



# COMPETITION

Title IX, Male Athletes, and the Threat to Women's Sports

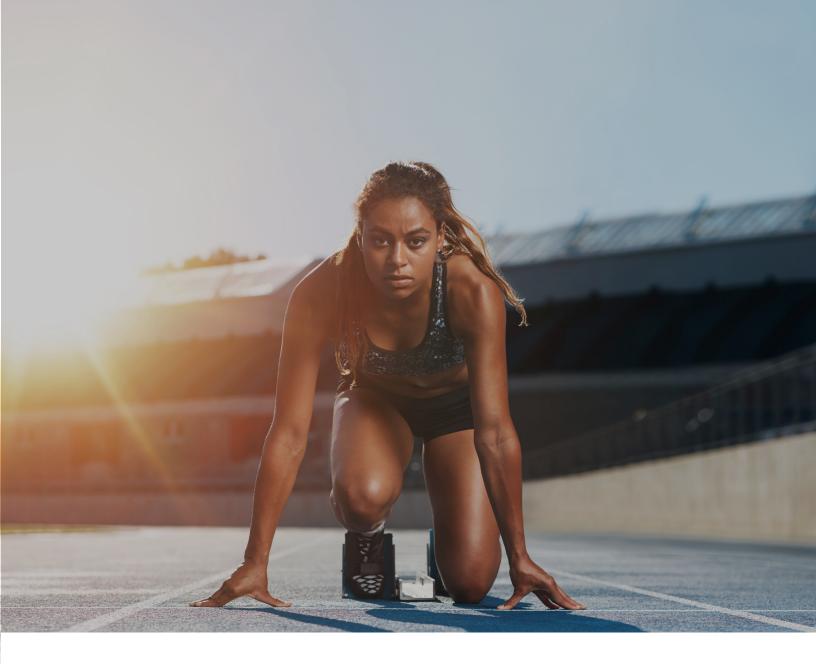
THIRD EDITION

# **İndependent**Women®

Independent Women is a nonprofit, non-partisan 501(c)(3) organization that fights for women and their loved ones by effectively expanding support for policy solutions that aren't just well-intended, but actually enhance people's freedom, opportunities, and well-being.

# IndependentWomen law center®

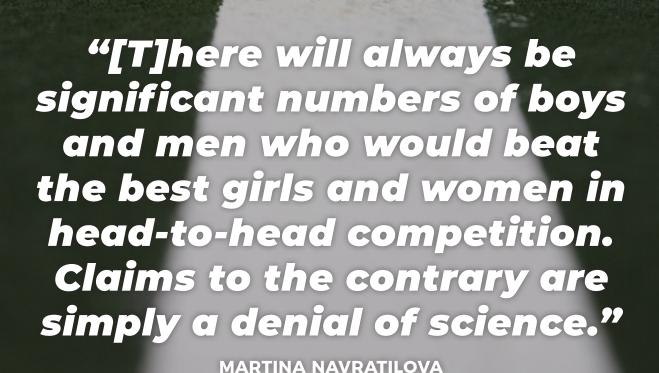
in the courts, before administrative agencies, in Congress, and in the media—for equal opportunity, individual liberty, and the continued legal relevance of biological sex.



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Winner of 18 Grand Slam Tennis Singles Titles

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# LETTER TO READERS

On September 1, 2022, I suffered permanent physical and neurological issues from injuries sustained during a high school varsity volleyball game in my junior year. A male athlete, who identified as a female, on the opposing team powerfully "spiked" the ball into my head, and I was knocked unconscious for over 30 seconds. While unconscious, my body twisted into a "fencing position," indicating extreme trauma to the brain. Later, a medical evaluation revealed that the ball's impact had caused a concussion, brain bleed, and severe head and neck injuries. I continue to suffer the long-term effects from these injuries, including vision problems, memory loss, and partial paralysis of the right side of my body.

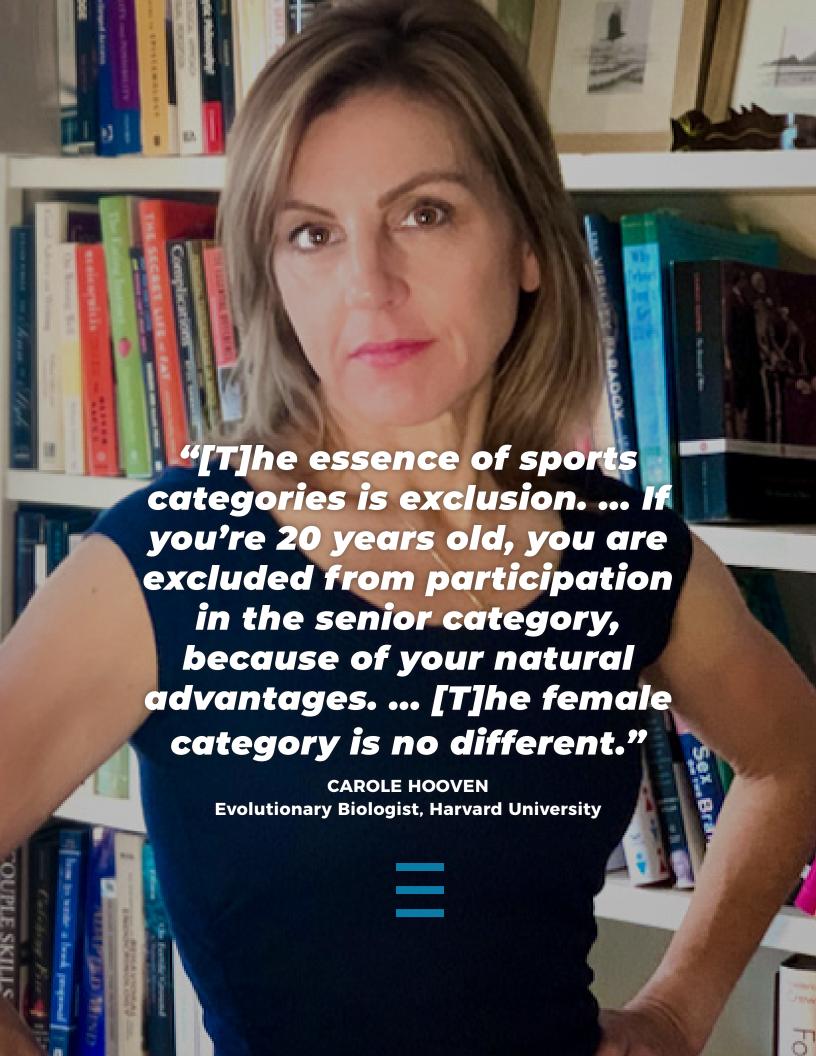
This incident ended my aspirations of playing college sports and ignited my advocacy for the protection of women's sports. In April 2023, I testified before the North Carolina General Assembly in support of the Fairness in Women's Sports Bill, sharing my personal story to highlight the risks posed by allowing trans-identified biological male athletes to compete in women's categories. Since then, I have continued to testify at both the state and federal levels to advocate for the protection of women's sports.

It is important to me to speak out against policies that compromise the safety and fairness of women's sports. Policymakers must understand this growing threat, and Independent Women offers this third edition to its first-of-its-kind report that summarizes the science, the law, and the stories of some of the females who have been forced to compete with or against biological males.

I remain steadfast in my commitment to advocating for the rights and safety of female athletes. I hope that policymakers and others who are in a position to make athletic decisions will read this report and prioritize fairness and safety for all female athletes.

#### **Payton McNabb**

Independent Women Ambassador



# **EXECUTIVE SUMMARY**

It is undisputed that the average male is bigger, faster, and stronger than the average female.\* In almost every sport, allowing males to compete on women's teams or in women's events puts female athletes at a competitive disadvantage. It is for this reason that, when it comes to competitive sports, single-sex competitions have long been the norm.

Recently, however, biological males who identify as women have been seeking access to women's sports. Lia Thomas, the University of Pennsylvania swimmer who smashed women's records as a senior after previously competing on the Penn men's team, is the most high-profile example of this trend. But there are many more.

And it is not only trans-identifying athletes who are challenging eligibility requirements for women's sports. Across the United States, high school boys increasingly are seeking spots on women's teams when the schools offer no corresponding men's team.

The harm caused by males in women's sports is significant. In head-to-head competitions, allowing biologically male athletes into the women's division can severely limit the chances of success for female athletes. On teams with limited roster spots, allowing even one biological male to participate takes a spot and playing time (and potentially a scholarship) from a female athlete. And in many sports, allowing males to compete against females increases the risk of injury to female athletes. As the number of males seeking to compete in women's sports grows, the harm to female athletes also grows. Claims to the contrary deny science, defy logic, and undermine Title IX.

<sup>\*</sup>A word about terminology: As in the first edition of this report, this edition uses the terms "male" and "female" to refer to the two main biological categories into which humans and most other living things are divided based on reproductive roles/sexual anatomy. This edition also continues to use the term "sex" to refer to the condition of being either male or female, as observed at birth. (Sex, which is biological, differs from "gender," which is cultural and relates to social expectations/norms.) We continue to use the term "gender identity" to describe the way in which a person understands and expresses himself or herself as male, female, or something else. This third edition of "Competition" uses the term "trans-identified biological male" to refer to males who identify as women.







**NEW YORK POST** 

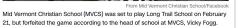
New Zealand weightlifter to become first

LOG IN

a i



Girls high school basketball team



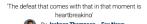


'I've dropped 17 seconds!' Trans high school runner

boasts about new PB after finishing second in girls'















### **Champlin Park wins Minnesota** softball state title behind trans pitcher's complete game shutout

Marissa Rothenberger pitched all 21 innings of the state tournament for Champlin Park

> By Amber Harding · OutKick Published June 6, 2025 3:05pm EDT



# HUFFPOST

#### Chelsea Wolfe Makes History As First Trans Athlete To Go To Olympics With Team USA

Wolfe, a BMX rider, will travel to Tokyo as a reserve for the U.S. team and will officially compete if one of the other two qualifying athletes drops out.

By Sarah Ruiz-Grossman

un 17, 2021, 02:47 PM EDT

#### The Washington Post

Girls say Connecticut's transgender athlete policy violates Title IX, file federal complaint



By Samantha Pell



55-meter dash over Andrava Yearwood, far left, and other runners in the Connecticut state indoor track championships in February. (AP Photo/Pat

😑 High School 🖫

Transgender runner repeats as

track and field champion

Washington high school (WIAA) state

East Valley of Spokane's Veronica Garcia wins 2A girls 400-meter dash again Saturday in Tacoma - amid boos

SJSU going to Mountain West volleyball final as Boise State forfeits semifinals amid trans player controversy

This is the Broncos' 3rd forfeiture to the Spartans this seasor

By Scott Thompson · Fox News



NFL NBA Soccer

High School volleyball player Payton McNabb urges ban on transgender athletes after serious injury

A female player was injured by a transgender woman.



# I. WOMEN'S SPORTS AND AMERICAN LAW

### A. Title IX

Title IX of the Education Amendments of 1972 bans sex discrimination in all federally funded education programs. It states:

No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.<sup>2</sup>

Congress enacted Title IX to end unjust discrimination in education.<sup>3</sup> Although the statute originally made no mention of athletics, in 1974, Congress passed an amendment proposed by Senator Jacob Javits of New York that directed the Department of Health, Education, and Welfare to issue regulations "which shall include with respect to intercollegiate athletic activities reasonable provisions considering the nature of particular sports."<sup>4</sup>

**Title IX's athletic regulations**, promulgated pursuant to the Javits Amendment, were intended to expand athletic opportunities for women and girls.<sup>5</sup> These

regulations state that schools "may operate or sponsor separate teams for members of each sex where selection for such teams is based upon competitive skill." For non-contact sports, the regulations allow schools to offer sex-specific athletic teams, so long as the sport is offered to both sexes. For contact sports, schools may offer a single-sex team without offering a team for the opposite sex, so long as they provide "equal athletic opportunit[ies]

Congress enacted Title IX to expand opportunities for women and girls. Under the statute, schools may operate single-sex teams, so long as they offer equal athletic opportunities for both males and females.

for members of both sexes." In other words, educational institutions may operate single-sex sports, 10 but the opportunities for females and males to compete athletically must be equal.

The National Collegiate Athletic Association (NCAA) and the various governing bodies for each sport (*i.e.*, USA Swimming, USRowing, etc.) are not technically covered by Title IX<sup>11</sup> because they are not "education program[s] or activit[ies] receiving Federal financial assistance."<sup>12</sup>

The colleges and universities that offer athletic programs as members of the NCAA, however, are covered by Title IX<sup>13</sup> and must comply with the statute and its dictates irrespective of the policies of individual athletic associations.<sup>14</sup>

## B. Women's Progress in Sports

Prior to the passage of Title IX, fewer than 5% of female students participated in high school sports; by 2025, that number had grown to approximately 43%.<sup>15</sup>

At the college level, fewer than 30,000 women participated in college sports during the 1971–1972 school year. <sup>16</sup> During the 2023-2024 school year, 236,315 women played college sports. <sup>17</sup> That same school year, women made up approximately 43% of college athletes in NCAA sports. <sup>18</sup>



The female share of athletic scholarships has also increased dramatically during this time. In 1972, almost no such scholarships existed. By 2022, women received 45% of athletic scholarship dollars.<sup>19</sup>

Since the passage of Title IX, there has also been a steady increase in female participation in the **Olympic Games**. In 1972, there were 84 women and 316 men in the U.S. delegation to the Summer Olympics in Munich, Germany.<sup>20</sup> At the 2016 Rio Games, there were 291 women

and 263 men in the U.S. delegation.<sup>21</sup> At the Paris 2024 Olympic Games, there were 323 women and 287 men in the U.S. delegation.<sup>22</sup>

None of this progress in women's sports would have been possible without a binary approach to athletics that takes into account the average differences in the athletic performance of males and females and offers separate, sex-specific athletic divisions.

# II. THE THREAT

Challenges to single-sex athletic competition fall into three primary categories: (a) policies that allow biologically male athletes who identify as women to participate in women's sports; (b) policies that allow *any* male athlete to participate on women's teams that lack a male counterpart (usually field hockey or volleyball); and (c) efforts to eliminate sex-specific sports altogether.

## A. Trans-Identified Biological Males in Women's Sports

### **Athletic Associations**

- In 2025, 21 **state high school athletic associations** allowed athletes to compete according to their gender identity *without restriction*, <sup>23</sup> meaning without surgery or any hormone therapy. Under such policies, the only requirement for participation on women's teams designated for women or girls is self-identification as a woman or girl. <sup>24</sup> 28 states have passed laws, and one state instituted a policy, protecting female sports by limiting women's and girls' sports to biological females. <sup>25</sup> See Section V(B), *infra*.
- Prior to 2025, the National Collegiate Athletic Association (NCAA) allowed biological males who identify as women to participate in women's sports if they (1) complete a year or more of

The explosion of women's sports increase in female athletes since the 1970s was made possible by the creation of separate teams for females.

testosterone suppression; and (2) meet sport-specific testosterone levels twice annually—at the beginning of their competition season and again six months later—for one year.<sup>26</sup>

On February 6, 2025, the NCAA updated its participation policy for transidentified student athletes following the Trump administration's executive order "Keeping Men out of Women's Sports." The new policy limits competition in women's sports to student-athletes who are biologically female. The policy permits student-athletes who are biologically male to practice with women's teams.<sup>27</sup>

- In November 2022, the **International Olympic Committee (IOC)** handed over eligibility determinations to the governing bodies of each sport, urging sporting agencies to consider ten guiding principles in setting criteria to compete in single-sex events.<sup>28</sup> The IOC places "inclusion" first on that list, above "prevention of harm" and "fairness," which rank second and fourth, respectively.<sup>29</sup> The new recommendations discourage any sporting agency from requiring medical transition prior to allowing athletes to compete in the female category.<sup>30</sup>
- Most **sport-specific governing bodies** either: (1) have no official position or requirements for trans-identifying athletes; (2) require documentation of "sincerely held" gender identity; or (3) make participation of biological males in women's events and teams contingent upon testosterone reduction.<sup>31</sup> For example, in February 2023, USA Swimming issued a policy requiring transidentified biological males to lower their testosterone levels to 5 nmol/L or less for a period of at least thirty-six (36) months.<sup>32</sup> Note that the normal 95% reference range for healthy menstruating women under 40 years of age is 0 to 1.7 nanomoles per liter.<sup>33</sup> **See Section III(D)**, *infra*.

U.S. Golf Association implemented a new gender policy on December 4, 2024.<sup>34</sup> To be eligible for women's events or women's teams, athletes must be biologically female, or have transitioned to female prior to male puberty or before age 12. The Ladies Professional Golf Association implemented a new gender policy as of January 1, 2025.<sup>35</sup> To be eligible for competition, athletes must be biologically female or have transitioned to female prior to male puberty.

### Federal Rules: Title IX and Its Implementing Regulations

In June 2022, the Biden administration attempted to rewrite Title IX to broaden the definition of sex discrimination to include discrimination on the basis of gender identity.<sup>36</sup> The rewrite required schools to allow participation in educational programs and athletics according to the student's gender identity, not biological sex, limiting athletic opportunities for females.<sup>37</sup>

The attempted rewrite was an example of gross administrative overreach [See Text Box 1] and, in fact, a complete misapplication of Supreme Court precedent.[See Text Box 2]

The Biden administration's Title IX rule faced significant legal opposition from over half of U.S. states. 26 Republican-led states filed multiple lawsuits, arguing that the rule unlawfully reinterpreted "sex" discrimination to include gender identity, conflicting with state laws and infringing on constitutional rights. Several federal



judges issued preliminary injunctions blocking the enforcement of the Title IX rule in all 26 states, citing concerns over the rule's legality and its potential overreach.

In August 2024, the Supreme Court declined to lift the preliminary injunctions issued by the lower courts. The Court's 5-4 decision left these injunctions in place, preventing the Department of Education from enforcing the rule in those 26 states while legal challenges continued.

On January 9, 2025, a federal judge in Kentucky ruled that the 2024 Title IX rule was unlawful, stating that the Department of Education had overstepped its statutory authority by redefining "sex" discrimination to include gender identity. The judge vacated the rule, effectively nullifying its provisions. The ruling applied nationwide, holding that the Department of Education exceeded its authority and that the regulations were "arbitrary and capricious." The court opined, "When Title IX is viewed in its entirety, it is abundantly clear that discrimination on the basis of sex means discrimination on the basis of being male and female. As this Court and others have explained, expanding the meaning of 'on the basis of sex' to include 'gender identity' turns Title IX on its head." The court opined is a province of the basis of sex' to include 'gender identity' turns Title IX on its head."

#### **TEXT BOX 1**



# A NOTE ABOUT ADMINISTRATIVE RULE-MAKING

Our Constitution is clear: only the people's representatives—not unelected bureaucrats—have the authority to make law.<sup>39</sup> The Department of Education's June 2022 rule usurped that power by rewriting Title IX to include new categories (including "gender identity") that were not mentioned in the original statute, something the agency has no authority to do.40 Indeed, the very same month that the Biden administration was rewriting Title IX by administrative fiat, the Supreme Court issued a ruling in an unrelated case, reiterating the importance of the constitutional separation of powers, and holding that executive agencies may not adopt regulations that go beyond the scope of the statutes written by

Congress. West Virginia v. Environmental Protection Agency, 142 S. Ct. 2587, 2608-10 (2022). The Court emphasized that in "extraordinary cases" of "economic and political significance," and particularly when the agency uses "unheralded" or new authority, the agency must be able to point to a clear authorization from Congress for its actions. Id. at 2608.

With respect to the issue of federal antidiscrimination laws, Congress has many times considered expanding civil rights protections to include protections for "gender identity." And each time, such proposals have failed.<sup>41</sup> The June 2022 rules, therefore, were an unlawful attempt to accomplish through the back door that which Congress has not authorized. While the Supreme Court did not issue a final judgment on the merits of the Biden rule, its decisions to uphold lower court injunctions and the subsequent federal district court ruling halted the implementation of the rule.

### **Title IX Under President Trump**

President Donald Trump's executive order titled "Defending Women From Gender Ideology Extremism and Restoring Biological Truth to the Federal Government," signed on January 20, 2025, has significantly impacted the interpretation and enforcement of Title IX.42 The order mandates that "sex" be understood solely as an individual's immutable biological classification—male or female-determined at conception. It explicitly excludes "gender identity" from federal policy considerations. It directs agencies to enforce policies that maintain single-sex spaces, such as locker rooms, based strictly on biological sex.

On February 5, 2025, President Trump signed the "Keeping Men Out of Women's Sports" executive order.<sup>43</sup> This directive mandates that federal agencies interpret Title IX as prohibiting trans-identified biological males from participating in female sports. The order threatens to rescind federal funding from educational programs that allow such participation and directs the Department of Education to enforce this interpretation.

#### **TEXT BOX 2**

# A NOTE ABOUT BOSTOCK



The Biden administration claimed that its new rules were compelled by the Supreme Court's 2020 ruling in Bostock v. Clayton County. 44 Bostock held that Title VII of the Civil Rights Act of 1964 prohibits workplace discrimination against gay and trans-identified employees. That case is simply not applicable to school sports.

To begin with, the Bostock Court did not equate "sex" and "gender identity." Rather, it explicitly proceeded on the assumption that, as used in Title VII, the term "sex" refers to the biological state of being either male or female.45 The Court nevertheless found that an employer that fires a male employee for presenting as a woman but who would not have fired a similarly-situated female employee from presenting the same way has discriminated "because of sex."46 That is because the employer fired an employee "for traits or actions it would not have questioned in members of a different sex."47 The Court emphasized that "[a]n individual employee's sex is not relevant to the selection, evaluation, or compensation of employees."48

When it comes to athletics, however, the two sexes are not "similarly situated."<sup>49</sup> In fact, **sex is not only relevant with respect to athletics, it is often dispositive**.<sup>50</sup> The Supreme Court in Bostock was, therefore, careful to emphasize that Bostock concerned only Title VII (employment law) and not other statutes.<sup>51</sup>

# B. Male Participation on Women's Teams without a Male Counterpart

Across the U.S., many schools offer field hockey, volleyball, or other sports for females only. Significantly, many schools initially created such programs to increase opportunities for female athletes in order to comply with Title IX.<sup>52</sup>

And yet, some states have compelled the inclusion of male athletes on these teams. For example, the Supreme Judicial Court of Massachusetts has held that the state's equal rights amendment prohibits schools from banning boys from girls' teams where the school offers no male counterpart.<sup>53</sup> As a result, and despite protest from parent groups,<sup>54</sup> Massachusetts today requires that public schools allow boys to play on girls' teams where the school does not offer that sport for boys. This policy applies even though such teams traditionally have limited rosters and need to cut students after tryouts.<sup>55</sup> In other words, males are allowed to play even where their participation means that female athletes get cut from the team or lose playing time.

## C. Efforts to Eliminate Single-Sex Sports Altogether

Some activists argue for the elimination of sex-specific sports altogether,<sup>56</sup> claiming that allowing males and females to compete in separate divisions reinforces harmful stereotypes about male and female abilities and perpetuates the supposedly pernicious presumption that sex is binary.<sup>57</sup>

Writing in The Washington Post in April 2021, for example, **Professor Elizabeth Sharrow** of the University of Massachusetts Amherst argues that single-sex athletic teams are a form of segregation that damages women and girls.<sup>58</sup> For some gender activists, therefore, trans-inclusion is not a goal in and of itself: It is a vehicle for abolishing single-sex sports.

The goal of complete sex integration in sport could very well become the law of the land if the United States adopts the proposed **Equal Rights Amendment** (**ERA**) to the Constitution. Although the ERA makes no mention of sports, its language is sufficiently broad that courts might well interpret it as prohibiting the separation of the sexes in most contexts,<sup>59</sup> including athletics.<sup>60</sup>

# III.THE DATA

On average, male bodies have about a 10% athletic advantage over female bodies.<sup>61</sup> This male-female athletic gap is not simply the result of unequal opportunity, socialization, or lack of funding for women's sports.<sup>62</sup> Rather, the difference is almost entirely the result of biology.63

## A. Physiological Differences Between Males and Females

Physiological differences between females and males begin in utero, 64 becoming vastly more pronounced during puberty. Below are just some of the many differences that contribute to the male athletic advantage:

#### Men have:

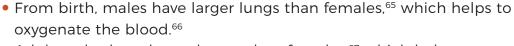


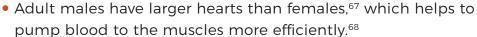






larger lungs





- Adult males have, on average, a 12% higher level of circulating hemoglobin than females,69 which helps to transport oxygen in the blood.<sup>70</sup>
- As a result, adult males typically have better aerobic capacity than females.71



more bone mass

### **Bones/Skeletal Structure**

- Grown males are, on average, 4.5 inches taller<sup>72</sup> and have longer, larger, and denser skeletal structures<sup>73</sup> than grown females.
- Grown males tend to have greater bone mass, even after taking body size into account.74
- In some parts of the body, males have different bone geometry than females.75
- As a result, male and female bodies have different biomechanics. with the female body "set up to produce less force in running, jumping and throwing."76



muscle mass





### Muscle Mass, Muscle Strength, and Fat Distribution

 Grown males have approximately 36% greater muscle mass than grown females (with about 40% more muscle mass in the upper body, and 33% more muscle mass in the lower body).77

- Grown males have a larger portion of fast-twitch muscle mass than females, "which allows them to generate greater force, speed, and anaerobically produced energy" than females.<sup>78</sup>
- Grown males have less fat (and a different distribution of body fat) than grown females.<sup>79</sup>
- Even in males and females with similar body mass, male muscles are stronger than female muscles (both absolutely and relative to lean body mass).80

## **B.** The Male Athletic Advantage

How do physiological differences between the sexes impact athletic performance? When it comes to sport-specific actions, such as tackling or throwing, the physiological differences between males and females combine in ways that are "likely synergistic" and in ways that "widely surpass[] the sum of individual magnitudes of advantage in isolated fitness variables."81

Male puberty confers a significant, and lasting, athletic advantage that cannot be erased by testosterone suppression.

Although much of the male-female athletic gap does not emerge until around age 12,82 male bodies nevertheless carry some athletic advantages over female bodies even in early childhood. For example, in one 2012 study of

physical fitness differences between prepubescent boys and girls, boys performed better in tests of aerobic fitness, strength, speed, and agility, while girls performed better in tests of balance and flexibility.<sup>83</sup> Some studies also indicate significant sex differences in throwing ability from an early age.<sup>84</sup> Other studies indicate that boys have an advantage over girls in running, jumping, and aerobic capacity even before the age of 10.<sup>85</sup>

Irrespective of the debate surrounding any childhood athletic gap, the science is consistent and irrefutable that the 20-fold boost in testosterone that occurs during male puberty<sup>86</sup> creates a significant, and lasting, athletic advantage for males. Because most American boys begin puberty between ages 9 and 14,<sup>87</sup> the male-female athletic gap is significant by age 15.<sup>88</sup>

This advantage is particularly prominent with respect to activities where speed, size, power, strength, or cardiorespiratory/anthropometric characteristics are determinative of performance.<sup>89</sup> Males may also have an advantage in sports where



Males **jump** approximately **25% higher** than females



Males **throw** about **25% further** than females



Males **run** approximately **11% faster** than females



Males accelerate around 20% faster than females



Males punch 30–162% harder than females



Males are around 30% stronger than females of equivalent stature and mass

aggressive behavior and risktaking influence performance, as these behaviors are more common in individuals exposed to higher levels of testosterone.<sup>90</sup>

With regard to specific skills, studies indicate that post-pubescent males can *jump* (25%) higher than females,<sup>91</sup> *throw* (25%) further than females,<sup>92</sup> *run* (11%)<sup>93</sup> faster than females, and *accelerate* (20%)<sup>94</sup> faster than females.

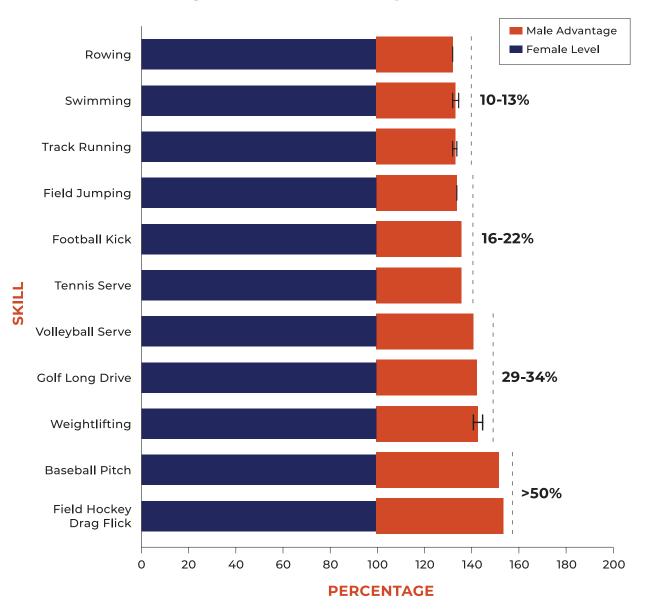
Perhaps the largest performance gap is seen in the area of strength. Some studies show that males are able to *lift* 30% more than females of equivalent stature and mass.95 Males can also **punch** significantly harder than females. Andrew Langford, a performance scientist and strength and conditioning coach, estimates that males can punch with 30% greater force than females.96 But at least one study has found that "even with roughly uniform levels of fitness, the males' average power during a

punching motion was 162% greater than females', with the least-powerful man still stronger than the most powerful woman." Studies also suggest that even *untrained* males are stronger than athletically trained females. 98

In addition to these significant performance gaps, studies indicate that males are much less prone to sports-related injuries than females.<sup>99</sup> All of these physiological

gaps contribute to significant gaps across specific athletic activities. For example, British biologist Emma Hilton and Swedish researcher Tommy Lundberg reviewed performance gaps in a variety of specific athletic activities and found disparities of *more than 50*% in activities such as a baseball pitch or a field hockey drag flick, where upper body effort plays a significant role.<sup>100</sup>

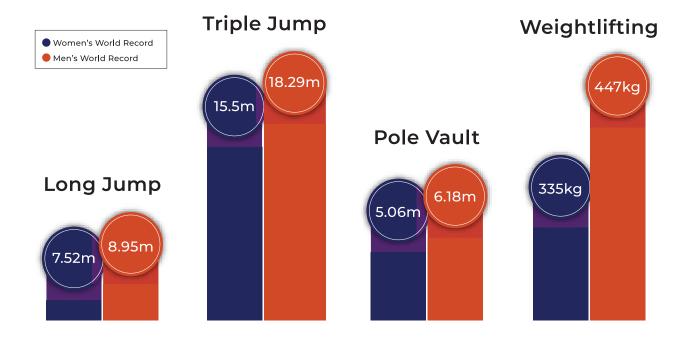
## Male Advantage for Particular Sport-Related Skills



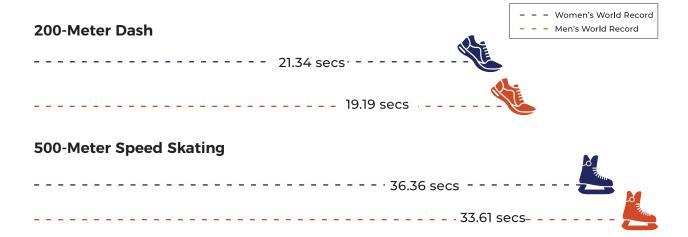
Source: Emma N. Hilton and Tommy R. Lundberg, "Transgender Women in the Female Category of Sport: Perspectives on Testosterone Suppression and Performance Advantage." *Sports Med.*, Dec. 8, 2020, Vol. 51:199, 202-03. <a href="https://link.springer.com/article/10.1007/s40279-020-01389-3">https://link.springer.com/article/10.1007/s40279-020-01389-3</a> (data demonstrating the male performance advantage over females in selected sporting disciplines with the female level set to 100%).

### C. Differences in Men's and Women's Athletic Performance

Performance gaps are evident not just with respect to specific athletic skills, but also with respect to overall athletic performance at all levels of athletic competition.<sup>101</sup> Not surprisingly, then, we see significant disparities in men's and women's **world records** across events. To take just one example, the gap between men's and women's world-record times in running is 9-10% at every distance up to the marathon.<sup>102</sup>



### Men's and Women's World Records





Even the most talented female athletes would have an extremely difficult time beating the top male athletes in their sport. For example,

- Allyson Felix is the most decorated U.S. track and field athlete in Olympic history. She has competed in five Olympic Games, winning 11 medals (one more than Carl Lewis). Seven of her medals are gold. And, yet, Felix's best 400-meter speed (49.26 seconds) almost four seconds slower than Usain Bolt's personal best (45.28 seconds) and more than six seconds slower than Wayde van Niekerk's world record (43.03 seconds).
- Florence Griffith Joyner ("Flo-Jo") died in 1998.<sup>107</sup> But she still holds the women's world record in both the 100-meter (10.49 seconds) and 200-meter (21.34 seconds).<sup>108</sup> Compare this to Usain Bolt's 100-meter world record of 9.58 seconds.<sup>109</sup> Bolt also holds the men's world record for the 200-meter race, which he ran in 19.19 seconds<sup>110</sup>—2.15 seconds faster than Flo-Jo.
- At the 2020 Tokyo Olympics (held in 2021), American **Sydney McLaughlin** broke the women's world record in the 400-meter hurdles with a time of 51.46 seconds; **Karsten Warholm** of Norway broke the men's world record in the same event with a time of 45.94 seconds.<sup>111</sup>
- Great Britain's **Bethany Shriever** won a gold medal in women's BMX racing in Tokyo with a time of 44.538 seconds.<sup>112</sup> The winner of the men's event in Tokyo, **Niek Kimmann** of the Netherlands, finished with a time of 39.053 seconds.<sup>113</sup>
- Swimmer **Lydia Jacoby** earned a gold medal in the 100-meter breaststroke in Tokyo with an impressive time of 1 minute and 4.95 seconds.<sup>114</sup> Meanwhile, **Adam Peaty**, the men's 100-meter breaststroke gold medal winner in Tokyo, finished with a time of 57.37 seconds.<sup>115</sup>







PHOTO BY IAN MACNICOL VIA GETTY IMAGES





PHOTO BY CLIVE ROSE VIA GETTY IMAGES

PHOTO BY MADDIE MEYER VIA GETTY IMAGES

 Even among athletes who are basically the same size, sex matters significantly. As Duke Law Professor Doriane Lambelet Coleman explains, Olympic swimmers Missy Franklin and Ryan Lochte are both about the same height (6'2") and have approximately the same wingspan (6'4"). And yet Franklin's record in the 200-meter backstroke is 2:04.06, while Lochte's world record is 1:53.94—a full nine seconds faster. Writes Professor Coleman.

If Franklin had been in [Lochte's] race, at her best she would have been about half a lap behind Lochte when he finished ... Franklin would not have had a world record; she would not have been on the podium; in fact, she would not have made the team. In those circumstances, we might not even know her name.<sup>116</sup>

But it is not just the top male athletes who can beat the world's best females:

• Tennis player **Serena Williams** is widely regarded as one of the greatest athletes of all time. Yet, in 1998, Karsten Brassch, the 203rd-ranked men's player, beat both Serena and her sister Venus in back-to-back sets.<sup>117</sup> Serena later recounted that Andy Murray—a two-time Olympic gold medalist and highly ranked male tennis player<sup>118</sup>—had been "joking" about playing her in a match, but she declined. 119 Serena explained:



PHOTO BY AELTC/JED LEICESTER - POOL VIA GETTY IMAGES PHOTO BY OLIVER HARDT/AFP VIA GETTY IMAGES

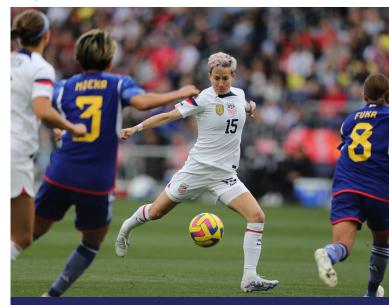


For me, mens' tennis and womens' tennis are completely, almost, two separate sports. If I were to play Andy Murray, I would lose 6-0, 6-0 in five to six minutes, maybe 10 minutes. ... It's a completely different sport. The men are a lot faster and they serve harder, they hit harder, it's just a different game. I love to play women's tennis. I only want to play girls, because I don't want to be embarrassed. ... So Andy, stop it. I'm not going to let you kill me.<sup>120</sup>

- At the 2022 FINA World Championships, all eight men in the final of the 1500-meter freestyle swam faster than the female gold medalist.<sup>121</sup> The man who came in first place at this competition swam the race in 14:32.80—nearly one minute faster than the women's champion.<sup>122</sup>
- In 2019, high school student **Matthew Boling** ran the 100-meter race in just 9.98 seconds<sup>123</sup>—0.51 seconds faster than Flo-Jo's world record. In 2021, two high school students, **Connor Washington and Jose Garcia,** ran the same distance in just 10.00 seconds—0.49 seconds faster than Flo-Jo's world record.<sup>124</sup>

In many events, males outperform the best female athletes thousands of times a year. <sup>125</sup> For example, Coleman and Shreve found that, in 2017 alone, men and boys around the world beat the best women's time in the 400-meter dash more than 15,000 times. <sup>126</sup> The professors put it simply: Men and boys beating the world's best female athletes "is far from the exception. It's the rule." <sup>127</sup>

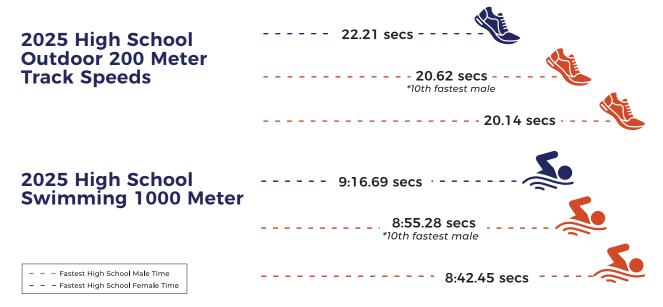
Because of the significant male athletic advantage, it is common for elite women's teams to prepare for competition by scrimmaging younger boys' teams. For example, in 2013 and 2014, the U.S. Women's National Ice Hockey Team prepared for the 2014 Winter Olympics in Sochi by facing off against top-ranked male high school hockey teams—and losing 6-3 to Dexter Southfield in Massachusetts and 3-1 to the Salisbury School in Connecticut.<sup>128</sup> Even the celebrated U.S. Women's National Soccer Team, which won the 2019 FIFA Women's World Cup, has prepared for competition by scrimmaging top boys' teams—losing 5-2 to FC Dallas' U-15 team. 129



In 2017, the U.S. women's national soccer team lost to a top U-15 boys' academy soccer team in a scrimmage.

PHOTO BY ERIN CHANG/ISI PHOTOS VIA GETTY IMAGES

The male-female athletic advantage exists not only in elite competition, but also at ordinary levels of competition between males and females.<sup>130</sup> That advantage is evident in the charts below, which show the best times in the nation in high school track and swimming events in 2025.



Sources: athletic.net/TrackAndField/Division/; USASwimming.org

# D. What Role Does Testosterone Suppression Play?

It is clear that men have a substantial athletic advantage over women. But some advocates still argue that trans-identified biological males should be allowed to participate in women's sports even if they have not taken any steps to medically transition.<sup>131</sup>

Others recognize the inherent unfairness of allowing athletes with a male athletic advantage to compete in women's sports, but argue that the advantage can be mitigated with testosterone suppression.<sup>132</sup> So, does hormone therapy eliminate the male athletic advantage? And do current testosterone levels accurately predict athletic performance? The answer to both these questions is no.

Testosterone suppression cannot eliminate the significant male athletic advantage conferred by male puberty.\*\* That is because many of the changes that occur during puberty (such as changes to skeletal architecture) cannot be erased with hormone therapy.<sup>133</sup>

<sup>\*\*</sup> It is worth noting, also, that many sporting organizations do not require trans-identified biological males to lower their testosterone levels to within average female levels. (See chart on pg. 30)

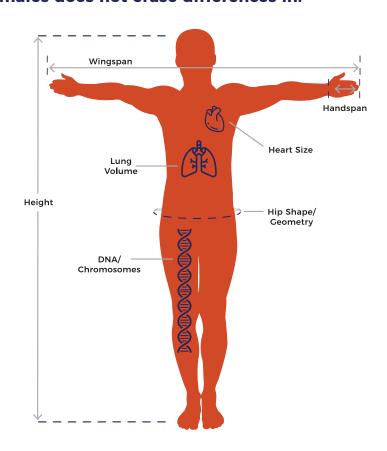
### Consider the following:

• Bone Density and Bone Size: According to a review of the literature by Hilton and Lundberg, post-pubescent trans-identified biological males maintain bone mineral density over years of testosterone suppression and do not lose height, limb length, or other skeletal parameters. Thus, athletes who begin testosterone suppression after the onset of male puberty are likely to retain an athletic advantage in sports such as basketball, volleyball, and handball, where

height, limb length, and handspan are relevant. 136 Moreover, such athletes are likely to continue to be *less injury-prone* than their female counterparts, even after years of testosterone suppression and hormone therapy. 137

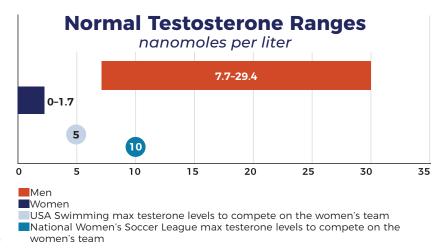
• Lung Volume and Heart
Size: Taryn Knox, Lynley
C. Anderson, and Alison
Heather cite research
indicating that hormone
therapy will not alter the
lung volume or heart size of
a trans-identified biological
male athlete, "so natural
advantages including ...
stroke volume and maximal
oxygen uptake will be
maintained." 138

# Testosterone suppression in post-pubescent males does not erase differences in:



• **Muscle Size:** Hilton and Lundberg note that testosterone suppression does reduce muscle size, although *not to female levels*.<sup>139</sup> Hilton and Lundberg reviewed 12 longitudinal studies that collectively suggest that 12 months of testosterone suppression to female-typical levels result in only about a 5% loss of lean body mass or muscle size.<sup>140</sup> They conclude that "given the large baseline differences in muscle mass between males and females, ... the reduction achieved by 12 months of testosterone suppression can be reasonably assessed as small relative to the initial superior mass" of males.<sup>141</sup>

- **Strength:** Biologically male athletes cannot eliminate their strength advantage by suppressing testosterone. In fact, even after multiple years of testosterone suppression, biological males remain significantly stronger than most females, With one study showing a reduction in handgrip strength of only about 9% after two full years of hormone therapy. Even if a biological male could reduce his strength to close to female levels for a period of time, that athlete may have different muscle responses to training than biological females with the same testosterone levels, meaning that he would regain his male athletic advantage while training to compete.
- Endurance: The most significant reduction in athletic advantage after hormone therapy seems to be in hemoglobin counts, with an 11-14% change. Although further study is needed, it is possible that testosterone



suppression brings trans-identified biological male athletes closer to the female baseline for **endurance** sports than for sports that depend on strength or explosive power.<sup>147</sup> On the other hand, one recent study that analyzed women's exercise performance across their menstrual cycles determined that "women reached exhaustion from muscle fatigue about 18% faster than men, even when adjusting for muscle mass, possibly because women's bodies may naturally reserve more energy."<sup>148</sup>

• **Speed:** A study of members of the United States Air Force, published in the British Journal of Sports Medicine, found that, even after hormone therapy, biological males who identify as women maintain a significant advantage in **speed** over biological females.<sup>149</sup> It is perhaps not surprising, then, that after at least one year of hormone treatment, college athlete **CeCé** (formerly Craig) **Telfer** ran the indoor 200-meter dash in 24.45 seconds—faster than Telfer's 2017 pre-transition time of 24.64.<sup>150</sup>

In sum, while testosterone suppression will certainly impair male athletic performance, it will not come close to reducing male performance to normal female levels.

Some trans-identified athletes acknowledge as much. Even after 15 years of hormone therapy, IOC advisor and trans-athlete Joanna Harper "carr[ies] more muscle mass than a woman [of the same] size, absolutely."<sup>151</sup>

And former tennis player and transgender pioneer **Renee Richards** (formerly Richard Raskin) admits that biology provided a competitive advantage over female players. Richards, who won a legal battle for the right to play in the female category of the U.S. Open,<sup>152</sup> now says that biological males should not participate in competitive women's sports.

"Having lived for the past 30 years," Richards says, "I know if I'd had surgery at the age of 22, and then at 24 went on the tour, no genetic woman in the world would have been able to come close to me." 153

What about biological males who take puberty blockers from an early age and never experience male puberty? Would this meaningfully reduce or eliminate the male athletic advantage? Not necessarily.

To begin with, males experience some degree of heightened exposure to testosterone even prior to puberty—both in the womb and shortly after birth.<sup>154</sup> This could account for the differences in athletic performance between sexes that have been measured even pre-puberty. For example, one review of fitness data from Australian children reveals that, when compared with nine-year-old females, nine-year-old males were 9.8% faster over short sprints, 16.6% faster over a mile, could jump 9.5% further from a standing start, could complete 33% more push-ups in 30 seconds, and had a 13.8% stronger grip.<sup>155</sup>

In addition, the increased testosterone to which males are exposed in "mini puberty" (which occurs between one to six months of age) "may be correlated with higher growth velocity and an 'imprinting effect' on BMI and bodyweight." Thus, unsurprisingly, at least one study of males treated with puberty blockers as young as 12, followed by hormone treatment at 16, found that early intervention did *not* reduce height, lean body mass, or grip strength to age-matched female levels. 157

Finally, it is worth noting that **female bodies have athletic** *disadvantages* **that biological males cannot create for themselves**. For example, the female pelvis has less joint rotation than a male pelvis, making females slower than biological males. Menstrual cycles and potential pregnancies, factors that *cannot* affect biological males, may also impact training and performance in females. For these and other reasons, even biological males who never experience male puberty are likely to have an athletic advantage over females.



# IV. THE HARM

Allowing male athletes to displace female athletes denies those women the equal athletic opportunities mandated by Title IX and thus discriminates against them on the basis of sex. Although sporting organizations claim they are acting in the name of "inclusion," their policies, in fact, *exclude* female athletes, the very athletes whom Title IX was passed to protect.

Supporters of male "inclusion" in women's sports often argue that the number of males seeking to compete in women's sports is relatively small and so the harm to females as a group is negligible. But to the individual female athletes impacted by males

While testosterone suppression will reduce a male's athletic performance, it will not come close to reducing it to normal female levels.

in their sport, the harm is significant and substantial (and, as the number of transidentified youth increases, the threat to female athletes also grows).<sup>161</sup>

The inclusion of male athletes in women's sports harms female athletes by (a) decreasing the chances of female athletic success; (b) demoralizing female athletes; (c) taking away opportunities to train and compete from female athletes; and (d) increasing the risk of injury.

### A. Decreasing Chances of Female Athletic Success

To begin, allowing biologically male athletes to compete against females hurts female athletes by decreasing the opportunity for female athletic success.

Between 2003 and 2022, there have been dozens of reported instances of biological males winning women's sports championship titles.<sup>162</sup>

More recently, data has emerged not only on championship titles but across a broader range of athletic events, offering a more comprehensive view of biological male participation and performance in women's sports. The statistics are staggering. In 2023, there was a total of 2,322 athletic events where a male athlete competed in the female division. Of that, there were 677 first-place finishes and 1,207 top-three finishes by male athletes in female competitions.

In 2024, there was a total of 2,040 athletic events where a male athlete competed in the female division. Of that, male athletes won 631 first-place finishes and 1,061 top-three finishes in female competitions.

As of June 1, 2025, there have been 605 total athletic events where a male athlete competed in the female division; 189 first-place finishes and 302 top-three finishes by male athletes in female competitions.<sup>163</sup>

Female athletes have lost medals, podium spots, records, awards, and other athletic opportunities for success due to male participation in the female athletic division.



Indeed, during the 2021-22 school year, **University of Pennsylvania swimmer Lia Thomas**, who previously competed for the school's men's swimming team as Will
Thomas, took the top spot in 25 finals, thus displacing at least 25 female athletes from the top of the podium. 164 At the NCAA women's national tournament in March 2022, Thomas placed first in the 500-meter freestyle, finishing more than one second ahead of the other competitors, two of whom were Olympic medalists. 165 And

because of Thomas's performance in the NCAA Championship 100-yard, 200-yard, and 500-yard freestyle preliminary races, Thomas deprived three ninth-place-finishing women of the chance to compete in the championship finals—which prevented those women from being named All-Americans in those events.<sup>166</sup>

Lia Thomas might be the most famous trans-identified biological male to beat out the female competition, but Thomas is certainly not alone. During the 2019-20 school year, **June (formerly Jonathan) Eastwood**<sup>167</sup> took a podium spot from multiple female competitors.<sup>168</sup> And **CeCé (formerly Craig) Telfer** competed as a man as recently as January 2018 but then won the NCAA Division II women's title in the 400-meter hurdles in 2019, beating the female competition by more than a second and beating the previous time Telfer set when competing as Craig.<sup>169</sup>

Girls competing in high school athletics and women competing post-college have faced the same challenges. For example, in Connecticut in 2017-2019, two natal males, Terry Miller and Andraya Yearwood, set 17 Connecticut track meet records and captured 15 women's State Championship titles previously held by girls.<sup>170</sup>

At the 2025 State Track and Field Championships, trans-identified biological males claimed top spots in multiple girls' events.<sup>171</sup> AB Hernandez took first place in both the high jump and triple jump, and second in the long jump at the California State Championships. Logan "Veronica" Garcia won the girls' 400-meter Washington state title and placed third in the 4x400 relay. In Oregon, Zachary "Lia" Rose finished fifth in the girls' high jump. "Becky" Pepper-Jackson secured third place at the West Virginia State Championships, and Soren Stark-Chessa took first in the girls' 800-meter run at the WMC Conference Championships in Maine.

# B. Demoralizing Female Athletes

The inclusion of male athletes in women's sports also harms female athletes by lowering their self-esteem. **Chelsea Mitchell**, who ran for Canton High School in Connecticut, lost four state championships to trans-identified biological males.<sup>172</sup> "That's a devastating experience," Mitchell wrote for USA Today. "It tells me that I'm not good enough; that my body isn't good enough; and that no matter how hard I work, I am unlikely to succeed, because I'm a woman."<sup>173</sup>



# A MOTHER AND DAUGHTER FIGHT FOR WOMEN'S SPORTS

In early 2020, high school student **Margaret Oneal Monteleone** of Maui, Hawaii, lost a 400-meter women's track race to a trans-identified biological male. It was the first and only race of Margaret's freshman year at St. Anthony School in a track season cut short by the COVID-19 pandemic.<sup>174</sup>

Just a year and a half earlier, **Cynthia Monteleone**, Margaret's mother and a Team USA Track & Field Masters

track athlete, also competed against a trans-identified biological male at the 2018 World Masters Athletics Championships in Málaga, Spain. Monteleone beat Yanelle Del Mar Zape by a hair to make it to the final round in the 200-meter race. But Del Mar Zape beat Monteleone's teammate in the 80-meter hurdles at the April 2019 World Championship indoor meet in Toruń, Poland.<sup>175</sup> The fact that both mother and daughter competed against biological males within such a short time span demonstrates that the threat to women's sports is significantly more widespread than activists are willing to admit.



"Coaches at the collegiate level are rewarded for winning, so these coaches will choose biological males in order to remain competitive in their conference. Where are the spaces for biological females then? What does this mean for equal opportunity for women?"

CYNTHIA MONTELEONE
Team USA Masters Track Athlete, Coach, and Metabolic Practitioner

Competed against trans-identified athlete Yanelle Del Mar Zape of Colombia while representing Team USA in the 2018 women's World Masters Athletics Championships in Málaga, Spain. Former swimmer Riley Gaines puts it this way,

When schools give women's trophies to biologically male athletes who suppressed their testosterone, they publicly humiliate female athletes by telling them they don't measure up to even a hormonally-impaired male body. ... These messages are regressive and misogynistic. 176



In some cases, the participation of biological males in female sports is so demoralizing that it decreases the desire of women and girls to compete at all. Track coach and USA Masters athlete Cynthia Monteleone reports that the prospect of racing against a male competitor was so devastating for one of her female athletes that the young woman "didn't even want to run track for the rest of the season."<sup>177</sup>

"'What was the point?'" Monteleone recalls her athlete saying. "I trained so hard for my events and I have no chance of winning the conference championship." 178

# C. Taking Away Opportunities to Compete from Female Athletes

As disappointing as it is for a female athlete to lose a competition to a male-bodied competitor, it is perhaps even more frustrating to lose the chance to compete at all. Yet, when biological males are allowed to compete in women's events or are selected for limited roster women's teams, female athletes are displaced and deprived of equal athletic opportunities.

For example, in 2021, New Zealand weightlifter **Laurel (formerly Gavin) Hubbard** made history as the first openly transgender athlete to compete in an individual event at the Summer Olympics.<sup>179</sup> Hubbard finished last in the over-87-kilogram division and was eliminated without registering a single lift.<sup>180</sup> But that does not make Hubbard's selection less problematic—when the New Zealand team added Hubbard to its Olympic delegation, a biological female weightlifter lost a chance to compete in Tokyo.

According to Tasmania Senator Claire Chandler, that weightlifter was **Roviel Detenamo**. "Eighteen-year-old Roviel Detenamo could have become the first wom[a]n in 20 years to qualify to represent Nauru at the Olympic Games," Sen.

Chandler said in August 2021. "She could have been in Tokyo proving that, if you

have the talent and the work ethic, even a teenager from a nation of 12,000 people can make the Olympics and compete on the same stage as world champions from China and the USA. But we didn't witness that, because Roviel was denied the opportunity to become an Olympian, one of the most celebrated and respected titles in the world."<sup>182</sup>

Similarly, swimmer Lia Thomas didn't just take awards from female athletes. At every single meet in which Thomas participated, Thomas took a lane in the pool from a female swimmer. As noted above, because of Thomas's performance in three NCAA championship preliminary races, Thomas also deprived three ninth-place finishers of the chance to compete in those championship finals and prevented them from being named an All-American in those events.<sup>183</sup>

While Hubbard's and Thomas's participation in women's sports garnered international attention, similar outcomes at the high school level often go unreported. In Maui, Hawaii, for example, when a biological male who had previously competed on the school's men's volleyball team joined the women's program, a biological girl lost the opportunity to start for her team, 184 although this never made the news. In jurisdictions where males are allowed to compete on women's high school teams that lack male counterparts, males inevitably take varsity spots and playing time from girls. This, of course, directly undermines Title IX, the purpose of which is to increase opportunities for women and girls, not limit them.

### D. Increasing the Risk of Injury

In some sports, allowing males to compete with and against female athletes increases the chance of injury. For example, in a women's MMA fight, trans-identified biological male **Fallon Fox** famously fractured Tamikka Brents's orbital bone. Not surprisingly, Brents said she felt "overwhelmed" by Fox's power.<sup>185</sup>

Female athletes at the high school level are also susceptible to injury at the hands of their male counterparts.

In 2022, North Carolina high school volleyball player Payton McNabb suffered a similarly serious injury "after a transgender player spiked a ball at her



STRINGER VIA GETTY IMAGES



head at ... [an] 'abnormally fast' speed" that was estimated by one outlet to be "approximately 70 mph." McNabb "experienced trauma to the head and neck" and "long-term concussion symptoms, including problems with her vision." The school board for the injured player's school ultimately voted to forfeit all future games against the transgender athlete's school "due to safety concerns." 188

Often, the media fail to cover injuries caused by biological males in women's high school sports. For example, although a volleyball player from Maui, Hawaii, reported that a biologically male athlete injured at least two girls and caused a concussion after transferring from the men's to the women's team, the incidents were not reported by the mainstream media.<sup>189</sup>

Still, some organizations have appropriately recognized and responded to the physical threat posed to females by biologically male players. For example, World Rugby in October 2020 established a rule banning the participation of transidentified biological males on women's teams. After consulting with numerous experts from the fields of medicine, physiology, and psychology, as well as players, transgender representatives, and rugby experts, the organization concluded that the "size, force- and power-producing advantages" that male-bodied individuals enjoy over female athletes translate into an unacceptable risk to player safety. 190

Other institutions, like the North Carolina school described above, have refused to put their athletes in a position where they may be injured by biologically male athletes, choosing instead to forfeit games that pose such a threat.<sup>191</sup> But those decisions have come at a cost. After one Vermont school opted to forfeit a girls' basketball playoff game rather than "jeopardize[] ... the safety of [its] players," the governing body for high school sports in that state informed the school that it would be fully "banned from further state-run activities and athletic competitions." The school vowed to appeal the ban, noting that: "[c]ancelling our membership is not a solution and does nothing to deal with the very real issue of safety and fairness facing women's sports in our beloved state."

At the end of the 2024 college volleyball season, five universities forfeited matches against San Jose State University due to a trans-identified biological male player, Brayden "Blaire" Fleming. The decision to forgo competition reflects a commitment by the schools to protect the safety and fairness of their female athletes.<sup>194</sup>

## V. THE PUSHBACK

#### A. The Public

As the number of male athletes participating in women's sports continues to grow, several Olympic and professional athletes have begun to speak out against the practice. Martina Navratilova, LGBTQ activist and winner of 18 Grand Slam Tennis Singles Titles, has written widely about the unfairness of letting males compete against women. "It's insane and it's cheating," Navratilova has said. "I am happy to address a transgender woman in whatever form she prefers, but I would not be happy to compete against her. It would not be fair." 195

Former British Olympic swimmer Sharron Davies put it succinctly: "Those with a male sex advantage should not be able to compete in women's sports."

Professional surfer Bethany Hamilton objected to her sport's policy allowing trans-identifying biologically male athletes to compete and noted that the league's policy was "not supported by a majority of women ... [then-] competing on the tour." In an Instagram video, Hamilton asked,

The participation of even a small number of males in women's sports denies numerous female athletes opportunities to win.

"Is a hormone level an honest and accurate depiction that someone indeed is a male or female? Is it as simple as this?" Hamilton added, "I personally won't be competing in or supporting the World Surf League if this rule remains." 198

Female athletes are not alone in their opposition to including males in women's sports. A January 2025 New York Times poll found that 79% of Americans agree that transgender athletes who are biologically male should not be allowed to compete in women's sports.<sup>199</sup>

An April 2025 NBC poll found that 75% of Americans oppose transgenderidentifying males competing in women's sports.<sup>200</sup>

In June 2022, on the 50th anniversary of Title IX, 18 advocacy groups from across the political spectrum rallied for "Our Bodies, Our Sports," demanding that lawmakers protect equal athletic opportunities for women.<sup>201</sup>



### **B.** Legislative Efforts

On January 14, 2025, the United States House of Representatives passed with bipartisan support **the Protection of Women and** 

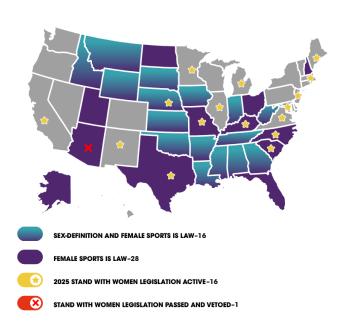
Girls in Sports Act of 2025.<sup>202</sup> The bill amends Title IX to ensure that schools comply with Title IX's recognition of a person's reproductive biology and genetics at birth and explicitly prohibits males from participating in school athletic programs that are designated for females. On March 3, 2025, the United States Senate blocked advancement of the bill.<sup>203</sup>

As of June 4, 2025, 28 states have enacted laws prohibiting biological males who identify as female from participating in women's and girls' sports.<sup>204</sup> These laws, often titled the "Fairness in Women's Sports Act" or similar, mandate that sports teams in K-12 schools and collegiate institutions be designated based on biological sex at birth, barring trans-identified biological males from competing on female teams.

#### C. Court Battles

In contrast, the 22 states without laws prohibiting trans-identified biological males from participating in female sports must align with federal policy or risk losing federal funding. In these states, all educational institutions receiving federal funding must comply with the president's executive order to maintain eligibility for federal support.

The Trump administration has stated that states and schools that violate federal policy by allowing trans-



identified biological males to participate in female sports will be subject to investigation by the Department of Education's Office for Civil Rights (OCR). If found to be noncompliant, they may face a federal lawsuit.

Several states have alleged that their state-level civil rights laws explicitly protect "gender identity" in education and athletics. This conflict between state law and federal administrative rules will, ultimately, have to be resolved in court.



"I didn't feel it was fair for [this athlete] to be playing [and taking] away a position from girls who could have started, which to me was so wrong on so many levels."

DESTINY LABUANAN Maui, HI

Played on a high school volleyball team with a student who had previously competed on the men's team.





"We're all about equality for women in sport but right now that equality is being taken away from us."

TRACEY LAMBRECHS A



Former New Zealand women's Olympic weightlifter who retired rather than compete against a biological male.

## CONCLUSION

The world of competitive sport is a zero-sum game where some athletes make the team and others do not; where someone wins and others lose. And in a zero-sum competition, the inclusion of male athletes in women's sports inevitably means that females lose out.

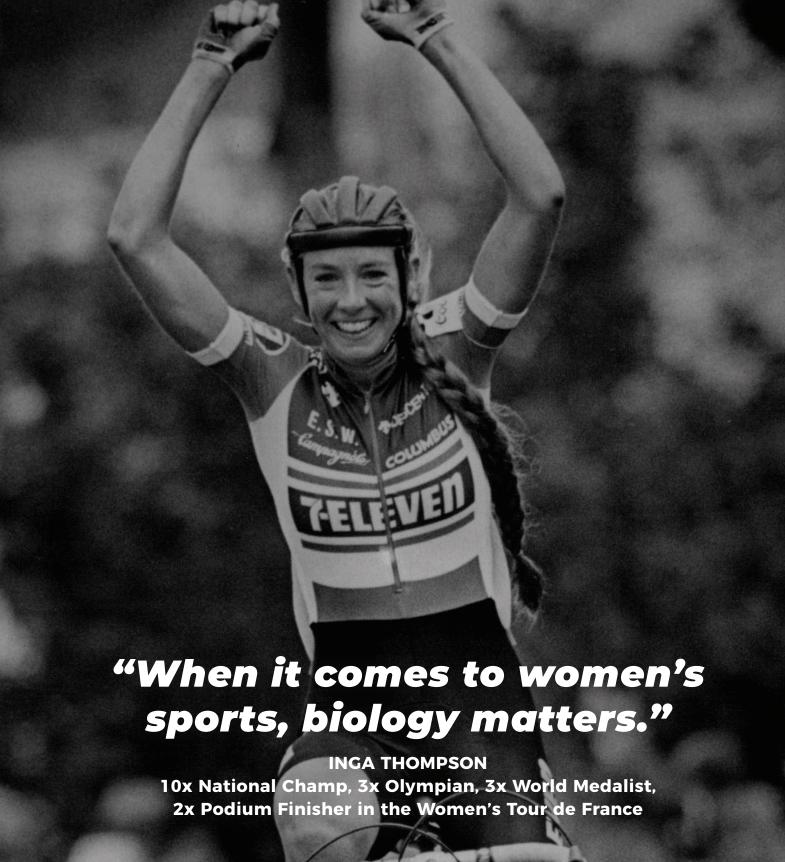
In the short term, the inclusion of males in women's sports hurts individual female athletes. But in the long run, the logic of allowing male participation in women's events and on women's teams could be used to eliminate sex-specific sports altogether. It is, therefore, imperative that we protect the female sporting category and resist calls for inclusion that result in the *exclusion* of even a single female athlete from competitive sport.











Competed at the 1984, 1988, and 1992 Olympic Games.

#### **MODEL LEGISLATION**

# An Act to Protect Equal Athletic Opportunities for Women and Girls

#### Section 1: Name.

This statute shall be known as the Equal Athletic Opportunities Act.

#### Section 2: Definitions.

- A. For purposes of this Act:
  - a. A "woman" is an adult human of the female sex, and a "man" is an adult human of the male sex;
  - b. A "girl" is a human female who is a legal minor under the laws of {STATE}, and a "boy" is a human male who is a legal minor under the laws of {STATE} –provided that the use of the term "girl" or "boy" in reference to the participation of a high-school-aged individual in a school or extracurricular program shall not be understood to exclude the participation of a student who is legally an adult;
  - c. A "**female**," when this term is used in reference to a natural person, is an individual who naturally has, had, will have through the course of normal development, or would have but for a developmental anomaly, genetic anomaly, or accident the reproductive system that at some point produces ova;
  - d. A "male," when this term is used in reference to a natural person, is an individual who naturally has, had, will have through the course of normal development, or would have but for a developmental anomaly, genetic anomaly, or accident the reproductive system that at some point produces sperm;
  - e. "Sex," when this term is used to classify or describe a natural person, means the state of being either male or female as observed or clinically verified at birth. There are only two sexes, and every individual is either male or female. Individuals with congenital and medically verifiable "DSD conditions" (sometimes referred to as "differences in sex development," "disorders in sex development," or "intersex conditions") are not members of a third sex and must be accommodated consistent with state and federal law. "Sex" does not include "gender identity" or any other term intended to convey a person's subjective sense of self; "gender identity" and other subjective terms are not synonyms or substitutes for "sex."
  - f. **Athletic event** includes any competition, contest, game, jamboree, scrimmage, tournament, showcase, combine, or tryout related to a sport or physical activity.

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- g. **Athletic club** refers to any privately or publicly operated organization that operates sports teams, trains athletes for competition, or allows athletes or athletic teams to use its facilities on a regular basis.
- h. **Athletic association** refers to any governing body for athletic competition or sport or any organization of athletic conferences.
- i. **Compete** means to take part in a contest, game, jamboree, tournament, showcase, combine, tryout, or other event after which team(s) or any individual(s) are designated as winners, roster spots are determined, or prizes awarded.
- j. **Team** means any group of people that participate in athletic or physical competitions for the same organization, school, club, college, university, or cause.

#### Section 3: Equal athletic opportunities in education.

Any accredited school, school district, or institution of higher education that offers, operates, or sponsors interscholastic or intercollegiate athletics shall provide equal athletic opportunities for both sexes.

#### Section 4: Separate athletic opportunities.

Notwithstanding the requirements of Section 3, a school, school district, institution of higher education, or private athletic club located within [INSERT STATE] may operate or sponsor single-sex teams where selection for such teams is based upon competitive skill or the activity involved is a contact sport.

#### Section 5: Designation of athletic opportunities.

- A. All public and private schools, school districts, institutions of higher education, and athletic clubs that participate in athletic competitions or events with or against other schools or clubs must designate each athletic team, sport, athletic competition, or athletic event as a:
  - a. team, sport, competition, or event for males, men, or boys;
  - b. team, sport, competition, or event for females, women, or girls; or
  - c. a co-educational or mixed team, sport, competition, or event.
- B. An individual who competes in any sport, athletic competition, or athletic event designated for females, women, or girls must be female. The sex listed on a participant's birth certificate may be relied on to establish the participant's eligibility under this section if the sex designated on the birth certificate was designated at or near the time of the participant's birth.

#### Section 6: Protecting women's athletic opportunities.

No school, school district, athletic club, athletic association, or institution of higher education that operates, sponsors, or permits athletic competitions or events may

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allow any male to compete for, against, or with a team designated for females, women, or girls to compete in any event designated for females, women, or girls.

#### Section 7: Permitting male practice players.

Nothing in this Act shall prohibit a school, school district, athletic club, athletic association, or institution of higher education from allowing male athletes to participate as practice players on teams designated for females, women, or girls, so long as no such player takes a roster spot, opportunity to compete, scholarship, or spot at the school from any female.

#### Section 8: Compliance protected.

No governmental entity, licensing or accrediting organization, athletic association, or school district may consider a complaint, open an investigation, or take adverse action against a school or school district for complying with this law.

#### Section 9: Liability.

- A. Any individual who is deprived of an athletic opportunity or who suffers or who will suffer direct or indirect harm resulting from a violation of this statute may bring a private cause of action for injunctive relief, compensatory damages, and legal fees, against the violating entity.
- B. Any school, school district, athletic association, or athletic club that suffers or will suffer direct or indirect harm as a result of a violation of this statute may bring a private cause of action against the violating entity for injunctive relief and compensatory damages.
- C. Any individual, athletic team, or athletic club subjected to retaliation or other adverse action as a result of reporting a violation of this statute to an employee or representative of a school, school district, athletic association, or athletic club, or subjected to retaliation or other adverse action as a result of reporting a violation of this statute to a state or federal government entity with oversight authority, may bring a private cause of action against the retaliating entity for injunctive relief, damages, and any other relief available under law.
- D. An action brought under this section must be commenced within two years of the event giving rise to the complaint.

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"[When it comes to competitive athletics,] sex segregation is the only way to achieve equality for girls and women."

MARTINA NAVRATILOVA
Winner of 18 Grand Slam Tennis Singles Titles

### **ENDNOTES**

- See Jennifer C. Braceras, "Legal Policy Focus: Sex is Better Than Gender." *Indep. Women's L. Ctr*, Aug. 2022. <a href="https://www.iwf.org/2022/09/07/legal-policy-focus-sex-is-better-than-gender/">https://www.iwf.org/2022/09/07/legal-policy-focus-sex-is-better-than-gender/</a>.
- 2 20 U.S.C. § 1681(a). <a href="https://www.justice.gov/crt/title-ix-education-amendments-1972#(a)%20">https://www.justice.gov/crt/title-ix-education-amendments-1972#(a)%20</a> Prohibition%20against%20discrimination;%20exceptions.
- See Neal v. Bd. of Trs. of Cal. State Univs., 198 F.3d 763, 766 (9th Cir. 1999). https://law.resource.org/pub/us/case/reporter/F3/198/198.F3d.763.99-15316.html (explaining that Title IX was designed to eliminate significant "discrimination against women in education"). According to Senator Birch Bayh, one of Title IX's primary sponsors, the statute promised women "an equal chance to attend the schools of their choice, to develop the skills they want, and to apply those skills with the knowledge that they will have a fair chance to secure the jobs of their choice with equal pay for equal work." Id. (quoting 118 Cong. Rec. 5808 (1972)).
- Education Amendments of 1974, Pub. L. No. 93-380, § 844, 88 Stat. 484, 612. <a href="https://www.govinfo.gov/content/pkg/STATUTE-88/pdf/STATUTE-88-Pg484.pdf">https://www.govinfo.gov/content/pkg/STATUTE-88/pdf/STATUTE-88-Pg484.pdf</a> [hereinafter the Javits Amendment]; see also McCormick ex rel. McCormick v. Sch. Dist. of Mamaroneck, 370 F.3d 275, 287-88 (2d Cir. 2004). <a href="https://case-law.vlex.com/vid/mccormick-ex-rel-v-889698948">https://case-law.vlex.com/vid/mccormick-ex-rel-v-889698948</a> (explaining the history of the Javits Amendment and the regulations promulgated thereunder).
- 5 See Williams v. Sch. Dist. of Bethlehem, 998 F.2d 168, 175 (3d Cir. 1993). <a href="https://digitalcommons.law.villanova.edu/cgi/viewcontent.cgi?article=1271&context=mslj">https://digitalcommons.law.villanova.edu/cgi/viewcontent.cgi?article=1271&context=mslj</a> (although Title IX's athletic regulation "appl[ies] equally to boys as well as girls, it would require blinders to ignore that the motivation for [the] promulgation of the regulation on athletics was the historic emphasis on boys' athletic programs to the exclusion of girls' athletic programs in high schools as well as colleges").
- 6 34 C.F.R. § 106.41(b). https://www.law.cornell.edu/cfr/text/34/106.41.
- 7 Id.; see also O'Connor v. Bd. of Ed. of Sch. Dist. 23, 449 U.S. 1301, 1307-08 & n.5 (1980). <a href="https://supreme.justia.com/cases/federal/us/449/1301/">https://supreme.justia.com/cases/federal/us/449/1301/</a> (Stevens, J., in chambers) (refusing to vacate a stay that prohibited a female student from trying out for the boys' basketball team where the school also had a girls' team).
- 8 34 C.F.R. § 106.41(b). https://www.law.cornell.edu/cfr/text/34/106.41.
- 9 Id. § 106.41(c). <a href="https://www.law.cornell.edu/cfr/text/34/106.41">https://www.law.cornell.edu/cfr/text/34/106.41</a>.
- The Equal Protection Clause of the United States Constitution forbids arbitrary discrimination on the basis of sex, but it does not presumptively prohibit separation of the sexes in the same way that it forbids racial segregation. See Craig v. Boren, 429 U.S. 190, 197-98 (1976). <a href="https://supreme.justia.com/cases/federal/us/429/190/">https://supreme.justia.com/cases/federal/us/429/190/</a> (outlining the intermediate scrutiny standard for sex-based classifications); cf. City of Richmond v. J.A. Croson Co., 488 U.S. 469, 493 (1989). <a href="https://supreme.justia.com/cases/federal/us/488/469/">https://supreme.justia.com/cases/federal/us/488/469/</a> (describing "strict scrutiny" applied to racial classifications). The reason that courts scrutinize racial classifications more strictly than they scrutinize sex-based classifications is that biological sex differences sometimes provide relevant grounds for distinction, whereas racial classifications do not. By recognizing the inherent difference between race and sex, courts have carved out space to accommodate real distinctions between males and females, while still prohibiting unjust discrimination. See, e.g., "Brief of Independent Women's Law Center as Amicus Curiae Supporting Appellee" at 21-22, Equal Means Equal v. Ferriero, 3 F.4th 24 (1st Cir. 2021) (No. 20-1802). <a href="https://www.iwf.org/wp-content/uploads/2021/02/EqualandEqual\_vs-Ferriero\_Amicus\_Brief\_of\_IndependentWomensLawCenter.pdf">https://www.iwf.org/wp-content/uploads/2021/02/EqualandEqual\_vs-Ferriero\_Amicus\_Brief\_of\_IndependentWomensLawCenter.pdf</a>.
- See generally Nat'l Coll. Athletic Ass'n v. Smith, 525 U.S. 459, 468-69 (1999). <a href="https://supreme.justia.com/cases/federal/us/525/459/">https://supreme.justia.com/cases/federal/us/525/459/</a>.
- 12 20 U.S.C. § 1681(a). https://www.justice.gov/crt/title-ix-education-amendments-1972.
- 13 See id. § 1681(a)(1). <a href="https://www.justice.gov/crt/title-ix-education-amendments-1972">https://www.justice.gov/crt/title-ix-education-amendments-1972</a> (providing Title IX applies to "institutions of ... professional education, and graduate higher education, and to public institutions of undergraduate higher education").

- 14 C.F.R. § 1253.125(c). <a href="https://www.law.cornell.edu/cfr/text/14/1253.125">https://www.law.cornell.edu/cfr/text/14/1253.125</a> ("The obligation to comply with these Title IX regulations is not obviated or alleviated by any rule or regulation of any organization, club, athletic or other league, or association that would render any applicant or student ineligible to participate or limit the eligibility or participation of any applicant or student, on the basis of sex, in any education program or activity operated by a recipient and that receives Federal financial assistance").
- NFSH News. "Participation in High School Sports tops Eight Million For First Time in 2023-24." NFHS, Sept. 10, 2024. <a href="https://www.nfhs.org/articles/participation-in-high-school-sports-tops-eight-million-for-first-time-in-2023-24/">https://www.nfhs.org/articles/participation-in-high-school-sports-tops-eight-million-for-first-time-in-2023-24/</a>.
- Lisa Maatz et al. "Title IX at 40: Working to Ensure Gender Equity in Education." *Nat'l Coal. for Women and Girls in Educ.*, 2012, 8. <a href="https://www.ncwge.org/TitleIX40/TitleIX-print.pdf">https://www.ncwge.org/TitleIX40/TitleIX-print.pdf</a>.
- 17 "NCAA Sports Sponsorship and Participation Rates Database." *Nat'l Coll. Athletic Ass'n*, Oct. 2024. <a href="https://www.ncaa.org/sports/2018/10/10/ncaa-sports-sponsorship-and-participation-rates-database.aspx">https://www.ncaa.org/sports/2018/10/10/ncaa-sports-sponsorship-and-participation-rates-database.aspx</a>.
- 18 *Id.* (236,315 out of 549,707 athletes were women).
- 19 "Title IX 50th Anniversary: The State of Women in College Sports." NCAA, 2022. <a href="https://s3.amazonaws.com/ncaaorg/inclusion/titleix/2022\_State\_of\_Women\_in\_College\_Sports\_Report.pdf">https://s3.amazonaws.com/ncaaorg/inclusion/titleix/2022\_State\_of\_Women\_in\_College\_Sports\_Report.pdf</a>. See charts at pages 27 & 30.
- 20 "United States at the 1972 München Summer Games." Sports Reference, accessed Jun. 10, 2025. <a href="https://web.archive.org/web/20200417043419/https://www.sports-reference.com/olympics/countries/USA/summer/1972/">https://web.archive.org/web/20200417043419/https://www.sports-reference.com/olympics/countries/USA/summer/1972/</a>.
- 21 Steve Keating. "U.S. To Send Second Biggest Team Ever To Tokyo Games." Reuters, Jul. 13, 2021. <a href="https://www.reuters.com/lifestyle/sports/us-send-second-biggest-team-ever-tokyo-games-2021-07-13/">https://www.reuters.com/lifestyle/sports/us-send-second-biggest-team-ever-tokyo-games-2021-07-13/</a>.
- "U.S. Olympic & Paralympic Committee names 610-Member 2024 U.S. Olympic Team." United States Olympic & Paralympic Committee, Jul. 10, 2024. <a href="https://www.usopc.org/news/2024/july/10/u-s-olympic-paralympic-committee-names-594-member-2024-u-s-olympic-team#:~:text=The%20">https://www.usopc.org/news/2024/july/10/u-s-olympic-paralympic-committee-names-594-member-2024-u-s-olympic-team#:~:text=The%20</a>
  Paris%202024%20Olympic%20Games,323%20females%20and%20287%20males.
- 23 "Independent Women: State Action." *Indep. Women's Voice*, accessed Jun. 10, 2025. <a href="https://www.iwv.org/state-action/">https://www.iwv.org/state-action/</a>.
- Quidance produced and distributed by the ACLU, Gender Spectrum, Human Rights Campaign, National Center for Lesbian Rights, and National Education Association urges schools to permit male students to play on female athletic teams even if they have not begun hormone therapy or taken any medical steps to alter their male physiology. Asaf Orr et al., "Schools In Transition: A Guide for Supporting Transgender Students in K-12 Schools." Hum. Rts. Campaign, Jul. 2016, 28-29. https://hrc-prod-requests.s3-us-west-2.amazonaws.com/files/assets/resources/Schools-In-Transition.pdf?mtime=20200713142742&focal=none (asserting that it is "inappropriate" for schools to require trans-identified students to begin any form of medical treatment prior to participating in sports according to their gender identity).
- 25 "Independent Women: State Action." *Indep. Women's Voice*, accessed Jun. 10, 2025. <a href="https://www.iwv.org/state-action/">https://www.iwv.org/state-action/</a>.
- In 2010, the NCAA adopted a policy allowing females who identify as men to compete on men's teams and allowing males who identify as women to compete on women's teams so long as they had completed at least one calendar year of testosterone suppression. Pat Griffin & Helen Carroll. "NCAA Inclusion of Transgender Student-Athletes." Nat'l Coll. Athletic Ass'n, Aug. 2011, 13. <a href="https://ncaaorg.s3.amazonaws.com/inclusion/lgbtq/INC\_TransgenderHandbook.pdf">https://ncaaorg.s3.amazonaws.com/inclusion/lgbtq/INC\_TransgenderHandbook.pdf</a>. On January 19, 2022, the NCAA issued a new policy reaffirming its support for trans-inclusion in women's sports, but adding the requirement that such athletes prove that they have lowered their testosterone to levels set by the governing bodies for each sport, as measured twice annually, for one year. "Transgender Student-Athlete Participation Policy." Nat'l Coll. Athletic Ass'n, Jan. 27, 2022. <a href="https://www.ncaa.org/sports/2022/1/27/transgender-participation-policy.aspx">https://www.ncaa.org/sports/2022/1/27/transgender-participation-policy.aspx</a>.
- 27 "Participation Policy for Transgender Student-Athletes." NCAA, Feb. 6, 2025. <a href="https://www.ncaa.org/sports/2022/1/27/transgender-participation-policy.aspx">https://www.ncaa.org/sports/2022/1/27/transgender-participation-policy.aspx</a>.

- 28 "IOC Framework on Fairness, Inclusion, and Nondiscrimination on the Basis of Gender Identity and Sex Variations." Int'l Olympic Comm., Nov. 2022, 1-6. <a href="https://stillmed.olympics.com/media/Documents/Beyond-the-Games/Human-Rights/IOC-Framework-Fairness-Inclusion-Non-discrimination-2021.pdf">https://stillmed.olympics.com/media/Documents/Beyond-the-Games/Human-Rights/IOC-Framework-Fairness-Inclusion-Non-discrimination-2021.pdf</a> [hereinafter "IOC 2022 Framework"].
- 29 Id. at 2-3 (capitalization omitted).
- Id. at 5 (Principle 7.1). Previously, IOC policies allowed biological females to compete in the male category without restriction, but allowed biological males to compete in women's competitions only if they declared a female gender identity without changing it, for sporting purposes, for at least four years, and demonstrated testosterone levels below 10 nanomoles per liter for at least a year prior to their first competition. Uğur Erdener et al., "IOC Consensus Meeting on Sex Reassignment and Hyperandrogenism." Int'l Olympic Comm., Nov. 2015, 2. https://stillmed.olympic.org/ Documents/Commissions PDFfiles/Medical commission/2015-11 ioc consensus meeting on sex reassignment and hyperandrogenism-en.pdf [hereinafter "IOC 2015 Consensus Statement"]. Notably, the 95% reference range for testosterone in healthy menstruating women under 40 years of age is significantly lower, 0 to 1.7 nanomoles per liter, while the range for post-pubescent males is 7.7 to 29.4 nanomoles per liter. David J. Handelsman et al., "Circulating Testosterone as the Hormonal Basis of Sex Differences in Athletic Performance." Endocrine Revs., Oct. 2018, Vol. 39(5):803, 806-07. https://academic.oup.com/edrv/article/39/5/803/5052770: see also Sarah Farrell, "How Do IAAF Regulations Affect Female Athletes With High Testosterone Levels?" Glob. Sport Matters, Nov. 15, 2019. https://globalsportmatters.com/health/2019/11/15/iaaf-regulations-forfemale-athletes-with-high-testosterone/.
- See "Policies by Organization." Transathlete, accessed Jun. 2025. https://www.transathlete. com/policies-by-organization (listing policies). For example, USA Climbing and the US Soccer Federation require documentation that an athlete's asserted "gender is sincerely held." Id. (citing "Rulebook." USA Climbing, 2020, § 1.4.1. https://usaclimbing.org/wp-content/uploads/2021/07/ USA Climbing Rulebook 2020-2021 v10 20200902-2.pdf and "Policy Manual." U.S. Soccer Fed., Inc., May 2025, § 601-5(6). https://ussoccer.app.box.com/s/d17mtf22sltr4k8r7513970c13almooo). Disability Sports Australia "supports the participation of trans athletes on the basis of the gender with which they identify, but encourages trans[] athletes to fill out the appropriate Therapeutic Use Exemptions necessary for competition in leagues which require them." Id. (citing "Member Protection Policy." Disability Sports Austl., Jan. 38, 2014, § 6.6. https://www.transathlete.com/ files/ ugd/2bc3fc 63bb33953f554b7ab0fabfdde502d83d.pdf). The Premier Hockey Federation Bylaws provide that "Transgender women are eligible to compete in the PHF if they have been living in their transgender identity for a minimum of two years." "PHF updates transgender and non-binary inclusion policy." LawInSport, Oct. 15, 2021. https://www.lawinsport.com/topics/news/item/phfupdates-transgender-and-non-binary-inclusion-policy#:~:text=The%20PHF%20recognizes%20 the%20rapidly,the%20privacy%20of%20all%20athletes. By contrast, USA Boxing follows what is known as the Stockholm Consensus, which requires genital surgery and gonadectomy. "Medical Handbook and Medical Rules of AIBA Open Boxing, § 2.4.5, 2013. https://www. transathlete.com/ files/ugd/2bc3fc 097c27dfc6784e9eb89d7c5ab44dd399.pdf).
- "Athlete Inclusion, Competitive Equity, and Eligibility Policy." USA Swimming, Mar. 10, 2023. <a href="https://www.usaswimming.org/docs/default-source/governance/governance-lsc-website/rules\_policies/usa-swimming-policy-19.pdf">https://www.usaswimming.org/docs/default-source/governance-lsc-website/rules\_policies/usa-swimming-policy-19.pdf</a>. In February 2023, World Aquatics adopted a policy permitting transidentifying biological male athletes to compete in the women's category "if they can establish to World Aquatics's comfortable satisfaction that they have not experienced any part of male puberty beyond Tanner Stage 2 [the onset of puberty] or before age 12, whichever is later," including evidence that the athlete has "complete androgen insensitivity and therefore could not experience male puberty" or "had male puberty suppressed beginning at Tanner Stage 2 or before age 12, whichever is later, and they have since continuously maintained their testosterone levels in serum (or plasma) below 2.5 nmol/L." "Competition Regulations." World Aquatics, Feb. 21, 2023, §§ 5.4.2. <a href="https://resources.fina.org/fina/document/2023/03/30/561db432-9ac8-4706-ac3c-96ca798a27d8/WORLD\_AQUATICS\_COMPETITION\_REGULATIONS.pdf">https://resources.fina.org/fina/document/2023/03/30/561db432-9ac8-4706-ac3c-96ca798a27d8/WORLD\_AQUATICS\_COMPETITION\_REGULATIONS.pdf</a>. On March 31, 2023, World Athletics adopted the same policy as World Aquatics. "Book of Rules." World Athletics, accessed Jun. 6, 2025. <a href="https://worldathletics.org/about-iaaf/documents/book-of-rules">https://worldathletics.org/about-iaaf/documents/book-of-rules</a>. On March 5, 2025, World Athletics

- completed a stakeholder consultation which resulted in recommendations for female eligibility. The recommendation proposes that World Athletics revise the eligibility rules and regulations for its Female Category restricted to athletes whose biological sex is female. "Member Federation Resource Centre." World Athletics, accessed Jun. 6, 2025. <a href="https://worldathletics.org/about-iaaf/documents/member-federation-resource-centre#collapseconsultation">https://worldathletics.org/about-iaaf/documents/member-federation-resource-centre#collapseconsultation</a>.
- Handelsman et al., *supra* note 30, at 806-07, (also noting that "the upper limit of serum testosterone in women with [polycystic ovary syndrome] PCOS is 3.1 [nanomoles per liter], or 4.8 [nanomoles per liter]," depending on the measurement used); see also Farrell, *supra* note 30 (explaining that the International Association of Athletics Federation considers 0.12 to 1.79 nanomoles per liter to be the normal testosterone range for women).
- "USGA Competitive Fairness Gender Policy." *United States Golf Association*, Dec. 4, 2024. <a href="https://champ-admin.usga.org/player/articles/usga-competitive-fairness-gender-policy">https://champ-admin.usga.org/player/articles/usga-competitive-fairness-gender-policy</a>.
- 35 "LPGA Gender Policy for Competition Eligibility." LPGA, Jan. 1, 2025. <a href="https://www.lpga.com/gender-policy">https://www.lpga.com/gender-policy</a>.
- 36 See Proposed Rulemaking, "Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance," 87 Fed. Reg. 41,390, 41,571, Jul. 12, 2022. https:// www.federalregister.gov/documents/2022/07/12/2022-13734/nondiscrimination-on-the-basisof-sex-in-education-programs-or-activities-receiving-federal (proposed § 106.31(a)(2)) (providing that "prevent[ing] a person from participating in an education program or activity consistent with the person's gender identity subjects a person to more than de minimis harm on the basis of sex") [hereinafter "Proposed Rulemaking, Nondiscrimination on the Basis of Sex"]; Brittany Bernstein. "Education Department Extends Title IX Protections to Transgender Students, in Reversal of Trump-Era Guidance." Nat'l Rev., Jun. 16, 2021. https://www.nationalreview.com/news/educationdepartment-claims-title-ix-protections-extend-to-transgender-students-in-reversal-of-trump-eraguidance/ (noting that Obama administration used a similar definition to require schools to open "some sports teams to students based on their chosen gender identity" and that the new rule "could expose schools that seek to preserve sex-segregated spaces to litigation" and prompt challenges to "efforts to preserve female only sports"); Jennifer C. Braceras & Kelsey Bolar. "Biden Administration's New Title IX Guidance Solidifies Threat To Girls' Sports." Indep. Women's Forum, Jun. 17, 2021. https://www.iwf.org/2021/06/17/biden-administrations-new-title-ix-quidance-solidifies-threat-togirls-sports/ (explaining the impact of the new policy); Section II(B), infra (describing the law in this area).
- See "Proposed Rulemaking. Nondiscrimination on the Basis of Sex." 87 Fed. Reg. at 41,571. <a href="https://www.federalregister.gov/documents/2022/07/12/2022-13734/nondiscrimination-on-the-basis-of-sex-in-education-programs-or-activities-receiving-federal">https://www.federalregister.gov/documents/2022/07/12/2022-13734/nondiscrimination-on-the-basis-of-sex-in-education-programs-or-activities-receiving-federal</a> Although this rule does not explicitly cover sports, neither does it make an exception for athletics, which clearly constitute school "programs" and "activities." The proposed rule thus necessarily requires schools to allow male athletes who identify as women to compete on women's athletic teams. See "Comment of Indep. Women's L. Ctr. and Indep. Women's Forum Regarding Implications of the Dep't of Educ.'s Proposed Title IX Rule on Women's Sports." Indep. Women's L. Ctr., Sept. 12, 2022. <a href="https://iwlc.org/wp-content/uploads/2022/09/FINAL-IWF-Title-IX-Comment-5-Sports-9-12.pdf">https://iwlc.org/wp-content/uploads/2022/09/FINAL-IWF-Title-IX-Comment-5-Sports-9-12.pdf</a>.
- 38 State of Tennessee v. Cardona, Civil Action No. 2:24-072-DCR. <a href="https://www.tn.gov/content/dam/tn/attorneygeneral/documents/pr/2025/2025-1-title-ix.pdf">https://www.tn.gov/content/dam/tn/attorneygeneral/documents/pr/2025/2025-1-title-ix.pdf</a>.
- 39 See Erin Hawley, "Placing the Administrative State in Constitutional Context." *Indep. Women's Forum*, 2016. <a href="https://www.iwf.org/wp-content/uploads/pdfs/LegalBrief\_AdminState.pdf">https://www.iwf.org/wp-content/uploads/pdfs/LegalBrief\_AdminState.pdf</a>.
- 40 See Bowen v. Geo. Univ. Hosp., 488 U.S. 204, 208 (1988). <a href="https://supreme.justia.com/cases/federal/us/488/204/">https://supreme.justia.com/cases/federal/us/488/204/</a> ("It is axiomatic that an administrative agency's power to promulgate legislative regulations is limited to the authority delegated by Congress.").
- See, e.g., Equality Act, H.R. 5, 117th Cong., as passed by House, Feb. 25, 2021. <a href="https://www.congress.gov/bill/117th-congress/house-bill/5#:~:text=Passed%20House%20">https://www.congress.gov/bill/117th-congress/house-bill/5#:~:text=Passed%20House%20</a>
  <a href="mailto:(02%2F25%2F2021">(02%2F25%2F2021</a>),-Equality%20Act&text=This%20bill%20prohibits%20discrimination%20</a>
  <a href="mailto:based,credit%2C%20and%20the%20jury%20system">based,credit%2C%20and%20the%20jury%20system</a>. If enacted, the Equality Act would require schools and athletic associations to open up girls' and women's sports to males who identify as female. See Inez F. Stepman, "The Equality Act Makes Women Unequal." <a href="Wall Street J.">Wall Street J.</a>, Feb. 23,

- 2021. <a href="https://on.wsj.com/3mqBThZ">https://on.wsj.com/3mqBThZ</a> (explaining that the Equality Act would jeopardize myriad sex-specific programs, including women's sports, prisons, domestic violence shelters, and more); Doriane Coleman, Martina Navratilova, & Sanya Richards-Ross, "Pass the Equality Act, But Don't Abandon Title IX." The Wash. Post, Apr. 29, 2019. <a href="https://wapo.st/3EX7b6u">https://wapo.st/3EX7b6u</a>. (noting that "there will always be significant numbers of boys and men who would beat the best girls and women in head-to-head competition. Claims to the contrary are simply a denial of science."); see also Patsy T. Mink and Louise M. Slaughter Gender Equity in Education Act of 2021, S. 2186, 117th Cong. § 3(7)(C), as introduced in Senate, Jun. 23, 2021. <a href="https://www.congress.gov/bill/117th-congress/senate-bill/2186/text">https://www.congress.gov/bill/117th-congress/senate-bill/2186/text</a> (proposing to include "gender identity" in the definition of sex).
- 42 "Defending Women from Gender Ideology Extremism and Restoring Biological Truth to the Federal Government." *The White House*, Jan. 20, 2025. <a href="https://www.whitehouse.gov/presidential-actions/2025/01/defending-women-from-gender-ideology-extremism-and-restoring-biological-truth-to-the-federal-government/">https://www.whitehouse.gov/presidential-actions/2025/01/defending-women-from-gender-ideology-extremism-and-restoring-biological-truth-to-the-federal-government/</a>.
- 43 "Keeping Men Out of Women's Sports." *The White House*, Feb. 5, 2025. <a href="https://www.whitehouse.gov/presidential-actions/2025/02/keeping-men-out-of-womens-sports/">https://www.whitehouse.gov/presidential-actions/2025/02/keeping-men-out-of-womens-sports/</a>.
- 44 140 S. Ct. 1731 (2020). <a href="https://www.supremecourt.gov/opinions/19pdf/17-1618\_hfci.pdf">https://www.supremecourt.gov/opinions/19pdf/17-1618\_hfci.pdf</a>; see Proposed Rulemaking, "Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance," 87 Fed. Reg. at 41,392, 41,531. <a href="https://www.federalregister.gov/documents/2022/07/12/2022-13734/nondiscrimination-on-the-basis-of-sex-in-education-programs-or-activities-receiving-federal">https://www.federalregister.gov/documents/2022/07/12/2022-13734/nondiscrimination-on-the-basis-of-sex-in-education-programs-or-activities-receiving-federal</a>.
- See Bostock, 140 S. Ct. at 1739, 1746-47. <a href="https://www.supremecourt.gov/opinions/19pdf/17-1618">https://www.supremecourt.gov/opinions/19pdf/17-1618</a>
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  <a href="https://www.supremecourt.gov/opinions/19pdf/17-1618">https://www.supremecourt.gov/opinions/19pdf/17-1618</a
- 46 Bostock, 140 S. Ct. at 1753. https://www.supremecourt.gov/opinions/19pdf/17-1618\_hfci.pdf.
- 47 Id. at 1737
- 48 Id. at 1741 (internal quotation marks omitted).
- 49 *Id.* at 1740.
- 50 See, e.g., Kleczek v. R.I. Interscholastic League, Inc., 612 A.2d 734, 738 (R.I. 1992) <a href="https://law.justia.com/cases/rhode-island/supreme-court/1992/612-a-2d-734.html">https://law.justia.com/cases/rhode-island/supreme-court/1992/612-a-2d-734.html</a> ("Because of innate physiological differences, boys and girls are not similarly situated as they enter athletic competition.").
- Bostock, 140 S. Ct. at 1753 (rejecting concerns that Court's "decision will sweep beyond Title VII to other federal or state laws that prohibit sex discrimination" because "none of these other laws are before [the Court]" and explaining that the Court "d[id] not prejudge any such question"). Significantly, both Title IX and the statute's implementing regulations repeatedly refer to "both sexes," see, e.g., 20 U.S.C. § 1681(a)(2). <a href="https://www.law.cornell.edu/uscode/text/20/1681">https://www.law.cornell.edu/uscode/text/20/1681</a>; 34 C.F.R. § 106.21(c)(4). <a href="https://www.ecfr.gov/current/title-34/subtitle-B/chapter-I/part-106/subpart-C/section-106.21">https://www.ecfr.gov/current/title-34/subtitle-B/chapter-I/part-106/subpart-C/section-106.21</a>, a phrase that would make no sense if the term "sex" were being used to describe the range of identifications included within the concept of gender identity. See, e.g., Pelcha v. MW Bancorp., Inc., 988 F.3d 318, 324 (6th Cir. 2021). <a href="https://case-law.vlex.com/vid/pelcha-v-mw-bancorp-888691674">https://case-law.vlex.com/vid/pelcha-v-mw-bancorp-888691674</a> (Bostock's holding "extends no further than Title VII").
- 52 See, e.g., Tom Daykin, "This Milwaukee Facility Doesn't Need Ice—Just Girl Power." Milwaukee J. Sentinel, Feb. 7, 2017. <a href="https://www.jsonline.com/story/money/real-estate/commercial/2017/02/07/milwaukee-hockey-facility-doesnt-need-ice--just-girl-power/97557390/">https://www.jsonline.com/story/money/real-estate/commercial/2017/02/07/milwaukee-hockey-facility-doesnt-need-ice--just-girl-power/97557390/</a> (explaining that "[s]everal universities added field hockey as a women's sport after Title IX").
- 53 See Att'y Gen. v. Mass. Interscholastic Athletic Ass'n, 378 Mass. 342, 343-44 & n.4, 363 (1979). https://law.justia.com/cases/massachusetts/supreme-court/1979/378-mass-342-2.html (relying on

- amended Article 1 of the Declaration of Rights of the Massachusetts Constitution in holding that the Massachusetts Equal Rights Amendment prohibits the state athletic association from adopting a rule that "No boy may play on a girls' team").
- Tom Fargo, "Coalition Takes Field Hockey Concerns to State House." *Bos. Herald*, Jan. 23, 2020. <a href="https://www.bostonherald.com/2020/01/23/coalition-takes-field-hockey-concerns-to-state-house/">https://www.bostonherald.com/2020/01/23/coalition-takes-field-hockey-concerns-to-state-house/</a> (explaining the objections of various parents to boys playing on high school field hockey teams).
- See Buddy Thomas, "Do Boys Belong on Field Hockey Teams?" SouthCoast TODAY, Oct. 10, 2018. <a href="https://www.southcoasttoday.com/story/sports/high-school/field-hockey/2018/10/10/do-boys-belong-on-field/9576513007/">https://www.southcoasttoday.com/story/sports/high-school/field-hockey/2018/10/10/do-boys-belong-on-field/9576513007/</a>; see also Shira Springer, "MIAA Must Draw a Line on Boys Playing Girls' Hockey." Bos. Globe, Nov. 28, 2015. (objecting to the Massachusetts policy).
- See, e.g., Nancy Leong. "Against Women's Sports.." Wash. U. L. Rev., 2018, Vol. 95(5):1249. <a href="https://openscholarship.wustl.edu/law\_lawreview/vol95/iss5/13/">https://openscholarship.wustl.edu/law\_lawreview/vol95/iss5/13/</a> (arguing that dividing athletes by sex should not be our default position); see also Eileen McDonagh & Laura Pappano, Playing with the Boys: Why Separate Is Not Equal in Sports. Oxford University Press, 2008, 260. ("Females playing sports with males must become standard practice, not the exception.").
- See Nancy Leong & Emily Bartlett. "Sex Segregation in Sport as a Public Health Issue." Cardozo L. Rev., 2019, Vol. 40:1813, 1815-16. <a href="https://cardozolawreview.com/wp-content/uploads/2019/05/6-Leong.40.4.6.pdf">https://cardozolawreview.com/wp-content/uploads/2019/05/6-Leong.40.4.6.pdf</a>; Adrienne N. Milner & Jomills Henry Braddock II. Sex Segregation in Sports: Why Separate Is Not Equal. Praeger, 2016, 2, 5. (arguing that "the concept[] of sex" is a "social construction" that is not itself real, and "sex segregation in sports is ... a consequence of presumed innate biological differences between male and female athletes, which creates and reproduces a dominant sexist ideology that women are physically inferior, although there is no scientific or biological proof that a sex binary exists").
- Elizabeth Sharrow. "Five States Ban Transgender Girls from Girls' School Sports. But Segregating Sports by Sex Hurts All Girls." *The Wash. Post*, Apr. 16, 2021. <a href="https://wapo.st/3EYkbb0">https://wapo.st/3EYkbb0</a> (arguing that single-sex teams reinforce gender stereotypes and suggesting that Title IX's endorsement of single-sex teams was intended to be temporary); see also Robyn Ryle. "The Case of Transgender Athletes. Why Sports Aren't Fair and That's OK." <a href="https://www.newsweek.com/case-transgender-athletes-why-sports-arent-fair-thats-ok-opinion-1569566">https://www.newsweek.com/case-transgender-athletes-why-sports-arent-fair-thats-ok-opinion-1569566</a> (arguing that "sports remain one of the last strongholds for the cult of gender differences" and suggesting that sex is not a meaningful category when it comes to competitive sport).
- The Equal Protection Clause of the Fourteenth Amendment to the United States Constitution already prohibits discrimination against similarly-situated individuals. If the Equal Rights Amendment were layered on top of the existing Equal Protection mandate, courts might well interpret the new amendment as going further than current law and requiring that the government treat males and females not just equally, but the same. See Kim Forde-Mazrui. "Why the Equal Rights Amendment Would Endanger Women's Equality: Lessons from Colorblind Constitutionalism." Duke J. Const. L. & Pub. Pol'y, 2021, Vol. 16(1):22, 33-34, 54. https://scholarship.law.duke.edu/djclpp/vol16/iss1/2/ (explaining that courts would likely interpret the ERA as requiring the strictest of scrutiny for all sex-specific government policies and arguing, from a progressive standpoint, that this is bad for women); see also Inez Stepman. "Equal Rights Amendment Will Replace Equality with Enforced Sameness." The Hill, Jan. 17, 2020. https://thehill.com/opinion/civil-rights/478765-equal-rights-amendment-will-replace-equality-with-enforced-sameness/ (explaining, from a conservative perspective, the dangers of treating men and women the same in all circumstances).
- 60 See Forde-Mazrui, supra note 59, at 38-39 (explaining that the ERA could be interpreted to eliminate single-sex activities such as separate men's and women's sports).
- 61 See, e.g., Doriane Lambelet Coleman & Wickliffe Shreve. "Comparing Athletic Performances: The Best Elite Women to the Boys and Men." Duke Ctr. for Sports L. & Pol'y, 2018. https://law.duke.edu/sites/default/files/centers/sportslaw/comparingathleticperformances.pdf ("there is an average 10-12% performance gap between elite males and elite females"); Tyler K. Jobe et al. "Sex Differences in Performance and Depth of Field in the United States Olympic Trials." J Strength Cond Res., Nov. 2022, Vol. 36(11):3122, 3123-24. https://pubmed.ncbi.nlm.nih.gov/36287179/ (finding that men were 9-13% faster than women in all running events and 6-12% faster in all freestyle swimming events); Jennifer C. Braceras. "Parsing Transgender Equality in Athletics." Bos. Globe, Jun. 24, 2019.

- https://www.bostonglobe.com/opinion/2019/06/24/parsing-transgender-equality-athletics/oVJezCcyPCqCYoMrzJOJ8K/story.html?event=event12 (citing Eric Vilain, a professor of human genetics at UCLA, for the proposition that, with respect to running, "[t]here is 10 to 12 percent difference between male and female athletic performance.").
- Were this the case, we would expect to see the male-female athletic gap continuing to narrow over time. In fact, over the last forty years, the gap has remained steady, despite increased opportunities and funding for women's sports. See Carole Hooven. T: The Story Of Testosterone: The Hormone That Dominates And Divides Us. Henry Holt and Company, 2021, 107; Emma N. Hilton & Tommy R. Lundberg. "Transgender Women in the Female Category of Sport: Perspectives on Testosterone Suppression and Performance Advantage." Sports Med., Dec. 2021, Vol. 51:199, 201. <a href="https://link.springer.com/article/10.1007/s40279-020-01389-3">https://link.springer.com/article/10.1007/s40279-020-01389-3</a>; Valérie Thibault et al. "Women and Men in Sport Performance: The Gender Gap Has Not Evolved Since 1983." J Sports Sci Med., Jun. 2010, Vol. 9(2):214, 219. <a href="https://pmc.ncbi.nlm.nih.gov/articles/PMC3761733/">https://pmc.ncbi.nlm.nih.gov/articles/PMC3761733/</a>.
- 63 Coleman, Navratilova, & Richards-Ross, *supra* note 41 ("The sex differential isn't the result of boys and men having a male gender identity, more resources, better training or superior discipline. It's because they have androgenized bodies.").
- See Doriane Lambelet Coleman. "Sex in Sport." Law & Contemp. Probs., Mar. 2017, Vol. 80:63, 71. <a href="https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=4849&context=lcp">https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=4849&context=lcp</a> (most females have a matching XX pair of chromosomes and most males have an unmatched XY pair, and this genetic standard is the case in all but a few births per thousand); "Sex Begins in the Womb" in Theresa M. Wizemann and Mary-Lou Pardue. Exploring the Biological Contributions to Human Health: Does Sex Matter? National Academies Press, 2001. <a href="https://www.ncbi.nlm.nih.gov/books/NBK222286/">https://www.ncbi.nlm.nih.gov/books/NBK222286/</a> (in utero, "developmental processes differentially organize tissues for later activation" in the male or female; "sex determination and differentiation occur in a series of sequential processes governed by genetic and environmental factors"); FPFW. "Dr Emma Hilton reviews the science supporting the IOC decision to let male-born transgender athletes into female competition." Fair Play for Women, Jul. 14, 2019. <a href="https://fairplayforwomen.com/emma\_hilton/">https://fairplayforwomen.com/emma\_hilton/</a> ("at 7 weeks gestation ... genetic makeup drives sex differentiation into male or female forms, and the dimorphic characteristics associated with sex begin to develop") [hereinafter "Hilton Speech"].
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- 68 "Ohio State Forum." supra note 66.
- 69 Handelsman et al., *supra* note 30, at 816 (increased levels of circulating hemoglobin give males a great capability of transporting oxygen from lungs to tissues, which enhances aerobic energy expenditure); William G. Murphy. "The Sex Difference in Haemoglobin Levels in Adults Mechanisms, Causes, and Consequences." *Blood Revs.*, Mar. 2014, Vol. 28(2):41-7. <a href="https://pubmed.ncbi.nlm.nih.gov/24491804/">https://pubmed.ncbi.nlm.nih.gov/24491804/</a>.
- 70 "Ohio State Forum." supra note 66.
- 71 *Id.* (noting "men's higher aerobic capacity [VO2max], on average" and explaining that the "difference in VO2max can be explained by the fact that men tend to have a higher concentration

of hemoglobin for transporting oxygen in the blood, larger hearts for pumping oxygen rich blood to the working muscles, and larger lungs for oxygenating the blood") (alteration in original); see Hilton & Lundberg, supra note 62, at 201-202 (noting men's "superior cardiovascular and respiratory function," including higher VO2max levels) (citing Russell R. Pate and Andrea Kriska. "Physiological Basis of the Sex Difference in Cardiorespiratory Endurance." Sports Med., Mar.-Apr. 1984, Vol. 1(2): 87-98. <a href="https://pubmed.ncbi.nlm.nih.gov/6567230/">https://pubmed.ncbi.nlm.nih.gov/6567230/</a>); see also Elisa Lodi et al.. "Sex and Physical Exercise: One Size Does Not Fit All." Eur. Heart J. Supp., Dec. 2022, Vol. 24(Supplement\_K). <a href="https://academic.oup.com/eurheartjsupp/article/24/Supplement\_K/suac121.703/6912016">https://academic.oup.com/eurheartjsupp/article/24/Supplement\_K/suac121.703/6912016</a>. (abstract); Hanjabam Barun Sharma & Jyotsna Kailashiya. "Gender Difference in Aerobic Capacity and the Contribution by Body Composition and Haemoglobin Concentration: A Study in Young Indian National Hockey Players." J Clin Diagn Res., Nov. 1, 2016, Vol. 10(11): 9, 12. <a href="https://pubmed.ncbi.nlm.nih.gov/28050360/">https://pubmed.ncbi.nlm.nih.gov/28050360/</a>. (males had greater aerobic capacity than females with similar training & competition level).

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- Nieves et al., *supra* note 73, at 529, 533-34; see also Handelsman et al., *supra* note 30, at 818 (male-female differences in bone geometry result in a male advantage in "leverage for muscular limb power exerted in jumping, throwing, [and] other explosive power activities").
- 75 Nieves et al., supra note 73, at 529; see also Handelsman et al., supra note 30, at 818.
- Andrew Langford. "Sex Differences, Gender, and Competitive Sport." Quillette, Apr. 5, 2019. <a href="https://quillette.com/2019/04/05/sex-differences-gender-and-competitive-sport/">https://quillette.com/2019/04/05/sex-differences-gender-and-competitive-sport/</a>. In addition, male bodies have a lower incidence of stress and osteoporotic fractures than females. Nieves et al. <a href="https://superior.org/">superior.org/</a> note 73, at 529. And females lose bone mass faster and earlier than men as they age. Khaled A. Alswat. "Gender Disparities in Osteoporosis." *J. Clinical Med. Res.*, Apr. 1, 2017, Vol. 9(5):382, 382-83. <a href="https://pmc.ncbi.nlm.nih.gov/articles/PMC5380170/">https://pmc.ncbi.nlm.nih.gov/articles/PMC5380170/</a>.
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- "Ohio State Forum," *supra* note 66; see also Langford, supra note 76 (in skeletal muscle, "males have a higher proportion of type II fibres, which are able to contract quicker and produce more force than their counterparts").
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- Handelsman et al., *supra* note 30, at 804-05 ("after puberty men produce 20 times more testosterone than women" and have 15- to 20-fold greater circulating testosterone than children or women at any age).
- "When is Puberty too Early?" Duke Health, Jul. 7, 2020. <a href="https://www.dukehealth.org/blog/when-puberty-too-early">https://www.dukehealth.org/blog/when-puberty-too-early</a> (most boys begin puberty between the ages of 9 and 14); see also Irvin H. Hirsch. "Men's Health Issues: Biology Of The Male Reproductive System / Puberty In Boys." Merck Manual Consumer Version, Feb. 2025. <a href="https://www.merckmanuals.com/home/men-s-health-issues/biology-of-the-male-reproductive-system/puberty-in-boys">https://www.merckmanuals.com/home/men-s-health-issues/biology-of-the-male-reproductive-system/puberty-in-boys</a> ("In boys, puberty usually occurs between the ages of 10 and 14 years ... However, it is not unusual for puberty to begin as early as age 9.").
- 88 See, e.g., Hooven, supra note 62, at 105 (noting that, by age 15, nearly every boy throws better than even the best girls); see also McKay & Burns, supra note 82 (significant male-female athletic differences emerge around age 12).
- 89 See "Transgender Women Guidelines." *World Rugby*, acessed Jun. 7, 2025. <a href="https://www.world.rugby/the-game/player-welfare/guidelines/transgender/women">https://www.world.rugby/the-game/player-welfare/guidelines/transgender/women</a> [hereinafter "Rugby Report"].
- 90 Stéphane Bermon. "Androgens and Athletic Performance of Elite Female Athletes." *Curr Opin Endocrinol, Diabetes Obes,* Jun. 2017, Vol. 24(3):246, 249. <a href="https://pubmed.ncbi.nlm.nih.gov/28234801/">https://pubmed.ncbi.nlm.nih.gov/28234801/</a>.
- 91 Langford, *supra* note 76; see also John J. McMahon et al. "Sex Differences in Countermovement Jump Phase Characteristics." *Sports*, Jan. 2017, 5(1):8. <a href="https://www.mdpi.com/2075-4663/5/1/8">https://www.mdpi.com/2075-4663/5/1/8</a> (finding that men jumped approximately 24% higher than women, in line with the range of 25%-27% reported in similar studies).
- 92 Langford, supra note 76; see also Jerry R. Thomas & Katherine T. Thomas. "Development of Gender Differences in Physical Activity." Quest, 1988, Vol. 40(3):219, 222. <a href="https://www.tandfonline.com/doi/abs/10.1080/00336297.1988.10483902">https://www.tandfonline.com/doi/abs/10.1080/00336297.1988.10483902</a> ("at 17 years of age the average male throws farther than 99% of the 17-year-old females"); Neil V. Watson. "Sex Differences in Throwing: Monkeys Having a Fling." Trends Cogn Sci., Mar. 1, 2001, Vol. 5(3):98. <a href="https://pubmed.ncbi.nlm.nih.gov/11239802/">https://pubmed.ncbi.nlm.nih.gov/11239802/</a> (study found males were much better than females at throwing accuracy and rather than a learned characteristic, the data indicate that there is an innate component to the sexual differentiation).

- 93 Hilton & Lundberg, supra note 62, at 204.
- 94 Langford, supra note 76.
- Hilton & Lundberg, supra note 62, at 203-04 (even after adjustment for mass, male Olympic weightlifters are 30% stronger than female weightlifters, and even "females who are 60% heavier than males do not overcome strength deficits"); see also Richard W. Bohannon et al.. "Handgrip Strength: A Comparison of Values Obtained From the NHANES and NIH Toolbox Studies." Am. J. OccupTher., Mar./Apr. 2019, Vol. 73(2):7302205080p1. <a href="https://pubmed.ncbi.nlm.nih.gov/30915969/">https://pubmed.ncbi.nlm.nih.gov/30915969/</a> (grip strength, a measure commonly used to indicate overall strength, differed significantly between males and females); D. Leyk et al. "Hand-grip Strength of Young Men, Women and Highly Trained Female Athletes." Eur. J. Appl Physiol., Mar. 2007, Vol. 99(4):415, 415, 419-20. <a href="https://pubmed.ncbi.nlm.nih.gov/17186303/">https://pubmed.ncbi.nlm.nih.gov/17186303/</a> (males have significantly greater grip strength; even strength training by women will rarely make them stronger than the majority of untrained or not specifically trained men).
- 96 Langford, supra note 76.
- 97 Paul Gabrielsen. "Why Males Pack a Powerful Punch." *The University of Utah*, Feb. 5, 2020. <a href="https://attheu.utah.edu/facultystaff/carrier-punch/">https://attheu.utah.edu/facultystaff/carrier-punch/</a> (citing Jeremy S. Morris et al. "Sexual Dimorphism in Human Arm Power and Force: Implications for Sexual Selection on Fighting Ability." *J. Exp Biol.*, Jan. 23, 2020, Vol. 223:1. <a href="https://pubmed.ncbi.nlm.nih.gov/31862852">https://pubmed.ncbi.nlm.nih.gov/31862852</a>).
- 98 James R. Morrow, Jr. & W.W. Hosler. "Strength Comparisons in Untrained Men and Trained Women Athletes." Med Sci Sports Exerc., 1981, Vol. 13(3):194, 196. <a href="https://pubmed.ncbi.nlm.nih.gov/7253873/#:~:text=Results%20indicate%20that%20untrained%20men,strength%20than%20women%20volley%20players">https://pubmed.ncbi.nlm.nih.gov/7253873/#:~:text=Results%20indicate%20that%20untrained%20men,strength%20than%20women%20volley%20players</a> (finding that untrained men were significantly stronger than trained female athletes in terms of relative strength for both the upper and lower body).
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- 100 Hilton & Lundberg, supra note 62, at 202-03.
- 101 Coleman & Shreve, supra note 61.
- 102 Ohio State Forum, supra note 66.
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- 130 Hilton & Lundberg, *supra* note 62, at 204 (discussing "moderately-trained" individuals). The malefemale athletic advantage is also evident in individuals who are not athletically trained. *Id.* (male performance advantages are similar in magnitude in athletes and "untrained people").

- 131 See Orr et al., supra note 24, at 28-29, (taking this position for K-12 schools); see also "IOC 2022 Framework," supra note 28, at 5 (Principle 7.1) ("Athletes should never be pressured by an International Federation, sports organization, or any other party (either by way of eligibility criteria or otherwise) to undergo unnecessary procedures or treatment to meet eligibility criteria.").
- 132 The degree of testosterone suppression required for males to compete in women's events varies by sport. See Section II(A), *infra* (discussing the various testosterone suppression policies of different athletic organizations).
- 133 Hilton & Lundberg, *supra* note 62, at 205; Hooven, supra note 62, at 128 (describing "the physical benefits of male puberty" that do not "disappear with the testosterone reduction that comes with a male-to-female gender transition").
- 135 Hilton & Lundberg, supra note 62, at 205; see also Hooven, supra note 62, at 121 (certain effects of testosterone, such as "lengthening, enlarging, and strengthening [of bones]—are, for the most part, permanent"); Handelsman et al., supra note 30, at 818 ("developmental bone effects of androgens are likely to be irreversible.").
- 136 Hilton & Lundberg, supra note 62, at 205.
- 137 Id.
- Taryn Knox et al. "Transwomen in Elite Sport: Scientific and Ethical Considerations." *J Med Ethics*, Jun. 2019, Vol. 45(6):395, 398. <a href="https://pubmed.ncbi.nlm.nih.gov/31217230/">https://pubmed.ncbi.nlm.nih.gov/31217230/</a>. (citing L.J. Gooren et al. "(Patho)physiology of Cross-Sex Hormone Administration to Transsexual People: The Potential Impact of Male-Female Genetic Differences." *Andrologia*, Feb. 2015, Vol. 47(1):5-19. <a href="https://pubmed.ncbi.nlm.nih.gov/25495275/">https://pubmed.ncbi.nlm.nih.gov/25495275/</a>).
- 139 Hilton & Lundberg, *supra* note 62, at 205 (citing Louis J.G. Gooren & Mathijs C.M. Bunck. "Transsexuals and Competitive Sports." *Eur J Endocrinol.*, Oct. 2024, Vol. 151(4):425. <a href="https://pubmed.ncbi.nlm.">https://pubmed.ncbi.nlm.</a> nih.gov/15476439/); see also "Rugby Report," *supra* note 89 (most studies suggest muscle mass reduced by 5-10% after hormone therapy).
- 140 Hilton & Lundberg, supra note 62, at 205.
- 141 *Id.* at 207; see also Hooven, supra note 62, at 128 (noting that, "[i]n some trans women, no muscle at all is lost," and explaining that "the muscle gain in female-to-male transgender people, who move from female to male levels of [testosterone], is significantly larger than the muscle lost in the other direction").
- 142 Blair R. Hamilton et al. "Integrating Transwomen and Female Athletes with Differences of Sex Development (DSD) into Elite Competition: The FIMS 2021 Consensus Statement." *Sports Med.*, Jul. 2021, Vol. 51(7):1401, 1407. <a href="https://pubmed.ncbi.nlm.nih.gov/33761127/">https://pubmed.ncbi.nlm.nih.gov/33761127/</a> ("different populations of muscle cells may express different phenotypes of androgen sensitivity, raising the possibility that the muscle response to training may be different between men and women at the same testosterone concentrations").
- 143 For example, one study found that, even after 12 months of testosterone suppression, the knee strength of trans-identifying biological males remained "about 50% stronger" than a reference group of females. See Hilton & Lundberg, supra note 62, at 207 (citing Anna Wiik et al. "Muscle Strength, Size, and Composition Following 12 Months of Gender-Affirming Treatment in Transgender Individuals." J Clinical Endocrinol Metab., Mar. 1, 2020, Vol. 105(3):805. <a href="https://pubmed.ncbi.nlm.nih.gov/31794605/">https://pubmed.ncbi.nlm.nih.gov/31794605/</a>).
- 144 See id. at 208 (citing Richard W. Bohannon et al. "Reference Values for Adult Grip Strength Measured with a Jamar Dynamometer: A Descriptive Meta-Analysis." Physiotherapy, Mar. 2006, Vol. 92(1):11. <a href="https://www.sciencedirect.com/science/article/abs/pii/S0031940605000878">https://www.sciencedirect.com/science/article/abs/pii/S0031940605000878</a>) (describing study

- finding that grip strength of trans-identifying biological males with a mean of eight years of hormone therapy was "25% higher than the female reference value"); Joanna Harper et al. "How does Hormone Transition In Transgender Women Change Body Composition, Muscle Strength And Haemoglobin? Systematic Review With A Focus On The Implications For Sport Participation." Br J Sports Med., Feb. 2021, Vol. 55:865. https://bjsm.bmj.com/content/bjsports/55/15/865.full.pdf ("even after 3 years of hormone therapy" trans-identifying male athletes may retain strength advantages over biological females).
- Hilton & Lundberg, supra note 62, at 207 (citing E. Van Caenegem et al. "Preservation of Volumetric Bone Density and Geometry in Trans Women During Cross-Sex Hormonal Therapy: A Prospective Observational Study." *Osteoporos Int.*, Jan. 2015, Vol. 26(1):35. <a href="https://pubmed.ncbi.nlm.nih.gov/25377496/">https://pubmed.ncbi.nlm.nih.gov/25377496/</a>). Significantly, muscle memory makes it likely that males who were athletically trained prior to undergoing hormone therapy can make up any loss in strength from testosterone reduction with continued training. See Knox et al., supra note 138, at 398 (strength training prior to muscle mass loss makes it "easier to regain muscle mass later"); Hilton & Lundberg, supra note 62, at 210 (noting that "muscle memory" in males who trained prior to hormone therapy may assist them in building and maintaining muscle as they retrain, suggesting that although testosterone is crucial for developing muscle mass, particularly during puberty, maintenance of that muscle mass "is not crucially dependent on circulating testosterone levels").
- 146 Hilton & Lundberg, supra note 62, at 208.
- 147 Hilton & Lundberg, *supra* note 62, at 208-209; see also Harper et al., *supra* note 144 (reporting that hemoglobin levels decrease to those seen in biological women after just months of hormone therapy).
- 148 Christie Allen. "Women Are Routinely Excluded from Exercise Research Across the Country. A New BYU Study Shows Why That's Misguided." BYU University Communications, Jan. 26, 2023. <a href="https://news.byu.edu/women-are-routinely-excluded-from-exercise-research-across-the-country-a-new-byu-study-shows-thats-misguided#:~:text=A%20new%20BYU%20study%20published%20in%20the%20Journal,women%E2%80%99s%20performance%20was%20just%20as%20consistent%20as%20men%E2%80%99s.
- Timothy A Roberts et al. "Effect of Gender Affirming Hormones on Athletic Performance in Transwomen and Transmen: Implications for Sporting Organisations and Legislators." *Br. J Sports Med.*, 2021, Vol. 55:577, 577, 580. <a href="https://pubmed.ncbi.nlm.nih.gov/33288617/">https://pubmed.ncbi.nlm.nih.gov/33288617/</a> (after a one-year period of testosterone suppression, trans-identified biological males still maintained an advantage in push-ups and sit-ups and "ran 1.5 miles 21% faster than their female counterparts"; after two years of hormone therapy they lost an athletic advantage in ability to perform push-ups and sit-ups but "were still 12% faster").
- 150 See Verified Compl. at 20 & tbl. 6, Soule v. Connecticut Ass'n of Schools, 3:20-cv-00201-RNC (D. Conn. Feb. 12, 2020), ECF No. 1. <a href="https://law.justia.com/cases/federal/district-courts/connecticut/ctdce/3:2020cv00201/137997/242/">https://law.justia.com/cases/federal/district-courts/connecticut/ctdce/3:2020cv00201/137997/242/</a>.
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- 152 Richards v. U.S. Tennis Ass'n, 93 Misc. 2d 713, 721-22 (N.Y. App. Div. 1977) <a href="https://www.aclu.org/wp-content/uploads/legal-documents/asset\_upload\_file31\_27714.pdf">https://www.aclu.org/wp-content/uploads/legal-documents/asset\_upload\_file31\_27714.pdf</a> (holding that under the New York Human Rights Law, Executive Law, § 290 et seq., the United States Tennis Association could not use the "Barr body test" as the sole criterion for determining eligibility to play in the women's division of the U.S. Open, "where[,] as here, the circumstances warrant consideration of other factors").
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If a biological male wins a women's event, a female athlete loses the event;

If a biological male is offered a spot on a women's team with limited roster spots, a female athlete loses a roster spot;

If a biological male is allowed to race in a women's event, a female athlete loses the opportunity to compete;

If a biological male is allowed to take the field with a women's team, a female athlete loses playing time;

And if a biological male is granted a women's athletic scholarship, a female athlete may lose a chance to attend the college of her dreams.

This is sex discrimination. And it is unlawful.

**Independent**Womenlaw center®

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