



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2023; 8(1): 273-275

© 2023 Yoga

www.theyogicjournal.com

Received: 27-03-2022

Accepted: 12-05-2022

Dr. Vishal Dahiya

Assistant Professor, Department
of Physical Education, Hindu
College, Sonipat, Haryana, India

Shadow of doping in sports

Dr. Vishal Dahiya

Abstract

Introduction: Since ancient times, competitive athletes have been familiar with the use of ergogenic aids and they will probably continue to use unfair and harmful substances in future, because their inclination to victory, along with the mirage of glory and money, will probably overcome health and legal risks.

Sources of data: We searched PubMed using the term doping over the period 1990 to the present day. We also included non-English journals.

Areas of agreement: By literature searching, it emerges that the phenomenon of doping is complex and multifaceted. It involves a number of causes and factors that do not originate solely in the athletic field, making universality its main feature. It is in fact observed in all ages and levels of competition, and it concerns all sports, even the most unpredictable.

Areas of controversy: The high number of athletes testing positive for anti-doping controls attests that the current strategy might be analytically adequate to unmask most (but not all) doping practices, but it is probably ineffective to prevent athletes to dope and modifying this upsetting trend.

Growing points: As doping parallels the use of medications, food supplements, alcohol and social drugs, a reinforced preventive policy is advisable.

Emerging areas for developing research: The current anti-doping policy should be replaced with a more efficient and practical strategy to identify and monitor abnormal and harmful deviations of the biochemical and haematological profiles.

Keywords: Shadow of doping, literature searching, food supplements, alcohol and social drugs

Introduction

Today no one is unaware of doping in sports. The word doping originates from 'drop', a term that conventionally refers to a stimulant drink used in tribal ceremonies in South Africa during the eighteenth century. Doping first appeared in an English dictionary in 1889, where it was described as a narcotic potion for reducing the performance of racehorses. There is a long history of doping in sports. Since the ancient Greco-Roman times, ergogenic aids in the form of natural products, bland chemicals and animal extracts have been commonplace in the attempt to push human performances to the limit. In recent times, remarkable advances in science and biotechnology have favoured the introduction of synthetic molecules, recombinant hormones and genetic manipulation of athletes. The issue of doping has become a regular phenomenon in recent times. We often hear news of athletes and sportspeople being tested positive for doping. The recent instance of doping involving Rio-bound Indian athletes (Shot putter Inderjit Singh and wrestler Narsingh Yadav) has shown that India is not far behind in the "Doping Games".

Doping is an age-old phenomenon in sports. In recent times, the doping menace has grown as a monster engulfing all categories of athletes in competitive sports, ranging from school kids to international Olympic champions. By definition, doping in sports implies athletes taking illegal substances to improve their performances. These illegal substances (Performance Enhancing Drugs) usually work by causing the body to build more muscles or by limiting muscle fatigue. It is therefore not permissible in the sporting arena. As a result, World Anti-Doping Agency was established in 1999 to check the menace of doping in sports. WADA is an independent international agency funded by sports organizations and associated countries. It monitors doping in sports based on the World Anti-Doping Code. At national level, we have the National Anti-Doping Agency (NADA), an independent body under the Union Ministry of Sports that monitors the issue of doping within the country.

Corresponding Author:

Dr. Vishal Dahiya

Assistant Professor, Department
of Physical Education, Hindu
College, Sonipat, Haryana, India

History of doping in sports in India

The news of Rio-bound Indian athletes (Inderjit Singh and Narsingh Yadav) being linked with the dope test failure shocked the whole nation. However, there have been various incidences in the past where Indian athletes were involved in the doping scandal. In the year 2000, discus thrower Seema Antil was stripped of her gold medal at the World Junior Championships. Further, she was issued a public warning by the national federation for testing positive for pseudoephedrine.⁶ In 2005, discus throwers Anil Kumar and Neelam Singh were handed a two-year suspension for testing positive for Norandrosteron. Anil Kumar was also disqualified from the Asian Championships and was stripped of his bronze medal. ⁷ In the year 2010, shot putter Saurabh Vij got a two-year ban for testing positive for Methylhexanamine (A banned stimulant). However, National Anti-Doping Agency (NADA) cleared him within weeks. As a result, he was allowed to take part in the 2010 Commonwealth Games.⁸ In 2011, NADA handed out a one-year ban to six women athletes (Three of them were 2010 Commonwealth Games and Asian Games 4x400m gold medalists). Mandeep Kaur, Sini Jose and Ashwini Akkunji were the members of the 4x400 relay team who tested positive. Apart from them a long jumper Harikrishnan Muralidharan (Handed one year ban by NADA) and sprinter Jauna Murmu (Handed two years doping ban by the NADA) also tested positive for doping. The nation was hit with one of the biggest doping scandals in April 2015 when 21 weightlifters were provisionally suspended by the Indian Weightlifting Federation after they tested positive for banned substances across various championships. Later that year, a thrower from Punjab Ketki Sethi was banned for eight years after she failed a dope test during the national meet in Patiala. Further, it was her second offence.

Test of Doping in Sports

The most common technique for testing doping is mass spectrometry. This method involves firing a beam of electrons at urine samples to ionize them (Turning the atoms into charged particles by adding or removing electrons). Each substance the sample contains has a unique "fingerprint". Since the scientists already know the weight of many steroids, they are able to detect doping. However, there were various defects in this system. Some by-products of doping substances were so small that they failed to produce a strong signal for detection. Blood testing is capable of detecting EPO and synthetic oxygen carriers, but not blood transfusions. Therefore a new method was introduced to aid the detection of such transfusions. The technique is called a biological passport. This technique was brought in by WADA in 2009, with an aim to reveal the effects of doping rather than detect the substance or method itself. A biological Passport is an electronic document about an athlete that contains certain markers from throughout his/ her career. If these change dramatically, it alerts the officials that the athlete might be doping. However, some scientists have questioned the passport's efficiency - especially in the cases when complicating factors such as training at altitude are factored in - but also its sensitivity to micro-dosing, a little-but-often approach to doping.

The WADA Code has prescribed International Standards for Testing and Investigations. It has also laid down detailed procedures to notify athletes, collect samples, conduct tests, and investigate a possible failure to comply with these rules. The Code has set out 10 anti-doping rule violations. Violation

of one or more of these rules can lead into an investigation.

1. Presence of a prohibited substance in an athlete's sample.
2. Use or attempted use of a prohibited substance or method.
3. Refusing to submit to sample collection after being notified.
4. Failure to file athlete whereabouts information & missed tests.
5. Tampering with any part of the doping control process.
6. Possession of a prohibited substance or method.
7. Trafficking is a prohibited substance or method.
8. Administering or attempting to administer a prohibited substance or method to an athlete.
9. Complicity in an ADRV.
10. Prohibited association with sanctioned Athlete Support Personnel.

Punishment for Doping and other legal provisions

According to WADA sanctions, punishment for doping may range from a reprimand to a lifetime ban. The period of the ban may vary depending upon the type of anti-doping violation, the circumstances of an individual's case, the substance, and the possible repetition of an anti-doping rule violation. However, the decision to strip the medal lies with the respective sports organization. Further, an athlete is also entitled for a fair hearing and appeal on any decision in regard of a positive test or sanction imposed for an anti-doping rule violation. The athlete can also request for a re-test — B sample analysis. The World Anti-Doping Agency (WADA) in 2013 has approved strict punishments for athletes found guilty of doping, increasing the ban period from two years to four years. The new code came into effect from the 1st of January 2015. WADA's new code has also increased flexibility in the punishment of athletes who were found to have mistakenly taken banned substances or who cooperate with doping investigations. Apart from that more powers have been assigned to the anti-doping authorities to punish the coaches and trainers who help athletes dope.

Side Effects of Doping

In sports where physical strength is favoured, athletes have used anabolic steroids, known for their ability to increase physical strength and muscle mass. The drugs mimic the effect of testosterone and dihydrotestosterone in the body. They were developed after Eastern Bloc countries demonstrated success in weightlifting during the 1940s. At the time they were using testosterone, which carried with it negative side effects, and anabolic steroids were developed as a solution. The drugs have been used across a wide range of sports from football and basketball to weightlifting and track and field. While not as life-threatening as the drugs used in endurance sports, anabolic steroids have negative side effects, including.

Side effects in men

- Acne.
- Impaired liver function.
- Impotency.
- Breast formation (Gynecomastia).
- Increase in oestrogen.
- Suppression of spermatogenesis: As endogenous testosterone is the major regulator of the HPG axis, the exogenous testosterone and androgen anabolic steroids exert a suppressive effect of LH and FSH, leading to a decrease in intratesticular and secreted testosterone, a

decrease in spermatogenesis and sperm production.

- Lack of libido and erectile dysfunction: This especially occurs in those men abusing aromatase androgen anabolic steroids, resulting in high oestrogen levels. Although physiological levels of oestrogens are necessary for normal sexual function, the high doses and the imbalance between testosterone and estradiol appear to be the cause of sexual dysfunction.
- Increased sex drive.
- Male pattern baldness.
- Risk of heart failure.

Side effects in women

- Hair loss.
- Male pattern baldness.
- Hypertrophy of the clitoris.
- Increased sex drive.
- Irregularities of the menstrual cycle.
- Development of masculine facial traits.
- Increased coarseness of the skin.
- Premature closure of the epiphysis.
- Deepening of the voice.

In countries where the use of these drugs is controlled, there is often a black market trade of smuggled or counterfeit drugs. The quality of these drugs may be poor and can cause health risks. In countries where anabolic steroids are strictly regulated, some have called for regulatory relief. Anabolic steroids are available over-the-counter in some countries such as Thailand and Mexico. Sports that are members of the IOC also enforce drug regulations; for example bridge.

Conclusion

The Russian Parliament has voted in favour of a bill that outlines new sanctions including prison terms for coaches found guilty of coercing athletes into doping. This has been done in the wake of recent doping instances which shocked the whole of Russia and the world. To come out of the menace of doping Russia has passed this deterrent law. Hence, now it's time for India to pass such a law which would deter the athletes and their coaches from involving themselves in such activities. Sports should be played with true sportsmanship because the goal of the Olympic Movement was to contribute in building a peaceful and better world by educating youth through sports practiced without discrimination of any kind and in the Olympic spirit. This also required mutual understanding with a spirit of friendship, solidarity and fair play. Thus, it's high time for us to remove this menace of doping from the sporting arena by passing a strict law followed by strict implementation.

References

1. Grajewski, Tadeusw. *The Building That Would Not Go Away*, Royal Agricultural Hall, UK; c1989.
2. Woodland, Les: *This Island Race*, Mousehold Press, UK; c2005.
3. Doping in Indian Sports: A brief history, *The Times of India* (Mar. 11, 2017, 11:45 am.)
4. Doping in sport: What is it and how is it being tackled? *BBC* (Mar. 11, 2017, 1:20 pm.)
5. Laure P, Thouvenin F, Lecerf T. Attitudes of coaches towards doping, *Sports Medical Physical Fitness*. 2001;41:132-136.
6. Laure P, Binsinger C, Lecerf T. General practitioners and

doping in sport: Attitudes and experience, *Br J Sports Med*. 2003;37:335-338.

7. Stengel D, Porzsolt F. Efficacy, effectiveness, and efficiency of diagnostic technology; c2006.
8. Porzsolt F, Kaplan RM. *Optimizing Health: Improving the Value of Healthcare Delivery*, Springer US; c2007. p. 217-231.
9. Lippi G, Banfi G, Franchini M, Guidi GC. New strategies for doping control. *Sport Science*. 2008;26:441-445.
10. Lippi G, Franchini M, Guidi GC. Switch off the light on cycling, and switch off the light on doping. *Sports Medical*. 2008;42:162.
11. Baron DA, Martin DM, Abol Magd S. Doping in sports and its spread to at-risk populations: an international review. *World Psychiatry*. 2007;6:54-59.
12. Hampton T. Researchers address the use of performance-enhancing drugs in no elite athletes. *JAMA*, 2006;295:607-608.
13. Buckley WE, Yesalis CE, Friedl KE. The estimated prevalence of anabolic steroids use by male adolescents. *JAMA*. 1988;260:3441-3445.