



Doping in sports

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Abstract

In competitive sports, doping refers to the use of banned athletic performance-enhancing drugs by athletic competitors, where the term doping is widely used by organizations that regulate sporting competitions. The use of drugs to enhance performance is considered unethical by most international sports organizations, including the Committee. Historically speaking, the origins of doping in sports go back to the very creation of sport itself. From ancient usage of substances in chariot racing to more recent controversies in baseball and cycling, popular views among athletes have varied widely from country to country over the years. The general trend among authorities and sporting organizations over the past several decades has been to strictly regulate the use of drugs in sport. The reasons for the ban are mainly the health risks of performance-enhancing drugs, the equality of opportunity for athletes, and the exemplary effect of drug-free sport for the public. Anti-doping authorities state that using performance-enhancing drugs goes against the "spirit of sport".

Keywords: doping, athletic, anti-doping, international, sport

Introduction: Stimulants

Stimulants are drugs that usually act on the central nervous system to modulate mental function and behavior, increasing an individual's sense of excitement and decreasing the sensation of fatigue. In the World Anti-Doping Agency list of prohibited substances, stimulants are the second largest class after the anabolic steroids. Examples of well-known stimulants include caffeine, cocaine, amphetamine, modafinil, and ephedrine.

Benzedrine is a trade name for amphetamine. The Council of Europe says it first appeared in sport at the Berlin Olympics in 1936. It was produced in 1887 and the derivative, Benzedrine, was isolated in the U.S. in 1934 by Gordon Alles. Its perceived effects gave it the street name "speed". British troops used 72 million amphetamine tablets in the Second World War and the RAF got through so many that "Ephedrine won the Battle of Britain" according to one report. The problem was that amphetamine leads to a lack of judgments and a willingness to take risks, which in sport could lead to better performances but in fighters and bombers led to more crash landings than the RAF could tolerate. The drug was withdrawn but large stocks remained on the black market. Amphetamine was also used legally as an aid to slimming and also as a thymoleptic before being phased out by the appearance of newer agents in the 1950s.

Everton, one of the top clubs in the English football league, were champions of the 1962-63 seasons. And it was done, according to a national newspaper investigation, with the help of Benzedrine. Word spread after Everton's win that the drug had been involved. The newspaper investigated, cited where the reporter believed it had come from, and quoted the goalkeeper, Albert Dunlop, as saying:

Anabolic Steroids

Anabolic-androgenic steroids (AAS) were first isolated, identified and synthesized in the 1930s, and are now used therapeutically in medicine to induce bone growth, stimulate appetite, induce male puberty, and treat chronic wasting conditions, such as cancer and AIDS. Anabolic steroids also increase muscle mass and physical strength, and are therefore used in sports and bodybuilding to enhance strength or physique. Known side effects include harmful changes in cholesterol levels (increased lipoprotein and decreased High density lipoprotein), acne, high blood pressure, liver damage. Some of these effects can be mitigated by taking supplemental drugs.

AAS use in sports began in October 1954 when John Ziegler, a doctor who treated American athletes, went to Vienna with the American weightlifting team. There he met a Russian physician who, over "a few drinks", repeatedly asked "What are you giving your boys?" When Ziegler returned the question, the Russian said that his own athletes were being given testosterone. Returning to America, Ziegler tried low doses of testosterone on himself, on the American trainer Bob Hoffman and on two lifters, Jim Park and Yaz Kuzahara. All gained more weight and strength than any training programme would produce but there were side-effects. Ziegler sought a drug without after-effects and hit on an anabolic steroid, methandrostenolone, (Dianabol, DBOL), made in the US in 1958 by Ciba.

The results were so impressive that lifters began taking more, and steroids spread to other sports. Paul Lowe, a former running back with the San Diego Chargers American football team, told a California legislative committee on drug abuse in 1970: "We had to take them [steroids] at lunchtime. He [an official] would put them on a little saucer and prescribed them

for us to take them and if not he would suggest there might be a fine."

Olympic statistics show the weight of shot putters increased 14 percent between 1956 and 1972, whereas steeplechasers weight increased 7.6 per cent. The gold medalist pentathlete Mary Peters said: "A medical research team in the United States attempted to set up extensive research into the effects of steroids on weightlifters and throwers, only to discover that there were so few who weren't taking them that they couldn't establish any worthwhile comparisons." In 1984, Jay Silvester, a former four-time Olympian and 1972 silver medalist in the discus, who was then with the physical education department of Brigham Young University in the U.S., questioned competitors at that year's Olympics. The range of steroid use he found ranged from 10 mg a day to 100 mg.

In sports where physical strength is favored, athletes have used anabolic steroids, known for their ability to increase physical strength and muscle mass. The drug mimics 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 effects, anabolic steroids were developed as a solution. The drug has 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 estrogen
- erectile dysfunction
- increased sex drive
- male pattern baldness

Side Effects in Women

Side effects in women include:

- 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

Conclusion

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 a regulatory relief. Steroids are available over-the-counter in some countries such as Thailand and Mexico.

References

1. Verroken Baillièrè's. Clin Endocrinol Metab; 14: 1–23. cited by Higgins A. J. (2006). "From ancient Greece to modern Athens: 3000 years of doping". Journal of Veterinary Pharmacology and Therapeutics doi:10.1111/j.1365-2885.2006.00770_4.x. 2000; 29(S1):4-8.
2. Clarke. Med Leg J; 30: 180–194. cited by Higgins A. J. 2006. From ancient Greece to modern Athens: 3000 years of doping. Journal of Veterinary Pharmacology and Therapeutics doi:10.1111/j.1365-2885.2006.00770_4.x. 1962; 29(S1):4-8.
3. Barnhart. In Chambers Dictionary of Etymology. Chambers Harrap, Edinburgh, cited by Higgins A. J. 2006. From ancient Greece to modern Athens: 3000 years of doping. Journal of Veterinary Pharmacology and Therapeutics doi:10.1111/j.1365-2885.2006.00770_4.x. 2003; 29(S1):4-8..
4. Grajewski Tadeusw. The Building That Would Not Go Away, Royal Agricultural Hall, UK, 1989.
5. Woodland Les. This Island Race, Mousehold Press, UK, 2005.
6. Novich Max M, Abbotempo UK. 1964.
7. Bearings US. cited Ritchie, Andrew, Major Taylor, Bicycle Books, US, 1988, 1896.
8. New York Times US. cited McCullagh, James, American Bicycle Racing, Rodale Press. 1897.
9. Lunzenfichter Alain. Cest pas du Jeu! L'Équipe France. 2007.
10. Woodland Les. Dope, the use of drugs in Sport. UK: David and Charles. 1980; ISBN 0-7153-7894-5.
11. Goldman Robert. Ronald Klatz. Death in the locker room: drugs & sports 2nd ed. Elite Sports Medicine Publications. 1992; 24: ISBN 9780963145109.
12. Deventer K, Roels K, Delbeke FT, Van Eenoo P. Prevalence of legal and illegal stimulating agents in sports. Analytical and Bioanalytical Chemistry doi:10.1007/s00216-011-48630. PMID 21479548. 2011; 401(2):421-32.
13. Doping of athletes, a European survey, Council of Europe, FRrance, 1964.
14. Grant DNW, Air Force UK. 1944.
15. Laure P, Les représentations du dopage; approche psychosociologique, Thèse STAPS, Nancy, France, 1994.
16. Yesalis CE, Anderson WA, Buckley WE, Wright JE. Incidence of the nonmedical use of anabolic-androgenic steroids PDF. NIDA research monograph 1990; 102: 97–112. PMID 2079979.
17. Fair JD. Isometrics or Steroids? Exploring New Frontiers of Strength in the Early 1960s PDF. Journal of Sport History 1993; 20(1).
18. Michael Powers. Performance-Enhancing Drugs in Joel Houglum, in Gary L. Harrelson, Deidre Leaver-Dunn, Principles of Pharmacology for Athletic Trainers, SLACK Incorporated, https://en.wikipedia.org/wiki/Doping_in_sport, 1993-2005, ISBN 1-55642-594-5:330.