



OLYMPICS

GENDER GAMES

The International Olympic Committee is soon expected to announce new policies on the eligibility of women with hyperandrogenism, which involves an excessive production of androgens. Guidelines have been drafted that will be applied at the Summer Olympics in London and serve as recommendations for international federations to follow. The guidelines were approved by the I.O.C.'s executive board and now must be validated by the group's juridical commission. Three experts in intersex issues were invited to share their thoughts on sex testing for athletes.

You Say You're a Woman? That Should Be Enough

By REBECCA JORDAN-YOUNG and KATRINA KARKAZIS

The International Olympic Committee's new policy governing sex verification is expected to ban women with naturally high testosterone levels, a condition known as hyperandrogenism, from women's competitions, claiming they have an unfair advantage. I.O.C. officials portray this as a reasonable compromise in a difficult situation, arguing that the rules may be imperfect, but that sports are rule-based — and that the rules should be clear.

We agree that sports need clear rules, but we also believe that the rules should be fair and as rational as possible. The new policy, if it is based on testosterone levels, is neither.

So what is a better solution?

First, at the very least, female athletes should be allowed to compete throughout any investigation. Suspending them from competition once questions are raised violates their confidentiality and imposes sanctions before relevant information has been gathered.

Second, when it comes to sex, sports authorities should acknowledge that while science can offer evidence, it cannot dictate what evidence we should use. Scientifically, there is no clear or objective way to draw a bright line between male and female.

Testosterone is one of the most slippery markers that sports authorities have come up with yet. Yes, average testosterone levels are markedly different for men and women. But levels vary widely depending on time of day, time of life, social status and — crucially — one's history of athletic training. Moreover, cellular responses range so widely that testosterone level alone is meaningless.

Testosterone is not the master molecule of athleticism. One glaring clue is that women whose tissues do not respond to testosterone at all are actually overrepresented among elite athletes.

As counterintuitive as it might seem, there is no evidence that successful athletes have higher testosterone levels than less successful ones.

Yes, doping with testosterone will most likely improve your performance by increasing muscle size, strength and endurance. But you cannot predict how well athletes will do in a competition by knowing their relative testosterone levels. There is just too much variation in how bodies make and respond to testosterone — and testosterone is but one element of an athlete's physiology.

Third, if we want a clear answer to who is eligible for women's competitions, it is time to stop pawning this fundamentally social question off onto scientists.

Sex tests are based on the notion that fair competition requires "protecting" female athletes. Protection has been the cloak that covers all manner of sex discrimination, and it is seldom, if ever, the best way to advance equality.

What are these tests protecting women from? Men infiltrating women's competitions? A century of monitoring competitions for sex fraud says no. Will superwomen crowd out other athletes? No again. Women who have been ensnared by sex-testing dragnets have often been impressive, but not out of line with other elite female athletes.

What about letting go of the idea that the ultimate goal of a fair policy is to protect the "purity" of women's competitions? If the goal is instead to group athletes so that everyone has a chance to play, to excel and — yes — to win, then sex-segregated competition is just one of many possible options, and in many cases it might not be the best one.

Rigidly protecting the principle of sex segregation sometimes undermines female athletes, as with the recent rule that women's marathon records cannot be set in races that include men; the rule could have eliminated Paula Radcliffe's best time, in 2003, which beat the record by three minutes.

Sex segregation may obscure other gender inequities in sports. Men, for example, have 40 more events in the Olympics and have longer distances and durations — with no clear rationale.

Sex segregation is probably a good idea in some sports, at some levels and at some moments. But it is time to refocus policy discussions at every level so that sex segregation is one means to achieve fairness, not the ultimate goal. Ensuring gender equity through access to opportunity is just as important.

Unlike in doping cases, women with hyperandrogenism have not cheated. There is no reason to disqualify women whose bodies produce any of the complex ingredients that add up to athleticism, be they superb vision, big lungs, flexibility, long legs or testosterone.

The obsessive focus on sex has done enough harm. María José Martínez-Patiño, whose hurdling career was derailed by sex testing, said a new policy based on testosterone levels would further the "decades-long persecution of women in sports." As she told us, "It's enough."

Rebecca Jordan-Young is an associate professor of women's, gender and sexuality studies at Barnard College, Columbia University, and the author of "Brain Storm: The Flaws in the Science of Sex Differences."

Katrina Karkazis is a senior research scholar at the Center for Biomedical Ethics at Stanford University and the author of "Fixing Sex: Intersex, Medical Authority, and Lived Experience."

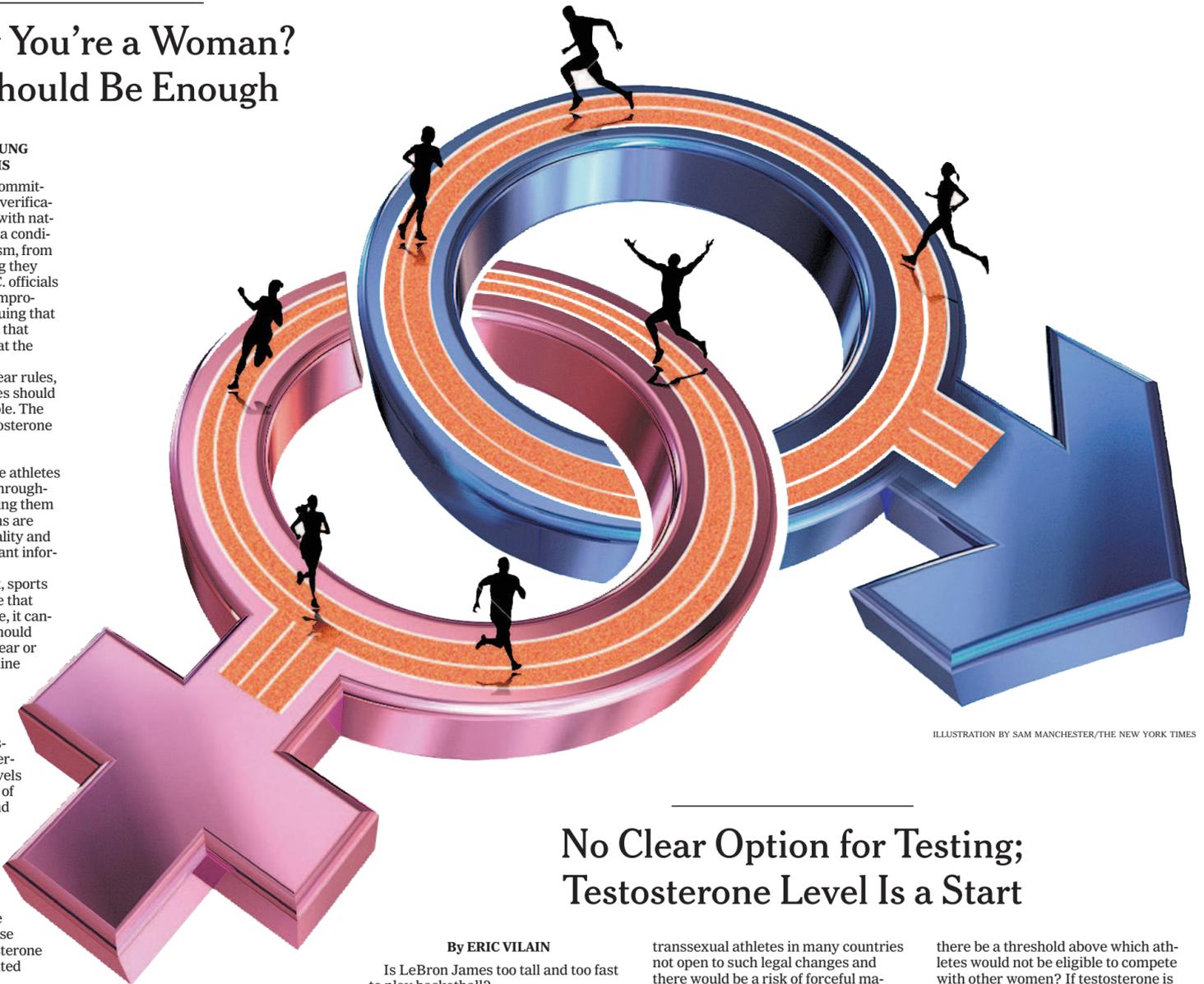


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No Clear Option for Testing; Testosterone Level Is a Start

By ERIC VILAIN

Is LeBron James too tall and too fast to play basketball?

In times of extreme political correctness infiltrating almost every societal topic, sport stands out as an oddity. It captures the passion of billions of people around the world, yet it is grotesquely unequal. There are no remedial programs for ungifted athletes.

Yet when it comes to women in sports, everyone frets about equality.

This was particularly true in the outrage over the case of Caster Semenya, the South African athlete who won the 800 meters at the world championships in Berlin in 2009 and was accused of holding an unfair advantage because she was thought to compete unjustly in a women's event. When men are more talented than others, it is an expression of the beauty of sports. But when women outcompete others, suspicions about eligibility and arguments for a level playing field often arise.

Sports officials are faced with an impossible quandary: a socially imposed sex division in sports (allowing half of the world's population to have a chance at winning) with no clear objective way to draw a line between male and female.

So what should be done?

There are what could be called the social solutions, not involving biology.

A simple possibility would be to segregate the sexes in sports. But female athletes would lose most, if not all, elite competitions. For all the brouhaha around Semenya's eligibility as a female athlete and perceived advantage, one should remember that her time in the 800 meters at the world championships — 1 minute 55.45 seconds — would not have even qualified for the men's final, in which the worst time was 1:47.80.

Another radical solution would simply be to accept the declared sex of each athlete. No other questions asked. No test. But in times of instant fame and wealth in sports, such an honor system seems unrealistic. It would allow for men to compete as women, unchallenged.

Another way would be to separate athletes by legal sex. Instead of trying to give a messy biological answer (with so many different biological parameters determining sex) to sports, why not just look at the sex written on the athlete's government-issued identification? There is some attractiveness to that solution, as it would often correspond with whether the athletes were raised as boys or girls, which might be a fair way to go. Athletes raised as girls compete as girls. This would create barriers for

transsexual athletes in many countries not open to such legal changes and there would be a risk of forceful manipulation of the legal sex in nondemocratic states.

Historically, one-size-fits-all biological tests have attempted to define sex, with one biological parameter for systematic "gender verification" of athletes, from counting the number of X chromosomes to detecting SRY, a Y chromosome gene. All were fraught with the misconception that a single set of sex chromosomes or a single gene systematically leads to one gender.

In the midst of all these extreme options, there could be pragmatic, sport-centric answers. Let's forget for a while

there be a threshold above which athletes would not be eligible to compete with other women? If testosterone is the main explanation for sex differences in sports, the logical answer should be: yes, if the level reaches the male range.

Such a threshold would be extraordinarily difficult to reach for women, and most female athletes with testosterone levels higher than normal (whether they were born with a disorder of sex development, or have developed hyperandrogenic conditions) would be eligible, therefore recognizing and including the wide variations of what could influence abilities within one sex category.

Is it a perfect parameter? Of course not. There are problems with it. The



about gender identity politics: eligibility of women in sports has long been framed as a gender issue. It should not be. Let's focus strictly on athletic performance and do a thought experiment.

What if there was one parameter that clearly provided an advantage in sports, with levels that did not overlap between men and women and could entirely explain why men did better than women in elite sports? Would this substance meet enough criteria to be a valid way of separating men and women on the field, and only on the field? And what should be the threshold for the level of this substance above which female athletes would have all the physical advantages of men and therefore would unfairly compete with other women?

The reality is that there is a pretty good candidate for such a substance: testosterone. We know that exogenous testosterone enhances performance and is therefore considered a doping substance, forbidden in all Olympic sports. We also know that there is practically no overlap between normal male and female ranges of endogenous testosterone levels.

Would levels of testosterone above the typical female range provide an athletic advantage in women? Probably. Would that be unfair? No more than other genetic traits that confer advantages to elite female athletes (height, number of red blood cells, etc.). Should

main one is that the levels of testosterone are relevant to sports performance only if the body (and the muscles in particular) is fully responsive to it. A small number of individuals have some degree of resistance to it, and what really matters is not just the raw level of testosterone but a combination of its amount and a measure of its functionality, which is not always easy to test for.

Another issue is that, unlike in our thought experiment, testosterone is not the unique explanation for sex differences in athletic performance. Others could be direct, sex-specific, genetic effects on motivation to win, aggressiveness or shape of the bones and joints. These are more complex to reliably measure than testosterone, and it is still unclear what relative proportion of sex differences these other factors will influence. But sports authorities should pursue a more complex algorithm of parameters.

From a pragmatic standpoint, the International Olympic Committee's new guidelines, which will identify functional testosterone as a key element for eligibility in women's competition, are a step in the right direction. It is certainly imperfect, but it allows women to compete with a shot at winning and it allows such a wide range of genetic and hormonal differences within the women's group that we are in for the exciting treat of watching women compete passionately with all their unjust, innate, athletic abilities that make sports so exhilarating.

Let the (genetically unfair) Games begin.

Dr. Eric Vilain is a medical geneticist and the director of the Institute of Society and Genetics at U.C.L.A. He was among the medical experts who advised the International Olympic Committee on its new policies regarding gender testing for elite athletes.



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