


**Short Communication**

## Fairness in Women's Sports and #TheIOCHatesWomen

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Sports are universal. They unite us. Regardless of language or culture, people recognize and celebrate the efforts and achievements of athletes as a triumph of the human spirit. We recognize the physical, mental and social benefits of sports participation and want all to have the opportunity to participate. As clinicians to athletes and researchers of sports performance, we enjoy a special relationship with sports.

The sports medicine community has seen the dramatic increase in women's sports over the past decade. In 1971 only 7% of American high school girls and 15% of collegiate women participated in sports, by 2019 that had increased to 43% for high school girls and by 2023 to 44% for collegiate women [1,2]. Full parity for men's and women's events in the Olympics was just achieved in the 2024 Paris Games [3]. Women's sports is dramatically growing in media viewership and revenue generation [4]. But what happens when sports leadership permits integrity in women's competition to be compromised?

The accolades bestowed on sports champions are predicated on fairness in competition. Women's and girls' sports were created to provide opportunities for females to compete, win, and be honored as champions. As biological sex is the single most important determinant of athletic performance [5], females need a sex-specific category to have any hope of being victorious in the athletic arena. At any matched level of sports, many men outperform all women [5,6]. The performances of the very best female athletes are routinely beaten by mediocre male athletes. Katie Ledecky, the best female swimmer in the world with an unprecedented fourth straight Olympic gold medal in the women's 800-meter freestyle, would have her world record beaten by 26 American boys under the age of 17 [7]. Read that again and let it sink in.

Because male advantage is present in all sports that require muscle power, speed, strength, or endurance, the inclusion of male athletes in women's sports threatens the very purpose and existence of women's sports. Gender affirming hormonal treatment in trans women (males who identify as women) through testosterone suppression does not erase the male advantage in [8]. Hard stop. Recent International Olympic Committee (IOC) sponsored research [9] which suggests otherwise is fatally flawed on several levels, including the calculation of the ratio of strength and power relative to body size and fat-free body mass to (erroneously) demonstrate some parity between trans women and female athletes [10-12]. As Greg Brown and I wrote in a critique of the publication, "This type of statistical deception has no real-world application in sports. If a 5'3" 134-pound basketball guard with a higher strength to mass ratio tries to drive the lane against a 5'11" 185-pound forward, the guard is probably not going to displace the forward enough to get an easy layup" [12]. In my own sport of rowing, an elite lightweight rower may have a higher strength to mass ratio than an elite heavyweight rower, but the heavyweight rower will move the boat faster and win.

The 2024 Paris Olympics highlighted the risk to fairness and safety for females when athletes reported to have a difference in sexual development

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(DSD) with resultant male advantage were allowed to compete as women. In brief, the IOC established eligibility criteria for women's boxing in Paris to be self-identification as a woman and the presence of "woman" on the athlete's passport [13]. Two boxers who were previously disqualified by the International Boxing Association for having each failed two "gender eligibility tests" were permitted by the IOC to compete as women [14]. The tests reportedly showed each athlete to have XY karyotype, leading to the speculation that they were DSD athletes who, while observed to be female at birth due to ambiguous genitalia, had internal testes, produced testosterone in the normal male range, had male secondary sex developmental, and thus had male physiologic advantages [15]. The IOC was aware of these test results, which were performed by legitimate laboratories, well before Paris [16], yet claimed the tests were "illegitimate [17]". Both boxers went on to win every match 5-0 in their respective weight categories and were awarded Olympic gold medals in women's boxing. Given that the punching power of males is 162% greater than females [18], and with the assumption that these boxers were in fact XY DSD athletes, the IOC blatantly disregarded not only fairness for female boxers but also safety, subjecting them to the risk of serious, even life-threatening injury. The indignation on social media produced the hashtag #TheIOCHatesWomen with some viewing the IOC as endorsing "male violence against girls and women." The concerns for safety and fairness makes the presence of male athletes in girls' and women's sports an issue of paramount importance for the sports medicine community.

Pressed by this controversy, the IOC has asked for solutions to defining eligibility in women's sports. The solution has been proposed by 32 international academicians in various disciplines related to sports: "(a) recognizing that female sport that excludes all male advantage is necessary for female inclusion; (b) recognizing that exclusion from female sport should be based on the presence of any male development, rather than current testosterone levels, (c) not privileging legal "passport" sex or gender identity for inclusion into female sport; and (d) accepting that sport must have means of testing eligibility to fulfill the category purpose" [19]. I am proud to be one of these 32 who are willing to speak up about the current injustice to female athletes by the IOC, arguably the most prestigious sports organization in the world.

Testing for eligibility in the women's category should begin with sex screening using a non-invasive cheek swab or spit test to determine sex chromosomes. Screening should be repeated to ensure accuracy. Everyone should be tested to avoid discrimination based on a woman's appearance of being "more masculine" or spurious allegations regarding male sports advantage. This screening process would identify, for example, athletes who were observed to be female at birth but are XY karyotype. In this situation and others with abnormal

screening results, further testing would be performed to determine if that athlete had male sports performance advantage, and such athletes could receive necessary medical care and counseling about their condition. Throughout this process, privacy of the athlete must be safeguarded [19].

The diversity of the human race is to be celebrated. Each person on the planet is unique. Some may identify with a gender that is discordant with their biological sex. A very small percentage have a difference of sex development. All should be respected. Recognition of sex in sports is not disrespectful; it is biological reality. Human bodies compete in sports; race, ethnicity, religious affiliation, sexual orientation, and gender identity do not. The reality of sex differences between females and males must be acknowledged for fair sport. Female athletes should be respected, celebrated, and afforded the same integrity in competition that male athletes enjoy. All athletes should be welcomed to compete in sex-based categories. The IOC, along with all international, national, and local sports governing bodies, must affirm integrity in competition as their most important responsibility and thus define girls' and women's sports as female only. The sports medicine community should not be silent, and thus complicit, in the attack on fairness and safety in sports for girls and women.

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