



The Olympic Games and performance-enhancing drugs

The 2012 Olympic Games ended recently in London, with a number of world records having been broken in various events. What did not receive a lot of publicity was how many athletes were disqualified for using performance-enhancing drugs before and during competition. Before the games, three athletes were suspended and charged with doping violations, namely Moroccan 1 500 m runner Amine Laalou, Belarus hammer thrower Ivan Tsikhan, and the Colombian 400 m runner Diego Palomeque, who was provisionally suspended after testing positive for testosterone.¹ Immediately after the closing ceremony, Nadzeya Ostapchuk, a Belarus shot putter, was stripped of her gold medal after she tested positive for the anabolic agent metenolone during in-competition testing.

The history of reported drug use in sport dates back to the ancient Olympians, who used extracts from natural products to enhance performance. Later, gladiators in the Roman era were doped to make their battles more vigorous and bloody for the public. The first athlete death assumed to be due to amphetamine overdose was that of the Danish cyclist, Knud Enemark Jensen, at the 1960 games in Rome.² On September 24, 1988 it was announced that the Canadian sprinter Ben Johnson, after having won the 100 m final at the Seoul games, had taken the anabolic steroid stanozolol.

The World Anti-Doping Agency (WADA) was only established in 1999, almost four decades after the death of Knud Jensen. The question to ask is: Why do athletes take performance-enhancing drugs when the risk of been found out is high?

Before I attempt to answer this question, family practitioners should be made aware of the various classes of banned performance-enhancing drugs athletes should avoid. These include:³

- Exogenous and endogenous anabolic androgenic steroids.
- Metabolites and isomers of endogenous anabolic androgenic steroids.
- Hormones and related substances increase muscle bulk and strength, and oxygen-carrying red blood cells (e.g. erythropoiesis-stimulating agents, β_2 agonists and hormone antagonists and modulators).
- Stimulants directly affect the central nervous system, increasing blood flow and heart rate.

- Diuretics decrease water retention and body weight, thereby increasing speed. Also, by increasing urine production, they deplete the concentrations of banned drugs and their metabolites, making detection more difficult.
- Narcotics and cannabinoids allow athletes to continue training for competition after serious injuries.
- Glucocorticoids possess pronounced anti-inflammatory activity and cause alterations in the connective tissue response to injuries.
- Beta blockers reduce blood pressure, heart rate, muscle tremors and anxiety.

So, why do athletes take performance-enhancing drugs? The fame, glory and financial incentives for athletes to excel have increased tremendously in recent years. For example, winning the gold medal for any South African athlete was worth R400 000, with the winning coach pocketing R100 000. There is nothing wrong with rewarding athletes for their success, but it should not become a perverse incentive. This drive to win at all costs pushes many athletes to take risks with their health by using performance-enhancing drugs.

Some athletes may take stimulants to overcome the conscious or unconscious fatigue that limits top performance. They may also use these drugs to increase their body mass and strengthen muscles, increase the oxygen-carrying capacity of the red cells, or mask previously sustained injuries.

Before governments and sporting associations put undue pressure on athletes to bring home medals, no matter what, they should ponder the negative effects of these drugs. Winning a race is glamorous, taking part is laudable, but being caught for taking performance-enhancing drugs is shameful.

Gboyega A Ogunbanjo

Editor-in-chief: *SAFPJ*

References

1. MailOnline. Moroccan, Belarusian and Colombian athletes suspended after failing drugs tests. <http://www.dailymail.co.uk/sport/olympics/article-2183573/London-2012-Olympics-Three-athletes-suspended-failed-drugs-tests.html> [accessed 17 Aug 2012].
2. Hunt TM. Drug games: the International Olympic Committee and the politics of doping, 1960 – 2008. Austin: University of Texas Press. 2011.
3. Wikipedia. List of drugs banned from the Olympics. http://en.wikipedia.org/wiki/List_of_drugs_banned_from_the_Olympics [accessed 17 Aug 2012].