Should women transgender athletes be able to take part in sporting competitions against cisgender women?

What they said...

There is no conclusive evidence that suggests transgender athletes create an unfair playing field for cisgender athletes, so it is wrong to exclude them from sports at any level' Editorial, 'The Duquesne Duke', Duquesne University

'Imagine your daughter... is denied a win or a college scholarship - all because she has to compete against boys who identify as girls'

Bianca Stanescu, the mother of a Connecticut cisgendered female college track athlete

The issue at a glance

On September 6, 2021, the Council of Europe (Europe's leading human rights organisation) announced that on September 20 it would stage an international online conference seeking to extend the participation rights of transgender and intersex athletes in sporting competition around the world. This is in part a follow-on from the participation of transgender athletes at the 2021 Tokyo Olympics.

On August 2, 2021, New Zealander weightlifter Laurel Hubbard become the first openly trans athlete to compete in the Olympics. Hubbard failed on all three of her snatch lifts, eliminating her before the clean and jerk round, and without a valid lift finished at the bottom of the 87 kilogram plus competition. Her presence, however, was part of the debut of transgender athletes gaining selection for Olympic competition.

United States transgender athlete, Chelsea Wolfe, was selected for the US BMX team. Wolfe was selected as an alternate, meaning she made the team but would only compete at the games if two other Team USA athletes were unable to compete in Tokyo.

The International Olympic Committee (IOC) has announced that it will be reviewing the rules that currently regulate the terms under which transgender athletes are able to compete. Opposition to transgender athletes typically focuses on transgender women where their genetically determined physiological attributes are claimed to give them an unfair advantage. It is disputed whether treatments such as hormone replacement therapy can adequately reduce the advantages transgender athletes are said to have.

The Olympic Committee currently requires that transgender women to declare their gender and not change that assertion for four years, as well as to demonstrate a testosterone level of less than 10 nanomoles per litre for at least one year prior to competition and throughout the period of eligibility.

There are those who maintain these regulations are inadequate. Others claim that any more proscriptive regulations, including a direct ban, would be discriminatory.

Background

The gender terms glossary below has been abbreviated and slightly modified from that

supplied by the United States Human Rights Campaign (HRC). The full HRC text can be accessed at 🖸

The information on 'Transgender people in sports' is abbreviated from a Wikipedia entry with the same title which can be accessed in full at 🖸

Gender Terms Glossary

Cisgendered: A term used to describe a person whose social gender identity aligns with their physiological sexual characteristics and the sexual identity assigned them at birth. By extension, cismen and ciswomen have a social gender identity in accord with their physiological sexual attributes at birth and the social sexual identity then assigned to them.

Gender dysphoria: Clinically significant distress caused when a person's assigned birth gender is not the same as the one with which they identify.

Gender identity: One's innermost concept of self as male, female, a blend of both or neither - how individuals perceive themselves and what they call themselves. One's gender identity can be the same or different from their sex assigned at birth.

GAHT: This acronym stands for gender affirming hormone therapy. It is hormone therapy given to bring an individual's physiological gender attributes into line with the gender identity with which they identify. In individuals transitioning to a female physiology, it can involve the administration of anti-androgens to reduce testosterone levels along with the administration of oestradiol. Oestradiol is a steroid hormone made from cholesterol and is the strongest of the three naturally produced oestrogens. Oestrogens help to produce female sexual characteristics.

LGBTQA+: An acronym used to refer to Lesbian, Gay, Bisexual, Transgender, Queer, Questioning, Asexual, Ally + Other Identities.

Intersex: Intersex people are born with a variety of differences in their sex traits and reproductive anatomy. They often have a mix of sex-related physical characteristics drawn from normatively gendered men and women. There is a wide variety of difference among intersex variations, including differences in genitalia, chromosomes, gonads, internal sex organs, hormone production, hormone response, and/or secondary sex traits. Their socially assigned gender identity may not coincide with their inner determination of gender identity.

Transgender: An umbrella term for people whose gender identity and/or expression is different from cultural expectations based on the sex they were assigned at birth. Being transgender does not imply any specific sexual orientation. Therefore, transgender people may identify as straight, gay, lesbian, bisexual, etc.

Transitioning: A series of processes that some transgender people may undergo in order to live more fully as their gender concept demands. This typically includes social transition, such as changing name and pronouns, medical transition, which may include hormone therapy or gender affirming surgeries, and legal transition, which may include changing legal name and sex on government identity documents. Transgender people may choose to undergo some, all, or none of these processes.

Transgender people in sport

The participation of transgender people in competitive sports is a controversial issue, particularly where athletes who have gone through male puberty are notably successful in women's sport, where they are claimed to have an unfair advantage. It is also suggested that they represent a significant increased injury risk to female-by-birth competitors.

Resistance to trans women competing in women's sports generally focuses on physiological attributes such as height and weight, or performance metrics such as speed and strength-and whether sustained testosterone suppression can adequately reduce any natural advantages of male body characteristics within a given women's sport.

Access regulations requiring that trans athletes compete against athletes of the same assigned sex at birth and requiring sex verification testing have been used. Proponents of such regulations regard them as necessary to ensure fair competition, while opponents regard them as discriminatory.

Olympic Games

In 2003, a committee convened by the International Olympic Committee (IOC) Medical Commission drew up new guidelines for participation of athletes who had undergone gender reassignment. The report listed three conditions for participation. First, athletes must have undergone sex reassignment surgery, including changes in the external genitalia and gonadectomy. Second, athletes must show legal recognition of their gender. Third, athletes must have undergone hormone therapy for an appropriate time before participation, with two years being the suggested time. It was not until 2004 that the IOC allowed transgender athletes to participate in the Olympic Games.

In 2015, the IOC modified these guidelines in recognition that legal recognition of gender could be difficult in countries where gender transition is not legal, and that requiring surgery in otherwise healthy individuals "may be inconsistent with developing legislation and notions of human rights". The new guidelines require only that trans woman athletes declare their gender and not change that assertion for four years, as well as demonstrate a testosterone level of less than 10 nanomoles per liter for at least one year prior to competition and throughout the period of eligibility. Athletes who transitioned from female to male were allowed to compete without restriction. These guidelines were in effect for the 2016 Rio Olympics, although no openly transgender athletes competed.

In 2021, the IOC approved Laurel Hubbard, a trans woman, to compete in the 2020 Summer Olympics in weightlifting. Hubbard became the first out trans woman to compete at the Olympics; she did not complete her lifts and won no medals. On 21 July 2021, at the same Games, Canadian non-binary soccer player Quinn became the first transgender person to compete at the Olympics, playing for the Canadian women's soccer team. At the 2020 Summer Olympics, they became the first out, transgender Olympian to win a gold medal. Alana Smith, a non-binary skateboarder, represented the United States in the women's skateboarding semifinals of the 2020 Summer Olympics.

World Athletics

In October 2019, World Athletics changed the testosterone limit for transgender competitors, setting it at 5 nmol/L, from the previous 10 nmol/L, in order to bring it in line with the DSD

(intersex) regulations. According to regulations from October 2019, in order for a trans woman to compete in the women's category: "3.2.1 she must provide a written and signed declaration, in a form satisfactory to the Medical Manager, that her gender identity is female; 3.2.2 she must demonstrate to the satisfaction of the Expert Panel (on the balance of probabilities), in accordance with clause 4, that the concentration of testosterone in her serum has been less than 5 nmol/L continuously for a period of at least 12 months; and 3.2.3 she must keep her serum testosterone concentration below 5 nmol/L for so long as she wishes to maintain her eligibility to compete in the female category of competition."

World Athletics also has rules for intersex/differences of sex development (DSD) athletes. DSD athletes will be subjected to specific rules if they have XY male chromosomes, testes rather than ovaries, have circulating testosterone within the typical male range (7.7 to 29.4 nmol/L), and are androgen-sensitive so that their body makes use of that testosterone. World Athletics requires that any such athlete must reduce their blood testosterone level to 5 nmol/L or lower for a six-month period before becoming eligible for track running events from 400 metres to the mile run in international competition, though World Athletics publicly remains open to extending this to other events based on new scientific study. World Athletics created these rules as a way to ensure fair competition in the women's category.

Other sporting competitions

In 1996 the *Iron Ladies*, a men's volleyball team made up of gay men and transgender women from Thailand, won the national championship. The Iron Ladies were not allowed to join Thailand's national volleyball team because of the way they dressed.

The first out transgender person to make a US National Team was *Chris Mosier*, who in 2016 qualified for Team USA in duathlon. Mosier is considered the catalyst for the change in the IOC policy on transgender athletes in 2015, when he challenged the policy after initially being banned from the world championship race. Mosier also became the first known transgender athlete to compete in the Olympic Trials in the gender with which they identify, and the first trans man to make a men's Olympic Trials, when he competed in January 2020 in the US Olympic Team Trials in the 50k Racewalking event.

In 2017 *Mack Beggs*, a teenager from Texas, was required to wrestle against girls throughout the season of his transition from female to male up through the state championship, despite wanting to wrestle against boys. This was due to state sport regulations requiring athletes to compete alongside athletes of their assigned sex. Some opponents say the testosterone prescribed as part of his transition gives him an unfair advantage and made it unsafe for the other wrestlers. (He finished the regular season at 52-0 and won the state championship.)

In October 2018, *Rachel McKinnon* won a gold medal at the cycling Masters World Track Championship in Los Angeles.

Internet information

On September 8, 2021, West Virginia's Metro News published a news report titled 'Poll: Most would limit transgender athletes to teams matching their sex at birth.' The article details the results of a poll conducted among 400 registered voters between August 20-25 which found the 65 percent of respondents believed that athletes should only be allowed to play on sports teams that match their sex at birth.

The full text can be accessed at

On September 6, 2021, the Council of Europe (Europe's leading human rights organisation) announced that on September 20 it would stage an international online Diversity Conference seeking to extend the participatory rights of transgender and intersex athletes in sporting competitions around the world. The details of the conference can be accessed at

On September 3, 2021, The Federalist published an opinion piece by Jayme Metzgar titled 'With New Campaign, Michelob Says Women Should Be Seen, Not Heard' which argues the fundamental unfairness of ciswomen having to compete against biological males who identify as women. The full text can be accessed at

On September 2, 2021, The Duquesne Duke, the magazine of Duquesne University, Pittsburgh, published an opinion piece by its editorial staff titled 'The case for trans athletes'. The piece presents a range of reasons for allowing transgender athletes access to competitive sports.

The comment can be accessed at

On September 1, 2021, Open Democracy published a comment and analysis by Jessie Lau titled 'Will new Olympics rules exclude or include transgender athletes?' which examined what she termed the 'backlash' which has followed transgender competitors participating in the Tokyo Olympics.

The full text can be accessed at

On September 1, 2021, the Entertainment and Sports Programming Network (ESPN) published an overview titled 'Alabama to Wyoming: State policies on transgender athlete participation'. The report gives a state-by-state account of the regulations governing transgender athletes' participation in a range of sports.

The full text can be found at

On August 3, 2021, The New York Times published an overview of the issues surrounding transgender athletes competing against cisgender women. The article is titled 'Who Should Compete in Women's Sports? There Are 'Two Almost Irreconcilable Positions' The full text can be accessed at

On August 2, 2021, The Sydney Morning Herald published a comment by Joanna Harper, a PhD researcher at Loughborough University, England, and the author of the book Sporting Gender. The article is titled 'Trans women have advantages, but here's why Hubbard should not be banned from the Olympics' and argues that whatever residual advantages some trans women may retain does not remove meaningful competition within the sports in which they take part.

The full text can be accessed at

On July 29, 2021, Deseret News published a report titled 'In search of a level playing field. How male-to-female transgender athletes are impacting women's sports.' The article gives an overview of the growing controversies surround how, or if at all, transgender women should participate in competition with cisgender women.

The full text can be accessed at

On July 27, 2021, Forbes published a report from Senior Contributor Kim Elsesser, titled 'What Makes an Athlete Female? Here's How the Olympics Decide'. It looks at the situation of intersex and transgender athletes, recognising how difficult making determinations can be. The full text can be accessed at

On July 26, 2021, Frontline published a fact check titled 'Do trans athletes have an unfair advantage?'

The report detailed the work of a range of research teams which demonstrated that trans athletes retain a significant measure of physiological advantage even after transition hormone therapy.

The full text can be accessed at

On July 15, 2021, WebMD/Medscape published an interview with Joanna Harper, a PhD researcher at Loughborough University, England, and the author of the book Sporting Gender. The interview is titled 'Do Trans Women Athletes Have Advantages?' and argues that whatever residual advantages some trans women may retain does not remove meaningful competition within the sports in which they take part.

The full text can be accessed at

On May 18, 2021, The Conversation published an article by Chris W. Surprenant, Professor of Ethics, Strategy, and Public Policy, University of New Orleans. The article is titled 'Striking a balance between fairness in competition and the rights of transgender athletes.' Surprenant argues that the complexity of determining advantage makes case by case judgements the fairest solution. The full text can be accessed at

On January 5, 2021, NBC News published a report titled 'Trans women retain athletic edge after a year of hormone therapy, study finds'

The report details the findings of a recent study published in the British Journal of Sports Medicine which suggests transgender women maintain an athletic advantage over their cisgender peers even after a year on hormone therapy.

The full text can be accessed at

On June 19, 2020, USA Today published an opinion piece by Bianca Stanescu titled 'Transgender athletes don't belong in girls' sports. Let my daughter compete fairly.' Stanescu was one of the plaintiffs bringing a suit against the Connecticut Interscholastic Athletic Council for allowing transgender athletes to deprive cis athletes of any meaningful opportunity to participate competitively.

The full text can be accessed at

On July 20, 2020, The Guardian published a report on World Rugby's decision to ban transgender athletes from the women's competition because of the risk of injury to cisgendered women.

The report is titled 'Trans women face potential women's rugby ban over safety concerns' The full text can be accessed at

On January 20, 2020, The Hill published an article by Gregg Bloche, professor of law at Georgetown University and co-director of the Georgetown-Johns Hopkins joint degree

program in law & public health. The opinion piece is titled 'Do transgender athletes have an unfair advantage?'

Bloche argues that questions of advantage in sport are complex and that we should be wary of imposing judgements based on the supposed effects of biological differences.

The full text can be accessed at

On February 25, 2019, AP News published a report titled 'Connecticut runners part of debate over transgender athletes'.

The report details the controversy that has developed in Connecticut college athletics over the inclusion of transgender women athletes.

The full text can be accessed at

On December 3, 2017, Stuff Co NZ published a report titled 'Professor of physiology says transgender athletes have advantage in speed, power'. The report details the work of Otago University professor in physiology Alison Heather who has researched transgender changes, particularly in top level sport..

The full text can be accessed at

On August 1, 2016, SBS news published the results of a research report titled 'Female athletes work harder than men, and science can prove it'. The report details the main physiological differences between men and women and how the effect the degree of effort women have to make in order to achieve comparable results to men.

The full text can be accessed at

Arguments supporting transgender women athletes taking part in sporting competition against cisgendered women

1. Removing or excessively limiting transgender women athletes' access to sporting competitions is discriminatory

Those who oppose significant limitations being imposed on transgender athletes' access to competitive sport claim that such restrictions are discriminatory. They argue that a particular class of athletes, transgender women athletes, are being restricted or excluded from competitive sport on unjust grounds. They argue that the claim that these transgender athletes are being excluded or restricted because they have an unfair advantage is false. Their supporters claim that their exclusion is based on their gender and so is discrimination.

The claim of discrimination is based on the fact that many forms of relative advantage are allowed in sport. Some athletes are naturally taller than others, have better hand-eye coordination or greater musculature and, though these attributes give them an advantage over others, they are not excluded because of them. Gregg Bloche, a professor of law at Georgetown University and co-director of the Georgetown-Johns Hopkins joint degree program in law and public health, has stated, 'We allow some differences in capability to affect sports outcomes without calling out those with an edge as cheaters. Indeed, we admire many of these advantages, whether we believe they're bestowed by God or good fortune: we praise competitors for their strength, speed, endurance, agility, toughness, discipline, resolve, and more.'

Ľ

An editorial published in The Duquesne Duke, the magazine of Duquesne University,

similarly stated, 'It is...important to realize that advantages already exist in sports among cisgender athletes, and they are not banned. Michael Phelps, for example, produces half of the lactic acid of his competition [giving him a large competitive advantage], and he is a celebrated Olympic champion.'

It has further been noted that such relative advantages as exist between competitors only add to the interest and entertainment value of the sport. Professor Bloche has noted, 'Myriad influences - environmental, genetic, and mixtures of both - produce differences in athletic capability and performance. Without these differences, sports would be insufferably dull. Every competition would yield a tie - or, worse, a winner decided by dumb luck.'

Joanna Harper, a PhD researcher at Loughborough University, England, and the author of the book 'Sporting Gender', has stated, 'Advantages are allowed in sport. What is not allowed is overwhelming advantage. For instance, left-handed tennis players are allowed to compete against right-handed tennis players despite their advantages. On the other hand, heavyweight boxers are not allowed into the ring against flyweight boxers. The important difference is that meaningful competition exists between left- and right-handed tennis players but not between big boxers and small boxers. I think it is important to examine the question of trans women athletes within this framework.

Ľ

It is claimed that any residual advantage that transgender women athletes may have will not be an overwhelming one. Supporters of transgender inclusion argue the process of transitioning into their new gender identity decreases any innate advantage among transgender athletes considerably, while physical differences between all athletes mean there is never a truly level playing field in sport. Therefore, it is argued, any move to exclude them on the basis of unfair advantage is really an attempt to disguise prejudice against transgender athletes. The editorial writers of the Duquesne Duke have stated, 'There is no conclusive evidence that suggests transgender athletes create an unfair playing field for cisgender athletes, so it is wrong to exclude them from sports at any level.'

Finally, it is argued that such discrimination in sport only consolidates the discrimination transgender people experience in all areas of life. Chris Mosier, a triathlete and the first trans man to represent the United States internationally, has noted that the current debate over the exclusion of transgender athletes was damaging for all trans people. He claimed that such debates 'serve as an entry point to larger scale discrimination'.

2. Transgender athletes suffer discrimination in many other areas of their lives

Those who support transgender athletes being able to compete within the gender classification with which they identify argue that this is an important measure to help redress the disadvantage suffered by a group which already faces much discrimination.

The prevalence of discrimination faced by transgender individuals appears to be a worldwide phenomenon. The United Nations Human Rights Office of the High Commissioner (OHCHR) has stated, 'Gender-diverse and trans people around the world are subjected to levels of violence and discrimination that offend the human conscience: they are caught in a spiral of exclusion and marginalization; often bullied at school, rejected by their family, pushed out onto the streets, and denied access to employment.'

The OHCHR has further noted that where transgender people are part of other marginalised groups, their position becomes even worse. They have stated, 'When they are persons of

colour, belong to ethnic minorities or are migrants, living with HIV, or sex workers, they are particularly at risk of violence, including of killing, beatings, mutilation, rape and other forms of abuse and maltreatment.' Additionally, the OHCHR has noted that they often have highly damaging and discriminatory 'interventions' forced upon them. The OHCHR states, 'In order to practice their right to recognition before the law, gender-diverse and trans persons are often victim to violence in health-care settings such as forced psychiatric evaluations, unwanted surgeries, sterilization or other coercive medical procedures, often justified by discriminatory medical classifications.'

Discrimination against transgender people is a significant problem in Australia. In 2014, Curtin University released the results of 'The First Australian National Trans Mental Health Study'. Among the study's findings was that 'Experiences of discrimination and harassment were common. Nearly two thirds of participants (64.8 percent) reported at least one instance, with experiences ranging from social exclusion to violence and assault. Many participants reported changing their behaviour for fear of being subject to further instances. Participants also reported discrimination when accessing healthcare, and that the healthcare system generally failed to meet their needs.'

An Australian study released in March 2021, conducted by Dr Ada Cheung and Sav Zwickl, of the University of Melbourne, found that transgender Australians are arguably among the most marginalised and socioeconomically disadvantaged groups in the Australian community - a disadvantage that has been magnified by the COVID-19 pandemic. 35 per cent of those surveyed reported discrimination from employment as a result of being trans, and the unemployment rate of 19 percent is more than three times the national rate. The study further noted that discrimination when accessing healthcare results in nearly a third of transgender people avoiding medically necessary care.

There are those who claim that there is a probable connection between the mental health problems transgender people suffer and the level of social discrimination they encounter. A report published in Medical News Today on May 20, 2021, concluded, 'People who identify as transgender have higher rates of mental health complications than those in the general population due to stigma and discrimination.' \(\mathbb{L}\) Dr Wang and her colleagues from the department of psychiatry at the Second Xiangya Hospital of Central South University in China have noted regarding the impact of discrimination within schools, 'Within the school environment, transgender adolescents are vulnerable to harassment and bullying... findings indicate the need for researchers, practitioners and policy makers to address these mental health risks...School-level intervention is recommended to support the well-being and equity of gender minority youth.'

It has been argued that as a high profile, socially valued activity, sport can lead the way in addressing the problems of discrimination that transgender people face. Sport Australia chief executive officer Kate Palmer, when releasing the 'National guidelines for the inclusion of transgender and gender diverse people in sport', stated sport 'must be safe and inclusive for all.' She has further argued, 'It must take strong, proactive leadership to stand up against any attitudes or behaviours that lead to discrimination in sport, so I urge every sporting organisation...to make your sport more inclusive... Every single person involved in Australian sport can play an important part in being more inclusive.'

3. Competitive sporting participation can assist transgender people with mental health issues

There is a high incidence of mental health issues among transgender people. Sporting competition, it is claimed, can help transgender athletes maintain their mental wellbeing. It has been repeatedly indicated that transgender or gender-nonconforming adolescents may be at greater risk of a range of mental health issues. Dr Yuanyuan Wang, of the department of psychiatry at the Second Xiangya Hospital of Central South University in China, and colleagues have recently written, 'There are...a number of studies reporting a high percentage of suicidal ideation, self-harm and suicide attempts in adolescents with gender dysphoria.' Dr Wang noted that these young people appeared to be at greater risk 'compared with their cisgender peers' of 'mental health problems such as anxiety, depression and suicidal ideation'.

Australian data released in April 2021 replicates the results of Chinese research. LGBTQA+ (Lesbian, Gay, Bisexual, Transgender, Queer, Questioning, Asexual, Ally + Other Identities) young people aged 16 to 17 were almost three times more likely to have attempted suicide in the past 12 months. These young people were almost five times more likely to have attempted suicide in their lifetimes, while transgender people aged 14-25 are fifteen times more likely. 48.1 percent of transgender and gender diverse people aged 14 to 25 reported that they had attempted suicide in their lifetime. 35 percent of transgender people aged 18 and over reported that they had attempted suicide in their lifetime and 28 percent of gender questioning young people between 14 and 21 years reported that they had attempted suicide.

Among LGBTQA+ Australians who have had suicidal thoughts research figures are similarly high. LGBTQA+ young people aged 16 to 17 were over five times more likely to have experienced suicidal ideation in the past 12 months. 59.1 percent of these young people aged 16 to 17 reported having experienced suicidal ideation in the past 12 months and 58.2 percent aged 14 to 21 had seriously considered attempting suicide in the past 12 months. 24.4 percent of LGBTQA+ young people aged 14 to 21 had made a suicide plan in the past 12 months and 41 percent of transgender people and non-binary people aged 18 years and over reported thoughts of suicide or self-harm in the last two weeks.

Australian research further shows that mental conditions, including depression, are also high among transgender adolescents and young adults. 44.5 percent of LGBTQA+ young people aged 14 to 21 reported receiving treatment or support for a mental health condition in the past 12 months. 73.2 percent of people in this group aged 18 and over reported having at some time in their lives having been diagnosed with a mental health condition; 51.9 percent reported being diagnosed or treated for a mental health condition in the past 12 months. Referring specifically to depression, Australia data shows transgender, and gender diverse people aged 14 to 25 are over seven times more likely than those in the same age group in the general population to suffer with depression. Transgender and gender diverse people aged 18 and over are five and a half times more likely.

It is claimed that findings such as these have a direct bearing on how transgender athletes should be treated. Participating meaningfully in sporting competitions has been found to promote the mental well-being of trans individuals, while being excluded from these competitions intensifies the damaging sense of rejection that trans people frequently suffer.

The United Kingdom's Mental Health Foundation has noted, 'Participation in regular physical activity can increase our self-esteem and can reduce stress and anxiety. It also plays a role in preventing the development of mental health problems and in improving the quality of life of people experiencing mental health problems.'

These findings suggest regular physical activity has both a preventative and a curative role in regard to the development of mental issues. It can boost self-esteem and help develop resilience, thus forestalling the development of depression and other disorders. It can also help those suffering the effects of mental ill-health overcome these problems. The value of competitive sport in helping to manage conditions such as depression has been suggested by a 2017 study of the effect of high-level sporting competition on Paralympians. The study concluded, 'The findings suggest that Paralympians benefited from exposure to highly demanding situations in a supportive environment and this helped develop mentally tough characteristics and behaviors and individualized cognitive coping strategies.' Supporters of transgender athletes being able to compete at the highest levels that they are able suggest that the same mental health benefits are available to them.

4. The competitive advantage of transgender women athletes has been exaggerated Those who support transgender athletes being given either full or relatively unrestricted access to sporting competitions argue that the degree of advantage these transgender athletes have been claimed to have has been exaggerated.

One of the points noted regarding the supposed advantage of transgender women over ciswomen in sporting competition is that on average transgender women, even before gender realignment or affirming treatments, are not as physically able as the average cisman. Cisgender men are as much as 50 percent stronger in the upper body than cisgender women. However, trans women are not cisgender men. Measured hand-grip strength in non-athletic trans women was 10-14 per cent lower than in cisgender men even before gender affirming hormone therapy (GAHT).

Looking at a subset of the trans population who were already physically fit and trained prior to receiving hormone therapy, a study of changes in fitness test results of transgender American service personnel indicated that the trans women in the study were able to do 31 per cent more push-ups per minute than cisgender women prior to GAHT but this difference was entirely resolved with GAHT.

Supporters of transgender athletes being allowed either free or relatively unrestricted access to sporting competitions argue that trans women athletes experience a range of potential disadvantages as well as some potential advantages. In July 2021, WebMD/Medscape interviewed sports physicist Joanna Harper, who has advised the International Olympic Committee (IOC) and other sporting bodies on gender and sports. Dr Harper stated, 'Trans women have larger frames, which are now being powered by reduced muscle mass and reduced aerobic capacity, and that can lead to disadvantages in things like quickness, recovery endurance, and things that might not be quite as obvious as seeing somebody bigger...The idea that trans women only have advantages just isn't true. The analogy I've used is that it's like a big car with a small engine competing against a small car with a small engine.'

Harper's comments are borne out by the experience of Idaho cross-country runner Lindsay Hecox, who has seen her competitiveness decline since transitioning. Hecox stated that after

the therapy, 'I could feel myself getting slower.' Ultimately she became uncompetitive with ciswomen cross-country runners despite having been a successful high school competitor before transitioning. Despite a rigorous training schedule provided by the school she attends, she was not fast enough to make Boise State's women's track team in 2020.

It has further been noted that some of the physical advantages that transgender women athletes have been claimed to retain after gender reassignment of affirmation therapy do not make the crucial difference they are said to. Volleyball is a sport where the height of a player has been claimed to confer a decisive advantage. Therefore, it is a sport where it would appear that a transgender woman player with a height advantage conferred by her former physiological gender would have a competitive edge. However, a 2005 study was conducted of Olympic volleyball terms to assess the importance of the height of its players in giving a team victory. The study found the gold medal winning women's team in every Olympic Games since 1968 had (with one exception) not been the tallest team in the tournament. The study also found the final ranking of the men's volleyball teams participating in the medal round of the Athens 2004 Summer Games was inversely related to average team height. This suggests that an often gender-linked characteristic, commonly assumed to give a crucial competitive advantage may not be as significant as many have claimed. The study concluded, 'Insofar as team success in [Olympic] volleyball is concerned, there would appear to be factors more critical to individual performance and team success than average player height.'

5. Most competitive advantages some transgender women athletes have can be removed Those who support transgender athletes taking part in sporting competitions argue that most competitive advantages they may have because of their transgender status can be removed. It is also argued that any advantages that may remain will not be competitively significant, that is, they will not give the transgender athlete a competition-winning degree of assistance. This means that cisgender athletes competing against them are not being unfairly penalised.

It is claimed that one of the principal reasons that transgender women should be able to take part in competitive sport is that gender affirming hormone therapy (GAHT) removes the physiological advantages that these competitors might otherwise possess. GAHT is taken by transgender people to allow them to exhibit the secondary sexual characteristics of the gender with which they identify. This hormone treatment typically removes most of their potentially advantageous sports-related attributes.

Joanna Harper, a PhD researcher at Loughborough University, England, and the author of the book 'Sporting Gender', has stated, 'Trans women on GAHT achieve the same testosterone levels as cisgender women and this includes the high-level athletes studied at Loughborough University in England.' She concluded, 'I think that in most sports testosterone suppression alone will mitigate...the physiological advantages held by trans women to the point that trans women and cisgender women can enjoy meaningful competition.' In a July 2021 interview given to WebMD/Medscape, Harper further stated, '95 percent of cisgender women have testosterone below 2 nanomoles per liter. And in a recent study of nearly 250 trans women, 94 percent of them had testosterone below 2 nanomoles per liter.'

Testosterone levels affect haemoglobin levels and haemoglobin determines the blood's oxygen carrying capacity and has a major impact on endurance. Haemoglobin (Hb) is a protein found in the red blood cells that carries oxygen and gives blood its red colour. Haemoglobin levels

vary from person to person; however, men usually have higher levels than women. Haematocrit levels show the ratio of the volume of red blood cells to the total volume of blood, they are, therefore, a measure of the blood's oxygen-carrying capacity. The blood's oxygen-carrying capacity is important in most sports as it affects energy levels.

Harper explains that as transgender women taking hormone therapy lose testosterone their haemoglobin levels similarly decline. She has stated, 'Haemoglobin levels follow the testosterone. Within weeks of starting testosterone suppression, testosterone levels will be within female norms, but it takes a little longer for haemoglobin to get the female norms, probably in the 3- to 4-month range. That's roughly the life cycle of red blood cells. As trans women replace their red blood cells, with their new lower testosterone levels, they will have fewer red blood cells and lower haemoglobin, but it does take three to four months.' Harper further noted, 'After four months of hormone therapy haemoglobin and haematocrit levels of trans women will shift from typical male to typical female levels. Haemoglobin is the single most important factor influencing performance in endurance sports.'

Levels of the male hormone testosterone also affect lean muscle mass which can, it has been argued, give a transgender woman athlete a competitive advantage in many sports. Studies have found that lean body mass and muscle strength decline but remain above cis female levels up to three years after hormone transition. Harper, however, has claimed that while transgender women may retain a muscle mass advantage after a year of hormone therapy, it is possible that residual advantage may ultimately disappear. She has stated, 'The greatest changes in the strength of trans women on hormone therapy occur in the first 12 months, but there aren't enough data to make a definitive statement. It is possible that there are further declines in strength after 36 months, and a recent small study out of Brazil suggests that the entire strength advantage might go away.'

Despite some lean muscle mass advantage that transwomen athletes may retain, it is argued that high-level ciswomen athletes are competing at such accelerated levels of performance, that any lingering advantage gained by a trans athlete is not likely to be significant. Dr. Timothy Roberts, a pediatrician and associate professor at the University of Missouri-Kansas City, has argued that though lean muscle mass may continue to give transwomen athletes an advantage it was within the competitive range. Referring to trans- and ciswomen runners, Roberts noted, '[Transwomen retain] a 12 percent advantage after two years in run times. But to be in the top 10 percent of female runners, you have to be 29 percent faster than the average woman. And to be an elite runner, you've got to be 59 percent faster than the average cis woman.'

What Harper and others argue is that though some transgender athletes may retain residual advantages in some sports this will not be at a level which will make the contest unfair or so skewed that competition has been removed. Harper claims that what she refers to as 'meaningful competition' will remain.

Arguments against women transgender athletes taking part in sporting competitions against cisgendered women

1. Cis male athletes have a major competitive advantage over cis female athletes
It has been claimed that the innate physiological advantage most cismen have over a majority
of ciswomen makes it unfair that athletes born male be allowed to compete against athletes
born female.

An article published in SportsRec outlined the nature and basis of men's athletic advantages over women. These are explained as: 'Athletic differences between men and women have much to do with innate characteristics determined by genetics and hormones. These include height, weight, muscle mass, body fat and aerobic capacity. As a group, women do not run, jump or swim as fast as men. Women are also more prone to certain types of athletic injuries than men. Due to higher estrogen levels, women have more body fat than men. The leanest female athletes, such as top marathon runners, have body fat of approximately 8 percent, compared with 4 percent for their male counterparts. In addition, women's bodies are less muscular, but their joints are more flexible, which gives them greater range of motion -- an advantage in sports such as gymnastics.' The SportsRec article further explains, 'Testosterone enables men to develop larger skeletal muscles as well as larger hearts. Men also have a larger proportion of Type 2 muscle fibers, which generate power, strength, and speed. Testosterone also increases the production of red blood cells, which absorb oxygen, giving men an even greater aerobic advantage, reports "New York Times" writer Gina Kolata, in an interview with Dr. Mark Tarnopolsky, an exercise researcher at McMaster University in Ontario.'

These differences are summarised an article published in Human Kinetics taken from 'Best Practice in Youth Sport' by Robin Vealey and Melissa Chase. The article states, 'Several physical characteristics of postpubescent males predispose them to outperform females in sports that require strength, power, and speed. Adult males tend to be taller with longer limbs. The breadth of their shoulders allows for more muscle on a larger shoulder girdle, the main contributor to postpubescent males' advantage in upper-body strength. Adult males have more overall muscle mass and less body fat than females, even in trained samples. Male athletes average 4% to 12% body fat compared to 12% to 23% in female athletes. Males develop larger skeletal muscles, as well as larger hearts and lungs and a greater number of red blood cells (which absorb oxygen for an aerobic advantage). Without question, males and females differ on several physical characteristics that influence sport performance.

In a review published in the Journal of Physical Education and Sport on November 24, 2017, the extent to which physical training can reduce these innate differences was considered. The review states, 'Differences of muscle strength are related to the greater development of muscle mass, which is favored in men from higher testosterone production, whose levels are clearly different between the sexes. Consequently, men benefit from this in all those disciplines that require considerable levels of strength, speed, and power. With training, woman's strength increases, but the gain obtained is lower than that of man. In adult women, the VO2max value is on average less, about of 15-20 percent for trained athletes. One reason for this difference, in relation to maximum oxygen consumption, is the higher concentration of haemoglobin (10-14 percent more) in men, because in men's circulatory system there is greater oxygen transport capacity and, consequently, a greater aerobic capacity, to which the VO2max value is related. At the level of the cardiovascular system, the main differences between men and women are related to the size of the cardiac chambers, the blood haemoglobin concentration, and the volume of circulating blood; in women all these parameters are lower. This penalises women especially in aerobic disciplines.' The review concludes that though an analysis of women's high-level athletic performance starting in the 1980s reveals an initial narrowing of differences, this relative improvement in women's performances has not been sustained, suggesting there are physiological limits to the extent to which women athletes can approach the performances of men.

The SportsRec article also considers the relative propensity to injury of cismen and ciswomen. The article states, 'Women are more prone to injuring joints such as the shoulders and knees. Weaker shoulder muscles and looser supporting tissues mean the joint is less stable than in men, reports writer Michael Lasalandra, in an interview with Beth Israel Deaconess Medical Center sports medicine physician Bridget Quinn. Also, the injury rate to the anterior cruciate ligament, or ACL, a major knee ligament, is significantly higher in female than in male athletes.'

A recent paper quantified the male advantage across various sports using data from cis men and women. Track and swimming were at the lower end with about a 12 percent differential, weightlifting was on the high end, and for throwing a baseball pitch, that was a 50 percent difference.

2. No treatment will completely remove the competitive advantage of transgender women athletes

Those who oppose transgender women athletes competing against cisgendered women argue that none of the transition therapies or subsequent hormone therapies these trans athletes receive will adequately reduce the physical advantages they retain.

A study released in January 2021 in the British Journal of Sports Medicine suggests that transgender women maintain an athletic advantage over their cisgender peers even after a year on hormone therapy. The study's lead author, Dr. Timothy Roberts, a pediatrician, and the director of the adolescent medicine training program at Children's Mercy Hospital in Kansas City, Missouri, stated, 'At one year, the trans women on average still have an advantage over the cis women.' For the first two years after starting hormones, the trans women in the study's review were able to do 10 percent more pushups and 6 percent more sit-ups than their cisgender female counterparts. After two years, Roberts stated 'they were fairly equivalent to the cisgender women.' Their running times declined as well, but two years on, trans women were still 12 percent faster on the 1.5 mile-run than their cisgender peers. Critics of transgender women being given access to ciswomen's competitions argue that this data suggests, at the least, that transgender women should not be able to compete against ciswomen in athletic events for at least two years, if not longer.

Similar findings have been made before. In 2017, Otago University professor in physiology Alison Heather released similar findings. Heather stated, 'The physiological attributes of males that makes them naturally stronger including anatomical and biological features such as size, muscle mass, lung capacity, and heart size would be an advantage.' It has been argued that though muscle mass may diminish attributes such as height, lung capacity and heart size would be retained and are likely to prove an advantage in many competitive sports. Heather argued then that the differences, their longevity, and their effects were not well enough known to conclude that transgender women can be fairly allowed to compete against cisgender women. Heather stated, 'Given the lack of research, there is a real need to study what physical advantages transgender females carry after hormone therapy with consideration required for different sports, trainability and for performance. Until then, it is very difficult to conclude that it is a level playing field for CIS women versus trans women."

Research conducted in Sweden has similarly concluded that transgender women athletes will

retain physiological advantages. Tommy Lundberg, lecturer, and researcher at the Division of Clinical Physiology Sweden's Karolinska Institute focuses on the skeletal muscle strength of trans people receiving hormone therapy. Lundberg concludes that the advantages for trans women in strength are to the point where fairness cannot be ensured in most sports. Lundberg argues that the International Olympic Committee's aim of ensuring fair competition for all, including transgender athletes, will be very difficult to attain. He concludes, 'The IOC (International Olympic Committee) states that the overriding objective is, and remains, the guarantee of fair competition. That's what they say in their guidelines. So that's the problem right now: They don't go hand-in-hand.' Lundberg has argued that even extending the period during which a trans athlete has to have been on hormone therapy prior to competing to two years is unlikely to guarantee fairness. He states, 'It would be an easy fix if you could just change regulation to two years, instead of one. But I don't think that's a feasible solution either. Actually, right now, there is nothing to indicate that.' Lundberg concludes, 'We don't have this easy fix or easy regulation that can be applied. You basically have to choose or prioritize either inclusion or fairness. They don't go hand-in-hand right now. And in most sports, it's going to be problematic to include transgender women and achieve fairness. That's what the current research suggests.'

Ľ

There are others who similarly argue that the persistence of physiological advantage in transgender athletes means that the goals of inclusivity for trans people and fairness for ciswomen competitors may not be compatible. Doriane Lambelet Coleman, a professor of law at Duke has acknowledged that attempts to restrict trans women's access to competitive sport 'run counter to the movement that seeks to include transgender and intersex people in social institutions based on their gender identity rather than their biology.' Coleman, though sympathetic toward including transwomen in most social institutions, claims that this cannot be fairly done in women's competitive sport. She states, 'Replacing traditional sex classifications with classifications based on gender identity certainly has steep costs in contexts like competitive sport.'

3. Allowing transgender women to compete against cisgender women damages competitive sport for ciswomen

Opponents of transgender athletes competing against ciswomen without major restrictions argue that the trans athletes have such an advantage that their participation could potentially destroy competitive sport for sic women.

Opponents of transgender athletes' participation argue that competitive sport for ciswomen requires that the best of them have some realistic capacity to win. It has been argued that in some areas of competition the advantages enjoyed by the trans athletes are so great as to virtually remove the capacity for ciswomen athletes to have any potential to be competitively successful. A dramatic instance of this has recently occurred within women's track competition at a college level in Connecticut. In June 2020, Bianca Stanescu, the mother of Connecticut college track champion, Selina Soule, wrote about the unfair and insurmountable competition she believed her daughter was facing. She stated, 'After a series of unremarkable finishes as a boy in the 2018 indoor season, the same athlete began competing - and winning - as a girl in the outdoor season that started just weeks later. My daughter would have qualified for the New England regionals in the 55-meter dash in Spring 2019, but instead, the top two spots went to biological boys who identify as girls.'

Sprinter Chelsea Mitchell, another college track athlete who claims to have been closed out by unfair competition from transgender women athletes has stated, 'No girl should have to settle into her starting blocks knowing that no matter how hard you work, you don't have a fair shot at victory.' Chelsea Manning and Selina Soule were among the plaintiffs bringing a suit against the Connecticut Interscholastic Athletic Council for allowing transgender athletes to deprive cis athletes of any meaningful opportunity to participate competitively. The plaintiffs' attorney Roger Brooks argued that the law guarantees girls 'equal quality' of competition, which he said is denied by having to race people with what he described as inherent physiological advantages. Brooks argued that the transgender sprinters improperly won 15 championship races between 2017 and 2020 and cost cisgender girls the opportunity to advance to other races 85 times.

Opponents of transgender women competing against ciswomen argue that their participation undermines the purpose for which separate competition was originally established for ciswomen. Doriane Coleman, a Professor of Law at Duke Law School, who as an 800m runner, became the United States. National Collegiate Indoor Champion in 1982, has written that the inherent performance gap between male and female competitors makes shared competitions discriminatory for ciswoman. She has written, 'the performance gap between males and females that justifies the existence of a women's category in competitive sports. That gap typically extends to 10-12 percent. Without an eligibility rule based in sex-linked traits, we wouldn't see female bodies on any podium.' Coleman has further argued that such competitive opportunities provide an avenue for ciswomen's advancement. She has stated, 'It matters that girls and women are afforded opportunities equal to boys and men, including in elite athletics. It matters because this is the only way sport can achieve its empowerment goals.'

Finally, it has been argued that creating sporting competitions in which ciswomen were likely to be regularly defeated by transgender women athletes is likely to diminish ciswomen's participation in competitive sport. Barbara Ehardt, the Republican Idaho state representative, who played basketball in college and formerly coached a N.C.A.A. Division I women's team, has expressed concern that residual physical advantages that transgender women athletes might possess could reduce the participation of cisgender women in sports. Ehardt has stated, 'The progress that we, as women, have made over the last 50 years will be for naught and we will be forced to be spectators in our own sports.'

Doriane Lambelet Coleman, a professor of law at Duke has noted that even without the impact of transgender women's competition, ciswomen's participation in college sport has been declining in the United States. She has written, 'The most recently collected statistics show that participation by middle-school U.S. girls is actually decreasing. Funding for and promotion of boys and men remains higher, not only because their participation rates are higher but also because their events are more popular.' Lat has long been acknowledged that women athletes typically must train harder to achieve comparable levels of achievement to male athletes. Physiological studies have demonstrated that men have larger hearts, greater blood volume, more red blood cells, greater lung capacity and are on average, taller (15cm) and larger (10kg) than women. The gap does narrow in athletic populations, but in terms of sports performance this means that for any given athletic task - such as running 100 metres in 11 seconds - a woman athlete would be using almost 100 per cent of her potential, whereas a male athlete might use 90 per cent of his potential to complete that goal. Lat has been

suggested that the combined effect of having to work harder and achieve less competitive success would be a decline in female participation in sport. Professor Coleman has concluded, "Replacing traditional sex classifications with classifications based on gender identity certainly has steep costs in contexts like competitive sport.'

4. Competing against transgender women athletes put cis gender women at a safety risk

Those who oppose transgender women competing against ciswomen argue that particularly in contact sports, competing against transwomen places cis women at significantly increased risk of injury.

Joanna Harper, a PhD researcher at Loughborough University, England, and the author of the book 'Sporting Gender', has stated, 'I absolutely agree that there's a safety issue because on average, trans women are taller and bigger than cis women. If you're looking at collision metrics, the two important factors are size and speed. The data I gathered from 20 distance runners and sprinters suggests that trans women aren't faster than cis women. A study from the U.S. Air Force does suggest that trans women are faster, but [it] didn't measure training in any way. They are still going to be bigger than cis women.' Referring to the recent draft proposals by World Rugby to ban transwomen from the women's competition, Harper stated, 'Now, of course, what you really want to know is how big are the transwomen playing rugby versus the ciswomen playing rugby? We don't have any data on that. But as a population group, transwomen are bigger than ciswomen, so there's definitely some reason for concern over a potential safety issue.

In a 38-page draft document produced by its transgender working group, World Rugby acknowledged that there is likely to be 'at least a 20-30 percent greater risk' of injury when a female player is tackled by someone who has gone through male puberty. The document also indicated that the latest science shows that transwomen retain 'significant' physical advantages over biological women even after they take medication to lower their testosterone. The rugby report stated, 'Current policies regulating the inclusion of transgender women in sport are based on the premise that reducing testosterone to levels found in biological females is sufficient to remove many of the biologically-based performance advantage; however, peer-reviewed evidence suggests this is not the case. Ciswomen players (who do not undergo androgenisation during development) who are participating with and against transwomen (who do undergo androgenisation during development) are at a significantly increased risk of injury because of the contact nature of rugby.'

World Rugby's working group notes, players who are assigned male at birth and whose puberty and development is influenced by androgens/testosterone 'are stronger by 25-50 percent, are 30 percent more powerful, 40 percent heavier, and about 15 percent faster than players who are assigned female at birth (who do not experience an androgen-influenced development).' Crucially those advantages are not reduced when a transwoman takes testosterone-suppressing medication, as was previous thought - 'with only small reductions in strength and no loss in bone mass or muscle volume or size after testosterone suppression'. It also recognises that the advantage is so great - and the potential consequences for the safety of participants in tackles, scrums and mauls concerning enough - it should mean that welfare concerns should be prioritised.

5. Seeking limitations on trans women athletes competing against cisgender athletes is not transphobia

Those who oppose transgender women competing against cisgender women claim that the accusations of transphobia levelled against them are unjust. They argue that they are merely seeking fairness and safety for ciswomen and that they value this over inclusivity. They claim that their opposition to transgender women competing is not based on prejudice but on the desire to treat cisgender women fairly. They further claim that accusations of transphobia are used against them to avoid considering their legitimate concerns.

Liberal Senator Claire Chandler has been cited as an example of someone who was accused of transphobia after she opposed transwomen competing in some ciswomen sports because of their unfair advantage. Speaking in Federal Parliament on August 3, 2021, she objected to New Zealand transgender female weightlifter Laurel Hubbard being able to displace Nauru's 18-year-old Roviel Detenamo in the women's 87-plus kilogram category. Chandler highlighted that Hubbard's previous performances as a male were 'miles off Olympic standard' and claimed that the only reason she was able to qualify for the Olympic women's competition was because of the residual advantages she had from being born physiologically male. Chandler stated, 'The only explanation for that is male advantage, which, by definition, is an unfair advantage in women's competition.'

The year before, in July 2020, Chandler argues that transgender women athletes posed a risk to ciswomen athletes' safety when they competed against each other. Chandler cited World Rugby experts who claimed there was a 20-30 per cent higher risk of injury for women tackled by transgender females, and new research showing trans players born male lose little of their physical advantages after 12 months on drugs to lower their testosterone. Chandler claimed, 'Evidence about safety risks for female athletes is highly relevant to women's sport at every level and should be made available.'

Chandler's critics have accused her of being transphobic, that is, of having an irrational fear of, aversion to, or showing discrimination against transgender people. Con August 30, 2021, Senator Nita Green, a leader of the LGBTQ ginger group Rainbow Labor, stated in the upper house that Senator Chandler's campaign to limit transgender women's access to ciswomen's sport was an attempt 'to veil her transphobic views as faux feminist values'. Public figures such as Chandler have defended themselves against accusations of transphobia arguing that their concerns do not spring from aversion or discrimination but from a desire to see that cisgender women are treated fairly. Chandler has stated that 'unfounded accusations of "transphobia" against women like JK Rowling have been used to justify appalling abuse and threats of violence against women on social media.

Chandler has claimed that these unjustified accusations of transphobia are being used to silence are being used to silence those who are concerned about a distortion of women's sport. Chandler has stated, 'So many women have contacted me with concerns about this issue (of trans activist claims on female sport), but they are worried that if they speak publicly, or even internally, they might face consequences at their club or at their work...

How do Australians know that they are able to speak freely about women's rights? The idea that someone could lose their job or be banned from the sport they love for acknowledging that [gender differences] exist should be alarming to every fair-minded Australian.' Similarly, the United Kingdom LGB Alliance has stated, 'People are sick and tired of common sense being presented as "transphobia". Bev Jackson, a co-founder of the United Kingdom LGB has stated, 'It is astonishing that we have reached a point at which talking about the need

to preserve safety in women's sport is somehow mischaracterized as "transphobic".'

Further implications

The issue of whether or under what circumstances transgender woman athletes should be able to compete against cisgender women athletes is a complex one, drawing together vexed questions of conflicting rights and definitions of gender.

On June 16, 2021, The Conversation published a discussion by <u>Claire Breen, Professor of Law at the University of Waikato, New Zealand</u>. Professor Breen outlines the various international laws and declarations which seem to bear on sporting participation and the rights of transgender athletes. She argues that despite the broad support offered for transgender athletes under protections from discrimination when applied in detail to specific sports certainty disappears.

Professor Breen concludes that the current confusion around the level of advantage enjoyed by some transgender athletes in some sports needs to be resolved by further carefully targeted research. She argues that the issue cannot be satisfactorily addressed until this research has been undertaken.

The full text of the article can be accessed at \(\mathbb{L}\), but a *slightly abridged copy is reprinted below*.

The debate over transgender athletes' rights is testing the current limits of science and the law

Sports participation as a human right

The wider relationship between sports and human rights is complex and often contradictory. No explicit right to participate in sport exists in international law. However, a number of core human rights are relevant:

The <u>Universal Declaration on Human Rights</u> says everyone has the rights to freedom of association, health, rest and leisure, and to participate in cultural life.

The <u>International Covenant on Civil and Political Rights</u> says everyone has the right to freedom of association; its sister treaty, the <u>International Covenant on Economic, Social and Cultural Rights</u> recognises the rights to health and cultural life.

The <u>UN Convention on the Rights of the Child identifies</u> the right to rest, leisure and participation in cultural life, which include participation in sport, as does the <u>Convention on the Rights of Persons with Disabilities</u>.

UNESCO's <u>International Charter of Physical Education and Sport</u> identifies sport as a fundamental right, as does the <u>International Olympic Committee</u>.

Recognising transgender athletes

As with all human rights, the right to participate in sport is underpinned by the right to be free from discrimination on grounds of sex, gender, or other status. That includes gender identity and the right of trans people to be free from discrimination.

This broad principle informs much of the thinking on the issue. The UN Special Rapporteur on the Right to Health, for example, has said the participation of girls and women in sport should not result in the arbitrary exclusion of transgender people.

The rapporteur has also asked for a consensus by all international sporting bodies and national governments, in consultation with transgender organisations, with subsequent

policies ideally reflecting international human rights norms.

The UN's Independent Expert on "protection against violence and discrimination based on sexual orientation and gender identity" has highlighted the negative impact of exclusionary practices in sport, and noted the value of inclusive programs.

The UN Convention on the Elimination of All Forms of Discrimination Against Women calls for equality between men and women in sports and includes gender identity among the forms of potential discrimination.

Difficulty in putting conflicting rights into effect

Beyond these areas of broad agreement, however, the issue quickly becomes more complex.

In Aotearoa (New Zealand), the Human Rights Act 1993 prohibits discrimination on the grounds of "sex" and "sexual orientation". These prohibitions have been interpreted to encompass the legal right of trans people to be free from discrimination.

However, the act also says it is not discriminatory to exclude people of one sex from participating in any competitive sporting activity in which the strength, stamina or physique of competitors is relevant.

Unfortunately, this is where the arguments run into the limited help offered by science. There is still strong disagreement about whether transgender athletes have a competitive advantage or not.

The limits of science and the law

Research focusing on testosterone levels to justify the exclusion (or inclusion) of trans athletes has been criticised as an inappropriate oversimplification. Whether testosterone even provides a competitive advantage is disputed, and commentators point to other factors that may be at play.

One study of the available literature concluded that a consensus could not be reached due a lack of data. That finding was itself challenged, but both sides agreed more research was required.

In the meantime, we need to recognise the limits of science and the law when it comes to setting demonstrably balanced guidelines for trans athletes' participation in sport. Progress will only come through listening to both sides in the short term, but broad support for the required research is also needed in the longer term.

Ultimately it is in everyone's interests that this hugely complex issue is resolved properly. Given it goes to the heart of human identity, the potential benefits are not confined to the sporting world.