

## ANABOLIC STEROIDS IN ATHLETICS (or The Rise of the Mediocrity)

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The general athletics world (as opposed to the few Americans who were 'in the know') came to hear of the possibilities of anabolic steroids about the time of the 1964 Tokyo Olympics. The story was that the drugs had first become available to the weight lifting and body building fraternity in the 1950's and that the knowledge and use had gradually spread into the athletic throwing events, as the throwers spend such a lot of their training time in weight training gyms. Because of the secrecy surrounding the use of steroids in athletics, most of my paper will be reporting on rumours and hearsay. One of the earliest rumours floating about was that a certain American hammer thrower had been taking the drugs from the late 1950's and that the shot putters and discus throwers hadn't been long in joining him. They must have been a select band, for not much information slipped through until the early 1960's. Even in Tokyo in 1964 not many of us took the stories seriously, but we began to wonder, when in 1965, world records were broken by huge amounts in three of the throwing events. This was also remarkable in that the year after an Olympics usually is a quiet time in athletics.

By 1966 the results were plain to see – several athletes at the Commonwealth Games in Jamaica were using steroids and I wrote in the *Discobolus* magazine that year; "In terms of athletic morals, it is better that we remain poor in the field events rather than that we achieve artificial results through doping. To my mind the person who uses these anabolic steroids in athletics is as despicable as the cheat who knowingly uses a light discus in competition". This made for me a lot of enemies at the time. From 1966 more and more British athletes began to "experiment" with steroids. One of the typical explanations given by an athlete confessing that he has taken drugs is that he was "just experimenting" – always against his better judgement, of course.

In the 1968 Olympics, I am sure that one of the factors involved in the magnificent performances was that the use of steroids had by then become widespread. It was rumoured that athletes in all events up to and including the 1500 metres in the American team were given steroids by their coaches. I have an impression, and it is only an impression, that up until 1968, the world women athletes and the British athletes were relatively innocent, but from then onwards this innocence began to die. Women always seem to be more sensible than men in these matters, but inevitably they are drawn into

the web because of the men who influence them.

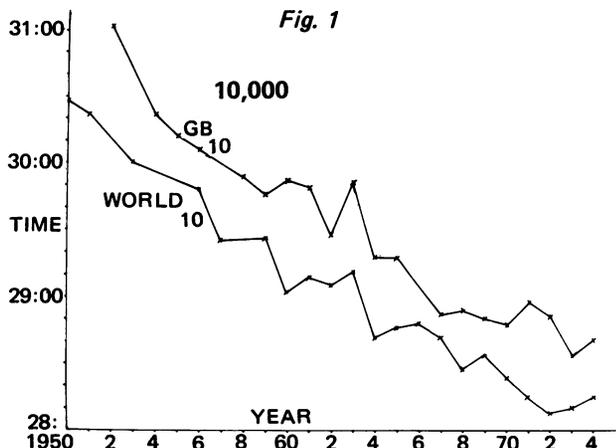
So there is a certain time scale of steroid usage, from the early days of the American body builders to the days, yet to come when a large number of British women athletes will be involved.

I had always assumed that all this information and rumour would be confirmed if one set out to analyse the world ranking lists. So I recently embarked on the huge task of gathering details of performances over the last 25 years.

The graphs shown represent the achievements of the 10th, 20th and 50th best performers in either the World or the British ranking lists in each year since 1950. I chose these particular places in the lists because they were conveniently marked in most of the publications I consulted and they do tend to eliminate the freak performances which would be distorting in averaging. Like all statistics they sometimes show beautifully what you want them to show, but, usually, they stubbornly give you a straight line when you want a curve and vice versa! In any case the effect of steroids, which is what we are looking for, is only just one of several factors which influence improvement in athletics performance. Since 1950 there have been tremendous strides in training methods, coaching, attitudes, equipment and facilities. More people are involved in sport and because of improved diets since the last war, athletes are bigger and stronger now than they were in the 1950's. So we are just going to look for trends – the changes in slopes of the lines may give us clues as to whether steroids have had an effect on the general standards or not. (Scatter diagrams would have been preferable, but joining the points with lines makes for clarity).

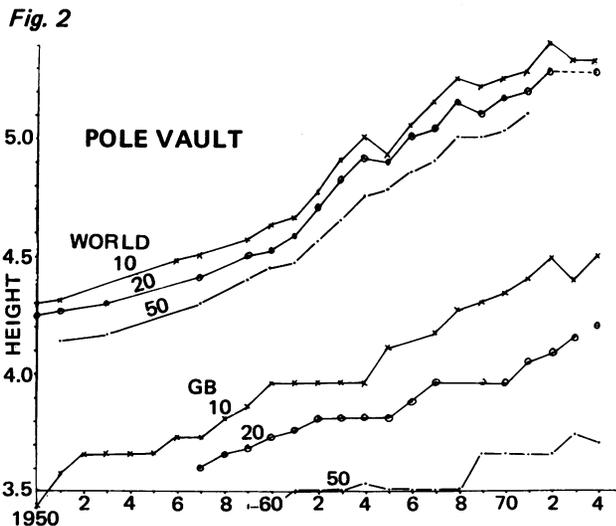
### 10,000 metres:

As most long distance runners abhor strength training anyway, not many are tempted to take steroids, and their improvement should be normal in spite of the few who are trying the so-called "blood doping". But even here there may be complications of high altitude training affecting the results. It is difficult to find any other event which we can use as a control – the 1500 metres is too often run tactically, rather than as a time trial, and from 400 metres downwards, the variations are too small and hand stop watches too inaccurate. (Fig. 1).



**Pole Vault:**

We can look at the pole vault to see whether a factor like the introduction of the fibre glass pole does show up. The glass pole came into use in the early 1960's and there is a change in slope, albeit a small one. (Fig. 2).

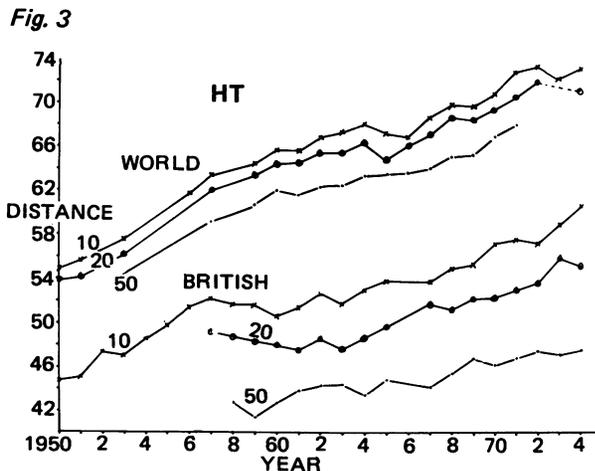


**Hammer:**

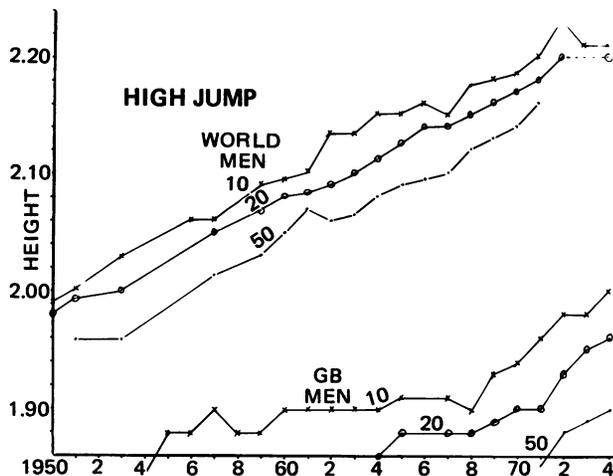
There are changes in slopes in the hammer curves, but they are difficult to interpret. (Fig. 3).

**High Jump:**

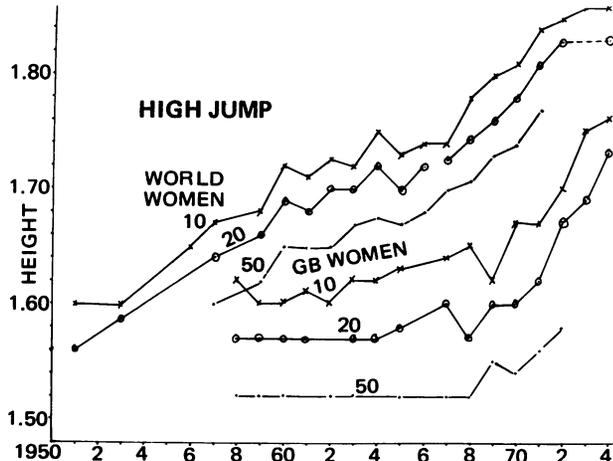
The high jump does show the effect of the Fosbury technique which was introduced in 1968. Or is it a steroid effect? (Figs. 4 and 5).



**Fig. 4**



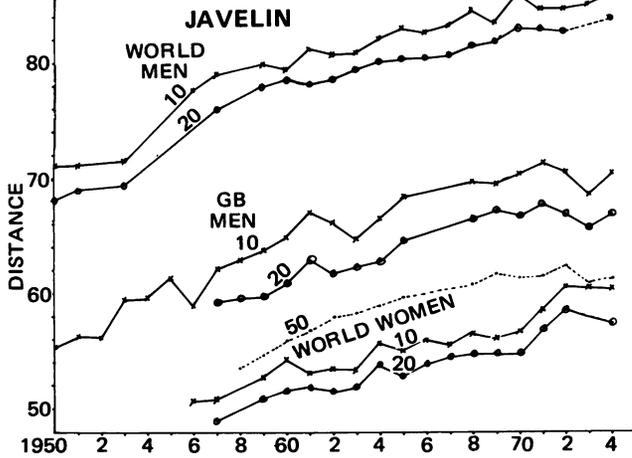
**Fig. 5**



**Javelin:**

There is not much to see here – though it is well known that many of these throwers are taking steroids. It could be that the strength gains are not being effectively incorporated into the technique, by most athletes. (Fig. 6).

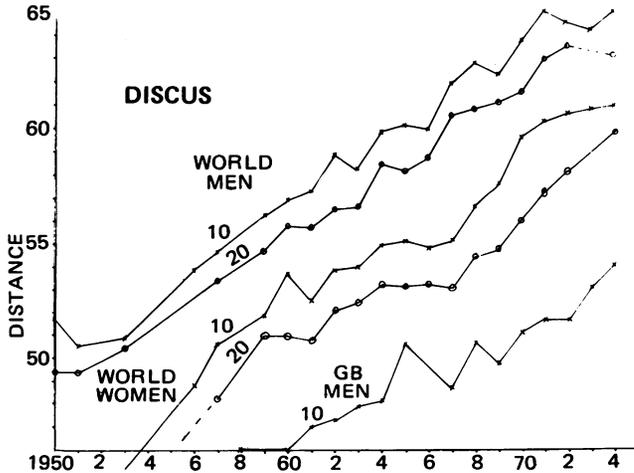
**Fig. 6**



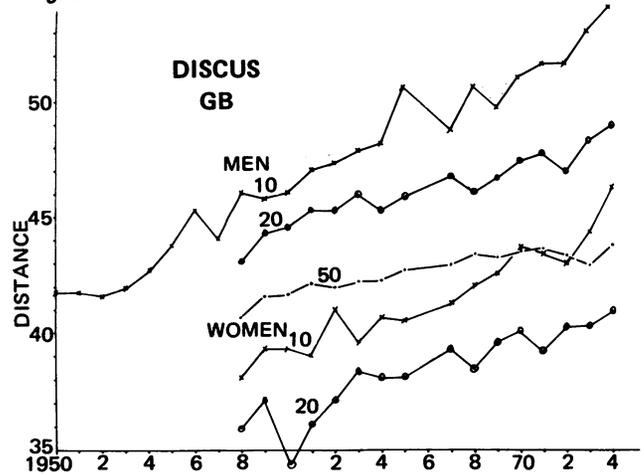
**Discus and Shot:**

There is a surprising absence of slope change in the world rankings though there is a spreading out of the lines in the case of the British throwers. (Figs. 7, 8, 9 and 10). Could it be that there are many steroid takers amongst the world's top 50, but that the tendency to drugs very rapidly dies away in the British list? The one remarkable fact which comes out of the shot, discus and javelin results is that the women have suddenly begun to

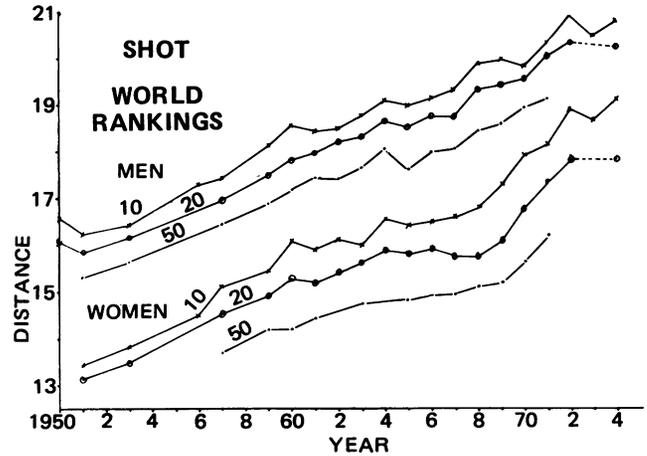
**Fig. 7**



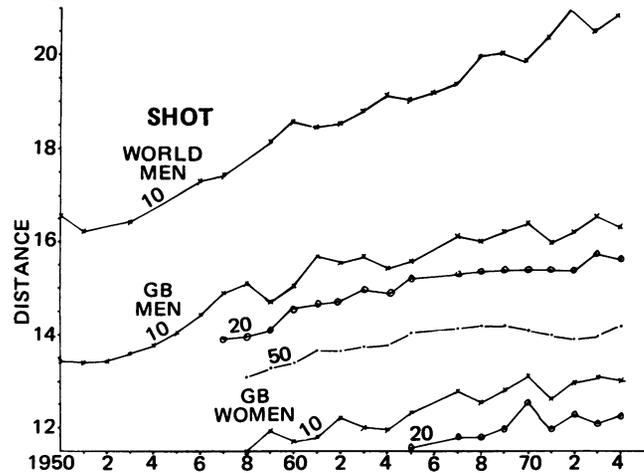
**Fig. 8**



**Fig. 9**



**Fig. 10**

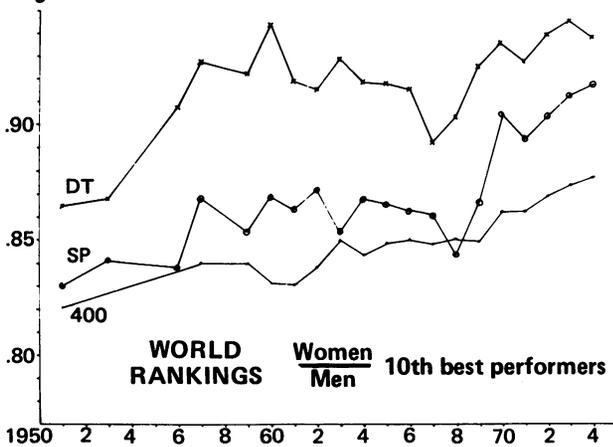


improve over the last few years. This shows up very well if the ratio of the women's to men's performances is plotted. (Figs. 11, 12 and 13). An upward movement, as is apparent from 1969 onwards, indicates that women are improving faster than men. We must now ask the question: "Are these sudden improvements due to steroids or are they due to the changing attitudes towards women's participation in the throwing events?"

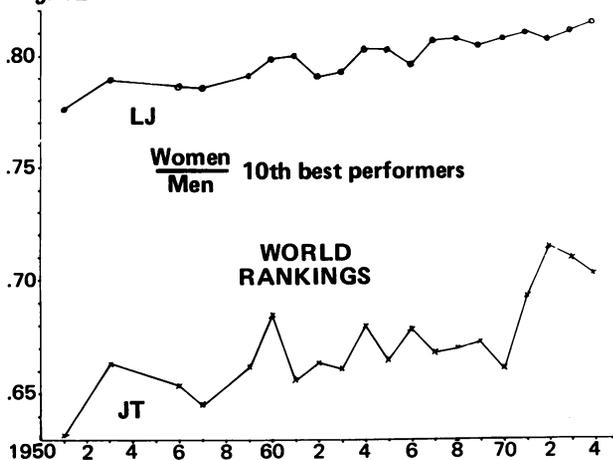
**Comparison of events:**

Is it possible to compare one event against another? I have always maintained that a simple comparison of a track event against a throwing event just does not make sense, because we are measuring two completely different quantities — a time and a distance. Projectile theory shows that the distance travelled by an implement thrown at an angle of 45° is proportional to the square of the velocity at release. The height of release and aerodynamic forces are complicating factors, but the

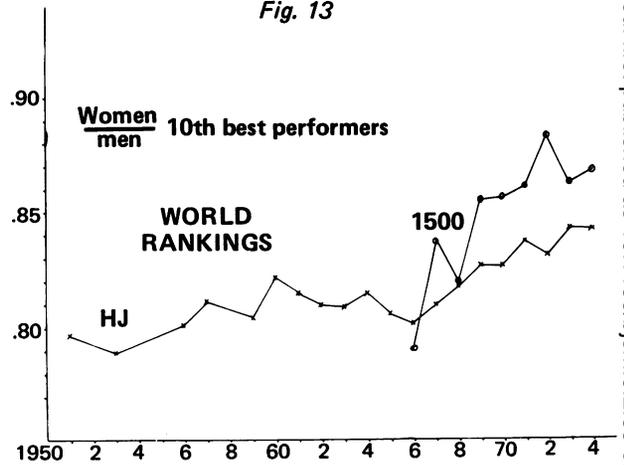
*Fig. 11*



*Fig. 12*



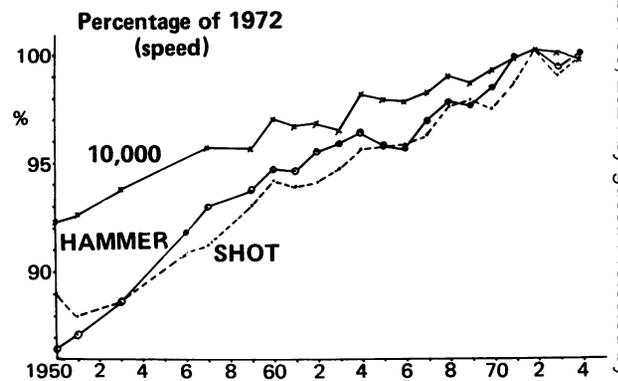
*Fig. 13*



point is, that if a runner doubles his speed, he halves his time, whereas, if a thrower doubles his speed he very nearly quadruples the distance he achieves. Thus, in order to obtain a better comparison of a throw with a run, one should really attempt to estimate the release speed of the missile and compare that with the average speed of the run. Even here we are going to have doubtful conclusions when comparing an explosive anaerobic throw with a long sustained aerobic 10,000 metres run. Bearing in mind these reservations I have tried to show the differences between the 10,000 metre running speeds and some of the release speeds in throwing. It seems that the throwing events are improving at a faster rate than the run. (Fig. 14).

In the end, of course, saturation point must be reached when all the athletes who are capable of taking steroids are taking them and have at last reached an equilibrium state. At this stage the improvement curves will level out and there will only remain the "normal" upward slope due to improvements in training methods, coaching, etc. If effective tests are forthcoming, I predict

*Fig. 14*



that we are due for a shock — the slopes will come down very rapidly in some events. However, I have to be convinced that:

i) there are really effective tests which can detect all varieties of the anabolic steroids, and which cannot be masked by the taking of other chemicals or drugs.

ii) the administration can apply these tests throughout the whole year to stop the usage in winter training (and here we have an interesting legal problem).

iii) testing research will be able to stay ahead of the athletes in forestalling the use of non-steroid anabolics. Already there is talk of the possibilities of the anti-histamine drugs like "Periactin". The rumours about this are conflicting — but then so they were when steroids were first heard of.

### **The Athletes' Point of View:**

What about the athletes themselves? I have questioned dozens of British athletes to try to discover their thinking about the use of steroids. And I must say that unless you have been a serious athlete yourself, it is difficult to understand the pressures, both internal and external, when the choice faces you. It takes a strong will indeed to go against the very drive and ambition that makes you such a competitive animal, and say: "No, I shall compete at a lower level". When I asked one of my fellow team members for his views, he reminded me about the 1967 Europa Cup Semi-final when the four throwers could muster only 6 points in total in the competition, and Britain was eliminated from the final. The British newspapers tore us to shreds — calling us "passengers" in the team. We were the best throwers in Britain and we had trained hard, only to be insulted by our Press and smashed by the other Europeans, who laughed at our innocence about the real world of athletics. Even if an athlete can ignore the pressures put on him by the public and the Press, he cannot ignore the qualifying standards set for major Games by the sport's own administrators. This is the paradox to rival all paradoxes. The administrators, who declare themselves against steroids, set the qualifying standards high, the athlete knows he can only achieve these if he goes on steroids. In the competition, too many are there, and too many qualify for the final, so the next time the administrators set the standards higher, the athlete takes an even higher dose of drugs, too many qualify, so the next time the administrators set the standards higher . . . and so the vicious spiral goes on.

Think further of the athlete on steroids — in spite of his guilty feelings he is overjoyed at the effects at first. But there are diminishing returns when increasing the dose and he begins to worry whether his opposition is on larger doses or perhaps has found an improved drug. An

element of gamesmanship has even developed in certain events, with one athlete trying to give the impression that his drugs are better and in larger quantities than his opponent's. There are, undoubtedly, psychological effects resulting from steroid taking, and the ones who benefit most from these effects are the nervous, poor competitors, who suddenly find the confidence to lift themselves out of their mediocrity. These are the ones who would not like to have to come off the drugs if effective tests are brought in. The majority of athletes I have spoken to, however, would welcome the tests if they could ensure that no drug taker in the world can escape detection. The athletes themselves, on the whole, want to come off the steroids.

Who takes steroids? I am not going to name any names, for that would solve nothing, but my enquiries have led me to conclude that no event in athletics is free of its drug takers. When I showed surprise that 10,000 metre runners were dabbling, I was told that, after all, the runner relies on his heart, and the heart is a muscle, which can be improved by steroids like any other muscle. Our athletes point the finger at the East Europeans and they are convinced that in those countries the taking of drugs by athletes is a highly organised affair in which doctors are involved and in which regular monitoring of the athletes' condition is carried out. When I said I was to present this paper at the British Association of Sport and Medicine, one athlete said: "I didn't know there was such an Association — can't they do something to help us?"

On the other hand, it is common knowledge that the dire warnings of the health hazards have been overrated. I know of one athlete who has been on steroids almost nonstop for nine years and he is a fit healthy bull, who enjoys his sex life. There are side effects, but these appear to be only minor.

### **The Ethics**

In 1968 after the Olympics I wrote a concluding paragraph in an article on steroids as follows: "Perhaps we should have emphasised the ethics of the situation, that drug taking is cheating, right from the start, instead of harping on the harmful side effects. We should have cared about our sport as a whole, rather than the damage a stupid athlete was inflicting upon himself in his greed for glory. We have lost the use of the "medical damage" argument because of improved drugs with few side effects. We should have pointed out and tried to educate people that the important thing in sport is to compete honourably, that to win at all costs is a contradiction of the meaning of sport. Now, I am afraid, it is too late". However, the years have passed since I wrote that and I have thought a great deal about the problem. I was impressed by a recent philosophical article on the nature of athletics by Mike Bull, our top pole vaulter. He

questions whether top class athletics can still be called sport, in the true sense of that word. There are so many pressures now on international athletes that even in Britain, the good loser is no longer accepted as a good sportsman.

Sport for all? I don't think that sport is for the top class athlete. There is this paradox that the top end of sport is nothing like it is lower down. Perhaps the ladder of progress goes through the clouds and enters some cuckoo land where, whatever it is we do it is something other than sport. In the narrow context of this symposium we are concerned about sport and sport should be synonymous with fair play. But there isn't fair play when some are aided by drugs. Are we to ensure that everyone has access to these drugs in order to ensure fairplay – or do we admit that the title of this symposium is a contradiction in terms?

Who is to blame for the present mess with the anabolic steroids? Don't pin all the blame on the athletes. Steroids are controlled by law and few athletes can obtain their supplies without the help of doctors. Coaches have a difficult job to do – on one hand they show their worth by the performances of the athletes they coach – but they also shoulder a tremendous responsibility in the power of the influence they have over their athletes. Our officials and administrators are grossly overworked – but should they continue to turn the blind eye?

Are the rest of us, the general public, not encouraging the athlete to cheat when we agree with the reporter who writes of that athlete's failure in an unfair competition? Or is that non-drugged loser the real "winner" after all?

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