

AP Millar\*

## The best method for steroid use

Drugs have been an integral part of sport in the world for two to three millennia<sup>1</sup>. There is no evidence of any slackening in the rate of increase of drug intake with the numbers of new users. The most widely used drug group in sport is that of the anabolic steroids; this has led to increased interest in these drugs resulting in increased attempts at sports law enforcement. As with all previous attempts at prevention by enforcing penalties, this system has also failed. The prohibition of alcohol in the United States, which had strong forces enforcing it, is a prime example. Currently, steroids are used by two main groups: those in sports where special regulations as well as the law of the land apply and those who use them mainly for cosmetic benefit or to increase their future potential in their chosen sphere of action/work and are only subjected to the law of the land.

The most publicised group of steroid users is that comprising of competitive athletes performing under the rules enforced by the International Olympic Committee (IOC) and its close companion, World Anti-Doping Agency (WADA). They argue that drug usage denies a level playing field. Such a playing field has never existed due to genetic variations in athletes, technological advances not being universally available and financial constraints on those without suitable support. Drugs are said to be dangerous, but there are more deaths in sport from the game than from drugs, and this does not result in any intervention by the IOC. Drugs are said to be against the spirit of sport,

but this has never been defined and from the increasing attendance at high-level sport, there is nothing to support this view in the population at large.

The anti-drug campaign totally ignores the athlete's entitlement to human rights. They allow exercise of human rights when considering alcohol but deny them for the use of steroids, a much less damaging substance.

The implementation of the rules leaves a lot to be desired. The most corrupt race in history was the 100 metres final in Seoul<sup>2</sup>. The fourth and second placegetters had tested positive for steroids in the year prior to the Games and should have been banned from the Games but the United States authorities excused them on specious grounds. The third placegetter tested positive for pseudoephedrine, a banned substance at the time; he was excused by the IOC medical commission as he was alleged to have unknowingly taken the drug in Ginseng (an over-the-counter stimulant). The first place getter was tested with tests never used before or since and was declared positive. The Seoul laboratory director told the New York Times that 20 other athletes tested positive and were cleared by the medical commission<sup>3</sup>.

The Lance Armstrong case is to be settled, but already there have been complaints about the inaccuracy of the blood tests; this has been well described by Koudinov<sup>4</sup>. When one reads of the history of 'The great Olympic swindle'<sup>5</sup>, it becomes hard to believe that all are treated equally before the law.

Clearly, one cannot have confidence in the results reported from laboratories supported by the IOC and its affiliate, WADA. As the IOC is a body that selects its own members, there is minimal hope that a dissenting voice would be appointed to its committee.

Athletes can have no confidence in receiving a 'fair-go'. There is no significant evidence that drugs properly used are dangerous. Many of the supposed dangers are less frequent than they were 30 years ago when the providers were ignorant of steroid chemistry, and dosages were excessive and long continued. There have been reports of liver cancer and heart disease allegedly due to steroid use but these have been countered by Friedl<sup>6</sup>. It is worth recalling that most of the substances banned are used on a daily basis for medical therapy.

The solution to the drug usage in this group is to abandon the present charade of fairness and honesty and have a harm reduction approach in which medical doctors care for the athlete and prescribe and monitor progress. This would give the athlete the best opportunity to use the drug if they wished and have the lowest risk profile. In the present system, there is a huge expenditure of money for what must be one of the lowest returns for the dollar. The results are swept under the carpet when it suits the authorities. There are no universal levels accepted by all authorities in the case of many drugs, particularly erythropoietin or EPO. The work of Garle et al.<sup>7</sup> showed that normal people had testosterone/epitestosterone ratios way above the limits accepted by WADA. Both, the WADA and the IOC, have supported their official testers, but there is much disagreement about the differences and hence, athletes suffer.

An important concept is that this program will restore human rights for the athlete and eliminate the present police-state approach to the problem. This will also eliminate the problem of corrupt actions by those in positions where this can be done.

The biggest problem, numerically, is in the area of those not under any specific association's control. These

\* Corresponding author  
Email: tmillar@myisp.net.au

Founder, Lewisham Sports Medicine Institute,  
Sydney, Australia

have been well described by Yesalis<sup>8</sup>, and there is nothing to suggest that this population has, in any way, decreased over time. Many of these athletes have attended educational courses which strongly emphasised the negatives and rejected the positive effects of steroids. Many of these courses were in schools and other organisations where rules were to be obeyed. Once the athlete reached the gym territory, education was based on the benefits of the drug; the lessons were frequently repeated in the gym on a personal level and were supported by the visual evidence of successful users working in the gym.

To improve the situation, it is important that the users obtain advice in a non-judgemental situation from a qualified person. Accordingly, the author set up a clinic which athletes could visit at their own volition or when referred by their own doctor. Over the course of 15 years, approximately 3500 patients attended the clinic. At initial contact, a medical history was obtained and a physical examination was performed. During this examination, estimations of body fat and lean body mass were made for reference at a follow-up discussion after the course. This was followed by a discussion on steroids, trying not to be judgemental. Many had been well indoctrinated in the gym, and questions were frequent as medical advice did not always agree with the dealer's view. It was important to exercise patience, and generally, this won the day.

During the talk, the importance of training to failure was described and it was stressed that steroids do not work if the user does not work. Nearly all were working hard in their view but with some explanation they discovered the difference. They were advised to work to failure if they wanted to grow. Diet was analysed and many had followed diets with allegedly, 40% to 70% protein, about 10% fat and the rest was carbohydrate. They were instructed to eat a high carbohydrate diet and given some written diets. They were

encouraged to have a drink with carbs and protein at the end of training, and this satisfied their desire to eat protein. All members were instructed to have a meal within one and a half hours of ending training. All were asked to have their trainer contact the unit, but only a few did so.

Discussion of the steroids was the last item on the agenda. The idea that they all do different things to the body was discarded, as was the idea that injecting a drug was a better system. The idea that small doses were useless was difficult to avoid. However, most athletes agreed to follow the prescribed routine and a small dose of an oral preparation was ordered, usually methenolone, a drug not popular with the dealers. They were given a six-week course and then asked to return for review. They were also presented with notes to aid their memory of what we had discussed. It became apparent that these notes were spread around the gym attendees and this stimulated others to attend the clinic.

At the review, any medical problems were attended to; a full review of the athlete was performed and blood was examined for high-density lipoprotein levels. Alanine transaminase (ALT) and aspartate aminotransferase levels, body fat and lean body mass were also repeated. The general impressions were favourable. The average weight gain was between 2 kg and 4 kg. Some actually lost weight, but these were athletes who were fat at the original examination and the loss of weight from fat mass exceeded the gain in lean body mass; experience showed that this was an encouraging sign for the future course. Some did not gain weight and blamed the dosage schedule, but when confronted with a creatine kinase level consistent with inactivity, they generally understood who was to blame. Some arrived with a weight gain of 5 kg to 7 kg. The ALT level was generally raised and they were obviously using some extra steroid from the gym. This led

to some heated arguments and some did not return.

The second course was discussed. All were advised to wait for six to eight weeks before starting. Injectables in small amounts were allowed. Some feared their ability to self-inject and stayed with orals. The injectables were prescribed in amounts that would last for the projected course and this left no room for sales. The same re-examination was performed at the end of the second course, and a similar approach to the previous examination was done.

There was a diminution in attendees as the course went on. Some had reached a target and did not wish to continue. Nobody had more than six courses over a two-year period. Side effects were minor. Sexual activity was heightened in some, decreased in others and unaffected in most. There were slight increases in acne activity. The main complaint was that some became angry and irritable. Ceasing the drug could eliminate these results; eventually, having shorter courses, or in some, changing the steroid was effective. This suggested that the steroid was not the cause of the problem, but could have possibly aggravated it.

Harm reduction works best with interested, non-judgemental people and would eliminate the time and money spent on policing steroids. There would be no need to have black marketers illegally importing drugs and the health of the community could be maintained.

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