



# Anti-Doping Handbook 2019

Edition v1 - English



**WORLD  
RUGBY™**

**Doping control plays an essential part in promoting and protecting doping free Rugby. World Rugby operates a zero tolerance policy to doping in Rugby. As a player, you are solely responsible for any prohibited substances found to be present in your body. It is not necessary that intent or fault on your part be shown in order for an anti-doping rule violation to be established. This is known as the 'strict liability' principle.**

All the information contained in this handbook as well as additional resources can be found at: [worldrugby.org/keeprugbyclean](http://worldrugby.org/keeprugbyclean)



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## Urine Sample Collection

Doping Control plays an essential part in promoting and protecting doping free Rugby. Testing worldwide is conducted in accordance with the World Anti-Doping Code and applicable International Standards. Testing may take place at anytime, anywhere. The following is a guide to the Urine Sample Collection process and although slight variations may exist depending on the Anti-Doping Organisation, the principles are the same and will not affect the integrity of the process.



### 1. Notification

You can be selected for testing either at random or targeted. A Doping Control official will notify you that you have been selected for Doping Control showing you their identification and authority to test. They will inform you of your rights and responsibilities, ask you to sign a Doping Control form confirming your acceptance to complete the test and will then escort you to the Doping Control Station.

A failure to comply with the request to provide a Sample may be considered an anti-doping rule violation and may result in a sanction of four years.

You are entitled to have a representative and/or interpreter accompany you to the Doping Control Station. If you are a Minor you are strongly advised to bring a representative with you.

You should report to the Doping Control Station as soon as possible however you may request a delay to complete any of the following activities whilst remaining in direct view of a Doping Control official and within one hour of being notified:

- i. Attend a victory ceremony;
- ii. Fulfil media commitments;
- iii. Perform a warm-down or take an ice bath;
- iv. Be medically assessed and receive any necessary medical attention;
- v. Attend a post-match team meeting in the team change room;

- vi. Change out of your playing uniform;
- vii. Locate a representative and/or interpreter;
- viii. Obtain relevant identification;
- ix. Complete a training session if selected for out of competition testing;
- x. Any other exceptional circumstances which may be justified and which shall be documented.



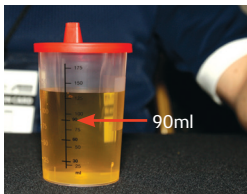
## 2. Selection of Collection Vessel

You will be provided with a choice of individually sealed collection vessels in which to provide your Sample. After making your selection check the collection vessel has not been tampered with and is clean inside.



## 3. Provision of Sample

You are required to provide a Sample in direct view of a Doping Control official of the same gender. This means you should remove items of clothing from your knees to your midriff and from your hands to your elbows to provide an unobstructed view of the Sample leaving your body. You should also wash your hands prior to and after providing your Sample.



## 4. Volume of Urine

The minimum volume of urine required is 90ml. However, you should provide more if possible. If you provide less than 90ml it will be treated as a Partial Sample, temporarily sealed, documented and stored by the Doping Control Officer (DCO) until you are ready to provide a further Sample which will be added to your Partial Sample to meet the minimum volume.



## 5. Selection of Sample Collection Kit

Once you have provided 90ml you will be asked to choose a tamperproof Sample collection kit in which to seal your Sample. Check the kit has not been tampered with, open the kit, remove the A and B bottles and verify that the numbers on the bottles are identical.



## 6. Splitting the Sample

The DCO will instruct you to pour the correct amount of urine into the B bottle and then the A bottle. You will be asked to leave a small amount of urine in the collection vessel.



## 7. Sealing the Sample

The bottles can now be sealed. The DCO should verify that both bottles have been sealed correctly.



## 8. Measuring Specific Gravity

The residual urine left in your collection vessel will be measured for specific gravity to ensure the density of the Sample is suitable for analysis. If the Sample does not meet the minimum requirements, i.e., it is too dilute, you may be asked to provide additional Samples.

It is therefore very important that you do not over hydrate before you provide your Sample.



## 9. Paperwork

The Doping Control form must be completed, checked and signed by you, the DCO and any representative you have with you. You should declare any medications or supplements you have taken in the last seven days and can make any comments you have about the Doping Control process. You will receive a copy of the Doping Control form which completes the process.

## 10. Laboratory Analysis

Your Sample is then sent to a World Anti-Doping Agency (WADA) Accredited Laboratory for analysis. A section of the Doping Control form containing only your Sample details will accompany your Sample to the laboratory. The laboratory will report the results to the relevant authorities.

## 11. Sanctions

If you are sanctioned for a positive test you will not be allowed to train with a team, play, coach or administer the Game of Rugby while under sanction. The decision of your positive test may also be published in a public environment.



## Blood Sample Collection

The process for blood collection follows much of the same principles as those for the collection of urine however the drawing of blood is carried out by a trained Phlebotomist or Blood Collection Official (BCO).

Doping Control can involve the collection of blood only, urine only, or both.

The notification process of your selection for blood testing is the same as it is for urine. Reporting to the Doping Control Station and your rights and responsibilities are also the same.

In general, the blood collection procedure is as follows:

1. You will be asked to rest for a period of time before the drawing of blood starts, usually 10 minutes.
2. You will be asked to select a blood collection kit containing all the necessary equipment for blood collection. The equipment typically includes a sterile needle, syringe, and the relevant vacutainer tubes for collecting your sample.
3. You will also be asked to select a sample sealing kit in which your blood sample will be secured and transported to the laboratory. As always you should check the equipment thoroughly to be sure it is clean and has not been tampered with.
4. The BCO will assess the most suitable site to draw blood (usually on your non dominant arm), apply a tourniquet if necessary, and clean the skin at the puncture site.
5. The BCO will then draw the necessary volume of blood filling a minimum of two tubes.
6. The amount of blood collected in each tube is up to a maximum of 5ml which is approximately 1 teaspoon.
7. If the BCO is unable to find a vein after three attempts to insert the needle, the blood collection will be cancelled.
8. Once the blood has been drawn, the tubes can then be sealed in tamperproof bottles ready for transport.
9. The DCO will record the relevant sample code numbers on the Doping Control form and complete the remainder of the process with you.
10. If you are also required to provide a urine sample this can be completed before or after blood collection depending on when you are ready to provide a urine sample.
11. Your sample will then be transported to a WADA accredited laboratory for analysis.





## Frequently Asked Questions

### Why collect blood?

The analysis of blood can detect prohibited substances and methods that cannot be detected in urine.

### What if I'm afraid of needles?

The BCO is experienced and trained to make the process as easy and painless as possible. If you are prone to fainting or are scared of needles it is recommended you bring a representative with you.

### When can I resume physical activity?

The volume of blood is very small so should not prevent you from exercising, however it is recommended that you avoid strenuous activity using the arm from which the blood was drawn for at least 30 minutes after sample collection to minimise bruising.

### What if I refuse to provide a sample?

There is no acceptable reason to refuse to provide a sample or complete the process once you have been notified. World Rugby's Anti-Doping Regulations clearly state that blood samples can be collected from Players. A failure to comply with the request to provide a Sample is an anti-doping rule violation which may result in a sanction of 4 years.

### Where can I find more information on blood collection procedures?

See blood collection guidelines at Schedule 1, Section 25 of World Rugby Anti-Doping Regulations at: [worldrugby.org/keeprugbyclean](http://worldrugby.org/keeprugbyclean)

## 1. What is a TUE?

A TUE provides a Player with authorisation to use a Prohibited Substance or Method to treat a legitimate medical condition/illness whilst continuing to play Rugby. Players with a documented medical condition requiring the use of a Prohibited Substance or Method are required to obtain a Therapeutic Use Exemption (TUE). Without a TUE, Players risk committing an Anti-Doping Rule Violation, an offence that may result in a sanction regardless of the medical circumstances.



## 2. When should a Player apply for a TUE?

- a. When a Player is advised by their medical doctor / specialist that they require a Prohibited Substance to treat their medical condition / illness and has supporting medical evidence to prove this.
- b. When a Player is administered a Prohibited Substance in a medical emergency. In this case the Player is required to apply retroactively for a TUE. Note that a Retroactive TUE will only be granted in emergency situations or in exceptional circumstances where there was insufficient time or opportunity for a Player to submit, or the TUE Committee (TUEC) to consider an application prior to Doping Control.
- c. In addition to the circumstances outlined in (a) and (b) above a Player should only submit a TUE to either World Rugby or their National Anti-Doping Organisation (NADO) when they meet the required criteria.

## 3. What are the criteria for granting a TUE?

A TUE will be granted only in strict accordance with the following criteria:

- a. The Prohibited Substance or Prohibited Method in question is needed to treat an acute or chronic medical condition, such that the Athlete would experience a significant impairment to health if the Prohibited Substance or Prohibited Method were to be withheld.
- b. The Therapeutic Use of the Prohibited Substance or Prohibited Method is highly unlikely to produce any additional enhancement of performance beyond what

might be anticipated by a return to the Athlete's normal state of health following the treatment of the acute or chronic medical condition.

- c. There is no reasonable Therapeutic alternative to the Use of the Prohibited Substance or Prohibited Method.
- d. The necessity for the Use of the Prohibited Substance or Prohibited Method is not a consequence, wholly or in part, of the prior Use (without a TUE) of a substance or method which was prohibited at the time of such Use.

#### 4. What about my asthma medication?

All beta-2 agonists are prohibited with the exception of inhaled salbutamol (maximum 1600 micrograms over 24 hours, not to exceed 800 micrograms every 12 hours), inhaled formoterol (maximum delivered dose 54 micrograms over 24 hours) and inhaled salmeterol (maximum 200 micrograms over 24 hours).

#### Notes:

- a. *The presence of salbutamol in urine in excess of 1000 ng/mL, or formoterol in excess of 40ng/mL will be presumed to be not intended for therapeutic use and considered an Adverse Analytical Finding.*
- b. *The status of inhaled terbutaline remains unchanged and still requires a TUE to be submitted prior to use.*
- c. *Glucocorticosteroids administered by oral, intravenous, intramuscular or rectal routes require a TUE.*

## 5. Who has to apply for a TUE and where do they submit it?

Players included in World Rugby's Registered Testing Pool or Testing Pool, or Players who participate in an International Match or Tournament directly organised by World Rugby (Section 9) must obtain a TUE in advance of the administration of the Prohibited Substance or Method from the World Rugby TUEC. A Player may also provide a copy of any existing and valid TUE for review pursuant to World Rugby Regulation 21.4.5 - Mutual Recognition. See Section 6.

World Rugby has also arranged with a number of NADOs to be responsible for all TUE applications from Rugby Players in their country. Players should check with their NADO to see if they fall under this arrangement.

Applications should be submitted at least 30 days prior to a Player's participation in an International Match or Tournament organised by World Rugby with the exception of medical emergencies which can be submitted within this period or retroactively.



The World Rugby TUE Application Form can be downloaded from World Rugby's Anti-Doping website at [worldrugby.org/keeprugbyclean](http://worldrugby.org/keeprugbyclean) and can be submitted by email to [tue@worldrugby.org](mailto:tue@worldrugby.org) or by fax to +353 1 240 9289.

All other Players should consult the rules of their NADO with regard to the submission of TUEs within their own country.

## 6. What is Mutual Recognition of TUEs?

World Rugby will recognise TUEs granted by other Anti-Doping Organisations under the mutual recognition provision of the WADA Code upon submission of a current and valid copy of the TUE application and certificate of approval subject to the approval of the World Rugby TUEC. The World Rugby TUEC has the right to review and appeal all TUE approvals submitted to World Rugby where approval has been granted by another Anti-Doping Organisation.

## 7. How do I know if my application has been approved?

The World Rugby TUEC or other TUEC will issue a Certificate of Approval to the Player via their Member Union which will be for the specified medication, the defined route of administration, dose and will outline the expiry date. Players must comply with all the treatment conditions outlined in their TUE Certificate of Approval and should reapply well in advance of their current TUE expiring.

## 8. What if my TUE is denied?

If a Player who is part of World Rugby's Registered Testing Pool or Testing Pool or who is due to participate in a Match or Tournament outlined below has a TUE application denied then they may appeal the decision of the World Rugby TUEC to WADA.

Any decision by WADA reversing the granting or denial of a TUE may be appealed exclusively to the Court of Arbitration for Sport (CAS) by the Player or World Rugby.

Decisions by the World Rugby TUEC which are not reversed by WADA may be appealed by the Player to CAS.

## 9. List of World Rugby Organised Matches and Tournaments that require a TUE application or copy of a TUE certificate to be sent to World Rugby.

- All Rugby World Cup Tournaments and Qualifications Matches
- World Rugby U20 Championships
- World Rugby U20 Trophy
- World Rugby Sevens World Series (Men's and Women's)
- World Rugby Nations Cup
- World Rugby Pacific Nations Cup
- World Rugby Pacific Challenge

For all other Rugby Matches or Tournaments, Players should submit their TUE application to their NADO.

If a Member Union does not have a NADO then the TUE application may be submitted to the World Rugby TUEC.



## 10. Where can I find more information?

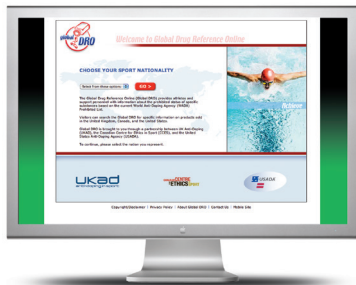
A full copy of World Rugby Regulation 21 can be found in the Regulations section of the World Rugby Anti-Doping website at [worldrugby.org/keeprugbyclean](http://worldrugby.org/keeprugbyclean). The specific provisions relating to TUEs are located within section 21.4.4 along with Schedule 3a and 3b.

This is an educational guide. In the event of any inconsistency World Rugby Regulation 21 shall take precedence.

## Checking Medications

Players who are taking any medication, prescribed or otherwise, or dietary supplements, should be certain it does not contain a prohibited substance. To check the ingredients of specific substances, the Global Drug Reference Online at [www.globaldro.com](http://www.globaldro.com) may be of assistance. If in doubt, or for any other country, contact your National Anti-Doping Organisation.

Always advise your doctor or pharmacist before you are prescribed a medication that you may be subject to drug testing.



## World Rugby guideline on dietary supplements

- Players are advised to exercise extreme caution regarding the use of any dietary supplement as no guarantee can be provided that any particular supplement, including vitamins and minerals, ergogenic aids and herbal remedies are totally free from Prohibited Substances.
- The biggest risk associated with the use of dietary supplements is cross contamination or lacing with substances that are prohibited. A product could also contain ingredients that are also not listed on the label which are prohibited or are listed under an alternate name which may not be listed on the prohibited list.
- Players should also be aware that products marketed under the same brand in different countries may contain different ingredients which may not always appear on the product label.
- Strict Liability - a Player is solely responsible for any Prohibited Substances found to be present in his or her body. It is not necessary that intent or fault on the Player's part be shown in order for an anti-doping rule violation to be established. Nor is lack of intent a defence to testing positive to a Prohibited Substance because of a contaminated supplement.
- The use of any nutritional or dietary supplement by a Player is at their own risk.
- The principle of personal responsibility cannot be abdicated because of the actions of coaches or medical advisers or any other person associated with the Player's Union or Team. The fact that supplements may be provided by a Player's Club, Union, or other Rugby Body, will not absolve the Player of his or her responsibility for the consequences if the use of such supplements results in an anti-doping rule violation. This will be the case even if there was no reason to suspect that the supplement contained a prohibited substance.
- The only way to completely eliminate the risk of dietary supplements is to not take them.
- Players are more likely to benefit from a healthy, well balanced diet which should be put in place by an appropriately qualified nutritionist.

## Dietary Supplements

- Dietary or nutritional supplements, ergogenic aids and herbal products should only be considered for use where the nutritional review and supplementation process is controlled and individually monitored by appropriately qualified medical practitioners or nutritionists and where the appropriate batches of the products have undergone the applicable tests to ensure that the products do not contain any prohibited substances.

Players who insist on using dietary supplements should consider the following risk assessment prior to using any dietary supplement.

- Seek expert guidance to assess your dietary and performance needs from an appropriately qualified person.
- Is there any valid evidence that the supplement you feel you need to take really works? Many of the claimed benefits are not clearly supported by scientific research.
- Be wary of products that claim to increase strength, muscle mass, energy or weight loss.
- Research well known products/brands.
- Read the label and list of ingredients very carefully and undertake a search on each ingredient to ensure that it is not linked to a substance on the WADA prohibited list.
- Avoid purchasing supplements over the internet.
- Avoid taking or sharing supplements with fellow Players, friends or Athletes from other sports.
- Avoid purchasing supplements from a manufacturer who also produces supplements that contain or are known to contain Prohibited Substances.
- Seriously consider having a supplement tested by a laboratory to ensure the batch does not contain any Prohibited Substances prior to using it.

Note: The above points do not abdicate a Player's responsibility as the consumption of any supplement remains at the Player's own risk regardless of the precautionary measures the Player adopts.





## CASE STUDY

Adam Dean, a 17-year-old Rugby Player was achieving his highest honours at his age group in Rugby, receiving international caps for England at the Under 18 group.

Following the pressures of being told he needed to be “bigger, faster and stronger”, Adam began the use of supplements to complement his training and diet. Although aware of having to adhere to the rules of the Prohibited List, the education Adam had received had not made him fully aware of the risk of potential

contamination of supplements and he decided to make his decision based on his own research. Adam chose a supplement that did not have any prohibited substances on the product label, a product that also made claims of being “suitable for drug tested athletes.”

Assuming that the information provided by the manufacturer was accurate and substantiated, Adam began to take the supplements as part of his training regime. Adam tested positive for 19-Norandrosterone (a prohibited anabolic agent) and the only explanation Adam could comprehend was that the positive test was attributable to the supplements that he was taking. Adam was banned for two years from Rugby.

## Methylhexaneamine (MHA)

### What is MHA?

MHA is a stimulant originally derived from the geranium plant but is now mostly synthetically produced. It was first developed as a nasal decongestant in the 1940s but can now be found in dietary or nutritional supplements under many different names other than MHA.

Some products which openly contain, or have been identified in certain countries to contain, MHA or its variants include, Hemo Rage, Jack3d, OxyElite Pro, 1.M.R., Mesomorph, Rocked, Crack, USN Anabolic Nitro, Ergolean Amp 2, DynaPep, Core Zap, C4 Extreme, Nutrimax Burner, NitroX, IBE X-Force, Fusion Geranamine, ClearShot, Black Cats, and Musclespeed. Please note this is not an exhaustive list but provides examples of some commercial supplements which contain, or have been identified in certain countries to contain, MHA or its variants.

MHA is classed as a Specified Stimulant prohibited In Competition only by the World Anti-Doping Agency (WADA). MHA has caused a number of positive cases in Rugby for both amateur and professional Players.

### What are the effects of MHA?

The stimulant effects are said to be less than amphetamine and ephedrine and slightly stronger than caffeine. MHA is marketed as a pre work-out supplement with thermogenic or stimulant properties and may have mild stimulant effects but there is no publicly available data on its specific mechanism of action, absorption, pharmacokinetics, metabolism or excretion.

Anecdotal evidence suggests the effects of MHA last between 1-3 hours, and that it increases focus, heart rate and productivity whilst other users have reported increased anxiety, nervousness and sweating.



### Related substances and other names

MHA has many different variants/names which Players should check for individually if considering the use of any dietary or nutritional supplements. They include but are not limited to:

Methylhexaneamine; Methylhexanamine; DMAA (dimethylamylamine); Geranamine; Forthane; Forthan; Floradrene; 2-hexanamine, 4-methyl-; 2-hexanamine, 4-methyl-(9CI); 4-methyl-2-hexanamine; 1,3-dimethylamylamine; 4-Methylhexan-2-amine; 1,3-dimethylpentylamine; 2-amino-4-methylhexane; Pentylamine, 1, 3-dimethyl-; pelargonium graveolens; pelargonium extract; geranium, geranium oil or geranium root extract.

Warning: In some cases, the labels and ingredient lists on products are not complete. Players should also be aware that products marketed under the same brand in different countries may contain different ingredients which may not always appear on the product label.

### Strict Liability

Players must be aware that, under the policy of strict liability, they are solely responsible for any substance found in their body (regardless of whether the substance was contained in a dietary or nutritional supplement prepared or recommended by team management, medical personnel or other trusted persons and/or whether or not it was listed on the label of the product). Those Players who use dietary or nutritional supplements do so at their own risk and are advised to exercise extreme caution.

## Methylhexaneamine (MHA)



**STATUS IN RUGBY**  
BANNED IN-COMPETITION

## What happens if I commit an anti-doping rule violation?

You will be provisionally suspended from all Rugby activities including training and playing with a team pending the outcome of a hearing before a Judicial Committee. If your case involves a positive test, you have the right to have your B sample analysed. You will be entitled to present your case before a Judicial Committee who will then decide on any applicable sanction and provide a written decision which shall be published on the World Rugby website. You have a right of appeal if you do not agree with the decision in the first instance.

## Sanctions

Sanctioning depends on the substance and the type of anti-doping rule violation. In general, the standard sanction for an anti-doping rule violation is four years which can be reduced or extended depending on the individual circumstances of each case. Previous World Rugby case decisions can be found at [worldrugby.org/keeprugbyclean](http://worldrugby.org/keeprugbyclean).

## Additional consequences

Besides a sanction, the following could also apply to you as a result of committing an anti-doping rule violation:

- Being labelled a cheat or doper
- Having your name published in the media
- Having your reputation tarnished
- Losing the respect of your peers or team mates
- Loss of standing in your local community
- Loss of contract or potential contract with a club
- Loss of income derived from Rugby
- Loss of sponsors
- May hinder your employment opportunities
- Isolation



# Consequences of Doping

## What are the different types of anti-doping rule violations?

Testing positive for a prohibited substance is not the only way you can commit an anti-doping rule violation. There are 10 different violations which not only apply to you as a Player but also Player support personnel including coaches, managers, and medical staff. The 10 violations include:

- Presence of a prohibited substance or method
- Use or attempted use of a prohibited substance or method
- Refusal or failure to comply with a request to provide a sample
- Possession of prohibited substances or methods
- Tampering or attempted tampering with any part of Doping Control
- Violation of whereabouts requirements
- Administration or attempted administration of a prohibited substance or method
- Trafficking or attempted trafficking of a prohibited substance or method
- Complicity
- Prohibited Association

## Case study

A 20 year old from Namibia had progressed from playing Rugby for his country at U19 level to his national senior team. The 6ft 4in, 110kg second rower had dreamt of being a professional Rugby Player since he was young and an opportunity had arisen with a major club in South Africa which he desperately wanted. In order to secure a playing contract, he needed to meet certain strength requirements and despite training relentlessly was unable to meet the required benchmarks. Unsure of what to do and afraid of consulting with the club whom he was trying to impress to obtain assistance with this minor problem, he made the decision to take anabolic steroids in an attempt to meet his weight training targets. He knew at the time that it was cheating but he decided to take the risk.

A few weeks later, he received an unannounced visit at his home by Doping Control officials for an Out of Competition test. His sample returned a positive test and he was suspended for 2 years. He was labelled a cheat within his community and amongst his fellow Players. His dream of being a professional Rugby Player was over, as was his chance of representing Namibia at the Rugby World Cup 2011 in New Zealand.

## Anabolic steroids

### What are anabolic steroids?

Anabolic steroids mimic the effects of the male sex hormone testosterone. Testosterone plays a key role in the development of the testicles as well as promoting masculine characteristics such as a deeper voice, the growth of body hair and muscle mass.

The effects on muscle growth make steroids particularly attractive to athletes where strength, speed, and size may be of an advantage. It may also be tempting for athletes to use them to recover from injury more quickly.

For this reason, anabolic steroids are prohibited both In and Out of Competition by the World Anti-Doping Agency (WADA). The starting point for a sanction related to steroid use is a four year ban from all sport.

### What are the risks?

The use of anabolic steroids has the potential to cause a number of harmful side effects including:

- Acne
- Increased risk of heart disease, cancer
- Liver and kidney damage
- Increased aggression
- Extreme mood swings ('Roid rage')

Male specific side effects:

- Breast growth
- Shrinking of testicles
- Decreased sperm production
- Impotence



Female specific side effects:

- Deeper voice, facial and body hair
- Enlarged clitoris
- Abnormal menstrual cycles
- Infertility

Other considerations:

- Steroids purchased over the internet or from other unknown or unregulated suppliers can be potentially fatal - they could be fake or mixed with other dangerous chemicals.
- In most countries, the possession or sale of anabolic steroids without a prescription is a criminal offence.
- Importation of steroids or any prohibited substance including items carried in your personal luggage when travelling may also be considered a criminal offence.
- Information resulting from the seizure of steroids or any prohibited substance at the border by Customs (including items purchased over the internet) will be passed on to your National Anti-Doping Organisation to investigate as an anti-doping rule violation for attempted use. This may occur even if you don't physically receive the substances you paid for.

## Anabolic steroids



**STATUS IN RUGBY**  
BANNED IN AND OUT OF COMPETITION

## Cannabinoids (Cannabis)



### What are Cannabinoids (Cannabis)?

Cannabinoids are one of the most commonly used illicit drugs and can be found within the dried flowers, leaves or resin of the Cannabis plant. Cannabis may also be known as marijuana, pot, hash, ganja, green or weed. It is most commonly smoked but can also be eaten.

Cannabis use is most commonly associated with recreational or social settings but regardless of the environment in which it is taken, if it is found in your system on Match day there are serious consequences.

Cannabinoids are listed on the World Anti-Doping Agency (WADA) Prohibited List and have been prohibited In Competition in Rugby since 1 January 2004.

### How does it affect the body?

The active ingredient in Cannabinoids, delta-9-tetrahydrocannabinol (THC) leads to feelings of euphoria and relaxation. Other effects on the body include:

- Impaired balance, co-ordination, concentration
- Slowed reaction time
- Impaired motor skills
- Drowsiness
- Dryness of mouth

Long term risks may include:

- Mood swings
- Feelings of anxiety or paranoia
- Memory impairment
- Chronic bronchitis
- Increased risk of lung, mouth, tongue, and throat cancer



## How long does Cannabis stay in your system?

THC can be detected in the body up to several weeks after initial ingestion because it binds to the fatty tissue in the body where it is then released slowly. Clearance times may also be affected by the amount consumed, frequency of use, the potency of the Cannabis and how physically active the person is.

REMEMBER - a Player can test positive for Cannabis even if its use was in the days or weeks prior to a Match.

## Cannabis



**STATUS IN RUGBY**  
BANNED IN-COMPETITION

## Cocaine

### What is Cocaine?

Cocaine is extracted from the leaves of the Coca plant predominately found in South America and is one of the most addictive and abusive illegal drugs that exists.

Its common names include Coke, Blow, Snow, Crack and Nose Candy. Cocaine can be eaten, injected and smoked, however insufflation or “snorting” is the most common method.

Cocaine is classified as a Non-Specified Stimulant and is prohibited In Competition only by the World Anti-Doping Agency (WADA).

### How does it affect the body?

Cocaine directly affects the central nervous system by creating an intense high or sense of euphoria. The initial rush is shortlived and leaves addicts on a “downer” as it wears off.

Other short term effects on the body include:

- A loss of weight due to suppressed appetite
- Dilated pupils
- Increased temperature, heart rate and blood pressure
- Constricted blood vessels

Long term effects may include:

- Irregular heart beat
- Loss of memory and concentration
- Headaches and nausea
- Chest pain and respiratory problems
- Strokes and possible heart attacks



## How long does Cocaine stay in your system?

Metabolites of Cocaine can be detected in the body several days after ingestion. The clearance times of this drug are affected by variable factors, such as the amount consumed, frequency of use, gender, age, purity of the cocaine and an individual's metabolism.

REMEMBER - a Player can still test positive for Cocaine even if it was used a few days prior to being tested.

## Cocaine



**STATUS IN RUGBY**  
BANNED IN-COMPETITION

## Ecstasy

### What is Ecstasy?

Ecstasy is a synthetic drug with psychedelic and stimulant effects better known to chemists as MDMA or 3, 4-Methylenedioxyamphetamine. It is most commonly found in tablet form and is often mixed with other toxic chemicals such as ephedrine, ketamine, cocaine, methamphetamine, caffeine and even rat poison increasing the potential health risk to unsuspecting users.

Ecstasy use is typically associated with night clubs and dance parties. However, regardless of the social environment in which it is consumed, there are serious consequences if it is detected in your system following a drug test.

Ecstasy is classified as a Specified Stimulant and is prohibited In Competition only by the World Anti-Doping Agency (WADA).

### How does it affect the body?

Ecstasy directly affects the central nervous system by releasing chemicals such as serotonin and oxytocin. These create a sense of euphoria and restlessness, followed by a rapid comedown period.

Other short term effects on the body may include:

- Increased energy and endurance
- Increased drive and motivation
- Decreased appetite
- Short term memory loss
- Urinary retention / dehydration
- Increased heart rate, body temperature
- Involuntary teeth grinding
- Blurred vision and nausea
- Severe anxiety, paranoia and depression



Long term effects may include:

- Clinical depression
- Low self-esteem and self-confidence
- Liver damage
- Impaired memory, learning and attention span
- Excessive wear of teeth

### How long does Ecstasy stay in your system?

Ecstasy can be detected within the body for several days after ingestion. The clearance times of this drug are affected by variable factors such as the amount consumed, frequency of use, gender, age, purity of the Ecstasy and an individual's metabolism.

REMEMBER - a Player can test positive for Ecstasy even if its use was days before being tested.

## Ecstasy



**STATUS IN RUGBY**  
BANNED IN-COMPETITION

## The World Anti-Doping Code 2019 Prohibited List

This List shall come into effect on 1 January 2019.

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 $\alpha$ -androst-1-ene-3 $\beta$ ,17 $\beta$ -diol); 1-androstenedione (5 $\alpha$ -androst-1-ene-3,17-dione); 1-androsterone (3 $\alpha$ -hydroxy-5 $\alpha$ -androst-1-ene-17-one); 1-testosterone (17 $\beta$ -hydroxy-5 $\alpha$ -androst-1-en-3-one); bolasterone; calusterone; clostebol; danazol ([1,2]oxazolo[4',5':2,3]pregna-4-en-20-yn-17 $\alpha$ -ol); dehydrochlormethyltestosterone (4-chloro-17 $\beta$ -hydroxy-17 $\alpha$ -methylandrosta-1,4-dien-3-one); desoxymethyltestosterone (17 $\alpha$ -methyl-5 $\alpha$ -androst-2-en-17 $\beta$ -ol and 17 $\alpha$ -methyl-5 $\alpha$ -androst-3-en-17 $\beta$ -ol); drostanolone; ethylestrenol (19-norpregna-4-en-17 $\alpha$ -ol); fluoxymesterone; formebolone; furazabol (17 $\alpha$ -methyl [1,2,5]oxadiazolo[3',4':2,3]-5 $\alpha$ -androstan-17 $\beta$ -ol); gestrinone; mestanolone; mesterolone; metandienone (17 $\beta$ -hydroxy-

17 $\alpha$ -methylandrosta-1,4-dien-3-one); metenolone; methandriol; methasterone (17 $\beta$ -hydroxy-2 $\alpha$ ,17 $\alpha$ -dimethyl-5 $\alpha$ -androstan-3-one); methyldienolone (17 $\beta$ -hydroxy-17 $\alpha$ -methylestra-4,9-dien-3-one); methyl-1-testosterone (17 $\beta$ -hydroxy-17 $\alpha$ -methyl-5 $\alpha$ -androst-1-en-3-one); methylnortestosterone (17 $\beta$ -hydroxy-17 $\alpha$ -methylestr-4-en-3-one); methyltestosterone; metribolone (methyltrienolone, 17 $\beta$ -hydroxy-17 $\alpha$ -methylestra-4,9,11-trien-3-one); mibolerone; norboletone; norclostebol; norethandrolone; oxabolone; oxandrolone; oxymesterone; oxymetholone; prostanazol (17 $\beta$ -[(tetrahydropyran-2-yl)oxy]-1'H-pyrazolo[3,4:2,3]-5 $\alpha$ -androstan-3-one); quinbolone; stanozolol; stenbolone; tetrahydrogestrinone (17-hydroxy-18 $\alpha$ -homo-19-nor-17 $\alpha$ -pregna-4,9,11-trien-3-one); trenbolone (17 $\beta$ -hydroxyestr-4,9,11-trien-3-one); and other substances with a similar chemical structure or similar biological effect(s).

b. Endogenous\*\* AAS and their Metabolites and isomers, when administered exogenously, including but not limited to:

4-androstenediol (androst-4-ene-3 $\beta$ ,17 $\beta$ -diol); 4-hydroxytestosterone (4,17 $\beta$ -dihydroxyandrost-4-en-3-one); 5-androstenedione (androst-5-ene-3,17-dione); 7 $\alpha$ -hydroxy-DHEA; 7 $\beta$ -hydroxy-DHEA; 7-keto-DHEA; 19-norandrostenediol (estr-4-ene-3,17-diol); 19-norandrostenedione (estr-4-ene-3,17-dione); androstanolone (5 $\alpha$ -dihydrotestosterone, 17 $\beta$ -hydroxy-5 $\alpha$ -androstan-3-one); androstenediol (androst-5-ene-3 $\beta$ ,17 $\beta$ -diol); androstenedione (androst-4-ene-3,17-dione); boldenone; boldione (androsta-1,4-diene-3,17-dione); epiandrosterone (3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17-one); epi-dihydrotestosterone (17 $\beta$ -hydroxy-5 $\beta$ -androstan-3-one); epitestosterone; nandrolone (19-nortestosterone); prasterone (dehydroepiandrosterone, DHEA, 3 $\beta$ -hydroxyandrost-5-en-17-one); testosterone.

## 2. Other Anabolic Agents

Including but not limited to:

Clenbuterol, selective androgen receptor modulators [SARMs, e.g. andarine, LGD-4033, enobosarm (ostarine) and RAD140], 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. 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 [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. 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- $\beta$ ) 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 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. lenomorelin (ghrelin) and its mimetics, e.g. 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- $\beta$ 4 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.



# 2019 Prohibited List

## S3. BETA-2 AGONISTS

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

Fenoterol; formoterol; higenamine; indacaterol; 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.

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

The following hormone and metabolic modulators are prohibited:

1. Aromatase inhibitors including, but not limited to: 2-Androst-en-17-ol); 2-Androstenone (5a-androst-2-en-17-one); 3-Androst-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); androsta-3,5-diene-7,17-dione (arimistane); 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: clomifene; cyclofenil; fulvestrant.
4. 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-neutralizing antibodies (e.g. domagrozumab, landogrozumab, stamulumab); myostatin-binding proteins (e.g. follistatin, myostatin propeptide);
5. Metabolic modulators:
  - 5.1 Activators of the AMP-activated protein kinase (AMPK), e.g. AICAR, SR9009; and Peroxisome Proliferator Activated Receptor  $\delta$  (PPAR $\delta$ ) agonists, e.g.

2-(2-methyl-4-((4-methyl-2-(4-(trifluoromethyl)phenyl)thiazol-5-yl)methylthio)phenoxy) acetic acid (GW1516, GW501516);

5.2 Insulins and insulin-mimetics;

5.3 Meldonium;

5.4 Trimetazidine.

## 5.5. DIURETICS AND OTHER 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. bendroflumethiazide, chlorothiazide and hydrochlorothiazide; triamterene and vaptans, e.g. tolvaptan.

Except:

- Drosipirenone; 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 (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

### M1. MANIPULATION OF BLOOD AND BLOOD COMPONENTS

The following are prohibited:

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.

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

## Substances and Methods Prohibited In-Competition

In addition to the classes S0 to S5 and M1 to M3 defined above, the following classes 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; lisdexamfetamine; mefenorex; mephentermine; mesocarb; metamfetamine(d-); p-methylamfetamine; 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-methylhexan-2-amine (methylhexaneamine); 4-methylpentan-2-amine (1,3-dimethylbutylamine); 5-methylhexan-2-amine (1,4-dimethylpentylamine); benzfetamine; cathine\*\*;  
cathinone and its analogues, e.g. mephedrone, methedrone, and  $\alpha$ -pyrrolidinovalerophenone; dimetamfetamine (dimethylamphetamine); ephedrine\*\*\*; epinephrine\*\*\*\* (adrenaline); etamivan; etilamfetamine; etilefrine; famprofazone; fenbutrazate; fencamfamin; heptaminol; hydroxyamfetamine (parahydroxyamphetamine); isometheptene; levmetamfetamine; meclofenoxate; methylenedioxyamphetamine; methylephedrine\*\*\*; methylphenidate; nikethamide; norfenefrine; octopamine; oxilofrine (methylsynephrine); 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 2019 Monitoring Program\*.

\* Bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol, and synephrine: These substances are included in the 2019 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

The following narcotics are prohibited:

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

## S8. CANNABINOIDS

The following cannabinoids are prohibited:

- Natural cannabinoids, e.g. cannabis, hashish and marijuana, Synthetic cannabinoids e.g. D9-tetrahydrocannabinol (THC) and other cannabimimetics.

Except:

- Cannabidiol.

## S9. GLUCOCORTICOIDS

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

Including but not limited to:

Betamethasone; budesonide; cortisone; deflazacort; dexamethasone; fluticasone; hydrocortisone; methylprednisolone; prednisolone; prednisone; triamcinolone.

## Substances Prohibited in Particular Sports

### P1. 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; metipranolol; metoprolol; nadolol; oxprenolol; pindolol; propranolol; sotalol; timolol.

All the information contained in this handbook as well as additional resources can be found at: [worldrugby.org/keeprugbyclean](http://worldrugby.org/keeprugbyclean)



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For more information regarding Anti-Doping, please consult World Rugby's Anti-Doping website: [worldrugby.org/keeprugbyclean](https://worldrugby.org/keeprugbyclean)

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