LPGA PROHIBITED LIST – 2021

PROHIBITED SUBSTANCES

1. **NON-APPROVED SUBSTANCES**: Any pharmacological substance which is not addressed by any of the subsequent sections of the Prohibited 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.

2. ANABOLIC AGENTS:

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-1-ene-17-one)

1-Epiandrosterone (3β-hydroxy-5α-androst-1-ene-17-one)

1-Testosterone (17β-hydroxy-5α-androst-1-en-3-one)

4-Androstenediol (androst-4-ene-3β,17β-diol)

4-Hydroxytestosterone (4,17β-dihydroxyandrost-4-en-3-one)

5-Androstenedione (androst-5-ene-3,17-dione)

7α-hydroxy-DHEA

7β-hydroxy-DHEA

7-Keto-DHEA

19-Norandrostenediol (estr-4-ene-3,17-diol)

19-Norandrostenedione (estr-4-ene-3,17-dione)

Androstanolone (5α-dihydrotestosterone, 17β-hydroxy-5α-androstan-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-4-en-20-yn-17α-ol)

Dehydrochlormethyltestosterone (4-chloro-17β-hydroxy-17α-methylandrosta-1,4-dien-3-one)

Desoxymethyltestosterone (17α-methyl-5α-androst-2-en-17β-ol and 17α-methyl-5α-androst-3-en-17β-ol)

Drostanolone

Epiandrosterone (3β-hydroxy-5α-androstan-17-one)

Epi-dihydrotestosterone (17β-hydroxy-5β-androstan-3-one)

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-17α-methylandrosta-1,4-dien-3-one)

Metenolone

Methandriol

Methasterone (17β-hydroxy-2α,17α-dimethyl-5α-androstan-3-one)

Methyl-1-testosterone (17β-hydroxy-17α-methyl-5α-androst-1-en-3-one)

Methylclostebol

Methyldienolone (17β-hydroxy-17α-methylestra-4,9-dien-3-one)

Methylnortestosterone (17β-hydroxy-17α-methylestr-4-en-3-one)

Methyltestosterone

Metribolone (methyltrienolone, 17β-hydroxy-17α-methylestra-4,9,11-trien-3-one)

Mibolerone

Nandrolone (19-nortestosterone)

Norboletone

Norclostebol (4-chloro-17β-ol-estr-4-en-3-

one)

Norethandrolone

Oxabolone

Oxandrolone

Oxymesterone

Oxymetholone

Prasterone (dehydroepiandrosterone, DHEA, 3β-hydroxyandrost-5-en-17-one)

Prostanozol (17β-[(tetrahydropyran-2-yl) oxy]-1'H-pyrazolo[3,4:2,3]-5α-androstane)

Quinbolone

Stanozolol

Stenbolone

Testosterone

Tetrahydrogestrinone (17-hydroxy-18ahomo-19-nor-17α-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. Other Anabolic Agents

Including, but not limited to: Clenbuterol, selective androgen receptor modulators (SARMs, e.g. andarine, LGD-4033 (ligandrol), enobosarm (ostarine) and RAD140), tibolone, zeranol and zilpaterol.

3. PEPTIDE HORMONES, GROWTH FACTORS, RELATED SUBSTANCES, AND MIMETICS:

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, Darbepoetins (dEPO); Erythropoietins (EPO); EPO based constructs [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. Argon; Cobalt; daprodustat (GSK1278863); Molidustat (BAY 85-3934]; Roxadustat (FG-4592); Vadadustat (AKB-6548); Xenon.

1.3 GATA inhibitors, e.g. K-11706.

1.4 TGF-beta (TGF-β) 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 Corticotrophins and their releasing factors, e.g. Corticorelin;

2.2 Growth Hormone (GH), its fragments and releasing factors, including, but not limited to: Growth Hormone fragments, e.g. AOD-9604 and hGH 176-191; Growth Hormone Releasing Hormone (GHRH) and its analogues, e.g. CJC-1293, CJC-1295, sermorelin and tesamorelin; Growth Hormone Secretagogues (GHS), e.g. ghrelin and ghrelin mimetics, e.g. anamorelin, ipamorelin 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).

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

4. BETA-2 AGONISTS: 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; Reproterol; Salbutamol; Salmeterol; Terbutaline; Tretoquinol (trimetoquinol); Tulobuterol; Vilanterol

Except:

• Inhaled salbutamol: maximum 1600 micrograms over 24 hours in divided doses not to exceed 800 micrograms over 12 hours starting from any dose;

• Inhaled formoterol: maximum delivered dose of 54 micrograms over 24 hours;

• Inhaled salmeterol: maximum 200 micrograms over 24 hours.

Inhaled vilanterol: maximum 25 micrograms over 24 hours.

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* unless the *Player* 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.

5. HORMONE AND METABOLIC MODULATORS:

The following hormone and metabolic modulators are prohibited:

1. Aromatase Inhibitors

Including, but not limited to: 2-Androstenol (5a-androst-2-en-17-ol); 2-Androstenone (5a-androst-2-en-17-one); 3-Androstenol (5a-androst-3-en-17-ol); 3-Androstenone (5a-androst-3-en-17-one); 4-Androstene-3,6,17 trione (6-oxo); Aminoglutethimide; Anastrozole; Androsta-1,4,6-triene-3,17-dione (androstatrienedione); 5Androsta-3,5-diene-7,17-dione (arimistane); Exemestane; Formestane; Letrozole; Testolactone.

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.

3. Agents Preventing Activin Receptor IIB Activation

Including, but not limited, to: Activin A-neutralizing 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:

– Agents reducing or ablating myostatin expression

– Myostatin-binding proteins (e.g. follistatin, myostatin propeptide)

– Myostatin-neutralizing antibodies (e.g. domagrozumab, landogrozumab, stamulumab)

4. Metabolic modulators:

4.1 Activators of the AMP-activated protein kinase (AMPK), e.g. AICAR, SR9009; and Peroxisome Proliferator Activated Receptor δ (PPARδ) agonists, e.g. 2-(2-methyl-4-((4-methyl-2-(4-(trifluoromethyl)phenyl)thiazol-5-yl)methylthio)phenoxy) acetic acid (GW1516, GW501516);

4.2 Insulins and insulin-mimetics;

4.3 Meldonium;

4.4 Trimetazidine

6. DIURETICS AND MASKING AGENTS: The following diuretics and masking agents are prohibited, as are other substances with a similar chemical structure or similar biological effect(s).

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. bendroflu-methiazide, chlorothiazide and hydrochlorothiazide; triamterene and vaptans, e.g. tolvaptan.

Except:

• Drospirenone; pamabrom; and ophthalmic use of carbonic anhydrase inhibitors (e.g. dorzolamide, brinzolamide);

• Local administration of felypressin in dental anaesthesia.

The detection in a *Player*'s *Sample* 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, will be considered as an *Adverse Analytical Finding* unless the *Player* has an approved *TUE* for that substance in addition to the one granted for the diuretic or masking agent.

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

Stimulants include:

Adrafinil;

Amfepramone;

Amfetamine;

Amfetaminil;

Amiphenazole;

Benfluorex;

Bromantan;

Clobenzorex;

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.

3-Methylhexan-2-amine (1,2-dimethylpentylamine)

4-Methylpentan-2-amine (1,3-Dimethylbutylamine);

4-Methylhexan-2-amine (methylhexaneamine);

5-Methylhexan-2-amine (1,4-dimethylpentylamine);

Benzfetamine;

Cathine[1];

Cathinone and its analogues, e.g. mephedrone, methedrone, and α - pyrrolidinovalerophenone;

Ephedrine[2];

Epinephrine[3] (adrenaline);

Etamivan;

Etilamfetamine;

Etilefrine;

Famprofazone;

Fenbutrazate;

Fencamfamin;

Heptaminol;

Hydroxyamfetamine (parahydroxyamphetamine);

Isometheptene;

Levmetamfetamine;

Meclofenoxate;

Methylephedrine[4];

Methylphenidate;

Nikethamide;

Norfenefrine;

Octodrine (1,5-dimethylhexylamine)

Octopamine;

Oxilofrine (methylsynephrine);

Pemoline;

Pentetrazol;

Phenethylamine and its derivatives;

Phenmetrazine;

Phenpromethamine;

Propylhexedrine;

Pseudoephedrine[5];

Selegiline;

Sibutramine;

Strychnine;

Tenamfetamine (methylenedioxyamphetamine);

Tuaminoheptane;

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

Except:

- Those identified as *Drugs of Abuse* on the Drugs of Abuse list;

Clonidine;

- Imidazole derivatives for topical/ophthalmic use and those stimulants included in the World Anti-Doping Agency's 2021 Monitoring Program[6].

8. GLUCOCORTICOIDS

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

Including but not limited to: Beclometasone, Betamethasone; Budesonide; Ciclesonide; Cortisone; Deflazacort; Dexamethasone; Flucortolone; Flunisolide; Fluticasone; Hydrocortisone; Methylprednisolone; Mometasone; Prednisolone; Prednisone; Triamcinolone.

9. BETA-BLOCKERS: 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.

1 Prohibited when its concentration in urine is greater than 5 micrograms per milliliter.

2 Prohibited when the concentration of either in urine is greater than 10 micrograms per milliliter.

3 Not prohibited in local administration, e.g. nasal, ophthalmologic, or co-administration with local anesthetic agents.

4 Prohibited when the concentration of either in urine is greater than 10 micrograms per milliliter.

5 Prohibited when its concentration in urine is greater than 150 micrograms per milliliter.

6 Bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol, and synephrine.

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PROHIBITED METHODS

1. **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.

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 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.

2. **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. proteases.

2. 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.

3. **GENE DOPING**. The following, with the potential to enhance sport performance, are prohibited:

1. The use of polymers of nucleic acids or nucleic acid analogues.
2. The use of gene editing agents designed to alter genome sequences and/or the transcriptional or epigenetic regulation of gene expression.
3. The use of normal or genetically modified cells.

ADDITIONAL NOTE:

*Many nutritional and/or dietary supplements may contain prohibited substances. In addition, the U.S. Food and Drug Administration (FDA) does not strictly regulate the supplement industry; therefore, purity and safety of nutritional and/or dietary supplements cannot be guaranteed. Impure and/or contaminated supplements may lead to a positive drug test. The use of nutritional and/or dietary supplements is at the player's own risk.