Updates on Anti-doping and TUE Management in Paralympic Sport

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Important Resources
WADA Prohibited List

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
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

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

For Immediate Release: Oct. 31, 2017

Media Inquiries

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“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

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.
Welcome to USADA’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:

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

A dietary supplement safety and awareness tutorial coming soon!
Supplement Risks

What’s the difference?

Use Third-Party Testing to reduce your supplement risk

REALIZE | RECOGNIZE | REDUCE

Supplement 411®
Is this Supplement “100% WADA Certified?”

What’s wrong?

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

Improving performance increases up to 16% miles 30-45 minutes with Lactigo.

Lactigo is a natural aid that allows for delivery to specific muscle groups. It is a unique compound that your body naturally uses to move lactate acid from your muscles.

Benefits include: 
- Increased speed and power in 30-45 minutes
- Increased performance in 30-45 minutes
- Increased recovery in 30-45 minutes

How It Works

H+ ACID BUILDUP

Buffer acid to reduce fatigue and improve performance.

BUFFER ACID

Buffer acid to reduce fatigue and improve performance.

GO LONGER

Buffer acid to reduce fatigue and improve performance.

FASTER RECOVERY

Buffer acid to reduce fatigue and improve performance.
The Present and Future of the Athlete Biological Passport

<table>
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<tr>
<th>Module</th>
<th>BioMarkers</th>
<th>Status</th>
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<td>Haematological</td>
<td>Hb, Ret%, Red Blood Cell Indices</td>
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<td>Growth Factors (IGF-1, PIIP…</td>
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Athlete Biological Passport

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

- **Haemoglobin concentration**
  - Actual values of each test
  - Upper and lower reference values

- **OFF score**
  - Actual values of each test
  - Upper and lower reference values

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://med.stanford.edu/cme/courses/online/USADA.html
Thanks!
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