

DOPING IN SPORTS

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Abstract

Sports are defined as activities that are based on play and can be competitive, cooperative or individual. Sport is an athletic activity involving physical exertion and it is governed by a set of rules. Sports are a crucial part of physical, mental and social development and consists group of social, physical and mental skills. "Sports has the power to change the world" (Nelson Mandela). Nowadays importance of sports is increasing in the world especially in India because physical exercise is decreased due to modern life styles. At the present time in India sports is also having high importance equal to education. Doping refers to the use of banned drugs in sports training and sports competitions by athletes. Doping is now a global problem. Doping is a major problem in sports field and negatively affects culture of sports. Athletes use drugs for improve their performance. Athletes only focusing on winning a competition, they neglect negative side of performance enhancing drugs. Drugs negatively affect social, mental and physical development. The use of prohibited substances is a form of cheating and these athletes cheat their society. Variety form of performance enhancing drugs cheaply available in markets but the government does not restrict sales of these substances. Most of the performance enhancing drugs is used for other medical purposes. Coach is a leader. The coach will assist players to prepare training schedule, provide knowledge, education, communicate effectively with athlete, and assist players to develop new skills and developing to their full potential.

Keywords: Sports, Doping, Coach.

Introduction

"Sports have the power to change the world. It has the power to unite the world in a way that little else does" (Nelson Mandela). "A human activity capable of achieving a result requiring physical exertion and/or physical skill, which by its nature and organization, is complete and is generally accepted as being a sport" (Australian sports commission, SC). Sports have great value in life and help us to grow in a life. Sports have power to inspire universe and it is a part of social and economic development in a country. Participation of sports helps to learn many positive things in life. We learn how to maintain social, mental and physical balance in life and sports have great potential to offer carrier opportunities. Sports education is an integral part of total education process. Nowadays government of India gives high importance to sports education and included sports education as a part of school curriculum. Without proper education sports does not develop and athletes are selected wrong paths to win competitions. Doping is one of the examples of that process.

Doping is a public health issue. Doping means sports persons taking illegal PEDs to increase their performance. Nowadays athletes using PEDs during training time and in competition time. "Doping is the use of any method or substances that might harm the athlete, in a guest to gain an unfair advantage over his/her fellow competitors" (IOC). "Doping is defined as the occurrence of one or more of the anti-doping rule violations set forth in Article 2.1 through Article 2.10 of the code" (WADA). WADA is the international foundation initiated by the IOC was established on November 10, 1999. Lausanne. WADA promoted, coordinated and monitor the anti doping work all over the world. National anti doping agency is the national organization. NADA adopted and implemented anti doping rules and policies from WADA and controls PEDs in India. "A great coach not only inspires but supports and encourages others to get results" (Richard Schuy). "Coaching is unlocking a person's potential to maximize their own performance. It is help to learn rather than teaching them" (John Whitmore, 2002). A Good coach does not allow to use performance enhancing drugs to increase performance.

Objectives of the Study

- To identify athlete's doping objectives
- To discuss benefits and side effects of ergogenic aids
- To discuss role of a coach in doping
- To identify aim and objectives of world anti doping agency.
- Suggestions and recommendations for promoting anti doping.

Methodology

The methodology consists of a conceptual discussion on doping and drugs using in sports. Also, this study was highlighting role of a coach in doping and objectives of WADA.

Athlete's Doping Objectives

Doping has probably the same age of sports. Nowadays athletes misuse performance enhancing substances to improve their performance capacity. It consists of medications, procedures, and devices that are intended to improve athletic sports performance. Anabolic-androgenic steroids, erythropoietin and other PEDs are widely used by sports person to increase their performance. Anti-doping foundations states that using PEDs in sports negatively affect values of fair play and team work. When an athlete use doping it would negatively affect society and family.

Physiological Objectives	Social and Psychological Objectives
Increase oxygen transports towards muscles	Poor mental health and mood changes
To build muscles	Misleading information
Reduce body fat/reduce weight	Media coverage
Reduce fatigue	Financial burdens
Faster muscle recovery	Sharpen focus and concentration
Faster recovery from injuries	Peer groups pressure
Faster recovery from injuries	Lack of education
Increase metabolism	Family demands
Relieve aches and pain	To reduce stress and anxiety

Role of a Coach in Doping

“Coaching is about performing at your best through the individual and private assistance of someone who will challenge, stimulate and guide you to keep growing” (Gerard O Donovan). “A coach is someone who can give correction without resentment” “A good coach can change a game; a great coach can change a life” (coach John Wooden). Coaches play an important role in the development of a player as excellent sportsman and sports women. Sports coaches may have a significant role in an athlete's decision to use or not use PEDs. Anti doping education is a part of coaching process. A sports coach needs to understand how the anti doping system impacts himself and his students. The world anti doping code (WADC) (WADA, 2015b) places the primary responsibility for doping with athletes and also recognize the rules and responsibilities of supporting personnel. Nowadays sports coaches must need to acquire good knowledge about PEDs. Some educated coaches do not promote use of PEDs. They find new ways to improve performance capacity of their students. Coaches are reluctant about anti doping education they think anti doping education is a time-wasting process. Small population of coaches tries to learn knowledge about PEDs and apply safely. Most of the coaches are apply doping without proper education and knowledge. They do not know how to use PEDs, dosage schedule, benefits, side effects and life span of drugs but they apply drugs for enhance sports performance of their students.

Coaches Roles and Responsibilities under the (WADC) Anti Doping Code

- Help athletes to determine the prohibited status of their medications and other substances.
- Act as resource person for athletes, parents and supports personnel.
- Understand and comply with anti doping policies.
- Become knowledgeable about anti doping topics.
- Cooperate with athlete testing programs.
- Act as an athlete representative during the sample collection process.
- Help athletes file their samples accurately and on time.
- Encourage athletes to complete the sample collection process in a timely and cooperative manner.
- Report anti doping violations to the appropriate governing body, WADA or NADA.
- To build clean sports culture.

World Anti Doping Agency

WADA works towards a vision of the world that values and fosters a doping free culture in sports. Wada's administrative office situated in Montreal (Canada). Europe, Asia/Oceania, Africa and Latin America are the four regional offices of WADA.

Aim and objectives of WADA

- Lead a comprehensive strategy to protect the rights of clean athletes
- Build and promotes anti doping programs all over the world
- Support and work with National anti doping organizations
- Publish technical and, best practices and other anti doping material and engage the clean athlete in all programs and activities.
- Work with the IOC and the IPC to enhance anti doping works and programs
- Integration of anti doping programs with government programs through education, scientific research public health and related initiatives
- Create an international frame work for education programs that instils the values of doping free sports
- Promote earlier identification of new drugs
- Research outcomes are analyzed and implemented regularly
- Maintain scientific research programs
- Lead, implement and promote international researches related to drugs and doping
- Publishing the annual list of prohibited substances and methods
- Managing laboratory accreditations, therapeutic use exemptions and the athlete biological passport
- Anti-doping activities coordinated through ADAMS
- Coordinately works with law enforcement and ADOs and share information and collect evidences
- Conduct independent observer mission at major sports events

Major Categories of Drugs banned by IOC are as follows:

- **Androgenic-Anabolic Steroids:** Androgenic anabolic steroids are chemical derivatives of testosterone. 40 types of steroid related products available in world wide. Steroids are most widely used performance enhancing drug in sports. Examples: anadrol, dianabol, anavar, deca-durabolin, masteron

Side effects

Kidney failure	Increased risk of tendinitis
Increased LDL Cholesterol level	Decreased HDL cholesterol level
Aggressive behavior	anxiety
High blood pressure	Infections
Heart diseases	Infrequent or absent periods in women
Nausea	Liver damage

- **Stimulants:** Stimulants are used in sports to improve performance capacity of an athlete. Stimulants are the second largest class after the anabolic steroids in the list of prohibited substances by WADA. Examples: Caffeine, Amphetamines, Ephedrine.

Benefits

Stimulate central nervous system	Reduces stress and depression
Reduce fatigue	Reduce body fat
Increased metabolic rate	Improves endurance
Suppress appetite	Increased attention and alertness

Side Effects

Insomnia	Hypertension
Dehydration	stroke
Heart problems	Circulatory problems

- **Diuretics:** Diuretics are not a performance enhancing drug but it acts as a masking agent. They increase the volume of urine production and promote elimination of minerals and water from kidney. Diuretics helps to lose body weight. Examples: Lasix, Dytor, Demadex

Side Effects

Muscle cramps	Hypokalemia
Tiredness	Dehydration
Weak pulse	Uric acid increased

- **Peptides:** A peptide is a short chain of two or more amino acids. Peptides acts as building blocks of proteins. Peptides are currently a banned doping gent in sports. Examples: GHRP-6, GHRP-2, IGF, Ipamorelin.

Benefits

Reduced body fat	Increased energy
Improved workout and recovery	Increased lean muscle mass
Decreased joint and muscle pain	Increased strength and stamina
Increased sex drive	Bones grow bigger and faster

Side Effects

Water retention	High blood pressure
diabetes	Increased tiredness
Abnormal growth of internal organs	Heart diseases
hypertension	liver disease

- **Beta-2 Agonists:** Most of the beta-2 agonists are banned by WADA. Beta-2 Agonists is a drug class used in endurance sports such as marathon races, cycling and swimming. Examples; *Clenbuterol*, *Albuterol*, *Formoterol*.

Benefits

Promote protein synthesis	Increase endurance
Fat reduction	Dilatation of bronchial muscles

Side Effects

Fatigue and dizziness	Allergic reaction
Shortens of breath	depression
Decreased sex drive	Muscle cramps
Heart failure	Weakening of the heart muscles

- **Blood Doping:** Blood doping is banned by IOC and other sports organizations related to sports. It is an artificial method for improving sports performance. In this method artificially increases red blood cells.

Blood Doping Methods: Blood transfusion, injections of erythropoietin, injections of synthetic oxygen carriers

Benefits

Increase aerobic capacity	No oxygen depletion
Improve the health of athletes	Decrease lactic acid formation

Side Effects

Increased viscosity of the blood	Blood clots
Risk of heart diseases	Negative mental effects
Cerebral or pulmonary embolisms	Kidney damage
Weakened immune system	vasoconstriction

- **Beta Blockers:** Beta blockers blocks the body's receptors for hormone, adrenalin. Examples: *Atenolol*, *Metoprolol*, *Acebutolol*.

Benefits

Reduce anxiety and stress	Keep the blood pressure low
Keep the heart rate low	Calming effect of beta blockers helps in high-risk sports

Side Effects

Sleep disturbances	Breathing problems
Low blood pressure and heart rate	Un usual tiredness or weakness

Suggestions and Recommendations

- Develop a coaching environment that promote a culture of personal excellence rather than win at all costs.
- Without advice from a physician athlete do not takes PEDs.
- Athletes must understand benefits and side effects of PEDs.
- A coach must understand how to apply PEDs safely.
- Coaches educate their students and parents about doping.
- Coaches and players must understand about PCT.
- Properly apply PCT after use of PEDs.
- Coaches and athletes must cooperate with WADA's policies and rules.
- Conducting more researches and tests related to PEDs.
- Support athlete in managing careless doping by helping them check their medications.
- Promote fair play and dope free performance.

Conclusion

The main reason for ban PEDs was high health risks in athletes. Use of PEDs are harmful for health. Most of the PEDs are negatively affect mental, physical and social health. Doping helps to win competitions but negatively affect future of life. Side effects of doping do not come within few days it takes longer time to affects functions of body. Athletes and coaches not aware about post cycle therapy. Proper use of PCT is important for reduce side effects and helps to maintain hormonal balance. Most of the coaches do not try to learn about doping methods. A good coach does not promote doping. He takes proper scientific and psychological methods to improve performance of their students. Some coaches promote doping. They do not care about health risks of their students and only focuses on winning a competition. WADA promoting antidoping in all over the world and promote fair play. Androgenic anabolic steroids are strongest drug available in markets Various types of AAS are available through dealers. Most of the PEDs are available illegally in markets but government still not takes any proper actions to control sales of PEDs.

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