirits or flavoured purified alcoholic beverages, and playing drinking games are risk factors for young people becoming intoxicated and needing medical attention. Drinking too much, too fast can be fatal for youth.

### Did you know?

It is prohibited in Canada to sell alcoholic drinks pre-mixed with energy drinks.

### Flavoured, purified alcoholic beverages

Flavoured purified alcoholic beverages are a relatively new type of high alcohol, high sugar beverage in Canada that can be particularly appealing and dangerous to youth. In 2019, almost 20% of young people between grades 7 to 12 reported drinking “sweetened high alcohol content” drinks (Health Canada, 2019a).

Young people can die from drinking too much alcohol, too fast. It can be easy for youth to drink large amounts of these high strength drinks because their sweetness and fruity flavourings can mask the flavour of alcohol and lead to overconsumption. In recognition of these risks, the Government of Canada introduced legislation in May 2019 restricting the amount of alcohol allowed in single serving, purified alcoholic beverages. Prior to this, these single serve drinks could contain up to four standard drinks — enough to severely intoxicate a youth (Health Canada, 2019e).

For example, a 568 ml bottle could contain up to 11.9% alcohol. Under the new regulations, purified alcoholic beverages can now contain no more than 1.5 standard drinks per serving. For example, a 568 ml bottle can contain no more than 4.5% of alcohol (Health Canada, 2019f).

### REFLECTION EXERCISE

Think about the factors that influence how alcohol affects someone. Which of these, if any, do you think youth understand? What factors do you think youth may not be aware of?

## Canada's Low-Risk Alcohol Drinking Guidelines

Canada's [Low-Risk Alcohol Drinking Guidelines](#) (LRDGs) make recommendations on alcohol consumption limits to support people in reducing alcohol-related harms should they choose to drink. They also provide tips to lower the risks of alcohol consumption and set out situations when it is advisable to not consume alcohol at all (for example, when pregnant or while taking medications that might interact with alcohol).

Currently, the LRDGs advise youth to delay drinking for as long as possible or at least until the legal age (CCSA, 2014a). If they choose to drink, they should do so under the guidance of caregivers.

The LRDGs are based on “standard drinks.” A standard drink contains 13.45 grams of alcohol, regardless of the kind of drink it is. Under these guidelines, the following drinks contain one standard drink (CCSA, 2018a):

- 341 ml bottle (12 oz) of 5% beer, cider or cooler
- 142 ml (5 oz) of 12% wine
- 43 ml (1.5 oz) of 40% spirit

The two graphics below show drinks that contain a) one standard drink and b) more than one standard drink. Do the number of standard drinks in these beverages surprise you?



Learning how to count the number of standard drinks in an alcoholic beverage has been shown to help people reduce their overall alcohol consumption (Drane et al., 2019). CCSA's self-help guide, *Knowing Your Limits with Alcohol* (2019h), provides guidance on how to count standard drinks.

The upcoming section on Strategies to Support Youth to Lower Their Risk provides some useful low-risk tips for youth, should they decide to drink alcohol.

### Updating Canada's Low-Risk Alcohol Drinking Guidelines

CCSA has received funding from Health Canada to lead an update of Canada's LRDGs by June 2022. Since Canada's LRDGs were first published in 2011, new research has significantly enhanced our understanding of the risks and harms of alcohol consumption. The update is being done through a collaborative process involving a range of experts, organizations and consultations. It will bring Canada's guidelines in line with current international evidence to reflect advances in what we know about alcohol.

The new guidelines aim to give people in Canada the most up-to-date evidence-based advice to help them make informed choices about alcohol. They will also provide focused guidance on the needs of particular risk groups including women, youth and people with chronic disease (CCSA, 2021g).

Learn more about the project to update Canada's LRDGs at [CCSA.ca](https://www.ccsa.ca).

## Summary of Alcohol-Related Harms and Risks for Youth

Although the risks and negative effects associated with drinking alcohol are well-documented and can impact people of any age, they are particularly acute for youth because their brains and bodies are still developing. In this section we'll look at these risks in more detail, paying particular attention to those concerning youth and young adults. Refer back to page 46 for an overview of the short- and long-term effects of alcohol.

### REFLECTION EXERCISE

- Think about the amount of alcohol contained in the drinks shown in the images in this section. Does the alcohol content or number of standard drinks in these beverages surprise you?
- Do you think youth understand the concept of a "standard drink"? How could you explain it to them?

#### Examples:

- Food and drink often come in portions or a recommended serving size. Pop is sold in portion-sized cans, as well as large 750 ml and two litre bottles. Drinking a whole two litre bottle of pop in one sitting is not recommended. Instead, you pour yourself a small glass.
- Think of a standard drink like a standard portion of alcohol. Unlike a portion of pop, which is based on a volume of a liquid, a standard alcoholic drink is based on an amount of alcohol (or ABV%). Some alcoholic drinks contain one portion or standard drink of alcohol, but others — especially drinks with a high alcohol content — can contain more than one portion (standard drink) of alcohol. So, a 341 ml bottle of 7% beer contains more standard drinks than a 341 ml bottle of 5%. Even though both these drinks are the same volume of liquid, they contain different amounts of alcohol.

### Taking a harm-reduction approach to alcohol education

Scare tactics — messaging and images designed to frighten or shock — have often been used in prevention-based approaches to alcohol education but have been found to be largely ineffective (United Nations Office on Drugs and Crime & World Health Organization, 2018). Approaches that use evidence-based information to reduce harms through empowerment and personal choice have been more successful (Jenkins et al., 2017).

In 2021, CCSA conducted a series of focus groups with young people aged 19 to 25 to better understand their perceptions on youth-targeted alcohol education messaging. Youth in the study said they wanted the facts about alcohol, including the potential harms, presented in ways that resonate with them. In response to this feedback CCSA developed a series of [educational social media graphics](#) tailored to youth (CCSA, 2021f).

- **Youth who start using alcohol at a young age are at increased risk of developing physical and mental health concerns, and social challenges.** Young people are particularly susceptible to the negative effects associated with alcohol because their brains and bodies are still growing and developing. Evidence shows that drinking alcohol in high-risk ways during adolescence can negatively impact the development of the brain and body. This can lead to problems with memory and learning, and compromise performance at school. It also raises the risk of experiencing chronic illness, and mental health and substance use concerns over a person's lifetime (CCSA, 2014a; CCSA, 2018a; Ewing et al., 2014).
- **Young people who consume alcohol in high-risk ways increase their risk of developing chronic illnesses later in life.** Drinking alcohol regularly — even in small amounts — is linked to many types of cancer (liver, throat, breast, mouth, colon) and chronic conditions including pancreatitis, diabetes, high blood pressure, and heart and liver disease (CCSA, 2014a; CCSA, 2019h),
- **Drinking alcohol makes youth vulnerable to health and safety risks such as injury, driving after using alcohol, violence and alcohol poisoning.** Young people may already be more likely to engage in risky behaviour because the part of the brain responsible for impulse control is not fully developed until the age of 25. Alcohol amplifies these risks; it impairs judgment, reasoning and coordination, which can make it more difficult for young people to evaluate risks (CCSA, 2014a).



### Alcohol-impaired driving

Young drivers are already a high risk on the road due to their impulsive nature and lack of driving experience. Driving under the influence of alcohol, cannabis or other substances considerably increase a young person's risk of crashes, injury and death on the road (Beirness et al., 2013; CCSA, 2019g).

Although improved awareness of the dangers of alcohol-impaired driving has seen rates decrease considerably in recent years, people who drive impaired continue to put everyone on the road at risk. Using alcohol before or while driving impairs the skills and functions you need to safely operate a vehicle, including vision, judgment and the ability to multi-task. Driving under the influence of alcohol, drugs or both is never worth the risk (CCSA, 2021h).

- **Youth and young adults are more likely to engage in high-risk drinking such as binge drinking, pre-drinking and playing drinking games.** This behaviour can put them at greater risk of harm. Consuming large amounts of alcohol over a short period of time can lead to over-intoxication or alcohol poisoning, which can be fatal. Over-intoxication happens when the amount of alcohol consumed is more than your body can handle. It can cause vomiting, black outs, unconsciousness and death (CCSA, 2014a; Meister et al., 2018).
- **Drinks with high alcohol content such as purified alcoholic beverages can be highly sweetened, which can make them appealing to youth and mask the effects of over-consumption.** This can put youth who consume these drinks at greater risk of becoming over-intoxicated and experiencing other negative impacts associated with alcohol (Health Canada, 2019e).
- **Mixing alcohol with other substances (polysubstance use) such as cannabis or prescription medications is dangerous.** Alcohol can react with other substances causing harmful, unpredictable and unwanted side effects. Mixing substances with alcohol can amplify the impairing effects of substances and can stop medications from working.
- **Individuals who start drinking at an early age or who engage in high-risk drinking behaviours such as binge drinking are at greater risk of developing problems with alcohol or an alcohol use disorder.** While some people are more susceptible than others, alcohol use disorder can develop at any age. Youth should delay drinking alcohol for as long as possible (CCSA, 2014a).

Remember that drinking any amount of alcohol comes with risks, especially for young people.

## REFLECTION EXERCISE

- Do you think youth are aware of and understand the harms associated with drinking alcohol?
- Which risks and harms do you think youth are more aware of? Which do you think they are they less aware of? Why?
- What type of questions do young people in your personal and professional lives have about alcohol? Do you feel able to answer their questions? What can you do when faced with a question you don't know the answer to?

### What is alcohol use disorder?

Alcohol use disorder (AUD) is a medically recognized health condition. AUD can be mild, moderate or severe. Individuals experiencing AUD have trouble controlling their alcohol use, even when it has detrimental effects on their health or other aspects of their life. They may experience withdrawal symptoms if they stop drinking abruptly, including cravings, nausea, seizures and, in severe cases, a syndrome called delirium tremens that can cause death if left untreated. People with AUD who want to stop drinking should always do so under the guidance of a health professional (CAMH, 2012).

### Signs a youth may be experiencing problems with alcohol

Although it can be hard to know if a young person is having problems with alcohol, there are some behavioural changes you can look out for:

- Losing interest in or participating less in sports, hobbies and other activities that they used to enjoy;
- Decline in academic performance and absences from school;
- Changes in their friendships and social groups;
- Increased conflicts at work, home and school; and
- Significant changes in mood (National Institute on Alcohol Abuse and Alcoholism, 2015).

These behaviour changes can also be signs and symptoms of other health, mental health and social issues that can benefit from adult or professional intervention.

## Strategies To Support Youth to Lower Their Risk

Although Canada's Low-Risk Alcohol Drinking Guidelines recommend youth delay drinking alcohol for as long as possible, the reality is that many young people do choose to drink but aren't always aware of the risks (Meister et al., 2018; CCSA, 2021f). Provide opportunities for youth to learn about alcohol so they feel empowered to make informed and responsible decisions about its use. It's best to approach the topic in a way that's open, non-judgmental and always focused on the facts.

Understandably, some youth might be hesitant or uncomfortable to talk about alcohol. They may worry about being judged or the repercussions of drinking under the legal age. Here are some tips to start the conversation (Fleming & McKiernan, 2020; Drug Free Kids, 2019; Government of Canada, 2010):

- Choose the right time to talk, like when you're both feeling calm or when you're doing an activity together.
- Create a safe, judgment-free space where youth can feel accepted, valued, respected and supported.
- Use language that encourages openness, trust and understanding — an approach that feels more like a two-way conversation, not an interview.
- Stay calm and listen as well as talk. Pay attention to non-verbal language and be open to learning new or current language from your students. Asking questions can also help you gauge how much the young person already knows about alcohol use and then provide them information that is developmentally appropriate.
- Praise your student and express gratitude for their openness, honesty and willingness to talk and entrust their feelings and experiences with you.
- Always focus on the facts while being open about the risks of drinking.
- When talking with youth, discuss the reasons why some people may drink alcohol, the risks of drinking and the ways in which youth can lower their risks, if they still choose to consume alcohol.
- Talk regularly. Lots of small conversations are better than a long lecture.
- If the young person is concerned about their alcohol use, encourage them to speak to their caregiver, counsellor or healthcare provider.

### Conversation Starter: Questions for Youth

Here are some questions you can ask youth to get the conversation started (Fleming & McKiernan, 2020; Drug Free Kids, 2019). Choose the ones that work best for you, the youth, and the situation:

- Why do you choose to drink alcohol (if a youth is already drinking)?
- What are the things you like or don't like about drinking alcohol?
- What do you think lower-risk drinking looks like? Why?
- What do you think risky drinking looks like? Why?
- What do you know about binge drinking, pre-drinking and drinking games? Have you ever felt pressured to drink too much?
- If you're drinking alcohol to cope with stress or anxiety, can you think of some alternative ways to cope?
- Do you think some people your age might drive or ride in a car with someone who has drunk alcohol? Why do you think this is? If not, why not?

- What can you do if your ride home has been drinking?
- What do you know about the alcohol content or strength of different drinks like spirits, coolers, beer and wine? How do you know this?
- What do you know about Canada's Low-Risk Alcohol Drinking Guidelines?
- What steps can you take to lower your risk if you choose to drink alcohol?
- When might drinking alcohol become harmful to someone?
- What are some ways you could help a friend who has drunk too much alcohol?

### **Having the Conversation: Key Messages**

Here are some key messages you can share when talking to youth about alcohol.

- **Delay drinking alcohol for as long as possible to lower your risk of experiencing negative impacts related to its use, especially when your brain is still developing.** When you're a teen your brain and body are still developing. In fact, your brain doesn't finish maturing until around the age of 25. Science shows that if you drink alcohol when you're young it can harm your development. This can cause problems with memory and learning at school, and even problems at home. Teen drinking also increases your risk of getting sick with long-term health conditions, like cancer and liver disease, and having problems with your mental health or substance use later in life (CCSA, 2014a; CCSA, 2018a; Ewing et al. 2014).
- **Try to avoid mixing alcohol with other substances such as cannabis or prescription medications.** Mixing any drug with alcohol — even prescription medications and cold medications — is dangerous and puts your health at risk. Alcohol can react with other drugs and cause side effects that can make you sick. You may even require a visit to the hospital. Alcohol can also stop your medications from working properly (CCSA, 2019h; CAMH, 2012)
- **Avoid higher strength alcoholic drinks and drinking games.** It's easy to consume too much alcohol if you drink strong drinks or play drinking games, even if you think you're being careful. If you choose to drink, stick to lower strength drinks and avoid having more than one or two drinks on one occasion.
- **Drinking a lot of alcohol in a short period of time can increase your risk of blacking out, getting injured and even having long-term health problems.** Drinking a lot of alcohol on one occasion is risky. It could increase the risk of doing something that you'll regret later. It could also increase your risk of having accidents, getting injured or getting into difficult situations. If you consume more alcohol than your body can tolerate you can get sick with alcohol poisoning. You may black out, become unconscious or even die if you're not treated quickly (CCSA, 2014a; Drug Free Kids, 2019).
- If you choose to drink alcohol, these tips can help lower your risk (CCSA, 2019h):
  - **Set limits and try to stick to them:** setting limits and learning how to count standard drinks can help you to keep track of how much you're drinking.
  - **Eat food before and while consuming alcohol:** eating food can reduce the impact of drinking alcohol because it interferes with how alcohol is absorbed into your body. It's dangerous to drink alcohol on an empty stomach.
  - **For every alcoholic drink, have one non-alcoholic drink:** drinking water while consuming alcohol will help you to pace your drinking.
  - **Pace yourself:** taking it slow will help you stick to your limits and avoid short-term health risks like injuries, getting drunk and alcohol poisoning.

- **Don't drive after drinking alcohol or take a ride with someone who has been drinking.**

Alcohol affects the skills and functions you need to drive safely, such as your ability to concentrate, react quickly and multi-task. It is not safe to drive after consuming alcohol, cannabis or other drugs, or ride with anyone who has. Driving under the influence of alcohol, other drugs or both can cost you money, your time and your freedom, and even cause serious injuries or death to you or someone else (CCSA, 2021g).

- **Plan ahead.** If you're going out with friends and intend to drink alcohol, have a plan to reduce risks when drinking and get home safely. Think about finding an alternative means of transportation such as a bus or ride share, arrange to stay the night with a friend or call family for a ride. If you're driving somewhere with friends, make sure you have a designated driver, someone who agrees in advance to stay sober (i.e., does not use any alcohol or other drugs) all night.
- **It's ok if you don't want to drink alcohol at all.** The choice is yours. Many young people decide not to drink alcohol at all. If you are worried about your drinking, talk to an adult or your healthcare provider about your concerns. You might want to think ahead and plan some ways you can respond when someone offers you a drink. You might use some of the following responses:
  - No thanks, I'm driving.
  - No thanks, I have a lot to do tomorrow so I want to be clear-headed.
  - No thanks, I have a big game tomorrow and I want to be in shape.
  - No thanks, I told my family I would cut down.
  - No thanks, my doctor says I shouldn't drink while taking medication.

### REFLECTION EXERCISE

- What can you do to prepare for a conversation with a young person about alcohol?

*Examples:*

- *do your research so you can focus on the facts and answer any questions they might have*
- *consider when might be an appropriate time to have the conversation*

- How can you put a youth at ease if they feel uncomfortable?

*Examples:*

- *be compassionate and understanding*
- *actively listen to their concerns without judgment*

- How do you think your own personal experiences and perspectives on alcohol consumption might influence your conversations with youth?

### Choosing not to drink

Because drinking alcohol is widely considered to be socially acceptable, some people who choose not to drink can experience social stigma. A U.K. study explored the negative experiences of female postsecondary students who do not drink alcohol at university. Many of these students reported being judged by peers and having difficulty socializing in an environment where drinking culture is so deeply engrained. All students said they found ways to cope with these social pressures either by “providing excuses” for not drinking or by avoiding social events (e.g., bars and nightclubs) where alcohol would be involved (Jacobs et al, 2018).

Despite these challenges, the proportion of teens in grades 7–12 who report drinking alcohol has fallen over the past 15 years according to CSTADS (Health Canada, 2019d; Health Canada, 2021a). In fact, many young people choose not to drink at all. Over 50% of students who participated in the 2019 CSTADS survey said they had not consumed alcohol at all in the past 12 months (Health Canada, 2019d).

It's a misconception that you need alcohol to have a good time. Educators can remind young people that there are so many activities they can enjoy that don't involve alcohol, such as playing sports and doing other hobbies. Even traditionally alcohol-centric activities such as clubbing can be alcohol-free. The “conscious clubbing” movement has grown globally in recent years as an alternative way for young adults to socialize, have fun and enjoy music without using alcohol or drugs. (Davies et al., 2019).

## Additional Resources

Topic Area	Resource
Alcohol (general)	<a href="#">Knowing Your Limits with Alcohol</a> (CCSA, 2019h)
	<a href="#">Canada's Low Risk Alcohol Drinking Guidelines - Brochure</a> (CCSA, 2018a)
	<a href="#">Alcohol</a> (CCSA 2019f)
	<a href="#">Alcohol and Chronic Health Problems</a> (CAMH, n.d-c)
Alcohol and youth	<a href="#">Youth and Alcohol</a> (LRDG summary) (CCSA, 2014a)
	<a href="#">Youth and Alcohol</a> (Drug Free Kids, 2019)
	<a href="#">How to Talk with Your Teen</a> (Caring for Kids, 2017)
	<a href="#">Alcohol Public Education Tailored for Youth</a> (CCSA, 2021f)
	<a href="#">Partying and Getting Drunk</a> (CAMH, n.d-d)
Alcohol, sex and gender	<a href="#">Trauma, Gender, Substance Use: Sex, Gender and Alcohol</a> (Centre of Excellence for Women's Health, 2017)

## PART 5: Understanding Impaired Driving

### Module Introduction

This section provides you with information about impaired driving including how alcohol, cannabis and other drugs affect driving performance, the harms and risks of driving after using alcohol, drugs or both, how law enforcement detects impaired driving, and how educators can support youth to lower their risks.



To get started, watch the video module [Understanding Impaired Driving](#). Once completed, work through this section of the guide and complete the reflection exercises.

#### Key concepts and takeaways:

- Impaired driving is a public safety issue and a leading cause of serious road collisions in Canada.
- Youth are at high risk for road collisions due to being young and inexperienced drivers. Driving under the influence of alcohol or other drugs, or riding with someone who is, greatly increases their risk of collisions, injury and death on the road.
- Alcohol, cannabis and other drugs, including some prescription and over-the counter medications like cold medications, impair the functions and skills needed to operate a vehicle safely.
- All jurisdictions in Canada have zero tolerance policies for driving after using alcohol, other drugs or both for new and young drivers. This means they face immediate short term administrative sanctions if found driving with any amount of alcohol, cannabis or impairing substance in their system.
- Impaired driving is a serious criminal offence.
- Police can subject drivers to sobriety tests. Failure to comply can result in criminal charges.
- When educating youth, discuss the reasons people drive after using alcohol and drugs, common misconceptions, the risks of driving under the influence of alcohol, drugs or both, and ways youth can lower their risk.

## Impaired Driving in Canada

Driving after using alcohol and other drugs is a leading cause of serious collisions, injuries and death on Canada's roads. Between 30–50% of road deaths in Canada involve a driver who has been under the influence of alcohol or other drugs according to estimates by the Canadian Centre on Substance Use and Addiction (CCSA, 2021h). In 2019, impaired driving claimed more lives than all other crimes in Canada with the exception of homicide (Perreault, 2021).

Although these statistics are alarming, rates of alcohol-impaired driving have fallen considerably in recent years thanks to education and awareness efforts. Despite this, drivers who are impaired by alcohol continue to be a danger to everyone on the road. In 2019 the number of alcohol-impaired driving incidents reported by the police rose by 15% from the previous year, according to Statistics Canada (CCSA, 2021h; Perreault, 2021).

Driving after using drugs other than alcohol — particularly cannabis — is a growing concern. In some self-reported drug and alcohol use surveys, more young people report driving after using cannabis than alcohol (Beirness & Porath, 2019; Boak et al, 2020; Health Canada, 2019d)

Police reports of drug-impaired driving increased by 43% in 2019 from 2018, although alcohol remains the most prevalent substance involved in incidents reported by the police. While new legislation giving police greater capacity to screen for drugs is likely to have contributed to this increase, the number of police-reported drug-impaired driving incidents has been rising for the past decade (Perreault, 2021).

### What Is Impaired Driving?

Impaired driving is operating a motor vehicle while under the influence of alcohol, psychoactive drugs, medication or any combination of these substances. This includes illegal and legal substances, prescription medications and over-the-counter medications like some cold medicines (CCSA, 2021h).

#### Did you know?

In impaired driving laws, a motor vehicle includes any motorized land, water or aircraft. This includes cars, motorcycles, snowmobiles, all-terrain vehicles, airplanes, jet skis and even e-scooters and e-bikes. Impaired driving laws apply while operating a vehicle on private property, including trails, as well as on public roadways.

A person is considered impaired by alcohol or drugs when they are no longer able to operate a vehicle or machinery safely. Impairment can occur after the use of very small quantities of alcohol or drugs, especially for young and novice drivers, due to a lack of driving experience. For some substances (including alcohol and cannabis), the law specifies the concentration of drug that can be present in a driver's blood above which the driver is deemed to have committed an impaired driving offence.

The *Criminal Code* set outs the illegal levels (per se limits) for various substances within two hours of driving (Justice Canada, 2021a):

- Alcohol: 80 ml of alcohol per 100 ml of blood or 0.08% blood alcohol content (BAC) or above.
- Cannabis: There are two illegal levels for THC, the primary psychoactive component of cannabis. It is a less serious offence to have between two nanograms (ng) and five ng of THC per ml of blood and a more serious offence to have five ng of THC or more per ml of blood.
- Alcohol and cannabis combined: 50 ml of alcohol per 100 ml blood (0.05% BAC) and 2.5 ng or more of THC per ml of blood or above.
- Other substances: Any amount of ketamine, methamphetamine, cocaine, LSD, psilocybin, 6-mam (heroin metabolite) or PCP.



For young and novice drivers, the rules are even more restrictive. All provinces and territories have zero tolerance policies for novice drivers, which means new drivers who are found with any amount of alcohol, cannabis or other drugs in their system will face an immediate penalty. Many jurisdictions extend this policy to all drivers under the age of 22 (CCSA, 2021i).

### Did you know?

Non-criminal penalties for impaired driving vary between jurisdictions. Young drivers are advised to make themselves aware of the laws in their province or territory.

Most provinces and territories also impose penalties and administrative sanctions, such as licence suspension and fines, on drivers who have alcohol or drug concentrations below criminal levels. Most jurisdictions can impose immediate suspensions on drivers with an alcohol concentration of 50 mg of alcohol per 100 ml of blood. Visit [Justice Canada](#) for more information about impaired driving laws.

## Impaired Driving and Youth

Young and novice drivers are already at a high risk of being involved in road collisions due to their lack of driving experience. Year after year, vehicle accidents are a leading cause of death amongst young people worldwide (Khan et al, 2021; Li et al., 2016).

Using alcohol, cannabis or any other psychoactive substance before or while driving considerably increases a young person's risk of collisions, injury and death on the road (Beirness et al., 2013; CCSA, 2019g). Despite these risks, some young people still drive while impaired. Young people who drive under the influence of alcohol, other drugs or both endanger the lives of everyone on the road, including their passengers. Some teens ride in vehicles with drivers who have used substances and may be impaired, which is also dangerous.

### Risk factors for young drivers

Several factors put young drivers at greater risk of harm on the roads. These risks are amplified when a driver is impaired by cannabis, alcohol or a combination of substances (CCSA, 2019g).

**Inexperience:** No matter how careful they are, all young drivers start off with little driving experience. It takes time and many hours on the road to become a safe, competent driver. Graduated Driver Licensing programs aim to reduce the risks for new drivers through a phased approach to driving that gradually increases driving privileges as a person gains experience (Transport Canada, 2019).

**Age:** Adolescence is a time when youth explore boundaries and their path to independence. Young people are more likely to take risks while driving — like speeding, making sudden maneuvers and driving after using substances — because the part of the brain responsible for impulse control does not fully develop until the age of 25 (CCSA, 2019g).

**Passengers and distractions:** Many young people carry passengers or engage in activities that can distract them while driving, like using their cell phone or car radio. Carrying one or more young passengers can increase a young driver's risk of having collisions (Beirness, 2014).

**Driving at night:** It's harder to see hazards, stay awake and judge speed and distance when driving at night. These factors all contribute to making night driving a risky business for young, inexperienced drivers (CCSA, 2019g).

**Peer pressure:** Like the social pressures young people face to drink alcohol or try drugs, peer pressure can also influence a young person's decision to drive under the influence of alcohol and other drugs.

### ***Cannabis-Impaired Driving***

Although awareness among youth of the dangers of alcohol-impaired driving has improved in recent years, many young people underestimate the dangers of driving while under the influence of drugs, particularly cannabis. In fact, a common misconception among youth is that cannabis can make them a better or safer driver because it helps them to focus or because they will drive more slowly (McKiernan & Fleming, 2017). This is not true.

The reality is that youth are two-to-fives times as likely to be involved in a fatal collision if they drive after using cannabis because it severely impairs a person's motor skills, awareness of surroundings, thought processes, attention and ability to react to things on the road (Asbridge et al., 2012). Yet, in some self-reported drug and alcohol use surveys, more young people report driving after using cannabis than alcohol (Beirness & Porath, 2019; Boak et al, 2019; Health Canada, 2019c). For example, in the 2019 Canadian Postsecondary Education Alcohol and Drug Survey, 17% of students aged 17–25 reported driving within two hours of smoking or vaping cannabis; 9% reported driving after drinking alcohol (Health Canada, 2019c).

#### **Did you know?**

[The High Way Home?](#) is “a choose your own adventure” style website that takes young people through virtual scenarios that require decisions about cannabis use and driving (CCSA, n.d.-g).

### ***Misconceptions About Cannabis-Impaired Driving***

CCSA carried out a study on [youth perceptions on cannabis use](#) in Canada, including cannabis-impaired driving. Many participants in the study considered driving after using cannabis to be less risky than after drinking alcohol. Although most of the 77 youth who took part in the study understood that cannabis can affect driving and slow reaction times, they largely perceived the risks as dependent on an individual's experience with the drug, their level of tolerance and the amount used.

Conversely, all participants agreed that they would not drive after drinking alcohol because it was dangerous. Most agreed they would not ride with a driver who was obviously impaired, but fewer showed the same level of concern for riding with a driver who had consumed cannabis (McKiernan & Fleming, 2017).

The following misconceptions were also observed in the study (McKiernan & Fleming, 2017):

- Cannabis makes you a better or more careful driver.
- Cannabis-related driving incidents are less common because they are not in the media.
- You're less likely to get caught driving high than drunk.
- It's more difficult for police to detect cannabis use than alcohol use by drivers.

It's clear that many young people misperceive the real risks of driving high but it's not only youth who hold these beliefs. Some adults and even more experienced drivers underestimate or misunderstand the dangers and consequences of cannabis-impaired driving. Educators are in a unique position to set an example to challenge these misconceptions and support young people to make informed, responsible decisions behind the wheel.

### Impaired driving, sex and gender

Research tells us that sex assigned at birth and gender can affect risk-taking behaviour such as driving after consuming alcohol or drugs, as well as how people use and react to substances (Pawlowski et al., 2008; Greaves et al., 2019). For example, more males drive under the influence of alcohol or drugs than females (Beirness, 2020; Minaker et al., 2017; Perreault, 2021) and more male drivers are killed in impaired driving collisions.

The Canadian Cannabis Survey 2019 revealed that 32% of males who use cannabis reported driving after using the drug at least once in the past 12 months, compared to 19% of females (Health Canada, 2019b). Similarly, the 2019 Ontario Student Drug Use and Health Survey found that almost twice as many young males in grades 10–12 drove under the influence of cannabis (8.6%) or alcohol (5.2%) than young females (4.9% cannabis; 2.6% alcohol) (Boak et al., 2020).

In contrast, females may be more likely to ride as a passenger of a driver under the influence. The analysis in Minaker et al of data from the 2014–2015 Canadian Student Tobacco, Alcohol and Drug Survey found that girls had a “higher odds of risky passenger behaviours relative to boys” (Minaker et al., 2017).

### REFLECTION EXERCISE

- What factors put young, inexperienced drivers at higher risk on the roads?

*Examples:*

- age
- carrying young passengers

- What are some of the misconceptions youth may have about driving under the influence of cannabis?

*Examples:*

- cannabis makes you a more careful driver
- you're less likely to get caught driving high

## Effects of Drugs on Driving Performance

To operate a vehicle safely, drivers need to be alert and make complex, instant decisions in response to your surroundings.

Alcohol, cannabis and other drugs affect the brain and body, impairing the functions and skills needed to drive safely, including:

- motor skills
- coordination and balance
- reaction time
- judgment and decision making
- temporal and spatial awareness
- attention
- multi-tasking

Impairing substances include legal (alcohol, cannabis) and illegal drugs (cocaine, methamphetamine, heroin), prescription medications (opioids), and even over-the-counter medications (some anti-allergens and cold medications (CAMH, n.d.-b)).

### **Alcohol**

Alcohol is a depressant that impairs vision, coordination and judgment. This can make it difficult for drivers to see the road ahead and react to things like an animal darting onto the road, as well as to judge speed and make decisions. A person who drives after using alcohol may drive faster, swerve in and out of lanes, and take more risks on the road (CAMH, n.d.-b).

### **Cannabis**

Cannabis affects the parts of the brain responsible for attention, motor skills and awareness of surroundings. It can distort your sense of space and time, impair coordination and memory, and affect your ability to think clearly. A person who drives after using cannabis may have difficulty making decisions and may react more slowly to their environment. They may appear to drive slowly, have difficulty keeping their vehicle in the lane and take more time to make maneuvers (Beirness & Porath, 2019, CCSA, 2016).

#### **MISCONCEPTION ALERT**

*"Cannabis doesn't impact my driving ability, in fact, it can make me a better driver."*

A common misconception among youth and young adults is that cannabis makes you a better or more focused driver. This is not true. As we've seen in this section, using cannabis seriously impairs a person's ability to drive safely because it affects perceptions, coordination, concentration and how you react to things on the road. People who drive after using cannabis have difficulty with tasks that involve assessing and responding to multiple sources of information. Driving after using cannabis doubles the risk of being involved in a fatal collision. It's important for educators to counter misconceptions like this when talking to youth about cannabis-impaired driving. (Beirness & Porath, 2019).

### **Stimulants**

Stimulants such as cocaine speed up brain activity. They can make an individual restless and more talkative while affecting attention and the ability to control impulses. A person who drives after using stimulants may drive erratically and take more risks on the road (CCSA, 2016).

### **Opioids**

Opioids like oxycodone and morphine relieve pain. They can also cause drowsiness, and impair concentration and coordination. A person who drives after using opioids may drive slowly, have trouble controlling the vehicle and react more slowly to hazards on the road, pedestrians, animals crossing and so on (CCSA, 2016).

## Sedatives

Sedatives such as sleep medications (benzodiazepines) and some over-the-counter allergy medications can cause drowsiness and impair coordination. The driving behaviour of a person who has used sedatives can be similar to someone who has used alcohol. They may have delayed reaction times, take more risks on the road and have trouble steering (CCSA, 2016).

### MISCONCEPTION ALERT

*"It's safe to drive after taking prescription medications."*

Many prescription and over-the-counter medications, including sedatives, opioid pain relievers and some cold and anti-allergy medicines, can impair your ability to drive safely. Always speak to a pharmacist or healthcare professional before driving while using these medications (CAMH, n.d.-b).

## Polysubstance Use and Impaired Driving

How a substance or combination of substances affects someone varies from person to person and with each use. This is because the intensity and duration of effects will depend on a number of different factors, including the amount used and the method of consumption, as well as the person's age, sex assigned at birth, body weight and tolerance to substances (Government of Canada, 2021d).

Using cannabis with alcohol or using any combination of substances together is known as polysubstance use. It can cause unpredictable effects and can multiply the impairing effects of substances. A driver who is impaired by multiple substances is at even greater risk of having a road collision (Hartman et al. 2015, Beirness et al. 2013).

It is not safe to drive after using any substance that may impair your functioning or ability to drive. Impaired is impaired.

### REFLECTION EXERCISE

- Name some of the key skills a person needs to safely operate a motorized vehicle.

*Examples:*

- motor skills*
  - concentration*
  - coordination*
- Choose two types of substance from the list above. Which driving skills do they impair? How does impairment by these substances impact the way someone might drive?

## What Are the Risks, Harms and Consequences of Driving While Impaired?

We've learned so far that driving while impaired by any substance can have life changing and even fatal consequences. Impaired driving is dangerous and a serious criminal offence that can cost young people their time, limit options for education and employment, and restrict freedom including the ability to travel. In this section, we'll explore some of these risks, harms and consequences in more detail.

### ***Impaired Driving Is a Serious Criminal Offence***

Impaired driving is a criminal offence in Canada. There are both criminal and non-criminal penalties for driving under the influence of alcohol, drugs or both. If you are found driving while impaired, you can face criminal and non-criminal penalties, including (Justice Canada, 2021a):

- Having your licence suspended
- Having your car impounded
- Fines
- Mandatory completion of a driving education program
- Criminal record
- Jail time

The severity of penalties depends on (Justice Canada, 2021a):

- The level of impairment
- Whether it is a first offence or repeated offence
- If harm has been caused to another person

The mandatory minimum criminal penalty for impaired driving is a \$1000 fine. The most serious cases — where bodily harm is caused to another person — can lead to a criminal sentence of up to 14 years in jail. Over half (57%) of the impaired driving incidents reported by police in 2019 resulted in criminal charges (Justice Canada, 2021a; Perreault, 2021).

### **MISCONCEPTION ALERT**

*“Law enforcement doesn’t really care about cannabis-impaired driving, so I’m unlikely to be caught.”*

It's a misconception that law enforcement does not care about cannabis- or drug-impaired driving, or that they go easy on youth. In 2018 the police were given greater capacity to screen for drugs such as cannabis and cocaine. The following year, police reports of drug-impaired driving increased by 43% (alcohol remains the most commonly detected substance in incidents reported by police). Drug-impaired driving carries the same criminal charges as alcohol-impaired driving. Young people face the same penalties as older drivers and, in many cases, the rules are even more restrictive (Perreault, 2021; Government of Ontario, 2020).

### ***Driving or Riding Impaired Increases the Risk of Road Collisions, Injury and Death***

Driving under the influence of alcohol, other drugs or both, or riding as a passenger of someone who has consumed alcohol or other drugs can lead to serious road collisions, life-changing injuries and even death. People who drive impaired put themselves, their passengers and other road users at risk of physical and mental harm.

Choosing to drive while impaired can result in life-altering circumstances. The consequences for drivers, passengers and other road users may be difficult or impossible to overcome or reverse. This reality alone highlights the importance for caregivers, educators and youth allies to support youth in understanding, evaluating and navigating decision making about substance use and driving.

#### **MISCONCEPTION ALERT**

*“Driving after using cannabis and other drugs is harmless because we don’t hear about it in the news.”*

Although we may not hear much about cannabis-related collisions in the news, we know that people do drive after using cannabis. In Canada, 22% of people who use cannabis report driving after using it at least once in their lifetime (Statistics Canada, 2019). Drivers are at least twice as likely to be involved in a collision if they drive after using cannabis and these collisions can result in serious injuries and even death (Asbridge et al, 2012; Beirness et al., 2013). As police and medical professionals increase monitoring for cannabis in crashes, we may hear more about cannabis-related collisions.

### ***Impaired Driving Has Social Consequences***

People who drive impaired may experience stigma and social exclusion, particularly if their impaired driving caused an injury or death. Being charged with impaired driving might have an impact on a person’s relationships with friends, family and their community.

In addition, having a criminal record can negatively impact a person’s opportunities for education, employment, travel and housing (Babchishin et al, 2021; Justice Canada, 2021b).

For example:

- Some universities, colleges and post-secondary programs will not enroll students who have a criminal record.
- Students with a criminal record may be ineligible for post-secondary scholarships.
- Having a criminal record can restrict travel across international borders.
- Having a criminal record can limit options for employment.
- Having a criminal record can restrict a person’s housing options as many landlords require background checks.

Visit [Justice Canada](https://www.justice.gc.ca) to learn more about the criminal penalties for impaired driving.

Visit [CCSA.ca](https://www.ccsa.ca) for more information about impaired driving laws, regulations and policy in Canada.

### REFLECTION EXERCISE

- Do you think youth are aware of and understand the risks, harms and consequences of driving under the influence of alcohol and other drugs? Why or why not? What do you think they are more aware of? What are they less aware of?
- What are some common misconceptions that you think youth have about impaired driving and its consequences? How would you counter these misconceptions?

**Examples:**

- *driving after using cannabis is “safer” than driving after drinking alcohol*
- *law enforcement goes easy on young people*

## Enforcement and Detection

People who drive after using alcohol, other drugs or both are often detected by police during routine traffic stops and at impaired driving check points.

When a person is stopped, they may be subject to (Royal Canadian Mounted Police, 2020):

- A breath test for alcohol using an Approved Screening Device (ASD)
- An oral fluid test to detect cannabis, cocaine or methamphetamine using an Approved Drug Screening Equipment (ADSE)
- A Standardized Field Sobriety Test (SFST)
- An evaluation by a Drug Recognition Expert (DRE), which can include a urine and oral fluid test or blood test

A driver who refuses to comply with police when they request a sample or assessment can face criminal charges with the same penalties as driving while impaired. In 2018 the federal government introduced new legislation that gives police greater powers to investigate people who drive impaired by alcohol and enhanced methods to screen for drug impairment.

### Screening for Alcohol

Police have long used approved screening devices to breath test for alcohol at the roadside but were only permitted, until recently, to check drivers they had reason to believe had been drinking. Mandatory alcohol screening, introduced in 2018, allows police to demand breath tests from any lawfully stopped driver, whether they suspect the driver has consumed any alcohol or not (CCSA, 2020c).

### Screening for Drugs

Until 2018, screening for drugs such as cannabis and cocaine was carried out via behavioural and physical assessments such as the Standard Field Sobriety Test (SFST) or diagnostic tests, such as urine testing, at a police testing facility or hospital. New legislation enables police to use oral fluid screening devices to screen for THC (the psychoactive component in cannabis), and sometimes cocaine and methamphetamine in samples of oral fluid (saliva) at the roadside. In addition, law enforcement has dedicated officers called Drug Recognition Experts (DREs) specially trained to detect impairment by drugs (CCSA, 2020d).



## MISCONCEPTION ALERT

*“Law enforcement cannot detect cannabis-impaired driving,*

As you’ve seen in this chapter, law enforcement has tools they can use to detect drug-impaired driving, including oral fluid screening and dedicated Drug Recognition Experts who are specially trained in detecting drug impairment. It’s a misconception that law enforcement cannot detect cannabis- or drug-impaired driving. The recent change in legislation gives police greater capacity to screen for cannabis and other drugs.

## REFLECTION EXERCISE

- What are some of the ways that law enforcement can detect impaired driving?

*Examples:*

- *approved screening device for alcohol*
- Do you think young people are aware of how law enforcement can screen for drug impairment? If not, why not? How could you, as an educator, support them to learn more about this?

## Drug and alcohol screening in focus

**Approved Screening Device (ASD):** ASDs provide an indication of the amount of alcohol per 100 ml of blood in a person’s body from a breath sample. Police do not need to suspect a person has been drinking to demand a driver provide a sample (CCSA, 2020c).

**Approved Drug Screening Equipment (ADSE):** ADSE can detect the presence of THC (and sometimes cocaine or methamphetamine) in a person’s body from a sample of saliva. Police must have reasonable grounds to suspect a person has used a drug to request this test. Such grounds include if a person is driving erratically, or there are physical or behavioural signs of impairment or evidence of drugs in the vehicle (CCSA, 2020d).

**Standardized Field Sobriety Test (SFST):** A police officer can request that a person takes an SFST if they suspect impairment by drugs, alcohol or a mix of both. An SFST involves an examination of the eyes, a test of walking in a straight line and a test of standing on one leg (Royal Canadian Mounted Police, 2020).

**Drug Recognition Expert Evaluation (DRE):** DREs are police officers who are specially trained through the Drug Evaluation and Classification Program to evaluate the presence of impairing substances in drivers. DRE evaluations are carried out at a police facility and include physical tests of balance and coordination, clinical observations (pupil dilation, blood pressure, heart rate, etc.) and the collection of a bodily fluid sample (e.g., urine, blood) for analysis of drug content (Royal Canadian Mounted Police, 2017).

Not all jurisdictions use oral fluid screening at the roadside for the detection of drugs. In these cases, if a person is suspected of drug impairment at the roadside, police can bring an individual straight to a police station to be evaluated by a DRE.

## How Educators Can Support Youth

Most young people are aware of the dangers of driving after drinking alcohol. Yet many have misconceptions about the risks of driving after consuming drugs, particularly cannabis. Young people might feel pressure to engage in this behaviour to fit in with their peers. Educators are in a unique position to have conversations with youth about the realities of impaired driving. Having open, two-way discussions with trusted allies can support youth to see the bigger picture and make informed, responsible decisions on the road.

### **“Scare tactics” fail to reduce risky driving behaviour**

When it comes to helping young drivers stay safe on the road, positive, fact-based campaign messages can be more effective than scare or threat-based tactics and graphic images. Fear-based messaging could even be counter-productive.

A recent study in Europe found that young people were less likely to take risks on the road when they were shown how to approach a situation safely (responsible driving behaviour), than when they were shown content designed to provoke fear of vehicle collisions. In fact, participants who were shown fear-based videos reported taking more driving risks in virtual scenarios than those who were shown videos of responsible driving (Cutello et al, 2021)

This ties in with what we know about the ineffectiveness of fear-based substance use prevention campaigns. When we focus on reinforcing positive behaviours, such as safer driving or reducing harm, rather than scaring people into not doing something, youth may be more receptive and better at making informed decisions.

### **Starting the Conversation**

Before you go ahead and start a conversation with a youth about impaired driving, think about the points below (Fleming & McKiernan, 2020):

- Check your biases before approaching the conversation. Understand how your personal experiences, values and beliefs might influence the discussion.
- Create a supportive, judgment-free space and opportunities for open, two-way conversations about impaired driving.
- Stay calm, listen and use language that encourages openness, trust and understanding.
- Focus on the facts, be open about the consequences and avoid using scare tactics.
- Discuss reasons why people drive while impaired, as well as any common misconceptions.
- Encourage students to identify ways to be safe, responsible drivers and how to lower their risk of driving after using alcohol or other drugs, or of riding as a passenger of a driver who has used substances.

CCSA's resource [\*Talking Pot with Youth: A Cannabis Communication Guide for Youth Allies\*](#) (Fleming & McKiernan, 2020) can support youth allies to have those tough conversations with young people about cannabis use. The tools and techniques covered in the guide can also be applied to conversations about impaired driving.

### ***Having the Conversation: Questions***

Here are some questions you can ask youth to consider when talking about impaired driving:

- Why do some people drive after using alcohol or drugs?
- What do you think are some misconceptions about cannabis and driving?
- What are some of the potential consequences of driving while impaired or being a passenger of a driver who is impaired?
- What do you think responsible driving and a responsible driver look like?
- What do you think irresponsible driving and an irresponsible driver look like?
- If you think you or a friend will be consuming drugs, what can you do ahead of time to help reduce the chances of you or others driving afterwards?
- What can you do to get home safely if you've consumed cannabis or alcohol?
- Do you know the legal consequences of impaired driving? Tell me about them.
- Does driving under the influence of cannabis carry the same criminal charges as driving under the influence of alcohol? How do you know?
- How might you respond if someone is pressuring you to ride in a vehicle with an impaired driver?
- How do the police detect drivers who might be impaired?
- What is a designated driver?

### **National Impaired Driving Prevention Week**

[National Impaired Driving Prevention Week](#) is the third week of March each year. The Public Safety Canada initiative aims to educate people in Canada about the dangers of driving while impaired by drugs, alcohol and tiredness (2021). The campaign website includes useful information, tools and resources to get the conversation started. Why not encourage your school and students to get involved next March?

### ***Having the Conversation: Key Messages***

Here are some key messages you can share when talking to youth about impaired driving:

- **Driving after using alcohol or other drugs increases your risk of collisions, injuries and death.** Inexperienced and young drivers are already at high risk on the road. Adding alcohol or drugs into the mix further amplifies the risk of having a crash, getting injured or even death. It also increases the risk of causing harm to others on the road such as passengers, other drivers and pedestrians (CCSA, 2019f; Beirness et al., 2013).
- **It's not safe to drive after using any amount of cannabis, alcohol or other drugs, and even some prescription medications.** Even small amounts of alcohol and drugs — including some over the counter medications like cold medicines — can affect the skills and functions you need to drive safely such as your ability to concentrate, react to things quickly and multi-task. Cannabis does not make you a more focused driver. In fact, it interferes with your ability to make complex decisions and react to what's happening on the road. It's never safe to drive after using cannabis or under the influence of any substance (CAMH, n.d.-b; Beirness & Porath, 2019).

- **Don't get into a vehicle with a driver who has consumed alcohol, cannabis or any other drugs.** When you ride as a passenger with a young, inexperienced driver you're already taking a big risk. Your risks increase even further if either the driver or passengers are under the influence of alcohol, cannabis or other drugs (Beirness, 2014). If you're driving somewhere with friends, always have a designated driver. This is a person who agrees in advance not to drink, use cannabis or other substances before or during the event, or while driving. Driving or riding impaired is not worth the risk.
- **Driving under the influence of alcohol, cannabis or other drugs can cost you time, money and freedom, and even serious injuries or death to you or someone else.** Across Canada, it's against the law for new drivers to drive after consuming any amount of alcohol, cannabis or other drugs. In many places this policy also applies to any driver under the age of 22 years old. Zero tolerance means zero alcohol or drugs (CCSA, 2021i).
- **Impaired driving of any kind is a serious criminal offence.** Drug-impaired driving carries the same criminal charges as alcohol-impaired driving, even if the drug is a prescription or over-the-counter medication. Law enforcement does not go easy on youth. In fact, the penalties for young and new drivers are more severe.
- **You're at least twice as likely to have a fatal collision if you drive high.** Cannabis amplifies the factors that already put young people at risk on the road such as age and inexperience. It's not safe to drive after consuming any amount of cannabis (CCSA, 2019g; Asbridge, 2012).
- **If you are going out with friends, always have a plan beforehand to get home safely.** Knowing how you're going to get home at the end of the night can help you avoid getting into situations where you may choose to drive under the influence of alcohol, cannabis or other drugs, or getting in a vehicle with someone else who is. You could:
  - Plan to take an alternative means of transport like a bus or ride share.
  - Arrange to stay the night with a friend.
  - Call family for a ride home.
  - Arrange in advance to have a designated driver who does not consume alcohol or drugs at all that day, or before or while driving.

### REFLECTION EXERCISE

- Why do you think a youth might feel uncomfortable talking with a parent, educator or youth ally about impaired driving? How could you put them at ease?
- How might your own personal experiences or opinions impact a conversation with youth about impaired driving? What can you do overcome these potential barriers?

## Additional Resources

Topic Area	Resource
Impaired driving (general)	<a href="#">Impaired Driving In Canada</a> [Topic Summary] (CCSA, 2021h) <a href="#">Impaired Driving Laws</a> (Justice Canada, 2021b) <a href="#">Short-term Administrative Sanctions for Alcohol and Drug Use By Drivers</a> [policy brief] (CCSA, 2021i)
Impaired driving and youth	Did You Know? Alcohol and Other Drugs and Driving. (Centre for Addiction and Mental Health, n.d.-b) <a href="#">Driving under the Influence of Alcohol</a> (CCSA, n.d.-h) <a href="#">“Wrong Turn.” 2021–22 School Presentation Program</a> (Mothers Against Drunk Driving Canada, 2021)
Alcohol-impaired driving	Did You Know? Alcohol and Other Drugs and Driving. (Centre for Addiction and Mental Health, n.d.b) <a href="#">Driving under the Influence of Alcohol</a> (CCSA, n.d.-h) <a href="#">“Wrong Turn.” 2021–22 School Presentation Program</a> (Mothers Against Drunk Driving Canada, 2021)
Cannabis- and drug-impaired driving	<a href="#">Clearing the Smoke on Cannabis: Cannabis Use and Driving – an Update</a> (CCSA, 2019) <a href="#">The High Way Home?</a> (CCSA, 2019) <a href="#">Don't Drive High</a> (Government of Canada, 2021e) <a href="#">Effects of Drugs on the Body and Driving</a> [handout] (CCSA, 2016) <a href="#">Talking Pot With Youth: A Cannabis Communication Guide for Youth Allies</a> (Fleming & McKiernan, 2020)

## Support and Services

If you would like to refer someone or would like to seek assistance for your own health, please visit or contact:

**Wellness Together Canada** provides free online resources for mental health and substance use support for all people in Canada, including links to a range of Canada-wide services such as counselling and support groups.

[www.wellnesstogether.ca](http://www.wellnesstogether.ca)

**Hope for Wellness** provides support 24/7 to all Indigenous peoples via phone and an online chat service in English, French, Cree, Ojibway and Inuktitut.

[www.hopeforwellness.ca](http://www.hopeforwellness.ca)  
1-855-242-3310

**Finding Quality Addiction Care** in Canada outlines how to access substance use treatment services and crisis support in each province and territory.

[View guide](#)

**If you suspect someone is over-intoxicated and is in need of immediate medical attention, please contact 911.**

### ***Managing Your Mental Health***

Educators engaging with youth and caregivers about substance use may face difficult conversations that can cause stress and bring up challenging emotions. Here are some things you can do to help manage your own mental health:

- Stay active and keep yourself busy with physical activities and hobbies you enjoy.
- Stay connected with friends and family.
- Celebrate successes, small or big, that you have when engaging youth.
- Reach out for help. Talk with a family member or friend and seek professional support through your school board's employee assistance program or an alternate provider, if needed.

## References

- Alberta Family Wellness Initiative. (n.d.-a). ACEs: Adverse childhood experiences. <https://www.albertafamilywellness.org/what-we-know/aces>.
- Alberta Family Wellness Initiative. (n.d.-b). The foundations of lifelong health: The Brain Story. <https://www.albertafamilywellness.org/what-we-know/the-brain-story>.
- Alberta Family Wellness Initiative. (n.d.-c). Serve & return: Positive child-caregiver interactions build strong brains. <https://www.albertafamilywellness.org/what-we-know/serve-and-return>.
- Alberta Family Wellness Initiative. (n.d.-d). Stress: How positive, tolerable, and toxic stress impact the developing brain. <https://www.albertafamilywellness.org/what-we-know/stress>.
- Alberta Family Wellness Initiative. (n.d.-e). What is addiction? A disease involving changes to the architecture of the brain. <https://www.albertafamilywellness.org/what-we-know/what-is-addiction>.
- Alberta Family Wellness Initiative. (n.d.-f). Resilience: Why do some of us bounce back from adversity better than others? <https://www.albertafamilywellness.org/what-we-know/resilience-scale>.
- Alberta Family Wellness Initiative. (n.d.-g). Brain Story Toolkit. <https://www.albertafamilywellness.org/brain-story-toolkit>.
- Alberta Family Wellness Initiative and Palix Foundation. (n.d.). Brain architecture: Early experiences build brains. <https://www.albertafamilywellness.org/assets/Resources/Learning-Cards/AFWI-Brain-Architecture-Web.pdf>.
- Alberta Health Services. (n.d.). *Alcohol and health: Alcohol and adolescents*. <https://www.albertahealthservices.ca/assets/info/amh/if-amh-alcohol-and-adolescents.pdf>.
- Ali, S., Mouton, C. P., Jabeen, S., Ofoemezie, E. K., Bailey, R. K., Shahid, M., & Zeng, Q. (2011). Early detection of illicit drug use in teenagers. *Innovations in Clinical Neuroscience*, 8(12), 24–28. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3257983/>.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders*, fifth edition.
- American Psychiatric Association. (2020). What is a substance use disorder? <https://www.psychiatry.org/patients-families/addiction/what-is-addiction>.
- American Society of Addiction Medicine. (2019). Definition of addiction. <https://www.asam.org/Quality-Science/definition-of-addiction>.
- Asbridge, M., Hayden, J.A., & Cartwright, J.L. (2012). Acute cannabis consumption and motor vehicle collision risk: Systematic review of observational studies and meta-analysis. *British Medical Journal*, 344, Article e536 <https://doi.org/10.1136/bmj.e536>
- Babchishin, K.M., Keown, L. & Mularczy, K.P. (2021). *Economic outcomes of Canadian federal offenders*. Ottawa, Ont.: Public Safety Canada. <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/2021-r002/index-en.aspx>
- Barry, A.E., Stelfox, M.L., Piazza-Gardner, A.K., Chaney, B.H., & Dodd, V. (2013). The impact of pregame on subsequent blood alcohol concentrations: An event-level analysis. *Addictive Behaviours*, 38(8), 2374–2377. <https://doi.org/10.1016/j.addbeh.2013.03.014>
- Beirness, D.J. (2014) *The characteristics of youth passengers of impaired drivers*. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. <https://www.ccsa.ca/sites/default/files/2019-05/CCSA-Characteristics-Youth-Passengers-Impaired-Drivers-technical-report-2014-en.pdf>
- Beirness, D. (2020). *Who drives after using drugs? A review of prominent characteristics*. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. <https://www.ccsa.ca/sites/default/files/2020-02/CCSA-Who-Drives-After-Using-Drugs-Report-2020-en.pdf>
- Beirness, D.J., Beasley, E.E., & Boase, P. (2013). A comparison of drug use by fatally injured drivers and drivers at risk. *20<sup>th</sup> International Conference on Alcohol, Drugs and Traffic Safety*. Brisbane, Queensland, Australia. [https://drive.google.com/file/d/17Jq59gy7nahbd-Ucs9OHH\\_ueHKPDDf1N/view](https://drive.google.com/file/d/17Jq59gy7nahbd-Ucs9OHH_ueHKPDDf1N/view)

- Beirness, D.J., & Porath, A.J. (2019) *Clearing the smoke on cannabis: Cannabis use and driving – An update*. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. [https://www.ccsa.ca/sites/default/files/2019-10/CCSA-Cannabis-Use-Driving-Report-2019-en\\_1.pdf](https://www.ccsa.ca/sites/default/files/2019-10/CCSA-Cannabis-Use-Driving-Report-2019-en_1.pdf)
- Boak, A., Elton-Marshall, T., Mann, R.E., & Hamilton, H.A. (2020) *Drug use among Ontario students, 1977–2019: Detailed findings from the Ontario Student Drug Use and Health Survey*. Toronto, Ont.: Centre for Addiction and Mental Health. [https://www.camh.ca/-/media/files/pdf---osduhs/drugusereport\\_2019osduhs-pdf.pdf](https://www.camh.ca/-/media/files/pdf---osduhs/drugusereport_2019osduhs-pdf.pdf)
- Brooks, R. (2009). How can teachers foster self-esteem in children? Teachers play an important role in nurturing a student's sense of dignity and self-worth. *GreatSchools*. <https://www.greatschools.org/gk/articles/teachers-foster-self-esteem-in-children/>.
- Canadian Centre on Substance Use and Addiction. (n.d.-a). Lived and living. <https://www.ccsa.ca/lived-and-living>.
- Canadian Centre on Substance Use and Addiction. (n.d.-b). Understanding the competencies. <https://www.ccsa.ca/understanding-competencies#glossary>.
- Canadian Centre on Substance Use and Addiction. (n.d.-c). Adverse childhood experiences. <https://www.ccsa.ca/adverse-childhood-experiences>.
- Canadian Centre on Substance Use and Addiction. (n.d.-d). *The pain of stigma: Recognizing stigma and its impacts*. <https://www.ccsa.ca/module/stigma-learning-module-en/#/>.
- Canadian Centre on Substance Use and Addiction. (n.d.-e). *Insights on substance use: Understanding the science on substance use disorder*. <https://ccsa.ca/module/stigma-learning-module-2-en/#/>.
- Canadian Centre on Substance Use and Addiction. (n.d.-f). Overcoming stigma: Online learning. <https://www.ccsa.ca/overcoming-stigma-online-learning/>.
- Canadian Centre on Substance Use and Addiction. (n.d.-g). The High Way Home? <https://www.thehighwayhome.ca/>.
- Canadian Centre on Substance Use and Addiction. (n.d.-h). *Driving under the influence of alcohol*, <https://www.ccsa.ca/research-impaired-driving#driving-under-the-influence-of-alcohol>
- Canadian Centre on Substance Abuse. (2007). *Substance abuse in Canada: Youth in focus*. <https://www.ccsa.ca/sites/default/files/2019-04/ccsa-011521-2007-e.pdf>.
- Canadian Centre on Substance Abuse. (2014a). *Youth and alcohol*. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Youth-and-Alcohol-Summary-2014-en.pdf>
- Canadian Centre on Substance Abuse. (2014b). *Cancer and alcohol*. <https://www.ccsa.ca/sites/default/files/2019-05/CCSA-Cancer-and-Alcohol-Summary-2014-en.pdf>
- Canadian Centre on Substance Abuse. (2016). *Effects of drugs on the body and driving*. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Drug-Impaired-Driving-Toolkit-Handout-2016-en.pdf>
- Canadian Centre on Substance Use and Addiction. (2017a). When it comes to substance use disorders words matter [infographic]. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Substance-Use-Disorders-Words-Matter-Fact-Sheet-2017-en.pdf>.
- Canadian Centre on Substance Use and Addiction. (2017b). Changing the language of addiction [fact sheet]. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Language-of-Addiction-Words-Matter-Fact-Sheet-2017-en.pdf>.
- Canadian Centre on Substance Use and Addiction. (2017c). *Canadian youth perceptions on cannabis* [report at a glance]. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Canadian-Youth-Perceptions-on-Cannabis-Report-at-a-Glance-2017-en.pdf>.
- Canadian Centre on Substance Use and Addiction. (2018a). Canada's Low-Risk Alcohol Drinking Guidelines [brochure]. [https://ccsa.ca/sites/default/files/2020-07/2012-Canada-Low-Risk-Alcohol-Drinking-Guidelines-Brochure-en\\_0.pdf](https://ccsa.ca/sites/default/files/2020-07/2012-Canada-Low-Risk-Alcohol-Drinking-Guidelines-Brochure-en_0.pdf)



- Canadian Centre on Substance Use and Addiction. (2018b). *Heavy episodic drinking among post-secondary students: Influencing factors and implications* [Report at a Glance]. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Heavy-Episodic-Drinking-Post-Secondary-Students-Report-at-a-Glance-2018-en.pdf>
- Canadian Centre on Substance Use and Addiction (2018c). *Heavy episodic drinking among post-secondary students: Influencing factors and implications* [Report]. <https://www.ccsa.ca/heavy-episodic-drinking-among-post-secondary-students-influencing-factors-and-implications-report-0>
- Canadian Centre on Substance Use and Addiction. (2019a). Cannabis: Inhaling vs ingesting [infographic]. <https://ccsa.ca/sites/default/files/2019-10/CCSA-Cannabis-Inhaling-Ingesting-Risks-Infographic-2019-en.pdf>.
- Canadian Centre on Substance Use and Addiction. (2019b). 7 Things you need to know about edible cannabis. <https://www.ccsa.ca/sites/default/files/2019-06/CCSA-7-Things-About-Edible-Cannabis-2019-en.pdf>.
- Canadian Centre on Substance Use and Addiction. (2019c). Edible cannabis: Always read the label [infographic]. <https://www.ccsa.ca/sites/default/files/2019-10/CCSA-Edible-Cannabis-Read-Label-Infographic-2019-en.pdf>.
- Canadian Centre on Substance Use and Addiction. (2019d). *Edible cannabis, cannabis extracts and cannabis topicals: A primer on the new cannabis products*. [https://www.ccsa.ca/sites/default/files/2019-06/CCSA-Cannabis-Edibles-Extracts-Topicals-Topic-Summary-2019-en\\_1.pdf](https://www.ccsa.ca/sites/default/files/2019-06/CCSA-Cannabis-Edibles-Extracts-Topicals-Topic-Summary-2019-en_1.pdf).
- Canadian Centre on Substance Use and Addiction. (2019e). *Vaping linked with severe lung illnesses*. [https://www.ccsa.ca/sites/default/files/2019-11/CCSA-Vaping-and-Lung-Illnesses-Summary-2019-en\\_0.pdf](https://www.ccsa.ca/sites/default/files/2019-11/CCSA-Vaping-and-Lung-Illnesses-Summary-2019-en_0.pdf).
- Canadian Centre on Substance Use and Addiction. (2019f). *Alcohol* [Canadian Drug Summary]. <https://www.ccsa.ca/sites/default/files/2020-10/CCSA-Canadian-Drug-Summary-Alcohol-2019-en.pdf>
- Canadian Centre on Substance Use and Addiction. (2019g). The high way home? Driving high raises the risks. [https://thehighwayhome.ca/sites/default/files/2019-10/The-High-Way-Home-Risks-of-Cannabis-and-Driving-2019-en\\_0.pdf](https://thehighwayhome.ca/sites/default/files/2019-10/The-High-Way-Home-Risks-of-Cannabis-and-Driving-2019-en_0.pdf)
- Canadian Centre on Substance Use and Addiction. (2019h). *Knowing your limits with alcohol*. [https://www.ccsa.ca/sites/default/files/2019-08/CCSA-Knowing-Your-Limits-with-Alcohol-Guide-2019-en\\_0.pdf](https://www.ccsa.ca/sites/default/files/2019-08/CCSA-Knowing-Your-Limits-with-Alcohol-Guide-2019-en_0.pdf)
- Canadian Centre on Substance Use and Addiction. (2020a). *Psychotic disorder and cannabis use: Canadian hospitalization trends, 2006–2015* [report in short]. <https://www.ccsa.ca/sites/default/files/2020-07/CCSA-Psychotic-Disorder-Cannabis-2006-2015-Canadian-Hospitalization-Trends-Report-in-Short-2020-en.pdf>.
- Canadian Centre on Substance Use and Addiction. (2020b). *COVID-19 and cannabis smoking and vaping: Four things you should know*. [https://www.ccsa.ca/sites/default/files/2020-04/CCSA-COVID-19-Cannabis-Smoking-and-Vaping-Report-2020-en\\_1.pdf](https://www.ccsa.ca/sites/default/files/2020-04/CCSA-COVID-19-Cannabis-Smoking-and-Vaping-Report-2020-en_1.pdf).
- Canadian Centre on Substance Use and Addiction. (2020c). *Mandatory alcohol screening* [policy brief]. <https://www.ccsa.ca/sites/default/files/2020-06/CCSA-Mandatory-Alcohol-Screening-Policy-Brief-2020-en.pdf>
- Canadian Centre on Substance Use and Addiction. (2020d). *Oral fluid drug screening* [policy brief]. <https://www.ccsa.ca/sites/default/files/2020-04/CCSA-Oral-Fluid-Drug-Screening-Policy-Brief-2020-en.pdf>
- Canadian Centre on Substance Use and Addiction. (2021a). What are opioids? [poster] [https://www.ccsa.ca/sites/default/files/2021-06/CCSA-What-Are-Opioids-Poster-2021-en\\_0.pdf](https://www.ccsa.ca/sites/default/files/2021-06/CCSA-What-Are-Opioids-Poster-2021-en_0.pdf).
- Canadian Centre on Substance Use and Addiction. (2021b). Opioids and pain management [poster]. <https://www.ccsa.ca/sites/default/files/2021-06/CCSA-Opioids-Pain-Management-Poster-2021-en.pdf>.
- Canadian Centre on Substance Use and Addiction. (2021c). Canada's opioid crisis: What you should know [poster]. <https://www.ccsa.ca/sites/default/files/2021-06/CCSA-Canada-Opioid-Crisis-What-You-Should-Know-Poster-2021-en.pdf>.
- Canadian Centre on Substance Use and Addiction. (2021d). Canada's opioid crisis: How you can help [poster]. <https://www.ccsa.ca/sites/default/files/2021-06/CCSA-Canada-Opioid-Crisis-How-You-Can-Help-Poster-2021-en.pdf>.

- Canadian Centre on Substance Use and Addiction. (2021e). Public education (cannabis). <https://www.ccsa.ca/public-education>.
- Canadian Centre on Substance Use and Addiction. (2021f). *Alcohol education tailored for youth: What we heard* [report]. <https://www.ccsa.ca/sites/default/files/2021-06/CCSA-Alcohol-Education-for-Youth-What-We-Heard-Report-2021-en.pdf>
- Canadian Centre on Substance Use and Addiction. (2021g). LRDG project 2022: Public and stakeholder consultations. <https://www.ccsa.ca/lrdg-project-2022#lrdg-public-consultation-faq>
- Canadian Centre on Substance Use and Addiction. (2021h). *Impaired driving in Canada* [topic summary]. <https://www.ccsa.ca/sites/default/files/2021-03/CCSA-Impaired-Driving-Canada-Summary-2021-en.pdf>
- Canadian Centre on Substance Use and Addiction. (2021i). *Short-term administrative sanctions for alcohol and drug use by drivers* [policy brief]. <https://www.ccsa.ca/sites/default/files/2021-03/CCSA-Administrative-Sanctions-Impaired-Driving-Policy-Brief-2021-en.pdf>
- Canadian Centre on Substance Use and Addiction. (2021j). How to reduce the risks of cannabis vaping. [video]. <https://www.youtube.com/watch?v=cwo6MtPvjM>
- Canadian Centre on Substance Use and Addiction. (2021k). Are there risks to vaping cannabis? [video]. <https://www.youtube.com/watch?v=dXjP6DCQCaY>
- Canadian Centre on Substance Use and Addiction, Alberta Family Wellness Initiative, & Palix Foundation. (2019). Brain builder learning cards. [https://www.ccsa.ca/sites/default/files/2019-07/CCSA-Brain-Builder-Learning-Cards-Tool-2019-en\\_0.pdf](https://www.ccsa.ca/sites/default/files/2019-07/CCSA-Brain-Builder-Learning-Cards-Tool-2019-en_0.pdf).
- Canadian Centre on Substance Use and Addiction & Canadian Coalition for Seniors' Mental Health. (2020). *A guide to cannabis for older adults*. <https://ccsmh.ca/wp-content/uploads/2020/09/CCSA-Cannabis-Use-Older-Adults-Guide-2020-en-copy.pdf>.
- Canadian Centre on Substance Use and Addiction & Canadian Executive Council on Addictions. (2017). *Finding quality care in Canada: Drug and alcohol treatment guide*. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Addiction-Care-in-Canada-Treatment-Guide-2017-en.pdf>.
- Canadian Centre on Substance Use and Addiction & Community Addictions Peer Support Association. (2019). *Overcoming stigma through language: A primer*. <https://www.ccsa.ca/sites/default/files/2019-09/CCSA-Language-and-Stigma-in-Substance-Use-Addiction-Guide-2019-en.pdf>.
- Canadian Institutes of Health Research. (2020). What is gender? What is sex? <https://cihr-irsc.gc.ca/e/48642.html>.
- Canadian Mental Health Association, Calgary Region. (n.d.). Stomp out stigma. <https://youthsmart.ca/understanding-your-brain/stomp-out-stigma/>.
- Canadian Mental Health Association, National. (2018). Concurrent mental illness and substance use problems. <https://cmha.ca/documents/concurrent-mental-illness-and-substance-use-problems/>.
- Canadian Mental Health Association, Ontario. (n.d.-a). Lesbian, gay, bisexual, trans & queer identified people and mental health. <https://ontario.cmha.ca/documents/lesbian-gay-bisexual-trans-queer-identified-people-and-mental-health/>.
- Canadian Mental Health Association, Ontario. (n.d.-b). Concurrent disorders. <https://ontario.cmha.ca/documents/concurrent-disorders/>.
- Canadian Mental Health Association, Ontario. (n.d.-c). Harm reduction. <https://ontario.cmha.ca/harm-reduction/>.
- Canadian Mental Health Association, Ontario. (n.d.-d). Stigma and discrimination. <https://ontario.cmha.ca/documents/stigma-and-discrimination/>.
- Canadian Mental Health Association, Ontario. (n.d.-e). Mental health resources in schools. <https://ontario.cmha.ca/documents/mental-health-resources-in-schools/>.
- Canadian Paediatric Society. (2021). Vaping. <https://www.cps.ca/en/vaping>.

- Canadian Pharmacists Association. (2017). Administering naloxone nasal spray [video]. <https://www.youtube.com/watch?v=aR3qA63TrAI/>.
- Canadian Substance Use Costs and Harms Scientific Working Group. (2020). Canadian substance use costs and harms 2015–2017. (Prepared by the Canadian Institute for Substance Use Research and the Canadian Centre on Substance Use and Addiction.) Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. <https://csuch.ca/publications/CSUCH-Canadian-Substance-Use-Costs-Harms-Report-2020-en.pdf>
- Caring for Kids. (2017). How to talk with your teen. [https://caringforkids.cps.ca/handouts/behavior-and-development/talk\\_with\\_your\\_teen](https://caringforkids.cps.ca/handouts/behavior-and-development/talk_with_your_teen)
- Caring for Kids. (2020a). Talking with your teen about vaping. <https://www.caringforkids.cps.ca/handouts/preteens-and-teens/vaping>.
- Caring for Kids. (2020b). Cannabis: What parents need to know. <https://www.caringforkids.cps.ca/handouts/preteens-and-teens/marijuana-what-parents-need-to-know>.
- Centre for Addiction and Mental Health. (2012). Alcohol. <https://www.camh.ca/en/health-info/mental-illness-and-addiction-index/alcohol>
- Centre for Addiction and Mental Health. (2019). Six ways to practise self-care [infographic]. <https://camh.ca/-/media/files/gc-schools-self-care-infographic-pdf.pdf>.
- Centre for Addiction and Mental Health. (n.d.-a). Fetal alcohol spectrum disorders. <https://www.camh.ca/en/health-info/mental-illness-and-addiction-index/fetal-alcohol-spectrum-disorder>
- Centre for Addiction and Mental Health. (n.d.-b). Did you know? Alcohol and other drugs and driving. <https://www.camh.ca/en/health-info/guides-and-publications/alcohol-and-other-drugs-and-driving>
- Centre for Addiction and Mental Health. (n.d.-c). Alcohol and chronic health problems. <https://www.camh.ca/en/health-info/guides-and-publications/alcohol-and-chronic-health-problems>
- Centre for Addiction and Mental Health. (n.d.-d). Partying and getting drunk. <https://www.camh.ca/en/health-info/guides-and-publications/partying-and-getting-drunk>
- Centre for Addiction and Mental Health & Canadian Research Initiative in Substance Misuse. (2018) 10 Ways to reduce risks to your health when using cannabis. <https://www.camh.ca/-/media/files/pdfs---reports-and-books---research/canadas-lower-risk-guidelines-cannabis-pdf.pdf>.
- Centre for Innovation in Campus Mental Health. (2018). 4. Understanding substance use disorders and problematic substance use. In *Reducing cannabis harms: A guide for Ontario campuses*. <https://campusmentalhealth.ca/toolkits/cannabis/cannabis-substance-use/understanding-disorders-problematic/>.
- Centre of Excellence for Women's Health. (2017a) Trauma, gender, substance use: Sex, gender and alcohol. <https://bccewh.bc.ca/wp-content/uploads/2018/02/TGSInfoSheet-SexGenderAlcohol021418.pdf>
- Centre of Excellence for Women's Health. (2017b). Women and Alcohol. <https://bccewh.bc.ca/wp-content/uploads/2018/03/InfoSheet-Women-Alcohol0308.pdf>
- Centers for Disease Control and Prevention. (2021). Preventing adverse childhood experiences. [https://www.cdc.gov/violenceprevention/aces/fastfact.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Ffastfact.html/](https://www.cdc.gov/violenceprevention/aces/fastfact.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Ffastfact.html/).
- Community Addictions Peer Support Association. (2019a). Let us tell you about name-calling [video]. <https://www.youtube.com/watch?v=1Ev9zsd5thk/>.
- Community Addictions Peer Support Association. (2019b). Gord's story [video]. <https://www.youtube.com/watch?v=-Jy2IGZdz4A/>.
- Community Addictions Peer Support Association. (2020a). How trauma impacts the brain: Reducing stigma around addiction and substance use [video]. <https://www.youtube.com/watch?v=vW4Rdf-FIHU/>.
- Community Addictions Peer Support Association. (2020b). Words matter [video]. <https://www.youtube.com/watch?v=ISUTq8KLaN0/>.

- Curry, T. R., & Corral-Camacho, G. (2008). Sentencing young minority males for drug offenses: Testing for conditional effects between race/ethnicity, gender and age during the US war on drugs. *Punishment & Society*, 10(3), 253–276. <https://doi.org/10.1177/1462474508090231>
- Cutello, C.A., Gummerum, M., Hanoch, Y. & Hellier, E. (2021). Evaluating an intervention to reduce risky driving behaviors: Taking the fear out of virtual reality. *Risk Analysis*, 41, 1662–1673. <https://doi.org/10.1111/risa.13643>
- Davies, E., Smith, J., Johansson, M., Hill, K., & Brown, K. (2019). Can't dance without being drunk? Exploring the enjoyment and acceptability of conscious clubbing in young people. In Conroy D., & Measham F. (eds). *Young Adult Drinking Styles*. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-030-28607-1\\_12](https://doi.org/10.1007/978-3-030-28607-1_12)
- Drinkaware. (2020). What is an alcohol unit? <https://www.drinkaware.co.uk/facts/alcoholic-drinks-and-units/what-is-an-alcohol-unit>
- Doggett, A., Qian, W., Cole, A.G., & Leatherdale, S.T. (2019). Youth consumption of alcohol mixed with energy drinks in Canada: Assessing the role of energy drinks. *Preventive Medicine Reports*, 14, Article 100865 <https://doi.org/10.1016/j.pmedr.2019.100865>
- Drane, C.F, Jongenelis, M.I., Hasking, P., & Pettigrew, S. (2019). The potential individual- and population-level benefits of encouraging drinkers to count their drinks. *Addictive Behaviors Reports*, 10, Article 100210, <https://doi.org/10.1016/j.abrep.2019.100210>.
- Drug Free Kids. (2019) *Youth and alcohol*. [https://www.drugfreekidscanada.org/wp-content/uploads/2019/10/DFK\\_Info\\_YouthAlcohol\\_FINAL.pdf](https://www.drugfreekidscanada.org/wp-content/uploads/2019/10/DFK_Info_YouthAlcohol_FINAL.pdf)
- Ewing, S. W., Sakhardande, A., & Blakemore, S. J. (2014). The effect of alcohol consumption on the adolescent brain: A systematic review of MRI and fMRI studies of alcohol-using youth. *NeuroImage. Clinical*, 5, 420–437. <https://doi.org/10.1016/j.nicl.2014.06.011>
- Fairlie, A.M., Maggs, J.L., & Lanza, S.T. (2015) Prepartying, drinking games, and extreme drinking among college students: A daily-level investigation. *Addictive Behavior*, Mar., 91–95. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4272894>
- Families for Addiction Recovery. (n.d.-a). What are the risk factors? <https://www.farcanada.org/understanding-addiction/risk-factors/>.
- Families for Addiction Recovery. (n.d.-b). Stigma. <https://www.farcanada.org/understanding-addiction/stigma-changing-conversation/>.
- First Peoples Wellness Circle, Thunderbird Partnership Foundation & First Nations Health Managers Association. (n.d.). Soar above stigma. <https://soarabovestigma.com/>.
- Fleming, K., & McKiernan, A. (2020). *Talking pot with youth: A cannabis communication guide for youth allies*. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. <https://www.ccsa.ca/sites/default/files/2020-04/CCSA-Cannabis-Communication-Guide-2020-en.pdf>.
- Fourtin, M., Moulin, S., Picard, E., Belanger, R. & Demers, A. Tridimensionality of alcohol use in Canada: Patterns of drinking, contexts and motivations to drink in the definition of Canadian drinking profiles according to gender. *Canadian Journal of Public Health*, 106, e59–e65. <https://doi.org/10.17269/cjph.106.4665>
- Government of Canada. (2010). How to talk to your teen about drugs — Communication Tips for Parents. <https://www.canada.ca/en/health-canada/services/health-concerns/reports-publications/alcohol-drug-prevention/talk-your-teen-about-drugs-communication-tips-parents.html>
- Government of Canada. (2018a). Know how to recognize an opioid overdose [poster]. <https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/problematic-substance-use/festival-poster-eng.pdf>.
- Government of Canada. (2018b). Cannabis in Canada: Get the facts. <https://www.canada.ca/en/services/health/campaigns/cannabis/questions-answered.html>.
- Government of Canada. (2019). Opioid overdoses: What to do [fact sheet]. <https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/opioid-overdoses-what-to-do.pdf>.

- Government of Canada. (2021b). How young adults can reduce risks related to alcohol use. <https://www.canada.ca/en/health-canada/services/substance-use/alcohol/young-adults-reducing-risk.html>
- Government of Canada. (2021c). Alcohol use among Canadians. <https://health-infobase.canada.ca/alcohol/cstads/>
- Government of Canada. (2021d). About problematic substance use. <https://www.canada.ca/en/health-canada/services/substance-use/about-problematic-substance-use.html>
- Government of Canada. (2021e) Don't drive high. <https://www.canada.ca/en/campaign/don-t-drive-high.html>
- Government of Ontario. (2020). Zero tolerance penalties for novice and young drivers. <http://www.mto.gov.on.ca/english/safety/impaired-is-impaired.shtml>
- Grant, C. N., Bélanger, R. E., & Canadian Paediatric Society, Adolescent Health Committee. (2017). Cannabis and Canada's children and youth [position statement]. *Paediatrics & Child Health*, 22(2), 98–102. <https://www.cps.ca/en/documents/position/cannabis-children-and-youth/>.
- Greaves, L., Hemsing, N., Brabete, A. C., & Poole, N. (2019). *Sex, gender and cannabis*. Centre of Excellence for Women's Health. <https://bccewh.bc.ca/wp-content/uploads/2019/11/SG-Cannabis-report-Nov-23.pdf>.
- Hammond, D., Reid, J.L., & Zukowski, S. (2018) Adverse effects of caffeinated energy drinks among youth and young adults in Canada: A web-based survey. *CMAJ Open*, 6(1), E19–E25. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5912944/>
- Hartman, R.L., Brown, T.L., Milavetz, G., Spurgin, A., Pierce, R.S., Gorelick, D.A., Gaffney, G. & Huestis, M.A. (2015). Marijuana effects on driving lateral control with and without alcohol. *Drug and Alcohol Dependence*, 154, 25–37. <https://doi.org/10.1016/j.drugalcdep.2015.06.015>
- Harvard Health. (2019). Alcohol use disorder (alcoholism). *Harvard Health Publishing*. [https://www.health.harvard.edu/a\\_to\\_z/alcohol-use-disorder-alcoholism-a-to-z](https://www.health.harvard.edu/a_to_z/alcohol-use-disorder-alcoholism-a-to-z)
- Health Canada. (2018). Canadian Tobacco, Alcohol and Drugs Survey (CTADS): Summary of results for 2017. <https://www.canada.ca/en/health-canada/services/canadian-alcohol-drugs-survey/2017-summary.html>
- Health Canada. (2019b). Canadian Cannabis Survey 2019: Summary. <https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/canadian-cannabis-survey-2019-summary.html>
- Health Canada. (2019c), Canadian Postsecondary Education Alcohol and Drug Use Survey (CPADS). [https://health-infobase.canada.ca/src/data/alcohol/cpads/downloads/infographic\\_download.pdf](https://health-infobase.canada.ca/src/data/alcohol/cpads/downloads/infographic_download.pdf)
- Health Canada. (2019d). Canadian Student Tobacco, Alcohol and Drugs Survey. <https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey.html>.
- Health Canada. (2019e). Health Canada restricts the amount of alcohol in single serve flavoured purified alcoholic beverages [news release]. <https://www.canada.ca/en/health-canada/news/2019/05/health-canada-restricts-the-amount-of-alcohol-in-single-serve-flavoured-purified-alcohol-beverages.html>
- Health Canada. (2019f) Regulations respecting flavoured purified alcohol. <https://www.canada.ca/en/health-canada/services/food-nutrition/legislation-guidelines/guidance-documents/flavoured-purified-alcohol.html>
- Health Canada. (2021a). About alcohol. <https://www.canada.ca/en/health-canada/services/substance-use/alcohol/about.html>
- Health Canada. (2021b). Canadian Alcohol and Drugs Survey (CADS): Summary of results for 2019. <https://www.canada.ca/en/health-canada/services/canadian-alcohol-drugs-survey/2019-summary.html>
- Hingson, R., Zha, W., Simons-Morton, B., & White, A. (2016). Alcohol-induced blackouts as predictors of other drinking related harms among emerging young adults. *Alcoholism: Clinical and Experimental Research*, 40(4), 776–784. <https://doi.org/10.1111/acer.13010>
- Hope For Wellness. (n.d). Hope for Wellness. <https://www.hopeforwellness.ca/>
- Jacobs, L., Conroy, D., & Parke, A. (2018). Negative experiences of non-drinking college students in Great Britain: An interpretative phenomenological analysis. *International Journal of Mental Health and Addiction*, 16, 737–750. <https://doi.org/10.1007/s11469-017-9848-6>



- Jenkins, E.K., Slemon, A., & Haines-Saah, R.J. (2017). Developing harm reduction in the context of youth substance use: insights from a multi-site qualitative analysis of young people's harm minimization strategies. *Harm Reduction Journal*, 14. Article 53 <https://doi.org/10.1186/s12954-017-0180-z>
- Justice Canada. (2021a). Impaired driving laws. <https://www.justice.gc.ca/eng/cj-jp/sidl-rlcfa/> <https://www.canada.ca/en/health-canada/services/substance-use/about-problematic-substance-use.html>
- Justice Canada. (2021b). Youth records. <https://www.justice.gc.ca/eng/cj-jp/yj-jj/tools-outils/sheets-feuillets/recor-dossi.html>
- Kalant, H., & Porath-Waller, A. J. (2016). *Clearing the smoke on cannabis: Medical use of cannabis and cannabinoids — An Update*. Canadian Centre on Substance Use and Addiction. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Medical-Use-of-Cannabis-Report-2016-en.pdf>.
- Kelly, J. F., Wakeman, S. E., & Saitz, R. (2015). Stop talking “dirty”: Clinicians, language, and quality of care for the leading cause of preventable death in the United States. *American Journal of Medicine*, 128(1), 8–9. [https://www.amjmed.com/article/S0002-9343\(14\)00770-0/fulltext/](https://www.amjmed.com/article/S0002-9343(14)00770-0/fulltext/).
- Kelly, J. F., & Westerhoff, C. M. (2010). Does it matter how we refer to individuals with substance-related conditions? A randomized study of two commonly used terms. *International Journal on Drug Policy*, 21(3), 202–207. <https://doi.org/10.1016/j.drugpo.2009.10.010/>.
- Khan, U.R., Razzak, J.A., & Wärnberg, M.G. (2021). Global trends in adolescents' road traffic injury mortality, 1990–2019. *Archives of Disease in Childhood*, 106(8), 753–757. <https://adc.bmj.com/content/106/8/753>
- Kittel Canale, M., & Munn, E. (2005). Turning voices into action. *Visions Journal*, 2(6), p. 13–14. <https://www.heretohelp.bc.ca/visions-stigma-and-discrimination-vol2/stigma-addiction-project/>.
- Konefal, S., Gabrys, R., & Porath, A. (2019). *Clearing the smoke on cannabis: Regular use and mental health*. Canadian Centre on Substance Use and Addiction. [https://www.ccsa.ca/sites/default/files/2019-08/CCSA-Cannabis-Use-Mental-Health-Report-2019-en\\_0.pdf](https://www.ccsa.ca/sites/default/files/2019-08/CCSA-Cannabis-Use-Mental-Health-Report-2019-en_0.pdf).
- Lee, N., & Boeri, M. (2017). Managing stigma: Women drug users and recovery services. *Fusio*, 1(2): 65–94. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6103317/pdf/nihms931455.pdf/>.
- Li, Q., Alonge, O., & Hyder, A.A. (2016). Children and road traffic injuries: Can't the world do better? *Archives of Disease in Childhood*, 101, 1063–1070. <http://www.ncbi.nlm.nih.gov/pubmed/27543508>
- McKiernan, A., & Fleming, K. (2017). *Canadian youth perceptions on cannabis*, Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Canadian-Youth-Perceptions-on-Cannabis-Report-2017-en.pdf>
- McQuaid, R.J., Malik, A., Moussouni, K., Baydack, N., Stargardt, M., & Morrissey, M. (2017). *Life in recovery from addiction in Canada*. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Life-in-Recovery-from-Addiction-Report-2017-en.pdf>.
- Meister, S.R., Barker, B., & Flores Pajot, M.-C. (2018). *Heavy episodic drinking among post-secondary Students: Influencing factors and implications*. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction. <https://www.ccsa.ca/sites/default/files/2019-04/CCSA-Heavy-Episodic-Drinking-Post-Secondary-Students-Report-2018-en.pdf>
- Minaker, L. M., Bonham, A., Elton-Marshall, T., Leos-Toro, C., Wild, T. C., & Hammond, D. (2017). Under the influence: Examination of prevalence and correlates of alcohol and marijuana consumption in relation to youth driving and passenger behaviours in Canada. A cross-sectional study. *CMAJ Open*, 5(2), E386–E394. <https://doi.org/10.9778/cmajo.20160168>
- Mothers Against Drunk Driving Canada. (2021). “Wrong Turn.” 2021–22 School Presentation Program. <https://maddyyouth.ca/wp-content/uploads/Educators-Guide-Grade-7-8-2021-.pdf>
- National Harm Reduction Coalition. (2020a). Principles of harm reduction. <https://harmreduction.org/about-us/principles-of-harm-reduction/>.

- National Harm Reduction Coalition. (2020b). Opioid overdose basics: Understanding naloxone. <https://harmreduction.org/issues/overdose-prevention/overview/overdose-basics/understanding-naloxone/>.
- National Harm Reduction Coalition. (2020c). Opioid overdose basics: What is an overdose? <https://harmreduction.org/issues/overdose-prevention/overview/overdose-basics/what-is-an-overdose/>.
- National Institute on Alcohol Abuse and Alcoholism. (2015). *Alcohol screening and brief intervention for youth: A practitioner's guide*. <https://www.niaaa.nih.gov/sites/default/files/publications/YouthGuide.pdf>
- Ontario Ministry of Education. (2013). *Supporting minds: An educator's guide to promoting student's mental health and well-being*. <http://www.edu.gov.on.ca/eng/document/reports/SupportingMinds.pdf>.
- Ontario Physical and Health Education Association. (n.d.-a). Discussion guides. <https://teachingtools.ophea.net/supplements/cannabis-education-resources/discussion-guides>.
- Ontario Physical and Health Education Association. (n.d.-b). Cannabis resources. <https://teachingtools.ophea.net/supplements/cannabis-education-resources/resources-database>.
- Østergaard, J., & Bastholm Andrade, S. (2014). Who pre-drinks before a night out and why? Socioeconomic status and motives behind young people's pre-drinking in the United Kingdom, *Journal of Substance Use*, 19(3), 229–238, <https://doi.org/10.3109/14659891.2013.784368>
- Pan-Canadian Joint Consortium for School Health. (2015). *What is comprehensive school health?* [http://www.jcsh-cces.ca/images/What\\_is\\_Comprehensive\\_School\\_Health\\_October\\_14\\_2015\\_-\\_2-pager.pdf](http://www.jcsh-cces.ca/images/What_is_Comprehensive_School_Health_October_14_2015_-_2-pager.pdf).
- Paquette, C. E., Syvertsen, J. L., & Pollini, R. A. (2018). Stigma at every turn: Health services experiences among people who inject drugs. *International Journal on Drug Policy*, 57, 104–110. <https://doi.org/10.1016/j.drugpo.2018.04.004>.
- Pawlowski, B., Atwal, R., & Dunbar, R. I. M. (2008). Sex differences in everyday risk-taking behavior in humans. *Evolutionary Psychology*, 6(1), 29–42. <https://doi.org/10.1177/147470490800600104>
- Perreault, S. (2021). Impaired driving in Canada, 2019. *Juristat*. Statistics Canada Catalogue no. 85-002-X. <https://www150.statcan.gc.ca/n1/en/pub/85-002-x/2021001/article/00012-eng.pdf?st=btAmEuyK>
- Public Health Agency of Canada. (2020a). *A primer to reduce substance use stigma in the Canadian health system*. <https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/healthy-living/primer-reduce-substance-use-stigma-health-system/stigma-primer-eng.pdf>.
- Public Health Agency of Canada. (2020b). *Communicating about substance use in compassionate, safe and non-stigmatizing ways: A resource for Canadian health professional organizations and their membership*. <https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/healthy-living/communicating-about-substance-use-compassionate-safe-non-stigmatizing-ways-2019/guiding-principles-eng.pdf>.
- Public Health Agency of Canada. (2021). Hey, are you ok? [poster]. <https://www.canada.ca/en/public-health/services/publications/healthy-living/hey-are-you-ok-poster.html>
- Public Safety Canada. (2021). National Impaired Driving Prevention Week. <https://www.canada.ca/en/public-safety-canada/campaigns/national-impaired-driving-prevention-week.html>
- Recovery Capital Conference of Canada. (n.d.). What is recovery capital? The science of recovery capital. <https://recoverycapitalconference.com/what-is-recovery-capital-2/>.
- Renard, J. (2020). *Clearing the smoke on cannabis: Respiratory and cardiovascular effects of cannabis smoking*. Canadian Centre on Substance Use and Addiction. <https://www.ccsa.ca/sites/default/files/2020-10/CCSA-Respiratory-Cardiovascular-Effects-of-Cannabis-Smoking-Report-2020-en.pdf>.
- Royal Canadian Mounted Police. (2017). Drug recognition expert. <https://www.rcmp-grc.gc.ca/ts-sr/dre-ert-eng.htm>
- Royal Canadian Mounted Police. (2020). Impaired driving investigations. <https://www.rcmp-grc.gc.ca/ts-sr/aldr-id-cfa-aldr-eng.htm>

- St John Ambulance. (2016). The recovery position [video]. <https://www.youtube.com/watch?v=GmqXqwSV3bo>
- School Mental Health Ontario. (n.d.). Learn more: Substance use and addiction. <https://smho-smso.ca/educators/learn-more/explore-by-topic/substance-use-and-addiction/>.
- School Mental Health Ontario & Centre for Addiction and Mental Health. (2020a). *Cannabis: What educators need to know*. [https://www.eenet.ca/sites/default/files/2018/Cannabis\\_KE\\_Hub/Cannabis\\_Educator\\_Infosheet%20EDIBLES%20update%20\(Sept%202020\).pdf](https://www.eenet.ca/sites/default/files/2018/Cannabis_KE_Hub/Cannabis_Educator_Infosheet%20EDIBLES%20update%20(Sept%202020).pdf).
- School Mental Health Ontario & Centre for Addiction and Mental Health. (2020b). *Cannabis: What parents/guardians and caregivers need to know*. <https://www.camh.ca/-/media/files/cannabis-parent-infosheet-pdf.pdf>.
- School Mental Health Ontario & Centre for Addiction and Mental Health. (2020c). *Vaping: What elementary school educators need to know*. <https://www.camh.ca/-/media/files/vaping-elementary-educator-resource-en-pdf.pdf>.
- Singh, R. D., Jimerson, S. R., Renshaw, T., Saeki, E., Hart, S. R., Earhart, J., & Stewart, K. (2011). A Summary and synthesis of contemporary empirical evidence regarding the effects of the Drug Abuse Resistance Education Program (D.A.R.E.). *Contemporary School Psychology* 15, p. 93–102. <https://link.springer.com/article/10.1007/BF03340966>.
- Statistics Canada. (2019). Heavy drinking, 2018 [health fact sheet]. <https://www150.statcan.gc.ca/n1/pub/82-625-x/2019001/article/00007-eng.htm>
- Stuart, H. (2019). Managing the stigma of opioid use. *Healthcare Management Forum*, 32(2), 78–83. <https://doi.org/10.1177/0840470418798658>.
- Transport Canada. (2019). Road safety in Canada. <https://tc.canada.ca/en/road-transportation/publications/road-safety-canada>
- United Nations Office on Drugs and Crime & World Health Organization. (2018). International standards on drug use prevention, Second edition. Vienna: author. [https://www.unodc.org/documents/prevention/UNODC-WHO\\_2018\\_prevention\\_standards\\_E.pdf](https://www.unodc.org/documents/prevention/UNODC-WHO_2018_prevention_standards_E.pdf)
- van Boekel, L. C., Brouwers, E. P., van Weeghel, J., & Garretsen, H. F. (2013). Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. *Drug and Alcohol Dependence*, 131(1-2), 23–35. <https://doi.org/10.1016/j.drugalcdep.2013.02.018>.
- Volkow, Nora. (2015). Why do our brains get addicted? [video] <https://www.youtube.com/watch?v=Mnd2-al4LCU>.
- Wetherill, R.R., & Fromme, K. (2016). Alcohol-induced blackouts: A review of recent clinical research with practical implications and recommendations for future studies. *Alcoholism: Clinical and Experimental Research*, 40(5), 922–935. <https://doi.org/10.1111/acer.13051>
- Wellness Together Canada. (2021). Wellness Together Canada. <https://wellnesstogether.ca/>
- White, W., & Cloud, W. (2008). Recovery capital: A primer for addictions professionals. *Counselor*, 9(5), 22–27. <http://www.williamwhitepapers.com/pr/2008RecoveryCapitalPrimer.pdf>.
- World Health Organization. (n.d.). Drugs (psychoactive). [https://www.who.int/health-topics/drugs-psychoactive#tab=tab\\_1/](https://www.who.int/health-topics/drugs-psychoactive#tab=tab_1/).



