

Drugs in Sports



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Ontario Minor Hockey Association



Acknowledgement

The content and structure of this publication is based upon a presentation developed by Senior Constable, Terry Bell, Wiarton Detachment of the Ontario Provincial Police for the Hockey Trainers Certification Program and Under-17 Program of the Ontario Minor Hockey Association. Senior Constable Bell has and continues to be a Course Conductor with the Hockey Trainers Certification Program in The Grey and Bruce County area of Ontario.

In the latest version of this publication, Dr. Darryl Bossence, D.C. has made a significant contribution to and assisted with editing the content. Dr. Bossence is a Course Conductor with the Hockey Trainers Certification Program in the Central Area of the Ontario Minor Hockey Association. Both Terry Bell and Dr. Bossence are Master Course Conductors with the Hockey Trainers Certification Program of the Ontario Minor Hockey Association and with Hockey Canada.

We wish to acknowledge the contribution and work of Terry Bell and Dr. Darryl Bossence in developing and updating this publication.

[Note: the information provided in this document is not intended to be in-depth, authoritative or definitive in nature. It is to provide an overview of signs and symptoms of the use of some of the more common legal and illegal drugs readily available to youth in your community.]

DRUGS IN SPORTS

This Hockey Trainers Certification Program information supplement is provided to inform volunteer Hockey Trainers so that they are better prepared to deal with some of the common questions about the use and abuse of drugs. While drug use and abuse is not a new issue, the recent media coverage about the use of drugs and food supplements by high profile athletes in a wide variety of sports, demonstrates a growing interest and concern over an apparent increase in the incidence of performance enhancing and other drug use among both amateur and professional athletes.

Drug use in relation to sports and recreational activities has been around for many years. The public, sport officials, sport safety officials, medical specialists and sports enthusiasts have become increasingly concerned about this use. Through increased awareness, we find ourselves inundated regularly with stories of tragedy involving children and adolescents who have become users of performance enhancing and other types of drugs.

Today, the reported extent of drug use in society seems to be greater than ever in history. Both legal and illegal drugs have become more readily available to adolescents at all ages. The vast majority of our youth is exposed to the temptations of using drugs. Scientific studies of the use of drugs by youth in Ontario¹ indicate that in 12 to 18 years age group, more than 29% of males and more than 28% of females have used illegal drugs other than alcohol. In that same study it is reported that in the same age group, over 61% of males and over 60% of females had consumed alcohol.

In many parts of society, the use of drugs has become an accepted activity. Increasingly, in some elements of society drug use has become a way to deal with personal or family problems, school or peer pressures and as a way to improve personal performance. Unfortunately, drug use does not result in solutions to the problems nor does it fulfill the desires or expectations of the user. Routinely the use of drugs results in increased personal or family problems. Unhappiness and self-dissatisfaction are increasingly amongst users being witnessed along with increased crime and personal injury data and a general decline in the health and wellbeing of the user.

The availability of drugs and the myths associated with the use of drugs continue to create problems of increasingly greater dimension in sport and other activities. It is important that each person involved in minor hockey have some basic facts about drug use and the impact that it can have on the lives of players and their families. It is also important that we have some information that will inform us as to what to look for in that we are better able to recognize the signs of drug use and abuse amongst our youth. Being aware of what to look for, and the risks associated with the use and abuse of drugs, will better prepare us to recognize and seek help for the drug user.

By providing the information in this publication, it is hoped that you as a volunteer hockey trainer will be better prepared to deal with drug use and abuse in your hockey team and community.

WHAT IS A DRUG?

A drug is a substance other than food that is taken to alter the body or mind's functions.

Drugs are available from a variety of sources. Some drugs may come from physicians or drug stores. Drugs may come from natural sources such as plants or they may be man made. Drugs may or may not have medical or health care purposes. Drugs may be legally available under some conditions, such as those that are readily available in stores or from doctors, or they may be illegal such as those purchased on the street from a variety of illicit sources. Many of the drugs that are abused by athletes and adolescents have legitimate medical uses when administered under the supervision and care of a qualified health care professional. On the other hand, many of the drugs that are used and abused have no legitimate medical or health care use at all.

Many of the common drugs that are available are abused because they are not used for the purposes or in the manner intended. Drugs such as alcohol and tobacco have achieved a level of social acceptability that makes them available to youth through their homes or older persons. Glues and solvents, one of the very prevalent drug abuses in younger children (7 - 11 years) are available from retail stores without question. These are examples of the many types of substances that are drugs being routinely used and abused by youth in our communities. If a substance changes the way the mind or body functions, it is a drug.

1. The Centre for Addiction and Mental Health, Ontario Student Drug Use and Health Survey (OSDUS), 2007

WHAT ARE THE COMMON TYPES OF DRUGS?

The most common drugs that will be used by youth are those that in some way alter the way in which a person feels, acts and thinks. These drugs have effects that influence the user physically as well as altering the mind and the senses. These are known as psychoactive drugs.

Many of the prescription and over-the-counter drugs that are used are psychoactive. They may include drugs to ease pain, treat colds and other common ills, manage emotional problems and aid sleep. Alcohol, caffeine and tobacco which also do these things, are easily and readily obtained while other drugs such as narcotics or amphetamines are illegal except by medical prescription, while drugs such as cannabis, cocaine, ecstasy, gamma hydroxybutyrate (GHB), heroin and hallucinogenic drugs are not legally available.

Due to the effect, that these types of drugs have on the mind and upon the user sees themselves and their world, they have become the most commonly used drugs. Following alcohol, prescription and over-the-counter drugs, nicotine is the most commonly abused drug, followed by cannabis, methamphetamine and an array of man made illegal drugs.

WHAT IS DRUG DEPENDENCE?

There are essentially two types of dependency arising from drug use. They are physical and psychological dependence. Each in its own way places tremendous pressure upon the user to continue to use the drug.

Psychological Dependence: is present when the user has a strong emotional need to use the drug on a regular and/or continual basis and has a feeling of loss or desperation when the drug is not available.

Physical Dependence: is present when the user has a need to continue to use the drug in order to function normally. In many situations, the user may become physically disabled or ill in the absence of the drug.

WHAT IS DRUG TOLERANCE?

Tolerance occurs when the use of the same drug is of such a long and continuous nature that the users' body requires greater and greater amounts of the drug in order to achieve the desired effect on the mind or body.

WHAT IS WITHDRAWAL REACTION?

Withdrawal reaction is the body's way of signaling the need for the drug in order to function normally. When the drug is no longer available at all or in the dosages required for the desired effect, the characteristics of the withdrawal reaction will occur. These characteristics vary dramatically from person to person. Some will experience severe unpleasant physical or emotional effects from the withdrawal of their drug.

WHY DO YOUTH TAKE DRUGS?

There are wide varieties of causes for why children and adolescents start or continue taking drugs. It may be due to: peer pressure to try something that the other kids have tried; an attempt to be part of and do the things that other members of the group that they spend time with are doing; following the lead of another youth who they look up to; trying to act grown up like some of their older family or friends, or simply curiosity to find out what it is like to "do drugs". In some instances, drug use by youth is to relieve boredom, escape reality or to achieve the pleasure derived from the drug. Others may use drugs to improve their self-esteem or simply feel good, to feel powerful or to get a sense of being unbeatable. For others it may be sign of rebellion or it may be the early signs of an underlying mental health issue.

HOW DO YOU RECOGNIZE WHEN SOMEONE IS USING DRUGS?

The key characteristic to look for when there is a chance that someone is abusing drugs is to look for an unexplained change in the actions, looks or attitude of that person. The world of the preteen and the teenager is which is constantly going through change. Often adolescents and pre-teens do not feel good about themselves or about their family. They may begin to have money problems, their personal grooming may deteriorate, and they may lose interest in favorite sports and other outside interests.

The quality of their life begins to show subtle yet significant change. These may be the early signs of drug use and abuse. A youth who is using drugs may not be as talkative as they used to be, they may appear to be bored or distracted all of the time, they begin to hang around with a new group of people, old friends are no longer interesting, the family and its activities are no longer interesting, and school is boring. Change is the earliest and also the subtlest of symptoms. The changes that take place are never the same between two different people.

Frequently, whether the symptoms are encountered individually or several appear together they do not cause concern among most people. Often parents, teachers, coaches and other adults regularly associating with youth, do not look for, expect to see or recognize the symptoms of drug use.

When reading the following signs and symptoms, try to keep in mind that often these will appear slowly. The efforts that the drug user employs to disguise the symptoms also assist in having the symptoms go unrecognized for significant period of time. Many people do not recognize the signs and symptoms because they are unwilling to accept that such innocent appearing changes can mean something as serious as drug abuse.

As a hockey trainer, you will have the opportunity to get to know very well the physical, psychological and emotional characteristics of the players on your team. You are in a unique position to recognize these signs and symptoms in a situation and environment that most other adults do not share.

MOOD SWINGS

The moods of the drug abuser will often swing, from being talkative, active and interested to being depressed, lethargic and complaining, over a very short period of time. These changes may appear with no apparent reason.

CHANGES IN APPETITE

The eating patterns of the drug user are likely to change dramatically. The person who is accustomed to eating regular meals will begin to routinely be late for or skip meals all together or to eat erratically. This may be noticed in the hockey setting when a player states to ignore regular meals and consumes junk food in place of such meals.

WEIGHT LOSS

The drug abuser may begin to show significant, unexplained loss of weight (no dieting or illness to explain it). This weight loss may be a byproduct of the changes in eating patterns or it may be the effect of the drugs that are being consumed. A number of the most commonly abused drugs have the side effect of depressing the user's appetite. Sudden, unexplained weight loss may become evident to the hockey trainer in the change room before or after games.

CHANGING SLEEP PATTERNS

People who are using illegal drugs or abusing legal drugs will often experience disruptions of their sleep patterns. The drug user may have increasing difficulty in getting up in the morning despite there being no change in their bedtime. The drug user may also have a problem with over tiredness and start taking naps at various times during the day or falling asleep unexpectedly. Sleeplessness that appears unexpectedly and continues for an extended time-period without apparent cause may be the result of drug use. This may become evident in the sports setting as a player who tires very quickly or who appears to be continually suffering from a lack of sleep.

CHANGING SCHOOL HABITS AND GRADES

One of the commoner signs of drug use in youth is a sudden and dramatic change in the user's school grades or habits. The once studious student who enjoyed school may drop out of extra-curricular activities; interest in favourite subjects or sports may decline or disappear completely. Often mathematics, language or scientific subjects will suffer the first effects due to drug abuse. The drug user may become lethargic about completing projects, studying, preparing for examinations or doing homework.

SECRETIVE OR EVASIVE BEHAVIOUR

The drug user will often become quite evasive and secretive about their activities, where they are spending time and the people with whom they interact. There may be an increase in telephone calls and hang-ups as well as visits from persons who are unknown to the family. In hockey, a player may begin to hang around with individuals who are members of the team or who are not known to other team members.

CHANGE IN NEED FOR MONEY

The drug user will often experience a significant change in their spending habits and need for money. They may be in constant need of additional money or it is found that their bank or saving accounts have been depleted or emptied. Any unexpected or unexplained change in money habits that are not accompanied by a known change in employment may be a sign of drug use.

LOSS OF INTEREST IN SPORTS OR OTHER ACTIVITIES

A person who has been active in sports or other activities outside of their school or home and who suddenly and unexplainedly loses interest in such activities may be involved in drug use. Often it begins with missed practices or meetings. It is particularly concerning if the person drops out of activities that they have enjoyed and does not pursue some alternate activity.

EGOCENTRISM (All about me!)

The drug user will often become increasingly self centered and uncaring about others. They will forget about or lose interest in the activities of friends and family. They may appear in the hockey setting as the player who used to be a strong team player who becomes a lone wolf type. The team player who begins to think only of scoring goals, trying to be the big play person or demonstrates increased aggression on the ice may be using drugs.

REDUCED INTEREST IN GROOMING AND PERSONAL HYGIENE

The drug user routinely loses interest in maintaining body cleanliness and good health habits. Failing to shower, clean up after games or practices, failing to launder clothes or maintain hockey equipment, failure to clean or dry equipment may mean that a player is neglecting personal care or distracted by the use of drugs.

REMEMBER: These are only signs and symptoms. Some of these signs could apply to a teenager who is experiencing changes in their relationship with the opposite sex, a newly evolving obsession with video games, skateboards, a new job, or some other logical explanation. Do not forget that some of these signs and symptoms may also represent a threat of drug use or abuse to one of the youth involved with your team or community!

OTHER SYMPTOMS TO CONSIDER

- Reddened eyes requiring regular and ongoing use of eye drops (e.g. Visine),
- Sleep disturbances that are unexplained,
- Chronic dry cough that is not explained,
- Menstrual irregularities,
- Chest pains with no known explanation,
- Difficulty in fighting off common infections & diseases,
- Depression with feelings of loneliness and paranoia,
- Drug related graffiti on hockey equipment & clothes,
- Use of monotone speech and a lack of expression,
- Presence of drug paraphernalia (e.g. rolling papers, pot pipes, liquor containers)

Note: To assist the volunteer trainer in dealing with this information as part of your responsibilities to promote the safety of your players you may wish to provide a copy of this document to the parents of your players.

INFORMATION ON DRUG IMPACT DIFFERENCES

The effects of most illegal drug use on a person are unpredictable. It will differ from person to person or with different drug use episodes by the same person depending on:

- Age and weight of the user
- Mood, expectations of the user
- Presence of medical or psychiatric disorders
- Amount of the drug taken (dose) by the user
- If a person has eaten recently & type and amount of food in stomach
- How frequently and for how long drug has been used
- Presence or use of other drugs, including non-prescription, prescription, and street drugs

COMMON DRUGS, THEIR USE, IMPACT & LEGAL STATUS

ALCOHOL (Sedative, Depressant)

ACTIVE INGREDIENT

Ethyl alcohol (Ethanol)

METHODS OF USE

Alcohol is consumed in a variety of beverages that are produced and marketed to the public.

ALCOHOL CONTENT

- Beer: 5% alcohol (by volume)
- Table wine: 10 - 14% alcohol
- Fortified wine(e.g. Sherry): 16 - 20% alcohol
- Distilled spirits(e.g. Rum): 40% alcohol

Note: 1 bottle of beer = 85 - 113ml (3 - 4oz) of Sherry,
which = 43 ml (1 1/2 oz) of distilled spirits (e.g. Rum)
which = 142 ml (5oz) of wine

SHORT TERM EFFECTS

- Initial relaxation and loss of inhibitions
- Impaired co-ordination, slowing of reflexes and mental processes
- Impaired perception
- Attitude changes, increased risk-taking to point of bad judgment
- Unable to operate vehicle or other equipment safely
- Acute overdose may lead to brain damage or death due to respiratory depression
- Dangerous side effects and risk of death increased when mixed with other drugs (e.g. caffeine, amphetamines, and depressants).
- Implicated in birth defects when used by either childbearing women or men.

LONG TERM EFFECTS

Regular, heavy use increases the possibility of:

- Gastritis, pancreatitis
- Cirrhosis of the liver, liver cancer
- Certain cancers of the gastrointestinal tract
- Heart disease
- Brain and nerve damage
- Suppressed sex hormone production and activity, especially in males
- On withdrawal from regular, heavy use, convulsions and delirium tremens may occur.

PREVALENCE OF USE

80+% of Canadians over the age of 15 consume alcohol.

LEGAL STATUS

May not be legally sold or provided to, or consumed by persons under 19 years of age (Ontario).

AMPHETAMINES (Central Nervous System Stimulants)

ACTIVE INGREDIENT

Amphetamine, dextro-amphetamine, methamphetamine, phenmetrazine.

Amphetamines come in a variety of forms. Some are drugs that are legally available through prescription (e.g. Benzedrine, Dexedrine) and others are not legally available (e.g. methamphetamine).

METHODS OF USE

May be taken by mouth, sniffed, smoked or injected in veins.

SHORT TERM EFFECTS

Use of amphetamines in a variety of differing doses can lead a person to experience one or more of the following:

- Dizziness, headache, fainting
- Sleep difficulties, reduced appetite
- Dry mouth, teeth grinding
- High fever, sweating
- Dilation of pupils
- Stomach ache
- Muscle tremors, muscle twitching
- Increased and irregular heart rate, chest pain
- Increased breathing rate
- Confusion, hallucinations, paranoid thinking, suicidal behaviour
- In high doses can lead to seizures, coma and death
- Increased risk of infection (especially for those using unsterilized needles)

In the event of an overdose there is no specific antidote that will reverse the effects of the drug, in a case of suspected overdose, the user needs to urgently receive emergency medical attention.

LONG TERM EFFECTS

- Chronic sleeping disorders
- 'Meth mouth' (tooth decay and damage to soft tissues)
- Skin lesions (due to picking at 'meth bugs' on their skin caused by touch hallucinations which make them think something is crawling under their skin)
- Feelings of anxiety, tension or paranoia
- Lose their appetite and lose significant amounts of weight
- Demonstrate repetitive body movements
- Rapid heart rate, chronic high blood pressure
- Implicated in developmental abnormalities in unborn child.
- Bizarre, erratic or violent actions
- Severe agitation and psychotic behaviour
- Impaired motor functions (use of muscles)
- Impaired memory and cognitive functions
- Irreversible brain damage

LEGAL STATUS

All forms of amphetamine, its preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession of any of this family of drugs is a criminal offense that can lead to a significant jail term and a criminal record.

ANABOLIC/ANDROGENIC STEROIDS (Synthetic Male Hormone)

ACTIVE INGREDIENT

Synthetic Testosterone

FORMS OF ANABOLIC/ANDROGENIC STEROIDS

Anabolic steroids (tissue building) and Androgenic steroids (masculinising) are synthetic substances related to the male hormone testosterone.

These synthetic hormones should never be confused with the corticosteroids used for treating asthma and various skin conditions.

METHODS OF USE

Most common methods for use are orally (pill form) or injected (liquid form).

Note: As most steroids are imported from outside Canada and with the incidence of counterfeit packaging, analysis of seized steroids has confirmed incorrectly stated dosages and evidence that the contents having been tampered with. Purchasing illegally obtained steroids carries with it an extreme risk to life and health of the user. Frequently illegal steroids contain several different steroids (and other substances) which are used at the same time. This practice significantly increases the risk to the user's health and it is almost impossible to determine how the different steroids and drugs will react together in the body of the user.

SHORT TERM EFFECTS

- Injectable steroids significantly increase the risk of shared needles, syringes and bottles transmitting infectious diseases such as HIV or Hepatitis B or C
- Abscesses and "blood poisoning" (septicemia) may develop if sterile syringes and needles are not used
- Oral steroids with the "C-17" (or "alpha-alkylated") label can be very toxic and lead to serious health issues in a very short time
- Increased irritability and aggressiveness ('roid rages').
- Acne and skin eruptions
- Accelerated hair loss. (not reversible)
- Elevated cholesterol level (both men and women)
- Enlarged breasts in males
- Bloating (fat) appearance resulting from salt and water retention
- Changes (increase or decrease) in sex drive
- Commonly impotence and decline in sperm production in men

LONG TERM EFFECTS

Damage to the heart is caused by fatty deposits blocking blood flow to the heart and high blood pressure due to water and salt retention (both significant increase the risk of a heart attack in teenager and very young adult users).

Liver damage including hepatitis, cancer of the liver and formation of blood filled lesions in the liver tissue

Kidney damage due to the toxicity of some of the steroids or their metabolic by-products

In women, male sex characteristics (e.g. body hair, deepening voice) may appear.

LEGAL STATUS

Anabolic steroids and their derivatives are controlled substances in Canada under Schedule IV of the Controlled Drugs and Substances Act. Trafficking in anabolic/androgenic steroids is a criminal offense. There are several medical uses for anabolic steroids. In such instances anabolic steroids made by reputable pharmaceutical companies is legally available by prescription. Most steroids used by athletes are smuggled, stolen or made in clandestine (and frequently unclean) laboratories. In addition, veterinary anabolic steroids are frequently stolen or diverted from legal use toward abuse by humans.

Anabolic steroids are banned by all amateur sports governing organizations in Canada and participants found to be using them will be disciplined by the respective governing organization

CAFFEINE AND RELATED SUBSTANCES (Central Nervous System Stimulants)

ACTIVE INGREDIENT

Caffeine

FORMS OF CAFFEINE

Caffeine is the most commonly encountered performance enhancing drug in society and in sports.

Caffeine is found in a wide variety of forms including in beverages (e.g. tea, coffee, soft drinks, hot chocolate) and is routinely found in combination with other performance enhancing drugs (e.g. guarana, taurine, glucuronolactone) in popular energy supplement beverages (e.g. Red Bull, Throttle, Monster) as well as in some popular "stay awake" over the counter drugs and in chocolate bars.

- An average cup of coffee will contain approximately 45 mg of caffeine.
- An average cup of tea will contain approximately 30 mg of caffeine.
- Caffeinated soft drinks will contain approximately 35 mg of caffeine
- Hot chocolate will contain approximately 4 mg of caffeine
- Chocolate bars may contain from 4 - 65 mg of caffeine
- Caffeinated energy drinks can contain from 85 - 250 mg. of caffeine in one serving in combination with other caffeine like and enhancing substances.

METHODS OF USE

Most common use of caffeine is through the use of caffeinated beverages such as coffee, tea, soft-drinks and energy drinks.

SHORT TERM EFFECTS

- Mild physiological effects
- Slight increase in body temperature
- Increase in heart and breathing rates
- Increase in urination (caffeine is a diuretic which contributes to dehydration)
- Increased blood pressure
- Increased irritability and reduced attentiveness
- Increased incidence of gastric hyperacidity
- May lead to loss of calcium from bones and reduce bone density
- Delays fatigue and interferes with sleep patterns
- Large doses of caffeine may lead to cardiac arrhythmias, headach, jitteriness
- Very large dose of caffeine have been known to be fatal
- Physical dependence (addiction) on caffeine can occur
- Withdrawal from caffeine addiction can result in headaches, irritability, altered sleep patterns.

LONG TERM EFFECTS

- People who use less than 650 mg of caffeine per day (8 - 9 coffees) have not been identified as having any long-term effects.
- Heavy caffeine use has been linked to heart arrhythmias (irregular heart beat)
- Heavy caffeine use has been linked to elevated blood cholesterol
- Scientific studies have linked caffeine to reproductive issues.
- It is strongly recommended that pregnant females (especially smokers) avoid using substances containing caffeine.
- Abuse of caffeinated energy drinks have been investigated in sudden, unexplained deaths in youth.

LEGAL STATUS

Caffeine is legally available in a wide variety of food and beverage products as well as in a number of over the counter drugs.

CANNABIS (Hallucinogen)

ACTIVE INGREDIENT

THC (9-delta tetrahydrocannabinol)

Cannabis sativa is the name of the hemp plant from which marijuana, hash, and hash oil come from. The main hallucinogenic chemical in cannabis which alters the mood and perception of the user is called THC, It is the THC that makes the user feel 'high'.

FORMS OF CANNABIS

Cannabis is most commonly found on one of three preparations, "marijuana", "hashish" and "hash-oil". Cannabis preparations vary widely in potency and hallucinogenic effect, with marijuana being in general the least potent and hash oil the most potent.

METHODS OF USE

Cannabis is smoked, or eaten alone or with food. After smoking cannabis, the effects are felt almost immediately and may up to three hours. After eating cannabis, it may take an hour to take effect, however the effects may last as long as four hours.

SHORT TERM EFFECTS

- Feelings of anxiety, euphoria, 'a high' or fearful.
- Reddening of the eyes
- Spontaneous laughter
- Drowsiness
- Increased hunger (often called "munchies")
- Mild paranoia, anxiety or panic
- Impaired reaction time, coordination and motor skills
- Impaired short-term memory
- Increase in pulse rate
- Decrease in blood pressure (may lead to fainting)
- Dry mouth and throat
- Irritation of the respiratory tract (with smoking)
- Hallucinations (seeing something that does not exist)
- Pseudo-hallucinations (seeing colours or patterns that the user knows are not real)
- Paranoia, severe agitation, disorientation
- Abdominal pain
- Taken in combinations with other psychoactive drugs (e.g. cannabis and heroin: atom bomb or A-bomb; cannabis and opium: OJ (opium joint); cannabis and PCP: supergrass or killer weed) can cause a significant increase in the negative side effects of cannabis
- In very large doses cannabis can precipitate a psychotic episode.

LONG TERM EFFECTS

- Loss of drive and interest in sustained activity
- Increased tolerance requiring increasingly more cannabis to achieve "high"
- Chronic bronchitis, lung cancer
- Reduction in sex hormone levels
- Possible reduction in immunity against infections
- Onset of psychosis and development of schizophrenia
- Cannabis makes the symptoms of psychosis and schizophrenia worse
- May have negative impact on unborn child when used by child-bearing women.

LEGAL STATUS

Cannabis, it's preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession is a criminal offense that can lead to a significant jail term and a criminal record.

COCAINE (Central Nervous System Stimulant)

While it is not chemically similar to the amphetamine family of drugs, cocaine and its derivatives provide a similar reaction on the user. This effect occurs even though cocaine is classified as a narcotic.

ACTIVE INGREDIENT

Cocaine hydrochloride

FORMS OF COCAINE

Cocaine powder or freebase (Crack) cocaine.

METHODS OF USE

Cocaine powder is usually snorted up the nose or mixed with water and injected into a vein. Crack cocaine is a smokeable version of cocaine hydrochloride.

SHORT TERM EFFECTS

The effects of cocaine on a user are wildly unpredictable. The effects will vary dramatically from one user to another and the same user may react differently following uses of this drug. Short term effects include:

- Delay in feelings of physical or mental fatigue
- Elevated breathing, heart rates & blood pressure
- Powerful local anaesthetic
- Nausea & vomiting
- Increased body temperature & episodes of cold sweats
- Dilation of pupils, dry mouth
- Anxiety, severe agitation, hallucinations & paranoid episodes
- Reduced appetite
- Muscle twitching & "the shakes"

An overdose of cocaine can be deadly due to cardiac or respiratory arrest, stroke or seizure. In a case of suspected overdose, the user needs to urgently receive emergency medical attention.

LONG TERM EFFECTS

Long term effects are very unpredictable and may include:

- Difficult to control nose bleeds
- Restlessness & excitability
- Red, runny nose from snorting drug, loss of smell
- Erratic, bizarre, or violent behaviour
- Chest pain, cardiac arrhythmias & breathing difficulties
- Chronic high blood pressure
- Depression, mood swings, hallucinations, delusions, paranoia
- Sleep disorders
- Intense hunger or no interest in food
- Sexual dysfunction (impotence)

LEGAL STATUS

Cocaine, its preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession is a criminal offense that can lead to a significant jail term and a criminal record.

ECSTASY (Central Nervouse System Stimulant, Hallucinogen)

ACTIVE INGREDIENT

3,4-methylenedioxyamphetamine (MDMA)

FORMS OF ECSTASY

Tablet, capsule or powder. Tablets or capsules may contain no Ecstasy, instead they may contain one or more of the following: Caffeine, Ketamine, LSD, PCP

Methamphetamine or Ephedrine (Ephedrine has been linked to increased risk of stroke, heart attack and death)

METHODS OF USE

Taken by mouth.

SHORT TERM EFFECTS

The effects of Ecstasy on a user are wildly unpredictable. The effects will vary dramatically from one user to another and the same user may react differently following uses of this drug. Short term effects include:

- Sense of well-being (euphoria)
- Friendliness, empathy toward others.
- Sense of energy and confidence followed by depression & confusion
- Decreased appetite, nausea and vomiting
- Elevated blood pressure and heart rate
- Elevated body temperature, sweating, thirst and dehydration
- Reduced blood electrolytes
- Teeth grinding and jaw pain
- Distorted perception, paranoia, hallucinations, sleep disorders
- Increased risk of kidney or heart failure, strokes and seizures
- May be toxic in presence of a number of prescription drugs

LONG TERM EFFECTS

- Flashbacks, delusions, hallucinations, psychotic behaviour.
- Weigth loss, chronic fatigue and exhaustion
- Anxiety, depression, sleep disorders
- Unexplained muscle aches and pains
- Suspected of causing permanent brain damage.

LEGAL STATUS

Ecstasy, it's preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession is a criminal offense that can lead to a significant jail term and a criminal record.

GHB (Central Nervous System Depressant)

ACTIVE INGREDIENT

Gamma hydroxybutyrate

FORMS OF GHB

Tablets, white powder, colourless liquid or in capsules

METHODS OF USE

Taken by mouth alone or with beverage or food.
Known as one of the “date rape” drugs.

SHORT TERM EFFECTS

The effects of GHB on a user are very unpredictable. The effects will vary dramatically from one user to another and the same user may react differently following uses of this drug. Short term effects include:

- Dizziness, loss of consciousness, memory loss
- Loss of coordination (e.g. difficulty walking, spasmodic movements)
- Nausea, vomiting and diarrhea
- Decreased respiratory rate, blood pressure & heart rate
- Lowered body temperature
- Increased libido (interest in sex)
- Seizures, comma and respiratory arrest leading to death may occur
- Likelihood of death in presence of alcohol or other drugs increased

LONG TERM EFFECTS

There is very little medical information regarding the long-term effects of GHB use.

LEGAL STATUS

GHB, its preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession is a criminal offense that can lead to a significant jail term and a criminal record.

KETAMINE (Central Nervous System Depressant, Hallucinogen)

ACTIVE INGREDIENT

Ketamine (dissociative anesthetic - commonly used by veterinarians)

FORMS OF KETAMINE

Odourless, tasteless, white powder or clear liquid.

METHODS OF USE

May be smoked, snorted or dissolved in liquid and injected into a vein. Liquid version may be injected into muscle as well. Known as one of the “date rape” drugs.

SHORT TERM EFFECTS

The effects of Ketamine on a user are very unpredictable. The effects will vary dramatically from one user to another and the same user may react differently following uses of this drug. Short term effects include:

- Rapid loss of consciousness if injected
- Sleepiness, vivid dreams and hallucinations
- Confusion, loss of coordination
- Blurred vision, inability to speak, incoherent speech
- Fever, nausea and vomiting
- Sudden increase in blood pressure and heart rate
- Memory loss
- Nose bleeds
- Unpleasant taste
- Decreased response to pain
- Temporary paralysis (inability to move)
- Respiratory depression
- Likelihood of death in presence of alcohol or other drugs greatly increased

Overdoses of Ketamine can be quickly fatal. In a case of suspected overdose of Ketamine, the user needs to urgently receive emergency medical attention.

LONG TERM EFFECTS

There is very little medical information regarding the long-term effects of Ketamine use

LEGAL STATUS

Ketamine, its preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession is a criminal offense that can lead to a significant jail term and a criminal record.

LSD (Hallucinogen)

ACTIVE INGREDIENT

(Lysergic Acid Diethylamide)

FORMS OF LSD

Capsule or tablet form, dissolved in liquid and made available as breath freshener or applied to sugar cubes, absorbent paper or contained in food. Effects of LSD will normally be felt within 30 to 60 minutes of taking the drug and may last for up to 12 hours.

METHODS OF USE

Most common method of use is to take by mouth and hold on the tongue until absorbed. Some people may inhale or inject LSD as well.

SHORT TERM EFFECTS

The effects of LSD on a user are very unpredictable. The effects will vary dramatically from one user to another and the same user may react differently following uses of this drug. Short term effects include:

- Extreme mood swings in same use (e.g. happiness, terror, aggression)
- Sense of body feeling too light or too heavy)
- Loss of ability to concentrate
- Distorted and impaired judgement (increased risk-taking)
- Impaired perception (distance, time, speed, colours)
- Loss of short-term memory and short and long term memory may blend
- Reduction or loss of touch sensation
- Elevated blood pressure/ heart rate
- Dizziness, dilated pupils
- Decreased or no appetite
- Dry mouth, chills, nausea
- Shakes, weakness

LONG TERM EFFECTS

Long-term effects of LSD can include:

- Depression, psychosis and other mental illnesses
- Delusional thinking, bizzare behaviour and/or paranoia
- Flashbacks or spontaneous recurrences of a prior LSD experience
- No standard medical response defined yet for these LSD related disorders

LEGAL STATUS

LSD, it's preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession is a criminal offense that can lead to a significant jail term and a criminal record.

OPIATES

(Central Nervous System Depressant)

ACTIVE INGREDIENTS

Morphine, Codeine, Thebaine, Papaverine, (Heroin is made from Morphine)

FORMS OF OPIATES

Several hundred narcotic drugs are derived from the basis active ingredients of opium. They may appear as a white powder, clear liquid, brown crystals or dark sticky gum like substance.

METHODS OF USE

Snorted, smoked or injected under skin or into a vein.

SHORT TERM EFFECTS

The effects of Opiates on a user are very unpredictable. The effects will vary dramatically from one user to another and the same user may react differently following uses of these drugs. Short term effects include:

- Lack of emotion
- Itching or burning sensation of the skin
- Headaches, nausea, vomiting and cold clammy skin
- Decreased heart rate, breathing and blood pressure
- Cardiac arrhythmias & shallow breathing
- Blueish grey mottled skin (cyanosis)
- Reduced appetite, constipation
- Decreased response to pain or other stimuli
- Pinpoint pupils
- Unconsciousness and high risk of respiratory arrest leading to death
- Likelihood of death in presence of alcohol or other drugs increased

LONG TERM EFFECTS

- Effects associated with long-term use of heroin include:
- Changing and unpredictable moods and behaviours.
- Chronic constipation
- Pinpoint pupils, which impair night vision
- Loss of interest in sex (decreased libido)
- Missed periods in women
- Chronic respiratory impairment
- Skin infections
- Greater risk of contracting infectious diseases such as HIV, hepatitis B & C
- Blood poisoning (septicaemia)
- Infection in the lining of the heart (endocarditis)
- Known negative effect on development of unborn child of female users

LEGAL STATUS

Opium, its preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession is a criminal offense that can lead to a significant jail term and a criminal record.

PCP (Hallucinogen)

ACTIVE INGREDIENT

Phencyclidine (dissociative anesthetic)

FORMS OF PCP

White crystalline powder. May be found as tablets, capsules or coloured powders

METHODS OF USE

Usually snorted, smoked or ingested by mouth. Some reports of PCP being dissolved in liquid and injected.

SHORT TERM EFFECTS

The effects of LSD on a user are wildly unpredictable. The effects will vary dramatically from one user to another and the same user may react differently following uses of this drug. Short term effects include

- Drowsiness, impaired coordination, dizziness, blurred vision, drooling
- Increased heart & breathing rate and blood pressure
- Nausea, vomiting and sweating
- Detachment from environment & reality
- Distortion of body perception, time & space
- Numbness in the arms and legs
- Visual and auditory delusions
- Aggressive/ hostile/ violent behaviour
- Incoherent actions and speech, inability to talk
- Severe depression hallucinations
- Increased risk of suicide & self mutilation
- Convulsions, coma, hyperthermia, increased risk of death
- Chance of death/coma in presence of alcohol/other drugs greatly increased

Overdoses of PCP can be quickly fatal. In a case of suspected overdose of PCP, the user needs to urgently receive emergency medical attention.

LONG TERM EFFECTS

There is limited medical information about the long-term effects of PCP use. It is known that use of PCP over an extended period of time can lead to flashbacks, chronic anxiety & depression, memory loss, difficulties speaking and thinking. These signs and symptoms may persist for several years after a user stops taking PCP.

LEGAL STATUS

PCP it's preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession is a criminal offense that can lead to a significant jail term and a criminal record

PSILOCYBIN (Hallucinogen)

ACTIVE INGREDIENT

Psilocin (4-HO-DMT) - Magic mushroom

FORMS OF PSILOCYBIN

Dried whole mushrooms or brown powder

METHODS OF USE

May be eaten cooked or raw, made into a tea or ground up and added to beverages or food.

SHORT TERM EFFECTS

The effects of Psilocybin on a user are very unpredictable. The effects will vary dramatically from one user to another and the same user may react differently following uses of this drug. Short term effects include

- light-headedness, nausea and vomiting
- dilated pupils, blurred vision, dry mouth
- numbness in extremities, facial numbness
- exaggerated reflexes, muscle weakness and twitching
- sweating and increased body temperature followed by chills and shivering
- increased blood pressure and heart rate
- confusion, disorientation, severe agitation and paranoia
- loss of coordination and urinary control
- convulsions

LONG TERM EFFECTS

There is limited medical information about the long-term effects of Psilocybin use. There is some evidence that it may cause or contribute to specific mental illnesses.

LEGAL STATUS

Psilocybin, it's preparations and derivatives are covered by the Controlled Drugs and Substances Act (Canada). Unlawful possession is a criminal offense that can lead to a significant jail term and a criminal record

SEDATIVE HYPNOTICS (Central Nervous System Depressants)

ACTIVE INGREDIENT

A variety of chemicals make up this family of drugs including: Amobarbital (e.g. Amytal), penobarbital (e.g. Nembutal), phenobarbital (e.g. Luminal), secobarbital (e.g. Seconal), and the combination amobarbital-secobarbital (e.g. Tuinal).

FORMS OF SEDATIVE HYPNOTICS

Tablets, capsules, liquid

METHODS OF USE

Taken orally or injected. People addicted to other drugs may turn to Sedative Hypnotics if their regular drugs are not readily available. Theft of prescription drugs from family or friends is common source of these drugs for youth.

SHORT TERM EFFECTS

The effects of Sedative Hypnotics on a user will vary from one user to another and the same user may react differently following uses of this drugs. Short term effects include:

- Feeling of being "high"
- Slurred speech, staggering, loss of co-ordination
- slowed reactions and reduced ability to operate vehicles or equipment
- Loss of inhibitions
- Intense emotions often leading to extreme & unpredictable behaviour produce Slow, shallow, and irregular breathing with risk of respiratory arrest.
- Increased chance of death in presence of alcohol/other drugs
- Sedative/hypnotic drug use has been linked with birth defects and behavioral abnormalities in babies

LONG TERM EFFECTS

- Impairment of memory and judgment
- Hostility
- Depression
- Mood swings
- Chronic fatigue
- Stimulation of preexisting emotional disorders
- Paranoia
- Thoughts of suicide.

LEGAL STATUS

Many barbiturates and other sedative/hypnotics are defined as controlled drugs, governed by Schedule G of Canada's Food and Drugs Act; the rest are governed by Schedule F. Drugs listed in Schedule F are legally available only with a physician's prescription. Additional restrictions apply to drugs listed in Schedule G. It is illegal in Canada to obtain a prescription for any controlled drug without notifying a physician that you obtained a similar prescription through another practitioner within the preceding 30 days.

SOLVENTS/INHALANTS

(May be Central Nervous System Stimulant or Depressant)

ACTIVE INGREDIENTS

Most solvents are volatile (aliphatic, aromatic or halogenated) hydrocarbons of petroleum origin (e.g. gasoline)

Some of the substances that may be encountered alone or in combination in solvents include: benzene, trichloroethane, benzene, toluene, xylene, acetone, naphtha, toluene, ether, xylene, hexane. Such solvents may be found in cookware coating agents, deodorants, engine starter fluid, hair sprays, insecticides, nail polish, cleaning fluids, adhesives (glues), lighter fluid, lubricants and paints.

FORMS OF SOLVENTS/INHALANTS

Liquids or vapour forms.

METHODS OF USE

User inhales fumes from an enclosed container or bag or they may put a cloth containing some of the solvent over their face and breath through the cloth. Most commonly used by youth between 6 and 15 years of age.

SHORT TERM EFFECTS

Solvent/inhalants are depressants and are pharmacologically related to anesthetic gases. In fact, some anesthetic gases. The immediate effects of inhalant abuse are similar to the early classic stages of anesthesia.

The effects of solvents and inhalants on a user will vary from one user to another and the same user may react differently following uses of these substances. Short term effects include:

- Euphoria, initially stimulated, disinherited
- Prone to impulsive behaviour
- Nausea, drooling, sneezing & coughing
- Slurred speech
- Staggering, muscle inco-ordination, slow reflexes
- Hallucinations, lightheadedness, vivid fantasies
- Drowsiness and sleep
- Unconsciousness, seizures, irregular heart beat

LONG TERM EFFECTS

Long-term use of any solvent/inhalant risks permanent brain injury. May lead to peripheral limb (hands, feet) neuropathy (numbness, tingling or pain). Long-term effects may include:

- Deafness, thirst, severe nosebleeds
- Metabolic acidosis, pallor, weight loss
- Birth defects, neonatal withdrawal
- Lung damage, cardiac damage, kidney damage
- Chemical or toxic hepatitis (liver disease)
- Decreased visual acuity (loss of eyesight)
- Aplastic anemia (red blood cell disorder)
- Leukemia (cancer like white blood cell disorder)
- Confusion, fatigue, depression, irritability, hostility, paranoia
- Risk taking and dangerous behaviour
- Aspiration death
- Suffocation
- Sudden sniffing death syndrome

LEGAL STATUS

The possession or use of solvents and aerosols is not prohibited under either federal or Ontario law, and there are few drugs of abuse as cheap and as easily available. Given their many legitimate household and industrial uses, it is difficult to strictly control them.

Alberta and some states in the United States have restricted the sale of glue and made it illegal to sniff solvents. Some manufacturers and retailers voluntarily limit access to these products, and community action to reduce their availability and provide other pastimes for young abusers is recommended.

TOBACCO

(Central Nervous System Stimulant)

ACTIVE INGREDIENT

Nicotine, Tar, and Carbon Monoxide and over 400 other chemicals including selected acids, glycerol, glycol, alcohols, aldehydes, ketones, aliphatic and aromatic hydrocarbons, phenols, and such corrosive gases as hydrogen cyanide and nitrogen oxide,

FORMS OF TABACCO

Cigarettes, cigars, snuff, chewing tabacco.

METHODS OF USE

Smoking, chewing it or snorting snuff up the nose

SHORT TERM EFFECTS

- Increased heart and blood pressure due to nicotine
- Increased breathing rate due carbon monoxide depriving body of oxygen.
- Drop in skin temperature
- Diarrhea and vomiting may occur
- Central nervous system stimulation

LONG TERM EFFECTS

Heart and circulatory disease (e.g. high blood pressure)
Lung disorders such as emphysema and chronic bronchitis
Cancer of the lung, mouth, throat, colon, pancreas, bladder, kidneys, stomach, and cervix
Reduced immunity to infection
Significant increase in gastric and duodenal ulcers

LEGAL STATUS

In Canada, the purchase or possession of tobacco by anyone under 16 years of age is a federal criminal offence under the Tobacco Restraint Act. It is a federal criminal offence to sell or supply tobacco products to anyone under the age of 16. In Ontario, the Minors' Protection Act makes it a provincial offence to sell or supply tobacco in any form to a person under 18 years (except where minors are on errands for their parents or guardians and have a written request). The penalty for this offence is up to \$500. A maximum fine of \$25,000 applies to businesses.

TRANQUILIZERS

(Depressants) Two types, Major (anti-psychotic) and Minor (anti-anxiety)

ACTIVE INGREDIENTS

Major tranquilizers contain compounds such as phenothiazines, indoles, thioxanthenes, butyrophenones, piperazine compounds, and piperidine compounds that are known by names such as Thorazine, Haldol, Clozaril and Risperdal.

Minor tranquilizers contain Benzodiazepines that are marketed under trade names such as Valium, Xanax, Serax, Ativan, Quaaludes, Klonopin, Librium and Tranxene

FORMS OF TRANQUILIZER

Capsule, tablet, liquid

METHODS OF USE

Taken by mouth or injected. These drugs are widely prescribed by physicians when treating a variety of mental or behavioural conditions. Theft of prescription drugs from family or friends is common source of these drugs for youth.

SHORT TERM EFFECTS

The effects of Tranquilizers on a user will vary from one user to another and the same user may react differently following uses of this drug. Short term effects include

- Mild euphoria, drowsiness, confusion, lethargy or memory loss
- Blurred vision, hallucinations, headaches, lightheadedness.
- Impaired motor functions and reduced alertness
- Diminished emotional response to external stimuli
- Slowed breathing and heart rate
- Dry mouth, nausea, vomiting and sweating
- Irritability and hostility
- Increased chance of death in presence of alcohol/other drugs

LONG TERM EFFECTS

- Same as short-term effects
- Physical dependency (addiction)
- Tolerance to drug leads to increased use.
- Strong withdrawal reaction

LEGAL STATUS

Tranquilizers are prescription drugs under Schedule F of Canada's Food and Drugs Act. They are legally available to the public only on prescription from a physician. Unlawful possession is a criminal offense that can lead to a jail term and a criminal record.

For additional information on recognizing, preventing and dealing with the use and abuse of legal and illegal drugs and other substances in youth speak to your physician or go to;

Health Canada
www.nationalantidrugstrategy.gc.ca

and

http://www.hc-sc.gc.ca/iyh-vsv/food-aliment/caffeine_e.html

Centre for Addiction and Mental Health
www.camh.net/About_Addiction_Mental_Health/Drug_and_Addiction_Information/index.html

Canadian Centre for Substance Abuse
www.ccsa.ca/CCSA/EN/TopNav/Home/

Canadian Centre for Ethics in Sports
www.cces.ca/

Canadian Paediatric Society
<http://www.cps.ca/english/statements/11/ii97-01.htm#Types>

Rotary Club of Niagara-on-the-Lake - Drug Addiction & Advice Project
<http://www.daap.ca>



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