

International
Paralympic Committee



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Paralympic
Committee

Updates on Anti-doping and TUE Management in Paralympic Sport

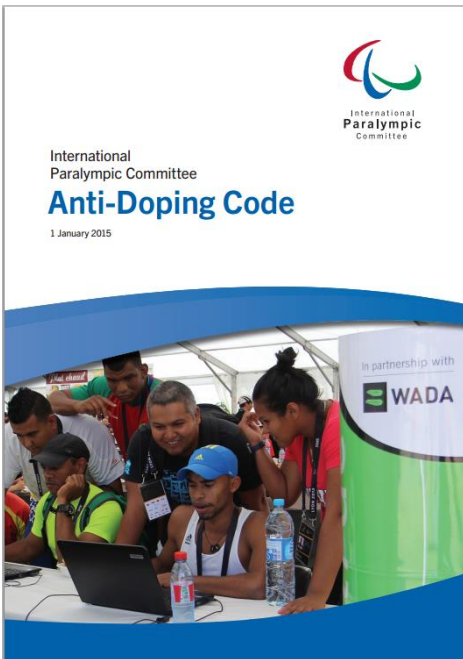
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March 15, 2018

PyeongChang 2018 IPC Medical /
Sports Science Committee Workshops



Important Resources



WADA Prohibited List



SUBSTANCES AND METHODS

UPDATED EVERY YEAR

PROHIBITED AT ALL TIMES

IN- AND OUT-OF-COMPETITION

- Non-Approved Substances
- Anabolic Agents
- Peptide Hormones, Growth Factors, Related Substances and Mimetics
- Beta-2 Agonists
- Hormone and Metabolic Modulators
- Diuretics & Masking Agents
- Manipulation of Blood & Blood Components
- Chemical and Physical Manipulation
- Gene Doping

PROHIBITED IN-COMPETITION

- Stimulants
- Narcotics
- Cannabinoids
- Glucocorticoids

PROHIBITED IN PARTICULAR SPORTS

- Beta Blockers



WORLD
ANTI-DOPING
AGENCY
play true

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 2018.

Global Drug Reference Online

www.globaldro.com



CHOOSE YOUR SPORT NATIONALITY



Canada



United Kingdom



United States



Switzerland



Japan



Australia



Other

CANADIAN CENTRE
OF ETHICS SPORT

UKad
protecting sport



antidoping.ch
schweiz · suisse · switzerland

JADA
Japan Anti-Doping Agency

Australian Government
Australian Sports
Anti-Doping Authority

Global DRO allows athletes to check the anti-doping status of their medications

In 2017, Global DRO helped athletes and users from six countries identify the prohibited status of their medications and ingredients. The platform saw a **30 percent increase** in searches from 2016 to 2017.



Specific Topics in Anti-Doping

Recent Trends

- Intravenous infusions
- Selective Androgen Receptor Modulators (SARMs)
- Clomiphene



Intravenous Infusions

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.

- Prohibited at all times
- Require a TUE in advance except in emergency circumstances
- IV infusions during a competition, polyclinics, home visits, urgent care or after-hours clinics, boutique IV and rehydration services, and doctor's office visits are not considered hospital treatment and would require an approved TUE in advance.
- Clinical investigations to diagnosis medical conditions, such a medical imaging, may also require IV administration of non-prohibited medicine which is permitted. Clinical trials and research studies are excluded.
- Surgery Checklist <http://www.usada.org/substances/surgery/>



IV Boutiques



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REVIV's proprietary IV infusion therapies target a variety of wellness needs by replenishing hydration, aiding recovery from illness or jet lag, providing hangover relief, restoring vitamin & nutrient levels, refreshing cosmetic appearance and revitalizing your overall well being

Selective Androgen Receptor Modulators (SARMs) in Dietary Supplements



- SARMs are nonsteroidal drugs in clinical trials to treat acute and chronic muscle wasting and breast cancer. None have been FDA approved.
- SARMs are listed as prohibited at all times on the World Anti-Doping Agency (WADA) Prohibited List and other sports bodies.
- SARMs are being sought out as performance and image-enhancing substances; as alternatives to anabolic steroids.
- SARMs are not legal or approved ingredients for dietary supplements products, but may be easy purchased.
- The composition and purity of such products is not known.
- Extended clearance times and very high detection sensitivity



Selective Androgen Receptor Modulators (SARMS) in Dietary Supplements

FDA In Brief: FDA warns against using SARMS in body-building products

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For Immediate Release: Oct. 31, 2017

Media Inquiries

✉ [Lyndsay Meyer](mailto:Lyndsay.Meyer@FDA)

☎ 240-402-5345

"We are extremely concerned about unscrupulous companies marketing body-building products with potentially dangerous ingredients. Body-building products that contain selective androgen receptor modulators, or SARMS, have not been approved by the FDA and are associated with serious safety concerns, including potential to increase the risk of heart attack or stroke and life threatening reactions like liver damage," said Donald D. Ashley, J.D., director of the Office of Compliance in the FDA's Center for Drug Evaluation and Research. "We will continue to take action against companies marketing these products to protect the public health."



Selective Androgen Receptor Modulators (SARMS) in Dietary Supplements

JAMA | Original Investigation

Chemical Composition and Labeling of Substances Marketed as Selective Androgen Receptor Modulators and Sold via the Internet

Ryan M. Van Wagoner, PhD; Amy Eichner, PhD; Shalender Bhasin, MB, BS; Patricia A. Deuster, PhD; Daniel Eichner, PhD

JAMA. 2017;318(20):2004-2010. doi:10.1001/jama.2017.17069

QUESTION - What types and quantity of ingredients are found in products sold through the internet and advertised to contain SARMS?

CONCLUSIONS In this limited investigation, most products contained unapproved drugs and substances. Only 52% contained SARMS and many were inaccurately labeled.



Clomiphene

Warning

- Clomiphene is a selective estrogen receptor modulator (SERM) commonly used in female fertility brand name prescription medications, such as Clomid.
- In women, clomiphene acts on the pituitary gland to stimulate the release of specific hormones responsible for ovulation.
- In men, clomiphene can alter testosterone levels by interfering with the negative feedback loop of the hypothalamic–pituitary–gonadal axis.
- Clomiphene is prohibited at all times** as an anti-estrogenic substance in the ***S4 Category of Hormone and Metabolic Modulators***.
- Clomiphene has an extremely long urinary excretion period. Always apply for a TUE before use.

Supplement 411: Realize, Recognize, Reduce

Supplement 411[®]

Welcome to USDA's dietary supplement safety education and awareness resource – Supplement 411. We thank you and congratulate you for taking the initiative to educate yourself regarding this important topic. As you may already know, the answers are not straightforward. There is no definitive resource that can protect you completely. The reality is that dietary supplements can be

risky, and that awareness, caution, education, and common sense must be exercised when considering their use. The resources on this page will help you gain a better understanding of the dietary supplement issue and cover topics including:

- ① REALIZE there are safety issues with dietary supplements.
- ② RECOGNIZE risk when you see it.
- ③ REDUCE your risk of testing positive and of health problems by taking concrete steps.



A dietary supplement safety and awareness tutorial coming soon!



Realize

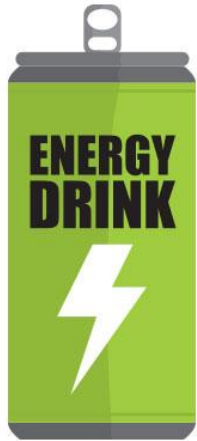


Recognize



Reduce

Supplement Risks



VS.



What's the difference?

Supplement
411[®]

Use Third-Party
Testing to reduce
your supplement risk

REALIZE | RECOGNIZE | REDUCE

Supplement
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Is this Supplement “100% WADA Certified?”

What's wrong?

LACTIGO What is it? Testimonials Ingredients How it Works Research Chat **SHOP**

Ingredients - 100% WADA & NSF Tested & LGC Certified!

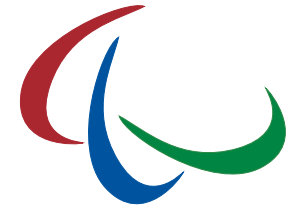
Experience performance increases of up to 15% within 30 - 45 minutes with Lactigo.

Lactigo is a topical gel that allows for delivery to specific muscles groups. This is the compound that your body naturally uses to remove lactic acid from your muscles. By increasing its concentration your body can eliminate more acid build up, refreshing your muscles for higher levels of activity.

Carnosine
During exercise, muscle carnosine levels drop significantly allowing for the buildup of lactic acid (lactate / H⁺).
Lactigo Gel naturally prevents the accumulation of lactic acid in your muscles.

How It Works

- H⁺ ACID BUILD UP**
During exercise, muscles build up with lactic acid (H⁺), which is the major cause of painful muscle cramps that slow you down.
- BUFFER ACID**
Block lactic acid build up in muscles, giving you faster recovery from strenuous exercise.
- GO LONGER**
Delaying the onset of lactic acid build up, means that anyone can go further and exercise longer at peak performance.
- FASTER RECOVERY**
Lactigo accelerates the recovery time from strenuous muscular exercise. Continued use of Lactigo also has an increased effectiveness.



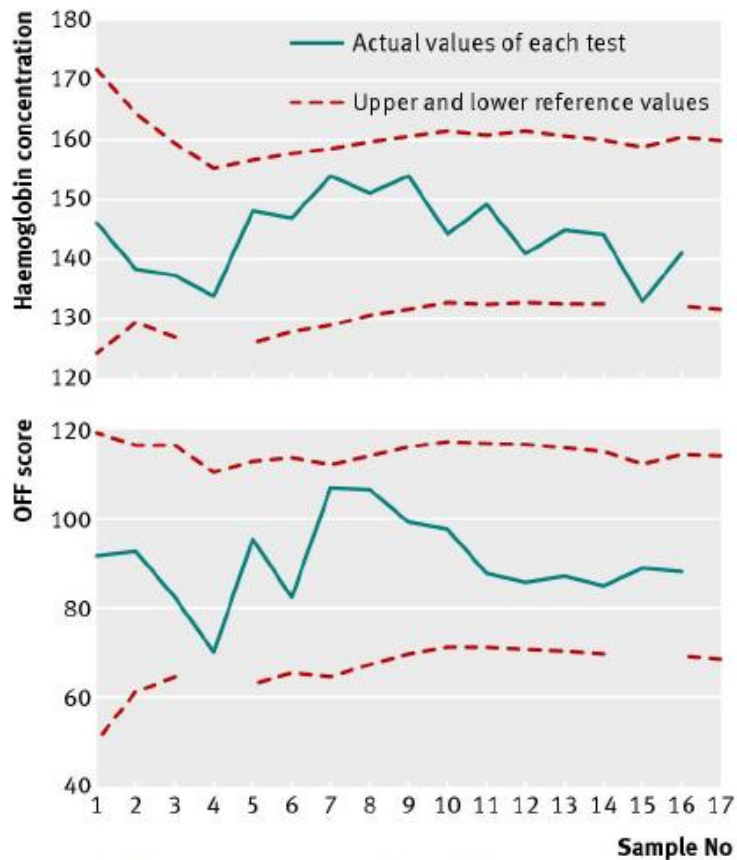
The Present and Future of the Athlete Biological Passport

Module	BioMarkers	Status
Haematological	Hb, Ret%, Red Blood Cell Indices	2009
Steroidal	Testosterone (T), T/E, A/T, A/Etio,...	2014
Endocrine	Growth Factors (IGF-1, PIIP...)	2017?
-Omics	Genomics, proteomics, ...	?

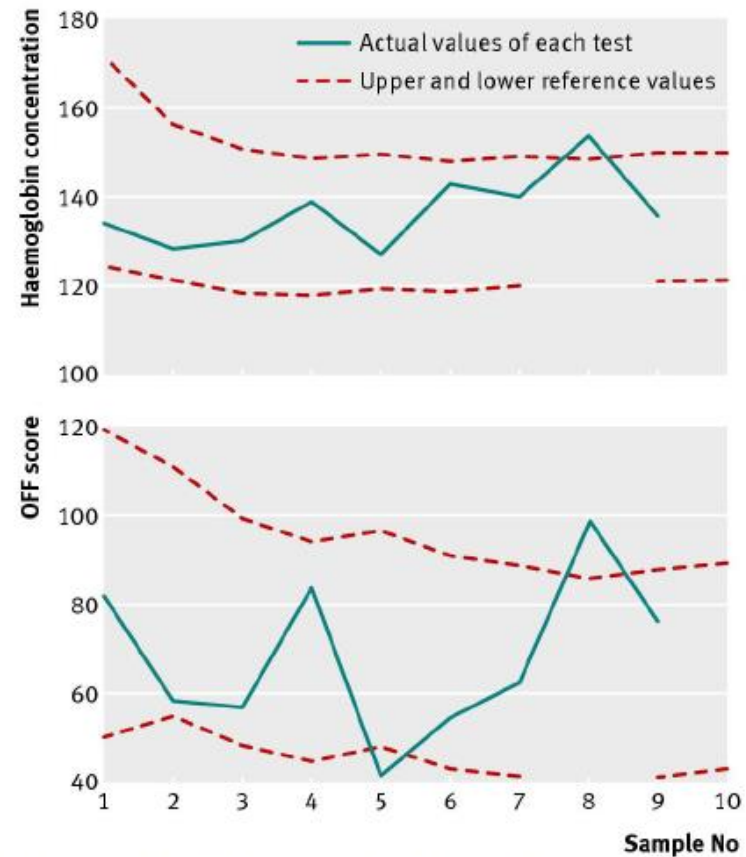


Athlete Biological Passport

BMJ 2012;344:e2077 doi: 10.1136/bmj.e2077 (Published 22 May 2012)



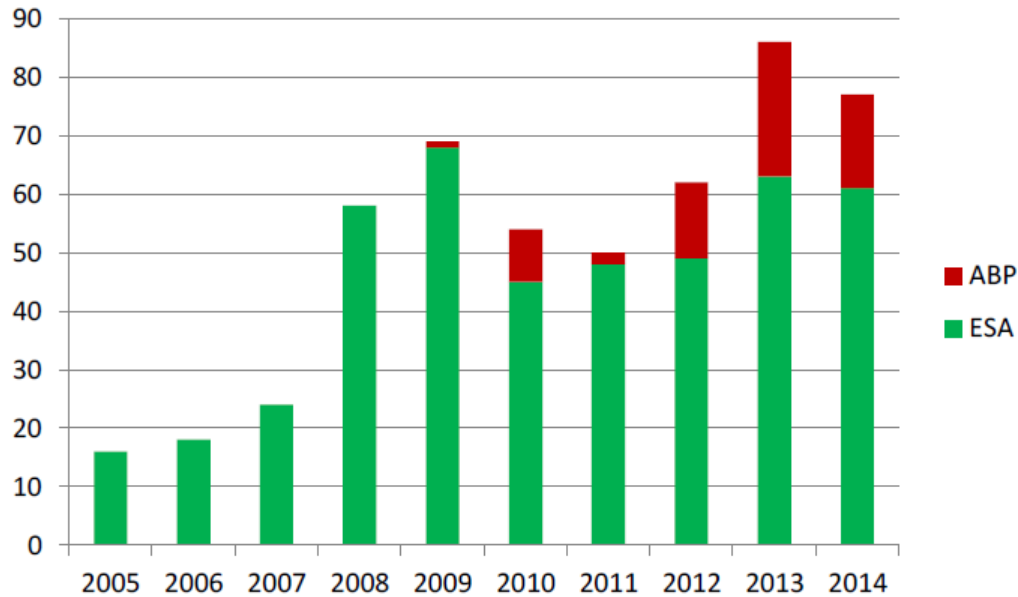
Normal haematological profile of an athlete



Profile of an athlete convicted of doping



Number of Blood Doping Cases since 2005





Future of Anti-Doping

Dried Blood Spots & Oral Fluid = Less Invasive Sample Collection





Important Reminders

- Encourage clean sport by acting a positive role model
 - Become educated and aware of country, sport, and event-specific anti-doping rules to be an accurate resource to athletes and to avoid errors
 - The athlete is solely responsible for the substances in his or her body and the methods used to administer those substances
 - Know the WADA Prohibited List and use country-specific resources to confirm the prohibited status of every substance or product
 - Assist athletes in applying for a TUE when appropriate by providing complete medical notes which clearly document a diagnosis and treatment plan consistent with best medical practice
-



Important Reminders

- ❑ Be aware that para sport athletes may request modifications to the doping control process due to factors related to their disability
- ❑ Act as a representative to assist athletes through the doping control process
- ❑ Educate athletes and the sports community regarding dietary supplements, noting that athletes may be at risk for an anti-doping rule violation or an adverse health event
- ❑ Athlete support personnel, including medical staff, are also liable for anti-doping rule violations if determined to be complicit, aiding or abetting in anti-doping rule violations.
- ❑ Prohibited Association List of Athlete Support Personnel
<https://www.wada-ama.org/en/resources/the-code/prohibited-association-list>



Health Professional Anti-Doping Education



- <https://www.wada-ama.org/en/resources/education-and-awareness/sport-physicians-tool-kit-online-version>
- <https://med.stanford.edu/cme/courses/online/USADA.html>



Paralympic.org

Thanks!

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