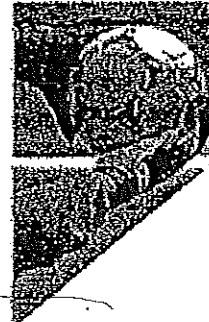
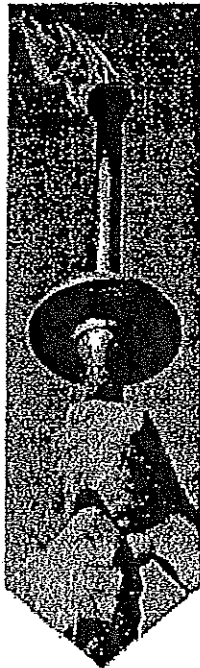
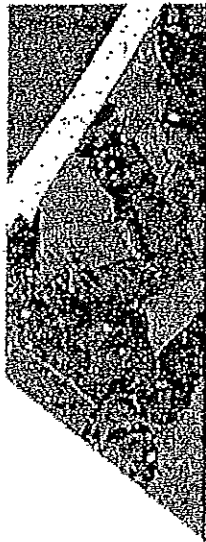


USADA

UNITED STATES ANTI-DOPING AGENCY



USADA Guide
to
Prohibited Classes of Substances
and
Prohibited Methods of Doping



**United States Anti-Doping Agency
Guide
to
Prohibited Classes of Substances
and
Prohibited Methods of Doping**

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INTRODUCTION

Doping violates the ethics of both sport and medical science, and is prohibited. The Olympic Movement Anti-Doping Code (Code), along with clarifications by the International Olympic Committee (IOC) and its Medical Commission, has been distributed for the year 2000 with the List of Prohibited Classes of Substances and Prohibited Methods of Doping.

The Code states that doping:

- contravenes the fundamental principles of Olympism and sports and medical ethics,
- is forbidden; and
- recommending, proposing, authorizing, condoning or facilitating the use of any substance or method covered by the definition of doping or trafficking therein is also forbidden.

The Code defines doping as:

- the use of an expedient (substance or method) which is potentially harmful to athletes' health and/or capable of enhancing their performance, or
- the presence in the athlete's body of a Prohibited Substance or evidence of the use thereof or evidence of the use of a Prohibited Method.

The definitions used by individual International Federations may vary.

A fundamental objective of the Olympic Movement is to eliminate doping from sport. Doping threatens the health of the athlete, the integrity and dignity of amateur sport, and public support of the Olympic Movement. Drug testing followed by punitive action and the threat of public disclosure, in tandem with drug abuse education and ethical considerations, are in place as deterrents to doping.

The United States Anti-Doping Agency maintains a drug testing and education program, distributes this Guide, seeks to enhance research efforts and utilizes an impartial adjudication system, and provides a confidential toll-free Drug Reference Line for clarification on relevant matters (1-800-233-0393).

MEDICATION CAUTIONS

- Prior to taking any medication or supplement, check whether any substance in the product is prohibited or restricted. Call USADA's Drug Reference Line (1-800-233-0393).
- Know the exact name of your medication since many products sound alike. For example, Tylenol and Afrin Nasal Spray are allowed, however, Co-Tylenol, Afrin tablets and Afrinol contain Prohibited Substances.
- Plain antihistamines are allowed in most sports, however, any combination of an antihistamine with a decongestant is prohibited and may not be in your system when you compete. New products of this type appear on the market on a regular basis.
- This Guide provides examples of substances in Prohibited Classes. **Not all Prohibited Substances are listed in this Guide. This list is subject to change and is updated and revised as necessary.** Check to make sure you have the most up-to-date information.
- The detected presence of a Prohibited Substance constitutes doping even if the substance is not listed as an example.
- New drugs containing Prohibited Substances, some of which may be especially designed for doping purposes, are prohibited by inclusion as "related substances." The term "and related substances" describes drugs having pharmacological action(s) and/or chemical structure similar to a Prohibited Substance. If a substance is not listed, it may still be prohibited as a "related substance."
- Even when used for legitimate medical treatment, the detected presence of a Prohibited Substance constitutes doping and will be subject to penalties.

IT IS IMPORTANT TO NOTE THAT:

- Ignorance is never an excuse. It is the personal responsibility of each athlete to ensure that he or she does not allow any Prohibited Substance to enter his or her system or use or allow the use of any Prohibited Method.
- Whether or not the use of a Prohibited Substance or Prohibited Method enhances performance does not matter.
- The presence of a Prohibited Substance in an athlete's urine constitutes an offense, regardless of the manner in which the Prohibited Substance came to be in the athlete's system.
- The inclusion of a Prohibited Substance or Prohibited Method in the Code is not subject to appeal.
- The IOC List of Prohibited Substances and Prohibited Methods contained in the Code and reported in this Guide may be changed at any time. It is the athlete's responsibility to stay current with those changes.
- Certain International Federations (IFs) have their own lists of Prohibited Substances. It is the athlete's responsibility to know the rules of his or her IF.
- References to specific products are for example purposes only and do not constitute an endorsement or recommendation of these drugs by USADA.

IOC LIST OF PROHIBITED CLASSES OF SUBSTANCES AND PROHIBITED METHODS OF DOPING

I. PROHIBITED CLASSES OF SUBSTANCES

- A. Stimulants (including Beta-2 Agonists)
- B. Narcotics
- C. Anabolic Agents*
 - 1. Anabolic Androgenic Steroids*
 - 2. Beta-2 Agonists*
- D. Diuretics*
- E. Peptide Hormones, Mimetics and Analogs (and all releasing factors)*

II. PROHIBITED METHODS*

- A. Blood doping
- B. Administering artificial oxygen carriers or plasma expanders
- C. Pharmacological, chemical and physical manipulation

III. CLASSES OF PROHIBITED SUBSTANCES IN CERTAIN CIRCUMSTANCES

- A. Alcohol**
- B. Cannabinoids**
- C. Local Anesthetics**
- D. Glucocorticosteroids
- E. Beta-Blockers**

* These classes of Prohibited Substances (and related substances) and Prohibited Methods are typically tested in the No Advance Notice (NAN) Program. Note, however, that some IFs may have more extensive NAN testing lists.

** These classes of Prohibited Substances (and related substances) and Prohibited Methods may be tested at the request of the Responsible Authority. Normally only tested for if prohibited by the International Federation (IF). (Tests will be conducted for cannabinoids at the Olympic Games.)

I. PROHIBITED CLASSES

(All Related Substances are Prohibited.)

A. STIMULANTS

Although these drugs produce both psychological and physical stimuli to athletic performance, it is important to note that the side effects can be very detrimental. Amphetamines and related compounds have the most notorious reputation for producing problems in athletes. There is no medical justification for the use or abuse of stimulants such as amphetamines or cocaine in sport.

Effects include:

- Increased alertness
- Insomnia
- Inhibited judgment/decision making
- Anxiety
- Possible increased competitiveness and hostility
- Addiction and withdrawal phenomena are common
- Reduced fatigue
- Aggressiveness
- Increased potential for dehydration
- Tremor
- Alterations in hemodynamics (increased heart rate and blood pressure)
- Increased risk of stroke, cardiac arrhythmia, heart attack, and sudden death

Examples: See Table 1: Prohibited Stimulants, Table 2: Over-the-Counter Medications, Table 3: Caffeine, and Table 4: Beta-2 Agonists.

TABLE 1: Examples of Prohibited Stimulants

Generic Name	Pharmaceutical Preparations/Examples
Amfepramone (Diethylpropion)	Apisate, Tenuate, Tepanil
Amphetamine	AN-1
Amphetamine	Survector
Amphetamine	Amphisol, Dapli, Daptizole
Amphetamine (Dextroamphetamine)	Benzedrine, Delcobese, Dexedrine, Obetrol
Bambuterol	Bambec
Bemegride	Meglמיד
Benzphetamine	Didrex
Bromantfin	Bromantan
Caffeine* >12 mcg/ml	(see table #3)
Carphedon	
Chlorphentermine	Lucofen, Pre Sate
Clobenzorex	Asentix, Dirintel
Clorprenaline	Asthone, Vortel
Cropropamide	(Micoren)
Crotethamide	(Micoren)
Desoxyephedrine	(see table #2)
Dimetamphetamine	Metrotonin
Ephedrine** >10mcg/ml	Asthmahaler, Asthmanefrin, Bronkaid, Primatene, Rynatuss, Tedral (see table #2)
Etafedrine	Mercodal, Decapryn, Nethaprin
Etillofrine	Bioflutin N, Circupon, Confidol, Effortil, Etl-Pure, Tonus-Forte-Tabliten
Etamivan	Cialvan, Vandid
Etilamphetamine	Apelinil

Fencamfamine	Allimine, Envirol, Phencamine
Fenfluramine (Dexfenfluramine)	Dima-Fen, Fenured, Pesos, Ponderal, Ponderax, Pondimin, Ponfural, Redux
Fenetylline	Captagon
Fenproporex	Antibes Retard, Appetizugler
Formoterol	Atock
Furfenorex	Frugal, Frugalan
Heptaminol	Eoden, Heptanol
Isoetharine HCL	Bronkosol, Bronkometer, Dilabron, Numotac
Isoproterenol	Isuprel, Metihaler-ISO, Norisodrine
Meclofenoxate	Brenal, Lucidril
Mefenorex	Doracil, Podlinit, Rondimen
Mephentermine	Wyamine
Mesocarb	Mesocarb, Sydnocarb
Metaproterenol	Alupent, Metaprel
Methamphetamine	Crank, Crystal Meth, Desoxyn, Met-Ampl, Speed
Methyl-Benzoyllecgonine	Cocaine, Crack, Ecgonine
Methylenedioxyamphetamine	Ecstasy, XTC
Methoxyphenamine	Orthoxicol Cough Syrup
Methylephedrine** >10mcg/ml	Methep, Tzbraina
Methylphenidate	Ritalin
Morazone	Rosimon-Neu
Nikethamide	Coramine
Norfenfluramine	
Norpseudoephedrine**** >5 mcg/ml	Cathine, Adiposetten N
Parahydroxyamphetamine	Amphetamine
Pemoline	Cylert, Dynalert, Tradon
Pentetrazol/Pentylentetrazol	Leptazol
Phendimetrazine	Bontril, Phenzine, Plegine
Phenmetrazine	Preludin
Phenylephrine (systemic)	(Phenylephrine tablets)
Phenylpropanolamine** >25mcg/ml	(see table #2)
Phentermine	Apidex-P, Fastin, Ionamin
Pholedrine	Adyston, Jatamasin, Kontagripp-RR, Ortho-Maren Retard, Pentavenon, Venosan
Picrotoxine	Cocculin
Pipradol	Alertonic, Meratran
Prolinane	Katovit, Promotil, Villescon
Propylhexedrine	Benzedrex Inhaler
Pseudoephedrine** >25mcg/ml	(see table #2)
Pyrovalerone	Centron, Thymerglx
Reproterol	Bronchodil
Salbutamol***	(see table #4)
Salmeterol***	(see table #4)
Selegiline	Anipryl, Eldepryl, Plurimen
Strychnine	Movellan
Terbutaline***	(see table #4)

* For caffeine the definition of a positive is a concentration in the urine greater than 12 mcg/ml.

** For ephedrine and methylephedrine, the definition of a positive is a concentration in the urine greater than 10 mcg/ml. For phenylpropanolamine and pseudoephedrine, the definition of a positive is a concentration in the urine greater than 25 mcg/ml.

*** Permitted by inhaler only to prevent and/or treat asthma and exercise-induced asthma. Prior to the particular competition, written notification of asthma and/or exercise-induced asthma by a respiratory or team physician is necessary to USADA and the Relevant Medical Authority.

**** For norpseudoephedrine (cathine), the definition of a positive is a concentration in the urine greater than 5 mcg/ml.

Over-the-Counter Products Containing Stimulants

Prohibited stimulants are often present in over-the-counter (OTC) medications such as decongestants, diet aids, and headache remedies. Because these medications are readily available and commonly used, athletes must be careful not to inadvertently or innocently take preparations containing these Prohibited Substances. Athletes should call USADA's Drug Reference Line (1-800-233-0393) before taking any new drug (prescription or OTC) or supplement to ensure that the product contains no Prohibited Substances.

- Products for colds, flu, or hay fever should not be taken without first checking to ensure that the product does not contain a Prohibited Substance.
- New and changing products continuously appear on the market and products carrying the name "decongestant" are likely to contain Prohibited Substances.
- Certain medications may also contain prohibited narcotics.

Table 2: Over-the-Counter Products Containing Prohibited Stimulants

- This list of examples is not complete.
- Any product labeled "D," "cold," "sinus," "non-drowsy," etc., should be treated as suspect for containing a prohibited stimulant.
- Therapeutic weight loss aids should be treated as suspect for containing a prohibited stimulant.

Generic Name	Pharmaceutical Preparations/Examples
I-Methamphetamine† (Desoxyephedrine)	Vicks Inhaler
Pseudoephedrine** >25 mcg/ml	Actifed, Afrinol, Claritin D, Co-Tylenol, Drixoral, Efidac 24, Formula 44M Multi Symptom Cough, Mini Thin Pseudo, Sudafed, Sine-Off
Phenylpropanolamine** >25mcg/ml	Acutrim 16 Hour, Alka-Seltzer Plus, Allerest, Contac, Dexatrim, Entex, Sinarest, Sine-Aid, Tavist D, Triaminic
Propylhexedrine	Benzedrex inhaler
Ephedrine** >10 mcg/ml	Bronkaid, Ephedra, Thermogenics Supplement, Vicks Nighttime Cold Medicine
Herbal Ephedrine** >10 mcg/ml	Ma Huang (Other examples include: Bishop's Tea, Brigham Tea, Chi Powder, Energy Rise, Excel, Joint Fir, Mexican Tea, Miner's Tea, Popollilo, Super Charge, Teamster's Tea)

† I-Methamphetamine cannot be distinguished from the street drug d-Methamphetamine in routine tests.

** For ephedrine and methylephedrine, the definition of a positive is a concentration in the urine greater than 10 mcg/ml. For phenylpropanolamine and pseudoephedrine, the definition of a positive is a concentration in the urine greater than 25 mcg/ml.

Know the exact name of your medication since many products sound alike. For example, Tylenol and Afrin Nasal Spray are allowed, however Co-Tylenol, Afrin tablets and Afrinol contain Prohibited Substances.

Caffeine

Caffeine is a central nervous system stimulant that is commonly found in coffee, tea, chocolate, and soft drinks. In addition, many cough and cold, supplement, and pain reliever combinations contain caffeine. A concentration greater than 12 micrograms of caffeine per milliliter in the urine is considered doping. Typically, a couple of cups of U.S. brewed coffee should not result in urinary concentrations of greater than 12 mcg/ml. However, one should not attempt to predict the urinary concentrations of caffeine since they vary significantly for each individual and are influenced by factors such as age, sex, body size, weight, diet, and metabolic rate. Be aware that other forms of caffeine (e.g., tablets) do not metabolize at the same rate and produce much higher urine concentrations of caffeine. **Do not take any pill containing caffeine before or during a competition.**

- The detection of caffeine in urine in a concentration greater than 12 mcg/ml is a doping violation.
- Urinary concentrations of caffeine are affected by age, sex, body size, weight, diet, and metabolic rate.

GUARANA

Guarana is often promoted as an energy enhancing herbal product. Guarana (*paullinea cupana*) is a tropical Brazilian fruit with seeds, that have a caffeine content 2-4 times that of coffee. Therefore, the same precautions need to be taken with guarana as with any product containing caffeine. Examples of products containing Guarana include: Bawls Guarana, Energy Guarana, Energy Guarana Powder, Guts, and Tropisoda.

Table 3: Products Containing Caffeine

Product	Approximate Amount/Dose
Decaffeinated coffee	2-4 mg per 7 ounces
U.S. Brewed Coffee	80-135 mg per 7 ounces
Tea	40-60 mg per 7 ounces
Chocolate	Varies
Coca Cola	46 mg per 12 ounces
Tab	47 mg per 12 ounces
Dr. Pepper	40 mg per 12 ounces
Diet Pepsi	36 mg per 12 ounces
No Doz*	200 mg per tablet
Vivarin*	200 mg per tablet
Anacin*	0-32 mg per tablet
Excedrin*	0-65 mg per tablet
Midol*	0-60 mg per tablet

**Amount of caffeine depends upon particular formulation.*

CAUTION

Do not use the caffeine table above to estimate clearance times of various caffeine products.

Beta-2 Agonists

The choice of medications in the treatment of asthma and respiratory ailments has traditionally posed problems in sport because many commonly prescribed drugs are powerful stimulants. Some of these agents also possess anabolic properties, especially when taken orally or by injection. Because of their stimulatory and potential anabolic effects, limitations have been placed on their use. Beta-2 Agonists are prohibited with the exception of those listed in Table 4.

Also refer to:

Table 8 - Anabolic Agents & Beta-2 Agonists (page 16)

Restricted Substance Medical Notification Form (pages 31-32)

- All Beta-2 Agonists are prohibited when administered orally or by injection.
- Certain Beta-2 Agonists are allowed in the aerosol or inhalant forms only to prevent and/or treat asthma and exercise-induced asthma (see Table 4).
- Written notification of asthma and/or exercise-induced asthma by a respiratory or team physician is necessary and must be provided to USADA and the Relevant Medical Authority prior to competition.
- Notification may be submitted to (see page 32):

United States Anti-Doping Agency
1265 Lake Plaza Dr.
Colorado Springs, CO 80906
or
FAX (719) 785-2001

(This notification shall remain in effect as long as the prescription, diagnosis, or other pertinent information remains unchanged.)

- Some IFs also require notification directly to them.

TABLE 4: Beta-2 Agonists Allowed Under Certain Circumstances

Generic Name	Pharmaceutical Preparations/Examples
Salbutamol	Albuterol (Proventil, Ventolin)
Salmeterol	Serevent
Terbutaline	Brethalar
Salbutamol/Ipratropium	Combivent

Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) Medications

The most commonly prescribed medications to treat ADD and ADHD (e.g., Ritalin and Cylert) contain prohibited stimulants. Where the applicable IF tests for stimulants in competition only, athletes prescribed these medications should, in consultation with their physician, discontinue use in advance of competition in order for the medication to clear their systems.

B. NARCOTICS

The drugs belonging to this class are represented by morphine and its chemical and pharmacological analogs. Evidence exists indicating that narcotics have been and are abused in sport, and therefore all products in this class are prohibited except for those indicated in Table 6. Please refer to Table 5 for examples of prohibited narcotics. There are alternative medications for treatment of mild to moderate pain (see Table 7).

Narcotics are typically used for the relief of pain.

Effects Include:

- Sensation of euphoria
- Psychological stimulation
- A false feeling of invincibility
- Illusions of athletic prowess beyond an athlete's inherent ability
- Increased pain threshold and failure to recognize injury
- Dangerous situations may be perceived as safe, resulting in an increased risk for injury.
- Physical and psychological dependence, leading to addiction and withdrawal symptoms
- Narcotic overdoses are always a medical emergency and can lead to respiratory depression and death.

TABLE 5: Prohibited Narcotics

Generic Name	Pharmaceutical Preparations Examples
Alphaprodine	Nisenthal
Anileridine	Apodal, Lertine
Buprenorphine	Buprenex
Dextromoramide	D-Moramid, Dimorlin, Jetrin, Palfum
Diamorphine	Heroin
Dipipanone	Diconal, Pipadone, Wellconal
Ethoheptazine	Equagesic, Panalgin
Fentanyl	Duragesic, Sublimaze
Hydrocodone	Hycodan, Lortab, Vicodin
Hydromorphone	Dilaudid
Levorphanol	Levo-Dromoran
Methadone	Amidon, Dolophine
Meperidine	Demerol, Mepergan
Morphine	Cyclimorph, Duramorph, MS Contin, Oramorph, Roxanol
Nalbuphine	Nubain
Oxycodone	Oxycontin, Percodan, Roxicodone, Tylox
Oxymorphone	NuMorphin
Peptazocine	Talwin
Pethidine	Centraline, Dolantin, Dolosal
Phenazocine	Narphen
Tincture Opium	Paregon

TABLE 6: Allowed Narcotics

Generic Name	Pharmaceutical Preparations Examples
Codeine	Tylenol w/ Codeine
Dextromethorphan	Benylin
Dihydrocodeine	Synalgos DC
Diphenoxylate	Lomotil
Ethylmorphine	Collins Elixir, Dionina
Pholcodine	Actuss, Adaphol, Dia-Tuss, Duro-Tuss, Evaphol, Expulin-Dry Cough, Famel Linctus, Galenphol, Lactus Tussinol, Pavacol-D, Pholcolin, Pholcomed, Pholtrate, Tixylil Daytime
Propoxyphene (Dextropropoxyphene)	Darvon-N
Tramadol	Ultram

TABLE 7: Other Medications for Treatment of Mild to Moderate Pain

- Mild to moderate pain can be effectively treated using medications other than narcotics.
- **Caution:** Some pharmaceutical preparations of these medications may be in combination with a Prohibited Substance.

Generic Name	Pharmaceutical Preparations Examples
Acetaminophen	Tylenol
Aspirin	Bufferin
Diclofenac	Voltaren
Diflunisal	Dolobid
Floctafenine	Idalon
Glafenine	Gilfanan
Ibuprofen	Advil, Motrin
Indomethacin	Indocin
Ketoprofen	Orudis
Mefenamic Acid	Ponstel
Naproxen	Anaprox, Naprosyn
Sulindac	Clinoril

This Guide provides examples of substances in Prohibited Classes. Not all Prohibited Substances are listed in this Guide. This list is subject to change and is updated and revised as necessary. Check to make sure you have the most up-to-date information.

C. ANABOLIC AGENTS

Anabolic Androgenic Steroids & Beta-2 Agonists

Anabolic Androgenic Steroids (AASs)

This Prohibited Class is made up of the male hormone testosterone and its synthetic derivatives. Natural testosterone regulates, promotes, and maintains physical and sexual development. In combination with training, muscular size and strength may increase from the use of AAS. Because these drugs are hormones, they greatly interfere with normal hormonal balance, thereby producing detrimental and sometimes permanent side effects like gynecomastia and testicular atrophy. AAS abuse can also lead to liver damage, heart disease, hypertension, stroke, psychotic reactions, addiction, and withdrawal symptoms. Recently it has been discovered that steroid use may make tendons stiffer, resulting in an increased potential for muscle strains or ruptures. Additionally, the risk of acquiring AIDS, hepatitis, and other blood-borne diseases increase greatly with the use of injectable forms of AASs.

Medical Uses of Anabolic Steroids

- Relief of bone pain from osteoporosis
- Severe anemia
- Metastatic breast cancer in women
- Weight gain for chronic nutritional deficiencies or AIDS wasting syndrome
- Corticosteroid-induced catabolism
- Hereditary angioedema
- Hormone deficiencies in males

The Federal Government designated AAS as Schedule III controlled substances in 1990, thus tightening down the control and availability of steroids. The dangers of today's black market manufactured drugs include impurities and/or false ingredients, which can produce unpredictable and potentially severe side effects in users.

Side Effects Of Androgenic Anabolic Steroid Use Include:

- Acne ♂ ♀
- Liver dysfunction* ♂ ♀
- Premature closure of the growth centers of long bones (in adolescents) which may result in stunted growth* ♂ ♀
- Increased aggressiveness and sexual appetite, sometimes resulting in aberrant sexual and criminal behavior ♂
- Impotence with chronic or repeated use ♂
- Testicular shrinkage (testicular atrophy)* ♂
- Breast enlargement (gynecomastia)* ♂
- Enlargement of prostate gland ♂
- Reduction of sperm production (cessation of spermatogenesis) ♂
- Premature baldness* ♂
- Masculinization ♀
- Excessive hair growth on the face and body* ♀
- Deepening of the voice* ♀
- Enlargement of the clitoris* ♀
- Abnormal menstrual cycles (suppression of ovarian function and menstruation) ♀

♂ - Side effects observed in males.

♀ - Side effects observed in females.

* Effects may be permanent.

Other side effects observed include: Muscle tightness and cramps; alteration of the libido, edema, diarrhea, constipation; functional/structural liver damage; and polycystic ovarian syndrome.

IOC Regulations pertaining to the detection of Anabolic Agents, which are also produced naturally by the body, include the following:

- Evidence obtained from metabolic profiles and/or isotopic ratio measurements may be used to draw definitive conclusions regarding the use of anabolic androgenic steroids.
- The presence of a testosterone to epitestosterone (T:E) ratio greater than six to one (6:1) in the urine of an athlete, constitutes an offense unless there is evidence that this ratio is due to a physiological or pathological condition.
- In the case of T:E greater than 6:1 or an epitestosterone concentration in the urine greater than 200 nanograms/ml, an investigation will be conducted by the USADA before the sample is declared positive.
 - The USADA investigation will be limited to (a) a review of previous tests, if available, and/or a review of subsequent tests including No Advance Notice (NAN) tests, and/or (b) analysis by Carbon Isotope Ratio measurement.
 - The athlete may submit his or her own evidence, including, but not limited to endocrine investigations, for consideration.
 - The sample will be declared positive unless the USADA's investigation and/or the information submitted by the athlete reveals that the elevated ratio is due to a physiological or pathological condition.
 - If the athlete fails to cooperate in the USADA investigation, the sample will be declared positive.

Beta-2 Agonists

Beta-2 Agonists have been shown to have anabolic effects when consistently high levels are present in the blood. The detection of Salbutamol in the urine in a quantity greater than 1,000 nanograms/ml is considered doping with Anabolic Steroids. See also regulations pertaining to use of Beta-2 Agonists under Section A – Stimulants, and Table 4.

In particular, clenbuterol is prohibited both as an anabolic agent and as a stimulant. This Beta-2 Agonist has not been approved for use in the United States. It is considered a Prohibited Substance because of its anabolic and stimulatory effects and misuse by athletes. Clenbuterol is available in foreign countries under a variety of brand names. Health food and nutrition companies sell imitation versions described as "nutritional supplements."

Effects include:

- Possible "repartitioning" or increasing muscle mass while decreasing body fat (based on animal and recent human studies)
- Nausea
- Nervousness
- Increased heart rate and blood pressure
- Headache
- Insomnia
- Tremors

Androstenedione, Androstenediol, and Dehydroepiandrosterone (DHEA)

Androstenedione, Androstenediol, and DHEA are steroids that are precursors to testosterone. They are widely available in dietary supplements being sold over-the-counter in health food stores and over the Internet. They are specifically included on the Examples of Prohibited Substances List. They are naturally produced in the adrenal gland and are claimed to reduce body fat, increase muscle mass, and lower cholesterol levels. They are sometimes used to treat certain types of cancer and to boost the immune system. Potential side effects include acne, water retention, male pattern baldness, moodiness, irritability, and changes in sex drive.

19-Norandrostenedione and 19-Norandrostenediol

19-Norandrostenedione and 19-Norandrostenediol are prohibited steroids that are precursors of nandrolone. They are also widely available in dietary supplements sold over-the-counter, through the mail, and over the Internet, sometimes in combination with other steroids such as androstenedione. Claims made include increased muscularity, strength, endurance and vascularity, as well as fat loss. Potential side effects are considered to be similar to those listed for androstenedione products.

TABLE 8: Anabolic Agents & Beta-2 Agonists

Generic Name	Pharmaceutical Preparations/Examples
Androstenediol	Androstederm, 4-androstenediol, 5-androstenediol
Androstenedione	Andro Stack 850, Andro-Gen, Androsten, Androstene 100, Testro Rx
Bambuterol*	Astra, Bambec
Bolasterone	Dimethyltestosterone, Myagen
Boldenone	Equipoise, Vebonol
Bitolterol*	Tornalate
Clenbuterol*	Broncodil, Clenasma, Clenbutol, Contrasma, Monores, Novegan, Prontovent, Spiropent, Ventolase
Clostebol	Steranabol
Danazol	Cyclomen, Danatrol, Danocrine, Danokrin, Danol, Ladogar, Win 17757, Winobanin
Dehydrochloromethyltestosterone	Turinabol
Dehydroepiandrosterone	DHEA
Dihydrotestosterone	Stanolone
Dromostanolone	Drolban, Masteril
Fenoterol*	Berotec
Fluoxymesterone	Android F, Halotestin, Ora-Testryl, Ultradren
Formebolone	Esiclone, Hubernol
Formoterol*	Atock
Gestrinone	Tridomose
Growth Hormone	hGH
Human Chorionic Gonadotrophin	hCG
Mesterolone	Androviron, Proviron
Metandienone	Danabol, Dianabol
Metaproterenol*	Alupent, Metaprel
Metenolone	Primobolan, Primonabol-Depot
Methandriol	Stenediol, Trofomone
Methandrostenolone	Dianabol
Methyltestosterone	Android, Estratest, Metandren, Oreton Methyl, Testred
Mibolerone	
Nandrolone	Deca-Durabolin, Durabolin, Kabolin, Nandrobolic
19-Norandrostenediol	19-Diol, 19-Norandrobol, Norandrodiol, Norandronate
19-Norandrostenedione	19-Nor Androstene, 19-Nora Force, Anabolic Stack, Androbolic, Androdyna, Androstat Poppers, Androstat Pro 6, Ultimate Release 24
Norethandrolone	Nilevar
Orciprenaline*	
Oxandrolone	Anavar
Oxymesterone	Oranabol 10
Oxymetholone	Adroyd, Anadrol, Anapolon
Pirbuterol*	Maxair
Reproterol*	Bronchodil
Rimiterol*	Pulmadil
Salbutamol*† (>100 nanograms/ml as a stimulant, >1000 nanograms/ml as an anabolic agent)	(see Table 4)
Salmeterol*†	(see Table 4)
Stanozolol	Stromba, Winstrol
Terbutaline*†	(see Table 4)
Testosterone (T:E >6:1)	Delatestryl, Malcgen, Malogex
Trenbolone	Finajet, Parabolan

* Beta-2 Agonists are included in the class of Anabolic Agents.

† Authorized in the aerosol or inhalant forms only to prevent and/or treat asthma and exercise-induced asthma (EIA and EIB). Written notification by a respiratory or team physician is necessary and must be provided to USADA and the Relevant Medical Authority.
(See Stimulants and Table 4.)

D. DIURETICS

Diuretics are drugs that help the body to eliminate fluids (water and salts) by increasing the rate of urine formation. Diuresis increases urine volume and net loss of salts (especially sodium, potassium, and/or chloride). Although diuretics, under strict medical supervision, have important therapeutic indications for the elimination of excess fluid from the body tissue in certain disease states and for management of high blood pressure, they are nonetheless prohibited.

- Diuretics may be abused by competitors for two main reasons:
 - ⇒ To reduce weight quickly in sports where weight categories are involved; and/or
 - ⇒ To produce a more rapid excretion of urine (to reduce the concentration of Prohibited Substances in the urine in an attempt to minimize detection).
- Drastic reduction of weight in sport cannot be medically justified. The potential for serious side effects such as dehydration, muscle cramps, volume depletion, drop in blood pressure, and severe electrolyte imbalance exists. Deliberate attempts to reduce weight artificially, in order to compete in lower weight classes or to dilute urine, constitutes clear manipulation which is ethically unacceptable.
- For sports involving weight classes, the Responsible Authorities reserve the right to obtain urine samples at the time of weigh-in.
- Taken without medical supervision, diuretics can result in potassium depletion and death.

TABLE 9: Diuretics

Generic Name	Pharmaceutical Preparations Examples
Acetazolamide	AK-ZOL, Dazamide, Diamox
Amiloride	Midamor
Bendroflumethiazide	Naturetin
Benzthiazide	Aqualag, Exna, Hyres, Marazide, Proaqua
Bumetanide	Bumex
Canrenone	Aldadiene, Aldactone, Phanurane, Soldactone
Chlormerodrin	Orimercur
Chlorthalidone	Hygroton, Hyildone, Thalitone
Diclofenamide	Daranide, Fenamide, Oratrol
Ethacrynic Acid	Edecrin
Furosemide	Lasix
Hydrochlorothiazide	Esidrix, Hydro-Diuril, Oretic, Thiuretic
Indapamide	Lozol, Natrilix, Servier
Mannitol (IV only)	Osmitrol
Mersalyl	Salyrgan
Spranolactone	Alatone, Aldactone
Torsemide	Demadex
Triamterene	Dyazide, Maxide

E. PEPTIDE HORMONES, MIMETICS AND ANALOGS

- The presence of an abnormal concentration of an endogenous hormone or its diagnostic marker(s) in the urine (or other specimen) of a competitor constitutes doping, unless it has been conclusively documented to be solely due to a physiological or pathological condition.
- All of these hormones and all of their respective releasing factors and their analogs are prohibited.

TABLE 10: Peptide Hormones, Mimetics and Analogs

EXAMPLE	
Chorionic Gonadotropin	Human Chorionic Gonadotropin (hCG) Prohibited for males only. The administration to males leads to an increased rate of production of endogenous male hormones and is considered equivalent to the exogenous administration of testosterone.
Pituitary and Synthetic Gonadotropins	Luteinizing Hormone (LH) Prohibited for males only.
Corticotropin	ACTH; tetracosactide Corticotropin has been used to increase blood levels of endogenous corticosteroids. Administration is considered to be equivalent to the systemic administration of corticosteroids (see Glucocorticosteroids on page 21).
Growth Hormone	hGH; Somatotropin Use is dangerous and may result in various adverse effects: allergic reactions, diabetes, and acromegaly. Contamination of some growth hormone preparations of human origin can cause Creutzfeldt-Jacob Disease, a fatal neurological condition.
Insulin-like Growth Factor	IGF-1 Primarily secreted by the liver; IGF-1 stimulates growth and anabolism.
Erythropoietin	EPO; Epogen This naturally occurring hormone is produced in the kidney and stimulates red blood cell production. Administration equates with blood doping and is prohibited (see Blood Doping on page 19).
Insulin	Permitted only to treat insulin-dependent diabetes mellitus (IDDM). Prior to the particular competition, written notification of IDDM by an endocrinologist or team physician to USADA and the Relevant Medical Authority is necessary.
Related substances	Clomiphene* (Clomid; Milofene; Serophene) Cyclofenil* (Fertodur; Neoclym; Rehibin) Tamoxifen* (Nolvadex) *Prohibited for males only.

Even when used for
legitimate medical treatment,
the detected presence of a
Prohibited Substance constitutes doping.

II. PROHIBITED DOPING METHODS

The following procedures are prohibited:

- Blood doping
- Administering artificial oxygen carriers or plasma expanders
- Pharmacological, chemical and physical manipulation

A. BLOOD DOPING

Blood doping means the administration of blood, red blood cells, and related blood products to an athlete, which may be preceded by withdrawal of blood from the athlete who continues to train in such a blood-depleted state.

Risks involved in the transfusion of blood and blood-related products include:

- Allergic reactions (rash, fever, etc.)
- Acute hemolytic reaction with kidney damage if incorrectly typed blood is used
- Delayed transfusion reactions resulting in fever and jaundice (can be fatal)
- Transmission of infectious diseases (e.g., viral hepatitis and AIDS)
- Overload of the circulatory system
- Blood clots
- Metabolic shock

B. ADMINISTERING ARTIFICIAL OXYGEN CARRIERS AND PLASMA EXPANDERS

Oxyglobin® and perfluorocarbons (PFC's) are examples of compounds used to enhance oxygen transport, and are prohibited by the IOC and International Federations. Plasma expanders, such as hydroxyethyl starch, used to increase the water content of the blood, are also prohibited.

C. PHARMACOLOGICAL, CHEMICAL AND PHYSICAL MANIPULATION

Pharmacological, chemical and physical manipulation means the use of substances and methods, including masking agents, which alter, attempt to alter, or may reasonably be expected to alter the integrity and validity of urine samples used in doping controls, including, without limitation, catheterization, urine substitution and/or tampering, inhibition of renal excretion such as by probenecid and Related Substances, and alterations of testosterone and epitestosterone measurements such as epitestosterone application or bromantin administration.

TABLE 11: Prohibited Methods (without limitation)

Alterations of testosterone and epitestosterone measurements	Epitestosterone administration to alter T:E ratio
Diuretics	Can be used to dilute the urine and mask other substances.
Catheterization	A way of obtaining a urine sample through a thin rubber tube inserted through the urethra into the bladder.
Sample substitution and/or tampering	
Inhibition of renal excretion	Bromantin, probenecid and related compounds
Masking Agents	Includes use of commercially produced products such as "Defend," "Test Free," "Test Clean," "Jamaica Me Clean," and "UrnAid."

Whether or not the use of a Prohibited Substance or Prohibited Method enhances performance does not matter. It is enough that the Prohibited Substance or Prohibited Method was used or attempted to be considered a sanctionable doping violation.

III. CLASSES OF PROHIBITED SUBSTANCES IN CERTAIN CIRCUMSTANCES

A. ALCOHOL

Although alcohol is the most widely abused drug in the country, it does not generally improve sports performance. It depresses the central nervous system and affects coordination and fine hand-eye movements. Nevertheless, breath or blood alcohol levels may be determined at the request of the Responsible Authorities (i.e., WADA, IOC, NOC, USOC, IF, and/or NGB) and positive tests may lead to sanctions.

B. CANNABINOIDS

Cannabinoids (e.g., marijuana, hashish, cannabis) are illegal substances. Possession and/or use of these substances are illegal and may subject a person to arrest and criminal prosecution. The IOC at the Olympic Games, and many IFs include cannabinoids on their lists of Prohibited Substances. In those cases a concentration in the urine of carboxy-THC greater than 15 nanograms per milliliter constitutes doping.

The body absorbs THC, which is the mind-altering ingredient in cannabinoids, and transforms it into metabolites, which can be detected in the urine for weeks after use. Its metabolites can be detected in urine 4 to 10 days after smoking a single joint, and up to several weeks or months following chronic use.

- Where the rules of a Responsible Authority so provide, tests will be conducted for cannabinoids (e.g., marijuana, hashish).
- At the Olympic Games, tests will be conducted for cannabinoids.

Side effects include:

- Increased heart rate
- Impaired short-term memory and distorted sense of time and space
- Diminished ability to concentrate and react with slowing of coordination and reflexes
- Fear of losing control, and impaired thinking and reading comprehension
- Chest pain and airway irritation

C. LOCAL ANESTHETICS

- Systemic injections are prohibited.
- Injectable local anesthetics are permitted under the following conditions:
 - ⇒ Bupivacaine, lidocaine, mepivacaine, procaine, etc. can be used, but not cocaine. Vasoconstrictor agents (e.g. adrenaline, epinephrine) may be used in conjunction with local anesthetics.
 - ⇒ Only local or intra-articular injections may be administered.
 - ⇒ These are permitted only when medically justified.
 - ⇒ Where the rules of a Responsible Authority so provide, notification of administration of local and intra-articular injections of anesthetics may be necessary in advance of competition, or during the competition in matters of medical urgency.*

* See outline of regulations pertaining to written notification on "RESTRICTED SUBSTANCE MEDICAL NOTIFICATION FORM" (see pages 31-32).

D. GLUCOCORTICOSTEROIDS

Corticosteroids (also called glucocorticoids or glucocorticosteroids) are naturally occurring substances secreted by the adrenal glands that regulate the metabolism of carbohydrates, proteins, and fats. Their indications for use include treating allergies, asthma, inflammatory conditions, skin disorders, and many other diseases.

Corticosteroids ARE NOT the same as Androgenic Anabolic Agents which are used to build muscle mass. They can cause a different spectrum of dangerous side effects. Naturally occurring and synthetic, corticosteroids are mainly used as anti-inflammatory drugs. They influence circulating concentrations of natural hormones in the body and may produce mood changes including euphoria and other side effects. Their use, except when administered topically, requires medical control.

- The systemic use of corticosteroids is prohibited [i.e., when administered orally, rectally (internal), or by intravenous or intramuscular injection].
- Anal (topical), aural, dermatological, inhalational, nasal, and ophthalmological administration is permitted.
- Topical use (in the ear, the eye, or on the skin) is permitted.
- Inhalation therapy* (i.e., for treatment of asthma) is permitted.
- Intra-articular* and local injections* of corticosteroids are permitted.

* Where the rules of a Responsible Authority so provide, notification of administration may be necessary. Any physician wishing to administer corticosteroids intra-articularly or locally to an athlete may be required to give prior written notification to USADA and the Relevant Medical Authority. (See outline of regulations pertaining to written notification on "RESTRICTED SUBSTANCE MEDICAL NOTIFICATION FORM," pages 31-32.)

Ignorance is never an excuse. It is the personal responsibility of each athlete to ensure that he or she does not allow any Prohibited Substance to enter his or her system or use or allow the use of any Prohibited Method.

E. BETA-BLOCKERS

The IOC Medical Commission has reviewed the therapeutic indications for the use of beta-blocking drugs and noted that there is a wide range of effective alternative preparations available to control hypertension, cardiac arrhythmias, angina pectoris, migraine, and nervous or anxiety-related conditions.

Due to the continued misuse of beta-blockers in some anaerobic sports, tests for beta-blockers are performed in agreement with the rules of the International Federation and/or at the direction of the Responsible Authority.

- Where the rules of a Responsible Authority so provide, tests will be conducted for beta-blockers. It is the athlete's responsibility to check whether beta-blockers are included on his or her IF's testing list.
- Sports that may be tested are unlikely to include endurance events that necessitate prolonged periods of high cardiac output and large stores of metabolic substances in which beta-blockers would severely decrease performance capacity.
- Other sports may test for beta-blockers if indicated or deemed appropriate.

TABLE 12: Examples of Beta-Blockers

Generic Name	Pharmaceutical Preparations Examples
Acebutolol	Sectral
Alprenolol	Aptine
Atenolol	Tenoretic, Tenormin
Betaxolol	Kerlone
Bisoprolol	Zebeta
Bunolol	
Bunitrolol	Stresson
Carteolol	Cartrol
Celiprolol	Selecor
Esmolol	Brevibloc
Labetalol	Normodyne, Trandate
Metoprolol	Lopressor, Toprol XL
Nadolol	Corgard, Corzide
Oxprenolol	Trasicor, Trepress
Pindolol	Viskin
Propranolol	Inderal, inderide
Sotalol	Betapace
Timolol	Blomadren

Summary of Urinary Concentrations Above Which IOC Accredited Laboratories Must Report Findings for Specific Prohibited Substances

- A case is considered as positive when the analytical laboratory test gives a result that is above the cut-off limit.

TABLE 13: Urinary Concentrations

SUBSTANCE	LEVEL
Caffeine	> 12 mcg/ml
Carboxy-THC	> 15 nanograms/ml
Ephedrine / Methylephedrine	> 10 mcg/ml
Epitestosterone	> 200 nanograms/ml
Morphine	> 1 mcg/ml
19-Norandrosterone	> 2 nanograms/ml In Males > 5 nanograms/ml In Females
Norpseudoephedrine (Cathine)	> 5 mcg/ml
Phenylpropanolamine	> 25 mcg/ml
Pseudoephedrine	> 25 mcg/ml
Salbutamol	> 100 nanograms/ml (as a stimulant) > 1,000 nanograms/ml (as an anabolic agent)
T:E Ratio	> 6:1 or positive carbon isotope ratio analysis

The presence of a Prohibited Substance in an athlete's urine constitutes an offense, regardless of the manner in which the Prohibited Substance came to be in the athlete's system.

SUPPLEMENTS AND OTHER SUBSTANCES

The Dietary Supplement Health and Education Act of 1994 specifically exempted certain products from evaluation for safety and efficacy by the Food and Drug Administration (FDA). Thus, the commonly held belief that the government approves these over-the-counter supplements is not correct. In addition, there has been some evidence that some products may not contain the amount of ingredient listed on the label, may not contain the ingredient listed at all, or may be adulterated with other Prohibited Substances not listed on the label. Imported herbal products, in particular, are often mislabeled concerning their actual ingredients. In addition, a State of California study documented the presence of other toxins such as arsenic and strychnine in these herbal preparations (1).

Herbal Products

Some herbal and plant products such as Ma Huang, ginseng, oryzanol, beta-sitosterol, diosterol and yohimbe bark which are alleged to be ergogenic or anabolic alternatives, and are purported to produce increased weight, strength, and other performance enhancing actions, are either prohibited substances or may inadvertently contain prohibited substances. Although there is substantial research being conducted on herbals to determine effectiveness, safety, and quality standards, there is currently little scientific evidence to support these claims. The contents and safety of these products cannot be guaranteed.

Other Supplements

CREATINE is a natural compound that is a critical part of the energy storage system in the body. Energy is stored in the cells as creatine phosphate. Under anaerobic conditions, the creatine phosphate is used to regenerate adenosine triphosphate (ATP), the main form of cellular energy. Creatine is obtained primarily from meat in the diet. Creatine supplementation presumes that additional intake will provide additional cellular levels, and therefore provide larger amounts of stored energy. In general, any creatine ingested in excess of need is excreted in the urine.

Creatine allegedly speeds muscle recovery, increases initial work output, and delays fatigue in anaerobic (high intensity, short duration) exercise. Research studies are nearly evenly divided on whether performance is actually improved. The long-term effects of taking supplemental creatine have not yet been established, but there appears to be a greater incidence of dehydration, nausea, stomach cramps, diarrhea, muscle cramping, pulled muscles, and muscle tightness according to a survey of creatine users (2). There are also two published reports of individuals with pre-existing liver and kidney problems having further complications while using creatine (3).

Since there are no regulations guaranteeing the actual content of creatine or other supplements, the use of any of these products may result in a positive drug test. Use is completely at the athlete's own risk!

GLUTAMINE levels have been shown to decrease significantly after intense training. It has been proposed that this deficiency can lead to a suppressed immune system in over-trained athletes. Glutamine supplementation studies in athletes have failed to show improvements in athletic performance or immune function (4).

COENZYME Q-10 is associated with energy transport within muscle and heart cells at very basic levels. This supplement is believed to be beneficial in treating various heart conditions and other diseases. Advocates have proposed that Coenzyme Q-10 improves exercise performance and recovery time. Studies on its performance-enhancing abilities have had mixed results with some reporting an increase in performance and others showing no effect. One study revealed that Coenzyme Q-10 was not readily absorbed into muscle without a preexisting deficiency in the athlete (5). No serious side effects are proven with Coenzyme Q-10 but decreased appetite, nausea, and diarrhea are potential adverse effects.

PYRUVATE has been promoted to enhance weight loss and to improve endurance. In studies, pyruvate, a product of glucose metabolism, has been substituted for a portion of an individual's carbohydrate intake in low calorie diets. These studies of obese individuals demonstrated slightly increased weight loss in the pyruvate-substituted group. In non-athletes studies have shown increased muscle endurance (6); however, these results are not repeated in studies of athletes.

Companies promoting pyruvate recommend supplementation with doses that have not been studied or shown to improve weight loss or endurance.

GLUCOSAMINE supplementation has been shown in quality research to promote the regeneration of cartilage in patients with osteoarthritic (damage due to overuse) knees. Improvement was seen with relieving pain, morning stiffness, walking stiffness, and the ability to perform general activities. There is no research available on the ability of glucosamine to prevent osteoarthritis in the athlete. Gastrointestinal discomfort and distress, and allergic reactions are reported adverse effects.

OTHER SUBSTANCES such as octacosanol, chromium picolinate, boron, and dibenzozide are found in a variety of supplemental products that claim to have ergogenic effects. They are often sold in combination with other supplements also not proven to be performance enhancing in athletes. Similarly, they may actually be in combination with prohibited diuretics and stimulants such as Ma Huang, ephedrine, and caffeine. Health food and nutrition stores, pharmacies, grocery stores, mail order companies, or Internet companies often sell these products. Unfortunately, there are no approved medical references that identify all of them by brand name or active ingredient. Since there are no regulations guaranteeing the actual content of these supplements, the **USE OF ANY OF THESE PRODUCTS MAY RESULT IN A POSITIVE DRUG TEST. USE IS COMPLETELY AT THE ATHLETE'S OWN RISK!**

1. Ko, R.J. Adulterants in Asian Patent Medicines. *New England Journal of Medicine*. 339(12):847, 1998.
2. Coleman, E. Risky Business: Knowing the facts before you decide to take one of these four common supplements. *Volleyball*. April: 66-73, 1998.
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4. Nieman, D.C., and B.K. Pedersen. Exercise and immune function: Recent developments. *Sports Med*. 27: 72-80, 1999.
5. Burnham, T.H., R.C. Hagermann, and D.S. Threlkeld (Eds.). The review of natural products. St. Louis: *Facts and Comparisons, Inc.* 1997.
6. Stone, M.H., K. Sanborn, L. Smith, et al. Effects of in-season (5 weeks) creatine and pyruvate supplementation on anaerobic performance and body composition in American football players. *International Journal of Sports Nutrition*. 9:146-165, 1999.

Manufacturers frequently claim that products "naturally" increase the concentrations of naturally occurring and Prohibited Substances (e.g. testosterone, growth hormone). The purpose of doping control is to level the playing field and any attempts to pharmacologically or chemically enhance performance are unethical.

If you have questions, call USADA's Drug Reference Line at 1-800-233-0393

FREQUENTLY ASKED QUESTIONS

WHAT IF THE ATHLETE HAS A COLD OR THE FLU? CAN HE OR SHE BE EXCUSED WHEN TAKING MEDICINE TO GET WELL?

NO! If an athlete has a cold, flu, or hay fever he or she SHOULD NOT take any medication or substance without first being sure that it does not contain a Prohibited Substance. This includes both over-the-counter (OTC) and prescription medications from a doctor. Most IFs test for the stimulants found in cold medications in competition only. However, some IFs may also include stimulants in their No Advance Notice (NAN) testing as well. A positive test whether inadvertent or due to medical treatment is still a positive test.

WHY IS CAFFEINE PROHIBITED? ISN'T IT HARMLESS?

Caffeine, though a commonly used substance in our society, is a stimulant and has similar effects to those of other stimulant substances. In the past, athletes have attempted to improve their performance by using large amounts of caffeine. This is considered cheating and caffeine use is limited in that an amount greater than 12 micrograms per milliliter in the urine is classified as doping.

IF THE ATHLETE DOESN'T DRINK COFFEE, SHOULD HE OR SHE WORRY ABOUT CAFFEINE?

YES! Many other products contain caffeine, including soft drinks, chocolate, and medications such as No-Doz, Vivarin, Midol, Anacin, Excedrin, Fiorinal, and others.

WHAT IF THE ATHLETE NEEDS A PAINKILLER FOR AN INJURY?

Slight to moderate pain can be effectively treated using non-narcotic drugs (see Table 7, page 13). These drugs are generally referred to as non-steroidal anti-inflammatory drugs (NSAIDs). They have anti-inflammatory and analgesic (pain-killing) actions. For management of severe pain, codeine, dihydrocodeine (dihydrocodone is prohibited), and pholcodine are allowed. These drugs are available alone or in combination with analgesics such as acetaminophen.

WHAT ABOUT CLENBUTEROL?

Clenbuterol, a foreign drug not available in the U.S., is classified as a Beta-2 Agonist. Some athletes have abused it because of its reported anabolic effect in building muscle mass in livestock. It is often used in combination with anabolic agents and growth hormone, and is prohibited both as an anabolic agent and as a stimulant.

BIRTH CONTROL PILLS ARE STEROIDAL HORMONES. ARE THEY PROHIBITED?

No! These substances have not been found to be performance enhancing and are not prohibited. IOC accredited laboratories can distinguish between birth control pills and Prohibited Substances.

HOW LONG DOES IT TAKE PROHIBITED SUBSTANCES TO LEAVE THE SYSTEM?

Individual metabolism, amount of substance used, frequency of use, duration of use, and nominal biodegradation process in any given individual varies. In addition, some drugs are stored in the body and have highly variable elimination rates. Elimination time ESTIMATES for specific substances can be determined by contacting the manufacturer, the prescribing physician, or the dispensing pharmacist.

WHY ISN'T IT OKAY TO USE A PROHIBITED MEDICATION THAT HAS BEEN PRESCRIBED BY A DOCTOR?

Since some medications prescribed by physicians for treatment of legitimate medical conditions have the potential to enhance athletic performance, they are prohibited. A prohibited drug is still prohibited, even if prescribed by a doctor.

WHAT CAN BE DONE ABOUT IT? IF THE MEDICINE IS NEEDED, WHAT SHOULD A PERSON DO?

Alternative medications that are not prohibited can oftentimes be prescribed to treat medical problems. An athlete's personal physician may not be aware of the complicated drug restrictions in amateur sports and should be advised to call USADA's Drug Reference Line (1-800-233-0393) for information. In extreme situations, the IOC and several IFs have procedures for obtaining advance waivers permitting the use of a Prohibited Substance.

IF AN ATHLETE IS NOT TAKING DRUGS ON THE PROHIBITED LIST, SHOULD HE OR SHE STILL BE CONCERNED?

YES! Many commonly used medications contain small amounts of prohibited drugs. Remember, many prescribed and OTC medications contain Prohibited Substances (e.g. cold medicines, diet pills, asthma medications, pain killers, nasal sprays, sleeping pills, etc.). Even a small amount of a Prohibited Substance can cause a positive test. Be aware that formulations and ingredients of OTC products and dietary supplements may change frequently, so these products can switch from being an allowed to a Prohibited Substance without notice.

HOW CAN AN ATHLETE BE SAFE?

- Call USADA's Drug Reference Line (1-800-233-0393) for information about contents of medications or supplements to be taken before or during competition.
- Do not take any unknown substances (e.g., from a friend or acquaintance who offers something to help a cold or headache).
- The use of foreign medications is strongly discouraged.

IS THERE A COMPLETE LIST OF DRUGS THAT WON'T CAUSE A POSITIVE TEST?

NO. No list can ever be complete. New names and new products come on the market daily. Foreign drugs may not appear in the U.S. drug reference books. The list of Prohibited Substances is subject to change without notice. In addition, drugs not listed or different formulations of the same brand name may not be allowed. For these reasons, a "complete" or "safe list" that is accurate and up-to-date is not available for distribution. This is why it is important for athletes to call USADA's Drug Reference Line (1-800-233-0393) to find out the current status of any substance they may consider taking.

HOW CAN AN ATHLETE KNOW WHAT IS NOT PROHIBITED?

Refer to the "USADA Guide to Allowed Medications" (see following pages) and the Athlete Wallet Card for examples of substances currently not on the Prohibited Substance List. However, this list is not complete and could change at any time. USADA's Drug Reference Line (1-800-233-0393) is also available for athletes to call and check the status of any medication.

WHAT ABOUT SUPPLEMENTS? IS THERE A LIST OF THOSE THAT ARE SAFE?

NO, there is not a list of "safe supplements." Supplemental products are taken at the athlete's own risk. Many contain Prohibited Substances that occasionally are not included on the label as ingredients. Be aware that these products may not be consistent from batch to batch and formulations often change without warning or notification. We recommend that athletes avoid these products, especially close to competition.

**IF YOU HAVE ANY QUESTIONS
CALL USADA'S DRUG REFERENCE LINE
1-800-233-0393
or address correspondence and inquiries to:**

**UNITED STATES ANTI-DOPING AGENCY
1265 LAKE PLAZA DR.
COLORADO SPRINGS, CO 80906**

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USADA GUIDE TO ALLOWED MEDICATIONS

WARNING

- Be especially cautious with any over-the-counter medications. Formulations may be changed at any time resulting in a change of status (from allowed to prohibited).
- Be aware that many brand names sound alike. One may be allowed, while the other may be prohibited.
- While vitamins, minerals, and amino acids are not prohibited, they may be in combination with Prohibited Substances which may not be disclosed on the labels.
- USADA's Drug Reference Line cannot guarantee the status of herbals, supplements, and other health food store products. They are taken at the athlete's own risk.
- References to specific products are for example purposes only and do not constitute an endorsement by USADA.

<p>ANALGESIC & ANTI-INFLAMMATORY <i>(Note: All Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) are allowed.)</i> Acetaminophen Acetaminophen with Codeine Aspirin Aspirin with Codeine Celebrex Codeine Coducept Darvocet Dihydrocodeine Kodein Propoxyphene (Darvon N, Darvon Pulvules) Tylenol Tylenol with Codeine Ultram Vioxx</p>	<p>ANTIBIOTIC ALL ANTIBIOTICS ARE ALLOWED.</p> <p>ANTI-DIABETIC Actose Amaryl Avandia Diabeta Diabinese Glipizide Glucophage Glucotrol Glyburide Glynase Micronase Prandin Precose Rezulin</p>	<p>ANTIHISTAMINE <i>(Caution: May be prohibited by some IFs. Decongestant products are prohibited.)</i> Allegra Benadryl Cetirizine Chlorpheniramine Chlor-Trimeton Clamastine Claritin Diphenhydramine Fexofenadine Loratadine Tavist I Zyrtec</p>	<p>ANTIVIRAL Acyclovir Amantadine Didanosine Famciclovir Famvir Flumadine Relenza Stavudine Tamiflu Valtrex Zidovudine Zovirax</p>
<p>ANTI-ANXIETY & ANTI-DEPRESSANT <i>(Caution: May be prohibited by some IFs.)</i> Atarax Ativan Buspar Celexa Effexor Elavil Librium Pamelor Paxil Prozac Valium Vistaril Wellbutrin Xanax Zoloft</p>	<p>ANTI-DIARRHEAL Bismuth subsalicylate Diphenoxylate w/ atropine Donnagel Imodium Kaopectate Lomotil Lonox Loperamide Pepto Bismol</p>	<p>ANTACID DI Gel Gaviscon Maalox Mylanta Tums</p>	<p>ANTI-SEIZURE <i>(Caution: May be prohibited by some IFs.)</i> Depakote Neurontin Phenobarbital Tegretol Topamax</p>
	<p>ANTIFUNGAL Cruex Diflucan Desenex Lamisil Lotrimin Miconin Monistat Mycostatin Nystatin Sporonox Tinactin</p>	<p>ANTI-NAUSEA & ANTIVERTIGO <i>(Caution: May be prohibited by some IFs.)</i> Anilvert Bonine Bucladln S Compazine Diphenhydramine Dramamine Emetrol Kytril Motion-aid Phenergan Promethazine Reglan Tigan Zofran</p>	<p>ASTHMA PRODUCT Accolate Aminophylline Atrovent Cromolyn sodium Intal Ipratropium Nedocromil sodium Singulair Theophylline Tilade Zyflo</p>
			<p>COUGH PREPARATION <i>(Caution: Decongestant products are prohibited.)</i> Codeine Dextromethorphan Guaifenesin Iodinated glycerol</p>

USADA's Drug Reference Line 1-800-233-0393 Fax 1-719-785-2001

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CHOLESTEROL LOWERING Baycol Lescol Lipitor Lopid Mevacor Niacin Niaspan Pravachol Tricor Zocor	EXPECTORANT & ANTI-TUSSIVE <i>(Caution: Oral decongestants are prohibited. Similar sounding nasal products may be prohibited.)</i> Benzonate Cheracol plain Cheracol-D Delsym Dextromethorphan Guaifenesin Humbid LA Humbid-DM Robitussin (plain, DM, AC) Tessalon Pearls Tussi-Organidin-DM	LAXATIVE Citrucel Colace Correctol Dulcolax Ex-Lax Fibercon Fleet Enema Metamucil Milk of Magnesia Peri-Colace	SLEEP AID / SEDATIVE <i>(Caution: May be prohibited by some IFs.)</i> Ambien Antivert Ativan Compoz Dalmane Diphenhydramine Halcion Meclizine Nyrol Restoril Somnifex Sonata Unisom Vallium Xanax
CONTRACEPTIVE Alesse Demulen Desogen Genora Loestrin Lo-Ovral Modicon Nova Nordette Ortho-Cept Ortho-Cyclen Ortho-Tri-Cyclen Ovcon Ovral Triphasil	EAR PRODUCT <i>(Note: All antibiotic eardrops are allowed.)</i> Auralgan Auro Ear Drops Cerumenex Cortisporin Debrox Murine Ear Drops Domeboro Otic Vosol Vosol-HG	MUSCLE RELAXER <i>(Caution: May be prohibited by some International Federations (IFs).)</i> Baclofen Carisoprodol Cyclobenzaprine Flexeril Norflex Norgesic Norgesic Forte Parafon Forte Robaxin Soma Zanaflex	TOPICAL Antibiotics (all are allowed) Aspercreme Ben-Gay Capsaicin Myoflex cream Cortaid Flex-All 454 Icy Hot Balm Sports Cream Vicks Vaporub Zostrix Zovirax
DECONGESTANT <i>(Caution: Oral decongestants are prohibited. Similar sounding nasal products may be prohibited.)</i> 4-Way Long Lasting Nasal Afrin Nasal Spray Afrin Children's Drops Allerest 12 Hour Nasal Spray Dristan Nasal Spray Naphazoline Neo-Synephrine Nasal Spray Afrin Nasal Afrin Oxymetazoline Privine Slnex Tetrahydrozoline Tyzine Xylometazoline	EYE PRODUCT <i>(Note: All antibiotic eye drops are allowed.)</i> Artificial Tears Boric acid Cromol Murine Plus Naphcon-A Neo-Synephrine Oxymetazoline Relief Tetrahydrozoline Vascon-A Visine	NASAL PRODUCT Astelin Atrovent Nasal AYR Saline Beco-nase (& AQ) Flonase Nasacort (& AQ) Nasalcom Nasonex Rhinocort (& Aqua) Ocean Salinex Vancenase (& AQ)	ULCER Antacids Axid Carafate Pepcid Prevacid Prilosec Propulsid Tagamet Zantac
ANTI-MIGRAINE Imitrex AmERGE Zomig	HEMORRHOIDAL <i>(Caution: Suppositories and foams used internally (rectal) and containing hydrocortisone are prohibited.)</i> Anusol Anusol-HC (external only) Preparation H	PAIN <i>(Refer to Tables 6 & 7.)</i> ***** United States Anti-Doping Agency 1265 Lake Plaza Dr. Colorado Springs, CO 80906 Drug Reference Line 1-800-233-0393 Staff Line 1-866-601-2632 FAX: 1-719-785-2001 Website: www.usantidoping.org *****	MISCELLANEOUS Accutane Amino Acids (alone) ODAVP Estrace Levoxyol Minerals (alone) Premarin Provera Synthroid Viagra Vitamins (alone)

Remember this list is intended for use as a guideline for treatment of certain medical conditions. It is not a complete list, nor should it be considered an endorsement or recommendation of these drugs. It is the athlete's responsibility to check the status of all medications!

RESTRICTED SUBSTANCE MEDICAL NOTIFICATION INFORMATION

- Do not submit this form for Prohibited or Allowed Substances.
- Completion of this form does NOT permit use of Prohibited Substances.

BETA-2 AGONISTS

The following Beta-2 Agonists are permitted in the aerosol or inhalant forms only to prevent and/or treat asthma and exercise-induced asthma. Written notification by a respiratory or team physician is necessary and must be provided to USADA and the Relevant Medical Authority prior to competition.

Salbutamol	(Albuterol, Proventil, Ventolin)
Salmeterol	(Serevent)
Terbutaline	(Brelhaler)
Salbutamol/ipratropium	(Combivent)

Beta-2 Agonists, such as the following, are prohibited even in the inhaled form:

Bambuterol	(Asira, Bambec)
Bioterol	(Tornalate)
Clenbuterol	(Broncodil, Clenasma, Clenbutol, Contrasmira, Monores, Novogan, Prontovent, Spiropent, Ventolase)
Fenoterol	(Berotec)
Formoterol	(Atock)
Metaproterenol	(Alupent, Metaprel)
Orciprenaline	
Pirbuterol	(Maxair)
Reproterol	(Bronchodil)
Rimiterol	(Pulmadil)

INSULIN

Insulin is permitted only to treat insulin-dependent diabetes. Written notification of insulin-dependent diabetes (IDDM) by an endocrinologist or team physician is necessary, and must be provided to USADA and the Relevant Medical Authority prior to competition.

LOCAL ANESTHETICS (Local anesthetics are permitted.)

Systemic injections are prohibited.

Injectable local anesthetics are permitted under the following conditions:

1. Bupivacaine, lidocaine, mepivacaine, procaine, etc. can be used, but not cocaine.
2. Vasoconstrictor agents (e.g. adrenaline, epinephrine) may be used in conjunction with local anesthetics.
3. Only local or intra-articular injections may be administered.
4. These are permitted only when medically justified.

Where the rules of a Responsible Authority so provide, notification of administration of local and intra-articular injections of anesthetics may be necessary. Written notice must be made prior to the particular competition to USADA and the Relevant Medical Authority, when applicable, or during the competition in matters of medical urgency.

CORTICOSTEROIDS

1. The systemic use of corticosteroids is prohibited (i.e., when administered orally, rectally (internal) or by intravenous or intramuscular injection).
2. Anal (topical), aural, dermatological, inhalational, nasal, and ophthalmological (but not rectal) administration is permitted.
3. Topical use (in the ear, the eye, or on the skin) is permitted.
4. Inhalation therapy* (i.e., for treatment of asthma) is permitted.
5. Intra-articular* and local injections* of corticosteroids are permitted.

* Where the rules of a Responsible Authority so provide, notification of administration may be necessary. Any physician wishing to administer corticosteroids intra-articularly or locally to an athlete may be required to give prior written notification to USADA and the Relevant Medical Authority.

U. S. Anti-Doping Agency
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