

A REVIEW AND ANALYSIS OF DOPING AND ITS RULES IN SPORT

**Driton SELMANI², Nexhibe NUHII^{1*}, Nadir AJRULI², Florim SELIMI², Shpresa MEMISHI³,
Donjeta ABAZI², Erda ALIU²**

¹Department of Pharmacy, Faculty of Medicine, University of Tetova

²Department of General Medicine, Faculty of Medicine, University of Tetova

³Faculty of Physical Education, University of Tetova

*Corresponding Author: e-mail: driton.selmani@unite.edu.mk

Abstract

Doping is a public health issue and not simply a problem inside the professional sports community. It is a complex and ancient phenomenon considering the vast variety of substances, supplied through both legal and illegal trading routes. It occurs in elite athletes but also affects amateur athletes and was generally considered as dangerous and unhealthy. Furthermore, it involves athletes' friends and relatives, medical staff, managers, chemists, biologists and pharmacists, pharmaceutical industries, clandestine laboratories and criminal organizations. Over time, doping has shown a great ability to discover and always use new substances and appropriated the new scientific discoveries. Unfortunately, new discoveries for the human health have been used in distorted way by the athletes. In fact, the athletes may be able to use gene therapy to re-engineer their bodies for better performances. Drug dependence depends on several factors: the socio-environmental context of the subject and what effects have the substance in the body. We will agree that sport is essentially under the current anti-doping campaign executed by a coordinated alliance between the World Anti-Doping Agency (WADA), law enforcement authorities, sports organizers and the media. This paper explores comprehensive description of the state of doping and its regulation in the past and nowadays.

Keywords: doping, prohibited drugs, side effects.

1. Introduction

Doping or taking substances for the purpose of enhancing sports performance has a long history. In the early era of modern sport, doping was mostly associated with professional cycling. Although some cyclists died from the intake of strong stimulants in the late nineteenth and early part of the twentieth century, sports authorities remained passive. It was not until a Danish cyclist died in 1960 during a road race at the Olympic Games in Rome that action was taken [1, 2]. The Union Cycliste Internationale (UCI) began to develop a set of rules and in 1967, the International Olympic Committee (IOC) created a 'Medical Commission' (IOC-MC) to combat the misuse of drugs in Olympic sports [3]. Nowadays doping is critical issue at International level in sport Physiology. This is not only concerned with health matter but also with the moral as well as ethical values of humanity affecting honest team spirit of sports competition. This is directly affecting sports, competitions around the world. Initially term 'doping' was restricted only with blood doping. But today the area of doping increases in such a way that the available tests become helpless for doping detection. However avoidance of doping is necessity & duty of experts by updating their knowledge in this field. Any form of practices leading to use of specific drugs with an objective to improve performance or stamina in sport can be referred as Doping. This is considering as unethical by respective organizations where such incidences are repetitively occurring either at National as well as International level. International Olympic committee declares this issue as unlawful & unethical. These committees often charges regular serious actions against such events occurred by time to time. This organization always tries extreme efforts for Doping free sports[4]. Doping is widely used by sportspersons in an attempt to improve their performance without any fear or unawareness related to their consequences or side effects. These practices not only hampers the quality of sports but it may be consider as one part as corruption in sports,

thus affecting sport spirit.[5]

Principally, drugs were prohibited because of their capacity to enhance performance. In 2004, the World Anti-Doping Agency (WADA) assumed responsibility for The List from the IOC-MC. Currently WADA have three criteria for prohibiting a drug: if it enhances sport performance; if it would be harmful to health if withheld; or if it is against the spirit of sport. Two of the three criteria are necessary to include a substance or method on The List. Decisions in 1985–1988 by the IOC-MC to prohibit glucocorticosteroids, diuretics and beta blockers were a catalyst for what have become known as Therapeutic Use Exemptions (TUE); that is, allowing athletes to administer prohibited drugs for genuine medical conditions and still compete. Such approvals are provided by authorised TUE Committees (TUEC), of which, the TUEC of the IOC, which has operated since 1992, was a pioneer.¹ Today, all International Federations and most major countries have a TUEC. The three criteria that must be met to grant a TUE are:

- the athlete would experience significant impairment to their health if the medication was withheld;
- the prohibited substance would not increase the athlete's performance other than from restoring their health to normality;
- the athlete could not use a permitted alternative.[6]

2. Aim

The aim of this study was to examine which groups of drugs used as doping in sports are prohibited, the role of the pharmacist in their use and the criteria that must be met for the use of these drugs.

3. Material and methods

This paper is a peer review scientific paper and the correlating literature was read and analysed.

4. Results

Therapeutic use of prohibited substances

Initially, this was termed permitted use of prohibited substances and abbreviated to 'permitted use'. In 1999–2001, the term 'therapeutic use' or 'TUE' was introduced gradually and the process is known as 'therapeutic use exemption' or 'TUE'. However, as expected, global recognition and acceptance of this procedure was slow.

The List was developed first to prevent drug-induced enhancement of sports performance and secondly to protect the health of athletes. It was not intended to prevent doctors from prescribing the correct medical treatment to their athlete patients. In 1985, the inclusion on the List of three new classes, diuretics, beta-blockers and systemic glucocorticosteroids, put some athletes and their doctors at a disadvantage. Their inability to administer any drugs in these three categories had the potential to result in either suboptimal treatment or aggravation of an athlete's medical condition if the drug had to be discontinued.

In 1988, in Calgary, the IOC-MC permitted an athlete to continue to take oral corticosteroids for biopsy-proven inflammatory bowel disease and compete at the Games, whilst later that year in Seoul, an athlete with biopsy-proven nephrotic syndrome was permitted to take oral furosemide. About the same time, exemptions were being granted in a several countries (including Sweden and Australia) to a few national level athletes who had presented an incontestable need to administer a prohibited substance to treat a genuine medical illness or condition. Such approvals were valid only in that country.

In 1989, a 19-year-old Australian athlete with neonatal torsion of both testes, who had been prescribed cyclic replacement T injections since puberty, sought national approval and indicated that he hoped to

compete internationally in the near future. The IOC-MC undertook studies on urine samples of the athlete's urine after T administration. There were discussions of recommending replacement T therapy, however, the proposal received little support and was dropped. In 1991, the IOC-MC established a small committee of the three members, A Ljungqvist, D Catlin and K Fitch (secretary) termed the Medication Advisory Committee (MAC) to examine the problem of TUE.

The MAC established criteria that had to be met before an athlete could be granted permission to administer a prohibited substance and compete and guidelines as to how this approval process should be managed. Criteria were:

1. the athlete would experience significant impairment of health if the prohibited medication was withheld;
2. no enhancement of performance could result from the administration of the prohibited substance as medically prescribed;
3. the athlete would not be denied the drug if he/she was not a competing athlete;
4. no available or practical alternative can be substituted; and
5. retrospective permission would not be granted.

Guidelines included the need to submit full medical details including laboratory and imaging investigations, confirmation of the necessity to administer the prohibited drug by a consultant or specialist in the appropriate medical discipline and information on the sports discipline and specific role of the athlete.[7]

Therapeutic use exemptions

The need for therapeutic use exemptions (TUEs) or the permitted use of Prohibited Substances and Prohibited Methods by athletes to treat significant medical conditions arose when several classes of drugs used commonly in medicine were prohibited in sport by the International Olympic Committee (IOC) during the 1980s. However, although the IOC Medical Commission (IOC-MC) gave qualified support for the concept to formally start at the 1992 Barcelona Olympics, the Commission's fears that athletes might abuse the mechanism resulted in minimal publicity and its non-inclusion in the Medical Code of the Olympic Movement for 8 years. TUEs would not be widely publicised until the advent of the World Anti-Doping Agency which not only approved the principles of TUEs as developed by the IOC's Medications Advisory Committee (MAC) in 1991, but also introduced the name of TUE. Several changes to the Prohibited List have resulted in TUEs being necessary for substances that were permitted 20 years ago as disclosed in a review of TUEs approved at the 11 Olympic Games that the IOC's MAC, later the TUE Committee (TUEC), has operated. The IOC and its TUEC played a pivotal role in developing the concept of TUE which is now globally accepted. [8]

Currently, the WADA website contains the International Standard for TUE, guidelines for a TUE and an application form to formally apply for a TUEs. The WADA criteria that must be met to grant a TUE are:

- 1.the athlete would experience significant health problems without taking the prohibited substance or method;
- 2.the therapeutic use of the substance would not produce significant enhancement of performance, and
- 3.there is no reasonable therapeutic alternative to the use of the otherwise prohibited substance or method.[9]

4. The role of the pharmacologists in Therapeutic Use Exemption

Therapeutic use exemption (TUE) is a process by which the permission to use a prohibited substance or method is granted where it is necessary for the treatment of a documented clinical condition.[10]

The criteria which need to be satisfied to get TUE are:

- Worsening of health if the prohibited drug or method is not used
- Appropriate therapeutic alternative is not available
- There will no additional enhancement of performance, but the medicine will restore the health to normal
- Requirement for the usage of the banned substance or method is not due to the prior use without a TUE which was prohibited at the time of use.

For many athletes, making a career in sports is not safe without the use of drugs, and it can be demonstrated best by the case of American sailor Kevin Hall. He had to lose his testicles because of cancer, and he needed testosterone injections for maintaining his health. Testosterone is an anabolic steroid because of which he had to prove many different authorities or governing bodies for TUE.[10]

5. Conclusion

People do well at sport as a result of the genetic lottery that happened to deal them a winning hand. Performance enhancement is not against the spirit of sport; it is the spirit of sport. To choose to be better is to be human. Athletes should be given this choice. Their welfare should be paramount. But taking drugs is not necessarily cheating. The legalisation of drugs in sport may be fairer and safer. Also, their medical health status should be taken into account and they should not be prohibited from sports just because of their necessity of using drugs.

References

- [1]. Dirix A, Sturbois X. The First Thirty Years of the International Olympic Committee Medical Commission. Lausanne: The International Olympic Committee, 1998.
- [2]. Beckett AH, Cowan DA. Misuse of drugs in sport. *Br J Sports Med* 1979; 12: 185– 94.
- [3]. Dirix A. Medical Guide of the IOC Medical Commission. Lausanne: International Olympic Committee 1992; 53–90.
- [4]. Teach PE: <http://www.teachpe.com/drugs/epo.php>; Downloaded on 14/12/2012
- [5]. Belson, Ken, N.F.L. Seeks Congressional Help on Drug Policy, *The New York Motilal C. Tayade et al DOPING IN SPORTS: CURRENT REVIEW Int J Cur Res Rev*, Apr 2013/ Vol 05 (07) Page 86 Times,(2009-11-04). http://www.nytimes.com/2009/11/04/sports/football/04star_caps.html?_r=1&hpw. Retrieved 2010-05-27.
- [6]. World Anti-Doping Agency. International standard for therapeutic use exemptions. www.wada-ama.org/Documents/World_Anti-Doping_Program/WADP-IS-TUE/2011/WADA_ISTUE_2011_EN.pdf [Accessed 27 March 2012].
- [7]. D. H. Catlin, K. D. Fitch, A. Ljungqvist, *Medicine and science in the fight against doping in sport*
- [8]. Kenneth D Fitch. Therapeutic use exemptions (TUEs) at the Olympic Games 1992-2012
- [9]. World Anti-Doping Agency. International Standard for Therapeutic Use Exemptions. Montreal: WADA, 2007. Accessed 29 January 2008
- [10]. Gerrard D, Pipe A. Therapeutic use exemptions. *Med Sport Sci*. 2017; 62:55–67.
- [11]. Savulescu J, Foddy B, Clayton M. Why we should allow performance enhancing drugs in sport. *Br J Sports Med*. 2004; 38:666-70.