

Anabolic steroids

May 2, 2022

In news— Recently, two of India's track-and-field Tokyo Olympians, a male and a female, failed in dope tests for using banned anabolic steroids and facing bans up to four years.

What are Anabolic steroids?

- **Anabolic steroids are essentially lab-made versions of the male hormone testosterone** and have a similar effect of increasing muscle mass as the natural hormone does.
- **It also increases male characteristics in a person, such as facial hair and a deeper voice.**
- Anabolic steroids, **also known as anabolic-androgenic steroids, are steroidal androgens that include natural androgens like testosterone as well as synthetic androgens** that are structurally related and have similar effects to testosterone.
- **Testosterone is a sex hormone** that in men is thought to **regulate sex drive** (libido), bone mass, fat distribution, muscle mass and strength, and the production of red blood cells and sperm.
- They **also increase protein within cells, especially in skeletal muscles, and also have varying degrees of virilizing effects**, including induction of the development and maintenance of masculine secondary sexual characteristics such as the growth of facial and body hair.
- Androgens or AAS are one of three types of sex hormone agonists, the others being estrogens like estradiol and progestogens like progesterone.
- **Anabolic steroids are, however, very different from the steroids that are prescribed by doctors for inflammations**, several autoimmune diseases, or to suppress the body's immune system during a Covid-19 infection.
- **These medicines are called corticosteroids and are lab-**

made molecules that mimic the action of the hormone called cortisol that controls the body's stress response, metabolism, and inflammation.

- The **anabolic steroids have a very limited medical role** and are mainly used by doctors to help patients gain weight after a severe illness or injury.
- **They are used medically in humans to treat a variety of conditions, including** anaemia, breast cancer, hypogonadism, short stature, malnutrition, osteoporosis, and human immunodeficiency virus (HIV) wasting syndrome.
- Doctors may also prescribe the medicine to men who have low levels of natural testosterone.
- **India is ranked third in doping, according to the latest World Anti-Doping Agency (WADA) report released in 2021.**
- With 152 cases across disciplines, the country is marginally below leaders Russia (167) and Italy (157) on this list.

Health impact

- Use of anabolic steroids in the short-term can cause acne and hairfall.
- Extended misuse of the substance can also lead to gynaecomastia (growth of breasts in men) and erectile dysfunction.
- In women, it can lead to growth of facial hair. It may also cause extreme anger, paranoia, and impaired judgement.
- Long-term use can lead to kidney disease and even failure, liver damage and tumours, enlarged heart, and high blood pressure.
- It can also lead to stunted growth in teenagers.

About World Anti-Doping Agency (WADA)-

- It is a **non-profit foundation initiated by the**

International Olympic Committee (IOC) to promote, coordinate, and monitor the fight against drugs in sports.

- **It was set up on 10 November 1999 in Lausanne, Switzerland**, as a result of the “**Declaration of Lausanne**”, to promote, coordinate and monitor the fight against drugs in sports.
- **Since 2002, the organization’s headquarters have been located in Montreal, Quebec, Canada.**
- **WADA is responsible for the World Anti-Doping Code**, adopted by more than 650 sports organizations, including international sports federations, national anti-doping organizations, the IOC, and the International Paralympic Committee.
- Initially funded by the IOC, WADA receives half of its budgetary requirements from them, with the other half coming from various national governments.
- Its governing bodies are also composed in equal parts by representatives from the sporting movement (including athletes) and governments of the world.
- **The highest decision-making authority is the 38-member foundation board**, which is composed equally of IOC representatives and representatives of national governments.