



PROTECTING THE INTEGRITY OF WOMEN'S SPORTS

Inclusion of males in female sports violates women's and girls' fundamental right to equal opportunity in sports. Performance differences between males and females—differences that persist through any hormone treatment and that precede puberty—necessitate sex categories for the sake of fairness and safety for women and girls.

Males have overwhelming physiological strength, speed, and aerobic advantages over females

- Males have substantially more muscle than females as a share of bodyweight, with lean body mass almost 50% higher than females ([Lee et al, 2017](#)), and muscle mass advantages of 40% in the upper body and over 30% in the lower body ([Janssen et al, 2000](#)).
- Males have denser bones, stronger tendons ([Lepley et al, 2018](#)), and more favorable bone geometry ([Jantz and Jantz, 1999](#); [Brinckmann et al, 1981](#)) compared to females.
- Males have bigger lungs and hearts affording a 20-50% aerobic advantage compared to females ([Pate and Kriska, 1984](#); [Astrand et al, 1964](#); [Best et al, 2014](#); [Tong et al, 2010](#)).

These physiological differences produce dramatic performance differences: the male-female performance gap ranges from 10% to more than 50% depending on the sport ([Hilton and Lundberg, 2021](#)).

- The male-female performance difference ranges between: 10-13% for track, swimming, and rowing, 16-22% for cycling, tennis serve speed, and pole vaulting, greater than 50% for throwing speed, and 160% for punching power ([Morris et al, 2020](#)).
- Male athletes lift 30% more than female athletes in the same weight class.
- 14 and 15 year old male athletes beat the female world records in track events.

Overwhelming male advantage is present at all ages and competition levels. For example, in last year's Massachusetts High School State Track and Field Championship ([Athletic.net](#)):

- In the 100 meter dash, 153 boys clocked a faster time than the girl who won the state title.
- In the high jump, 43 boys jumped higher than the girl who won the state title.
- In the shot put, 32 boys threw farther than the girl who won the state title.
- In the long jump, 93 boys jumped farther than the girl who won the state title.
- Male performance advantages in track events ([Brown et al, 2023](#)), in limb strength ([Nuzzo, 2024](#)), and in grip strength ([Nuzzo, 2024](#)) precede puberty.
- SheWon.org counts more than 800 wins by males in women's categories in the US in the past 5 years.

Studies show testosterone suppression and cross sex hormones do not meaningfully reduce males' overwhelming physiological advantages over females.

- Testosterone suppression reduces strength advantage from male puberty by less than 10% ([Wiik et al, 2019](#)) and athletic training has been shown to further mitigate those strength losses ([Chen et al, 2019](#)).
- A meta-analysis of 12 longitudinal studies of testosterone suppression showed male muscle losses of only 5-12% ([Hilton and Lundberg, 2021](#); [Harper et al, 2021](#)) compared to an initial difference of 30-60%.
- Male running remained 12% faster than females after cross sex hormone therapy ([Roberts et al, 2021](#)).



While hormone interventions do not eliminate male advantage even after years, state bodies like the [Massachusetts Interscholastic Athletic Association](#) do not even require any hormone treatments at all for males to compete in women's sports, and the [National Collegiate Athletic Association](#) allows testosterone levels that far exceed female levels.

Advantage of males over females in key metrics, and effect of cross sex hormone therapy

Physiological metric	Male advantage over females (%)	Advantage reduced by hormone therapy (%)
Total body mass	20-40%	0-4%
Lean mass	45%	4-5%
Muscle volume/area	45%	0-4%
Strength	30-60%	0-9%
Power	33%	Unknown
Running speed	10-15%	0-10%
Hemoglobin	10-15%	11-14%

*Data taken from World Rugby (2020). Summary of Transgender Biology and Performance Research. *World Rugby Medical Guidelines and Documents: Gender*. Retrieved from [World Rugby website](#).

Polls find a strong majority of the public, including majorities of Democrats, support protecting sex segregation in female sports, including:

- A [January 2024 YouGov poll](#) found 59% of voters, including a plurality of Democrats.
- A [September 2023 poll](#) found 84% of all voters, including 75% of Democrats.
- A [May 2023 Gallup poll](#) found that 69% of voters—a seven point increase from two years prior.
- A [December 2022 Washington Post/KFF poll](#) found 66% of voters.
- A [2022 poll](#) looked by age and found a strong majority, including 60% of Gen Z and 65% of Millennials.
- A [2021 messaging guide](#) on this *could not find a single message that produced a different outcome*.

Female athletes strongly back separate sporting categories for women, but many are now afraid to speak up because of the bullying and harassment

- A [2024 study](#) of the views of world class female athletes found that 77% considered it unfair for male athletes who identify as transgender to compete in their own sport.
- A [survey of female Olympians](#), taken in the year 2000 just after sex testing was discontinued, found that 82% supported the continuation of such testing, and 94% indicated that they were not bothered by it.
- A 2024 [BBC survey of elite UK female athletes](#) found 77% would be uncomfortable or very uncomfortable with transgender athletes competing in the female category.
- There are now numerous reports of female athletes, from the [amateur level](#) in [school sports](#) to the [professional](#) and [elite levels](#), refusing to compete against male athletes.
- Opposition to males competing against female athletes is likely higher than it appears because of the [actual](#) and [threatened consequences](#) for female athletes who speak out.
- The same [BBC survey](#) finds that almost 70% of female athletes are uncomfortable or very uncomfortable speaking publicly on this issue, with that proportion being significantly higher for those expressing opposition to male athletes competing in female sports.