



To: **Secretaries/Chief Executive Officers of Unions and Regional Associations
in Membership of World Rugby**

From: **David Carrigy
Head of Development & International Relations**

Date: November 30, 2015

Re: **2016 WADA Prohibited List**

Please find attached the 2016 WADA Prohibited List of substances and methods prohibited in sport and applicable to Rugby **effective from January 1, 2016.**

Also attached are the following supporting documents:

- a) 2016 Explanatory Notes (outlines the modifications from the 2015 Prohibited List to the 2016 Prohibited List)
- b) 2016 Monitoring Programme (Outlines the substances placed on WADA's monitoring programme)

The 2016 Prohibited List and the supporting documents are also available for download and reference on the World Rugby anti-doping website under the Resources tab www.keeprugbyclean.com

Please forward these documents to all your relevant rugby constituents, medical representatives and those involved in anti-doping within your Union.

If you have any queries regarding the WADA 2016 Prohibited List, please contact the World Rugby Anti-Doping Manager – Compliance & Results, David Ho, at david.ho@worldrugby.org or +353 1 2409 209.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "David Carrigy".

**David Carrigy
Head of Development & International Relations**



The World Anti-Doping Code

THE 2016 PROHIBITED LIST

INTERNATIONAL STANDARD

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.

This List shall come into effect on 1 January 2016

THE 2016 PROHIBITED LIST WORLD ANTI-DOPING CODE

Valid 1 January 2016

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.

SUBSTANCES AND METHODS PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)

PROHIBITED SUBSTANCES

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)

a. Exogenous* AAS, including:

1-androstenediol (5 α -androst-1-ene-3 β ,17 β -diol);
1-androstenedione (5 α -androst-1-ene-3,17-dione);
1-testosterone (17 β -hydroxy-5 α -androst-1-en-3-one);
4-hydroxytestosterone (4,17 β -dihydroxyandrost-4-en-3-one);
19-norandrostenedione (estr-4-ene-3,17-dione);
bolandiol (estr-4-ene-3 β ,17 β -diol);
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-17 α -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);
drostanolone;
ethylestrenol (19-norpregna-4-en-17 α -ol);
fluoxymesterone;
formebolone;
furazabol (17 α -methyl [1,2,5]oxadiazolo[3',4':2,3]-5 α -androstan-17 β -ol);
gestrinone;
mestanolone;
mesterolone;
metandienone (17 β -hydroxy-17 α -methylandrosta-1,4-dien-3-one);
metenolone;
methandriol;
methasterone (17 β -hydroxy-2 α ,17 α -dimethyl-5 α -androstan-3-one);
methyldienolone (17 β -hydroxy-17 α -methylestra-4,9-dien-3-one);
methyl-1-testosterone (17 β -hydroxy-17 α -methyl-5 α -androst-1-en-3-one);
methylnortestosterone (17 β -hydroxy-17 α -methylestr-4-en-3-one);
methyltestosterone;
metribolone (methyltrienolone, 17 β -hydroxy-17 α -methylestra-4,9,11-trien-3-one);
mibolerone;
nandrolone;
norboletone;
norclostebol;
norethandrolone;
oxabolone;
oxandrolone;
oxymesterone;
oxymetholone;
prostanazol (17 β -[(tetrahydropyran-2-yl)oxy]-1'H-pyrazolo[3,4:2,3]-5 α -androstande);
quinbolone;
stanozolol;
stenbolone;
tetrahydrogestrinone (17-hydroxy-18 α -homo-19-nor-17 α -pregna-4,9,11-trien-3-one);
trenbolone (17 β -hydroxyestr-4,9,11-trien-3-one);

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

b. **Endogenous** AAS** when administered exogenously:

Androstenediol (androst-5-ene-3 β ,17 β -diol);

androstenedione (androst-4-ene-3,17-dione);
dihydrotestosterone (17 β -hydroxy-5 α -androstan-3-one);
prasterone (dehydroepiandrosterone, DHEA, 3 β -hydroxyandrost-5-en-17-one);
testosterone;

and their **metabolites** and **isomers**, including but not limited to:

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

2. Other Anabolic Agents

Including, but not limited to:

Clenbuterol, **selective androgen receptor modulators** (SARMs, e.g. **andarine** and **ostarine**), **tibolone**, **zeranol** and **zilpaterol**.

For purposes of this section:

* "exogenous" refers to a substance which is not ordinarily produced by the body naturally.

** "endogenous" refers to a substance which is ordinarily produced by the body naturally.

S2. 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. Erythropoietin-Receptor agonists:

1.1 Erythropoiesis-Stimulating Agents (ESAs) including e.g.

darbepoietin (dEPO);

erythropoietins (EPO);

EPO-Fc;

EPO-mimetic peptides (EMP), e.g. CNTO 530 and peginesatide;

methoxy polyethylene glycol-epoetin beta (CERA).

1.2 Non-erythropoietic EPO-Receptor agonists, e.g.

ARA-290;

asialo EPO;

carbamylated EPO.

2. Hypoxia-inducible factor (HIF) stabilizers, e.g. cobalt and FG-4592; and HIF activators, e.g. argon, xenon;

3. Chorionic Gonadotrophin (CG) and Luteinizing Hormone (LH) and their releasing factors, e.g. buserelin, gonadorelin and leuprorelin, in males;

4. Corticotrophins and their releasing factors, e.g corticorelin;

5. Growth Hormone (GH) and its releasing factors including:

Growth Hormone Releasing Hormone (GHRH) and its analogues, e.g. CJC-1295, sermorelin and tesamorelin;

Growth Hormone Secretagogues (GHS), e.g. ghrelin and ghrelin mimetics, e.g. anamorelin and ipamorelin;

GH-Releasing Peptides (GHRPs), e.g. alexamorelin, GHRP-6, hexarelin and pralmorelin (GHRP-2).

Additional prohibited growth factors:

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);

Vascular-Endothelial Growth Factor (VEGF) and any other growth factor

affecting muscle, tendon or ligament protein synthesis/degradation, vascularisation, energy utilization, regenerative capacity or fibre type switching.

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
- Inhaled **salmeterol** 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 (AAF)* 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 **hormone** and **metabolic modulators** are prohibited:

1. **Aromatase inhibitors** including, but not limited to:

4-androstene-3,6,17 trione (6-oxo);
aminoglutethimide;
anastrozole;
androsta-1,4,6-triene-3,17-dione (androstatrienedione);
exemestane;
formestane;
letrozole;
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**.

5. **Metabolic modulators:**

5.1 **Activators of the AMP-activated protein kinase (AMPK)**, e.g. **AICAR**; and **Peroxisome Proliferator Activated Receptor δ** (PPAR δ) **agonists**, e.g. **GW 1516**;

5.2 **Insulins** and **insulin-mimetics**;

5.3 **Meldonium**;

5.4 **Trimetazidine**.

S5. 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. **glycerol** and 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**; **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 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, will be considered as an *Adverse Analytical Finding* unless the *Athlete* has an approved *TUE* for that substance in addition to the one granted for the diuretic or masking agent.

PROHIBITED 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.
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.
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:
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, surgical procedures 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.

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;
mefenorex;
mephentermine;
mesocarb;
metamfetamine(*d*-);
p-methylamphetamine;
modafinil;
norfenfluramine;
phendimetrazine;
pentermine;

prenylamine;
prolintane.

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

b: Specified Stimulants.

Including, but not limited to:

Benzfetamine;
cathine;**
cathinone and its **analogues**, e.g. **mephedrone**, **methedrone**, and **α -pyrrolidinovalerophenone;**
dimethylamphetamine;
ephedrine*;**
epinephrine**** (adrenaline);
etamivan;
etilamfetamine;
etilefrine;
famprofazone;
fenbutrazate;
fencamfamin;
heptaminol;
hydroxyamfetamine (parahydroxyamphetamine);
isometheptene;
levmetamfetamine;
meclofenoxate;
methylenedioxymethamphetamine;
methylephedrine*;**
methylhexanamine (dimethylpentylamine);
methylphenidate;
nikethamide;
norfenefrine;
octopamine;
oxilofrine (methylnephrine);
pemoline;
pentetrazol;
phenethylamine and its **derivatives;**
phenmetrazine;
phenpromethamine;
propylhexedrine;
pseudoephedrine**;**
selegiline;
sibutramine;
strychnine;
tenamfetamine (methylenedioxyamphetamine);
tuaminoheptane.

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

Except:

- Clonidine
- Imidazole derivatives for topical/ophthalmic use and those stimulants included in the 2016 Monitoring Program*.

* Bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol, and synephrine: These substances are included in the 2016 Monitoring Program, and are not considered *Prohibited Substances*.

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

*** 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 co-administration with local anaesthetic agents.

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

S7. NARCOTICS

Prohibited:

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

S8. CANNABINOIDS

Prohibited:

- **Natural**, e.g. **cannabis**, **hashish** and **marijuana**, or **synthetic Δ^9 -tetrahydrocannabinol** (THC).
- **Cannabimimetics**, e.g. "**Spice**", **JWH-018**, **JWH-073**, **HU-210**.

S9. GLUCOCORTICOIDS

All **glucocorticoids** 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 is equivalent to a blood alcohol concentration of 0.10 g/L.

- Air Sports (FAI)
- Archery (WA)
- Automobile (FIA)
- Powerboating (UIM)

P2. BETA-BLOCKERS

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)
- Shooting (ISSF, IPC)*
- Skiing/Snowboarding (FIS) in ski jumping, freestyle aerials/halfpipe and snowboard halfpipe/big air
- Underwater sports (CMAS) in constant-weight apnoea with or without fins, dynamic apnoea with and without fins, free immersion apnoea, Jump Blue apnoea, spearfishing, static apnoea, target shooting and variable weight apnoea.

*Also prohibited *Out-of-Competition*

Including, but not limited to:

Acebutolol;
alprenolol;
atenolol;
betaxolol;
bisoprolol;

bunolol;
carteolol;
carvedilol;
celiprolol;
esmolol;
labetalol;
levobunolol;
metipranolol;
metoprolol;
nadolol;
oxprenolol;
pindolol;
propranolol;
sotalol;
timolol.

16 September 2015



2016 Prohibited List

Summary of Major Modifications and Explanatory Notes

SUBSTANCES AND METHODS PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)

PROHIBITED SUBSTANCES

S2: Peptide hormones, Growth Factors, Related Substances and Mimetics

- Leuprorelin replaced triptorelin as a more universal example of a chorionic gonadotrophin and luteinizing hormone-releasing factor.

S4. Hormone and Metabolic Modulators

- Insulin-mimetics were added to the List to include all insulin-receptor agonists.
- Meldonium (Mildronate) was added because of evidence of its use by athletes with the intention of enhancing performance.

S5. Diuretics and Masking Agents

- It was clarified that the ophthalmic use of carbonic anhydrase inhibitors is permitted.

SUBSTANCES AND METHODS PROHIBITED IN-COMPETITION

S6. Stimulants:

- It was clarified that clonidine is permitted.

SUBSTANCES PROHIBITED IN PARTICULAR SPORTS

P1: Alcohol:

- After consideration of the Federation International de Motocyclisme (FIM)'s request, their Federation was removed from the list of sports prohibiting alcohol as a doping agent.
WADA understands that FIM will address the use of alcohol using their own regulations.

MONITORING PROGRAM

- Meldonium was removed from the Monitoring Program and added to the Prohibited List.
- Hydrocodone, morphine/codeine ratio and tapentadol were removed from the Monitoring Program.

THE 2016 MONITORING PROGRAM*

The following substances are placed on the 2016 Monitoring Program:

- 1. Stimulants:** ***In-Competition only:*** *Bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol and synephrine.*
- 2. Narcotics:** ***In-Competition only:*** *Mitragynine and tramadol.*
- 3. Glucocorticoids:** ***In-competition*** *(by routes of administration other than oral, intravenous, intramuscular or rectal)* and ***Out-of-Competition*** *(all routes of administration)*
- 4. Telmisartan:** ***In*** and ***Out-of-Competition***

* The *World Anti-Doping Code* (Article 4.5) states: "WADA, in consultation with Signatories and governments, shall establish a monitoring program regarding substances which are not on the Prohibited List, but which WADA wishes to monitor in order to detect patterns of misuse in sport."