Doping Control at the Canadian Masters Weightlifting Championships

Questions and Answers about Testosterone

2023.10.03

1. What kind of testing will be conducted by the WCHM approved laboratory?

Testing will include methods to determine the Testosterone /Epitestosterone – Ratio (T/E – ratio) and possibly, subsequent Isotope ratio mass spectrometry (IRMS).

Epi-Testosterone is one of several naturally-occurring testosterone compounds in the body that act as steroids.

Because epitestosterone conjugates are rapidly cleared in the urine, excretion rates of testosterone and epitestosterone are similar, and the ratio of urinary testosterone to epitestosterone (T/E ratio) is approximately 1 : 1.

Epitestosterone has not been shown to enhance athletic performance, although administration of epitestosterone can be used to mask a high level of testosterone if the standard T/E ratio test is used. As such, epitestosterone is banned as it is a masking agent for testosterone.

Ratios greater than 1.00:1.00 are noted and reported.

2. What are normal or average testosterone levels?

In general, the normal range in males is about 270-1070 ng/dL with an average level of 679 ng/dL. For females, the normal range is 15 to 70 ng/dL or 0.5 to 2.4 nmol/L. Some researchers suggest that the healthiest men have testosterone levels between 400-600 ng/dL. (ng/dL is nanograms per decilitre and for those who remember their high school chemistry nmol/L is nanomoles per litre.)

3. What is hypogonadism and what is its relative importance to the testing for prohibitive substances?

Very simply, this is a medical condition of androgen (hormone) deficiency that results in consistently abnormally low testosterone levels. This medical condition is in itself not problematic for drug testing, but it is the athlete's medical treatment, such TRT, (Testosterone Replacement Therapy) that is of serious concern.

There are two causes of hypogonadism. One is referred to as "Organic Hypogonadism" and the other is "Functional Hypogonadism." The differences between these two etiologies are best discussed with the athlete's medical doctor, however it is only the Organic Hypogonadism that can be approved for a Medical Exemption.

The WADA only approve TUEs (Therapeutic Use Exemptions) for Organic Hypogonadism. WCHM does not issue TUEs but may ask that an athlete who has tested positive for a prohibited substance complete a "Medical Review Application." This application is reviewed and assessed by the WCHM Medical Review Panel.

4. If a member's medical condition is acceptable to WCHM's Anti-doping Disciplinary Committee, how does the member proceed to participate in IMWA sanctioned international masters weightlifting competitions?

IMWA competitions are subject to the IMWA Anti-doping Policy, and a TUE (Therapeutic Use Exemption) is required. Since this Exemption cannot be provided by the CCES or WCHM, the member must contact the IMWA Anti-doping Director for further directions.

Doping Control for Internationally Competing Athletes.Information sur le contrôle du dopage pour les athlètes en compétition internationale.2023.08 (wchmasters.org)