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Introduction

Adapted from Kingston Community Health Centres.

According to a Canadian Addiction Survey in 2004 most Canadians use drugs. Close to 80% of us reported consuming alcohol in the past year. Close to half of Canadians surveyed report using cannabis at some point in their lives. But how many of you would consider yourself a “drug user”, or an “addict”? What images come to mind when you read those words? How many people that you know who drink alcohol would you consider problem drinkers?

Did you know that close to a quarter of people who reported drinking at all in the past year reported exceeding low-risk drinking guidelines? For many of us, a “drug user” is a kind of shady criminal character we can’t quite trust and don’t really want to be associated with. But the reality is that most of us use drugs.

A drug is a substance that we consume for purposes other than basic nutrition. A drug is consumed usually with the intent of changing the way we feel.

Some substances – like wine with a meal, or a cup of coffee in the morning – are so ingrained in our lives and culture that we forget they are drugs. Over 80% of Canadians consume caffeine on a regular basis. Indeed, we talk about alcohol and drugs as if they are not drugs. And have you ever thought of your local coffee shop as a “drug dealer”? Probably not.

There are a few points here to consider. One is that different drugs elicit different responses. Another is that there is a fine line between drugs and other items we consume. In fact, there is some speculation that a “drug” is not so much an item, but the expectations and values we place on a certain behaviour. You may have heard people talk about love as a drug, or food as a drug. Can love be a drug? Does food alter consciousness? What about gambling? We know that can be addictive. If so, what does this mean about the power of what we call drugs? We hear about the “addictiveness” of heroin, the danger of crack cocaine. But is the drug’s power within the substance itself, or is it in how a substance is used by an individual and what that experience means to them?

The answer is both. And to understand how drug use occurs and how drugs affect us, we need to look at a number of things. One is the drug. We need to understand the different kinds of drugs and their different effects on the body. We also need to look at the person using the substance. What is their personality? What expectations do they bring to the drug experience? Placebo studies have well demonstrated that part of a drug effect is psychological. The third area we need to appreciate in order to understand drugs and addiction is the social setting in which we live. What are the social norms when it comes to drug use? What messages do we receive about drugs and what they do and who we are? What controls surround the availability of drugs and what rituals exist and find expression in how the drug is used?
Understanding drug addictions is not something that happens easily in our world, and it requires a little bit of knowledge about a lot of things. Drug use is about plants and chemicals, the body and the brain. But it is also about society and culture. Most confusingly, it means we need to explore a little bit about how personal choices are made, about the effect of stressors and trauma on our decision making, and about individual autonomy.

Understanding drug addictions also requires that we examine our own attitudes and personal responses to drug use. There exists considerable stigma and taboo around certain kinds of drug use. When we talk about drug use, or addiction, all sorts of things come to mind.

It is important that we not confuse addiction with drug use. It is also important that we not create a separate mental category of “addicts” in this dialogue, as if somehow there exists a hard and fast distinction between “them” and the rest of us.

Drug use and abuse, as well as addictions, are prominent in our society, and they do not necessarily constitute a “social evil,” nor are drug addicts “social deviants.” Stigmatization of drug users only increases societal and individual harm.

This information kit will provide a detailed overview of a large variety of drugs. As a conclusion, it will explain the harm reduction strategy and philosophies in regards to drug use, and provide useful campus and community resources for support and harm reduction.

http://www.ontla.on.ca/library/repository/mon/25008/311845.pdf

http://www.ohrdp.ca/find-a-needle-syringe-program/

Alcohol

What is alcohol?

Alcohol is a “depressant” drug. That means it slows down the parts of your brain and central nervous system that affect your thinking and behaviour, as well as your breathing and heart rate. These effects increase the higher a person’s Blood Alcohol Concentration (BAC) is. The use of alcohol has been traced as far back as 8000 BC, and is common in many cultures today.

Where does alcohol come from?

Alcohol is produced by fermenting, and sometimes distilling, various fruits, vegetables or grains. Fermented beverages include beer and wine, which have a maximum alcohol content of about 15 per cent. Distilled beverages, often called “hard liquor” or “spirits,” such as rum, whisky and vodka contain a higher percentage of alcohol.

Although alcohol comes in different forms, it has the same effect. Each “standard” drink contains 13.6 grams of alcohol. A ‘standard drink’ could be 12oz of beer* (341mL, 5% alcohol), 5oz of wine (142mL, 12% alcohol), 3oz of fortified wine** (85mL, 16-18% alcohol), or 1.5oz liquor (43mL, 40% alcohol)

* Note that regular beers have an average alcohol content of five per cent, but some have as much as six or seven per cent, making them stronger than a “standard” drink. “Light” beers have an average alcohol content of four per cent.

** Such as sherry, port or vermouth

What does it look like?

Pure (ethyl) alcohol is a clear, colourless liquid. Alcoholic beverages get their distinctive colours from their other ingredients, and from the process of fermentation.

Who uses alcohol?
Most Canadians drink at a moderate level. In a 2010 survey, 77 per cent of Canadians aged 15 and older reported drinking alcohol in the past year. Another survey, of adults aged 18 and older, found that alcohol use in Ontario had increased from 78 per cent in 2006 to 82 per cent in 2007. This increase was especially evident among women.

Even though Ontario’s laws restrict alcohol use to those 19 years of age and older, many younger people drink. A 2015 survey of Ontario students in grades 7 to 12 found that 46% had used alcohol in the past year, and 18% had drunk five or more drinks on one occasion at least once in the past month. These numbers are a historic low; with alcohol use declining every year since 1999 and remaining stable since 2013.

In general, men drink more than women do, and are more likely to have drinking problems.

**How does alcohol make you feel?**

The way alcohol affects you depends on many factors, including:

- your age, sex and body weight
- how sensitive you are to alcohol
- the type and amount of food in your stomach
- how much and how often you drink
- how long you’ve been drinking
- the environment you’re in
- how you expect the alcohol to make you feel
- whether you’ve taken any other drugs (illicit, prescription, over-the-counter or herbal)

For many people, a single drink of alcohol releases tension and reduces inhibition, making them feel more at ease and outgoing. Some people feel happy or excited when they drink, while others become depressed or hostile. Suicide and violent crimes often involve alcohol.

Women are generally more sensitive to the effects of alcohol than men, and all adults become increasingly sensitive to alcohol’s effects as they age. When someone is more sensitive, it takes less alcohol to cause intoxication, and more time for the body to eliminate the alcohol consumed.

Early signs of alcohol intoxication include flushed skin, impaired judgment and reduced inhibition. Continued drinking increases these effects, and causes other effects, such as impaired attention, reduced muscle control, slowed reflexes, staggering gait, slurred speech and double or blurred vision. A severely intoxicated person may “black out,” and have no memory of what was said or done while drinking. Effects of extreme intoxication include inability to stand, vomiting, stupor, coma and death.

**How long will the effects last?**
It takes about one hour for the liver of a person weighing 70 kg (154 lbs.) to process and eliminate eight to 10 grams of alcohol, or about two-thirds of the alcohol contained in a standard drink. This rate is constant, no matter how much alcohol has been consumed, or what food or non-alcoholic beverages are taken.

Drinking heavily usually results in a “hangover,” beginning eight to 12 hours after the last drink. Symptoms can include headache, nausea, diarrhea, shakiness and vomiting. A hangover is caused in part by acetaldehyde, a toxic chemical that is created as alcohol is processed by your liver. Other causes include dehydration and changes in hormone levels.

Some people think that having a drink before bed helps them to get to sleep. While alcohol does bring on sleep more quickly, it disturbs sleep patterns, and causes wakefulness in the night.

**Is alcohol dangerous?**

Yes, alcohol can be dangerous in a number of ways.

The impact of alcohol’s effect on judgment, behaviour, attitude and reflexes can range from embarrassment, to unwanted or high-risk sexual contact, to violence, injury or death. Alcohol is involved in more regrettable moments, crimes and traffic fatalities than all other drugs of abuse combined. Young people, who are less familiar with the effects of alcohol, may be especially prone to act in an impulsive or dangerous manner while intoxicated.

Extreme intoxication can kill, often as the result of the person “passing out,” vomiting and choking. A person who has been drinking heavily and is unconscious should be laid on his or her side and watched closely. Clammy skin, low body temperature, slow and laboured breathing and incontinence are signs of acute alcohol poisoning, which can be fatal. Seek emergency medical care.

Women who drink during pregnancy risk giving birth to a baby with behaviour problems, growth deficiency, developmental disability, head and facial deformities, joint and limb abnormalities and heart defects. The risk of bearing a child with these birth defects increases with the amount of alcohol consumed. The first trimester may be a time of greatest risk for the fetus, although there is no time during pregnancy when it is known to be safe to drink alcohol.

Mixing alcohol with other drugs can have unpredictable results. Alcohol may either block the absorption of the other drug, making it less effective, or it may increase the effect of the other drug, to the point of danger. The general rule is never to mix alcohol with any other drugs—whether the other drug is a medication or an illegal substance. If you are taking a medication and you want to drink, check first with your doctor or pharmacist.

**Is there a safe level of drinking?**
While there is no precise “safe” level of drinking, there are guidelines for adults who wish to lower the risks of drinking. People who are pregnant, who have certain medical conditions, or who will be driving a vehicle or operating machinery, should avoid alcohol.

“Low-risk” drinking guidelines for healthy adults suggest that:

- Women should have no more than 10 drinks per week and not more than two drinks most days.
- Men should have no more than 15 drinks per week and not more than three drinks most days.
- Know what counts as a drink; the total amount of alcohol in a serving is what counts for the alcohol you have consumed, not strictly the number of beers or shots you have had.
- Count your drinks accurately; be aware that if a drink is made strong it will contain more alcohol or drinks than normal and remember to account for this.
- Have a plan for drinking!
  - If you’re out, know how you’re getting home safely, like having a designated driver with you or arrange beforehand with a family member or friend to pick you up.
  - Eat before and during drinking, as well as drinking plenty of water between drinks.
- Remember that if you are sick or tried, alcohol can have a greater effect on you and make you sick for a longer amount of time.
- Remember to never mix alcohol with drugs or medications of any kind!
- Set a limit before you start to drink and stay within that limit.
  - To help, inform your friends before you start drinking or get to the bar that you have a limit for the night, and ask that they respect that limit.

Is alcohol addictive?

It can be.

Most alcohol-related illnesses, social problems, accidents and deaths are caused by “problem drinking.” This term describes alcohol use that causes problems in a person’s life, but does not include physical dependence. Problem drinking is four times as common as severe alcohol dependence.

Physical dependence involves tolerance to alcohol’s effects, and withdrawal symptoms when drinking is stopped. As people develop tolerance, they need more and more alcohol to produce the desired effect. People who are physically dependent on alcohol can develop withdrawal symptoms, such as sleeplessness, tremors, nausea and seizures, within a few hours after their last drink. These symptoms can last from two to seven days and range from mild to severe, depending on the amount of alcohol consumed and the period of time over which it was used. Some people experience delirium tremens, or “the DTs,” five to six days after drinking stops. This dangerous syndrome consists of frightening hallucinations, extreme confusion, fever and racing heart. If left untreated, severe alcohol withdrawal can result in death.
Treatment for alcohol dependence usually begins by treating withdrawal symptoms, but most people will need additional help to stop drinking. Even after long periods of not drinking, a person may continue to crave alcohol, and may begin to drink again. Treatment may take place in a residential or community setting and may include individual or group therapy, self-help or mutual help groups such as Alcoholics Anonymous, and certain medications, such as naltrexone. Some people respond well to one form of treatment, while others do not. There is no single most effective treatment approach.

What are the long-term effects of drinking alcohol?

How alcohol affects you in the long term depends on how much and how often you drink.

Research studies have shown that:

- as little as one drink of alcohol every other day can help protect middle aged and older adults against heart disease
- one to two drinks a day can increase your risk of developing certain cancers
- three or more drinks a day increases your risk of high blood pressure, stroke and heart problems.

Heavy alcohol use can result in trouble getting and keeping an erection for men or menstrual irregularities for women, appetite loss, vitamin deficiencies and infections. Alcohol irritates the lining of the stomach, which can be painful and is potentially fatal. Alcoholic liver disease is a major cause of illness and death in North America. Alcohol also increases the risk of liver, throat, breast and other cancers.

Chronic use of alcohol can damage the brain, which can lead to dementia, difficulties with coordination and motor control, and loss of feeling or painful burning in the feet. Alcohol dependence often results in clinical depression, and the rate of suicide among people who are dependent on alcohol is six times that of the general population.

Although women’s average lifetime alcohol intake is less than half that of men, women are just as likely as men to develop alcohol-related diseases, and are twice as likely to die from these conditions.

Alcohol and the law

Provincial and federal laws regulate the manufacture, distribution, importation, advertising, possession and consumption of alcohol.

In Ontario it is illegal for anyone under 19 years of age to possess, consume or purchase alcohol; it is also illegal to sell or supply alcohol to anyone known to be or appearing to be (unless that person has proof otherwise) under the age of 19, or to sell or supply alcohol to anyone who appears to be intoxicated. Anyone who sells or supplies alcohol to others (including patrons of a tavern or restaurant and guests in a private home) may be held civilly liable if people injure themselves or others while intoxicated.
Federal and provincial laws include a range of drinking and driving offences.

*Adapted from Do You Know . . . Alcohol © 2003, 2010 Centre for Addiction and Mental Health*
Amphetamines

Types of amphetamines: amphetamine, methamphetamine, dextroamphetamine
Street names: speed, bennies, glass, crystal, crank, pep pills and uppers

What are amphetamines?

The different types of amphetamines—and related drugs such as methylphenidate (e.g., Ritalin)—are stimulant drugs. Stimulants speed up the central nervous system. They act like adrenaline, a hormone that is one of the body’s natural stimulants. Other drugs with similar effects include cocaine, ecstasy, caffeine and many others.

What do amphetamines look like and how are they used?

Pure amphetamines are white, odourless, bitter-tasting crystalline powders. Illicitly prepared amphetamines vary in purity. They may be whitish with traces of gray or pink and may be a coarse powder, or in crystals or chunks. They may smell “fishy” or like ammonia. Methamphetamine resembles shaved glass slivers or clear rock salt.

Amphetamines are injected, smoked, sniffed or taken as pills.

Who uses amphetamines?

When amphetamines were easy to get, many people used them to stay awake and to have more energy. Truck drivers, students and athletes were especially likely to abuse amphetamines. Even recently, soldiers have been given amphetamines for endurance in battle. People with eating disorders may use these drugs to try to lose weight.

A 2015 survey of Ontario students in grades 7 to 12 reported non-medical use of ADHD stimulant drugs by 2.1% of students at least once in the past year. It is important to note that about half of these users reported only using once or twice within the past year and that most of this use is reported in grades 11 and 12.

How do amphetamines make you feel?

How amphetamines make you feel depends on:
• how much you use
• how often and how long you use them
• how you use them (by injection, orally, etc.)
• your mood, expectation and environment
• your age
• whether you have certain pre-existing medical or psychiatric conditions
• whether you’ve taken any alcohol or other drugs (illicit, prescription, over-the-counter or herbal).
When amphetamines are injected or smoked, they reach the brain quickly, and produce a “rush,” or surge of euphoria, immediately. The effects of amphetamines are often different from person to person.

Amphetamines can make people:
• alert, confident and energetic
• talkative, restless and excited
• feel a sense of power and superiority
• tense and nervous
• hostile and aggressive.

However, in children who are hyperactive and adults with ADHD, amphetamines and related drugs, in the correct doses, can have a calming effect.

Amphetamines reduce hunger and increase breathing, heart rate and blood pressure. Larger doses may cause fever, sweating, headache, nausea, blurred vision, very fast or irregular heartbeat, tremors, loss of co-ordination and collapse.

How long does the feeling last?

The initial rush after injecting or smoking lasts only a minute. With some types of amphetamines, the stimulant effects can last up to 12 hours. Some people may use amphetamines repeatedly over a period of several days to try to stay high.

Are amphetamines dangerous?

Yes

Overdose can cause seizures, coma and death due to burst blood vessels in the brain, heart failure or very high fever. Injecting any drug can cause infections from used needles or impurities in the drug; sharing needles with others can transmit hepatitis or HIV.

Amphetamines are linked to risky and violent behaviors, and increased injury and sexually transmitted disease. Amphetamines may cause bizarre or repetitive behavior, paranoia and hallucinations.

Are amphetamines addictive?

When taken as prescribed, amphetamines and related drugs do not cause addiction. However, these drugs can cause addiction if they are misused. Methylphenidate (Ritalin) is less likely to cause addiction than other amphetamines. Regular non-medical use of amphetamines can lead to tolerance. This means that the person needs to take more and more of the drug to get the desired effect. Regular use of amphetamines, especially when the drug is smoked or injected, can quickly cause addiction.
Addiction means that cravings and compulsive use of the drug become very important to a person. If drug use is stopped, the person usually goes through withdrawal, also called “the crash.” Symptoms of withdrawal can include fatigue, restless sleep, irritability, intense hunger, depression, suicidal behavior and fits of violence.

People who use amphetamines often also use other drugs, such as alcohol, cannabis or benzodiazepines, to help them relax and sleep. This increases the risk for dependence on these other drugs.

**What are the long-term effects of taking amphetamines?**

Chronic use of amphetamines can lead to serious physical and mental health problems. Because amphetamines reduce appetite and fatigue, they can cause vitamin and sleep deficiencies and malnutrition, and make people more prone to illness. Regular use of amphetamines can also cause amphetamine psychosis. Symptoms include hallucinations, delusions, paranoia, and bizarre and violent behavior. These symptoms usually disappear a few days or weeks after the drug use has stopped.

Longer-term studies support the efficacy and safety of methylphenidate when taken as prescribed to treat hyperactivity, but more information is needed to evaluate its long-term effects.

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Benzodiazepines

What are benzodiazepines?

Benzodiazepines are a group of medications that can help reduce anxiety and make it easier to sleep. They are also used as a muscle relaxant, to induce sedation for surgery and other medical procedures, and in the treatment of seizures and alcohol withdrawal. Benzodiazepines are also called minor tranquillizers, sedatives or hypnotics. They are the most widely prescribed psychoactive drugs in the world.

The calming effects of benzodiazepines can often be achieved without drugs. Various kinds of exercise, such as walking, running, yoga or tai chi can help, as can reducing the stress in your life and taking time for relaxing activities such as meditation, reading a book or having a warm bath. Talking with a trusted friend, family member or therapist and working out the problems that are troubling you can also help. Whenever possible, these approaches should be tried first, before benzodiazepines. However, when non-drug approaches are not possible or do not help, benzodiazepines can provide relief.

When used appropriately, benzodiazepines are safe and effective drugs. They do, however, have potential for abuse and can be addictive. For this reason, they are usually only recommended for short-term or occasional use.

Do I need treatment?

A certain amount of anxiety or insomnia is a normal reaction to what is happening in your life. You may worry or feel stressed and sometimes these feelings can keep you up at night. Most often, these feelings pass and are not a problem. However, these feelings can become a problem when they continue over a longer term, cause severe distress, make you feel physically ill and affect your behavior. This kind of anxiety may be triggered by a challenging life event. It can also be a symptom of a mental health problem.

The ability to fall asleep and to sleep through the night can be affected by many types of health problems. These include physical conditions that cause pain or trouble breathing, as well as mental health problems. When sleep is disrupted, health can be further affected, leading to further disruption of sleep.

While each situation is unique and different treatment approaches may be called for, benzodiazepines can help to provide relief. They are especially useful in the first few days or weeks of treatment for a mental health problem. This is a time when distress is severe and longer-term medications, such as antidepressants, mood stabilizers or antipsychotics have not yet reached their full effect. During this period, benzodiazepines can help to reduce distress so that you are better able to work through problems with a therapist. Consult your doctor or therapist before long term use of benzodiazepines or before taking them with other prescribed drugs.
What do benzodiazepines do?

Benzodiazepines enhance the activity of the neurotransmitter GABA—a chemical in the brain that helps you to feel calm. Their effect also produces drowsiness, making it easier to fall asleep and to sleep through the night.

When taken by mouth, the calming effects of benzodiazepines are felt within 30 minutes to four hours, depending on the type taken. With most benzodiazepines, the effects last several hours.

Side-effects

The side-effects of benzodiazepines are generally mild and may not be noticed when these drugs are used at low doses. Common side-effects are drowsiness, sedation, dizziness and loss of balance. At higher doses, side-effects can include confusion, disorientation, amnesia, breathing difficulties and depression. Other possible effects, which are extremely rare, include agitation, hallucinations and nightmares. Reducing the dose can help to reduce side-effects.

Benzodiazepines can make it harder to learn and remember new information and to do certain physical and mental tasks. These abilities return to normal once the effect of the drug wears off.

When used to help you get to sleep, benzodiazepines can have some “hangover” effects, such as morning and daytime drowsiness.

Types of benzodiazepines

Many types of benzodiazepines are available in Canada. All benzodiazepines work the same way; however, the intensity and duration of their effects vary.

The benzodiazepines most commonly used to treat anxiety disorders are clonazepam (Rivotril)*, alprazolam (Xanax) and lorazepam (Ativan). Also used are bromazepam (Lectopam), oxazepam (Serax), chlordiazepoxide (once marketed as Librium), clorazepate (Tranxene) and diazepam (Valium).

Benzodiazepines used for the treatment of insomnia include lorazepam (Ativan), nitrazepam (Mogadon), oxazepam (Serax), temazepam (Restoril), triazolam (Halcion) and flurazepam (Dalmane).

Another drug used for insomnia is zopiclone (Imovane). This drug is similar to benzodiazepines and has similar side-effects. Zopiclone may have less abuse potential than some benzodiazepines; however, people can still become addicted to this drug.
Benzodiazepines are available in the form of tablets or capsules, which are taken by mouth. Some are also available as a sublingual tablet, which is dissolved under the tongue, or as a solution for injection.

* Medications are referred to in two ways: by their generic name and by their brand or trade names. Brand names available in Canada appear here in brackets.

**How long should I take benzodiazepines?**

For most people, benzodiazepines are helpful only as a temporary measure, to be used only on occasion, to help you sleep or when anxiety can’t be managed with non-drug approaches. Alternatively, they should be used daily, for up to a few weeks, to help re-establish sleep patterns or to reduce anxiety while waiting for an antidepressant or other treatment to take effect.

Some people may continue to use benzodiazepines for longer, even months or years. Some do so because they continue to find these drugs helpful and have agreed with their prescribing physician that the benefits of continuing to use them outweigh the risks. There are also those who continue to use benzodiazepines over a longer term because the prescribing doctor has not re-examined their continued use. In this instance, ask another doctor to review your prescription.

**Are benzodiazepines addictive?**

When used on occasion or daily for a few weeks, benzodiazepines have a low risk of addiction. This risk increases, however, when benzodiazepines are taken regularly for more than a few weeks, especially when they are taken in higher than normal doses. People with a history of substance abuse should avoid or minimize use of benzodiazepines as they are at higher risk of becoming addicted.

Signs of addiction include strong cravings for the effects of the drug, taking more of the drug than intended and continuing to use the drug despite the problems it may cause. Addiction may develop with or without physical dependence.

**Physical dependence**

When benzodiazepines are taken regularly over a long period of time, the body adapts to the presence of the drug. This is known as physical dependence. Physical dependence, on its own, is not the same as addiction. Signs of physical dependence include tolerance and withdrawal.

**Tolerance**

People are said to have developed tolerance to a drug when the same dose, taken over time, no longer has the desired effect. With benzodiazepines, it is known that:
• Tolerance to the sleep-inducing effects may develop within a few weeks of regular use; however, tolerance does not usually develop with occasional use.

• Tolerance to the anxiety-relieving effects is less likely to develop.

• Tolerance to the effects of one type of benzodiazepine leads to tolerance to other benzodiazepines, and to other drugs with similar effects, including alcohol.

Some people who develop tolerance may take higher and higher doses to feel the same intensity of effect as when they started taking the drug. These people may find it difficult to stop using benzodiazepines.

Withdrawal

Withdrawal symptoms of benzodiazepines may be similar to the reasons why the drugs were prescribed in the first place. The severity of withdrawal symptoms depends on the type of benzodiazepine used, the amount used and length of time it is used, and on whether the drug is stopped abruptly. Symptoms can include headache, insomnia, anxiety, tension, sweating, difficulty concentrating, tremor, sensory disturbances, fatigue, stomach upset and loss of appetite. Severe withdrawal symptoms from regular use of benzodiazepines in high doses may include agitation, paranoia, delirium and seizures. Withdrawal symptoms generally begin within a few days after treatment is stopped, and may continue for two to four weeks or longer.

The safe use of benzodiazepines

Take only as directed by your doctor; do not increase your dose.
Once you have slept well for two or three nights in a row, try to get to sleep without taking the medication.

If you have been taking benzodiazepines regularly for a few weeks or more, check with your doctor before reducing or stopping your medication

How do I cut down or stop taking benzodiazepines?

Most often, benzodiazepines are prescribed to help people get through stressful situations or to provide relief while waiting for other treatment to take effect. When used in this way, on occasion or daily for a few weeks, most people can stop taking them without difficulty or withdrawal effects.

Stopping use can, however, be hard for some people, even when the use is short term. Problems are most likely to occur when the issues that caused you to take these drugs in the first place have not yet been dealt with and no other medication or talk therapy has been started.
People who wish to stop using benzodiazepines after using them regularly over a longer term will need to cut back their use gradually over an extended period of time. This approach reduces withdrawal effects and helps ensure success in stopping. Because the ideal process for cutting down varies depending on the benzodiazepine you are taking, the dose and the length of time you have been taking it, ask your doctor to help you set up a schedule. If the long-term use has been at high doses, stopping use requires medical supervision.

**Will benzodiazepines interact with other medications?**

These drugs may interact with other medications. If your doctor or dentist prescribes any medication, inform him or her about the drug you are taking. Check with your pharmacist before using any over-the-counter medication, including herbal products, cold or allergy tablets, or cough syrups.

When taken on their own, the risk of overdose with benzodiazepines is low; however, combining these drugs with other sedatives, such as alcohol, or with medications containing codeine or other opioid drugs, can result in overdose and possible death. Symptoms of overdose include slurred speech, confusion, severe drowsiness, weakness and staggering, slow heartbeat, breathing problems and unconsciousness.

**What if I drink alcohol or coffee while taking benzodiazepines?**

Benzodiazepines can be dangerous when combined with alcohol. Benzodiazepines increase the effects of alcohol, making you more sleepy, dizzy or lightheaded. One danger of this is the increased risk of stumbling, falling and related injuries. Another is the increased risk of overdose. Both alcohol and benzodiazepines slow down the central nervous system, which controls breathing. In overdose, breathing can stop.

Drinking too many caffeinated beverages (i.e., more than four cups of coffee or six cups of tea daily) may counteract the anxiety-reducing effects of benzodiazepines.

**What if I use street drugs while taking benzodiazepines?**

If you are taking benzodiazepines to help reduce the distress of a mental health problem, chances are that you want to feel less anxious and get a good night’s sleep. Street drugs, such as marijuana or cocaine, have effects that can worsen symptoms of anxiety and interfere with sleep—making you feel worse, rather than better.

Taking benzodiazepines to enhance the effect of other sedative drugs, such as opioids, is dangerous and increases the risk of overdose and injury.

**Will benzodiazepines affect my ability to drive safely?**
Benzodiazepines can affect your ability to drive a vehicle and increase the risk of a crash, especially if taken in combination with alcohol or other sedative drugs. The risk is highest when you first start taking benzodiazepines, before you are used to their effect. Avoid driving or operating other machinery if you feel drowsy or slowed down.

Is it safe to take benzodiazepines while pregnant or breastfeeding?

The risk of birth defects from taking benzodiazepines while pregnant is not known, though it is thought to be very small. If benzodiazepines are used regularly close to the delivery date, the baby may be born drowsy or may have withdrawal symptoms such as restlessness and feeding problems.

Small quantities of benzodiazepines can be passed through breast milk from the mother to the baby. This may cause drowsiness in the baby.

If you are pregnant or breastfeeding, or thinking about becoming pregnant, talk to your doctor about the risks and benefits of continuing or stopping benzodiazepines. If your doctor recommends that you stop taking benzodiazepines, he or she will help you to slowly reduce your dose over time, to avoid withdrawal symptoms.

Children, teens and benzodiazepines

Benzodiazepines are not recommended for use by children and teens, except to bring sedation prior to surgery or for brief medical procedures. Extra caution should be used when considering giving benzodiazepines to children as these drugs may cause children to become irritable rather than calm.

Older adults and benzodiazepines

Sensitivity to the effects of benzodiazepines increases with age. When older adults take these drugs, they may become confused and have reduced muscle co-ordination, putting them at greater risk of falls, hip fractures and motor vehicle crashes.

If an older person has been taking benzodiazepines regularly for a very long time, the process required to stop taking them may be long and difficult. In some cases, a doctor may decide to leave the older person on the medication, with regular assessment of daytime side-effects.
Cannabis (Marijuana)

What is cannabis?

Street names: marijuana (grass, weed, pot, dope, ganja and others), hashish (hash), hash oil (weed oil, honey oil)

Cannabis sativa, also known as the hemp plant, has been cultivated for centuries for industrial and medical use, and for its “psychoactive,” or mind-altering, effects. Marijuana, hashish and hash oil all derive from the cannabis plant.

More than 61 chemicals, called cannabinoids, have been identified as specific to the cannabis plant. THC (delta-9-tetrahydrocannabinol) is the main psychoactive cannabinoid, and is most responsible for the “high” associated with marijuana use.

Hemp grown for industrial use has very low levels of THC. Hemp fibres are used to make rope, fabric and paper. Hemp seeds are high in protein and yield an oil with nutritional and industrial value.

Many claims about the medical uses of marijuana have not been scientifically proven; however, some have. In Canada, THC and other pure cannabinoids are available in three prescription medications:

- Marinol (dronabinol) is synthetic THC and Cesamet (nabilone) is another synthetic cannabinoid. Both are prescribed to relieve nausea and vomiting and to stimulate appetite. This can help people who have AIDS or who take drugs used to treat cancer.
- Sativex, the world’s first prescription medicine derived from the cannabis plant, was approved in Canada in 2005 for the relief of pain in multiple sclerosis. Sativex is a combination of THC and cannabidiol.

Where does cannabis come from?

Cannabis is native to tropical and temperate climates, but is cultivated around the world. Modern illegal growing operations use sophisticated methods to produce high-potency marijuana.

People with a medical exemption from Health Canada may grow their own supply or designate someone to grow it for them. Research-grade cannabis is grown by a producer appointed by the federal government.

What does cannabis look like?

Marijuana is the dried flower buds and leaves of the cannabis plant. It ranges in colour from grayish green to greenish brown and may contain seeds and stems. Hashish is the dried, compressed resin of cannabis flowertops. It ranges in colour from brown to black, and is sold in...
Hash oil is made by boiling cannabis floretops or resin in an organic solvent, which produces a sticky reddish-brown or green substance. The THC content of each variety of cannabis varies, although hash is generally more potent than marijuana, and hash oil is usually the most potent form.

Marijuana, hash or hash oil are sometimes mixed with tobacco, and are most often rolled into a cigarette called a joint, or smoked in a pipe. Cannabis is sometimes cooked in foods, such as brownies, or made into a drink.

Who uses cannabis?

Cannabis is the most commonly used illegal drug in Canada (after alcohol use by minors). However, most cannabis use is infrequent and experimental.

A 2009 study reported that 42 per cent of Ontarians over the age of 18 had used cannabis at some point in their life, and 12 per cent had done so in the past year.

Another survey from 2015 found that about 21.3 per cent of Ontario students in grades 7 to 12 had used marijuana at least once in the previous year. From this same survey, about 2.1% reported daily use of cannabis within the last month. There was no significant difference between men and women in rates of cannabis use.

How does cannabis make you feel?

How cannabis affects you depends on:
- how much you use
- how often and how long you’ve used it
- whether you smoke it or swallow it
- your mood, your expectations and the environment you’re in
- your age
- whether you have certain pre-existing medical or psychiatric conditions
- whether you’ve taken any alcohol or other drugs (illegal, prescription, over-the-counter or herbal).

When people first try cannabis, they often feel no psychoactive effect. With repeated use, however, these effects are felt.

People can have very different experiences with cannabis. Some may feel relaxed, lively, talkative and giggly, while others feel tense, anxious, fearful and confused. What’s more, the kind of experience a person has can vary from one drug-taking episode to another. People who are familiar with the drug learn to stop when they’ve had enough, and have more control of the effects, than do people who are new to the drug.

At low doses, cannabis mildly distorts perception and the senses. People who use the drug say that it makes music sound better, colours appear brighter and moments seem longer. They say that it enhances taste, touch and smell and makes them feel more aware of their body. Some enjoy these effects, but others find them uncomfortable.
Smoking larger amounts may intensify some of the desired effects but is also more likely to produce an unpleasant reaction. Too high a dose may result in feelings of losing control, confusion, agitation, paranoia and panic. Pseudohallucinations (seeing things such as pattern and colour that you know are not real) or true hallucinations (where you lose touch with reality) can occur.

The physical effects of cannabis include red eyes, dry mouth and throat, irritated respiratory system (from smoking) and bronchodilation (expansion of breathing passages). Appetite and heart rate increase, while blood pressure, balance and stability decrease. Cannabis may cause drowsiness or restlessness, depending on the amount taken and individual response to the drug.

**How long does the feeling last?**

When cannabis is smoked, the effect is almost immediate and may last several hours, depending on how much is taken. When it is swallowed, the effect is felt in about an hour, and lasts longer than when it is smoked. Although the high lasts only a few hours after smoking, THC is stored in fat cells and expelled from the body over a period of days or weeks, depending on the frequency of use and the amount used. This is why drug tests for cannabis use can give a positive result long after the effect of the drug has worn off.

**Is cannabis dangerous?**

While no one has ever died of a cannabis overdose, those who use cannabis should be aware of the following possible dangers, and take measures to avoid them:

- Cannabis impairs depth perception, attention span and concentration, slows reaction time, and decreases muscle strength and hand steadiness—all of which may affect a person’s ability to drive safely.
- Cannabis and alcohol, when taken together, intensify each other’s effects and can cause severe impairment.
- Cannabis intoxication affects thinking and short-term memory. Using cannabis while at school or work may interfere with learning or work performance.
- Unless you have a medical exemption, it is illegal to grow, possess or sell cannabis.
- Illegal cannabis products are not subject to any health and safety standards, and may be contaminated with other drugs, pesticides or toxic fungi.
- Large doses of potent cannabis, especially when swallowed, can cause “toxic psychosis.” Symptoms include auditory and visual hallucinations, paranoid delusions, confusion and amnesia. When cannabis use is stopped, these symptoms usually disappear within a week.
- Cannabis use raises the heart rate and lowers blood pressure. People with angina or other coronary artery disease may increase their risk of heart attack if they use cannabis.
- Using cannabis during pregnancy may affect the fetus. Research suggests there may be a link between cannabis use during pregnancy and subtle cognitive problems in children. Cannabis smoke contains many of the same chemicals found in cigarette smoke, which are dangerous to the fetus.
Is cannabis addictive?

It can be; People who use cannabis regularly can develop psychological and/or mild physical dependence.

People with psychological dependence crave the high. The drug becomes overly important to them, they may feel they need it, and if they can’t get it, they feel anxious. Long-term frequent use can lead to physical dependence. People who develop physical dependence may experience a mild withdrawal syndrome if they suddenly stop using cannabis. Symptoms can include irritability, anxiety, upset stomach, loss of appetite, sweating and disturbed sleep. These symptoms generally last for a week or so, although sleep problems may continue longer.

What are the long-term effects of using cannabis?

People who use cannabis heavily or regularly, or people with certain medical or psychiatric conditions, risk the following possible long-term effects:

- Cannabis smoke contains tar and other known cancer-causing agents. People who smoke cannabis often hold unfiltered smoke in their lungs for maximum effect. This adds to the risk of cancer.
- Smoking cannabis irritates the respiratory system. Chronic marijuana smoking has been linked to bronchitis.
- The constant intoxication associated with heavy cannabis use often reduces motivation for work and study, although this usually returns when drug use is stopped.
- There is a possible association between heavy regular cannabis use and the onset of schizophrenia. It is not clear, however, whether cannabis use releases latent symptoms of schizophrenia, or whether people use cannabis to help them cope with the symptoms of an emerging psychosis. Evidence suggests that continued cannabis use in people with schizophrenia accentuates psychotic symptoms and worsens the course of the illness.
- Chronic, heavy use of cannabis may impair people’s attention, memory and the ability to process complex information for weeks, months and even years after they have stopped using cannabis.

Cannabis and the law

Ontario has passed new laws (following extensive public and stakeholder engagement) about how, where and who can buy, possess and consume cannabis in the province. These rules are similar to those in place for alcohol and tobacco, with some differences.

You will need to be **19 and older** to buy, use, possess and grow **recreational** cannabis. This is the same as the minimum age for the sale of tobacco and alcohol in Ontario.

You will **not be allowed** to use recreational cannabis in:


- any public place
- workplaces
- motorized vehicles

These rules will be in place to protect people from second-hand cannabis smoke, and reduce youth and young adult exposure to cannabis.

**It is illegal to drive drug-impaired and it's just as dangerous as driving drunk.** Cannabis, like many other drugs, slows your reaction time and increases your chances of being in a collision. If a police officer finds that you are impaired by any drug, including cannabis, you will face serious penalties, including:

- an immediate license suspension
- financial penalties
- possible vehicle impoundment
- possible criminal record
- possible jail time

Police officers will be authorized to use oral fluid screening devices at roadside. Once a federally approved device is available, we will implement the use of those devices to help police enforce the law. You will **not be allowed to have any** cannabis in your system (as detected by a federally approved oral fluid screening device) if you are driving a motor vehicle and:

- you are 21 or under
- have a G1, G2, M1 or M2 licence
- the vehicle you are driving requires an A-F driver’s licence or Commercial Vehicle Operator’s Registration (CVOR)
- you are driving a road-building machine

*This information is taken from the Ontario Canada website on Cannabis Legalization*
Cocaine and Crack

What is cocaine?

Street names: blow, C, coke, crack, flake, freebase, rock, snow

Cocaine is a stimulant drug. Stimulants make people feel more alert and energetic. Cocaine can also make people feel euphoric, or “high.”

Pure cocaine was first isolated from the leaves of the coca bush in 1860. Researchers soon discovered that cocaine numbs whatever tissues it touches, leading to its use as a local anesthetic. Today, we mostly use synthetic anesthetics, rather than cocaine.

In the 1880s, psychiatrist Sigmund Freud wrote scientific papers that praised cocaine as a treatment for many ailments, including depression and alcohol and opioid addiction. After this, cocaine became widely and legally available in patent medicines and soft drinks.

As cocaine use increased, people began to discover its dangers. In 1911, Canada passed laws restricting the importation, manufacture, sale and possession of cocaine. The use of cocaine declined until the 1970s, when it became known for its high cost, and for the rich and glamorous people who used it. Cheaper “crack” cocaine became available in the 1980s.

Where does cocaine come from?

Cocaine is extracted from the leaves of the Erythroxylum (coca) bush, which grows on the slopes of the Andes Mountains in South America. For at least 4,500 years, people in Peru and Bolivia have chewed coca leaves to lessen hunger and fatigue. Today, most of the world’s supply of coca is grown and refined into cocaine in Colombia. Criminal networks control the lucrative cocaine trade.

What does cocaine look like and how is it used?

Cocaine hydrochloride—the form in which cocaine is snorted or injected—is a white crystalline powder. It is sometimes “cut,” or mixed, with things that look like it, such as cornstarch or talcum powder, or with other drugs, such as local anesthetics or amphetamines.

The base form of cocaine can be chemically processed to produce forms of cocaine that can be smoked. These forms, known as “freebase” and “crack,” look like crystals or rocks.

Cocaine is often used with other drugs, especially alcohol and marijuana. Cocaine and heroin, mixed and dissolved for injection, is called a “speedball.”

Who uses cocaine?
A 2015 survey of Ontario students in grades 9 to 12 reported that 2.5 per cent had used cocaine and less than one percent (<0.5%) had used crack at least once in the past year.

A 2007 survey of Ontario adults reported that:
• 1.7 per cent had used cocaine in the past year.
• 7.1 per cent had used cocaine at least once in their lifetime.

How does cocaine make you feel?

How cocaine makes you feel depends on:
• how much you use
• how often and how long you use it
• how you use it (by injection, orally, etc.)
• your mood, expectation and environment
• your age
• whether you have certain medical or psychiatric conditions
• whether you’ve taken any alcohol or other drugs (illegal, prescription, over-the-counter or herbal)

Cocaine makes people feel energetic, talkative, alert and euphoric. They feel more aware of their senses: sound, touch, sight and sexuality seem heightened. Hunger and the need for sleep are reduced. Although cocaine is a stimulant, some people find it calming, and feel increased self-control, confidence and ease with others. Other people may feel nervous and agitated, and can’t relax.

Taking high doses of cocaine for a long time can lead to:
• panic attacks
• psychotic symptoms, such as paranoia (feeling overly suspicious, jealous, or persecuted), hallucinations (seeing, hearing, smelling, etc., things that aren’t real) and delusions (false beliefs)
• erratic, bizarre and sometimes violent behaviour.

With regular use, people may become tolerant to the euphoric effects of cocaine. This means they need to take more and more of the drug to get the same desired effect.

At the same time, people who use the drug regularly may also become more sensitive to its negative effects, such as anxiety, psychosis (hallucinations, loss of contact with reality) and seizures. Cocaine also makes the heart beat faster, and raises blood pressure and body temperature.

How long does the feeling last?

How long the feeling lasts depends on how cocaine is used:
• Intranasal use, or “snorting,” takes effect within a few minutes, and lasts about 15 to 30 minutes.
• Injecting produces a “rush” that is felt within 30–45 seconds, and lasts 10 to 20 minutes.
• Smoking causes a high within seconds, but it lasts only five to 10 minutes.

When the cocaine high fades, the person may begin to feel anxious and depressed, and have intense craving for more of the drug. Some people stay high by “bingeing,” or continually using the drug, for hours or days.

Is cocaine dangerous?

Yes, cocaine can be very dangerous.

While many people use cocaine on occasion without harm, the drug can be very dangerous, whether it’s used once or often.

• Cocaine causes the blood vessels to thicken and constrict, reducing the flow of oxygen to the heart. At the same time, cocaine causes the heart muscle to work harder, which can lead to heart attack or stroke, even in healthy people.
• Cocaine raises blood pressure, which can cause weakened blood vessels in the brain to burst.
• A person can overdose on even a small amount of cocaine. Overdose can cause seizures and heart failure. It can cause breathing to become weak or stop altogether. There is no antidote to cocaine overdose.
• When cocaine is used with alcohol, the liver produces cocaethylene, a powerful compound that increases the risk of sudden death beyond the risk of using cocaine alone.

Is cocaine addictive?

It can be; not everyone who uses cocaine becomes addicted, but if they do, it can be one of the hardest drug habits to break.

People who become addicted to cocaine lose control over their use of the drug. They feel a strong need for cocaine, even when they know it causes them medical, psychological and social problems. Getting and taking cocaine can become the most important thing in their lives.

Smoking crack, with its rapid, intense and short-lived effects, is the most addictive. However, any method of taking cocaine can lead to addiction. The amount of cocaine used, and how often people use the drug, has an effect on whether people get addicted.

Cocaine causes people to “crash” when they stop using it. When they crash, their mood swings rapidly from feeling high to feeling distressed. This brings powerful cravings for more of the drug. Bingeing to stay high leads quickly to addiction.

Symptoms of cocaine withdrawal can include exhaustion, extended and restless sleep or sleeplessness, hunger, irritability, depression, suicidal thoughts and intense cravings for more of
the drug. The memory of cocaine euphoria is powerful, and brings a strong risk of relapse to drug use.

What are the long-term effects of taking cocaine?

Cocaine increases the same chemicals in the brain that make people feel good when they eat, drink or have sex. Regular cocaine use can cause lasting changes in this “reward system” of the brain, which may lead to addiction. Craving and psychiatric symptoms may continue even after drug use stops.

Regular long-term use of cocaine is associated with many serious health and behaviour problems. For example:

- Snorting cocaine can cause sinus infections and loss of smell. It can damage tissues in the nose and cause holes in the bony separation between the nostrils inside the nose.
- Smoking cocaine can damage the lungs and cause “crack lung.” Symptoms include severe chest pains, breathing problems and fever. Crack lung can be fatal.
- Injection can cause infections from used needles or impurities in the drug. Sharing needles can also cause hepatitis or HIV infection.
- Cocaine use in pregnancy may increase risk of miscarriage and premature delivery. It also increases the chance that the baby will be born underweight.
- Because women who use cocaine during pregnancy often also use alcohol, nicotine and other drugs, we do not fully know the extent of the effects of cocaine use on the baby.
- Cocaine use while breastfeeding transmits cocaine to the nursing child. This exposes the baby to all the effects and risks of cocaine use.
- Cocaine use is linked with risk-taking and violent behaviours. It is also linked to poor concentration and judgment, increasing risk of injury and sexually transmitted disease.
- Chronic use can cause severe psychiatric symptoms, including psychosis, anxiety, depression and paranoia.
- Chronic use can also cause weight loss, malnutrition, poor health, sexual problems, infertility and loss of social and financial supports.

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Ecstasy

What is ecstasy?

Street Name: E, XTC, Adam, the love drug

The chemical name for ecstasy is 3,4-methylenedioxymeth-amphetamine, or MDMA. The chemical structure and the effects of MDMA are similar to amphetamine (a stimulant) and to mescaline (a hallucinogen).

What’s sold as ecstasy often contains drugs other than MDMA, which may or may not be similar in effect to MDMA. Some of the other drugs include caffeine, ephedrine, amphetamine, dextromethorphan, ketamine and LSD. Ecstasy sometimes contains highly toxic drugs, such as paramethoxyamphetamine (PMA), which can be lethal even in low doses.

MDMA affects the chemistry of the brain, in particular by releasing a high level of serotonin. Serotonin is a chemical in the brain that plays an important role in regulating mood, energy level and appetite, among other things.

MDMA was patented in 1913 and has been used experimentally, most notably as a supplement to psychotherapy in the 1970s. It was made illegal to possess, traffic, import or produce MDMA in Canada in 1976 and in the United States in 1985.

Where does ecstasy come from?

Ecstasy is made in illegal labs with chemicals and processes that vary from lab to lab. What’s sold as ecstasy often contains unknown drugs or other fillers.

What does ecstasy look like?

Ecstasy is usually sold as a tablet or capsule that is swallowed. It may also be sold in powder form, or the tablets may be crushed and then snorted. There are also rare reports of the drug being injected.

Ecstasy tablets come in different shapes, sizes and colours, and are often stamped with a logo, such as a butterfly or clover, giving them a candy-like look. This “branding” of ecstasy tablets should not be mistaken for an indication of quality, as manufacturers may use the same logo, and low-quality copycats are common. Tablets that are sold as ecstasy may not contain MDMA.

Who uses ecstasy?

The increased use of ecstasy as a recreational drug began in the 1980s in the United States. Young people at raves (all-night dance parties) were the group most commonly associated with
ecstasy use. While still used by young people in clubs and at parties, ecstasy is now also used by a wider range of people in a variety of settings.

A 2015 survey of Ontario students in grades 9 to 12 reported that 5.4 per cent of students reported using ecstasy at least once within the past year. This is an increase in use from 3.4 per cent in 2013, but is still lower than the peak use of ecstasy of 7.9 per cent seen in 2001. There is no variation in usage between genders.

**How does ecstasy make you feel?**

How ecstasy affects you depends on several things:
- your age and your body weight
- how much you take and how often you take it
- how long you’ve been taking it
- the method you use to take the drug
- the environment you’re in
- whether or not you have certain pre-existing medical or psychiatric conditions
- whether you’ve taken any alcohol or other drugs (illegal, prescription, over-the-counter or herbal).

In low to moderate doses, ecstasy can produce feelings of pleasure and well-being, increased sociability and closeness with others. Like all stimulant drugs, ecstasy can make users feel full of energy and confidence.

Even at low doses, ecstasy can also have strong negative effects. Higher doses are unlikely to enhance the desirable effects, and may intensify the negative effects. These effects include grinding of teeth and jaw pain, sweating, increased blood pressure and heart rate, anxiety or panic attacks, blurred vision, nausea, vomiting and convulsions.

After the initial effects of the drug have worn off, users may also experience after-effects such as confusion, irritability, anxiety, paranoia, depression, memory impairment or sleep problems.

**How long does the feeling last?**

The effects of ecstasy usually begin within an hour, and may last four to six hours. The duration of the after-effects cannot be predicted as precisely, though they may last for days or weeks.

**Is ecstasy dangerous?**

It can be. Although some people regard ecstasy as a relatively safe drug, a growing number of deaths have been associated with it. As with many illegal drugs, these risks increase with the amount taken and frequency of use.

A major factor in many ecstasy-related deaths is the dehydration and overheating that can result when ecstasy is taken in conjunction with all-night dancing. Ecstasy increases body
temperature, blood pressure and heart rate, which can lead to kidney or heart failure, strokes and seizures. Ecstasy may cause jaundice and liver damage.

People with high blood pressure, heart or liver problems, diabetes, epilepsy or any mental disorder are the most vulnerable to the potential dangers of ecstasy. Part of the danger is that people may not be aware that they have these conditions, and the effects of ecstasy can trigger symptoms.

As with all illegal street drugs, the purity and strength of ecstasy can never be accurately gauged. When you take ecstasy, you don’t know what you’re taking, or how it will affect you.

Combining ecstasy with other drugs, whether illegal or prescription may cause a toxic interaction. Several prescription medications are known to interact with ecstasy, including a type of antidepressant called monoamine oxidase inhibitors (MAOIs) and ritonavir, a protease inhibitor used to treat HIV.

Driving or operating machinery while under the influence of ecstasy, or any drug, increases the risk of physical injury to the user and others.

Is ecstasy addictive?

It’s not uncommon for ecstasy to take on an exaggerated importance in people’s lives. Signs of addiction include strong cravings for the effects of the drug, taking more of the drug than intended, and continuing to use the drug despite the problems it may cause. Tolerance to ecstasy builds up very quickly. This means the more often you take ecstasy, the less effect the drug has. Taking more of the drug may not achieve the desired results, as frequent ecstasy use depletes serotonin and other brain chemicals that give the ecstasy “high.”

There is little evidence to indicate that MDMA can produce physical dependence or withdrawal symptoms.

What are the long-term effects of taking ecstasy?

Animal research has established that ecstasy use can damage the brain cells that release serotonin. Research on humans is limited, but there is some evidence to suggest that ecstasy can damage the cells and chemistry of the human brain, affecting functions such as learning and memory.

The risk of damage caused by ecstasy use may be linked to the amount taken and the frequency of use. However, some research suggests that even occasional use of small amounts of ecstasy may damage the brain cells that release serotonin, and that these effects may be long lasting. It is not known whether these effects may be permanent.

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GHB

What is GHB?
Street names: G, liquid ecstasy, liquid x, grievous bodily harm, fantasy

Generic and trade names: sodium oxybate (Xyrem)

GHB (gamma-hydroxybutyrate) is produced naturally in the human body in very small amounts. When taken as a recreational drug, and especially when taken in combination with alcohol or other drugs, GHB can be extremely dangerous.

GHB is a central nervous system depressant. That means it makes you sleepy, and slows down your breathing and heart rate.

The only current medical use of GHB in Canada is as a treatment for narcolepsy, a rare sleep disorder.

It is illegal to possess, traffic, import or produce GHB in Canada.

Where does GHB come from?
Access to pharmaceutical GHB is tightly regulated. GHB that is sold as a street drug is produced illegally using chemicals and processes that vary from lab to lab. The strength and purity of the final product also vary.

GHB “precursors” gamma-butyrolactone (GBL) and 1,4-butandiol (BD) are commercially available industrial substances that are not intended for human consumption. When ingested, these substances are converted by the body into GHB. GBL and BD are also used to manufacture GHB.

What does GHB look like?
In its liquid form, GHB looks like water. It has no smell, and is tasteless or has a slightly salty or solvent taste that can be easily masked. It is usually sold as a liquid in small vials. GHB is also available as a white powder or capsule.

Who uses GHB?
GHB gained popularity in the 1990s as a “club drug” among young people for its euphoric and sedative effects. At the same time, GHB became notorious as a “date rape drug,” with reports that it was being slipped into drinks to facilitate sexual assault.
Users of GHB include body builders who believe the drug can help to reduce fat and build muscles. GHB also stimulates human growth hormone. Some users claim GHB enhances sexuality.

People who experience cataplexy (sudden loss of muscle tone) associated with narcolepsy may be prescribed GHB in its pharmaceutical form, known as Xyrem. For people with this condition, taking the drug at night helps to reduce daytime sleepiness.

**How does GHB make you feel?**

How GHB affects you depends on various factors:
- your age and body weight
- how much you take and how often you take it
- how long you’ve been taking it
- the method you use to take the drug
- the environment you’re in
- whether you have certain pre-existing medical or psychiatric conditions
- whether you’ve taken any alcohol or other drugs (illicit, prescription, over-the-counter or herbal).

The way you feel when you take GHB is similar to the way some people feel when they drink alcohol. At a low dose, users usually feel more sociable, less inhibited and lightheaded. A slightly higher dose intensifies these effects or makes you drowsy and dizzy. A little more may cause nausea and vomiting, and a higher dose can make you slip into a deep sleep. An overdose can result in difficulty breathing, a lowered heart rate, convulsions and even death.

With GHB there is only a slight difference between a dose that produces the desired effects and a dose that puts the user at risk. If you have a little too much GHB, the consequences can be fatal.

GHB can also cause confusion, unusual and disturbing thoughts and depression.

**How long does the feeling last?**

The effects of GHB can generally be felt 10 to 20 minutes after you take it, and can last up to four hours, depending on the dose.

**Is GHB dangerous?**

Yes, GHB is dangerous in a number of ways.

Since GHB is illegal, there are no controls over the strength and purity of the drugs produced. What’s sold as GHB often contains unknown drugs or other fillers, which may be toxic. You don’t know how much GHB is in the solution or what dose is safe.
With GHB it’s easy to take too much, or overdose. Deaths have been reported. When GHB is taken with alcohol or other drugs, the effects are more intense, and the risk of toxic effects and overdose increases. GHB-related deaths usually involve other drugs, such as alcohol.

GHB is a potent sedative, causing users to lose consciousness and fall into a deep sleep from which they might not wake for several hours. They may vomit while they’re sleeping and choke. When in a GHB sleep, people may have trouble breathing and convulsions can occur. Users sometimes wake to discover that alarmed friends or family have rushed them to hospital for emergency care.

GHB’s liquid form allows it to be slipped into drinks, and its sedative effects prevent victims from resisting sexual assault. GHB can also cause amnesia, meaning that when people recover from the drug’s effects, they may not remember what happened.

GHB may interact dangerously with some medications, such as protease inhibitors used to treat HIV.

Driving after taking GHB is extremely dangerous because sleep may come on suddenly. Driving or operating machinery while under the influence of GHB, or any drug, increases the risk of physical injury to the user and to others.

Is GHB addictive?

Yes. Signs of addiction include using GHB more often than intended, and continuing to use it despite negative consequences. People who use GHB regularly can develop tolerance to the effects of the drug, which means they may need to take more to get the desired effect. Regular use can also cause physical dependence. People who are physically dependent on GHB will experience withdrawal symptoms if they abruptly stop using the drug. Withdrawal symptoms can include anxiety, tremors, inability to sleep and other unpleasant, potentially dangerous effects, including paranoia with hallucinations and high blood pressure. People who are physically dependent on GHB should seek medical help to ease withdrawal. GHB withdrawal can be life threatening.

What are the long-term effects of using GHB?

Overdosing on GHB can lead to profound coma, which may be neurotoxic to the brain, especially to the developing brain of a young adult. However, more research is needed to determine other long-term effects.

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Hallucinogens

What are hallucinogens?

Types of hallucinogens: LSD, mescaline, psilocybin, PCP, cannabis, ecstasy, ketamine, salvia and others

The term hallucinogen refers to many different drugs, which are often called “psychedelic” drugs. While the effects of these drugs vary widely, all change the way people see, hear, taste, smell and feel, and affect mood and thought. At high doses, all may cause a person to hallucinate, or see, hear or feel things that aren’t really there.

Most of the hallucinogens used in North America belong to one of these six categories:

- **indolealkylamines**, which includes LSD (d-lysergic acid diethylamide, a semi-synthetic substance originally derived from “ergot,” a fungus that grows on rye and other grains), LSA (d-lysergic amide, from morning glory seeds), psilocybin and psilocin (from Psilocybe mushrooms) and DMT (dimethyltryptamine, from the bark of the Virola tree, and other sources)
- **phenylethylamines**, which includes mescaline (found in peyote cactus), and “designer drugs” such as:
  - MDA (methylenedioxyamphetamine)
  - MDMA (ecstasy, 3,4-methylenedioxymethamphetamine)
  - PMA (paramethoxyamphetamine)
  - 2-CB (4-bromo-2,5-dimethoxyphenethylamine)
  - STP (2,5-dimethoxy-4-methylamphetamine)
  - TMA (trimethoxyamphetamine).
- **arylcycloalkylamines**, such as PCP (phencyclidine) and ketamine
- **cannabinoids**, especially THC (tetrahydrocannabinol), found in marijuana, hash and hash oil
- **anticholinergics**, from the plant family Solanaceae, which includes deadly nightshade (Atropa belladonna) and jimsonweed (Datura stramonium)
- **the diterpene**, salvinorin-A, from the plant Salvia divinorum.

Where do hallucinogens come from?

Some hallucinogens come from mushrooms (psilocybin), cacti (mescaline) and other plants (cannabis, salvia). Of these, cannabis and psilocybin are almost always used in their natural form. Although LSD is used only in a synthesized form, a related drug, LSA, is found in nature. Other hallucinogens, such as MDMA and ketamine, are created in laboratories.
Who uses hallucinogens?

Hallucinogens have been used since ancient times, in religion, medicine, magic and prophecy. In the 1960s and 70s, hallucinogen use became a symbol of the counter-culture among young people in North America and Europe. In the 1990s, hallucinogen use was linked to the “rave” scene.

A 2015 survey of Ontario students in grades 9 to 12 reported that:
- 5.4 per cent had used ecstasy at least once in the past year
- 1.5 per cent had used LSD at least once in the past year
- 3.2 per cent had used other hallucinogens (such as psilocybin and mescaline) at least once in the past year.

How do hallucinogens make you feel?

How hallucinogens make you feel depends on:
- how much you use
- how often and how long you use
- your mood, expectation and environment
- your age
- whether you have certain pre-existing medical or psychiatric conditions
- whether you’ve taken any alcohol or other drugs (illicit, prescription, over-the-counter or herbal).

Hallucinogens cause mostly psychoactive, or mind-altering, effects, which can be mild to intense. These effects vary from drug to drug, from person to person, from one drug-taking episode to the next, and can even change dramatically within one time of use. Effects can range from ecstasy to terror, from mild distortion of the senses to full hallucinations (where people believe that drug-induced visions or other perceptions are real).

Different types of hallucinogens produce different effects; for example:

- **LSD** produces a kaleidoscope of visual patterns and changes perception. People who take LSD usually know that the hallucinations are not real; however, the effects can appear real.
- **Ecstasy** enhances mood and produces feelings of empathy and intimacy.
- **Ketamine** causes an out-of-body feeling, which may be pleasant or terrifying.
- **Salvia** causes intense, short-lived hallucinogenic effects, such as smelling sounds or hearing colours.

How long does the feeling last?

The effects of some hallucinogens, such as LSD, last for hours, while others, such as salvia, last only a short time.

Are hallucinogens dangerous?
Taking hallucinogens can be dangerous for several reasons.

Most of these drugs are illegal and unregulated, and may include toxins, or not even contain the drug they are sold as. For example, drugs sold as ecstasy are usually not pure MDMA, and have been found to contain other drugs, such as methamphetamine. Drugs sold as mescaline are almost always something else.

Hallucinogens affect perception and behaviour. Taking them may cause people to become disoriented, have poor judgment and take risks.

Many hallucinogens can have very unpleasant or toxic effects (e.g., jimsonweed, deadly nightshade). Hallucinogenic plants can be mistaken for other toxic or lethal plants, for example, mushrooms.

Although research is scarce, taking hallucinogens during pregnancy may affect the development of the baby, and increase the chance of miscarriage.

**Are hallucinogens addictive?**

Most people who use hallucinogens do so occasionally. Repeated use of hallucinogens such as LSD or ecstasy leads to tolerance, where the drug has reduced or no effect. Sensitivity to the drug returns if the person stops using it for a period of time, and then starts again. Stopping use of hallucinogens does not usually cause symptoms of withdrawal. However, people can develop psychological dependence, in which they feel they need the drug.

**What are the long-term effects of taking hallucinogens?**

Hallucinogen use may, on rare occasions, result in “flashbacks,” or replays of the drug experience, days, weeks or even years after the drug was taken. Some people who take hallucinogens feel depressed or anxious long after they took the drug.

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Heroin

What is heroin?

Street names: junk, H, smack, horse, skag, dope

Heroin is a dangerous and illegal drug with a high addictive potential. It is also an effective painkiller.

Heroin belongs to the opioid family of drugs. Also in the opioid family are the “opiates,” such as morphine and codeine, which are natural compounds found in the opium poppy; and “synthetic” opioids, such as Demerol (meperidine) and methadone, which are chemically manufactured. Heroin is a “semi-synthetic” opioid: it is made from morphine that has been chemically processed. It enters the brain quickly and produces a more immediate effect. Heroin is converted back into morphine in the brain.

When heroin was first introduced in the late 19th century, it was promoted as a pain reliever and cough suppressant. By the early 20th century, the dangers of heroin were recognized. Laws were introduced throughout North America and Europe to restrict the production, distribution and use of heroin.

In some countries, there are circumstances where heroin may be prescribed by physicians. In the United Kingdom, for example, doctors may prescribe heroin for extreme pain. This treatment is usually reserved for patients who are terminally ill. In the United Kingdom, the Netherlands, Switzerland, Germany, Spain and Denmark, a small number of people who are addicted to heroin, and who have not responded to other treatments, receive heroin by prescription in carefully monitored maintenance programs.

Where does it come from?

Most heroin is produced in Asia and Latin America, where opium poppies are grown. Morphine is extracted from the opium gum in laboratories close to the fields, and then converted into heroin in labs within or near the producing country.

What does it look like?

In its pure form, heroin is a fine, white, bitter-tasting crystalline powder that dissolves in water. When it is sold on the street, its colour and consistency vary, depending on the manufacturing process and what additives it has been mixed, or “cut,” with. Street heroin may come in the form of a white powder, a brown and sometimes grainy substance or a dark brown sticky gum. The purity of heroin varies from batch to batch, and can range from two to 98 per cent.

Some additives, such as sugar, starch or powdered milk are used to increase the weight for retail sale, or other drugs may be added to increase the effects of the heroin. Quinine may be added to imitate heroin’s bitter taste, making it difficult to determine the purity of the drug.
How is it used?

The most common ways of using heroin are:

- injection—either into a vein ("mainlining," intravenous or IV use), into a muscle (intramuscular or IM use) or under the skin ("skin-popping" or subcutaneous use)
- snorting—inhaling the powder through the nose (also called sniffing)
- inhaling or smoking—this method is also referred to as “chasing the dragon,” and involves gently heating the heroin on aluminum foil and inhaling the smoke and vapours through a tube.

Injection may be chosen because this method gives the greatest and most immediate effect for the least amount of drug. People who are addicted to heroin may inject two to four times a day. The drug is more likely to be snorted or smoked when heroin of high purity is available, or by occasional users who prefer not to inject.

Who uses heroin?

Heroin is used by a range of people, from a variety of cultural, social, economic and age groups. First-time users tend to be in their teens or 20s, but most people who use heroin regularly are over 30. A survey of Ontario students in grades 9–12 reported that 0.5% used heroin in 2009—a significant drop from the 2.1% who used it in 1999.

How does heroin make you feel?

The way heroin, or any drug, affects you depends on many factors, including:

- your age
- how much you take and how often you take it
- how long you’ve been taking it
- the method you use to take the drug
- the environment you’re in
- whether or not you have certain pre-existing medical or psychiatric conditions
- whether you’ve taken any alcohol or other drugs (illegal, prescription, over-the-counter or herbal).

When heroin is injected into a vein, it produces a surge of euphoria, or “rush.” This effect is felt in seven or eight seconds, and lasts from 45 seconds to a few minutes. The initial effect with snorting or smoking is not as intense. Following the rush comes a period of sedation and tranquility known as being “on the nod,” which may last up to an hour. When heroin is injected under the skin or into a muscle, the effect comes on more slowly, within five to eight minutes.

New users often experience nausea and vomiting. The desired effects include detachment from physical and emotional pain and a feeling of well-being. Other effects include slowed breathing, pinpoint pupils, itchiness and sweating. Regular use results in constipation, loss of sexual interest and libido, and an irregular or stopped menstrual cycle in women.
Heroin use causes changes in mood and behaviour. People who are addicted to heroin may be docile and compliant after taking the drug, and irritable and aggressive during withdrawal.

How long does the feeling last?

Regardless of how it is used, the effects of heroin generally last for three to five hours, depending on the dose.

People who use heroin daily must use every six to 12 hours to avoid symptoms of withdrawal. The initial symptoms are intense, and include runny nose, sneezing, diarrhea, vomiting, restlessness and a persistent craving for the drug. Also associated with withdrawal are goosebumps and involuntary leg movements, leading to the expressions “cold turkey” and “kicking the habit.” Withdrawal symptoms peak within a couple of days, and usually fade within five to 10 days. Other symptoms, such as insomnia, anxiety and craving, may continue for some time. Heroin withdrawal is not life-threatening, but can be extremely uncomfortable.

Is heroin dangerous?

Yes. Heroin is dangerous in a number of ways. The most immediate danger is overdose. Heroin depresses the part of the brain that controls breathing. In an overdose, breathing slows down, and may stop completely. A person who has overdosed is unconscious and cannot be roused, and has skin that is cold, moist and bluish. A heroin overdose can be treated at a hospital emergency room with drugs, such as naloxone, which blocks heroin’s depressant effects.

The risk of overdose is increased by:

- The unknown purity of the drug. This makes it difficult to determine the correct dose. Ironically, many overdoses are due to increases in the quality of the drug sold on the street.
- Injection, because the drug reaches the brain more quickly than by other ways of taking the drug, and because the dose is taken all at once.
- Combining heroin with other sedating drugs, such as alcohol, benzodiazepines or methadone.

Dangers other than overdose that are associated with heroin use include:

- Injection: Injection drug use puts a person at high risk of bacterial infection, blood poisoning, abscesses, endocarditis (an infection of the lining of the heart) and collapsed veins. Sharing needles greatly increases the risk of becoming infected with, or spreading, HIV and hepatitis B or C.
- Unknown content of the drug: Heroin is often cut with additives that may be poisonous, such as strychnine, or that do not dissolve (and so can clog blood vessels), such as chalk.
- Combining heroin with other drugs, such as cocaine (in “speedballs”): When drugs interact inside the body, the results are unpredictable, and sometimes deadly.
- Risk of addiction: The constant need to obtain heroin, and the repeated use of the drug, can result in criminal involvement or other high-risk behaviour, breakdown of family life, loss of employment and poor health.
Pregnancy: Women who use heroin regularly often miss their periods; some mistakenly think that they are infertile, and become pregnant. Continued use of heroin during pregnancy is very risky for the baby.

Is heroin addictive?

Yes. Regular use of heroin, whether it is injected, snorted or smoked, can lead to addiction within two to three weeks. Signs of addiction include strong cravings for the effects of the drug, taking more of the drug than intended and continuing to use the drug despite the problems it may cause. Addiction may develop with or without physical dependence.

Not all people who experiment with heroin become addicted. Some use the drug only on occasion, such as on weekends, without increasing the dose. With regular use, however, tolerance develops to the effects of the drug, and more and more heroin is needed to achieve the desired effect. Continuous use of increasing amounts of the drug inevitably leads to physical dependence.

Once dependence is established, stopping use can be extremely difficult. People who have used heroin for a long time often report that they no longer experience any pleasure from the drug. They continue to use heroin to avoid the symptoms of withdrawal and to control the powerful craving for the drug, which is often described as a “need.” Cravings may persist long after they stop taking the drug, which makes it difficult to avoid relapse, or beginning to use again.

What are the long-term effects of using heroin?

Addiction, and the medical, social and legal complications that often result from heroin use, can be devastating to the lives of the people who use the drug.

Research using brain scans has revealed that long-term regular use of heroin results in changes in the way the brain works. While the effect of these changes is not fully understood, this research has shown that it may take months or years for the brain to return to normal functioning after a person stops using heroin.

Methadone maintenance treatment, which prevents heroin withdrawal and reduces or eliminates drug cravings, is the most effective treatment for heroin addiction currently available.

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Inhalants

What are inhalants?

Street names: glue, gas, sniff (solvents); whippets (nitrous oxide); poppers, snappers, room odourizers, aromas—some sold under “brand” names such as Rush, Bolt, Jungle Juice (nitrites)

The term “inhalants” refers to chemical vapours or gases that produce a “high” when they are breathed in. Most of the substances used as inhalants, such as glue, gasoline, cleaning solvents and aerosols, have legitimate everyday uses, but they were never meant for human consumption. Inhalants are cheap, legal and easy to get. They have a high potential for abuse—especially by children and young adults.

There are hundreds of different kinds of inhalants, roughly dividing into four different types:

- **Volatile solvents**: These are the most commonly abused type of inhalants. “Volatile” means they evaporate when exposed to air, and “solvent” means they dissolve many other substances. Examples of solvents used as inhalants include benzene, toluene, xylene, acetone, naptha and hexane. Products such as gasoline, cleaning fluids, paint thinners, hobby glue, correction fluid and felt-tip markers contain a mixture of different types of solvents.
- **Aerosol or spray cans**: Hair spray, spray paint, cooking spray and other aerosol products contain pressurized liquids or gases such as fluorocarbon and butane. Some aerosol products also contain solvents.
- **Gases**: This includes some medical anesthetics, such as nitrous oxide (“laughing gas”), chloroform, halothane and ether, as well as gases found in commercially available products, such as butane lighters and propane tanks.
- **Nitrites**: Amyl nitrite, butyl nitrite and cyclohexyl nitrite (also known as “poppers”) are different from other inhalants in effect and availability. Typically referred to as poppers.

Where do inhalants come from?

Many inhalants are widely available as commercial products. It is hard to prevent their use because these products are found in many homes and workplaces. Some manufacturers taint their products to try to make them less appealing to use as inhalants, but this has not prevented use. Stores may refuse to sell certain products to minors or people who are intoxicated, but there are no laws that enforce this in Ontario.

What do inhalants look like, and how are they used?

Solvent and aerosol products—on the store shelf, in the kitchen cupboard or in the workshop—would not be noticed by most people as dangerous drugs.
When solvents are used as drugs, they are either inhaled directly from the container (“sniffed”), from a soaked rag held to the face (“huffed”) or from a bag (“bagged”). Sometimes people spray aerosols into a bag or balloon and then inhale the gas.

Nitrous oxide or other anesthetic gases intended for medical use are contained in a gas tank; nitrous oxide is also found in whipped cream dispensers. Because nitrous oxide is pressurized and can be very cold, it is often inhaled from a balloon.

Nitrites are clear yellow liquids that are inhaled directly from the bottle or from a cloth.

**Who uses inhalants?**

Most of the people who use solvents and aerosols are young—between 10 and 16 years old. Many try inhalants only once or twice, or use them only on occasion. But some people use heavily and may continue using into adulthood. Chronic solvent users are usually in their 20s. Solvent use is associated with poverty, difficulty at school, lack of opportunity, problems at home and a high incidence of substance use in the family. A 2015 survey of Ontario students in grades 7 to 12 reported that 2.8% had sniffed glue or solvents at least once in the past year. This same study showed the highest rate of use, 6.2%, by students in grade 7, however this usage decreases with grade.

**How do inhalants make you feel?**

How inhalants, or any drugs, affect you depends on a number of factors:

- your age
- how sensitive you are to the drug
- how much you use
- how long and how often you’ve been using it
- the method you use to take the drug
- the environment you’re in
- whether or not you have certain pre-existing medical or psychiatric conditions
- if you’ve taken any alcohol or other drugs (illicit, prescription, over-the-counter or herbal).

All inhalants are absorbed through the lungs and travel quickly in the blood to the brain. This produces an immediate and brief intoxication. Different types of inhalants produce different effects.

- Inhaled solvents usually produce an alcohol-like effect, but with more distortion of perception, such as the shape, size and colour of objects, and distortion of time and space. New users may be initially excited, then become drowsy and fall asleep. People who use solvents more often may feel euphoric, exhilarated and have vivid fantasies. Some feel giddy, outgoing and confident. Physical effects may include dizziness, nausea, vomiting, blurred vision, sneezing and coughing, staggering, slow reflexes and sensitivity to light.
- Nitrous oxide produces a dreamy mental state, loss of motor control, hallucinations and an increased threshold for pain.
Nitrites dilate blood vessels and relax muscles. The heartbeat quickens and blood rushes to the head, creating a “rush.” Nitrites also cause headaches, dizziness, nausea and flushing. Use of Nitrites are sometimes used during intercourse due to the drugs’ capacity to relax muscles and promote blood flow.

How long does the feeling last?

Several breaths of solvents will produce a high within a few minutes of use. This high may last up to 45 minutes, if no more breaths are taken. Some people continue to take additional breaths to sustain the effects for several hours. As the effects wear off, the person may feel drowsy and have a hangover with a mild-to-severe headache for up to several days.

The effects of nitrous oxide and nitrites are immediate, and wear off within a few minutes.

Are inhalants dangerous?

Yes. Inhalant use is dangerous in many ways. Most inhalants are highly flammable; recklessness with lit cigarettes and flames while using inhalants has caused tragic accidents. The different types of inhalants carry other specific dangers:

Solvents and aerosols

- Suffocation: Solvents are often sniffed from a plastic bag, which is held firmly around the nose and mouth. People who use solvents sometimes pass out with the bag still in place, and suffocate due to lack of oxygen. Choking on vomit when unconscious is also a cause of inhalant-related death.
- Recklessness: Sniffing reduces inhibition and affects the way people feel about themselves and the world around them. It makes some people feel powerful, which has led to dangerous and destructive behaviour that caused serious harm. Others don’t get “high” when they sniff; they get depressed. Self-destructive or suicidal behaviour are common among people who use solvents.
- Sudden sniffing death (SSD): Prolonged sniffing of highly concentrated inhalants can cause a rapid and irregular heartbeat, leading to death from heart failure. SSD can occur after only one sniffing session, and when stress or strenuous exercise follows several deep inhalations.
- Serious health problems: People who use solvents regularly for a long time can damage their liver, kidneys, lungs, heart, brain, bones and blood. Sometimes this damage heals when drug use is stopped; sometimes it is permanent.
- Fetal solvent syndrome: Use of solvents during pregnancy, especially chronic use, can result in premature birth, birth defects or stillbirth.

Nitrous oxide

- Lack of oxygen: Sniffing pure nitrous oxide starves the body of oxygen. Some people have died this way.
• Loss of motor control: People who use nitrous oxide while standing can fall and hurt themselves.
• Frostbite: The gas is extremely cold as it is released from the cylinder and can freeze skin. In addition, pressure in the tank can damage the lungs.
• Nerve damage: High levels of nitrous oxide use, even with adequate oxygen, has been shown to damage nerves. This can cause numbness, weakness and loss of balance.

Nitrites

• Unsafe sexual practices: An increased risk of contracting HIV and hepatitis is associated with nitrite use.
• Weakened immune system: Recent animal research shows that nitrites may impair the immune system that protects against infectious diseases.
• Use of Nitrites can exasperate blood pressure issues or trouble breathing, as well as irritate glaucoma.

Are inhalants addictive?

They can be; most inhalant use is experimental and occasional. However, people who use inhalants regularly can develop tolerance. This means that more and more of the substance is needed to produce the same effects. Regular use also leads to a persistent craving for the high, which makes it hard to stop using. When regular use is stopped, withdrawal symptoms may include nausea, loss of appetite, tremors, anxiety, depression and paranoia.

What are the long-term effects of using inhalants?

People who use inhalants over a long time may have bloodshot eyes, sores on the nose and mouth, nose-bleeds, pale skin, excessive thirst and weight loss. They may also have trouble concentrating, remembering and thinking clearly. Other possible effects include tiredness, depression, irritability, hostility and paranoia. The long-term effects of inhalants vary depending on which inhalant is used. Heavy solvent use can result in numbness, weakness, tremors and a lack of co-ordination in the arms and legs.

Some long-term effects may go away when people stop using, but others are permanent. When inhaled, solvents are carried by the blood and stored in fat tissue in the body. Internal organs that have high blood circulation and that are rich in fat tissue, such as the brain, liver and kidney, are particularly affected. If inhalant use is stopped, damage to the liver and kidneys may heal, but damage to the brain is almost always permanent. Studies using scans of people’s brains after chronic long-term solvent use show that solvent use can cause the brain to atrophy, or shrink, which can severely affect thinking, memory and movement control. Long-term use of solvents such as toluene or naphthalene has also been shown to damage nerve fibres in the brain resulting in a neurological condition similar to multiple sclerosis.

Inhalant use can also result in permanent hearing loss and damage to bone marrow.
Ketamine

What is ketamine?

Street names: special K, K, ket, vitamin K, cat tranquilizers

Ketamine is a fast-acting anesthetic and painkiller used primarily in veterinary surgery. It is also used to a lesser extent in human medicine.

Ketamine can produce vivid dreams and a feeling that the mind is separated from the body. This effect, called “dissociation,” is also produced by the related drug PCP. Ketamine’s mind-altering effects make it prone to abuse. When ketamine is used in human medicine, it is often given with sedative drugs to offset these effects.

What does ketamine look like?

Ketamine prepared for medical use is a colourless, tasteless and odourless liquid that can be injected. Ketamine is usually converted into a white powder before it is sold illegally. It may also be sold as capsules or tablets. The powder can be snorted, mixed into drinks or dissolved for injection. The liquid can be added to drinks or to marijuana or tobacco.

Who uses ketamine?

Ketamine is legally available only to veterinarians and medical doctors for medical use. The ketamine sold illegally on the street or in clubs is often stolen or diverted.

Ketamine has been used for its mind-altering effects since the 1970s. In the 1990s ketamine became known as a “club drug” for its use in the dance club scene.

A 2011 survey of Ontario students in grades 7 to 12 reported that 0.9 per cent had used ketamine at least once in the past year. However, in 2013 there was such a negligible response to the use of ketamine, the questions was removed for the 2015 survey.

How does ketamine make you feel?

The way ketamine—or any other drug—affects you depends on many factors, including:

- your age and your body weight
- how much you take and how often you take it
- how long you’ve been taking it
- the method you use to take the drug
- the environment you’re in
- whether or not you have certain pre-existing medical or psychiatric conditions
- if you’ve taken any alcohol or other drugs (illegal, prescription, over-the-counter or herbal).

At low doses, ketamine can have stimulant effects. Users report a sense of floating, dissociation and numbness in the body. When ketamine is taken in higher doses, users often become withdrawn. They
may not remember who or where they are, and may stumble if they try to walk, feel their hearts race and find it difficult to breathe. High doses can also cause loss of consciousness.

Visual experiences can include blurred vision, seeing “trails,” and intense hallucinations. Some report feelings of an “out-of-body” or “near-death” experience. These experiences of detachment are sometimes described as a place, known as “the K-hole.” This experience can be terrifying.

How long does the feeling last?

The effects of ketamine are usually felt between one and 30 minutes after taking the drug, depending on whether it is injected, snorted or taken by mouth. The effects usually last about an hour. Some users may feel low or anxious, have some memory loss and experience flashbacks of their drug experience long after the effects of the drug have worn off.

Is ketamine dangerous?

Yes. If it is not used under the care of health professionals in a medical setting, users of ketamine put themselves at risk in a number of ways:

- Like all anesthetics, ketamine prevents users from feeling pain. This means that if injury occurs, a person may not know it. People under its effects may have difficulty standing up and be confused about their surroundings. Ketamine-related injuries and fatalities are often the result of falls and other accidents.
- Ketamine has been labelled a “rape drug.” This is because it can be slipped into someone’s drink without the person’s knowledge, and its effects can render the person unable to resist sexual assault.
- Ketamine raises heart rate and blood pressure, which can increase the risk of stroke or heart attack.
- Frequent use of ketamine may cause bladder problems (e.g., increased need to urinate, passing blood in urine).
- The ketamine sold at clubs may be mixed with other drugs. Taking ketamine with other drugs can have unpredictable and sometimes dangerous effects.
- Driving or operating machinery while under the influence of ketamine, or any drug, increases the risk of physical injury to the user and to others.

Is ketamine addictive?

Regular users of ketamine soon become tolerant to the dissociative effects of the drug, meaning more and more is needed to achieve the same effect. Some people do become addicted, and continue to use ketamine even when they plan not to or despite its negative effects. It is not clear whether people who are addicted to ketamine experience any symptoms of withdrawal when they stop taking the drug.

What are the long-term effects of using ketamine?

Research into the non-medical use of ketamine suggests that the long-term effects can include flashbacks, social withdrawal and memory loss.

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LSD

What is LSD?

Street Names: acid, blotter, microdot, window pane

LSD (lysergic acid diethylamide) is a potent hallucinogen—that is, a drug that can alter a person’s perception of reality and vividly distort the senses. LSD was originally derived from “ergot,” a fungus that grows on rye and other grains.

The hallucinogenic effect of LSD was first discovered in 1943 by Dr. Albert Hofmann, a Swiss research chemist working at a pharmaceutical company. Early studies exploring potential use of the drug focused on what insight it might offer into certain kinds of mental illness. In the 1950s, intellectuals such as Aldous Huxley experimented with the drug for its alleged ability to induce a state of “cosmic consciousness.”

LSD was the subject of numerous research studies in the 1950s and early 1960s. These studies included investigating the therapeutic potential of the “psychedelic” experience in treating chronic alcoholism and mental illness, and in helping patients with terminal illnesses to accept death. LSD also captured the attention of the CIA, who tested its potential for use in psychological warfare.

Recreational use of LSD increased in the 1960s as its “mind-expanding” qualities were promoted by influential role models such as Harvard scientist Timothy Leary and novelist Ken Kesey.

Concerns about the possible long-term effects of LSD led to new laws aimed at restricting its use. The sale, possession for the purpose of selling, and distribution of LSD were first made punishable in Canada in 1962. LSD currently has no medical use, and is prohibited under Schedule III of Canada’s Controlled Drugs and Substances Act.

Where does LSD come from?

Most LSD is produced in illegal laboratories, with only a very small amount legally manufactured for use in research.

What does LSD look like?

Pure LSD is a white, crystalline powder that dissolves in water. It is odourless and has a slightly bitter taste. An effective dose of the pure drug is too small to see (20 to 80 micrograms). LSD is usually packaged in squares of LSD-soaked paper (“blotters”), miniature powder pellets (“microdots”) or gelatin chips (“window pane”). Blotters are sometimes printed with illustrations of cartoon characters.
Who uses LSD?

People who use LSD range from those seeking a high to those seeking a mystical experience. The incidence of LSD use reached its peak during the 1960s and 1970s, and was closely associated with the “hippie” youth culture of that time. Rates of LSD use dropped in the 1980s, rose again in the 1990s, and have since dropped back down to low levels. The use of LSD among Ontario students in grades 9 to 12 dropped from 6.8 per cent in 1999 to 1.5 per cent in 2015.

How is LSD used?

LSD is usually taken by mouth and held on the tongue or swallowed, but there have been reports of it being inhaled or injected.

How does LSD make you feel?

How LSD affects you depends on several things:

- your age
- how sensitive you are to the drug
- how much you take and how often you take it
- how long you’ve been taking it
- the method you use to take the drug
- the environment you’re in
- whether or not you have certain pre-existing medical or psychiatric conditions
- whether you’ve taken any alcohol or other drugs (illegal, prescription, over-the-counter or herbal).

The physical effects of LSD may include numbness, rapid heartbeat, reduced co-ordination, chills, nausea, tremor, weakness and dilated pupils. Sensations of gravity may be altered, ranging from feeling weighted down, to feeling light and floating. The LSD experience, usually referred to as a “trip,” varies widely and is unpredictable. Individual reactions to the drug can range from ecstasy to terror, even within a single drug-taking experience. People who have used the drug before, and had a positive experience, may have a negative experience if they take it again.

Two factors that influence the way people feel when they take LSD are their “mindset”—their expectations, experience and mood at the time they take the drug—and the setting, or place where they are. For those who use the drug, the possibility of an adverse reaction, or “bad trip,” may be reduced by taking the drug only when already in a positive state of mind, in a relaxed environment and with supportive friends.

LSD produces vivid visual effects. Colours seem to become more intense, halos or rainbows may appear around objects, and shapes may become fluid in form. Rapidly changing, brightly coloured geometric patterns and other images may be seen, whether the eyes are open or shut. These visual distortions are referred to as “pseudo-hallucinations” because people know that what they are seeing is not real and is due to the effect of the drug. True hallucinations,
where people believe that what they are seeing is real, are not as common, but they can occur and can be frightening.

LSD affects your senses, mood, thoughts and how you perceive yourself and the world around you. The drug can produce a wide spectrum of mental states, from a sense of joy, wonder and heightened sensitivity, to panic, confusion and anxiety. Thoughts may seem clear and profound or race rapidly without logic. Sense of time, distance and body image may be distorted.

Boundaries between the self and the outside world may seem to dissolve. Some users report a fusion of the senses; for example, “seeing” music or “hearing” colour.

**How long does the feeling last?**

The effects of LSD come on gradually within an hour of taking the drug, peak at two to four hours and gradually taper off, with the entire trip lasting up to 12 hours. The intensity of the effect depends on the size of the dose.

Some users feel let down or fatigued for 12 to 24 hours after the trip is over.

**Is LSD dangerous?**

It can be.

Sometimes people who take the drug feel that the experience gets out of control. They may feel they are losing their identity or are disintegrating into nothingness. Such a reaction can lead to a state of panic. They may try to flee the situation, or become paranoid and frightful and lash out at the people around them. People experiencing a dangerous reaction to LSD should be kept as calm as possible. If their distress continues, they should receive treatment at a hospital emergency room.

No deaths resulting exclusively from an overdose of LSD have been reported. However, LSD affects judgment, which can lead to irrational, sometimes dangerous, behaviour. The drug has made people feel that they could fly, or that they could walk through traffic, and this has resulted in accidental injuries and deaths. In some people, LSD may release underlying psychosis or aggravate anxiety or depression. Long-term psychological problems may follow a bad trip with LSD. Taking only a small amount, or low dose, of LSD may not reduce the possibility of having a negative reaction. One person may have a bad trip on a low dose, while another may take a high dose and get through it without distress. Higher doses do, however, increase the hallucinogenic effect of the drug.

Because LSD is produced illegally, it varies in purity and strength. If you take LSD, you can’t be sure exactly what or how much you are taking, or how it will affect you.

Because LSD profoundly alters perception, it is highly hazardous to drive a vehicle while under the drug’s influence.
Is LSD addictive?

Yes, it can be addictive. Some people who use LSD repeatedly feel compelled to take it. The drug takes on an exaggerated importance in their lives, leading to emotional and lifestyle problems.

People who use LSD regularly do not experience physical withdrawal symptoms when they stop taking the drug. However, regular use of LSD will produce “tolerance” to the effects of the drug. This means that if LSD is taken repeatedly over a period of several days, it no longer has the same effect. After several days of not taking the drug, it becomes effective once again.

What are the long-term effects of taking LSD?

The use of LSD can result in long-term effects for both one-time and regular users of the drug. Possible negative effects are “flashbacks” of the drug experience, as well as prolonged anxiety, depression or psychosis. These reactions usually decrease over time, and end within a few months after LSD was last taken, but may continue for years.

Depression or anxiety may follow a bad trip. Psychosis may develop after using LSD, although it is thought that this reaction may be more likely to occur in people with latent, or underlying, mental health problems.

Flashbacks are the spontaneous and unpredictable replay of an aspect of the LSD trip, occurring sometime after the initial effects of the drug have worn off. Visual or emotional experiences that were originally seen or felt while under the influence of LSD are re-experienced. Flashbacks usually last only a few seconds or minutes, but may happen over and over again. Only some people who take LSD have flashbacks, but frequent users of the drug are said to be at greater risk. Flashbacks may be triggered by smoking marijuana or drinking alcohol, or by emotional stress or fatigue.

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Methadone

What is methadone?

Street names: juice, meth (also used to refer to methamphetamines)

Methadone belongs to the opioid family of drugs. It is used most commonly to treat addiction to other opioid drugs such as heroin, oxycodone (e.g., Percodan, Percocet), fentanyl (e.g., Duragesic, Sublimaze) and hydromorphone (e.g., Dilaudid).

Methadone is a synthetic opioid, which means that it is made from chemicals in a lab. Methadone was developed in Germany during the Second World War and was first used to provide pain relief.

Methadone maintenance treatment, which prevents opioid withdrawal and reduces or eliminates drug cravings, was first developed in the 1960s. For many years, Canadian regulations around the prescription of methadone were so restrictive that few doctors offered the treatment. People who wanted methadone treatment often had to wait months or years.

In the 1990s, the need to reduce the harm of drug use was more clearly recognized, and changes were made to make it easier for doctors to provide methadone treatment.

Methadone maintenance is not a “cure”: it is a treatment. Through treatment, people who are addicted to opioids receive the medical and social support they need to stabilize and improve their lives. They are encouraged to stay in treatment for as long as it helps them.

Another treatment for opioid addiction, buprenorphine/naloxone (Subutex, Suboxone), was approved for use in Canada in 2008.

What does methadone look like?

Pure methadone is a white crystalline powder. For the treatment of addiction, the powder is dissolved, usually in a fruit-flavoured drink, and is taken orally once a day. Methadone is also available as a tablet or oral solution for the treatment of severe pain.

Who uses methadone?

Most people who are prescribed methadone are being treated for addiction to opioid drugs. This includes people who are addicted to illegal opioids, such as heroin, and also prescription opioids, such as oxycodone, fentanyl and hydromorphone.

Methadone is also sometimes prescribed to provide pain relief for people who have severe chronic pain or pain associated with terminal illness.
Methadone is sometimes used as a street drug, but when it is, it is usually to prevent symptoms of withdrawal from other opioid drugs.

Women who use opioid drugs regularly and who are pregnant are often treated with methadone to protect the fetus. Short-acting opioids such as heroin or hydro-morphone must be taken frequently to avoid withdrawal. Opioid withdrawal increases the risk of miscarriage or premature birth. Methadone maintenance, combined with medical care, improves the chances of having a healthy baby. There are no known long-term effects of methadone on the baby.

People who inject opioid drugs regularly, and who are HIV- or hepatitis C–positive, are enrolled in methadone treatment to help protect their health. Methadone treatment also helps to prevent these infections from spreading to others through needle sharing.

The number of people receiving methadone maintenance treatment in Ontario has increased sharply in recent years, from 6,000 in 2000 to 38,000 in 2012.

How does methadone make you feel?

When people begin methadone treatment, some may experience sedation and other effects that are common to all opioid drugs. As treatment continues and a stable dose of methadone is established, tolerance to most of these effects develops. Those in treatment often describe the feeling of being on methadone as “normal.” Methadone treatment does not interfere with their thinking. They can work, go to school or care for family. Methadone also blocks the euphoric effect of heroin and other opioids, and in this way reduces the use of these drugs.

Most people experience some side-effects from methadone treatment. Possible side-effects include sweating, constipation and weight gain.

How long does the effect last?

A person who is physically dependent on opioids is kept free of withdrawal symptoms for 24 hours with a single dose of methadone. In contrast, a person who uses heroin or other short-acting opioids to avoid withdrawal must use three to four times a day.

Daily treatment with methadone may continue indefinitely. If, however, the person taking methadone and his or her doctor agree to move toward ending treatment, the methadone dose is tapered down gradually over many weeks or months, easing the process of withdrawal. If methadone is stopped abruptly, symptoms such as stomach cramps, diarrhea and muscle and bone ache will occur. These symptoms begin within one to three days after the last dose, peak at three to five days and then gradually subside, although other symptoms such as sleep problems and drug cravings may continue for months.

Make sure to consult with a doctor before making any major changes to medication use or drug use.
Is methadone dangerous?

When methadone is taken as prescribed, it is very safe and will not cause any damage to internal organs or thinking, even when taken daily for many years. On the other hand, methadone is a powerful drug and can be extremely dangerous to people who are not tolerant to its effects. Even a small amount may be fatal for a child. For this reason, the dispensing of methadone is carefully monitored and controlled.

Is methadone addictive?

Modern definitions of addiction look at many factors in assessing a person’s drug use. These include tolerance, or the need to use increasing amounts to achieve the same effect; physical dependence, resulting in withdrawal symptoms if drug use is stopped; and compulsive use, despite the negative consequences of continuing to use the drug.

Some people say that methadone is just as addictive as heroin. People in methadone treatment do become tolerant to certain effects of the drug, and will experience withdrawal if they do not take their regular dose. But methadone fails to meet a full definition of addictive when we look at how and why the drug is used.

Methadone maintenance is offered as a medical treatment, and is prescribed only to people who are already addicted to opioid drugs. For these people, methadone provides a safe alternative to the routine danger and desperation of securing a steady supply of opioid drugs illegally. It frees them from the nagging compulsion to use, and allows them a chance to focus on improving their lives.

What are the long-term effects of methadone?

Methadone maintenance is a long-term treatment. Length of treatment varies, from a year or two to 20 years or more. This prolonged treatment with proper doses of methadone is medically safe and is one of the most effective treatments currently available for opioid addiction.

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Methamphetamines

What is Methamphetamine?

Street Name: speed, meth, chalk, ice, crystal, crystal meth, jib

Methamphetamine belongs to a family of drugs called amphetamines — powerful stimulants that speed up the body’s central nervous system. It has been used medically as a treatment for obesity and attention-deficit/ hyperactivity disorder (ADHD). While still available for medical use in the United States, its use is limited by the severity of its adverse effects, and by its high addictive potential. Methamphetamine is not legally available in Canada.

Where does methamphetamine come from?

Street methamphetamine is made in illegal labs with fairly inexpensive, and often toxic or flammable, ingredients. The chemicals and processes used vary from lab to lab, affecting the strength, purity and effect of the final product.

What does methamphetamine look like?

Methamphetamine is a white, odourless, bitter-tasting crystalline powder that dissolves easily in water or alcohol and may be snorted, swallowed, smoked or injected. In its smokable form, methamphetamine is called “ice,” “crystal,” “crank” or “glass” because of its transparent, sheet-like crystals. It is smoked in a pipe like crack cocaine.

Who uses methamphetamine?

In the past, illegal methamphetamine use was most closely associated with biker gangs, and also had a spell of popularity in the hippie culture of the 1960s. More recently, the low cost, ease of manufacture and availability of methamphetamine has led to a rise in use among a variety of people. These users include young people at nightclubs and parties, and cocaine users who substitute methamphetamine for its cocaine-like effects.

A 2015 survey of Ontario students in grades 9 to 12 reported that about 1% had used methamphetamine at least once in the past year. A 2012 study estimated that there are roughly 52,000 methamphetamine users in Canada. This same study went on to say that the actual number of users may be much higher.

How does methamphetamine make you feel?

The way methamphetamine — or any other drug — affects you depends on many factors, including:

- your age and your body weight
- how much you take and how often you take it
• how long you’ve been taking it
• the method you use to take the drug
• the environment you’re in
• whether or not you have certain pre-existing medical or psychiatric conditions
• if you’ve taken any alcohol or other drugs (illicit, prescription, over-the-counter or herbal).

Immediately after smoking methamphetamine or injecting it into a vein, the user experiences an intense surge of euphoria, called a “rush” or “flash.” Snorting methamphetamine produces effects within three to five minutes; swallowing in about 15–20 minutes.

Methamphetamine makes people feel alert and energetic, confident and talkative. They feel little need for food or sleep. On the other hand, users are also likely to feel the many unwanted effects of the drug, including racing of the heart, chest pain, dryness of the mouth, nausea, vomiting and diarrhea and physical tension. Many report an anxious “wired” feeling of restlessness and irritability. The negative effects of methamphetamine can be extreme and alarming, including paranoid delusions, hallucinations, aggressive behaviour and impulsive violence.

**How long does the feeling last?**

When methamphetamine is injected or taken by mouth, the effects of the drug last about six to eight hours. Smoking methamphetamine may produce effects that last from 10–12 hours. After the effects of the drug have worn off, users are left feeling tired and depressed. Some use the drug continuously over a period of days or weeks in a “binge and crash” pattern, inviting serious health risks and leading to drug addiction.

**Is methamphetamine addictive?**

Yes. Tolerance to the effects of methamphetamine builds up quickly in regular users, meaning they need more and more of the drug to achieve the desired effect. Physical dependence builds quickly as a result. When addicted users stop taking methamphetamine, they have strong cravings for the drug, and within a few days will experience withdrawal symptoms, including stomach pain, hunger, headaches, shortness of breath, tiredness and depression.

**Is methamphetamine dangerous?**

Yes. Methamphetamine causes the heart to beat faster and blood pressure to rise. Since what is sold as methamphetamine varies widely in terms of content and purity, users can’t know how much they are taking. An overdose of methamphetamine can result in seizures, high body temperature, irregular heartbeat, heart attack, stroke and death. The risk of overdose is highest when the drug is injected. Injecting methamphetamine also puts the user at risk of infections from used needles or impurities in the drug, and at risk of contracting hepatitis or HIV if they share needles with others.
Using methamphetamine during pregnancy can cause the baby to be born prematurely and to have a low birth weight.

Driving or operating machinery while under the influence of methamphetamine, increases the risk of physical injury to the user, and increases the risk of injury to others.

What are the long-term effects of using methamphetamine?

When methamphetamine is used regularly over a long period of time, people can develop amphetamine psychosis. The symptoms of amphetamine psychosis include hallucinations, delusions, paranoia and bizarre and violent behaviour.

Regular use of methamphetamine can also result in:
- severe tooth decay (meth mouth)
- meth “bugs,” or the feeling of bugs under the skin, leading to skin-picking and sores
- loss of appetite, weight loss
- difficulty sleeping
- increased risk of heart disease and stroke
- increased risk of Parkinson’s disease.

Research in animals and humans suggests that methamphetamine may cause long-term damage to cells in those areas of the brain associated with thinking, memory and movement. Further research is needed to determine if these effects are permanent.

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Opioid Addiction

What is Opioid Addiction?

Opioids are a class of powerful drugs that are primarily prescribed to treat severe pain. If opioids are abused, they can create feelings of intense pleasure or euphoria, and can also lead to fatal overdose, along with other medical, legal and social problems. Opioids include illicit drugs, such as heroin, as well as prescription medications, such as Percocet, morphine and codeine. Opioids are an effective medication when used as prescribed, but they carry a risk of addiction because of their powerful effects.

Opioid addiction refers to a group of signs or symptoms and behaviours that indicate a person is both physically and psychologically dependent on the substance. Typically the person will continue to use opioids despite the fact that the drug use is causing significant physical, personal or social problems. Because tolerance develops quickly to the euphoric effects of the drug, the person will take increasing amounts of the drug in order to feel high. Through chronic exposure to the drug, the person will also show signs of physical dependence. That is, if the person abruptly stops using the drug, he or she will experience very unpleasant withdrawal symptoms, such as strong cravings, sweating, muscle aches and insomnia. Withdrawal symptoms happen when the body cannot re-adapt quickly enough to the absence of the drug.

Opioid addiction involves more than just physical dependence. For example, a person with cancer who is prescribed opioids for severe pain may experience withdrawal symptoms when he or she stops taking the medication, but is not addicted. In addition to physical dependence, opioid addiction also involves psychological dependence. This means that the drug is so central to the person’s life that the need to keep using becomes a craving or compulsion, even if the person knows continued use is harmful.

Cravings and increasing tolerance may lead the person to buy drugs on “the street” or go to more than one doctor to get the same drug. They may smoke, snort, crush or inject the drug in order to feel high faster and more intensely.

Signs & symptoms of Opioid Addiction

- needing to take more of the drug to get the same effect
- persistently wanting to quit, or trying unsuccessfully to quit
- spending a lot of time and effort to obtain, use and recover from opioids
- continuing to use opioids despite negative consequences
- crushing, snorting, smoking or injecting opioids
- running out of prescription medications early
- accessing two or more physicians for prescriptions
- escalating use
- buying opioids on the street
- showing signs of opioid intoxication (e.g., nodding off, pinpoint pupils)
- feeling ill (withdrawal) when the use of opioids suddenly stops
• experiencing cravings to use
• making the use of drugs a priority over family, work and other important obligations.

Causes & risk factors

Opioid addiction is caused by a combination of physical and psychological factors, including:
• access to opioid drugs, whether from licit or illicit sources
• development of physical tolerance to the drug
• use of increasing quantities of the drug
• compulsive use of opioids
• presence of withdrawal symptoms.

Risk factors for developing opioid addiction include:
• personal history of substance use issues involving any substance, including alcohol
• family history of substance use problems or addiction
• history of preadolescent sexual abuse
• history of psychiatric problems.

Treatment for Opioid Addiction

Two main treatment options are available for opioid addiction:
• substitution drug therapies using methadone or buprenorphine
• addiction treatment counselling (e.g., withdrawal management, day treatment, mutual aid groups such as Narcotics Anonymous).

Treatment usually involves a combination of these two approaches. With opioid substitution treatment, medically prescribed methadone or buprenorphine replaces the opioid the person is addicted to. It helps the person deal with cravings and withdrawal symptoms without becoming high or otherwise impaired.

The medical goal is for the person to feel physically normal, rather than either high or craving opioids. If that goal is achieved, the person can then receive other necessary treatments (e.g., medical, psychiatric), work or attend school and address other issues (e.g., family issues or problems with other substances).

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Prescription Opioids (OxyContin)

What are Prescription Opioids?

Street names: M, morph, (for morphine); meth (for methadone); percs (for Percodan, Percocet); juice (for Dilaudid)

Opioids are a family of drugs that have morphine-like effects. The primary medical use for prescription opioids is to relieve pain. Other medical uses include control of coughs and diarrhea, and the treatment of addiction to other opioids. Opioids can also produce euphoria, making them prone to abuse. Some people use opioids for their ability to produce a mellow, relaxed “high.” Federal laws regulate the possession and distribution of all opioids.

Use of prescription opioids is legal only when they are prescribed by a licensed medical practitioner, and are used by the person to whom they are prescribed. Illegal use includes “double doctoring,” or obtaining a prescription from more than one doctor without telling the prescribing doctor about other prescriptions received in the past 30 days. Penalties for the illegal possession and distribution of prescription opioids include fines, imprisonment or both.

Where do opioids come from?

Some opioids, such as morphine and codeine, occur naturally in opium, a gummy substance collected from the seed pod of the opium poppy, which grows in southern Asia. Semi-synthetic opioids, such as hydromorphone (e.g., Dilaudid) or hydrocodone (e.g., Tussionex), are made by changing the chemical structure of naturally occurring opioids. Synthetic opioids, such as methadone and meperidine (e.g., Demerol), are made from chemicals without using a naturally occurring opioid as a starting material.

What do opioids look like?

Prescription opioids come in various forms—tablets, capsules, syrups, solutions and suppositories.

Who uses opioids?

Opioids are prescribed by licensed medical practitioners to people with acute or chronic pain resulting from disease, surgery or injury. Opioids are also prescribed to people with moderate to severe coughs and diarrhea. The opioids methadone and buprenorphine are prescribed to treat addiction to other opioids.

The use of prescription opioids for other than their medical purpose is considered “abuse.” Much attention is given to the abuse of illegal opioid drugs, such as heroin, but some of the most commonly abused opioids are prescription drugs, such as codeine-containing Tylenol (1, 2, 3 and 4), hydromorphone (Dilaudid), oxycodone (Percocet, Percodan), morphine and others.
Due to widespread abuse, OxyContin (a controlled release oxycodone product) became unavailable in Canada in early 2012.

Because of the risk of abuse, opioids are prescribed cautiously for chronic pain. However, opioids are of particular value in controlling pain in the later stages of terminal illness, when the possibility of addiction is not relevant.

Opioid drugs that are sold on the street may be stolen from pharmacies or from people who have been prescribed the drugs for legitimate purposes.

The non-medical use of prescription opioids has increased in recent years. In 2015, about 10 per cent of Ontario students in grades 7 to 12 reported non-medical use of an opioid pain reliever at least once in the past year. This is a significant increase from the 12.4 per cent use in 2013 and the 20.6 per cent in 2007. In 2008, 1.5 per cent of Canadians aged 15 and older who said they use prescription opioids used them “to get high.” The rate of abuse was roughly five times higher among those aged between 15 and 24.

**How do opioids make you feel?**

The way opioids affect you depends on many factors, including:

- how much you use
- how often and how long you use opioids
- how you take them (e.g., by injection, orally)
- your mood, expectations and environment
- your age
- whether you have certain pre-existing medical or psychiatric conditions
- whether you’ve taken any alcohol or other drugs (illegal, prescription, over-the-counter or herbal).

Low doses of opioids suppress the sensation of pain and the emotional response to pain. They may also produce euphoria, drowsiness, relaxation, difficulty concentrating, constricted pupils, a slight decrease in respiratory rate, nausea, vomiting, constipation, loss of appetite and sweating. With higher doses, these effects are more intense and last longer.

The speed and intensity of the effects of opioids vary depending on how the drugs are taken. When taken orally, the effects come on gradually, and are usually felt in about 10 to 20 minutes. When injected into a vein, the effects are most intense and are felt within a minute.

**How long does the feeling last?**

When opioids are taken to relieve pain, the duration of the effect varies somewhat depending on the type of opioid taken. For many opioids, a single dose can provide pain relief for four to five hours.
Are opioids dangerous?

Yes. Opioids can be dangerous especially if they are used without medical supervision.

Opioids are depressant drugs, which means that they slow down the part of the brain that controls breathing. All opioid drugs are dangerous when taken in large quantities or when taken with other depressants, such as alcohol or benzodiazepines. Signs of overdose include slow breathing, bluish skin and coma. Death can result, usually because breathing stops. If caught in time, overdose can be treated with drugs such as naloxone, which blocks the effects of opioids, including the effect on breathing.

People who use opioids regularly for their pleasurable effects soon develop tolerance to these effects, which means they need to use more and more of the drug to achieve the desired effect. As the amount taken increases, so does the risk of overdose. If people with tolerance stop taking the drug, they lose their tolerance. If they then resume taking the same amount they took before they stopped, the risk of overdose is extreme.

Some people inject opioids to increase the intensity of the euphoric effect. Using contaminated needles and/or sharing needles puts a person at a high risk of infection and disease (e.g., HIV, hepatitis). When pharmaceutical tablets or capsules are dissolved for injection, non-drug substances contained in these products can permanently damage veins and organs.

Regular use of large quantities of opioids during pregnancy can increase the risk of premature delivery and infant withdrawal. Pregnant women who are addicted to opioids are treated with the long-acting opioid methadone to prevent withdrawal symptoms.

Are opioids addictive?

They can be; when opioids are used as directed under medical supervision in the general population, there is little risk of addiction. However, the risk appears to be higher in people with a history of abuse or addiction. Addiction is when a drug becomes central to a person’s thoughts, emotions and activities, and he or she feels a craving or compulsion to continue using the drug.

Anyone who takes opioids regularly will develop physical dependence. Physical dependence is the result of the body adapting to the presence of the drug, and is not the same as addiction. A person who is physically dependent will experience withdrawal symptoms about six to 12 hours after last taking a short-acting opioid, such as hydromorphone, and about one to three days after last taking a long-acting opioid, such as methadone. With short-acting opioids, withdrawal comes on quickly and is intense; with longer-acting opioids, withdrawal comes on more gradually and is less intense.

Symptoms of withdrawal include uneasiness, yawning, tears, diarrhea, abdominal cramps, goosebumps and runny nose, accompanied by a craving for the drug. Symptoms usually subside after a week, although some, such as anxiety, insomnia and drug craving, may continue for a long time. Unlike alcohol withdrawal, opioid withdrawal is rarely life-threatening.
What are the long-term effects of taking opioids?

Long-term use of opioids can cause constipation, decreased interest in sex, menstrual irregularities and mood swings. Addiction to opioids can have devastating long-term social, financial and emotional effects.

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Steroids

What are steroids?

**Generic and trade names:** oxymetholone (Anadrol), methan¬drostenolone (Dianabol), stanozolol (Winstrol), nandrolone decanoate (Deca-Durabolin), testosterone cypionate (Depo-Testosterone), boldenone undecylenate (Equipoise) and others **Street names:** the juice, the white stuff, roids

Many kinds of steroids occur naturally in various hormones and vitamins. Drugs known as “anabolic steroids” are made in laboratories and have the same chemical structure as the steroids found in the male sex hormone testosterone. The muscle-building (anabolic) and masculinizing (androgenic) effects of these drugs make them appealing to athletes and bodybuilders.

The primary use of anabolic steroids is to promote growth in farm animals. In humans they are sometimes prescribed to treat delayed puberty, some types of impotence and wasting of the body caused by AIDS and other diseases.

Steroidal “supplements,” such as dehydroepiandrosterone (DHEA), are converted into testosterone or a similar compound in the body. Although little research has been done on steroidal supplements, if taken in large quantities, they likely produce the same effects and the same side-effects as anabolic steroids.

Where do steroids come from?

Anabolic steroids manufactured by pharmaceutical companies are available legally only by prescription. Most steroids used by athletes are smuggled, stolen or made in illegal labs. Veterinary drugs are often used.

What do steroids look like and how are they used?

Anabolic steroids come in the form of tablets, capsules, a solution for injection and a cream or gel to rub into the skin. Weightlifters and bodybuilders who use steroids often take doses that are up to 100 times greater than those used to treat medical conditions.

Regimented methods of taking steroids are believed to enhance the effects of these drugs and lessen harm to the body. However, there is no scientific evidence to back up these claims. Such methods include the following:

- **Cycling:** a period of taking and then not taking the drugs in the belief that the drug-free cycle allows the body to recover normal hormone levels
- **Pyramiding:** taking doses in cycles of six to 12 weeks, starting with a low dose, then slowly increasing it, and then decreasing the amount to zero, believing this allows the body time to adjust to the high doses
- **Stacking:** taking two or more types of steroids, mixing oral and injectable forms, believing the different drugs interact to have greater effect.
Who uses steroids?

Most anabolic steroid use is non-medical. The main users are athletes—to improve their performance—and bodybuilders and young men—to develop a more muscular appearance. Steroid use has also been found among people who have experienced abuse or assault who wish to build muscles in order to protect themselves better.

Steroid use is banned by the International Olympic Committee and many other amateur and professional sports organizations. But because drug testing is costly, tests of professional athletes are generally “random,” and are often preceded by a warning. Regular mandatory testing is standard only at the international level of competition.

A 2015 survey of Ontario students in grades 9 to 12 reported that 1.2% had used anabolic steroids at least once, with males reporting use at a rate of 1.5%.

How do steroids make you feel?

Steroids can produce a variety of psychological effects ranging from euphoria to hostility. Some people who take steroids say the drugs make them feel powerful and energetic. However, steroids are also known to increase irritability, anxiety and aggression and cause mood swings, manic symptoms and paranoia, particularly when taken in high doses. High doses, especially when taken orally, cause nausea, vomiting and gastric irritation. Other effects include fluid retention and trembling.

Are steroids dangerous?

Yes. Taking high doses of steroids increases risk of:

- enlargement and abnormalities of the heart, blood clots, high blood pressure, heart attack and stroke. Steroid-related heart failure has occurred in athletes younger than 30.
- aggression and violence (“roid rage”)
- negative personality change, mania and depression; depression may persist for a year after drug use is stopped
- hepatitis, liver enlargement and liver cancer
- reduced fertility in both women and men
- tendon ruptures, cessation of growth in adolescents
- hepatitis or HIV if steroids are injected using shared needles, and infections if steroids are injected with dirty needles.

Are steroids addictive?

Yes, they can be. Addiction to steroids differs from many other drugs in that tolerance to the effects does not develop. However, some people who abuse steroids meet criteria for drug dependence in that they:
• continue to take steroids, even when they experience negative physical or emotional effects
• spend large amounts of time and money obtaining the drugs
• experience withdrawal symptoms such as mood swings, fatigue, restlessness, depression, loss of appetite, insomnia, reduced sex drive and the desire to take more steroids.

What are the long-term effects of taking steroids?

Some of the effects of steroids disappear when drug use is stopped, but others are permanent. The effects of long-term use include:

• acne, cysts, oily hair and skin, and thinning scalp hair in both sexes
• feminization in men, including permanent breast development
• testicle shrinking, difficulty or pain urinating and increased risk of prostate cancer in men
• masculinization in women, including breast size and body fat reduction, coarsening of the skin, enlargement of the clitoris, deepening of the voice, excessive growth of body hair, loss of scalp hair and changes or cessation of the menstrual cycle; with long-term use, some of these effects may be permanent
• in children or adolescents, the high levels of testosterone stop bone growth, preventing them from ever growing to full height
• aggression and violence; personality changes revert when drug use is stopped.

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Tobacco

What is tobacco?

Tobacco is a plant (Nicotiana tabacum and Nicotiana rustica) that contains nicotine, an addictive drug with both stimulant and depressant effects.

Tobacco is most commonly smoked in cigarettes. It is also smoked in cigars or pipes, chewed as chewing tobacco, sniffed as dry snuff or held inside the lip or cheek as wet snuff. Tobacco may also be mixed with cannabis and smoked in “joints.” All methods of using tobacco deliver nicotine to the body.

Although tobacco is legal, federal, provincial and municipal laws tightly control tobacco manufacture, marketing, distribution and use. Second-hand tobacco smoke is now recognized as a health danger, which has led to increasing restrictions on where people can smoke. Violations of tobacco-related laws can result in fines and/or prison terms.

Where does tobacco come from?

The tobacco plant’s large leaves are cured, fermented and aged before they are manufactured into tobacco products. Tobacco was cultivated and widely used by the peoples of the Americas long before the arrival of Europeans. Today, most of the tobacco legally produced in Canada is grown in Ontario, commercially packaged and sold to retailers by one of three tobacco companies. Many of the cheaper contraband cigarettes currently sold in Canada are smuggled in from the United States.

Who uses tobacco?

Greater awareness of the negative health effects of smoking, along with increased restrictions, has led to a steady decline in rates of smoking in Canada. In 1965, almost half of the population smoked. By 2008, this rate had dipped to 21 per cent of people aged 12 and over (24 per cent of males and 19 per cent of females). Despite the decline, more than six million Canadians still smoke. A 2015 survey of Ontario students in grades 7 to 12 indicates that cigarette smoking in young people has fallen from more than 28 per cent in 1999 to less than 12 per cent in 2009 and has remained stable since. While tobacco use is decreasing in Canada and other developed countries, it is increasing in developing countries. In the same 2015 survey, 8.6% of students in grades 7 to 12 reported smoking within the past 12 months; 3.1% of students reported smoking one or more cigarettes daily within the past 12 months.

Tobacco use tends to be more common among people with lower levels of education and income. Most people who smoke begin between the ages of 11 and 15.

Studies show that genetic factors play a role in whether or not a person will become addicted to nicotine.
People with certain psychiatric disorders are more likely to use tobacco. A U.S. survey of people who received psychiatric outpatient services reported that rates of smoking were 88 per cent for people with schizophrenia, 70 per cent for those with mania and 49 per cent for those with depression. Another study found that 85 per cent of people seeking treatment for alcohol dependence also smoked.

**How does tobacco make you feel?**

The nicotine in tobacco smoke travels quickly to the brain, where it acts as a stimulant and increases heart rate and breathing. Tobacco smoke also reduces the level of oxygen in the bloodstream, causing a drop in skin temperature. People new to smoking are likely to experience dizziness, nausea and coughing or gagging.

The mood-altering effects of nicotine are subtle, complex and powerful. Some people feel that smoking helps them to be alert and to concentrate, and also that it helps them to feel relaxed. Research has shown that smoking raises levels of dopamine, a chemical in the brain, increasing feelings of pleasure and reinforcing the desire to continue to smoke.

Smoking and second-hand smoke can irritate the eyes, nose and throat. Tobacco smoke may cause headaches, dizziness, nausea, coughing and wheezing, and can aggravate allergies and asthma. Smoking also weakens the sense of taste and smell, reduces hunger and causes the stomach to produce acid.

How smoking affects you depends on:
- how much and how often you smoke
- how long you’ve been smoking
- your mood, expectations and the environment
- your age
- whether you have certain pre-existing medical or psychiatric conditions
- whether you’ve taken alcohol or other drugs (illicit, prescription, over-the-counter or herbal).

**How long does the feeling last?**

When a cigarette is smoked, the effects are felt in less than 10 seconds, and last only a few minutes.

**Is tobacco dangerous?**

Yes. Tobacco use is the primary cause of preventable disease and death in Canada, and is considered our greatest public health concern. One study estimated that more than 45,000 Canadians die each year of smoking-related causes. This includes people who smoke, and people who are exposed to second-hand smoke.

When tobacco is burned, a dark sticky “tar” is formed from a combination of hundreds of chemicals, including poisons that cause cancers and bronchial disorders. Tar is released in
tobacco smoke in tiny particles that damage the lungs and airways and stain teeth and fingers. Tar is the main cause of lung and throat cancers. (Although nicotine is the main ingredient of tobacco that causes addiction, it is not known to cause cancer.)

Burning tobacco also forms carbon monoxide (CO), a poisonous gas you can't see or smell. When smoke is inhaled, CO replaces oxygen in red blood cells. While nicotine speeds up the heart, making it work harder, CO deprives it of the extra oxygen this work demands. This is one way that smoking contributes to heart disease.

When swallowed, nicotine is extremely toxic. Ingesting about 40 milligrams of pure nicotine, or roughly the amount contained in two cigarettes, is fatal. However, when a cigarette is smoked, most of the nicotine is burned, and only one to four milligrams is absorbed into the body. Similarly, the amount of nicotine absorbed from the patch, and other methods of nicotine replacement therapy used to help people quit smoking, is well below toxic levels.

Canadian laws require that levels of tar, nicotine and carbon monoxide appear on cigarette packages. It was once thought that cigarettes with less tar and nicotine might be less harmful. However, research has shown that so-called “light” cigarettes are just as likely to cause disease.

Is tobacco addictive?

Yes. Once a person begins to smoke, particularly at a young age, the chances of becoming addicted are quite high. People new to smoking quickly develop tolerance to the initial ill effects, and if they enjoy the stimulant and pleasant effects, they may begin to smoke regularly. Those who smoke regularly tend to have a consistent number of cigarettes per day. Canadians who smoke have, on average, about 15 cigarettes per day.

Nicotine addiction involves psychological and physical factors. Psychological factors may include feelings of pleasure and alertness. People who smoke regularly may learn to rely on the effects of nicotine to bring about these feelings. They also develop conditioned signals, or “triggers,” for cigarette use. For example, some people always smoke after a meal, while working at a certain task or while in certain emotional states, such as feeling depressed or anxious. These triggers lead to behaviour patterns, or habits, which can be difficult to change.

Signs of physical dependence include the urge to smoke within minutes of waking, smoking at regular intervals throughout the day, and ranking the first cigarette of the day as the most important.

People who are addicted to nicotine may become tolerant to the desired effects. They may no longer experience pleasure from smoking, but continue smoking due to cravings and to avoid nicotine withdrawal.

Symptoms of nicotine withdrawal include irritability, restlessness, anxiety, insomnia and fatigue. These symptoms vanish within a couple of weeks. Some people may be unable to concentrate, and have strong cravings to smoke, for weeks or months after quitting smoking.
What are the long-term effects of using tobacco?

The risk of long-term effects increases with the amount smoked, and the length of time a person smokes.

Smoking:
- is the main cause of lung cancer
- increases the risk of cancers of the colon, mouth, throat, pancreas, bladder and cervix
- causes most cases of chronic bronchitis and emphysema
- causes smoker’s cough
- is a major cause of heart disease and stroke
- increases the risk of medical problems for a woman during pregnancy (e.g., miscarriage, bleeding, placenta previa and poor healing) and increases the risk that her baby will be underweight or will die in infancy
- causes osteoporosis (thinning of the bones)
- increases risk of digestive problems
- affects the immune system, making people who smoke more prone to colds, flu and pneumonia
- decreases the amount of vitamin C in the body, which may cause skin wounds to heal less quickly
- can cause the arteries in the legs to become clogged, resulting in poor circulation, leg pain, gangrene and loss of limb.

Many of the risks and dangers of smoking also apply to people who are exposed to second-hand smoke. Long-term exposure to second-hand smoke:
- has been linked to heart disease and cancer
- (in pregnant women) increases the risk of complications during pregnancy and delivery, and of delivering babies with a low birth weight
- (in young children) has been linked to sudden infant death syndrome, can lead to or worsen respiratory problems such as asthma; also causes middle ear infections.

Use of tobacco products that are not smoked, such as snuff and chewing tobacco, are linked to an increased risk of oral cancers, gingivitis and tooth decay.

Quitting smoking

After a few years, people who quit smoking can generally achieve the same health levels as those who have never smoked, especially if they stop while they are young. Quitting smoking can take several attempts, so it is important to keep trying. Stop-smoking aids containing nicotine, such as the patch, gum, inhaler, lozenge or nasal spray, can help to ease withdrawal symptoms and reduce cravings. Such aids work best when the person is highly motivated to quit, and when the person has other supports, such as family, friends, a stop-smoking group or telephone support.

Certain medications that do not contain nicotine can help people to quit smoking. These include bupropion (Zyban) and varenicline (Champix). Both are available by prescription.
For some people, cutting down before quitting helps to lessen the withdrawal symptoms, and allows them to change their smoking behaviours gradually. Strategies for cutting down include delaying cigarettes, smoking fewer cigarettes and smoking less of each cigarette. Although cutting down may reduce some health risks, there is no safe level of smoking; cutting down is not an alternative to quitting.

There are currently more former smokers than smokers in Canada. In 2005, 39 per cent of the population, or more than 10 million Canadians aged 12 and over, reported they had quit smoking.

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Harm Reduction

Adapted from “CAMH Position on Harm Reduction: Its Meaning and Applications For Substance Use Issues.” June 2002

Harm reduction is any program or policy designed to reduce drug-related harm without requiring the cessation of drug use. Interventions may be targeted at the individual, the family, community or society.

The primary focus of harm reduction is on people who are already experiencing some harm due to their substance use. Interventions are geared to movement from more to less harm.

Examples of harm reduction programs are: server intervention programs which decrease public drunkenness; needle and syringe exchange programs which prevent the transmission of HIV among injection drug users; and, environmental controls on tobacco smoking which limit the exposure to second hand smoke.

Guiding Principles
CAMH proposes the following guiding principles be used to guide the development and assessment of harm reduction programs and policies:

Pragmatism
Harm reduction accepts that some level of drug use in society is inevitable and normal, though this view varies widely according to culture and cultural values. Harm reduction seeks to reduce the more immediate and tangible harms rather than embrace a vague, abstract goal related to some future ideal like a drug free society.

Focus on Harms
The focus of harm reduction policy and programs is the reduction of harmful consequences of substance use without necessarily requiring any reduction in use. These harms may be related to health, social, or economic factors that affect the individual, community and society as a whole.

Prioritization of goals
Harm reduction strategies prioritize each user's goals with an emphasis on immediate and realizable goals. The eventual goal may be abstinence but the user does not have to begin this way. Where community and individual goals appear to conflict, there is an attempt to reconcile them.

Flexibility and maximization of intervention options
Harm reduction initiatives are flexible in design, in recognition of individual differences and the reevaluation of individual set goals. They provide a maximum range of options for intervention, such as diverting users to alternative community-based measures and a variety of treatment options such as drug substitution, drug maintenance and interventions that adopt safer methods of use.
Autonomy
The drug user's decision to use drugs is acknowledged as a personal choice, for which they take responsibility. Drug users are not stigmatized as deviants. The user is an active rather than a passive entity in managing their addictions. Reintegration is emphasized over social exclusion. According to the Aboriginal Community: "The philosophy of harm reduction encourages us to reach those outside of the circle and welcome them back in... [we] recognize that everyone in the circle is affected and thus has a responsibility to make this circle whole."
Resource List

ON CAMPUS:
- Counselling Services - 519-824-4120 x.
- 53244 Wellness Education Centre - 519-824-4120 x
- 53327 Student Health Services - 519-824-4120 x52131
- Student Support Network – Raithby House, Monday-Friday 12pm-10pm

COMMUNITY:
- Alcoholics Anonymous Guelph - 519-836-1522
- Community Addiction Services (Homewood) – Substance Use Services – contact Here24/7: 1-844 437 3247
- Distress Centre - 519-821-3760
- Youth Support Line - 519-821-5469
- HIV/AIDS Resources & Community Health (ARCH) – Harm Reduction Outreach:
  - Offers safer injection supplies, safer inhalation kits, access to HIV, Hep C & STI testing, access to free Hep B vaccine, used supply & pick-up

NATIONAL:
- Centre for Addiction and Mental Health (24 hour info line)
  - Waterloo (serves Guelph) - 519-884-8757
- Drug and Alcohol Registry of Treatment (DART)
  - Toll-Free Info Line - 1-800-565-8603
- Good2Talk (24/7 hotline for university students)
  - 1-866-925-5454
- Ontario Harm Reduction Distribution Program
  - http://www.ohrdp.ca/
  - Provides valuable harm reduction information, and also has a searchable database of needle/syringe programs in your area
Reference List

- Ontario Student drug use and health survey 2015 data
- Detailed student usage
- Highlights of student usage
- Centre for Addiction and Mental Health (CAMH)
- Kingston Community Health Centres, author Ron Shore