

Sports Sciences

Sports Medicines:

Prohibited Drugs and Substances

(References WADA – 1 January 2013)

THE 2013 PROHIBITED LIST WORLD ANTI-DOPING CODE

Valid w e f 1 January 2013

In accordance with Article 4.2.2 of the World Anti-Doping Code, all Prohibited Substances shall be considered as “Specified Substances” except Substances in classes S1, S2, S4.4, S4.5, S6.a, and Prohibited Methods M1, M2 and M3.

<p style="text-align: center;">SUBSTANCES AND METHODS PROHIBITED AT ALL TIMES (IN – AND OUT-OF-COMPETITION)</p>
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PROHIBITED SUBSTANCE

S0 NON-APPROVED SUBSTANCES

Any pharmacological substance which is not addressed by any of the subsequent sections of the List and with no current approval by any governmental regulatory health authority for human therapeutic use (e.g drugs under pre-clinical or clinical development or discontinued, designer drugs, substances approved only for veterinary use) is prohibited at all times.

S1 ANABOLIC AGENTS

Anabolic agents are prohibited.

1. Anabolic Androgenic Steroids (AAS)

1. Exogenous* AAS, including:

1-androstenediol (5 α -androst-1-ene-3 β -diol);
1-androstenedione (5 α -androst-1-ene-3, 17-dione);
bolandiol (estr-4-ene-3 β , 17 β -diol);
bolasterone; boldenone⁷ baldione (androsta-1,4-diene-3,17-dione);
calusterone;
clostebol;
dnazol ([1,2] oxazolo [4',5':2,3]pregna-4-en-20-yn-17a-ol);
dehydrochlormethyltestosterone (4-chloro-17 β -hydroxy—17 α -methylandrosta-1,4-dien-3-one);
desoxymethyltestosterone (17 α -methyl-5 α -androst- 2-en-17 β -ol); d
rostanolone;
ethylestrenol (19-norpregna-4-en-17a-ol);

fluoxyesterone; formebolone; furazabol (17a-methyl [1,2,5]oxadiazolo[3',4':2,3]-5a-androstan-17β-ol);
gestrinone;
4-hydroxytestosterone (4, 17β-dihydroxyandrost- 4-en-3-one);
mestanolone;
mesterolone; metenolone; methandienone (17β-hydroxy- 17a-methylandrost-1,4-dien-3-one);
methandriol; methasterone (17β-hydroxy-2a, 17a-dimethyl-5a-androstan-3-one); methyldienolone
(17β-hydroxy-17a- methylandrost-4,9-dien-3-one); methyl-1-testosterone (17β-hydroxy-17a-
methyl-5a-androst-1-en-3-one); methylnortestosterone (17β-hydroxy-17a-methylestr-4-en-3-one);
methyltestosterone; meribolone (methyltrienolone, 17β-hydroxy-17a-methylestr-4,9,11-trien-3-
one); mibolone; nandrolone; 19-norandrostenedione (estr-4-ene-3,17-dione); norboletone;
norclostebol; norethandrolone; oxabolone; oxandrolone; oxymesterone; oxymetholone;
prostanazol (17β -[(tetrahydrophyran-2-yl)oxy]-1'H-phyrazolo [3,4:2,3]-5-a-androstane);
quinbolone; stanozolol; stenbolone; 1-testosterone (17β-hydroxy-5a-androst-1-en-3-one);
tetrahydrogestrinone (17-hydroxy-18a-homo-19-nor-17a-pregna-4,9,11-trien-3-one); trenbolone
(17β-hydroxyestr-4,9,11-trien-3-one); and other substances with a similar chemical structure or
similar biological effect(s).

2. Endogenous** AAS when administered exogenously:

androstenediol (androst-5-ene-3β, 17β-diol); androstenedione (androst-4-ene-3,17- dione);
dihydrotestosterone (17β-hydroxy-5a-androstan-3-one); prasterone (dehydroepiandrosterone,
DHEA, 3β-hydroxyandrost-5-en-17-one); testosterone;
and their metabolites and isomers, including but not limited to:

5a-androstane-3a, 17a-diol; 5a-androstane-3a, 17β-diol; 5a-androstane-3β, 17a-diol; 5a-
androstane-3β, 17β-diol; androst-4-ene-3a, 17a-diol; androst-4-ene-3a, 17β-diol; androst-4-ene-3β,
17a-diol; androst-5-ene-3a, 17a-diol; androst-5-ene-3a, 17β-diol; androst-5-ene-3β, 17a-diol; 4-
androstenediol (androst-4-ene-3β, 17β-diol); 5-androstenedione (androst-5-ene-3,17-dione); epi-
dihydrotestosterone; epitestosterone; etiocholanolone; 3a-hydroxy-5a-androstan-17-one; 3- β
hydroxy-5a- androstan-17-one; 7a-hydroxy-DHEA; 7β -hydroxy-DHEA; 7-keto-DHEA; 19-
norandrosterone; 19-noretiocholanolone.

2. Other Anabolic Agents, including but not limited to:

Clenbuterol, selective androgen receptor modulators (SARMs), tibolone, zeranol,
zilpaterol.

For purposes of this section:

* “exogenous” refers to a substance which is not ordinarily capable of being produced by
the body naturally.

** “endogenous” refers to a substance which is capable of being produced by the body

S2 PEPTIDE HORMONES, GROWTH FACTORS AND RELATED SUBSTANCES

The following substances and their releasing factors are prohibited.

1. Erythropoiesis-Stimulating Agents[e.g. erythropoietin (EPO), darbepoetin (dEPO), hypoxia-inducible factor (HIF) stabilizers, methoxy polyethylene glycol-epoetin beta (CERA), peginesatide (Hematide)];
2. Chorionic Gonadotrophin (CG) and Luteinizing Hormone (LH) in males;
3. Corticotrophins;
4. Growth Hormone (GH), Insulin-like Growth Factor-1 (IGF-1), Fibroblast Growth Factors (FGFs), Hepatocyte Growth Factor (HGF), Mechano Growth Factors (MGFs), Platelet-Derived Growth Factor (PDGF), Vascular-Endothelial Growth Factor (VEGF) as well as any other growth factor affecting muscle, tendon or ligament protein synthesis/degradation, vascularisation, energy utilization, regenerative capacity or fibre type switching;

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

S3 BETA-2 AGONISTS

All beta-2 agonists, including all optical isomers (e.g. d- and l-) where relevant, are prohibited except inhaled salbutamol (maximum 1600 micrograms over 24 hours), inhaled formoterol (maximum delivered dose 54 micrograms over 24 hours) and salmeterol when taken by inhalation in accordance with the manufacturers' recommended therapeutic regimen.

The presence in urine of salbutamol in excess of 1000 ng/mL or formoterol in excess of 40 ng/mL is presumed not to be an intended therapeutic use of the substance and will be considered as an Adverse Analytical Finding unless the Athlete proves, through a controlled pharmacokinetic study, that the abnormal result was the consequence of the use of the therapeutic inhaled dose up to the maximum indicated above.

S4 HORMONE AND METABOLIC MODULATORS

The following are prohibited:

1. Aromatase inhibitors including, but not limited to: aminoglutethimide, anastrozole, androsta-1,4,6-triene-3,17-dione (androstatrienedione), 4-androstene-3,16,17 trione (6-oxo), exemestane, formestane, letrozole, testolactone.
2. Selective estrogen receptor modulators (SERMs) including, but not limited to: reloxifene, 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.
5. Metabolic modulators:
 - a) Insulins
 - b) Peroxisome Proliferator Activated Receptor α (PPAR α) agonists (e.g. GW 1516), PPAR α -AMP-activated protein kinase (AMPK) axis agonists (e.g. AICAR).

S5. DIURETICS AND OTHER MASKING AGENTS

Masking agents are prohibited. They include:

Diuretics, desmopressin, plasma, expanders (e.g. glycerol; intravenous administration of albumin, dextran, hydroxyethyl starch and mannitol), probenecid; and other substances with similar biological effect (s) Local administration of felypressin in dental anaesthesia is not prohibited.

Diuretics include:

Acetazolamide, amiloride, bumetanide, canrenone, chlorthalidone, 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 drospirenone, pamabrom and topical dorzolamide and brinzolamide, which are not prohibited).

The use In-and out-of-Competition, as applicable, of any quantity of a substance subject to threshold limits (i.e. formoterol, salbutamol, cathine, ephedrine, methylephedrine and pseudoephedrine) in conjunction with a diuretic or other masking agents requires the deliverance of a specific Therapeutic Use Exemption for that substance in addition to the one granted for the diuretic or other masking agent.

PROHIBITED METHODS

M1. MANIPULATION OF BLOOD AND BLOOD COMPONENTS

The following are prohibited:

1. The administration of reintroduction of any quantity of autologous, homologous or heterologous blood or red blood cell products of any origin into the circulatory system.
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), excluding supplemental oxygen.

3. Any form of intravascular manipulation of the blood or blood components by physical or chemical means.

M2 CHEMICAL AND PHYSICAL MANIPULATION

The following are prohibited:

1. Tempering, or attempting to tamper, in order to alter the integrity and validity of Samples collected during Doping Control. These include but are not limited to urine substitution and/or adulteration (e.g. proteases).
2. Intravenous infusions and/or injections of more than 50 mL per 6 hour period except for those legitimately received in the course of hospital admissions or clinical investigations.

M3 GENE DOPING

The following, with the potential to enhance sport performance, are prohibited:

1. The transfer of polymers of nucleic acids or nucleic acid analogues;
2. The use of normal or genetically modified cells.

SUBSTANCES AND METHODS PROHIBITED IN-COMPETITION

In addition to the categories S0 to S5 and M1 to M3 defined above, the following categories are prohibited In-Competition:

PROHIBITED SUBSTANCES

S6 STIMULANTS

All stimulants, including all optical isomers (e.g. d- and l-) where relevant, are prohibited, except imidazole derivatives for topical use and those stimulants included in the 2013 Monitoring Program*.

Stimulants include:

- a. Non-Specified Stimulants:

Adrafinil; amfepramone; amiphenazole; amphetamine; amphetaminil; benfluorex; benzphetamine; benzylpiperazine; bromantan; clobenzorex; cocaine; cropropamide; crotetamide; dimethylamphetamine; etilamphetamine; famprofazone; fencamine; fenetylline, fenfluramine; fenproporex; furfenorex; mefenorex; mephentermine; mesocarb; methamphetamine (d-); p-

methylamphetamine; methylenedioxyamphetamine; methylenedioxymethamphetamine; modafinil; norfenfluramine; phendimetrazine; phenmetrazine; phentermine; 4-phenylpiracetam (carphedon); prenylamine; prolintane.

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

b. Specified Stimulants (examples):

Adrenaline**; cathine***; ephedrine****; etamivan; etilefrine; fenbutrazate; fencamfamin; heptaminol; isometheptene; levmetamfetamine; meclofenoxate; methylephedrine****; methylhexaneamine (dimethylpentylamine); methylphenidate; nikethamide; norfenefrine; octopamine; oxilofrine (methylsynephrine); parahydroxyamphetamine; pemoline; pentetrazol; phenpromethamine; propylhexedrine; pseudoephedrine*****; selegiline; sibutramine; strychnine; tuaminoheptane; and other substances with a similar chemical structure of similar biological effect(s).

* The following substances included in the 2013 Monitoring Program (bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, piradol, synephrine) are not considered as Prohibited Substances.

**Local administration (e.g. nasal, ophthalmologic) of Adrenaline or co- administration with local anaesthetic agents 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.

*****Pseudoephedrine is prohibited when its concentration in urine is greater than 150 micrograms per milliliter.

S7 NARCOTICS

The following are prohibited:

Buprenorphine, dextromoramide, diamorphine (heroin), fentanyl and its derivatives, hydromorphone, methadone, morphine, oxycodone, oxymorphone, pentazocine, pethidine.

S8 CANNABINOIDS

Natural (e.g. cannabis, hashish, marijuana) or synthetic delta 9- tetrahydrocannabinol (THC) and cannabimimetics (e.g. “Spice”, JWH-18, JWH-73, HU-210) are prohibited.

S9 GLUCOCORTICOSTEROIDS

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

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

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|--------------------|----------------------|
| - Aeronautic (FAI) | - Karat (WKF) |
| - Archery (FITA) | - Motorcycling (FIM) |
| - Automobile (FIA) | - Powerboating (UIM) |

P2 BETA-BLOCKERS

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

- Archery (FITA) (also prohibited Out-of-Competition)
- Automobile (FIA)
- Billiards (all disciplines) (WCBS)
- Darts (WDF)
- Golf (IGF)
- Shooting (ISSF,IPC) (also prohibited Out-of-Competition)
- Skiing/Snowboarding (FIS) in ski jumping, freestyle aerials/halfpipe and snowboard halfpipe/big air.

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.