THE 2023 PROHIBITED LIST - WORLD ANTI-DOPING CODE

DATE OF ENTRY INTO FORCE: 1 JANUARY 2023

Introduction

The Prohibited List is a mandatory International Standard as part of the World Anti-Doping Program.

The List is updated annually following an extensive consultation process facilitated by WADA. The effective date of the List is 01 January 2023.

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 English and French versions, the English version shall prevail.

Below are some terms used in this List of Prohibited Substances and Prohibited Methods.

Prohibited In-Competition

Subject to a different period having been approved by WADA for a given sport, the In-Competition period shall in principle be the period commencing just before midnight (at 11:59 p.m.) on the day before a Competition in which the Athlete is scheduled to participate until the end of the Competition and the Sample collection process.

Prohibited at all times

This means that the substance or method is prohibited In- and Out-of-Competition as defined in the Code.

Specified and non-Specified

As per Article 4.2.2 of the World Anti-Doping Code, "for purposes of the application of Article 10, all Prohibited Substances shall be Specified Substances except as identified on the Prohibited List. No Prohibited Method shall be a Specified Method unless it is specifically identified as a Specified Method on the Prohibited List". As per the comment to the article, "the Specified Substances and Methods identified in Article 4.2.2 should not in any way be considered less important or less dangerous than other doping substances or methods. Rather, they are simply substances and methods which are more likely to have been consumed or used by an Athlete for a purpose other than the enhancement of sport performance."

Substances of Abuse

Pursuant to Article 4.2.3 of the Code, Substances of Abuse are substances that are identified as such because they are frequently abused in society outside of the context of sport. The following are designated Substances of Abuse: cocaine, diamorphine (heroin), methylenedioxymethamphetamine (MDMA/"ecstasy"), tetrahydrocannabinol (THC).

SUBSTANCES AND METHODS PROHIBITED AT ALL TIMES

S0. NON-APPROVED SUBSTANCES

All prohibited substances in this class are prohibited at all times (in- and out-of-competition). All prohibited substances in this class are Specified 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.

This class covers many different substances including but not limited to BPC-157.

S1. ANABOLIC AGENTS

All prohibited substances in this class are prohibited at all times (in- and out-of-competition). All prohibited substances in this class are non-Specified Substances.

Anabolic agents are prohibited.

1. ANABOLIC ANDROGENIC STEROIDS (AAS)

When administered exogenously, including but not limited to:

- . 1-Androstenediol (5α-androst-1-ene-3β,17β-diol)
- . 1-Androstenedione (5α-androst-1-ene-3,17-dione)
- . 1-Androsterone (3α-hydroxy-5α-androst-1ene-17-one)
- . 1-Epiandrosterone (3β-hydroxy-5αandrost-1-ene-17-one)
- . 1-Testosterone (17β-hydroxy-5α-androst-1-en-3-one)
- . 4-Androstenediol (androst-4-ene-3β,17βdiol);
- . 4-Hydroxytestosterone (4,17βdihydroxyandrost-4-en-3one)
- . 5-Androstenedione (androst-5-ene-3,17dione)
- . 7α -hydroxy-DHEA
- . 7β-hydroxy-DHEA
- . 7-Keto-DHEA
- . 17a-methylepithiostanol (epistane)
- . 19-Norandrostenediol (estr-4-ene-3,17diol)
- . 19-Norandrostenedione (estr-4-ene-3,17dione)
- . Androst-4-ene-3,11,17- trione (11ketoandrostenedione, adrenosterone)
- . Androstanolone (5α-dihydrotestosterone, 17β-hydroxy-5αandrostan-3-one)
- . Androstenediol (androst-5-ene-3β,17β-diol)
- . Androstenedione (androst-4-ene-3,17-
- dione)
- . Bolasterone
- . Boldenone
- . Boldione (androsta-1,4-diene-3,17-dione)
- . Calusterone
- . Clostebol
- . Danazol ([1,2]oxazolo[4',5':2,3]pregna-4en-20-yn-17α-ol)

- Dehydrochlormethyltestosterone (4-chloro-17β-hydroxy-17α-methylandrosta-1,4-dien-3-one)
- . Desoxymethyltestosterone (17α-methyl-5αandrost-2-en-17β-ol and 17α-methyl-5αandrost-3-en-17β-ol)
- . Drostanolone
- . Epiandrosterone (3β-hydroxy-5αandrostan-17-one)
- . Epi-dihydrotestosterone (17 β -hydroxy-5 β -androstan-3one)
- . Epitestosterone
- . Ethylestrenol (19-norpregna-4-en-17α-ol)
- . Fluoxymesterone
- . Formebolone
- . Furazabol (17α-methyl
- [1,2,5]oxadiazolo[3',4[′]:2,3]-5α-androstan-17β-ol)
- . Gestrinone
- . Mestanolone
- . Mesterolone
- . Metandienone (17β-hydroxy-17αmethylandrosta-1,4-dien-3-one)
- . Metenolone
- . Methandriol
- . Methasterone (17β-hydroxy-2α,17αdimethyl-5α-androstan-3-one)
- . Methyl-1-testosterone (17 β -hydroxy-17 α -methyl-5 α -androst-1-en-3-one)
- . Methylclostebol
- . Methyldienolone (17β-hydroxy-17αmethylestra-4,9-dien-3-one)
- . Methylnortestosterone (17 β -hydroxy-17 α -methylestr-4-en-3-one)
- . Methyltestosterone
- . Metribolone (methyltrienolone, 17βhydroxy-17α-methylestra-4,9,11-trien-3one)

. Mibolerone	. Prostanozol (17β-[(tetrahydropyran-2-
. Nandrolone (19-nortestosterone)	yl)oxy]-1'H-pyrazolo[3,4:2,3]-5α-
. Norboletone	androstane)
. Norclostebol (4-chloro-17β-ol-estr-4-en-3-	. Quinbolone
one)	. Stanozolol
. Norethandrolone	. Stenbolone
. Oxabolone	. Testosterone
. Oxandrolone	. Tetrahydrogestrinone (17-hydroxy-18a-
. Oxymesterone	homo-19-nor-17α-pregna-4,9,11-trien-3-
. Oxymetholone	one)
. Prasterone (dehydroepiandrosterone,	. Tibolone
DHEA, 3β-hydroxyandrost-5-en-17-one)	. Trenbolone (17β-hydroxyestr-4,9,11-trien- 3-one)

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

2. OTHER ANABOLIC AGENTS

Including, but not limited to:

Clenbuterol, osilodrostat, ractopamine, selective androgen receptor modulators [SARMs, e.g. andarine, enobosarm (ostarine), LGD-4033 (ligandrol), RAD140, S-23 and YK-11], zeranol and zilpaterol.

S2. PEPTIDE HORMONES, GROWTH FACTORS, RELATED SUBSTANCES, AND MIMETICS

All prohibited substances in this class are prohibited at all times (in- and out-of-competition). All prohibited substances in this class are non-Specified Substances

The following substances, and other substances with similar chemical structure or similar biological effect(s), are prohibited:

1. ERYTHROPOIETINS (EPO) AND AGENTS AFFECTING ERYTHROPOIESIS

Including, but not limited to:

- 1.1 Erythropoietin receptor agonists, e.g. darbepoietin (dEPO); erythropoietins (EPO); EPO-based constructs [e.g. EPO-Fc, methoxy polyethylene glycol-epoetin beta (CERA)]; EPO-mimetic agents and their constructs (e.g. CNTO 530, peginesatide).
- 1.2 Hypoxia-inducible factor (HIF) activating agents, e.g. cobalt; daprodustat (GSK1278863); IOX2; molidustat (BAY 85-3934); roxadustat (FG-4592); vadadustat (AKB-6548); xenon.
- 1.3 GATA inhibitors, e.g. K-11706.
- 1.4 Transforming growth factor beta (TGF-β) signalling inhibitors, e.g. luspatercept; sotatercept.
- 1.5 Innate repair receptor agonists, e.g. asialo EPO; carbamylated EPO (CEPO).

2. PEPTIDE HORMONES AND THEIR RELEASING FACTORS

- 2.1 Chorionic gonadotrophin (CG) and luteinizing hormone (LH) and their releasing factors in males, e.g. buserelin, deslorelin, gonadorelin, goserelin, leuprorelin, nafarelin and triptorelin.
- 2.2 Corticotrophins and their releasing factors, e.g. corticorelin.
- 2.3 Growth hormone (GH), its analogues and fragments including, but not limited to: . growth hormone analogues, e.g. lonapegsomatropin, somapacitan and somatrogon . growth hormone fragments, e.g. AOD-9604 and hGH 176-191.
- 2.4 Growth hormone releasing factors, including, but not limited to:

. growth hormone-releasing hormone (GHRH) and its analogues (e.g. CJC-1293, CJC-1295, sermorelin and tesamorelin)

. growth hormone secretagogues (GHS) and their mimetics [e.g. lenomorelin (ghrelin), anamorelin, ipamorelin, macimorelin and tabimorelin];

. GH-releasing peptides (GHRPs) [e.g. alexamorelin, GHRP-1, GHRP-2 (pralmorelin), GHRP-3, GHRP-4, GHRP-5, GHRP-6, and examorelin (hexarelin)].

3. GROWTH FACTORS AND GROWTH FACTOR MODULATORS

Including, but not limited to:

- . Fibroblast growth factors (FGFs)
- . Hepatocyte growth factor (HGF)
- . Insulin-like growth factor 1 (IGF-1) and its analogues
- . Mechano growth factors (MGFs)
- . Platelet-derived growth factor (PDGF)
- . Thymosin-β4 and its derivatives e.g. TB-500
- . Vascular endothelial growth factor (VEGF)

and other growth factors or growth factor modulators affecting muscle, tendon or ligament protein synthesis/degradation, vascularisation, energy utilization, regenerative capacity or fibre type switching.

S3. BETA-2 AGONISTS

All prohibited substances in this class are prohibited at all times (in- and out-of-competition). All prohibited substances in this class are Specified Substances

All selective and non-selective beta-2 agonists, including all optical isomers, are prohibited. Including, but not limited to:

- . Arformoterol
- . Fenoterol
- . Formoterol
- . Higenamine
- Indacaterol
- . Levosalbutamol
- . Olodaterol
- . Procaterol

EXCEPTIONS

- Inhaled salbutamol: maximum 1600 micrograms over 24 hours in divided doses not to exceed 600 micrograms over 8 hours starting from any dose;
- Inhaled formoterol: maximum delivered dose 54 micrograms over 24 hours;
- Inhaled salmeterol: maximum 200 micrograms over 24 hours.
- Inhaled vilanterol: maximum 25 micrograms over 24 hours.

NOTE

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

S4. HORMONE AND METABOLIC MODULATORS

All prohibited substances in this class are prohibited at all times (in- and out-of-competition). Prohibited substances in classes S4.1 and S4.2 are Specified Substances. Those in classes S4.3 and S4.4 are non-Specified Substances.

The following hormone and metabolic modulators are prohibited:

- Reproterol
- Salbutamol
- Salmeterol
- . Terbutaline
- Tretoguinol (trimetoguinol)
- Tulobuterol
- . Vilanterol

4.1. AROMATASE INHIBITORS

Including, but not limited to:

- . 2-Androstenol (5α-androst-2-en-17-ol)
- . 2-Androstenone (5α-androst-2-en-17-one)
- . 3-Androstenol (5α-androst-3-en-17-ol)
- . 3-Androstenone (5 α -androst-3-en-17-one)
- . 4-Androstene-3,6,17 trione (6-oxo)
- . Aminoglutethimide
- . Anastrozole
- . Androsta-1,4,6-triene-3,17-dione(androstatrienedione)
- . Androsta-3,5-diene-7,17-dione (arimistane)
- . Exemestane
- . Formestane
- . Letrozole
- . Testolactone

4.2. ANTI-ESTROGENIC SUBSTANCES [ANTI-ESTROGENS AND SELECTIVE ESTROGEN RECEPTOR MODULATORS (SERMS)]

Including, but not limited to:

- . Bazedoxifene
- . Clomifene
- . Cyclofenil
- . Fulvestrant
- . Ospemifene
- . Raloxifene
- . Tamoxifen
- . Toremifene

4.3. AGENTS PREVENTING ACTIVIN RECEPTOR IIB ACTIVATION

Including, but not limited, to:

- . Activin A-neutralising antibodies;
- . Activin receptor IIB competitors such as:
- Decoy activin receptors (e.g. ACE-031);
- . Anti-activin receptor IIB antibodies (e.g. bimagrumab);
- . Myostatin inhibitors such as:
 - Ågents reducing or ablating myostatin expression
 - Myostatin-binding proteins (e.g. follistatin, myostatin propeptide)
 - Myostatin- or precursor-neutralising antibodies (e.g. apitegromab, domagrozumab,

landogrozumab, stamulumab)

4.4. METABOLIC MODULATORS

- 4.4.1 Activators of the AMP-activated protein kinase (AMPK), e.g. AICAR, SR9009; and peroxisome proliferator-activated receptor delta (PPARδ) agonists, e.g. 2-(2-methyl-4-((4-methyl-2-(4-(trifluoromethyl)phenyl)thiazol-5-yl)methylthio)phenoxy) acetic acid (GW1516, GW501516)
- 4.4.2 Insulins and insulin-mimetics
- 4.4.3 Meldonium
- 4.4.4 Trimetazidine

S5. DIURETICS AND MASKING AGENTS

All prohibited substances in this class are prohibited at all times (in- and out-of-competition). All prohibited substances in this class are Specified Substances

All diuretics and masking agents, including all optical isomers, e.g. d- and l- where relevant, are prohibited.

Including, but not limited to:

- Desmopressin; probenecid; plasma expanders, e.g. intravenous administration of albumin, dextran, hydroxyethyl starch and mannitol.
- Acetazolamide; amiloride; bumetanide; canrenone; chlortalidone; etacrynic acid; furosemide; indapamide; metolazone; spironolactone; thiazides, e.g. bendroflumethiazide, chlorothiazide; and hydrochlorothiazide; torasemide; triamterene and vaptans, e.g. tolvaptan

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

EXCEPTIONS

- Drospirenone; pamabrom; and topical ophtalmic administration of carbonic anhydrase inhibitors (e.g. dorzolamide, brinzolamide).
- Local administration of felypressin in dental anaesthesia.

NOTE

The detection in an Athlete's Sample at all times or In-Competition, as applicable, of any quantity of the following substances subject to threshold limits: formoterol, salbutamol, cathine, ephedrine, methylephedrine and pseudoephedrine, in conjunction with a diuretic or masking agent (except topical ophthalmic administration of a carbonic anhydrase inhibitor or local administration of felypressin in dental anaesthesia), will be considered as an Adverse Analytical Finding (AAF) unless the Athlete has an approved Therapeutic Use Exemption (TUE) for that substance in addition to the one granted for the diuretic or masking agent.

PROHIBITED METHODS

All prohibited methods are prohibited at all times (in- and out-of-competition). All prohibited methods are non-Specified except methods in M2.2. which are Specified Methods.

M1. MANIPULATION OF BLOOD AND BLOOD COMPONENTS

The following are prohibited:

- 1. The Administration or reintroduction of any quantity of autologous, allogenic (homologous) or heterologous blood, or red blood cell products of any origin into the circulatory system.
- Artificially enhancing the uptake, transport or delivery of oxygen. Including, but not limited to: Perfluorochemicals; efaproxiral (RSR13); voxelotor and modified haemoglobin products, e.g. haemoglobin-based blood substitutes and microencapsulated haemoglobin products, excluding supplemental oxygen by inhalation.
- 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. Tampering, or Attempting to Tamper, to alter the integrity and validity of Samples collected during Doping Control.
- Including, but not limited to:
- Sample substitution and/or adulteration, e.g. addition of proteases to Samples.
- Intravenous infusions and/or injections of more than a total of 100 mL per 12-hour period except for those legitimately received in the course of hospital treatments, surgical procedures or clinical diagnostic investigations.

M3. GENE AND CELL DOPING

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

- 1. The use of nucleic acids or nucleic acid analogues that may alter genome sequences and/or alter gene expression by any mechanism. This includes but is not limited to gene editing, gene silencing and gene transfer technologies.
- 2. The use of normal or genetically modified cells.

SUBSTANCES AND METHODS PROHIBITED IN-COMPETITION

S6. STIMULANTS

All prohibited substances in this class are prohibited in-competition.

All prohibited substances in this class are Specified Substances except those in S6.A, which are non-Specified Substances.

Substances of Abuse in this section: cocaine and methylenedioxymethamphetamine (MDMA /"ecstasy")

All stimulants, including all optical isomers, e.g. d- and l- where relevant, are prohibited. Stimulants include:

A: NON-SPECIFIED STIMULANTS

- . Adrafinil
- . Amfepramone
- . Amfetamine
- . Amfetaminil
- . Amiphenazole
- . Benfluorex
- . Benzylpiperazine
- . Bromantan
- . Clobenzorex
- . Cocaine
- . Cropropamide
- . Crotetamide
- . Fencamine
- . Fenetylline
- . Fenfluramine
- . Fenproporex

Fonturacetam [4-phenylpiracetam (carphedon)]

- . Furfenorex
- . Lisdexamfetamine
- . Mefenorex
- . Mephentermine
- . Mesocarb
- . Metamfetamine(d-)
- . p-methylamphetamine
- . Modafinil
- . Norfenfluramine
- . Phendimetrazine
- . Phentermine
- . Prenylamine
- . Prolintane

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

B: SPECIFIED STIMULANTS

Including, but not limited to:

 3-Methylhexan-2-amine (1,2-dimethylpentylamine) 4-fluoromethylphenidate 4-Methylhexan-2-amine (methylhexan-2-amine, 1,3- dimethylamylamine, 1,3 DMAA) 4-Methylpentan-2-amine (1,3- dimethylbutylamine) 5-Methylhexan-2-amine (1,4- dimethylpentylamine, 1,4- dimethylamylamine, 1,4-DMAA) Benzfetamine Cathinone and its analogues, e.g. mephedrone, methedrone, and α- pyrrolidinovalerophenone Dimetamfetamine (dimethylamphetamine) Ephedrine*** Epinephrine**** (adrenaline) Etamivan Ethylphenidate Etilamfetamine Etilefrine Famprofazone Fencamfamin Heptaminol Hydrafinil (fluorenol) 	 Hydroxyamfetamine (parahydroxyamphetamine) Isometheptene Levmetamfetamine Meclofenoxate Methylenedioxymethamphetamine Methylenedioxymethamphetamine Methylephedrine*** Methylaphthidate [((±)-methyl-2- (naphthalen-2-yl)-2-(piperidin-2-yl)acetate] Methylphenidate Nikethamide Norfenefrine Octodrine (1,5-dimethylhexylamine) Octopamine Oxilofrine (methylsynephrine) Pemoline Pentetrazol Phenethylamine and its derivatives Phenpromethamine Propylhexedrine Selegiline Sibutramine Solriamfetol Strychnine Tenamfetamine Tuaminoheptane
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and other substances with a similar chemical structure or similar biological effect(s).

EXCEPTIONS

- Clonidine;
- Imidazoline derivatives for dermatological, nasal, ophthalmic or otic use (e.g. brimonidine, clonazoline, fenoxazoline, indanazoline, naphazoline, oxymetazoline, tetryzoline, xylometazoline) and those stimulants included in the 2023 Monitoring Program*.
- * Bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol, and synephrine: These substances are included in the 2023 Monitoring Program and are not considered Prohibited Substances.
- ** Cathine (d-norpseudoephedrine) and its l-isomer: Prohibited when its concentration in urine is greater than 5 micrograms per millilitre.
- *** Ephedrine and methylephedrine: Prohibited when the concentration of either in urine is greater than 10 micrograms per milliliter.
- **** Epinephrine (adrenaline): Not prohibited in local administration, e.g. nasal, ophthalmologic, or coadministration with local anaesthetic agents.
- ***** Pseudoephedrine: Prohibited when its concentration in urine is greater than 150 micrograms per millilitre.

S7. NARCOTICS

All prohibited substances in this class are prohibited in-competition. All prohibited substances in this class are Specified Substances. Substance of Abuse in this section: diamorphine (heroin)

The following narcotics, including all optical isomers, e.g. d- and l- where relevant, are prohibited.

- . Buprenorphine
- . Dextromoramide
- . Diamorphine (heroin)
- . Fentanyl and its derivatives
- . Hydromorphone
- . Methadone

Morphine
Nicomorphine
Oxycodone
Oxymorphone
Pentazocine
Pethidine

S8. CANNABINOIDS

All prohibited substances in this class are prohibited in-competition. All prohibited substances in this class are Specified Substances. Substance of Abuse in this section: tetrahydrocannabinol (THC)

All natural and synthetic cannabinoids are prohibited, e.g.:

- In cannabis (hashish, marijuana) and cannabis products
- Natural and synthetic tetrahydrocannabinols (THCs)
- Synthetic cannabinoids that mimic the effects of THC

EXCEPTIONS

• Cannabidiol.

S9. GLUCOCORTICOIDS

All prohibited substances in this class are prohibited in-competition. All prohibited substances in this class are Specified Substances.

All glucocorticoids are prohibited when administered by any injectable, oral [including oromucosal (e.g. buccal, gingival, sublingual)] or rectal route.

Including but not limited to:

Beclometasone Flunisolide Fluticasone Betamethasone Budesonide Hydrocortisone Methylprednisolone Ciclesonide Cortisone Mometasone Deflazacort Prednisolone Dexamethasone Prednisone Flucortolone Triamcinolone acetonide

NOTE

Other routes of administration (including inhaled, and topical: dental-intracanal, dermal, intranasal, ophthalmological, otic and perianal) are not prohibited when used within the manufacturer's licensed doses and therapeutic indications.

PROHIBITED IN PARTICULAR SPORTS

P1. BETA-BLOCKERS

All prohibited substances in this class are Specified Substances

Beta-blockers are prohibited In-Competition only, in the following sports, and also prohibited Out-of-Competition where indicated (*).

- Archery (WA) *
- Automobile (FIA)
- Billiards (all disciplines) (WCBS)
- Darts (WDF)
- Golf (IGF)
- Mini-Golf (WMF)
- Shooting (ISSF, IPC) *
- Skiing/Snowboarding (FIS) in ski jumping, freestyle aerials/halfpipe and snowboard halfpipe/big air
- Underwater sports (CMAS)* in all subdisciplines of freediving, spearfishing and target shooting.
- * Also prohibited Out-of-Competition

Including but not limited to:

- . Acebutolol
- . Alprenolol
- . Atenolol
- . Betaxolol;
- . Bisoprolol
- . Bunolol
- . Carteolol
- . Carvedilol
- . Celiprolol
- . Esmolol

- . Labetalol
- . Metipranolol;
- . Metoprolol
- . Nadolol
- . Nebivolol
- . Oxprenolol
- . Pindolol
- . Propranolol
- . Sotalol
- . Timolol