Prohibited List
The 2009 Prohibited List

This List shall come into effect on 1 January 2009

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The World Anti-Doping Agency
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www.wada-ama.org

Please be advised that this information is subject to change at anytime and that in case of any discrepancy between this information and the World Anti-Doping Code, the Code prevails. Always check with your International Federation or National Federation for the most up-to-date anti-doping regulations.

The official text of the Prohibited List shall be maintained by WADA and shall be published in English and French. In the event of any conflict between the translations and original English text, the English version posted at www.wada-ama.org shall prevail.
The World Anti-Doping Agency (WADA) was established in 1999 to promote, coordinate, and monitor at the international level the fight against doping in sport in all its forms. WADA is composed and funded equally by the Sports Movement and Governments of the world.
# Contents

## About WADA and The List

### Substances and Methods Prohibited at All Times (In- and Out-of-Competition)

<table>
<thead>
<tr>
<th>Prohibited Substances</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1. Anabolic Agents</td>
<td>6</td>
</tr>
<tr>
<td>S2. Hormones and Related Substances</td>
<td>9</td>
</tr>
<tr>
<td>S3. Beta-2 Agonists</td>
<td>10</td>
</tr>
<tr>
<td>S4. Hormone Antagonists and Modulators</td>
<td>10</td>
</tr>
<tr>
<td>S5. Diuretics and Other Masking Agents</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prohibited Methods</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1. Enhancement of Oxygen Transfer</td>
<td>12</td>
</tr>
<tr>
<td>M2. Chemical and Physical Manipulation</td>
<td>12</td>
</tr>
<tr>
<td>M3. Gene Doping</td>
<td>12</td>
</tr>
</tbody>
</table>

## Substances and Methods Prohibited In-Competition

Includes S1 to S5 and M1 to M3 defined above, as well as:

<table>
<thead>
<tr>
<th>Prohibited Substances</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>S6. Stimulants</td>
<td>14</td>
</tr>
<tr>
<td>S7. Narcotics</td>
<td>15</td>
</tr>
<tr>
<td>S8. Cannabinoids</td>
<td>16</td>
</tr>
<tr>
<td>S9. Glucocorticosteroids</td>
<td>16</td>
</tr>
</tbody>
</table>

## Substances Prohibited in Particular Sports

<table>
<thead>
<tr>
<th>Prohibited Substances</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1. Alcohol</td>
<td>18</td>
</tr>
<tr>
<td>P2. Beta-Blockers</td>
<td>18</td>
</tr>
</tbody>
</table>

_The use of any drug should be limited to medically justified indications._

_All Prohibited Substances shall be considered as “Specified Substances” except Substances in classes S1, S2, S.4.4 and S6.a, and Prohibited Methods M1, M2 and M3._
What is WADA?

The World Anti-Doping Agency (WADA) is the international independent organization responsible for promoting, coordinating, and monitoring the fight against doping in sport in all its forms.

WADA works towards a vision of the world that values and fosters doping free sport.

What is the World Anti-Doping Code?

The World Anti-Doping Code (Code) is the document that harmonizes regulations regarding anti-doping in sport across all sports and all countries of the world. The Code provides a framework for anti-doping policies, rules, and regulations for sport organizations and public authorities so that there may be a level playing field for all athletes worldwide.

What is the List?

The List of Prohibited Substances and Methods (List), is the International Standard that designates what is prohibited in- and out-of competition. The List also indicates whether particular substances are banned in particular sports. The List is updated annually, and the most current edition is posted on WADA’s Web site at www.wada-ama.org.

What does “Play True” mean?

“Play True” is WADA’s tagline. Along with the WADA logo—the green equal sign centered in a black square seen above left—“Play True” expresses the universal spirit of sport practiced naturally within the rules and free from artificial enhancements. The equal sign represents fairness and equity, while the square represents the rules all athletes agree to respect. WADA’s colors are also significant: black stands for the fairness of the referee while green evokes the image of health, nature, and the traditional field of play.
How is the List updated?

WADA assumed responsibility for the List in 2004 following implementation of the Code and the associated International Standards (List, Testing, Laboratories, and Therapeutic Use Exemptions). According to the Code, if a substance or method is found to meet two of three criteria (enhances performance, poses a threat to athlete health, violates the spirit of sport), then it is possible that it be considered for placement on the List.

The List is developed through a highly consultative process, beginning with the circulation of a draft List among more than 1,700 stakeholders for comment. The comments received are processed by WADA’s scientific committees which are composed of international scientific and anti-doping experts. WADA’s Working Group responsible for the List analyzes stakeholder input and presents its conclusions to WADA’s Health, Medical and Research Committee, who in turn submits its final recommendations to WADA’s Executive Committee at its annual September meeting. The Executive Committee, WADA’s ultimate policy-making body, discusses the recommendations and makes a final decision.

The new List is published online by October 1, and goes into effect on January 1 of the following year.
Prohibited Substances

S1. Anabolic Agents

Anabolic agents are prohibited.

1. Anabolic Androgenic Steroids (AAS)
   a. Exogenous* AAS, including:
      1-androstendiol (5α-androst-1-ene-3ß,17ß-diol)
      1-androstendione (5α-androst-1-ene-3,17-dione)
      bolandiol (19-norandrostenediol)
      bolasterone
      boldenone
      boldione (androsta-1,4-diene-3,17-dione)
      calusterone
      clostebol
danazol (17α-ethynyl-17ß-hydroxyandrosten-4-eno[2,3-d]isoxazole)
dehydrochlormethyltestosterone
   (4-chloro-17ß-hydroxy-17α-methylandrosta-1,4-dien-3-one)
desoxymethyltestosterone
   (17α-methyl-5α-androst-2-en-17ß-ol)
drostanolone
ethylestrenol (19-nor-17α-pregn-4-en-17-ol)
fluoxymesterone
formebolone
furazabol
   (17ß-hydroxy-17α-methyl-5α-androstano[2,3-c]-furazan)
gestrinone
4-hydroxytestosterone (4,17ß-dihydroxyandrosten-4-en-3-one)
meestanolone
mesterolone
metenolone
methandienone (17β-hydroxy-17α-methylandrostena-1,4-dien-3-one)
methandriol
methasterone (2α, 17α-dimethyl-5α-androstane-3-one-17ß-ol)
methyldeanolone (17β-hydroxy-17α-methylstere-4,9-dien-3-one)
methyl-1-testosterone
   (17β-hydroxy-17α-methyl-5α-androst-1-en-3-one)
methylneotestosterone (17β-hydroxy-17α-methylene-4-en-3-one)
methyltrienolone
   (17β-hydroxy-17α-methylene-4,9,11-trien-3-one)
methyltestosterone
mibolerone

* “exogenous” refers to a substance which is not ordinarily capable of being produced by the body naturally.
nandrolone
19-norandrostenedione (estr-4-ene-3,17-dione)
norboleone
norclostebol
norethandrolone
oxabolone
oxandrolone
oxymesterone
oxymetholone
prostanozol (17β-hydroxy-5α-androstano[3,2-c] pyrazole)
quinbolone
stanozolol
stenbolone
1-testosterone (17β-hydroxy-5α-androst-1-en-3-one)
tetrahydrogestrinone (18α-homo-pregna-4,9,11-trien-17β-ol-3-one)
trenbolone
and other substances with a similar chemical structure or similar biological effect(s).

b. Endogenous** AAS, when administered exogenously:
androstenediol (androst-5-ene-3α,17α-diol)
androstenedione (androst-4-ene-3,17-dione)
dihydrotestosterone (17β-hydroxy-5α-androstan-3-one)
prasterone (dehydroepiandrosterone, DHEA)
testosterone
and the following metabolites and isomers:
5α-androstane-3α,17α-diol
5α-androstane-3α,17β-diol
5α-androstane-3β,17α-diol
5α-androstane-3β,17β-diol
androst-4-ene-3α,17α-diol
androst-4-ene-3α,17β-diol
androst-4-ene-3β,17α-diol
androst-4-ene-3β,17β-diol
androst-5-ene-3α,17α-diol
androst-5-ene-3α,17β-diol
androst-5-ene-3β,17α-diol
androst-5-ene-3β,17β-diol
4-androstenediol (androst-4-ene-3β,17β-diol)
5-androstenedione (androst-5-ene-3,17-dione)
epi-dihydrotestosterone
epitestosterone
3α-hydroxy-5α-androstan-17-one
3β-hydroxy-5α-androstan-17-one
19-norandrosterone
19-noretiocholanolone.

** “endogenous” refers to a substance which is capable of being produced by the body naturally.
Where an anabolic androgenic steroid is capable of being produced endogenously, a Sample will be deemed to contain such Prohibited Substance and an Adverse Analytical Finding will be reported where the concentration of such Prohibited Substance or its metabolites or markers and/or any other relevant ratio(s) in the Athlete’s Sample so deviates from the range of values normally found in humans that it is unlikely to be consistent with normal endogenous production. A Sample shall not be deemed to contain a Prohibited Substance in any such case where an Athlete proves that the concentration of the Prohibited Substance or its metabolites or markers and/or the relevant ratio(s) in the Athlete’s Sample is attributable to a physiological or pathological condition.

In all cases, and at any concentration, the Athlete’s Sample will be deemed to contain a Prohibited Substance and the laboratory will report an Adverse Analytical Finding if, based on any reliable analytical method (e.g. IRMS), the laboratory can show that the Prohibited Substance is of exogenous origin. In such case, no further investigation is necessary.

When a value does not so deviate from the range of values normally found in humans and any reliable analytical method (e.g. IRMS) has not determined the exogenous origin of the substance, but if there are indications, such as a comparison to endogenous reference steroid profiles, of a possible Use of a Prohibited Substance, or when a laboratory has reported a T/E ratio greater than four (4) to one (1) and any reliable analytical method (e.g. IRMS) has not determined the exogenous origin of the substance, further investigation shall be conducted by the relevant Anti-Doping Organization by reviewing the results of any previous test(s) or by conducting subsequent test(s).

When such further investigation is required the result shall be reported by the laboratory as atypical and not as adverse. If a laboratory reports, using an additional reliable analytical method (e.g. IRMS), that the Prohibited Substance is of exogenous origin, no further investigation is necessary and the Sample will be deemed to contain such Prohibited Substance. When an additional reliable analytical method (e.g. IRMS) has not been applied, and a minimum of three previous test results are not available, a longitudinal profile of the Athlete shall be established by performing three no-advance notice tests in a period of three months by the relevant Anti-Doping Organization. The result that triggered this longitudinal study shall be reported as atypical. If the longitudinal profile of the Athlete established by the subsequent tests is not physiologically normal, the result shall then be reported as an Adverse Analytical Finding.

In extremely rare individual cases, boldenone of endogenous origin can be consistently found at very low nanograms per milliliter (ng/mL) levels in urine. When such a very low concentration of boldenone is reported by a laboratory and the application of any reliable analytical method (e.g. IRMS) has not determined the exogenous origin of the substance, further investigation may be conducted by subsequent test(s).

For 19-norandrosterone, an Adverse Analytical Finding reported by a laboratory is considered to be scientific and valid proof of exogenous origin of the Prohibited Substance. In such case, no further investigation is necessary.

Should an Athlete fail to cooperate in the investigations, the Athlete’s Sample shall be deemed to contain a Prohibited Substance.
2. Other Anabolic Agents

*Including but not limited to:*

clenbuterol
selective androgen receptor modulators (SARMs)
tibolone
zeranol
zilpaterol.

S2. Hormones and Related Substances

*The following substances and their releasing factors, are prohibited:*

1. Erythropoiesis-Stimulating Agents (e.g. erythropoietin [EPO], darbepoietin [dEPO], hematide)
2. Growth Hormone (GH), Insulin-like Growth Factors (e.g. IGF-1), Mechano Growth Factors (MGFs)
3. Chorionic Gonadotrophin (CG) and Luteinizing Hormone (LH) *in males*
4. Insulins
5. Corticotrophins

and other substances with similar chemical structure or similar biological effect(s).

[Comment to class S2:

Unless the *Athlete* can demonstrate that the concentration was due to a physiological or pathological condition, a *Sample* will be deemed to contain a *Prohibited Substance* (as listed above) where the concentration of the *Prohibited Substance* or its metabolites and/or relevant ratios or markers in the *Athlete’s Sample* satisfies positivity criteria established by WADA or otherwise so exceeds the range of values normally found in humans that it is unlikely to be consistent with normal endogenous production.

If a laboratory reports, using a reliable analytical method, that the *Prohibited Substance* is of exogenous origin, the *Sample* will be deemed to contain a *Prohibited Substance* and shall be reported as an *Adverse Analytical Finding*.]
S3. Beta-2 Agonists
All beta-2 agonists including their D- and L-isomers are prohibited.

Therefore, formoterol, salbutamol, salmeterol and terbutaline when administered by inhalation also require a Therapeutic Use Exemption in accordance with the relevant section of the International Standard for Therapeutic Use Exemptions.

Despite the granting of a Therapeutic Use Exemption, the presence of salbutamol in urine in excess of 1000 ng/mL will be considered an *Adverse Analytical Finding* unless the *Athlete* proves, through a controlled pharmacokinetic study, that the abnormal result was the consequence of the use of a therapeutic dose of inhaled salbutamol.

S4. Hormone Antagonists and Modulators

*The following classes are prohibited:*

1. Aromatase inhibitors *including, but not limited to:*
   - anastrozole
   - letrozole
   - aminogluthimide
   - exemestane
   - formestane
   - testolactone.

2. Selective Estrogen Receptor Modulators (SERMs) *including, but not limited to:*
   - raloxifene
   - tamoxifen
   - toremifene.

3. Other anti-estrogenic substances *including, but not limited to:*
   - clomiphene
   - cyclofenil
   - fulvestrant.

4. Agents modifying myostatin function(s) *including, but not limited to:*
   - myostatin inhibitors.
S5. Diuretics and Other Masking Agents

*Masking agents are prohibited. They include:*

Diuretics
probenecid
plasma expanders *(e.g. intravenous administration of albumin, dextran, hydroxyethyl starch and mannitol)*
and other substances with similar biological effect(s).

*Diuretics include:*

acetazolamide
amiloride
bumetanide
canrenone
chlorothalidone
etacrynic acid
furosemide
indapamide
metolazone
spironolactone
thiazides *(e.g. bendroflumethiazide, chlorothiazide, hydrochlorothiazide)*
triamterene
and other substances with a similar chemical structure or similar biological effect(s) (except drosperinone and topical dorzolamide and brinzolamide, which are not prohibited).

*[Comment to class S5:]*

A Therapeutic Use Exemption is not valid if an Athlete’s urine contains a diuretic in association with threshold or sub-threshold levels of an exogenous Prohibited Substance(s).]
Prohibited Methods

M1. Enhancement of Oxygen Transfer

The following are prohibited:

1. Blood doping, including the use of autologous, homologous or heterologous blood or red blood cell products of any origin.

2. Artificially enhancing the uptake, transport or delivery of oxygen, including but not limited to perfluorochemicals, efaproxiral (RSR13) and modified haemoglobin products (e.g. haemoglobin-based blood substitutes, microencapsulated haemoglobin products).

M2. Chemical and Physical Manipulation

1. Tampering, or attempting to tamper, in order to alter the integrity and validity of Samples collected during Doping Controls is prohibited. These include but are not limited to catheterisation, urine substitution and/or alteration.

2. Intravenous infusions are prohibited except in the management of surgical procedures, medical emergencies or clinical investigations.

M3. Gene Doping

The transfer of cells or genetic elements or the use of cells, genetic elements or pharmacological agents to modulating expression of endogenous genes having the capacity to enhance athletic performance, is prohibited.

Peroxisome Proliferator Activated Receptor δ (PPAR δ) agonists (e.g. GW 1516) and PPAR δ -AMP-activated protein kinase (AMPK) axis agonists (e.g. AICAR) are prohibited.
Substances and Methods Prohibited *In-Competition*

In addition to the categories S1 to S5 and M1 to M3 defined above, the following categories are prohibited in competition:
Substances and Methods
Prohibited In-Competition

In addition to the categories S1 to S5 and M1 to M3 defined previously, the following categories are prohibited in competition:

**Prohibited Substances**

**S6. Stimulants**

All stimulants (including both their D- & L- optical isomers where relevant) are prohibited, except imidazole derivatives for topical use and those stimulants included in the 2009 Monitoring Program*.

**Stimulants include:**

a. Non Specified Stimulants:

- adrafinil
- amfepramone
- amiphenazole
- amphetamine
- amphetaminil
- benzphetamine
- benzylpiperazine
- bromantan
- clobenzorex
- cocaine
- cropropamide
- crotetamide
- dimethylamphetamine
- etilamphetamine
- famprofazone
- fencamine
- fenetylline

- fenfluramine
- fenproporex
- furfenorex
- mefenorex
- mephentermine
- mesocarb
- methamphetamine[D-]
- methylenedioxyamphetamine
- methylenedioxymethamphetamine
- p-methylamphetamine
- modafinil
- norfenfluramine
- phendimetrazine
- phentermine
- 4-phenylpiracetam [carphedon]
- prolintane.

A stimulant not expressly listed in this section is a Specified Substance.

* The following substances included in the 2009 Monitoring Program (bupropion, caffeine, phenylephrine, phenylpropanolamine, pipradol, pseudoephedrine, synephrine) are not considered as Prohibited Substances.
b. Specified Stimulants
(examples):

- Adrenaline**
- cathine***
- ephedrine****
- etamivan
- etilefrine
- fenbutrazate
- fencamfamin
- heptaminol
- isometheptene
- levmetamphetamine
- meclofenoxate
- methylephedrine****
- methylphenidate

and other substances with a similar chemical structure or similar biological effect(s).

** Adrenaline associated with local anaesthetic agents or by local administration (e.g. nasal, ophthalmologic) is not prohibited.

*** Cathine is prohibited when its concentration in urine is greater than 5 micrograms per milliliter.

**** Each of ephedrine and methylephedrine is prohibited when its concentration in urine is greater than 10 micrograms per milliliter.

S7. Narcotics

The following narcotics are prohibited:

- buprenorphine
- dextromoramide
- diamorphine (heroin)
- fentanyl and its derivatives
- hydromorphone
- methadone
- morphine
- oxycodone
- oxymorphone
- pentazocine
- pethidine.
S8. Cannabinoids
Cannabinoids [e.g. hashish, marijuana] are prohibited.

S9. Glucocorticosteroids
All glucocorticosteroids are prohibited when administered by oral, intravenous, intramuscular or rectal routes.

In accordance with the International Standard for Therapeutic Use Exemptions, a declaration of use must be completed by the Athlete for glucocorticosteroids administered by intraarticular, periarticular, peritendinous, epidural, intradermal and inhalation routes, except as noted below.

Topical preparations when used for auricular, buccal, dermatological (including iontophoresis/phonophoresis), gingival, nasal, ophthalmic and perianal disorders are not prohibited and neither require a Therapeutic Use Exemption nor a declaration of use.
Substances Prohibited in Particular Sports
**P1. Alcohol**

Alcohol (ethanol) is prohibited *In-Competition* only, in the following sports. Detection will be conducted by analysis of breath and/or blood. The doping violation threshold (haematological values) is 0.10 g/L.

- Aeronautic [FAI]
- Archery [FITA, IPC]
- Automobile [FIA]
- Boules [IPC bowls]
- Karate [WKF]
- Modern Pentathlon [UIPM]
- Motorcycling [FIM]
- Ninepin and Tenpin Bowling [FIQ]
- Powerboating [UIM]
- for disciplines involving shooting

**P2. Beta-Blockers**

Unless otherwise specified, beta-blockers are prohibited *In-Competition* only, in the following sports.

- Aeronautic [FAI]
- Archery [FITA, IPC]
- Automobile [FIA]
- Billiards and Snooker [WCBS]
- Bobsleigh [FIBT]
- Boules [CMSB, IPC bowls]
- Bridge [FMB]
- Curling [WCF]
- Golf [IGF]
- Gymnastics [FIG]
- Motorcycling [FIM]
- Ninepin and Tenpin Bowling [FIQ]
- Powerboating [UIM]
- Sailing [ISAF]
- Shooting [ISSF, IPC]
- for match race helms only
- Sailing [ISAF]
- Skiing/Snowboarding [FIS]
- in ski jumping, freestyle aerials/half-pipe and snowboard halfpipe/big air
- Modern Pentathlon [UIPM]
- for disciplines involving shooting
- Wrestling [FILA]

**Beta-blockers include, but are not limited to, the following:**

- acebutolol
- alprenolol
- atenolol
- betaxolol
- bisoprolol
- bunolol
- carteolol
- carvedilol
- celiprolol
- esmolol
- labetalol
- levobunolol
- metipranolol
- metoprolol
- nadolol
- oxprenolol
- pindolol
- propranolol
- sotalol
- timolol.
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