

Anti-Doping Awareness in Sports

Prof. Ankush Gupta, Prof. Jay Singh, Prof. Anup Krishnan (Retd),

Prof. Dobson Dominic

Department of Humanities and Social Sciences

IIT Madras

Lecture -25

Common TUE Conditions

Good morning, ladies and gentlemen, and it's my privilege to welcome you back to Lecture Five of Week Five of this course on Anti-Doping Awareness for Sports. We discussed TUEs in the last lecture, and I hope you had a good time during your weekly assignments. How good a time? We will know when we grade the assignments. So let's start with discussing some common Therapeutic Use Exemptions and some common conditions wherein TUEs are applied for and generally granted. I will be covering this lecture as per the following outline. We will talk about an introduction.

We will discuss some common conditions which need TUEs, and we will conclude with a take-home message. TUEs are generally granted for various medical conditions. Please note, the conditions must justify the use of prohibited substances for treatment. Medical necessity must be proven.

WADA reviews and monitors all these conditions carefully. That means every application for a TUE, and the athlete's blood samples and biological passport, are reviewed periodically and carefully. Make sure that the applications are based on global standards of medical treatment, diagnosis, and therapeutics.

So let's talk about bronchial asthma. It is one of the common conditions which require a TUE. It deals with the narrowing or constricting of the airways, which are hyperreflexive. The treatment is generally by inhaled beta-2 agonists, and the most common drug used is salbutamol. Athletes must demonstrate significant breathing impairment, and lung function tests by spirometry have to be documented in the TUE application. Medications can generally improve breathing but not performance, or so it is postulated in people who have asthma.

Diabetes mellitus: There is a type of diabetes mellitus called Type 1 diabetes, and Type 1 diabetics typically need insulin to manage blood glucose levels. Insulin use is banned

without a TUE. Close monitoring of blood sugar is required during sport. Nowadays, there are CGM devices which are used by athletes and their coaches to monitor blood sugar levels during sport. Athletes must show that the diagnosis has been reached with proper tests as per the WADA guidelines. TUE ensures fair competition without any health risk to the athletes.

Attention Deficit Hyperactivity Disorder or ADHD. A common condition which is seen in several athletes. Stimulants like methylphenidate and amphetamines are used, but they are on the banned list. These are commonly prescribed for ADHD management. And if you are using such medicines, a TUE is required to use them. A proper comprehensive diagnosis from a specialist is required, along with all the relevant investigations to prove the diagnosis. And justification must be there to prove that the medicine is essential for this particular patient. Inflammatory bowel disease like Crohn's disease and ulcerative colitis, or any of the spectrum between them; require immunosuppressants as a common therapeutic modality. But some medications are on the prohibited list.

Athletes have to submit comprehensive documentation of irritable bowel disease diagnosis. And if the physician is prescribing medications like corticosteroids or any of the drugs on the prohibited list, TUE approval is mandatory. This will allow management of the chronic inflammation without risk of doping.

Severe allergies: Now we know allergies may range from simple skin rash to severe bronchospasm, right? Now, severe life-threatening allergies may require corticosteroids or epinephrine for treatment and prevention of death. Corticosteroids are banned in certain forms. Emergency use of epinephrine or EpiPen may require a retroactive TUE. When you are submitting documents for a TUE, the documents and the diagnosis must clearly show anaphylaxis risk. And the TUE ensures safety without unfair advantage. Hormonal imbalance, again, is commonly seen. But we are talking about a particular type of hormonal imbalance called hypogonadism, in which testosterone replacement therapy is strictly regulated and indicated.

There are some conditions like primary testicular failure which may justify testosterone replacement therapy. However, testosterone is highly restricted due to its performance-enhancing potential, and athletes who are using this must show a clear medical need for it. Detailed endocrine reports are required right from the time of diagnosis through follow-up and beyond. Athletes with severe pain.

We know opioids are banned, but they may sometimes be required for severe pain. Conditions like post-surgery recovery may justify opioid use. However, the TUE must prove that no alternative treatments are effective. Documentation of the pain level and injury is essential. Careful monitoring will ensure that the use is for medical necessity only.

Autoimmune diseases. There are several autoimmune diseases; musculoskeletal, like rheumatoid arthritis and SPA, which require immunosuppressants. Some medications like methotrexate are prohibited. A TUE will be needed for anti-inflammatory and immune-modulating drugs. The athlete and the doctor must show long-term management of the autoimmune disease in question. The treatment should balance the athlete's health without enhancing performance.

Renal transplant: Again, several athletes are competing with renal transplants, but immunosuppressive drugs are strictly necessary post-transplant because they prevent rejection of the transplanted organ. The issue is, several of these drugs are on WADA's prohibited list. A TUE will help the athletes manage their transplant medications better and compete at the same time. However, this requires clear-cut evidence of the transplant and ongoing therapy. Mental health conditions. Treatment of depression and psychotic conditions requires antidepressants and antipsychotics.

Some of them are generally allowed, but some are banned. Conditions like severe depression or bipolar disorder may require drugs which are on the banned list and which require a TUE. The athlete has to prove medical necessity with a clear-cut specialist diagnosis. He or she also must prove that the medications do not offer performance enhancement. And mental health management is key to safe participation, both for the athlete and for the rest of his team.

Chronic Obstructive Pulmonary Disease, COPD. Similar to asthma, but the lung impairment is usually much more severe. Beta-2 agonists like salbutamol and corticosteroids are often required for this treatment. There must be clear lung function tests which have confirmed a diagnosis of COPD. Medications allow normal breathing and should not enhance the endurance of the athlete. A TUE will ensure appropriate treatment for this chronic disease.

Epilepsy: Anti-epileptic drugs may appear on WADA's prohibited list. There are conditions like seizures which need long-term management. The treatment of epilepsy or seizures generally runs into years. The TUE must show that no other treatments are effective. Regular neurological checkups and seizure logs have to be submitted along with the TUE application. And the safety of the athlete versus the performance of the athlete should be balanced in the sport. Heart disease. Beta-blockers are banned in some sports, but they are needed in some heart conditions. A TUE may be required for cardiac arrhythmias, hypertension, and heart failure. Medical reports and diagnosis from a cardiologist are definitely needed. And the medications used must be necessary and should not enhance endurance. Careful management is required for safety during competition. Conclusion. TUEs ensure that athletes can manage medical conditions fairly and compete in a transparent manner without any undue advantage. WADA has provided

specific guidelines for physicians for each TUE condition. These guidelines help the healthcare providers navigate TUE requirements.

If there is any doubt, all these guidelines are available on WADA's official website for easy access by the physicians, the athlete support personnel, and the athlete himself or herself. They outline clear medical documentation and diagnostic criteria for each condition. This ensures consistency and fairness in the TUE process across sports and across nations.

These are the references which I had used for preparing this lecture. Ladies and gentlemen, I strongly urge you to go through them in the interest of further enhancing your knowledge. This brings us to the end of Week Five. Ladies and gentlemen, please do submit your assignments well in time. I thank you for your time and patience, ladies and gentlemen. Thank you, and Jai Hind.