
Doping Control and the Olympics

By Bob Adams *

Natural and artificial substances have been used to improve athletic performance since ancient times. Drug testing, also known as "doping control", was begun at the 1968 Olympic Games, along with the publication of a list of banned drugs.

Doping is defined as the use of substances in any form alien to the body, or the use of physiological substances (such as blood) in abnormal amounts and with abnormal methods, with the exclusive aim of attaining an artificial and unfair increase of performance in competition. This does not include vitamins or food supplements, but only pharmaceuticals which are on the International Olympic Committee's banned list.

Many nonprescription medications contain banned substances, particularly cold tablets and decongestants. The most common are ephedrine and its derivatives, and phenylpropanolamine. Several herbal teas contain ephedra, a naturally occurring form of ephedrine.

Other common drugs which are banned include cough medicine with codeine (a narcotic), nonprescription sleeping pills, asthma medications, and cold or flu remedies.

Doping substances fall into five general categories :

1. **Psychomotor Stimulants.**

These include amphetamines and other stimulants such as cocaine and Ritalin (R).

2. **Narcotic Analgesics.**

Codeine, morphine, Demerol (R), heroin, methadone, etc.

3. **Sympathomimetic amines.**

Ephedrine and related compounds found in cold preparations, nose drops, hay fever medicines.

4. **Central nervous system stimulants.**

Strychine and related compounds.

5. **Anabolic steroids.**

In 1983 the I.O.C. added testosterone and caffeine to the banned list. This was the first time that substances were tested quantitatively rather than qualitatively. If any amount of the other medications were found, the athlete was banned. Testosterone is measured relative to the amount of epitestosterone present in most people. Caffeine is considered positive if more than 15 mg. is detected. This would require taking several hundred milligrams of caffeine tablets. *The "normal" intake of coffee, tea, chocolate, or colas are within the "safe" range.*

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He served as team physician for the U.S.A. Track and Field Team at the 1983 World Championship in Helsinki, Finland. He is a member of T.A.C. Medical Advisory Board and serves as team physician for Lake Stevens High School.

Athletes to be tested are determined before the competition by order of finish. Usually this includes the first four or more finishers and random places.

Urine testing is the method used. Properly obtained and sealed specimens are sent to labs which are accredited by the I.O.C. Labs at U.C.L.A. and in Montreal are the only such labs in the Western Hemisphere.

All athletes who qualify for the U.S. Olympic trials, the Pan-American Games, the Olympics, and other certified International events are sent a drug information kit.

Education is the most important aspect of our doping control programme. Athletes and staff must become familiar with the doping control procedures. Athletes must be aware of and conscientious about reporting to the medical staff all medications, drugs, or supplements used, either orally or by injection. They should consult informed physicians or call the U.S.O.C. hotline for information.

There are two primary reasons for instituting doping control — to *protect the health of the athletes* and to *define and eliminate unfair competition*.

In the original Olympic Games it was believed that large amounts of animal protein (meat) would enhance performance and this is still believed by some athletes today despite all the lessons learned about proper nutrition.

In ancient Egypt, the rear hooves of an Abyssinian ass, ground up, boiled in oil, and flavoured with rose petals and rose hips was the current fad. Today, in 1984, one of the large vitamin companies perpetuates the myth by advertising, "The flavour of rose hip powder, pleasing to young and old alike."

The use of stimulants by athletes of every culture has been noted throughout the modern age. *Extracts of cola nuts and the use of xanthines and alcohol were the basis of a South African drink called "DOP" and from this developed the process of "doping".*

A Dutch cyclist died after taking amphetamines at the Olympic Games in Rome in 1960. In 1967 an English cyclist died during the Tour de France, also from amphetamines. National legislation against doping was then passed in France, and in 1967 the I.O.C. created the Medical Commission to develop and supervise the antidoping programmes of the Olympic Games, which have been the models followed in International competition.

The U.S.O.C. Sports Medicine Clinic at Colorado Springs, "Hot Line" for questions regarding use of medications is toll-free (1-800-233-0393). Athletes, coaches, physicians, athletic trainers, and other persons associated with an amateur athlete's use of medications are encouraged to utilise this resource to obtain accurate information on banned substances and alternatives to their use. Available during regular working hours (Mountain Time); during evening and weekend hours, a recording machine answers calls and takes messages, and all calls are returned within 24 hours.

REFERENCES

Hanley D F. Drug and Sex testing : Regulations for International Competition. Clinics in Sports Medicine 1984; 2 : 1.