

Olympic gender confusion: Woman with too much testosterone required to take estrogen to compete while drug that blocks estrogen is banned

Erik Lief and Chuck Dinerstein have each weighed in with companion pieces about a highly controversial rule by the International Association of Athletics Federations (I.A.A.F.), which governs international track and field competition.

[Editor's note: This is the third in a three-part series on the complicated and fluid issue of gender and sexual identity in elite sports. Read [part one](#) and [part two](#).]

South African Caster Semenya, a two-time Olympic champion in the 800 meters has unusually high levels of testosterone for a woman. While this no doubt plays some part in her success Semenya is not accused of doping; her body just makes more testosterone, which I.A.A.F. claims gives her an unfair advantage. So much so that they have established another classification female athletes called “differences of sexual development” (DSDs). The I.A.A.F established a maximum concentration of 5 nanomoles (a little more than a milligram) per liter (nM/L) of testosterone in blood for women who compete in the 400 m, 800 m, and 1,500 m events. The normal range in women is [0.12 to 1.79 nM/L](#).

At least they're not being *too* unreasonable.

Athletes will not be required to undergo surgery to lower their hormone levels

I.A.A.F.

That leaves Semenya with three choices; not compete, compete against men, or take medication to lower her testosterone levels. It is the last of these that strikes me as rather strange. Should we be forcing athletes to take powerful medications to “correct” whatever advantage they were born with? And if so, there are certainly plenty of genetic advantages that determine size, strength, and endurance. Lung capacity is determined by both [genetic and environmental](#) factors and athletes with greater lung capacity will excel in sports like running and swimming. Michael Phelps has a lung capacity that is [twice that of a normal man](#). Clearly, this gives him a competitive advantage, but is it unfair? Is the Phelps case all that different from the Semenya case? Is Semenya being required to take medicine because it is feasible while cutting out one of Phelps' lungs is not? Where do we draw the line?

The powerful medicine that Semenya would need to take is hormone replacement therapy (HRT), which is used most commonly by women who are going through menopause and are experiencing unpleasant symptoms, such as hot flashes and also to fight osteoporosis.

There are two types of HRT—estrogen-only and estrogen plus progesterone. Estrogen plus progesterone is used in women who still have a uterus (have not undergone a hysterectomy) Semenya would be presumably taking estrogens to make herself “more female.”

Will HRT therapy for some period of time before a competition be harmful? Probably not. Young women

with [certain conditions](#) are treated with the drugs. But this would be the first time an athlete would be required to take a drug to decrease performance.

And there is a bit of irony here. Cheating is an Olympic sport in the Olympics. This led the International Olympic Committee to form the [World Anti-Doping Agency](#) (WADA) in 1999. WADA's mission is to ensure that performance-enhancing drugs stay out of sports. The agency is rather strict about what to ban or limit, for example, asthma medications, diuretics, growth hormones, decongestants, and anti-inflammatory steroids (prednisone), to name a few.

And Tamoxifen, which blocks the action of estrogen. So, in track and field, [a woman](#) with too much testosterone is required to take estrogen to compete while in the Olympics it's illegal to take another drug that blocks estrogen.

Pretty crazy, no?

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