

*Preserving**Inspiring**Protecting***True Sport**

## Athlete Guide to the 2012 Prohibited List

The World Anti-Doping Agency provides annual updates to the Prohibited List. This guide is designed to help U.S. athletes understand how the Prohibited List applies to them with specific attention paid to medications available on the U.S. market. This guide should be read in conjunction with the Prohibited List (download the complete version from [www.USADA.org](http://www.USADA.org)). The use of a prohibited substance in sport requires an approved Therapeutic Use Exemption (TUE).

### Substances and Methods Prohibited at all times (both in- and out-of-competition).

The first section of the Prohibited List discusses substances and methods that are prohibited at all times, both in- and out-of-competition. An athlete can be tested for these substances at any time.

#### S0. Non-Approved Substances

This “open” section addresses the issue of the abuse of pharmacological substances for the purpose of performance enhancement that are not included in other sections of the Prohibited List. They include substances that are not approved by any governmental regulatory health authority for human therapeutic use (i.e. drugs under pre-clinical or clinical development or discontinued, designer drugs, or veterinary drugs). These substances will be prohibited at all times (in- and out-of-competition).

#### S1. Anabolic Agents

Anabolic Agents are prohibited. This includes the use of testosterone creams or shots, or the use of any other anabolic substance. The list of anabolic agents is extensive, but even if an anabolic agent is not specifically listed it is still prohibited if it has “a similar chemical structure or similar biological effect(s)”.

##### *Advisory:*

1. Clenbuterol is sometimes used to treat asthma, and it is sometimes used illegally in other countries to “bulk up” livestock. It may also be found in some dietary supplements, and may be publicized as a weight loss drug. USADA issued an advisory for athletes on Clenbuterol. Clenbuterol is classified as an anabolic agent.
2. There have been instances of dietary supplements contaminated with Anabolic Agents.

#### S2. Peptide Hormones, Growth Factors and related Substances

This class of substances includes EPO, CERA, chorionic gonadotropin, luteinizing hormone (in males), insulin, corticotrophins, and a number of growth factors.



*Advisory:*

1. The definition of growth factors includes any “growth factor affecting muscle, tendon, or ligament protein synthesis/degradation, vascularization, energy utilization, regenerative capacity or fiber type switching.”
2. WADA has clarified that even though Platelet Rich Plasma (PRP) contains growth factors, PRP is not prohibited.
3. Athletes with insulin-dependent diabetes need to be aware that insulin is prohibited under the class of Peptide Hormones. An athlete must apply for a Therapeutic Use Exemption to use insulin in sport.

### **S3. Beta-2 Agonists**

All oral (taken by mouth and swallowed) beta-2 agonists are prohibited. Inhaled beta-2 agonists are prohibited and require a TUE except for formoterol (dosages less than 36 micrograms/24 hours), salmeterol, and albuterol (dosages under 1600micrograms/24 hours). Search [www.GlobalDRO.com](http://www.GlobalDRO.com) to determine if the inhaler that you need to use contains a substance that requires a TUE for use in sport.

*Advisory:*

1. The dosage of albuterol or formoterol that may be used in sport without a TUE may translate into a wide range of “puffs”. You should examine your inhaler closely to determine the dosage. If you need to take more than the non-prohibited dosage you must apply for a TUE.
2. Note that albuterol and formoterol are listed as “threshold substances” which means they may be used in sport without a TUE as long as it is used under a certain threshold. However, if you also need to use a substance that falls into the category of diuretics and masking agents, you need to have a TUE for albuterol or formoterol even though you have a TUE for the diuretic or masking agent.
3. Use of oral beta-2 agonists is prohibited even if you have a TUE for the same inhaled beta-2 agonist. If your doctor prescribes an oral beta-2 agonist you should submit an application for a TUE.
4. There are a large number of inhalers available on the U.S. market and athletes need to be aware of which substances are in which inhaler.
5. Some inhalers have more than one active ingredient. Make sure you check all the ingredients on [www.GlobalDRO.com](http://www.GlobalDRO.com).
6. The presence of salbutamol in urine in excess of 1000ng/mL is presumed NOT to be an intended therapeutic use, and may be considered as an adverse analytical finding.



#### **S4. Hormone and Metabolic Modulators**

In short, the following are prohibited: aromatase inhibitors, selective estrogen receptor modulators (SERMS) such as tamoxifen, other estrogenic substances, and agents modifying myostatin function(s). Please consult the Prohibited List for examples of substances in each of the above classes.

#### **S5. Diuretics and Other Masking Agent**

Masking agents are prohibited, to include diuretics and plasma expanders.

*Advisory:*

1. WADA has clarified that local administration of Felypressin for dental anesthesia is not prohibited.
2. The use of any quantity of a threshold substance (i.e. albuterol, formoterol, morphine, cathine, ephedrine, methylephedrine and pseudoephedrine) in conjunction with a diuretic or other masking agent requires a TUE for that substance in addition to the one granted for the diuretic or other masking agent. Even when a Therapeutic Use Exemption (TUE) exists for the masking agent, the detection of the exogenous threshold substance at any level will be reported as an Adverse Analytical Finding (AAF) by the laboratory and therefore a TUE is also required for the threshold substance when applicable.

### **Prohibited Methods**

#### **M1. Enhancement of Oxygen Transfer**

Blood doping, the use of red blood cells of any origin, or otherwise artificially enhancing the uptake or delivery of oxygen remains prohibited.

*Advisory:*

1. Supplemental oxygen is not prohibited.

#### **M2. Chemical and Physical Manipulation**

Tampering, or attempting to tamper in order to affect the validity of samples collected during the doping control process is prohibited. Intravenous (IV) infusions or any intravenous injection of more than 50mL per 6 hour period are prohibited except for those legitimately received in the course of hospital admissions or clinical investigations.

*Advisory:*

1. Even if the substance to be delivered by intravenous infusion is not prohibited (such as saline), the method remains prohibited outside of the scope of allowable use (hospital admissions/clinical investigations).



2. Physicians frequently raise concerns about the emergency use of IV infusions in cases of severe GI distress (such as during travel) and dehydration. WADA has issued a position on the appropriate uses of IV infusions. Please consult the Science and Medicine/TUE section of the WADA website at [www.wada-ama.org](http://www.wada-ama.org). In the download center you will find a guideline on IV infusions.
3. The prohibition of “the sequential withdrawal, manipulation, and reintroduction of any quantity of whole blood” is not intended to prevent plasmapheresis (a specialized form of blood donation) or similar processes.
4. Those undergoing hemodialysis, as part of the treatment of chronic kidney disease, will require a TUE for such procedures (and the substances that are often used to treat such disorders).

### **M3. Gene Doping**

The transfer of cells or genetic elements, or the use of agents that alter gene expression is prohibited. Consult the WADA Prohibited List 2012 for details and examples.

### **Substances and Methods Prohibited In-Competition**

This section focuses on substances that are prohibited only in-competition. These substances may be used when athletes are not competing. USADA does not test for these substances out-of-competition.

It is very important to be aware of the definition of “in-competition.” Each International Federation may have a different definition of “in-competition” and it may vary by event. For some events, “in-competition” may be defined as “12 hours before the start of the competition” and different rules may apply to multi-day events (for example, the Olympic Games). It is very important for athletes to understand the definition of “in-competition” for the sporting events in which they compete. Athletes must ensure that all substances prohibited in-competition have completely cleared from their body before competition. If this is not possible, or if the chronic use of one or more of these medications is needed, the athlete should apply for a Therapeutic Use Exemption.

### **S6. Stimulants**

All stimulants are prohibited except for imidazole derivatives for topical use, and those stimulants on the 2012 Monitoring Program (bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol, and synephrine).

Advisory:

1. Athletes diagnosed with Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD) and are on stimulants and who are competing should obtain a Therapeutic Use Exemption for their medication. Athletes who are not competing do not need to obtain a TUE in order to use these medications.
2. Athletes diagnosed with narcolepsy, and prescribed medications that contain modafinil or



armodafinil, for example, should obtain a TUE if they need to take these medications just prior to or during competition.

3. Pseudoephedrine is an ingredient in several over-the-counter cold and flu medications. WADA has issued an advisory to athletes that they should discontinue taking medications containing pseudoephedrine AT LEAST 24 hours prior to the time defined as “in-competition.” However, in some cases this may not be enough time for the substance to clear from the body. Athletes who intend to compete in the near future, or who are currently in-competition should examine the ingredient list of any medication they are using to ensure it does NOT contain pseudoephedrine.

4. Nicotine and caffeine are not prohibited. They are simply part of WADAs monitoring program.

### **S7. Narcotics**

Certain narcotics are prohibited in-competition: Buprenorphine, dextromoramide, diamorphine (heroin), fentanyl and its derivatives, hydromorphone, methadone, morphine, oxycodone, oxymorphone, pentazocine, pethidine (meperidine). Use of these narcotics in-competition requires an approved TUE.

### **S8. Cannabinoids**

Natural or synthetic tetrahydrocannabinol (THC) and THC-like cannabinoids (e.g. hashish, marijuana, HU-210) are prohibited.

#### *Advisory:*

1. Athletes should be aware that cannabinoids may be retained in fat tissue following chronic use and may be detected weeks after use. There have been situations where sudden weight loss has caused cannabinoid metabolites stored in fat to be released in detectable levels. USADA strongly advises athletes not to use cannabinoids at any time.

### **S9. Glucocorticosteroids**

The systemic use of glucocorticosteroids is prohibited in-competition. This includes oral (like a Medrol Dose pack) or a systemic injection.

#### *Advisory:*

1. Athletes who are prescribed oral glucocorticosteroids (Medrol Dose Pack for instance) may take these medications without a TUE as long as the prohibited substance has cleared their system prior to the time defined as “in-competition”. If athletes need to use glucocorticosteroids by oral, intramuscular, or rectal routes shortly before, or during competition they must obtain a TUE.

2. Injection of glucocorticosteroids around tendons, into joints, and epidural (into the spine) is not prohibited.



3. Inhalation of glucocorticosteroids is not prohibited.
4. Topical use of glucocorticosteroids (anti-rash cream, hemorrhoidal creams etc.) is not prohibited.
5. Hemorrhoidal creams are not prohibited, but systemic rectal use (like a suppository) of glucocorticosteroids *is prohibited*.
6. Many physicians may refer to intramuscular injection of glucocorticosteroids as a “local” injection into muscle. According to the Prohibited List injection into a muscle is considered systemic, and is therefore it is prohibited.

### **USADA References and Resources**

This guide was intended to introduce athletes, and others involved in sport, to the Prohibited List and to provide practical guidance on how the Prohibited List may affect them. This guide is not intended to be exhaustive, and should be read in conjunction with the Prohibited List. Ultimately, the athlete is solely responsible for the substances in his or her body. Further information on the topics contained in this guide can be obtained by consulting the references and resources below.

- The 2012 Prohibited List can be downloaded from [www.usada.org/prohibited-list](http://www.usada.org/prohibited-list).
- Athletes can call Athlete Express toll-free at 866) 601-2632 or (719) 785-2000 for questions on medications, substances, methods, and clarification on the Prohibited List.
- Global DRO ([www.globaldro.com](http://www.globaldro.com)) is a searchable online database of medications available in the United States, Canada, and the United Kingdom explaining whether or not these medications contain prohibited substances.
- You may contact USADA’s Drug Reference Department on 719-785-2045 for questions on Therapeutic Use Exemptions.
- USADA does not provide medical advice or recommendations. Athletes should make all decisions on treatment with their physician in conjunction with the 2012 Prohibited List.