

Guide To Drug-Free Sport



CCES

Canadian Centre for Ethics in Sport
Centre canadien pour l'éthique dans le sport

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The information in this publication is provided for reference purposes only. The banned categories and lists of examples in this booklet are subject to change by the appropriate sanctioning authorities.

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The Canadian Centre For Ethics In Sport

The Canadian Centre for Ethics in Sport's (CCES) mission is to promote ethical conduct in all aspects of sport in Canada. As an independent, national, non-profit organization, the CCES is committed to supporting a fair and drug-free sport environment where athletes can compete for the love of the game, while achieving excellence and respecting the ethics of sport. CCES strives for a just, fair and ethical sport system based on fundamental principles that include fair play, drug-free sport, equity, safety and non-violence. As an important part of these responsibilities, the CCES administers Canada's Doping Control Program for amateur sport which includes athlete selection and notification, sample collection, and management of sample analysis results. The CCES also works closely with sport organizations, athletes, coaches and others involved in sport to promote and strengthen the positive values associated with sport.

The CCES provides information services to individuals and organizations about whether substances or practices are banned, restricted or permitted in amateur sport. Please note, however, that the CCES does not "clear" or "approve" consumer products for consumption by Canadian athletes. Questions regarding substances or any other issue related to drug-free sport, should be directed to the CCES.



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Section 1: What Is Doping?

Doping in sport is defined as the use by an athlete of a substance or method banned by the International Olympic Committee (IOC), or prohibited by an International Sport Governing Body. Doping contravenes the ethics of sport and medical science. It is also prohibited by Canadian Sport Governing Bodies and Sport Canada. Encouraging or assisting athletes to use such substances or methods is unethical, and considered a doping-related infraction.

Why is Doping Prohibited?

Doping is prohibited to protect athletes' rights to compete on a level playing field without the use of performance-enhancing drugs. Doping is also prohibited in order to protect athletes from:

- the possible harmful side effects which some substances or methods can produce;
- the potential for their own or other athletes' safety to be compromised.

Doping undermines the fundamental spirit of sport and the collective pursuit of human and sporting excellence.

In addition to the ethical and health consequences surrounding doping, there are also potential legal implications. The distribution of many banned substances (e.g. anabolic agents), if not for medically justified reasons, is illegal in Canada and in many other countries.

Section 2: Doping Control Procedures

Doping control is intended to deter and/or detect the use of banned substances and methods, and therefore protect athletes' rights to fair and ethical competition as well as help to ensure the integrity of amateur sport. The doping control process involves athlete selection, sample collection, laboratory analysis of the samples and the management of laboratory analysis results.

Athlete Selection And Notification

When will athletes be selected for doping control?

Athletes may be selected for doping control at competitions, training camps, at their home or at any other location throughout the year, with little or no notice.

What is Announced testing?

Announced testing refers to pre-scheduled doping control tests that are conducted at designated training camps, competitions or other sporting events with competitive elements.

How are athletes selected and notified for Announced testing?

Athletes are chosen for *Announced* testing as a result of a finishing position or a random selection method. Once selected, a Chaperone or Doping Control Officer (DCO) will approach the athlete following the event and present him/her with an Athlete Selection Order. The Chaperone or DCO will ask the athlete to read and sign the Athlete Selection Order and will then accompany the athlete to the Doping Control Station.

What is Unannounced testing?

Unannounced testing refers to doping control tests that are conducted at any time on a short-notice or no-notice basis. These tests may be conducted during competitions or out of competition, on a random testing or target testing basis.

How are athletes selected and notified for Unannounced testing?

Athletes may be selected for *Unannounced* testing anywhere and at any time during the year. This means that the tests are unscheduled and athletes will not know they are going to be tested until:

- they are notified by telephone and are requested to report to a designated DCO and testing location within twenty-four (24) hours of being notified (short-notice testing);
- an authorized DCO arrives at their training or competition venue, home, work, etc. and presents them with an Athlete Selection Order (no-notice testing).

What happens if an athlete refuses to participate?

Effective doping control requires the cooperation and participation of all athletes. Under the current sport and government policies, a refusal or failure to comply with doping control procedures, without sufficient cause, constitutes a doping-related infraction. For information on penalties, see Section 5 of this Guide.

“Effective doping control requires the cooperation and participation of all athletes.”

Urine Sample Collection

A - Collection Vessel Selection



When you are ready to provide a urine sample, you will select an individually sealed collection vessel. You are responsible for retaining control of your collection vessel and any sample provided until the sample is sealed.

provide an additional sample under observation. The procedures for collection of the sample are repeated until a sufficient volume of urine is provided. Once the DCO indicates that a sufficient volume of urine has been provided, the Partial Sample Form is completed by you, the DCO and the Chaperone. The DCO will indicate that partial samples were provided by attaching the completed Partial Sample Form to the Doping Control Form. The DCO will then direct you to break the seal(s) on the partial sample container(s) and combine all of the partial samples. The following standard procedures are then followed.

B - Provision of Urine Sample



You will provide a urine sample of approximately 100 ml in the presence of a Chaperone who is the same gender as yourself. In order to provide the Chaperone with an unobstructed view of the passing of the sample, you will be required to be unclothed from waist to mid-thigh.

D - Pre-packaged Kit Selection



The DCO will ask you to select a pre-packaged kit which will be used to contain, identify and secure your urine sample. You should select a pre-packaged kit that you are satisfied with. If you are not satisfied with the pre-packaged kit you should select another kit until satisfied.

C - Partial Sample Collection



Many athletes are unable to provide the full amount (100 ml) in one attempt. If the sample provided is less than 80 ml it will be securely sealed in a partial sample container until you are ready to provide an additional quantity of urine. The partial sample container's unique identification number, the approximate volume of urine and the time that the partial sample was sealed will be recorded on a Partial Sample Form. When you are ready to provide an additional sample, you will be asked to select a new individually sealed collection vessel and to

E - Recording of the Secure Transport Container's Identification Number



Once you are satisfied with the pre-packaged kit you will open it and remove all contents from the bag. You will be asked to verify that the identification numbers on the secure transport containers and sample bottles are consistent. The DCO will also check the pre-packaged kit to ensure that it is suitable. The DCO will write the secure transport container's identification number on the Doping Control Form.

F - Urine Sample Division and Packaging



You will pour at least the prescribed minimum volumes of urine into the "A" and "B" bottles, and screw the bottle tops into position.

You will then invert the bottles to ensure that there is no leakage. Finally, you will seal the bottles in the secure transport containers as directed by the DCO.



I - Completion of the Doping Control Form



The DCO will complete the Doping Control Form. You must review the form and ensure that the recorded information is accurate and complete.

You will then be asked to sign the Doping Control Form which states you are satisfied with the manner in which the procedures were carried out. If you are not satisfied with the accuracy of the information on the Doping Control Form or the procedures used for the sample collection, the DCO will indicate "See Supplementary Report" on the Doping Control Form in the space where you would normally sign, and have you complete a Supplementary Report Form stating your concerns.

G - Check pH and Specific Gravity



The DCO will confirm whether the sample satisfies laboratory ranges by testing the pH and specific gravity of your urine sample. If the pH and/or specific gravity readings are outside the specified ranges, you will be required to provide a second sample.

J - Completion of the Testing Process



You are now done! You will receive a copy of the Athlete Selection Order and Doping Control Form for your records. You will also receive a copy of any other form completed during

the collection process (i.e. Partial Sample Form, Supplementary Report Form).

H - Recording of Substances Taken



The DCO will ask you to identify what prescription/ non-prescription medications, nutritional supplements and any other substances

that you have taken within the past 10 days. This information is recorded on the Doping Control Form.

"The commitment to participate in sport with integrity, and to strive to win only by legitimate means."

Photos by: F.Scott Grant

Laboratory Analysis And Results Management

What happens to the sample after the athlete leaves the Doping Control Station?

The samples are packed and sealed into a secured transport bag, which is transported by secure chain of custody to an IOC accredited laboratory. Upon delivery, the laboratory staff will verify that the transport bag and secure transport containers have not been tampered with and that the contents correspond with the enclosed documentation.



Photo by: Don Gaudette

The "A" sample is analyzed and the "B" sample is securely stored. The laboratory will send a certificate of analysis to the CCES within ten (10) days of receiving the sample from the DCO. The National Sport Governing Body (NSGB) will notify the athlete only if the "A" sample returns a positive laboratory finding. If no banned substances are detected in the "A" sample, the "B" sample is destroyed.

What if the "A" sample tests positive and has been determined to be a doping infraction?

The NSGB will notify the athlete that a doping infraction has been determined and the athlete will then be suspended immediately. The NSGB will also inform the athlete about the option of having the "B" sample examined and analyzed, and will provide information to the athlete about protest, appeal and reinstatement procedures.

What happens if the athlete requests that the "B" sample be examined and analyzed?

Upon being notified of a doping infraction, an athlete may request that the "B" sample be examined and analyzed. This request must be in writing and must be made within ten (10) days of the NSGB receiving notification of a doping infraction. This request is to be accompanied by payment of an administration fee of \$300 to the CCES which will be refunded if the doping

infraction is subsequently revoked. Athletes are also requested to notify the CCES in writing if they wish to waive their right to the "B" sample analysis. Where the "B" sample is examined and analyzed, either upon the request of the athlete or as directed by the CCES, the following individuals have the right to be present: the Chief of the accredited laboratory (or designate), the CCES representative, a representative of the NSGB and the athlete and/or the athlete's representative. The purpose of examining the "B" sample is to ensure that the sample is properly identified by means of its identification code number, that the seal on the secure transport container has not been broken, and that there is no evidence of tampering with the sample. Following the examination, the "B" sample is opened and the analysis carried out.

What happens after the "B" sample analysis?

Upon completion of the "B" sample analysis, the Chief of the accredited laboratory will issue a certificate of analysis. When the certificate of analysis does not confirm the positive test result of the "A" sample, the CCES will declare the doping infraction void. As noted above, where an athlete requests an examination and analysis of the "B" sample and this results in an infraction being declared void, the \$300 fee paid by the athlete will be refunded by the CCES.

Photo by: Mike Ridewood



Will an infraction become public knowledge?

Doping infractions are a matter of public record. However, information concerning a doping infraction is not disclosed until the athlete is notified. Notwithstanding, after ten (10) days of reasonable attempts by the NSGB to notify the athlete, the CCES may disclose information concerning a doping infraction if it deems such disclosure to be in the best interest of drug-free sport. As well, information about infractions is

provided by the CCES to all NSGBs and can be obtained by others on request. Each NSGB is responsible for its own policy on the manner in which it publicly releases test results. Contact your NSGB for further information on its public disclosure policy.

Are there other consequences to a doping infraction?

The CCES plays a lead role in investigating all the facts surrounding a doping infraction. In accordance with procedures for determining doping-related infractions, this may involve requesting information from coaches, officials, doctors and others associated with the athlete. Those who assist or encourage an athlete to use banned substances or methods are also subject to sanctions. Any individual who is deemed to have committed an infraction has the right to challenge the finding and appeal the decision, or in some circumstances to apply for early reinstatement.

Photo by: F. Scott Grant



What if an athlete or another individual wishes to protest and/or appeal the infraction?

For more information on the protest and appeal procedures, and penalties for infractions, please refer to Sections 5 and 6 of this Guide. The protest and appeal procedures are explained in detail in the Canadian Doping Control Regulations.

Frequently Asked Questions

Why is the passing of the urine sample witnessed?

The athlete will provide a sample while observed by a Chaperone of the same gender as the athlete. This protects athletes by ensuring that the urine samples they provide are indeed their own. It also prevents athletes from manipulating their samples, such as contaminating the urine or substituting other fluids for the urine.

Why is the urine sample poured into two bottles?

The sample is poured into two bottles, designated "A" and "B", to ensure that a second sample ("B") is available for examination and analysis should the first sample ("A") return a positive test result.

Can someone accompany the athlete to the Doping Control Station?

Athletes are entitled and encouraged to be accompanied by a representative during the sample collection process. The athlete's representative can be a coach, doctor, team official, parent or other person who can help the athlete feel comfortable with the sample collection process. The athlete's representative may not, however, accompany the athlete into the lavatory for the passing of the sample if the athlete is 18 years of age or older. If the athlete is under 18 years of age the representative may, with the athlete's consent, accompany the Chaperone and the athlete into the lavatory but the representative is not permitted to witness the passing of the sample. Athletes with developmental disabilities or visual impairment are to be accompanied by a representative at all times during the sample collection procedures, but again, only the Chaperone is permitted to witness the passing of the sample.

What if the athlete is thirsty after competing?

Athletes will be offered beverages at the Doping Control Station. The beverages should be non-alcoholic, individually sealed, and selected and opened only by the athlete to ensure that no one has tampered with the beverage.

How long does an athlete have to provide the urine sample?

Athletes have as long as they need to provide the required volume of urine. It can take minutes or it can take hours. It is not unusual for an athlete to be unable to provide the sample all at once because of dehydration or nervousness. Sometimes it may take two or three attempts.

Photo by: Don Gaudette



Section 3: Banned Classes Of Substances And Methods

This section provides an overview of the International Olympic Committee's (IOC) list of banned substances and methods, as well as classes of substances subject to restrictions. Athletes are encouraged to contact their coach, their team physician or the CCES (1-800-672-7775 or (613) 521-3340) for questions pertaining to the status of any substances.

Banned Classes of Substances

- A. Stimulants (e.g. amphetamines)
- B. Narcotics (e.g. painkillers)
- C. Anabolic Agents (e.g. testosterone)
- D. Diuretics (e.g. frusemide)
- E. Peptide Hormones, Mimetics and Analogues (e.g. erythropoietin)

Banned Doping Methods

- A. Blood Doping
- B. Administration of Artificial Oxygen Carriers or Plasma Expanders
- C. Pharmacological, Chemical and Physical Manipulation of the Urine (substances or methods which may alter the integrity and validity of a urine sample)

Restricted Substances

- A. Local Anaesthetics
- B. Asthma and Respiratory Ailment Drugs
- C. Glucocorticosteroids
- D. Caffeine
- E. Beta-Blockers
- F. Alcohol
- G. Cannabinoids

Photo by: F. Scott Grant

Are urine samples always analyzed for all substances and methods banned by the IOC?

In competition situations, samples are analyzed for all substances and methods banned by the IOC, as noted in the categories listed on the previous page. For out-of-competition situations, the samples are typically analyzed for the following categories:

- Anabolic Agents
- Peptide Hormones, Mimetics and Analogues
- Diuretics and other modifiers of renal functions, such as probenecid

However, athletes may be tested for any other IOC banned substance under out-of-competition unannounced testing.

Banned Classes Of Substances

The CCES publishes a Drug Classification booklet for athletes, coaches and others involved in sport based on the International Olympic Committee's list of banned substances and methods. This booklet can be obtained through your NSGB or the CCES, and is also available on the CCES website at www.cces.ca.

Stimulants

What are stimulants?

Stimulants are substances which increase alertness and reduce fatigue. They may also increase competitiveness and hostility.

Why are stimulants banned?

Stimulants are banned because they can produce a psychological and physical stimulus which may improve athletic performance.

What are the harmful effects of stimulant use?

Some of the side effects include anxiety and aggression, increased heart rate and blood pressure, dehydration, and increased risk of stroke, cardiac arrhythmia and heart attack.

Photo by: Mike Ridewood



Can you tell if someone is using stimulants?

Physical signs of stimulant use include dilated pupils, increased sweating, nervousness, anxiety, hand tremors, weight loss, insomnia, rapid heart rate and increased blood pressure.

Are drugs such as cocaine, ecstasy, and amphetamines banned?

Recreational drugs such as cocaine, ecstasy and all other amphetamines are banned since they are all stimulants. Their use is illegal and may significantly increase health risks.

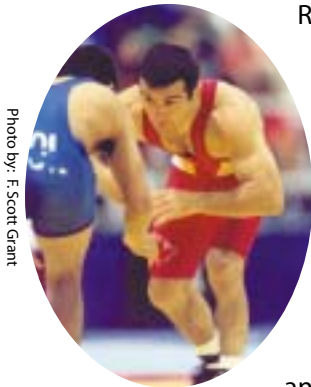


Photo by: F. Scott Grant

Some cough and cold medications contain stimulants that are banned. So what can athletes take for a cough or cold?

Athletes must be very careful when selecting cough and cold medications because they may contain banned substances (e.g. ephedrine, pseudoephedrine). Athletes should refer to the Drug Classification booklet or call the CCES before taking any new drug (prescription, non-prescription or supplement) to ensure that the product does not contain banned or restricted substances.

Narcotics

What are narcotics?

Drugs in this category are primarily substances which mask the effects of pain, some of which include morphine and its chemical and pharmacological analogues.

Why are narcotics banned?

Narcotics are used to mask pain. A false sense of security may cause an athlete to ignore a potentially serious injury, and by continuing to train and/or compete, risk further damage. Also, narcotics may reduce anxiety which may artificially enhance an athlete's performance.

What are the harmful effects of narcotics?

Most of these drugs have dangerous side effects such as loss of balance and coordination, sleepiness, nausea and constipation. Prolonged use can cause physical and psychological dependence. Excessive use could suppress the respiratory system and be fatal.

What if painkillers are needed for an injury?

There are several permitted substances which may be used to treat slight to moderate pain. Check the CCES Drug Classification booklet to identify some of the permitted medications. Athletes should contact their coach, team physician or the CCES if they require further information.

Anabolic Agents

What are anabolic agents?

Anabolic agents are synthetic variations of the male sex hormone, testosterone. Natural testosterone provides "anabolic" (muscle building) and "androgenic" (masculinizing) effects.

Why are anabolic agents banned?

Anabolic agents are intended for medical purposes only, such as the treatment of cancer patients or patients with deficiencies in testosterone. Using anabolic agents to enhance athletic performance gives an unfair advantage and may result in serious health risks.

What are some of the harmful effects of anabolic agents?

Anabolic agents interfere with normal hormone function and may produce harmful side effects such as an increased risk of liver disease, high blood pressure and increased levels of "bad" cholesterol, thereby increasing the risk of a cardiovascular incident. Perhaps as important are the mind-altering consequences of the use of these drugs. Abuse of anabolic agents may result in psychological dependence, depression and/or the potential for violence. The list of potential side effects is long; some are listed on the following page.

Photo by: F. Scott Grant



In Males:	In Females:	In Adolescents:
Acne	Masculinization	Severe acne on the face and body
Shrunken testicles*	Abnormal menstrual cycles	Premature closure of the growth plates of the bones leading to stunted growth
Decreased sperm production which can lead to impotence*	Deepening of the voice*	
Enlarged prostate gland	Acne	
Breast enlargement	Excessive hair growth on the face and body*	
Premature baldness	Enlarged clitoris*	
Potential for kidney and liver dysfunction	Increased aggressiveness, mood swings	
Increased aggressiveness, mood swings		

** These effects may be permanent with prolonged use.*

Diuretics

What are diuretics?

Diuretics act on the kidney and cause the excretion of large amounts of urine to eliminate excess body water. They are commonly used by athletes for two purposes: quick, temporary weight loss to meet weight categories within specific sports and to "flush out" other substances or drugs from the body in an attempt to avoid detection of their use.

Why are diuretics banned?

In addition to the health risks, the use of diuretics to reduce weight in order to compete in a lower weight class or to dilute a urine sample are manipulations that contravene the true spirit of sporting excellence.



Photo by: Mike Ridewood

What are the harmful effects of diuretic use?

The use of diuretics can cause dizziness, dehydration, muscle weakening and cramping, a drop in blood pressure and can lead to cardiac irregularities caused by electrolyte imbalance. Diuretics can also severely affect an athlete's ability to tolerate heat.

Peptide Hormones, Mimetics And Analogues

What are peptide hormones, mimetics and analogues?

Peptide hormones act as messengers from one organ to another to stimulate various functions of the body such as growth, sex drive, behaviour and sensitivity to pain.

Mimetics are substances that imitate the action of other related drugs. Analogues are chemically produced drugs designed to have similar effects to the naturally produced compounds in the body.

Photo by: Mike Ridewood



What are some of these analogues and what are their side effects?

Human Chorionic Gonadotrophin (HCG): HCG is a hormone that is produced in the placenta during pregnancy and can promote an increase in the production of natural male and female steroids. The administration of HCG in males leads to an increase in the body's natural levels of androgenic steroids and is equivalent to the administration of testosterone. The use of HCG is banned for males only. HCG use can cause headaches, irritability, depression, fatigue and gynecomastia (development of female breast tissue in males).

Adreno Corticotrophin (ACTH): ACTH is abused to increase the levels of naturally produced corticosteroids to obtain their euphoric effect. Any administration of ACTH is considered to be the same as an oral, intramuscular or intravenous application of glucocorticosteroids and is therefore banned.

Human Growth Hormone (HGH): Human growth hormone is a naturally occurring hormone which affects metabolism and muscle building. There are, however, dangerous side effects related to the abuse of this drug. Excess HGH use can cause acromegaly, which is characterized by distorted growth of internal organs, bones and facial features and the enlargement and thickening of fingers, toes, ears and skin. HGH can also cause diabetes, heart and thyroid disease, menstrual disorders, decreased sexual desire, impotence and shortened life span.

Photo by: F. Scott Grant



Erythropoietin (EPO): The hormone erythropoietin (EPO) is produced by the kidneys and stimulates the production of red blood cells by the bone marrow. In traditional medical practice, a synthetic form of EPO is used to treat patients with anemia of renal origin. Like blood doping, some athletes in endurance sports have abused EPO because it increases the number of red blood cells, thereby increasing the oxygen supply to the muscles. Abuse of the injectible drug EPO carries severe health risks, such as increased risk of blood clots, stroke and heart disease. There is also the risk of contracting infectious diseases such as hepatitis and HIV/AIDS if needles are shared.

Banned Doping Methods

Blood Doping

What is blood doping?

Blood doping, also known as "blood packing" or "blood boosting", is the intravenous administration of blood or blood related products in order to raise the blood's oxygen carrying capacity, thereby enhancing aerobic athletic performance. It may involve the use of blood previously withdrawn from oneself or from another person.

Why is blood doping banned?

The intravenous administration of blood to an athlete in order to enhance athletic performance gives an unfair advantage. Blood doping also carries dangerous health risks, including the development of allergic reactions (rash, fever, etc.) if the wrong blood type is used, jaundice, circulation overload, blood clots, and metabolic shock. There is also the risk of the transmission of infectious diseases such as hepatitis and HIV/AIDS.

What are the dangers of sharing needles?

Individuals who inject products by sharing needles increase the risk of contracting infectious diseases such as hepatitis and HIV/AIDS. This is as true for injecting steroids and blood doping as it is for injecting crack and heroin.

Artificial Oxygen Carriers And Plasma Expanders

What are artificial oxygen carriers?

Artificial oxygen carriers are chemicals used to increase the ability to carry extra oxygen in the blood (e.g. Perfluorocarbons (PFCs)).

Why are artificial oxygen carriers banned?

There have been some reports of athletes using these products to increase the oxygen carrying capacity of their blood in order to enhance aerobic athletic performance.

What are some of the harmful side effects of artificial oxygen carriers?

The harmful side effects of artificial oxygen carriers can be extremely serious, as it is difficult to measure correct doses. Side effects of PFCs include a transient fever, reduction in the platelet count and potential overloading of the body's white blood cells.

What are plasma expanders?

Plasma expanders are used to increase the water content of the blood.

Photo by: Mike Ridewood



Why are plasma expanders banned?

Some athletes may use plasma expanders, such as hydroxyethyl starch (HES), to mask the effects of erythropoietin (EPO).

What are some of the harmful side effects of plasma expanders?

Harmful side effects of plasma expanders may include allergic reactions and anaphylactic shock.

Urine Manipulation

What is meant by pharmacological, chemical and physical manipulation of the urine?

The IOC prohibits the use of substances or methods which alter the integrity and validity of a urine sample. Examples of banned practices include catheterization, urine substitution and/or tampering, the use of substances which modify kidney function (e.g. Probenecid) and the administration of epitestosterone.

“There are many other victims of drug abuse in sport but none is a greater victim than the athlete and coach who have competed drug-free – who played the game by its rules.”

Robert Armstrong, quoted in the Honourable Charles L. Dubin, Commission of Inquiry Into the Use of Drugs and Banned Practices Intended to Increase Athletic Performance (Ottawa: Minister of Supply and Services Canada, 1990), 488.

Restricted Substances

Local Anaesthetics

What about local anaesthetics? Are they banned?

There are restrictions on the use of local anaesthetics. They are permitted only when medically justified and under the following conditions:

- when bupivacaine, lidocaine, mepivacaine, procaine and related substances are used, with the exception of cocaine; vasoconstrictor agents (e.g. adrenaline) may be used in conjunction with local anaesthetics;
- only local or intra-articular injections can be administered.

Asthma And Respiratory Ailment Drugs

What can athletes take for asthma?

Athletes must be cautious when selecting asthma and respiratory ailment drugs. Many are prohibited because they contain banned stimulants. Athletes can check the Drug Classification booklet for examples of banned and restricted asthma and respiratory ailment drugs listed by Canadian brand name. Athletes are strongly encouraged to call the CCES or talk to their team physician if they need more information. Written declaration to the CCES is required for certain restricted asthma medications.

Glucocorticosteroids

Are there restrictions on the use of glucocorticosteroids?

Stronger restrictions have been required due to the increasing non-therapeutic use of glucocorticosteroids. In conventional medicine, glucocorticosteroids are mainly used as anti-inflammatory drugs which also relieve pain. The use of glucocorticosteroids is now banned except for topical use (ear, eye and skin), inhalation therapy (asthma, allergic rhinitis) and local or intra-articular injections. Therefore, the use of glucocorticosteroids orally, intramuscularly or by intravenous injection is banned. Some examples of anti-inflammatories that are permitted are listed in the CCES Drug Classification booklet.

Caffeine

Why is caffeine a restricted substance?

The IOC restricts caffeine because it has a stimulant effect when consumed in large quantities. Athletes have attempted to improve their performance by using large amounts of caffeine. Large doses of caffeine can raise an athlete's metabolic level, body temperature, blood pressure and blood sugar level. At extremely high doses, it can cause nausea, diarrhea, insomnia, trembling, headaches and nervousness.

Photo by: Mike Ridewood



Can I drink coffee or other beverages containing caffeine?

A positive finding will only be reported if the concentration of caffeine in the urine exceeds 12 micrograms/millilitre. Normal ingestion of coffee, tea or many caffeine-based drinks such as colas generally will not reach that limit. However, the ingestion of caffeine tablets or the use of caffeine suppositories or injections will likely result in a positive test.

Beta-Blockers

What are beta-blockers?

Beta-blockers are drugs commonly used for heart disease to lower blood pressure and decrease the heart rate. They may also be used in the treatment of migraines and to control tremors.

When are beta-blockers banned?

In sports such as shooting or archery, where a steady arm or trigger finger is important, beta-blockers are banned because they might be used to slow the heart rate and steady the nerves, giving an athlete an unfair advantage. Check with your NSGB to determine whether beta-blockers are banned in your sport.

How can beta-blockers be harmful?

In addition to adversely affecting endurance performance capacities, abuse of beta-blockers can cause heart failure, asthma, depression, sleep disorders, and sexual dysfunction.

Alcohol

Is alcohol banned?

Alcohol above a specified level is banned in some sports. Tests for alcohol levels may be conducted at the request of an International or National Sport Federation, as has already been done in Fencing and in the shooting events of Modern Pentathlon. Check with your NSGB about their policy on alcohol use.

Cannabinoids

Are cannabinoids (e.g. marijuana, hashish) banned?

Cannabinoids above a specified level are prohibited at the Olympic Games and by some International and National Sport Federations. Their use in Canada is illegal. A concentration in the urine of 11-nor-delta 9-tetrahydrocannabinol-9-carboxylic acid (carboxy-THC) greater than 15 nanograms per millilitre is prohibited. Contact your NSGB for more information.

“Doping control is intended to protect athletes’ rights to fair and ethical competition as well as help to ensure the integrity of amateur sport.”

Section 4: Vitamins, Herbal And Nutritional Supplements

The use of natural health products has increasingly gained popularity among the general Canadian population as well as among athletes at all levels within the sport community. Some vitamins, herbal and nutritional supplements may contain banned or restricted substances, in particular ephedrine and caffeine.

Many of these products contain botanical or so-called "natural" sources of ephedrine. Ephedrine is an amphetamine-like stimulant that is banned in sport. Athletes should avoid all products listing ma huang, chinese ephedra, ma huang extract, ephedra, ephedra sinica, ephedra extract, ephedra herb powder, ephedronin or ephedrine as ingredients. Any one of these ingredients listed on the label indicates the presence of ephedrine in the product.

The herbal and nutritional supplement industry is not subject to stringent regulatory requirements. It is not possible for the CCES or any other organization to guarantee that all the ingredients in the product have been listed on the packaging and/or whether the composition has not varied from batch to batch, without notice.

Therefore, the CCES cannot provide a definitive response to requests about the status of these products. Athletes are ultimately responsible for what they consume. If athletes are unsure of what they are consuming, they should not take that particular product.

A well balanced diet should provide athletes with the nutrients they require. For further information on sport nutrition contact your provincial Sport Medicine Council.

*"I train to win. I focus to win. I play to win,
I don't cheat to win."*

Frequently Asked Questions

What are natural health products?

According to Health Canada, the term "natural health products" encompasses the following items: homeopathic preparations; vitamins and minerals that meet the requirements of a class monograph; any drug that contains a plant, mineral or animal substance for which therapeutic or disease prevention activity is claimed. This includes traditional herbal medicines, traditional Chinese medicines, Ayurvedic (East Indian) medicines and traditional aboriginal (North American) medicines where the medical use is based solely on historical and ethnological evidence and not conventional scientific standards.

What are traditional herbal medicines?

A traditional herbal medicine is a finished drug product intended for self-medication that contains active herbal ingredients that have received relatively little attention in world scientific literature but for which traditional or folkloric use is well documented.

What constitutes a "high quality" product?

Determining what constitutes a "high quality" product is much more difficult for herbs than for pharmaceutical products. Pharmaceutical drugs contain well-characterized and structurally defined chemical constituents that exert pharmacological effects.

Plants by their very nature are highly variable, not only in their physical features but also in their chemical content. Intrinsic factors such as genetics and extrinsic factors, including planting time, environmental conditions throughout the growing season, time of harvest, method of drying and processing, and the solvent used for extraction, may all affect the chemical composition of the final product and hence both its safety and efficacy.



Photo by: F. Scott Grant

What is contamination?

The unintentional inclusion of the wrong plant part, the wrong plant species or other foreign material is referred to as "contamination". Inclusion of the wrong plant part will dilute the medicine, and in the worst case may pose a health risk by introducing toxic constituents.



Photo by: F. Scott Grant

Bacterial or fungal contamination of botanical products is also a serious concern. Microbial contamination usually occurs because of improper drying or storage of the plant material and typically results in the degradation of the plant's constituents. Microbial contamination can also render plant material toxic, either by transforming the chemicals in the plant material or through the production of toxic compounds by the microbes. In addition, contamination with pesticides or herbicides is a concern and scientific evidence supports the legitimacy of this concern.

What is adulteration?

Intentional substitution with another plant species or intentional addition of a foreign substance to increase the weight or potency of the product or to decrease its cost is referred to as "adulteration". Product adulteration takes many different forms. The most common is the addition of inexpensive materials (e.g. starch, lead or cheap herbs) to increase the product weight or to allow the sale of "exhausted" botanicals (when herbs are extracted and only the remaining dried husks are sold). The form of adulteration that poses the greatest health risks is the addition of undeclared pharmaceutical agents to herbal products.



Photo by: Mike Ridenwood

Can it be assumed that natural health products are safe?

There is a common misconception that all "natural" herbal products are "safe" and that "more is better". Because of this erroneous belief, some people consume doses far in excess of the label recommendations. Some of these products contain potent diuretics or stimulants such as caffeine, ephedrine and amphetamines which may have serious health implications and are banned or restricted. It has been determined that the use of dietary supplements containing ephedra may pose health risks to some individuals. Dietary supplements that contain ephedra (sometimes called ma huang) are widely promoted and used as a means of losing weight and/or increasing energy. A number of reports of adverse reactions to dietary supplements that contain ephedra, some of which resulted in permanent injury or death, have appeared in medical literature. Some of the reported adverse events involved the central nervous system (e.g. strokes, seizures), and cerebrovascular and cardiovascular systems.

Information in this section drawn primarily from *Herbs - Everyday Reference for Health Professionals* produced by the Canadian Pharmacists Association and the Canadian Medical Association.

"Striving to win involves total effort, doing one's best, within the rules of the contest."

Saul Ross "Winning and Losing in Sport: A Radical Reassessment", in Galasso, ed., *Philosophy of Sport*, 59.

Section 5: Penalties

Doping Infractions

A doping infraction is determined when a banned substance is found in an athlete's sample or when the use of a banned method is detected. See Section 3 of this Guide for overview information on the IOC's categories of banned classes of substances and methods.

Doping-Related Infractions

A doping-related infraction is an infraction other than a doping infraction which is in contravention of the Canadian Policy on Doping in Sport. Doping-related infractions include an individual or Sport Governing Body who:

- admits to a doping infraction or doping-related infraction;
- refuses or fails to comply with doping control procedures;
- condones, counsels, imports, sells, supplies, possesses (without valid medical reasons), secures or administers banned substances or practices;
- avoids or aids in avoiding doping control procedures;
- fails to cooperate with, fails to recognize or fails to adhere to sanctions.

Please refer to the Canadian Policy on Doping in Sport for additional information on infractions.

What are the penalties for doping infractions and doping-related infractions?

Canadian athletes or other individuals who commit doping or doping-related infractions will be subject to the sport eligibility and government sport funding penalties outlined below.

Athletes

The penalties for a doping infraction or doping-related infraction by an athlete are:

- First Infraction – four (4) years sport ineligibility and permanent ineligibility for Federal sport funding
- Second Infraction – permanent sport ineligibility and permanent ineligibility for Federal sport funding

Individuals other than athletes

The penalty for a doping-related infraction by an individual other than an athlete is:

- permanent sport ineligibility and permanent ineligibility for Federal sport funding

“Protecting athletes’ rights to compete on a level playing field.”

Section 6: Protests And Appeals

Can infractions be protested and appealed?

Doping infractions may be protested and appealed, and doping-related infractions may be appealed according to the procedures explained in the Canadian Doping Control Regulations.

How does an athlete file a protest?

Upon determination of a doping infraction, an athlete may submit a written protest to the CCES. A protest must be based on one or more of the following grounds:

- A. Identity of the sample
- B. Security of the sample
- C. Integrity of the sample
- D. Validity and reliability of the test result

How is an appeal initiated?

An athlete who has committed a doping infraction must file a protest and a decision on this protest must be rendered before an athlete may initiate an appeal. If the athlete filed a protest and the protest is dismissed, the athlete may then appeal the determination of a doping infraction. An athlete, any other individual or an organization determined to have committed a doping-related infraction may initiate an appeal of the decision. Appeals of doping-related infractions are not preceded by filing a protest. Appeals are heard by independent arbitrators.

Please refer to the Canadian Doping Control Regulations for detailed information on protests and appeals.

Section 7: Reinstatements

If suspended as a result of a doping or doping-related infraction, does that mean the end of an athlete's competitive career?

Athletes, individuals or organizations sanctioned under the Canadian Policy on Doping in Sport may seek reinstatement of sport eligibility and, in some cases, reinstatement of eligibility for Federal sport funding.

What are the different categories of reinstatement?

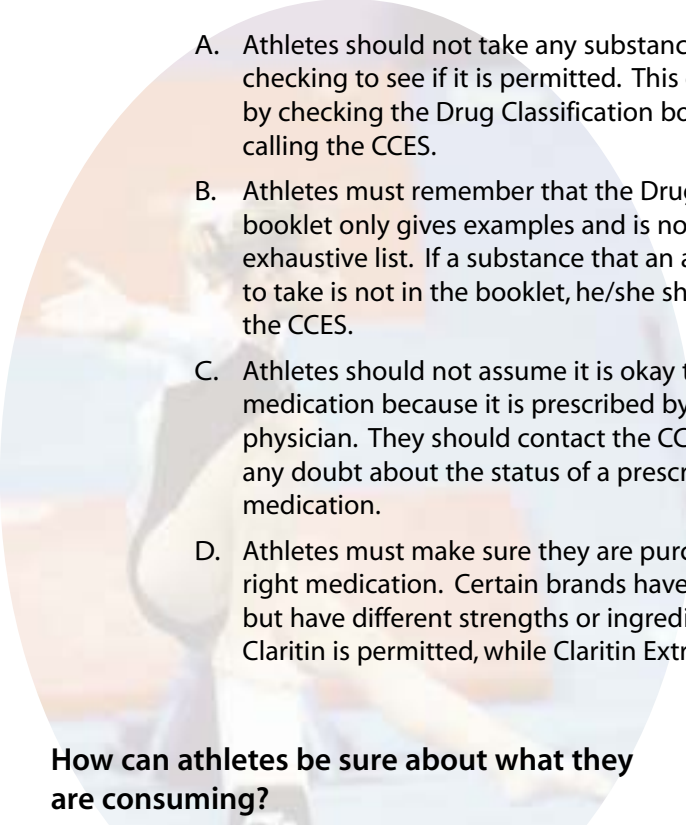
Reinstatement may be granted in the following circumstances only:

- A. Category I – where the infraction is a first doping infraction involving banned substances in the stimulant class and where the substance was administered for a medical purpose or ingested as part of a nutritional product.
- B. Category II – where exceptional circumstances surrounding the infraction have been proven.
- C. Category III – where the requirements for sport reintegration have been met.
- D. Category IV – upon completion of a penalty.

Please refer to the Canadian Doping Control Regulations for detailed information on reinstatements.


Concluding Advice For Athletes

When it comes to drug-free sport, the bottom line is that athletes are responsible for any substance that they ingest and that they must know what they are consuming. Here are some helpful hints:

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- A. Athletes should not take any substance without first checking to see if it is permitted. This can be done by checking the Drug Classification booklet or by calling the CCES.
 - B. Athletes must remember that the Drug Classification booklet only gives examples and is not an exhaustive list. If a substance that an athlete wishes to take is not in the booklet, he/she should contact the CCES.
 - C. Athletes should not assume it is okay to take a medication because it is prescribed by their physician. They should contact the CCES if there is any doubt about the status of a prescribed medication.
 - D. Athletes must make sure they are purchasing the right medication. Certain brands have similar names but have different strengths or ingredients (e.g. Claritin is permitted, while Claritin Extra is banned).

How can athletes be sure about what they are consuming?


If an athlete is unsure about a substance, he/she is encouraged to contact the CCES toll-free at 1-800-672-7775 (Canada-wide) or at (613) 521-3340, by email at info@cces.ca, or through the CCES website at www.cces.ca.



"I love competing, I love the rush, the energy, the power – that's sport. The second you use drugs, it's not sport anymore."



Canadian Centre for Ethics in Sport
Centre canadien pour l'éthique dans le sport



Canadian Centre for Ethics in Sport

1-800-672-7775 (Canada-wide) or (613) 521-3340

Email: info@cces.ca

Website: www.cces.ca