Text of Spoken Testimony:

Dear Chairperson Moonen, and members of the Maine Legislature Committee on Judiciary,

My name is Greg Brown. I am from Kearney, NE where I am a Professor of Exercise Science. I am a Fellow of the American College of Sports Medicine, and an American College of Sports Medicine Certified Exercise Physiologist. As an Exercise Physiologist I have spent the past three decades studying and teaching about the anatomical and physiological factors that influence health and human performance. I have previously provided expert reports for numerous legal cases and before numerous state legislative bodies and I have published papers in peer reviewed scientific journals and made presentations at scientific meetings on the importance of allowing only those who are indeed female to compete in girls' and women's sports. My comments represent my own analysis of the available science and do not represent a statement from my employer.

You will likely hear people, even health care providers and scientists, claim that sex is complicated and confusing. But that is not true, and they are being intentionally disingenuous about a universal and simple truth. That simple truth is that human beings are either male or female. Every human being that has ever existed or currently exists owes their existence to the unification of the male gamete (sperm) with the female gamete (ova). There is no other option when it comes to human procreation. The differences between males (meaning boys and men) and females (meaning girls and women) are blatantly obvious in 99.98% of humans and can be easily observed and accurately recorded at birth. For the 0.02% of humans in which sex is not obvious they are still either male or female but suffer from a disorder of sex development that requires further laboratory testing to determine their sex.

There are important biological differences between males (meaning boys and men) and females (meaning girls and women). These differences give males inherent biologically based athletic advantages when compared to similarly aged, trained, and talented females at all ages and all levels of sports.

You will likely hear some people say that sex does not influence sports performance before puberty, and that is also untrue. There are many peer reviewed scientific papers demonstrating that, before the onset of puberty, boys outperform girls on physical fitness tests. In the past year I have published research demonstrating that in the USA Track and Field 8-and-under age group boys run faster, throw farther, and jump farther than girls of the same age. I have also published research showing that in the 10-and-under age group for USA National Club Swimming Association boys swim faster than girls of the same age in most competitive events.

LD 868 – "An Act to Ensure Equity and Safety in Athletics, Restrooms, Changing Rooms and Housing at Elementary, Secondary and Postsecondary Schools" is common sense legislation that affirms the scientific truth that males and females are different, and that females have a right to sporting competitions, bathrooms, locker rooms, and other opportunities that are free from the intrusion of males. I hope you will approve this bill.

Thank you

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More in-depth information:

Dear Chairperson Moonen and members of the Maine Legislature Committee on Judiciary,

LD 868 – "An Act to Ensure Equity and Safety in Athletics, Restrooms, Changing Rooms and Housing at Elementary, Secondary and Postsecondary Schools" concerns many more aspects of society than only sports. However, based on my expertise as an Exercise Physiologist I am going to focus on sports. The information that follows represents a considerably abbreviated summary of the most recent expert report I have written on this topic, which spans 151 pages of text and data, and includes references to almost 200 scientific papers, policy statements from sport governing bodies, and other sources of information all supporting the following three main points:

1) There are important biological differences between human males (boys & men) and human females (girls & women)

2) These biological differences confer inherent athletic advantages to boys & men even before the onset of puberty

3) The athletic advantages conferred by male biology are not erased by transgender identification and/or the use of puberty suppression, testosterone suppression, or cross sex hormones

1) There are important biological differences between human males (boys & men) and human females (girls & women)

It is an indisputable and basic biological fact that human sexual reproduction requires the male gamete (a sperm) to unite with the female gamete (an ova) to propagate the human species. Therefore, human sexual reproduction is binary, meaning there are only two options. Furthermore, humans are also dimorphic, meaning there are two distinct body forms (i.e. male and female), each organized around the formation of its respective gametes. Sex is, therefore, an extremely important biological factor that is determined at conception based on the presence of X (female) and Y (male) chromosomes. Indeed, every cell in the human body has a sex and every system in the body is influenced by sex.

Although there are disorders of sex development (DSDs; sometimes called differences of sexual development) in which biological sex is ambiguous at birth, these conditions are very rare (approximately 0.017% of all births) and are a separate issue from gender dysphoria in which a person's perception of gender does not match their biological sex [1-5]. In the 2021 paper *Considering Sex as a Biological Variable in Basic and Clinical Studies: An Endocrine Society Scientific Statement* [5] the authors state that "Sex is dichotomous", "a clear causative biological underpinning of gender identity remains to be demonstrated", and "sex often influences gender [identity], but gender [identity] cannot influence sex." Another important point is made by Cohn who wrote "there is no currently available [laboratory] test (brain, DNA, or otherwise) that can reliably differentiate between a trans-identified and a non-trans identified person" [4]. In other words, everything we know about a transwoman or transgirl is that they are biologically male and a transman or transboy is biologically female. The importance of biological sex on growth,

development, health, and risk of disease cannot be understated and has been a point of emphasis in research and clinical application from the National Institutes of Health, Institute of Medicine, and most other medical and biologically based scientific professional societies for almost 30 years [3,6].

2) These biological differences confer inherent athletic advantages to boys & men even before the onset of puberty

Briefly summarized, boys & men have more muscle mass, less fat mass, higher bone mineral density, larger hearts and lungs, and are bigger, faster, and stronger than comparably aged and trained girls & women. The differences between boys and girls before puberty are small but are statistically significant and meaningful. The onset of puberty magnifies the differences, so they are much more apparent when comparing women to men. This information has been well established by human experience, in innumerable research papers, and can be found in pretty much any textbook on the topic of Exercise Physiology or Fitness Testing.

Fitness testing in children as young as 3 years old shows that boys perform better than girls of the same age on tests of muscular strength, muscular endurance, and aerobic fitness [7-12]. The youth records from USA Track and Field show boys outperforming girls in every age group from 8-and-under through 17-18 years old and in every event [13]. I have recently published papers in the European Journal of Sport Science clearly demonstrating that boys ages 8-and-under and 9-10-years-old run faster, throw farther, and jump farther in track & field competition than do girls of the same age[14,15]. I have also published another paper in the European Journal of Sport Science clearly demonstrating that boys aged 10-and-under swim faster than girls of the same age in 9 out of 12 short-course swimming events [16]. With the typical age of onset of puberty being 10 ½ years old in girls and 11 ½ years old in boys, it can very reasonably be assumed that these three papers document male sex-based athletic advantages before the onset of male puberty.

Comparing competitive performance after age 11, boys and men run 10-15% faster than girls & women, jump 15-20% longer and higher, and can lift 30-60% more weight than comparably aged and trained girls and women [17-30]. To help put this into perspective, based on NCAA Outdoor Championship running performance, the typical time difference between first place and second place is often 0.5-0.7% or less, and the difference between a gold medal and no medal is typically less than 2%.

To illustrate the differences between males and females, we do not need to look any further than high school track and field. Using data on Athletic.net to compare the performance of all high school boys and girls in outdoor track in the United States, the following information comes to light:

- In 2024 the fastest time reported for a high school girl in the 100-meter run was 11.16 seconds. On May 5, 2025 this database only listed 4,039 high school boys 100-meter times for 2024, with the slowest time being 11.02 seconds. The fastest time for a boy was 9.93 seconds.
- In 2024 the fastest time reported for a high school girl in the 200-meter run was 22.66 seconds. There were 5,655 faster times recorded for high school boys in 2024 with the

fastest being 20.40 seconds.

- In 2024 the fastest time reported for a high school girl in the 400-meter run was 51.66 seconds. There were 6,690 faster times recorded for high school boys in 2024 with the fastest being 44.20 seconds.
- In 2024 the fastest time reported for a high school girl in the 800-meter run was 2:03.48 (2 minutes, 3.48 seconds). There were 9,076 faster times recorded for high school boys in 2024 with the fastest being 1:47.55.
- In 2024 the fastest time reported for a high school girl in the 1500-meter run was 4:08.86. There were 580 faster times recorded for high school boys in 2024 with the fastest being 3:36.25.
- In 2024 the longest distance reported for a high school girl for the long jump was 21 feet 2.25 inches. There were 3,929 longer jumps recorded for high school boys in 2024, with the longest being 25 feet 7.25 inches.
- In 2024 the highest distance reported for a high school girl for the high jump was 6 feet 2 inches. On May 5, 2025 this database only listed 1,415 high jump performance for high school boys in 2024 with the shortest being 6 feet 4 inches. The highest high jump performance for boys in 2024 was 7 feet 4.25 inches.
- In 2024 the longest distance reported for a high school girl for the shot put was 54 feet 10.75 inches using a 4 kg (8.8 pound) shot. There were 471 longer throws recorded for high school boys in 2024, with the longest being 75 feet 1 inch using a heavier 12-pound shot.
- In 2024 the longest distance reported for a high school girl for the javelin was 169 feet 6 inches using a 600-gram javelin. There were 425 longer throws recorded for high school boys in 2024, with the longest being 234 feet 1 inch using a heavier 800-gram javelin.
- In 2024 the longest distance reported for a high school girl for the discus was 175 feet 7 inches using a 1-kilogram discus. There were 211 longer throws recorded for high school boys in 2024, with the longest being 213 feet 0 inches using a heavier 1.6-kilogram discus.
- Collectively, the information presented above indicates that within only one year of High School Competition, the best high school female track & field athletes in the United States would lose to hundreds or thousands of high school age boys in every event.

These sex-based differences in athletic performance are not because the boys train better or harder, or eat better, or have better coaching; the boys outperform the girls because of biologically based factors that come from male anatomy & physiology.

3) **The athletic advantages conferred by male biology are not erased by transgender identification and/or the use of puberty suppression, testosterone suppression, or cross sex hormones**

Some will argue that if males take puberty suppressing or testosterone suppressing drugs and cross-sex hormones the athletic advantages conferred by male biology are erased, but that argument is not supported by research. Of eight separate research studies published since 2015 measuring the effects of male-to-female hormone administration on muscle strength, three showed no decrease in muscle strength after 12 months of androgen suppression and cross-sex hormone use [31-33], and five others show only a 4-9% reduction in muscle strength [34-38] after 6-24 months of androgen suppression and cross-sex hormone use (keep in mind that men are typically 30-60% stronger than women). After 2 years of androgen suppression and cross-sex hormone use, the handgrip strength in these studies showed that the male-to-female transwomen were still stronger than 95% of comparably aged women. Even after 14 years of male-to-female hormone use the biologically male transwomen were still 18% stronger than comparably aged women [39]. In a study of transgender US Air Force personnel, Roberts et al. [40] reported that after 2 years of androgen suppression and cross-sex hormone use the difference between females and males in the number of sit ups and pushups performed in 1 minute was erased. In contrast, in another study of transgender US Air Force personnel Chiccarelli et al. [41] indicates that even after 4 years of androgen suppression and cross-sex hormone use the biologically male subjects still performed more pushups and sit-ups in one minute than did comparable women.

There are less data on endurance performance. One assessment of maximal oxygen consumption (VO_2max; a critical determinant of endurance performance) in transwomen indicates that even after 14 years of testosterone suppression and cross-sex hormone use the absolute VO_2max was 20% higher in the biologically male transwomen than in comparable women. Hamilton et al.[42] indicate that overweight and poorly conditioned transwomen still have a higher absolute VO_2max than highly fit and physically active women. Roberts et al. [40] reported that, in transwomen US Air Force personnel, 1.5 mile running performance was still 12% faster in the biologically male subjects than comparably aged women even after 2 years of testosterone suppression and cross-sex hormone use. In contrast Chiccarelli et al. [41] reports that after 2 years of testosterone suppression and cross-sex hormone use in male-to-female US Air Force personnel the difference between females and males in the time to run 1.5 miles was erased. Collectively, it's difficult to say conclusively how testosterone suppression and cross-sex hormone use influence endurance performance, but the currently available data suggest that male advantages are not entirely erased even after many years.

Keeping in mind that men typically have 12 kg (26 lbs.) more muscle mass than women, a number of longitudinal research studies show that male-to-female hormone use only reduces muscle mass by 2.4 kg (5 lbs.) over the course of up to 3 years [31,32,34,35,38,43-51]. Finally, four recent review papers [1,21,52,53], an in-depth evaluation by World Rugby [54], another by FINA [55] (the international federation for administering international competitions in water sports), and another by the United Kingdom Sports Councils [56] summarized the research on the changes in physiological factors that influence athletic performance and how these factors are affected by male-to-female hormone use, and all of these scholarly reviews came to the same conclusions; that a year or more of testosterone suppression and cross-sex hormone use does not erase the inherent athletic advantages biologically conferred upon males. World Rugby further concluded that transwomen cannot safely be included in women's rugby due to the inherent advantages conferred by biological male sex [54].

Of relevance to middle and high school sports, it is well known and demonstrated that males in this age group outperform females on tests of muscular strength, muscular endurance, aerobic fitness, and in most areas of athletic performance [7-12,19,30]. McManus and Armstrong [57] stated it well when they wrote "Sexual dimorphism underlies much of the physiologic response to exercise" and "Young girl athletes are not simply smaller, less muscular boys." It is also important to note that a male-to-female individual will never experience a menstrual cycle, or exercise induced amenorrhea, both of which cause variations in hormones that can have profound effects on health and athletic performance [58,59]. In a paper evaluating muscle strength in transgender youth, Tack et al. [33] observed that in 16-year-old male-to-female subjects the use of anti-androgens reduced the age associated increases in handgrip strength and muscle mass, but did not eliminate the advantages in muscle mass, body composition, and strength inherent to biological males. Another study indicates that after approximately 1 year of puberty blockers the male-to-female teenagers still had more lean body mass and less fat mass than age matched females [60] while another paper demonstrates that after 8 years of puberty blockers and cross sex hormones administered to teenagers through early adulthood the male advantages in lean body mass were not eliminated [61]. And finally, recent papers demonstrate that the use of puberty blockers and cross sex hormones administered to teenagers through early adulthood did not eliminate male advantages in adult body height [62,63]. We know that body height is an advantage in some sports, and having more lean body mass is advantageous in almost all sports. We also know that taller body height and greater lean body mass provide males with athletic advantages over similarly aged, trained, and talented females. These inherent biologically based male athletic advantages cannot be overcome by females through desire, training, nutrition, or coaching. Therefore, it is reasonable to conclude that current evidence indicates that male athletic advantages are not erased by having a transgender identity with or without the use of puberty blockers, testosterone suppression, or cross sex hormones.

Other Information to Consider

<u>The Myth that "There Aren't That Many Transgender Athletes"</u>

Some will claim that there are so few transgirls and transwomen who compete in female sports that their impact is negligible. This statement in and of itself acknowledges that these transgender athletes have inherent advantages when compared to similarly aged, trained, and talented females and also suggests that unfairness in sports should be tolerated if only a few athletes are engaged in unfair practices.

The organization Fair Play for Women, in a January 13, 2024 report titled "*How trans inclusion in sport is harming women and girls*"[A] presents a compilation of "around 50 personal testimonies representing 25 sports" in which female athletes have been subjected to (among other things) "Losing out on records, rankings or on opportunities to participate" due to the inclusion of transwomen (i.e. male) athletes. Included within this report are anecdotal accounts of female athletes who have ceased participating in sports out of concerns for personal safety, fairness, and religious beliefs due to the presence of transwomen (i.e. male) athletes. In the

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[A] https://fairplayforwomen.com/new-report-how-trans-inclusion-in-sport-is-harming-women-and-girls/

United Nations "*Report of the Special Rapporteur on violence against women and girls, its causes and consequences*", it is stated that allowing males to compete in female sports has caused "…over 600 female athletes in more than 400 competitions…" to lose "…890 medals in 29 different sports".[B] As of January 28, 2025, the website shewon.org[C] reports that "…males in women's sporting events and other types of competitions expressly for women" have displaced 766 female athletes from receiving 1088 "medals or records, scholarships or other opportunities" in 529 competitions in 40 sports. The website hecheated.org[D] provides "A record of MALES who have robbed FEMALE athletes of success and opportunities in sport". This website indicates that as of January 31, 2025, there have been "3,501+ stolen victories", "5,937 top 3 finishes", and "11,230+ total events" in which males have displaced females within female sports.

The Myth of the "Transgender Brain"

Some will also claim that transgender individuals have a "brain sex" that differs from the rest of their biological sex and will undoubtedly support this claim by citing research using magnetic resonance imaging (MRI), computed tomography (CT), or other imaging studies of the brains of transgender individuals. However, if the data were as conclusive as claimed, then a brain scan could be used to provide a diagnosis of being transgender [4]. Furthermore, brain scans don't definitively explain transgender identity because current research hasn't found a consistent, reliable pattern in brain structures that clearly differentiates a transgender person from other people. Furthermore, there is considerable overlap in brain structure between males and females. This means that there is no single brain structure or combination of structures that can be identified through imaging to clearly distinguish a person's gender identity. Particularly important for sports, the regions of the brain that are purported to be associated with being transgender are not parts of the brain associated with growth, development, motor control, or other factors relevant to sport performance [64].

Male Athletes with Disorders of Sex Development

While most of the information presented above focuses on transgender individuals, women's boxing in the 2024 summer Olympic games brought to the forefront the issue of males with DSDs competing in the female category. As previously mentioned, such DSDs are rare (approximately 0.017% of all children)[2]. These types of DSDs would very likely be diagnosed at birth or shortly thereafter in the United States of America and other countries with current advanced medical practices and would certainly be evident at puberty when the child exhibits a male pattern growth spurt and no signs of menstruation[5].

Males with DSDs competing in the female category is not a new issue as it has plagued women's sports since 2009 when Caster Semenya began competing in world and Olympic championships in the women's 800m run. Through research and legal evaluation, it has been determined that males with DSDs that make their sex ambiguous (and thus may be misidentified as female) still possess athletic advantages over similarly aged, trained, and talented females if

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[B] https://documents.un.org/doc/undoc/gen/n24/249/94/pdf/n2424994.pdf
[C] https://www.shewon.org/
[D] https://www.hecheated.org/

the male's cells are responsive to testosterone [65]. An international group of 31 sport scientists (including myself) recently published an invited editorial in the Scandinavian Journal of Medicine and Science in Sports reiterating the importance of protecting the safety and fairness of girls' and women's sports by preventing the infiltration of male advantages (including males with DSDs) into female sports [66,67].

Conclusion

In summary, human beings are either male or female; there is not an in-between or third option. In sports that depend on muscle strength, muscle power, muscular endurance, or speed males have undeniable biologically based athletic advantages over similarly aged, trained, and talented females. These athletic advantages are present before the onset of puberty and are magnified by male puberty. Transwomen and transgirls are biologically male, and research currently indicates that neither transgender identity nor extended use of puberty blockers, testosterone suppression, or cross sex hormones erases the male biological athletic advantages. The issue of males wanting to compete in girls' sports is not just an abstract concern but is happening here in Maine, across the United States, and across the world. LD 868 – "An Act to Ensure Equity and Safety in Athletics, Restrooms, Changing Rooms and Housing at Elementary, Secondary and Postsecondary Schools" is common sense legislation that affirms the scientific truth that males and females are different, and that females have a right to sporting competitions, bathrooms, locker rooms, and other opportunities that are free from the intrusion of males. I hope you will approve this bill.

Sincerely,

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These comments represent my own analysis of the available science and do not represent an official statement from my employer

Personal Qualifications on this matter

I serve as Professor of Exercise Science in the Department of Kinesiology and Sport Sciences at the University of Nebraska Kearney, where I teach classes in Exercise Physiology among other topics. I have served as a tenured (and nontenured) professor at universities since 2002.

In August 2002, I received a Doctor of Philosophy degree from Iowa State University, where I majored in Health and Human Performance, with an emphasis in the Biological Bases of Physical Activity. In May 1999, I received a Master of Science degree from Iowa State University, where I majored in Exercise and Sport Science, with an emphasis in Exercise Physiology.

I have authored or co-authored more than 60 refereed publications and more than 70 refereed presentations in the field of Exercise Science. I have authored chapters for multiple books in the field of Exercise Science. And I have served as a peer reviewer for over 30 professional journals, including *The American Journal of Physiology*, the *International Journal of Exercise Science*, the *Journal of Strength and Conditioning Research*, *Therapeutic Advances in Endocrinology and Metabolism*, *Sports Medicine*, and *The Journal of Applied Physiology*.

My areas of research have included the endocrine response to testosterone prohormone supplements in men and women, the effects of testosterone prohormone supplements on health and the adaptations to strength training in men, the effects of energy drinks on the physiological response to exercise, assessment of various athletic training modes in males and females, and sex-based differences in athletic performance. Articles that I have published that are closely related to topics that I discuss in this expert report include:

- Studies of the effect of ingestion of a testosterone precursor on circulating testosterone levels in young men. Douglas S. King, Rick L. Sharp, Matthew D. Vukovich, Gregory A. Brown, et al., *Effect of Oral Androstenedione on Serum Testosterone and Adaptations to Resistance Training in Young Men: A Randomized Controlled Trial*, JAMA 281: 2020-2028 (1999); G. A. Brown, M. A. Vukovich, et al., *Effects of Anabolic Precursors on Serum Testosterone Concentrations and Adaptations to Resistance Training in Young Men*, Int J Sport Nutr Exerc Metab 10: 340-359 (2000).

- A study of the effect of ingestion of that same testosterone precursor on circulating testosterone levels in young women. G. A. Brown, J. C. Dewey, et al., *Changes in Serum Testosterone and Estradiol Concentrations Following Acute Androstenedione Ingestion in Young Women*, Horm Metab Res 36: 62-66 (2004.)

- A study finding (among other things) that body height, body mass, vertical jump height, maximal oxygen consumption, and leg press maximal strength were higher in a group of physically active men than comparably active women, while the women had higher percent body fat. G. A. Brown, Michael W. Ray, et al., *Oxygen Consumption, Heart Rate, and Blood Lactate Responses to an Acute Bout of Plyometric Depth Jumps in College-Aged Men and Women*, J. Strength Cond Res 24: 2475-2482 (2010).

- A study finding (among other things) that height, body mass, and maximal oxygen consumption were higher in a group of male NCAA Division 2 distance runners, while women NCAA Division 2 distance runners had higher percent body fat. Furthermore, these male athletes had a faster mean competitive running speed (~3.44 min/km) than women (~3.88 min/km), even though the men ran 10 km while the women ran 6 km. Katherine Semin, Alvah C. Stahlnecker, Kate A. Heelan, G. A. Brown, et al, *Discrepancy Between Training, Competition and Laboratory Measures of Maximum Heart Rate in NCAA Division 2 Distance Runners*, Journal of Sports Science and Medicine 7: 455-460 (2008).

- A presentation at the 2021 American Physiological Society New Trends in Sex and Gender Medicine Conference entitled "Transwomen Competing in Women's Sports: What We Know and What We Don't".

- I have also authored an August 2021 entry for the American Physiological Society Physiology Educators Community of Practice Blog (PECOP Blog) titled "The Olympics, Sex, and Gender in the Physiology Classroom, and a May 2023 entry for the PECOP Blog titled "The Olympics, sex, and gender in the physiology classroom (part 2): Are there sex based differences in athletic performance before puberty?" I have also authored an April 17, 2023 post for the Center on Sport Policy and Conduct titled "Should Transwomen be allowed to Compete in Women's Sports? A view from an Exercise Physiologist."

- A presentation at the 2022 annual meeting of the American College of Sports Medicine titled "Comparison of Running Performance Between Division and Sex in NCAA Outdoor Track Running Championships 2010-2019." And a presentation at the 2023 annual meeting of the American College of Sports Medicine titled "Boys and Girls Differ in Running and Jumping Track and Field Event Performance Before Puberty."

- A letter to the editor in JAMA Pediatrics in which I and my co-authors point out the inherent male athletic advantages before and after puberty, state that transwomen are biologically male, and that allowing male bodies into female sports is detrimental to female athletes.

- Two recent papers published in the European Journal of Sports Science in which my colleagues and I evaluated competitive sports performance in children aged 10-and-under in national championship track & field meets in the United States of America. In these papers we report that, when comparing the male and female performances statistically and when comparing the individual best male performance to the best female performances numerically, males in the 8-and-under and 9-10-year-old age groups ran 2.9-6.7% faster than females in the 100m, 200m, 400m, 800m, and 1500m events, jump 3.9-4.7% farther in long jump, and throw 6.5-32.6% farther in shot put and javelin throw. Because running, jumping, and throwing are fundamental skills in many sports these data can be Because running, jumping, and throwing are fundamental skills in many sports these data can be generalized as being indicative of prepubertal male advantages in all sports in which running, jumping, or throwing are determinants of athletic performance.

- Another recent paper published in the European Journal of Sports Science in which my colleagues and I evaluated competitive swimming performance in children aged 10-and-

under in national championship short course swim meets in the United States of America. In this paper we report that, when comparing the male and female performances statistically, the males were 1.16-2.63% faster in 8 out of 12 events and the data approached statistical significance (P=0.055) in a ninth event. There were no statistically significant sex-based differences in performance in the remaining 3 events.

- A recent paper entitled "The IOC framework on fairness, inclusion and non-discrimination on the basis of gender identity and sex variations does not protect fairness for female athletes" that has been published in the Scandinavian Journal of Medicine and Science in Sports in which a team of 26 scholars from numerous countries reiterates the importance of sex as a biological determinant of athletic performance that favors males. Furthermore, we point out that research to date indicates that testosterone suppression and cross sex hormone use does not erase male biological athletic advantages.

- A "Rapid Response" in the British Journal of Sports Medicine in which I and a co-author point out some methodological and data interpretation flaws in a paper evaluating the physical fitness of purportedly athletic transgender individuals compared to athletic non-transgender individuals.

- An invited editorial entitled "Fair and Safe Eligibility Criteria for Women's Sport" that has been published in the Scandinavian Journal of Medicine and Science in Sports. In this paper a team of 32 scholars from numerous countries reiterates the importance of sex as a biological determinant of athletic performance that favors males. Further, we provide suggestions on how to screen athletes to exclude male advantages from the female category. As a team we have also published a response to a critique of this paper in this same journal.

- An invited editorial in the journal Translational Exercise Biomedicine in which my colleagues and I critique the paper "A unique pseudo-eligibility analysis of longitudinal laboratory performance data from a transgender female competitive cyclist" by Hamilton et al. (2024).

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