



## Kelsey Boyle

Kelsey Boyle received her Bachelor of Science in Exercise Science with a minor in Professional Spanish from Slippery Rock University and graduated in the top 20 of her class. She played collegiate volleyball and was active in many other campus organizations. She will attend the University of Cincinnati to earn her Doctorate in Physical Therapy.

# Sexism, Women Athletes, & Testosterone Testing

Throughout the history of professional sports, especially in levels as prestigious as the Olympics, there have been countless instances where athletes' integrity has been called into question due to cheating allegations. One reason that athletes have been scrutinized in particular is due to the elevated appearance of natural hormones in their bodies. This has caused governing bodies like the International Association for Athletics Federations (IAAF) and the International Olympic Committee (IOC) to question whether or not these athletes possess an unfair advantage during competition. Although females in the realm of professional sports have traditionally been faced with judgment and criticism, recently, higher than normal levels of testosterone in female athletes have been the center of controversy, consequently sparking a debate about gender discrimination in modern sports.

It is logical that organizations like the IAAF or IOC must ensure fairness in competitions, especially due to the ease by which professional athletes can cheat. For example, many athletes today are charged with doping, which is a term for enhancing performance via banned substances like steroids or stimulants (What is Doping?). As a monitoring tool, athletes are often subjected to extensive testing to ensure they are not cheating, especially when accusations arise. These allegations are taken very seriously by these organizations and typically launch full investigations of these athletes. Although evidence suggests that agents such as anabolic-androgenic steroids, which are commonly abused by athletes, enhance athletic performance through increasing lean mass and muscle strength, a controversy still exists over the ability or lack thereof of endogenous, or naturally-occurring bodily hormones to boost performance (Huang and Basaria). This topic is especially critical for female athletes with increased testosterone levels. Hyperandrogenism, which is marked by an abnormally high level of testosterone, is a marker of many medical conditions and often linked to disorders of sexual development (DSD) (Huang and Basaria). DSDs have created a mountain of controversy in the world of professional sports, placing numerous female athletes under tremendous scrutiny from both the public eye and the governing bodies of their competitions. However, thus far, evidence fails to positively confirm or deny whether or not hyperandrogenism provides a definite advantage to female athletes. Nevertheless, it is important to note that male athletes do not face these same policies. That being said, existing rules severely penalize and restrict female athletes naturally affected by hyperandrogenism and/or similar conditions.

In 2009, Caster Semenya, a South African track and field athlete and Olympic champion encountered considerable scrutiny in the face of this controversial issue. Semenya's impressive success in her Olympic races, paired with her hyperandrogenism and masculine build, have caused the IAAF to call her into question as a female athlete, thus perpetuating a legal battle over the regulations that undermine her athletic eligibility. According to an article from the New York

Times that explores this issue, "Most women, including elite female athletes, have natural testosterone levels of .12 to 1.79 nanomoles per liter... while the normal male range after puberty is much higher, at 7.7 to 29.4 nanomoles per liter" (Longman). Semenya's endogenous testosterone levels were substantially higher than what is considered normal, consequently sparking a debate and launching a corresponding investigation through the IAAF. Semenya was outraged by these allegations, which claimed that her natural-occurring hormones gave her an unfair advantage and ultimately jeopardized her reputation as a two-time Olympic champion.

The IAAF has several policies in place in order to verify the gender of competitors. In Semenya's case, invasive tactics such as evaluations from gynecologists and endocrinologists, among others, were used to confirm that she is, in fact, a female. Extensive testing also established that an intersex condition is the cause of her hyperandrogenism (Buzuvis). The IAAF has detailed protocols in place in order to police circumstances like Semenya's. Their guidelines restrict female athletes with testosterone levels of 5 nmol/L or above or with DSD from competing (IAAF introduces new eligibility regulations for female classification). The implications of this are that athletes like Semenya are forced to choose from few undesirable options in order to continue to compete in the sport they love. The rules clearly state that female athletes with testosterone levels meeting the aforementioned criteria can "change the distance at which [they] race to beyond one mile; compete against men; enter competitions for so-called intersex athletes, if any are offered; or give up [their] eligibility to perform in the most prestigious competitions like the Olympics" (Longman). These regulations are not only unjust and excessive, but they also threaten the livelihood of Semenya and other female athletes. Semenya has courageously fought these punitive rules with accusations against that the IAAF fosters gender discrimination, commits overall injustice, and tampers with her natural bodily functions with no viable health issue. Unfortunately, Semenya's efforts to fight for the rights of athletes with DSDs have been unsuccessful (Buzuvis).<sup>1</sup>

In order to evade the discrimination linked to the current policies, the institutions should approach these controversial situations differently and search for more just and equitable solutions. First, female athletes should be permitted to compete during any pending investigation regarding their testosterone levels because there is no reason to penalize them without committing any wrongdoings. Those in charge should also acknowledge that the science behind their regulations is fuzzy at best. Every individual responds to and utilizes testosterone differently, therefore not necessarily warranting any advantage to those with elevated hormone levels. There is no solid support to prove that increased testosterone consistently shows enhanced performance in any or every athlete. Additionally, by rejecting and/or revising their protocols, the IAAF could declare their stance as anti-gender discrimination in athletics. This will help to promote equality between male and female athletes, as well as encourage body positivity and respect for the female athlete population, rather than allowing the public to openly scrutinize them for their masculine characteristics

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In May 2019, Semenya lost her challenge to the IAAF, which concluded, in part, that that all DSD athletes, who are usually born with internal testes, will have to reduce their testosterone to below five nmol/L for at least six months if they want to compete internationally all distances from 400m to a mile. As of this writing, Semenya has said that she plans to challenge this decision.

(Jordan-Young and Karkazis).

Public scrutiny and suspicion of female athletes for masculinity have unfortunately played a sizable role in athletics for years, and Caster Semenya's case is no exception. In fact, women have fought a long, arduous battle to advance to their current position, whereas their male counterparts have been relatively untouched by the issues that burden females in the realm of athletics. Even Semenya argues that "the offensive practice of intrusive surveillance and judging of women's bodies... has historically haunted women's sports" (Longman). This discrimination against women in athletics predates even the ancient Olympic games, where women were barred from attending and participating due to their distracting nature and lack of strength to compete (Buzuvis). Flash forward to the 1930s, when the IAAF and IOC went so far as to visually inspect athletes to confirm their sex and prevent "male imposters" from competing in female competitions. Then, physician confirmation, chromosomal testing, and buccal smear testing were all implemented to disqualify men attempting to compete in women's sports and women with DSDs. Although the severity of this test battery has slowed, the new outlandish policies directly affect women with DSDs and hyperandrogenism (Huang and Basaria). Although women with these conditions are continually placed under a microscope, alternatively, men with elevated levels of endogenous testosterone see no penalties when it comes to participating in competitions. Women athletes have earned considerable rights and respect through years of trials and tribulations, but unfortunately, females are still oppressed by the pervasiveness of gender discrimination, which plagues the institution of professional sports.

As a student-athlete at the university level, I believe that I harbor a unique perspective on this controversial topic. On one hand, I understand what it is like to feel cheated by an opponent and how this is a severe injustice to both competitors and the entity of competition itself. Therefore, I firmly believe that cheating should be monitored diligently to ensure clean, fair competition. Given that most athletes are extremely competitive, we desire a competition void of any dishonesty or unfair advantages, so that we can prove that we won on our own volition: through strict athleticism and a strong work ethic. The IAAF utilizes similar logic to defend their position, stating that their guidelines are "leveling the playing field to ensure fair and meaningful competition in the sport of athletics where success is determined by talent, dedication and hard work rather than other contributing factors" (IAAF introduces new eligibility regulations for female classification). They also explicitly state their intention not to discriminate against the gender or gender identity of any athlete, but rather their aim to provide fairness and equality to athletics.

Although I agree that explicit rules are integral to any sport, I disagree with the irrationality and inequity of the IAAF's guidelines. For one, I believe it is unjust to prevent an athlete from using their natural abilities to perform in competitions. Undoubtedly, some athletes possess more natural talent or athleticism than others. This is what makes them successful athletes and essentially allows them to compete at a level that others simply cannot. However, athleticism is complex and

not quantifiable as it is a delicate combination of environmental influences, sheer motivation, and genetic markers. By that token, it has been reasoned that "if you want to be an Olympic champion, then you better pick your parents very carefully... genes for growth, muscle function, and cardiopulmonary function... clearly affect athletic performance and permit exceptional function" (Jordan-Young and Karkazis). Arguably, having high endogenous testosterone is, in a sense, no different than being naturally tall or muscular. It seems petty to fault athletes with favorable genetics and/or hormones, which are entirely out of their control, especially when other athletes are abusing their privilege to compete by knowingly exploiting outside resources to cheat.

Unfortunately, there is an extensive history of scrutiny of women in sports, which stems from gender discrimination. It is clear that the current controversy is yet another instance of the overarching inequality and lack of rights that women have faced for centuries. Sports governing institutions not only complicate this, but they also continue to add to this issue. The manner in which the IAAF and IOC go about regulating testosterone levels in female athletes is invasive, discriminatory, and unreasonable. As a female athlete, I strongly reject and discourage the regulations implemented by these institutions and strive for change that permits equality between male and female athletes. Until it is proven undoubtedly that elevated endogenous testosterone levels consistently provide an advantage for each and every female athlete, it is nonsensical to bar women in sports from their livelihood and require them to make momentous, forced decisions about their athletic careers that could have serious long-term implications.

## Works Cited

- Buzuvis, Erin E. "Caster Semenya and the Myth of a Level Playing Field." Digital Commons @ American University Washington College of Law, 2010, [digitalcommons.wcl.american.edu/tma/vol6/iss2/5/?utm\\_source=digitalcommons.wcl.american.edu%2Ftma%2Fvol6%2Fiss2%2F5&utm\\_medium=PDF&utm\\_campaign=PDFCoverPages](https://digitalcommons.wcl.american.edu/tma/vol6/iss2/5/?utm_source=digitalcommons.wcl.american.edu%2Ftma%2Fvol6%2Fiss2%2F5&utm_medium=PDF&utm_campaign=PDFCoverPages).
- Huang, Grace, and Shehzad Basaria. "Do Anabolic-Androgenic Steroids Have Performance-Enhancing Effects in Female Athletes?" *Molecular and Cellular Endocrinology*, vol. 464, 2018, pp. 56–64., doi:10.1016/j.mce.2017.07.010.
- "IAAF: IAAF Introduces New Eligibility Regulations for Female Classification | News." *Iaaf.org*, 26 Apr. 2018, [www.iaaf.org/news/press-release/eligibility-regulations-for-female-classifica](http://www.iaaf.org/news/press-release/eligibility-regulations-for-female-classifica).
- Jordan-Young, Rebecca, and Katrina Karkazis. "You Say You'Re a Woman? That Should Be Enough." *New York Times*, New York Times, 17 June 2012, [www.colby.edu/chemistry/BC176/Gender.pdf](http://www.colby.edu/chemistry/BC176/Gender.pdf).
- Longman, Jeré. "Caster Semenya Will Challenge Testosterone Rule in Court." *The New York Times*, The New York Times, 18 June 2018, [www.nytimes.com/2018/06/18/sports/caster-semenya-iaaf-lawsuit.html](http://www.nytimes.com/2018/06/18/sports/caster-semenya-iaaf-lawsuit.html).
- "Prevention of Competition Manipulation." *International Olympic Committee*, 20 Dec. 2018, [www.olympic.org/prevention-competition-manipulation](http://www.olympic.org/prevention-competition-manipulation).
- Rogol, Alan D., and Lindsay Parks Pieper. "Genes, Gender, Hormones, and Doping in Sport: A Convuluted Tale." *Frontiers in Endocrinology*, vol. 8, 2017, doi:10.3389/fendo.2017.00251.
- "What Is Doping?" *What Is Doping?* | United Nations Educational, Scientific and Cultural Organization, [www.unesco.org/new/en/social-and-human-sciences/themes/anti-doping/youth-space/what-is-doping/](http://www.unesco.org/new/en/social-and-human-sciences/themes/anti-doping/youth-space/what-is-doping/).