

# ADDICTIONS & SELF-MEDICATION IN TEENS

---



**Canadian Mental  
Health Association**

**Haliburton, Kawartha, Pine Ridge**

*Mental health for all*

# Who Am I?



**Paul Schauber MSW, RSW  
Program Manager  
Mental Health Intensive Case Management and CTO  
Programs  
Canadian Mental Health Association HKPR**

# What is substance use?

- There can be problems with substance use, even without dependence
- “Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs.” (WHO)
- Also consider other substances, such as tobacco and caffeine where there may be symptom exacerbation or interaction with prescribed medications

# What is addiction?



- Means different things to different people, for example:
  - Any behaviour that is out of control
  - The presence of withdrawal symptoms

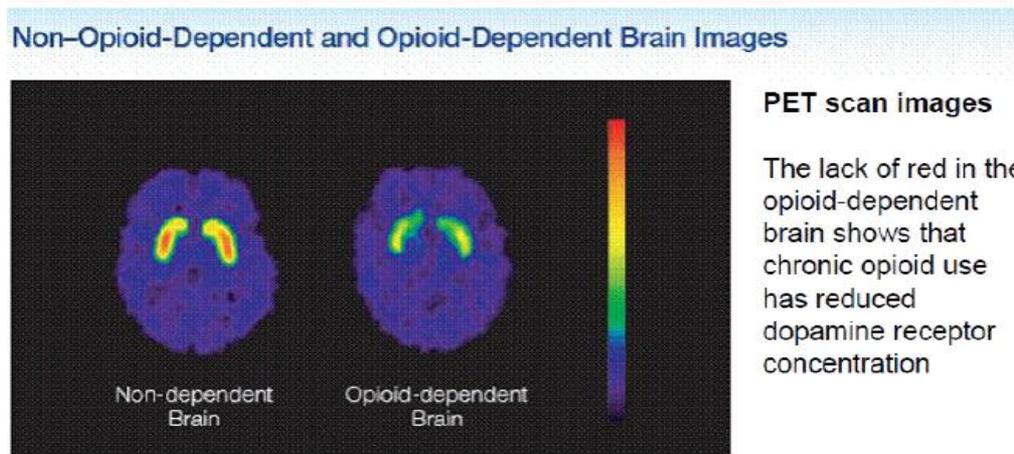
One way of describing addiction is the presence of the 4Cs.

# The 4 Cs

- Craving
- Loss of control of amount or frequency of use
- Compulsion to use
- Use despite consequences

# Or.... addiction is:

Substance Use Disorder = Brain Disease



A chronic relapsing brain disease that is characterised by continued use, despite harmful consequences (NIDA, AMA)

# Or.....addiction is

... compulsive drug use despite harmful consequences—is characterized by an inability to stop using a drug; failure to meet work, social, or family obligations; and, sometimes (depending on the drug), tolerance and withdrawal.

(National Institution on Drug Abuse)

# What we know is.....

- No one grows up wanting to have a substance use disorder
- The only choice involved is the choice to seek treatment
- Numerous factors today are known to put people at risk for developing a substance use disorder

# Why do people use/develop a substance use disorder?

- Immediate effects of using are usually positive/pleasurable
- Using may give relief from uncomfortable feelings – pain, loneliness, anxiety, depression
- Once use leads to dependence, stopping using becomes more difficult

# Risk Factors

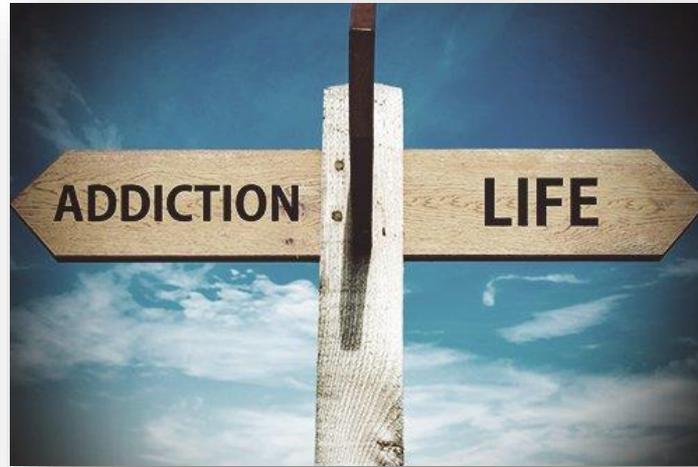
- Family history of a substance use disorder
- Mental health symptoms that have been untreated and often unrecognized (which includes personality features)
- Genetics
- Social determinants of health
- Trauma and abuse

# Key signs of a substance use disorder

- Loss of control: ‘can’t stop’
- Harmful consequences:
  - Physical and mental health problems
  - Financial problems
  - Legal issues
  - Problems with work/school/activities of daily living
  - Strain or breakdown of relationships



# A SPECTRUM OF USE



We have talked about addiction, but what about people who use substances problematically but who aren't physically or psychologically dependent?

People may be using substances in a way that is problematic because of their mental health concerns or medication



**Drugs** are chemicals that affect the **brain** by tapping into its communication system and interfering with the way neurons normally send, receive, and process information. Some **drugs**, such as marijuana and heroin, can activate neurons because their chemical structure mimics that of a natural neurotransmitter.

This area of the **brain** changes the most during the teenage years. Research with heavy **drinking** adolescents' shows that these young people have smaller prefrontal lobes than young people of the same age who do not drink. The body of research about the **effects** of **alcohol** on the **developing brain** is still growing.

Stimulants are **drugs** that accelerate the activity of the central **nervous system**. Examples of stimulants include nicotine, cocaine, and amphetamines. Depressants are **drugs** that slow down the activity of the central **nervous system**. Examples of depressants include alcohol, benzodiazepines like valium, and tranquilizers.

# Classifying Risks Associated with Substance Use

The following substances will be discussed in further detail:

- Alcohol - Depressant
- Marijuana (Cannabis) – Stimulant, Depressant and Hallucinogen
- Opioids/ Prescription Pain Medication
- Cocaine - Stimulant
- Heroin - Opioid



# Alcohol

Drug Class	Drug	Dependence Potential Physical Psychological		Short Term Effects	Long Term Effects	Risk of Overdose	Withdrawal
Central Nervous System Depressant							
Alcohol	Ethanol	High	High	<ul style="list-style-type: none"> <li>- Euphoria</li> <li>- Reduced inhibitions</li> <li>- Impaired judgement</li> <li>- Impaired memory/ thinking</li> <li>- Slurred speech</li> <li>- Loss of coordination</li>   <li>- can effect someone within 30 minutes of consumption and can stay in their system up to 24 hours, metabolism varies by person and depends on a number of other factors</li> </ul>	<ul style="list-style-type: none"> <li>- Alcohol dependence</li> <li>- Liver Damage</li> <li>- Brain Damage</li> <li>- Heart Damage</li> <li>- Nerve Damage</li> <li>- Pancreatitis</li> <li>- Diabetes</li> <li>- Fetal Alcohol Syndrome/ Effects</li> </ul>	<p>Yes</p> <ul style="list-style-type: none"> <li>- Alcohol poisoning</li> <li>- affects breathing, heart rate, body temperature and gag reflex and can potentially lead to a coma and death</li> </ul>	<ul style="list-style-type: none"> <li>- 8-10 hours after last drink experience/ feel typical hangover symptoms which include:</li> <li>- Shakiness</li> <li>- Nausea</li> <li>- Vomiting</li> <li>- Sweating</li> <li>- Fever</li> <li>- Headache</li> <li>- Anxiety</li> <li>- Depression</li> <li>- DT's (Delirium Tremens)</li> <li>- Day 1-5: increase risk of seizure, DT's begin</li> <li>- Day 5-7: symptoms begin to dissolve</li> </ul>

# Marijuana (Cannabis) – Stimulant, Depressant and Hallucinogen

- Marijuana (also known as pot, hash, and weed) is dry leaves or flowers from the Cannabis plant
- The active ingredient in marijuana is a substance known as tetrahydrocannabinol (THC)
- Smoked in hand-rolled cigarettes, wrapped in cigar tobacco or put into pipes or water pipes (bongs); it can also be cooked and eaten



# Marijuana (Cannabis)

Drug Class	Drug	Dependence Potential		Short Term Effects	Long Term Effects	Risk of Overdose	Withdrawal
		Physical	Psychological				
Central Nervous System Depressant, Stimulant or Hallucinogen							
Cannabis	Marijuana	Low	Moderate	<ul style="list-style-type: none"> <li>- Euphoria</li> <li>- Laughing</li> <li>- Altered perceptions</li> <li>- Reduced inhibitions</li> <li>- Hunger</li> <li>- Impaired judgement</li> <li>- Paranoia</li> <li>- Impaired memory</li>   <li>- can last up to 8 hours after smoking or 12 hours or longer if marijuana is eaten</li> </ul>	<ul style="list-style-type: none"> <li>- Memory impairment</li> <li>- Breathing problems and respiratory conditions</li> <li>- Increased risk of psychosis</li> <li>- Depression and anxiety</li> </ul>	No	<ul style="list-style-type: none"> <li>- Within the same day as using marijuana, when the drug wears off, user may:</li> <li>- have difficulty sleeping</li> <li>- feel irritable or anxious</li> <li>- hungry</li> <li>- depressed</li> </ul>



- Common street names
- 420
- Blow
- Blunt
- Bongo
- Dagga
- Dimba
- Dope
- Doobie
- Ganja
- Grass
- Hash
- Hemp
- Herb
- Joint-sticks
- Joint
- Kif
- Kush
- Marie-Jeanne
- Marihuana
- Marijuana
- Mary-Jane
- Pot
- Sensi
- Sinsemilla
- Skunk
- THC-candy
- Weed



Commonly  
used forms

Route of  
administration

Loose material (in a small roll wrapped  
in paper or onto sticks)

Inhalation (smoking, vaporization)

Ground material (melted in butter,  
producing “canna butter” for “hash  
brownies”, or “space-cake”; or infused  
with hot water as a drink)

Oral consumption



# Opioids/ Prescription Pain Medications

Opioids are medications that relieve pain by acting on specific nerve cells in the spinal cord and brain

Opioids come in many forms including tablets, capsules, syrups, liquids for injection, nose sprays, skin patches and suppositories



# Opioids/ Prescription Pain Medications

Drug Class	Drug	Dependence Potential		Short Term Effects	Long Term Effects	Risk of Overdose	Withdrawal
		Physical	Psychological				
Opiate							
Opioids	Morphine Codeine Heroin Hydromorphone Oxycodone Fentanyl	High	High	<ul style="list-style-type: none"> <li>- Pain relief</li> <li>- Drowsiness</li> <li>- Euphoric rush</li> <li>- Pinpoint pupils</li> <li>- Sweating</li> <li>- Nausea</li> <li>- Vomiting</li>   <li>- Opioids can be short-acting (released quickly) or long-acting (released slowly)</li> </ul>	<ul style="list-style-type: none"> <li>- Poor appetite</li> <li>- Weight loss</li> <li>- Constipation</li> <li>- IV use infections including AIDS, Hep B/C</li> <li>- Pulmonary problems</li> <li>- Increased tolerance to drug</li> </ul>	<p>Yes</p> <ul style="list-style-type: none"> <li>- Respiratory depression</li> <li>- Respiratory arrest</li> <li>- Coma</li> <li>- Death</li> <li>- Especially dangerous when taken in large amounts or in combination with alcohol or sedatives</li> </ul>	<ul style="list-style-type: none"> <li>- Withdrawal symptoms usually last about a week</li> <li>- Nervousness</li> <li>- Restlessness</li> <li>- Body aches</li> <li>- Diarrhea</li> <li>- Nausea</li> <li>- Stomach pain</li> <li>- Some symptoms may continue for longer: anxiety, insomnia and drug cravings</li> </ul>



# Cocaine - Stimulant

Cocaine is made from leaves of the South American coca bush which are processed into a fine, white powder



Crack is the smokable form of cocaine, to make crack, the cocaine powder is melted and compressed into rocks, which can then be smoked



# Cocaine

Drug Class	Drug	Dependence Potential		Short Term Effects	Long Term Effects	Risk of Overdose	Withdrawal
		Physical	Psychological				
Central Nervous System Stimulant							
Stimulant	Cocaine	Possible	High	<ul style="list-style-type: none"> <li>- Euphoria</li> <li>- Increased energy</li> <li>- Alertness</li> <li>- Grandiosity</li> <li>- Loss of appetite</li> <li>- Insomnia</li> <li>- Runny nose (if snorted)</li> <li>- It takes three minutes when snorted, thirty seconds when injected and only a few seconds when smoked to feel the effects</li> </ul>	<ul style="list-style-type: none"> <li>- Brain damage</li> <li>- Nerve death</li> <li>- Nasal damage from snorting</li> <li>- Psychosis</li> <li>- Dehydration</li> <li>- Weight loss</li> <li>- Anxiety, panic</li> <li>- Hallucinations</li> <li>- Tolerance to the drug</li> </ul>	<p>Yes</p> <ul style="list-style-type: none"> <li>- Heart attack</li> <li>- Stroke</li> <li>- Seizure</li> <li>- Fatal heart rhythms</li> <li>- Sudden death</li> </ul>	<p>Within hours to a day since last used:</p> <ul style="list-style-type: none"> <li>- Drug cravings</li> <li>- Insomnia</li> <li>- Restlessness</li> <li>- Depression</li> <li>- Increased risk of suicidal ideation</li> <li>- Agitation</li> <li>- Fatigue</li> <li>- Mood swings</li> </ul> <p>Day 1-7: Rebound effect of the above symptoms felt            Day 7 – 10 weeks: immense cravings for drug; drug dreams, and continuation of symptoms with low moods            30 weeks: marked decrease in cravings and drug dreams, symptoms have subsided</p>

# Heroin - Opiate

Heroin is made from morphine, a substance that comes from the opium poppy

Consumed in several ways: the powder may be sniffed up the nose, smoked (known as chasing the dragon) or dissolved in water and injected into a vein (known as mainlining) or injected into a muscle or under the skin (known as skin-popping)



# Heroin

Drug Class	Drug	Dependence Potential		Short Term Effects	Long Term Effects	Risk of Overdose	Withdrawal
		Physical	Psychological				
Opiate							
Opioids	Heroin	High	High	<ul style="list-style-type: none"> <li>- Euphoric rush</li> <li>- Drowsiness</li> <li>- Itching or a burning sensation of the skin</li> <li>- Nausea and vomiting</li> <li>- When heroin is injected in a muscle or under the skin, the effects occur more slowly, usually within 10 minutes</li> <li>- The effects of heroin usually last for about 3 to 5 hours</li> <li>- To avoid symptoms of withdrawal, regular heroin users feel the need to use every 6 to 12 hours</li> </ul>	<ul style="list-style-type: none"> <li>- Poor appetite</li> <li>- Weight loss</li> <li>- Constipation</li> <li>- IV use infections including AIDS, Hep B/C</li> <li>- Collapsed veins</li> <li>- Pulmonary problems</li> <li>- Increased tolerance to drug</li> </ul>	<p>Yes</p> <ul style="list-style-type: none"> <li>- Users rarely know the actual strength of the drug they take</li> <li>- A person who takes too much may lose consciousness almost immediately</li> <li>- An overdose is more likely if heroin is taken along with other depressant drugs such as alcohol, benzodiazepines, and other kinds of opioids such as methadone</li> </ul>	<ul style="list-style-type: none"> <li>- Chronic use leads to physical dependence</li> <li>- If a dependent user reduces or stops use of the drug abruptly, he or she may experience severe symptoms of withdrawal</li> <li>- These symptoms, which can begin as early as a few hours after the last drug administration, can include: <ul style="list-style-type: none"> <li>- Restlessness</li> <li>- Muscle and bone pain</li> <li>- Insomnia</li> <li>- Diarrhea</li> <li>- Vomiting</li> <li>- Cold flashes with goose bumps ("cold turkey")</li> <li>- Kicking movements ("kicking the habit")</li> <li>- severe craving for the drug during withdrawal, which can precipitate continued abuse and/or relapse</li> </ul> </li> </ul>

# Drug Slang

Its important to know what a person is speaking about.



Ask them what they are talking about as language used changes all the time as well as depends where you are from

Ask “What does that mean for you?”



# Drug Slang

Big Red

(Hydromorphone) Dialudid

Molly/Ecstasy

(MDMA) Methylenedioxymethamphetamine

Weed

(Marijuana)

Soft

(Cocaine)

Hard/Rock

(Crack)

H

(Heroin)

Banging Slammin/Bang

(injecting)

Cookers

(used to prepare drugs to inject drug)

Pipes

(used to inhale drug)

Longs/shorts

(Refers to the length of needle – personal preference)



# Substance Use and Teens

- Substance use during adolescence has been associated with alterations in brain structure, function, and neuro cognition.
- Recent research has indicated that adolescent substance users show abnormalities on measures of brain functioning, which is linked to changes in neuro cognition over time. Abnormalities have been seen in brain structure volume, white matter quality, and activation to cognitive tasks, even in youth with as little as 1–2 years of heavy drinking and consumption levels of 20 drinks per month.

# Substance Use and Teens

- Rates of use increase dramatically between ages 12 and 18.
- Alcohol use increases from 17% to 45% between 8<sup>th</sup> and 12<sup>th</sup> grade, and illicit drug use prevalence expands from 8% to 22%.
- Exposure to alcohol and drugs during a period of critical neurological development may interrupt the natural course of brain maturation and key processes of brain development.
- Potentially harmful implications for subsequent academic, occupational, and social functioning extending into adulthood.



Recent data suggest that even after four weeks of monitored abstinence, adolescents who regularly smoke marijuana performed poorer on performance tests of learning, cognitive flexibility, visual scanning, error commission, and working memory

# How do drugs and alcohol affect the brain?

**Drugs** are chemicals that **affect the brain** by tapping into its communication system and interfering with the way neurons normally send, receive, and process information. Some **drugs**, such as marijuana and heroin, can activate neurons because their chemical structure mimics that of a natural neurotransmitter.

The neurons' "notes" are called **neurotransmitters**, and they are manufactured in vesicles in the nerve cell. **Neurotransmitters** include serotonin, norepinephrine, dopamine, histamine and about two dozen others. The nerve cells are separated by a small space called a "synapse." **Neurotransmitters are** chemical messengers assisting in carrying signals across the brain and effect areas of emotion, mood, cognition, judgement.



- Agonists are drugs that mimic neurotransmitters and make the neuron fire, causing the neuron to fire **serotonin**, increasing happiness in an individual.
- Other **drugs**, such as cocaine or methamphetamine, can cause the nerve cells to release abnormally large amounts of natural neurotransmitters, or prevent the normal recycling of these **brain** chemicals, which is needed to shut off the signal between neurons.
- **Stimulants** enhance the effects of these chemicals in the **brain**. The associated increase in dopamine can induce a feeling of euphoria when **stimulants** are taken non medically. **Stimulants** also increase blood pressure and heart rate, constrict blood vessels, increase blood glucose, and open up breathing passages.





- Continued drug and alcohol use and abuse reduce your brain's ability to manufacture neurotransmitters naturally
- The effect then requires the individual to continue the use in order to maintain the “high” now through the uptake of serotonin and dopamine by increased use of substances.

# Use of Prescribed Medications Off Label

- Off label refers to medications that are being taken for use other than what the medication is prescribed for.
- Prescriptions that can be found at home can be used for purposes that induce a “ High” when not used as prescribed.
- Overuse, used in conjunction with other drugs:
  - Fentanyl with marijuana
  - Ecstasy mixed with cocaine
  - ADHD medications, Ritalin, Vyvance, Adderall (Stimulants)



# Prescribed Medications and Using Illicit Substances

- We are a society of pill poppers
- Doctors over prescribe medications (millions of prescriptions)
- Children and adolescents are diagnosed with ADHD, learning disorders, Autism spectrum disorders
- Youth that are on prescribed medications for these disorders over a period of time have permanently altered brain chemistry. Introduction of any chemical into the brain over a protracted period of time will have a change in the way the neurotransmitters function.
- The use of any non prescribed drugs can have a serious effect in conjunction with prescribed medications.
- Taking a non prescribed stimulant such as cocaine, ecstasy with prescribed Ritalin can produce significant dopamine which can cause serious harm to the brain.



# What do we do as parents, caregivers?”

- Educate yourself on the effects of substances, prescription drugs.
- Predisposition of those who are more susceptible to use and abuse ( genetics, environmental, social influences, mental health)
- Communicate with your children, educate your children.
- What does a conversation look like?



# The Facts

1 in 5 Canadians will have in their life, or do have mental health concerns which can contribute to the use of substances to alleviate emotional discomfort.

Watch for patterns:

1. Changes in mood
2. Changes in behaviour
3. Changes in Attitude
4. Sleep and eating patterns

# Questions/Comments?



# References

- <http://www.narconon.ca/drug-abuse/alcohol/health-risk.html>
- <http://www.ccsa.ca/Resource%20Library/CCSA-Canadian-Drug-Summary-Alcohol-2014-en.pdf>
- [www.porticonetwork.ca/web/hcardd/kte/applied-health-research-questions/test/sub](http://www.porticonetwork.ca/web/hcardd/kte/applied-health-research-questions/test/sub)
- <http://healthycanadians.gc.ca/healthy-living-vie-saine/substance-abuse-toxicomanie/prescription-abuse-abus-ordonnance/opiods-opiodes-eng.php>
- <http://www.ccsa.ca/Resource%20Library/CCSA-Canadian-Drug-Summary-Prescription-Opioids-2015-en.pdf>
- <http://www.narconon.ca/drug-abuse/prescription/health-risk.html>
- <http://www.narconon.ca/drug-abuse/cocaine/health-risk.html>
- <http://www.ccsa.ca/Resource%20Library/CCSA-Cocaine-Drug-Summary-2015-en.pdf>
- <https://www.drugabuse.gov/publications/drugfacts/heroin>
- <http://www.narconon.ca/drug-abuse/heroin/health-risk.html>
- <http://healthycanadians.gc.ca/healthy-living-vie-saine/substance-abuse-toxicomanie/controlled-drugs-substances-controlees/heroin-heroine-eng.php>
- <http://www.narconon.ca/drug-abuse/marijuana/health-risk.html>
- <http://www.ccsa.ca/Resource%20Library/CCSA-Canadian-Drug-Summary-Cannabis-2016-en.pdf>



# References

- <http://www.ccsa.ca/Resource%20Library/CCSA-Clearing-Smoke-on-Cannabis-Highlights-2015-en.pdf>
- <http://healthycanadians.gc.ca/healthy-living-vie-saine/substance-abuse-toxicomanie/controlled-drugs-substances-controlees/marijuana/effects-effets-eng.php>
- [http://www.camh.ca/en/hospital/about\\_camh/influencing\\_public\\_policy/public\\_policy\\_submissions/harm\\_reduction/Pages/harmreductionbackground.aspx](http://www.camh.ca/en/hospital/about_camh/influencing_public_policy/public_policy_submissions/harm_reduction/Pages/harmreductionbackground.aspx)
- <https://www.porticonetwork.ca/treatments/approaches-to-care/harm-reduction>
- [http://www.camhx.ca/education/online\\_courses\\_webinars/mha101/harmreduction/Harm\\_Reduction\\_.htm](http://www.camhx.ca/education/online_courses_webinars/mha101/harmreduction/Harm_Reduction_.htm)
- <http://www.canadianharmreduction.com/>
- <http://peterboroughdrugstrategy.com/resources/overdose-prevention>
- Cullen, Jim. (2013). Understanding and Treating Addictions From a Harm Reduction Perspective: A customized workshop for CMHA Haliburton Kawartha Pine Ridge. Tape Studies.
- Nijkeiwendidaa – 1097 Water Street 705-741-0900
- Nogojiwanong- nfc.ca
- <http://bmjopen.bmj.com/content/6/9/e011638.long>
- <http://nativeyouthsexualhealth.com/>
- <http://www.centrecmi.ca/>