



BRITISH CYCLING

**TRANSGENDER AND NON-BINARY
PARTICIPATION POLICY**

EXTERNAL CONSULTATION

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1. INTRODUCTION

- 1.1. Sex Matters is a not-for-profit organisation that advocates for clarity about sex in language, policy and law, in order to safeguard the human rights, health, safety and dignity of everybody. Sex matters in life and in law.¹
- 1.2. Sex matters in sport. Qualitative differences between the male and female body necessitate protected female sports categories, to permit women access to the physical, mental and social benefits of sports routinely available to men. The inclusion of transgender athletes within a structure rationally organised around sex has presented regulatory challenges for sports federations.
- 1.3. British Cycling is the national governing body for recreational and competitive cycle sports in Great Britain.² In March 2021, British Cycling announced a new policy to address the participation of transgender and non-binary athletes in cycling events. The proposed policy can be found here:

www.britishcycling.org.uk/zuvvi/media/media/other/British_Cycling_Transgender_and_Non_Binary_Participation_Policy.pdf

As part of the review process for this proposed policy, British Cycling has opened the policy for external consultation.³

- 1.4. We welcome the call by British Cycling for external viewpoints on their proposed transgender policy. This Sex Matters response draws on expertise from scientists and sports philosophers, and from female cyclists.

¹ Information about Sex Matters: www.sex-matters.org Email us at: info@sex-matters.org

² For more information on British Cycling, see: www.britishcycling.org.uk

³ British Cycling Policy Proposal External Consultation: www.britishcycling.org.uk/about/article/20210325-about-bc-news-British-Cycling-launches-consultation-on-Transgender-participation-policy-0

2. BACKGROUND

- 2.1. As defined in the UK Equality Act 2010,⁴ cycling in all forms is a “gender-affected”⁵ activity, one where:

“the physical strength, stamina or physique of average persons of one sex would put them at a disadvantage compared to average persons of the other sex as competitors in events involving the activity.”

- 2.2. Different cycling disciplines favour different overlaps of physical advantages like strength, stamina and physique. Broadly, track cycling involves maximum speed sprinting and thus requires massive explosive strength in the lower body. Road cycling requires significant lower body strength and excellent endurance capacity for long distance riding over various elevation profiles. On top of lower body strength, downhill (DHI) mountain biking (MTB), cross-country (XC) MTB and bicycle motorcross (BMX) racing add large strength inputs from core and upper body muscles, required to manoeuvre the bike over trails, obstacles and jumps. XC MTB also has a strong endurance component. Sprint starts and/or sprint finishes occur variously across cycling disciplines, again requiring explosive power in the lower body.

- 2.3. “Gender-affected” sports are exempt from standard non-discrimination laws in the UK Equality Act 2010. Sex discrimination in “gender-affected” sports is permitted, and does not contravene non-discrimination laws pertaining to gender reassignment:

*“A person does not contravene section 29, 33, 34 or 35,⁶ so far as relating to gender reassignment, only by doing anything in relation to the participation of a transsexual person as a competitor in a gender-affected activity **if it is necessary to do so to secure in relation to the activity (a) fair competition, or (b) the safety of competitors.**”*

[bold: our emphasis]

That is, in the pursuit of fairness and/or safety, UK sports governing bodies may create and maintain a protected female category of sport from

⁴ The UK Equality Act 2010 exemptions for sex discrimination in sport can be found in Part 14, Section 195: www.legislation.gov.uk/ukpga/2010/15/section/195

⁵ The UK Equality Act 2010 uses the term “gender-affected” and we reproduce this phrase here, although the term “sex-affected” is more appropriate when considering the explanations contained in the section.

⁶ Section 29 covers public provision of services like health care and education: www.legislation.gov.uk/ukpga/2010/15/section/29 Sections 33-35 cover disposal of, permission to dispose of or management of premises, respectively: www.legislation.gov.uk/ukpga/2010/15/section/33

which transwomen may be legally excluded, regardless of their gender reassignment characteristic.

- 2.4.** Cycling in all forms is a non-contact sport; deliberate contact is not part of a race. DHI MTB is turn-based, and riders do not compete at the same time. In track, road, XC MTB and BMX racing, multiple riders compete at the same time, and minor contact may occur when, for example, jostling for position or defending a line. More serious contact can occur in the form of collisions that may lead to injury. However, contact and collisions are often accidental, and deliberate/dangerous contact attracts sanctions. Thus, in reference to permitted sex discrimination outlined in the Equality Act 2010, in cycling there are no immediate safety concerns raised by inclusion of transwomen in female categories. Our response will therefore focus on fairness for female riders in the female category.
- 2.5.** In cycling, performance gaps between males and females can be calculated from publicly-available records and race times, for example, those ratified by Union Cycliste Internationale (UCI)⁷ and those collated from Olympic performances.⁸
- 2.5.1. Track racing:** Analysis of world records in overlapping track events⁹ reveal male performance advantages of 9% in the 4000m team pursuit, 11% in the flying 200m, 15% in the flying 1000m, 20% in the 1000m, and 24% in the flying 500m. The average difference across all overlapping events is 16%.
- 2.5.2. Road racing:** Typically, senior males and females compete over different distances/courses in road racing, making performance comparisons impossible. Masters records indicate a 10% performance difference over the same course.¹⁰ As a guide for peak performance, times for the road cycling segment for elite triathlon races¹¹, where males and females race the same road segment, were compared.
- 2.5.2.1. Olympic Games triathlons:** We took the fastest cycle segment time (40km distance) from the recorded male and female finishers in Olympic Games triathlons since its

⁷ www.uci.org

⁸ www.olympics.com

⁹ Male and female track cycling records:

www.uci.org/docs/default-source/about--discipline/about-track-cycling/men-elite-world-records.pdf

www.uci.org/docs/default-source/about--discipline/about-track-cycling/women-elite-world-records.pdf

¹⁰ www.cyclingweekly.com/fitness/cycling-and-gender-how-and-why-male-and-female-cyclists-need-to-train-differently-344365

¹¹ www.triathlon.org/results

introduction at Sydney 2000. The average performance gap was 12%.

2.5.2.2. Other elite triathlons: Comparison of the cycle segment times in world record performances for different triathlon formats¹² show an average performance gap of 10%.

2.5.3. DHI MTB: We compared race times over the same downhill events for males and females in the 2019 UCI World Cup.¹³ The average performance gap between males and females was 19%, despite females often having technically easier routes. Typical speeds achieved in male races (80 kmph) are 14% higher than in female races (70 kmph).¹⁴

2.5.4. BMX racing: Comparison of Olympic Games times for BMX racing since its introduction in 2008 shows very similar race times for males and females. However, females ride a shorter and technically less-challenging route. Analysis of recordings of the London 2012 BMX heats, semi-finals and finals¹⁵ reveal that, from the sprint from the gate to the end of the first segment, covered by both male and female riders and taking approximately 9 seconds, the lead male already had an average 12% advantage over the lead female.

2.5.5. XC MTB: As in road racing, males and females compete over different distances/courses. We were unable to identify suitable data sets for comparison. However, we reasonably assume that performance gaps between males and females map to the % differences calculated above.

Thus, the performance gap between male and female cyclists, as a snapshot across all disciplines, is 10-24%.

2.6. Power is an important metric across cycling disciplines. Short, explosive sprints are frequent, and power output data is a useful resource. Rider data from general population users of the Cycling Analytics software¹⁶ provide information about power-to-weight ratio (watts per kilogram [kg])

¹² Triathlon formats are full (180km cycle), Ironman (180km cycle), half (90km cycle), standard (40km cycle) and sprint (20km cycle). Particular courses are favourable for world records in each format. Thus, male and female world records tend to be set on the same course, and often in the same annual event (presumably because other conditions like weather are also favorable). All comparisons except the sprint format were set on the same course. For the course non-equivalent sprint records, we compared male and female finishers in the same event.

¹³ www.uci.org/mountain-bike/results

¹⁴ www.uci.org/mountain-bike/about-mountain-bike

¹⁵ www.youtube.com/watch?v=AeIRNz7f_5c

¹⁶ www.cyclinganalytics.com

across various times. Below the 50th percentile, males generate 16-26% more watts per kg than females over 5 seconds, 10-19% more over 1 minute, 3-8% more over 5 minutes and 0-5% more over 20 minutes. In better cyclists above this 50th percentile, male gaps are 16-19%, 12-15%, 5-9% and 1-6% across the same timed tests.

- 2.7. Exercise physiologist Dr Andrew Coggan has produced a standard table of power-to-weight ratios of male and female cyclists of different competitive ability (from world class to untrained), measured at 5 seconds, 1 minute and 5 minutes, and measures of functional threshold power (FTP).¹⁷ Males achieve higher watts per kg at all abilities and test times, from 16% at 5 minutes to 24% at 5 seconds. Male FTP difference is around 12% at all abilities.
- 2.8. Comparison of power-to-weight ratios at different competitive levels within the Coggan chart show that over 5 seconds and 1 minute, world class females produce around the same power-to-weight output as “very good” males. Over longer times, world class females are matched by “exceptional” males. These observations illustrate that lower ranked males would perform relatively better in a female field (see **Section 4.3** for an athlete example of this phenomenon).
- 2.9. Unsurprisingly, the measurement of power output in elite track sprinters reveals nearly a 40% gap in absolute power output between Sir Chris Hoy (peak approximately 2500 watts) and Anna Meares (peak approximately 1800 watts).¹⁸ The peak power production of elite BMX racers approaches that of track sprinters,^{19,20} reflecting the requirement for huge amounts of power to maximise competitiveness in short races with lots of ramps and corners. In Rylands et al., the peak power output of 5 elite male BMX riders was measured at 1539 watts, nearly 50% higher than the peak power output of a single elite female subject in the same study.
- 2.10. The race times and power metrics outlined above demonstrate the extent of the gap between male and female cyclists, and underline the need for a protected female category to permit fair competition for female riders.

¹⁷ www.trainingpeaks.com/blog/power-profiling

¹⁸ www.uci.org/news/2019/track-sprinting-a-question-of-watts

¹⁹ In *Power Analysis of Field-Based Bicycle Motor Cross (BMX)* (2020), Daneshfar et al. tracked the power profiles of 14 sub-elite male BMX riders over a standard course, measuring a mean output of 1288 watts at 2.34 seconds into the race. www.ncbi.nlm.nih.gov/pmc/articles/PMC7360409

²⁰ In *Velocity production in elite BMX riders: a field based study using a SRM power meter* (2013), Rylands et al. measured the peak power of 5 elite male BMX riders over 50m sprints, measuring a mean output of 1539 watts. In the same study, an elite female BMX rider recorded peak power output at 1030 watts. www.asep.org/asep/asep/JEPonlineJUNE2013_Lee.pdf

3. RESPONSE TO PROPOSED POLICY - 5 nM TESTOSTERONE CRITERION

- 3.1. Males, across almost all sporting disciplines and including cycling disciplines (see **Sections 2.5-2.9**), are stronger athletes than females. Male athletic advantage is largely acquired under high testosterone conditions at puberty, the result of which is that many 14/15 year old schoolboys outperform elite adult female athletes.²¹ The gap between male and female performance is so large that many thousands of males outperform all females in athletic events like running, throwing and jumping.²²
- 3.2. The proposed British Cycling Transgender and Non-binary Participation Policy follows International Olympic Committee (IOC)²³ and UCI²⁴ policies on inclusion of transwomen in female categories. That is, transwomen will be permitted to ride competitively with and against female riders, providing they: 1. make a solemn declaration regarding their gender identity, and; 2. maintain serum testosterone levels below 5 nM for 12 months prior to and during competition in the female category.
- 3.3. By common understanding, sports should be fair. Both the IOC and UCI, when considering inclusion of transwomen in the female category, make claims regarding fairness. The IOC policy states:

*“the **overriding sporting objective** is and remains the **guarantee of fair competition.**”*
[bold: our emphasis]

Of the UCI policy, President David Lappartient announced it would:

*“take into consideration – and in reflection of developments in our society – the desire of transgender athletes to compete, while **guaranteeing a level playing field** for all competitors.”*
[bold: our emphasis]

- 3.4. We thus infer that British Cycling considers testosterone suppression to below 5 nM for 12 months prior to and during competition sufficient to

²¹ Comparisons of event results between females and under-18 boys for the 2017 athletic season can be found here: www.law.duke.edu/sports/sex-sport/comparative-athletic-performance

²² Comparison of seasonal performance data between males and females in athletics shows that thousands of individual males, over multiple events each, are faster/higher/further than females. www.worldathletics.org/stats-zone

²³ The IOC transgender inclusion guidelines can be found here: www.stillmed.olympic.org/Documents/Commissions_PDFfiles/Medical_commission/2015-11_ioc_consensus_meeting_on_sex_reassignment_and_hyperandrogenism-en.pdf

²⁴ The UCI transgender inclusion guidelines can be found here: www.uci.org/inside-uci/press-releases/the-uci-updates-and-clarifies-its-regulations-on-transgender-athlete-participation

remove or render negligible the male athletic advantage acquired under high-testosterone conditions at puberty, and therefore deliver fairness.

- 3.5. There have been two high-quality, high-impact academic reviews in (both in leading sports journals) of muscle physiology in transwomen who have, post-puberty, suppressed testosterone (pharmaceutically and/or surgically) as part of their transition.^{25,26} These reviews cover studies of height, lean body mass (LBM), muscle mass and strength measurements in around 800 transwomen.

In transwomen, the extent of muscle/strength loss is approximately 5% after 12 months, a modest change that is insufficient to bridge the baseline muscular differences between males and females.

- 3.6. Particularly relevant for cycling, an individual study by Wiik et al.²⁷ (captured by both reviews above) was the first to measure leg muscle mass and strength in transwomen after 12 months of successful testosterone suppression. They found:

“In transwomen [...] total loss of thigh muscle volume was 5%, which was paralleled by decreased quadriceps CSA [cross-sectional area] but not radiological [contractile] density.”

and:

“Transwomen maintained knee extension strength and knee flexor isometric strength, and there were some improvements in the dynamic knee flexor measurements.”

- 3.7. Extending the Wiik study, by comparison with matched females, Hilton and Lundberg calculated retained advantage of muscle mass and/or strength after 12 months (expressed as +%) as +33% thigh muscle

²⁵ In *Transgender Women in the Female Category of Sport: Perspectives on Testosterone Suppression and Performance Advantage* (2021), Hilton and Lundberg collated multiple studies of around 800 transwomen measuring pre-transition musculoskeletal metrics compared with their metrics after at least one year, in some studies longer, of transition. These data were collected on transwomen as a routine aspect of their ongoing general health assessments within their clinical care teams. All transwomen had been successfully suppressing testosterone to around 1 nM for at least one year, and would therefore qualify for inclusion in female sports categories under the regulations specified by most sports federations. Where available within study cohorts, these metrics in matched female controls were used as a reference value to calculate retained advantage in transwomen.

<https://link.springer.com/content/pdf/10.1007/s40279-020-01389-3.pdf>

²⁶ In *How does hormone transition in transgender women change body composition, muscle strength and haemoglobin? Systematic review with a focus on the implications for sport participation* (2021), Harper et al. interrogated the same dataset as above, and included a systematic analysis of hemoglobin response to testosterone suppression: <https://bjsm.bmj.com/content/bjsports/early/2021/02/28/bjsports-2020-103106.full.pdf>

²⁷ <https://academic.oup.com/jcem/article/105/3/e805/5651219>

volume, +26% quad muscle area, +41% knee extension strength and +33% knee flexion strength. That is, after 12 months of testosterone suppression, transwomen remain far more muscular and stronger than matched females.

3.8. Similar calculations for other studies where data was available for matched females confirms that transwomen retain large amounts of muscle mass/strength advantage over females:

- 3.8.1.** Gooren and Bunck, 2004: +13% thigh muscle area after 3 years.²⁸
- 3.8.2.** Wierckx et al., 2014: +39% lean body mass (LBM) after 1 year.²⁹
- 3.8.3.** Van Caenegem et al., 2015: +28% LBM/+23% grip strength/+13% calf muscle area/+34% forearm muscle area after 2 years.³⁰
- 3.8.4.** Auer et al., 2018: +27% LBM after 1 year.³¹
- 3.8.5.** Klaver et al., 2018: +28% arm LBM/+19% leg LBM after 1 year.³²
- 3.8.6.** Scharff et al., 2019: +21% grip strength after 1 year.³³

3.9. Hilton and Lundberg concluded:

*“The biological advantage, most notably in terms of muscle mass and strength, conferred by male puberty and thus enjoyed by most transgender women is only **minimally reduced** when testosterone is suppressed as per current sporting guidelines for transgender athletes.”*

[bold: our emphasis]

This conclusion was subsequently extended by Harper et al., who found:

*“Hormone therapy decreases strength, LBM and muscle area, **yet values remain above that observed in cisgender women, even after 36 months.**”*

[bold: our emphasis]

Thus, the most recent analyses generate a consensus that testosterone suppression in transwomen who meet the central IOC criteria adopted by most sporting federations, including that proposed here by British Cycling, does not alter skeletal parameters like height (and linked attributes like shoulder/hip width, limb length, digit length), only modestly reduces muscle mass/strength, and muscle mass/strength fails, by some measure, to reach parity with matched females.

²⁸ <https://ej.e.bioscientifica.com/view/journals/eje/151/4/425.xml>

²⁹ <https://www.sciencedirect.com/science/article/abs/pii/S1743609515300837?via%3Dihub>

³⁰ <https://link.springer.com/article/10.1007%2Fs00198-014-2805-3>

³¹ <https://academic.oup.com/jcem/article/103/2/790/4688910>

³² <https://ej.e.bioscientifica.com/view/journals/eje/178/2/EJE-17-0496.xml>

³³ <https://ec.bioscientifica.com/view/journals/ec/8/7/EC-19-0196.xml>

- 3.10.** After 12 months of successful testosterone suppression, male musculoskeletal advantage is retained, and this has serious implications for fairness across all cycling disciplines. The statement from the UCI that testosterone suppression measures will guarantee a level playing field are without any scientific foundation, and there is sufficient evidence to conclude that the playing field remains distinctly “unlevel”.
- 3.11.** The transwomen cohorts analysed above had average testosterone levels around 1 nM, and this (female-typical) level was insufficient to induce the magnitude of musculoskeletal changes required to create parity with female controls. There are no studies of scales of difference at 10 nM (the IOC threshold), 5 nM (the selected British Cycling threshold) and 1 nM (the typical level achieved by compliant transwomen). The 5 nM threshold selected by British Cycling is thus arbitrary, and lacks evidential support that it, rather than a higher or lower threshold, is an effective threshold.
- 3.12.** Furthermore, Hilton and Lundberg note that requiring as a condition of inclusion a pharmaceutical intervention that does not deliver the intended aims of the treatment (in this case, removal of male performance advantage) raises medical-ethical questions and:
- “may drive medical practice that an individual may not want or require.”*
- 3.13.** The variety of different abilities required across different cycling disciplines renders the application of a “one size fits all” criteria untenable. For example, the muscular build of a track sprinter is vastly different to that of a long-distance road cyclist, and small amounts of strength loss with testosterone suppression (if experienced at all) may deliver different outcomes for different riders. At baseline, males have far greater upper body compared to lower body strength, and this may be relevant across different disciplines.
- 3.14.** Finally, unlike the IOC and many other sports federation policies, the British Cycling policy does not outline a contingency plan if a transwoman very visibly and clearly has large male advantage in terms of height, mass and strength, or previous athletic record. There appears to be no mechanism to reassure female athletes that they are safe to raise concerns, nor to assess (and, if necessary, exclude) a transwomen who undeniably presents a serious challenge to fairness in the female category.

4. RESPONSE TO PROPOSED POLICY - CYCLING CASE STUDIES

4.1. Internationally, there are several high-profile transwomen who have competed in competitive cycling in the female category. In this section, we discuss a few of these cases. The intent of such discussion is not to target specific individuals but to illustrate general principles and problems arising with inclusion of transwomen in female cycling categories.

4.2. **Veronica Ivy (formerly Rachel McKinnon) | Track cycling:** Ivy did not participate in competitive cycling pre-transition, so there is no longitudinal analysis of performance changes.

4.2.1. In 2018, Ivy became the UCI Masters world champion in the 200m sprint, age category 35-44, a feat achieved just a couple of years after taking up track cycling and at least 6 years after transition.³⁴ Ivy's rise to world champion drew protests from fellow competitor Sarah Fadar, who said:

"It's taken some women five to eight years to get that fast and [Dr. McKinnon] made these leaps and bounds in a few years. For her being such a beginner and being able to hit these times that took us years to hit, how do you even measure that progression?"³⁵

4.2.2. Ivy has a strong social media profile and frequently posts about her strength training and statistics. Squatting 154kg,³⁶ for her weight, she falls into the elite female lifting category.³⁷ Her squat at 36 years old is comparable to that of a younger Anna Meares, extensively-trained over many years for sprint cycling, renowned for sprint power and reported at 150kg aged 32 years old.³⁸

4.2.3. Both Hilton and Lundberg and Harper et al. have collated data from transwomen in the general population, finding only modest losses of mass/strength. There are no studies of strength metrics in transwomen athletes. By examining the effects of training in males who suppress testosterone for medical purposes, Hilton and Lundberg find that:

"In well-controlled studies in biological males who train while undergoing testosterone reduction, training is protective of,

³⁴ www.en.wikipedia.org/wiki/Veronica_Ivy#cite_note-lgbtq-7dec2019-25

³⁵ www.velonews.com/news/commentary-the-complicated-case-of-transgender-cyclist-dr-rachel-mckinnon

³⁶ www.twitter.com/SportIsARight/status/1053999819331719169?s=20

³⁷ www.strengthlevel.com

³⁸ www.adelaidenow.com.au/sport/olympics-2016/australias-olympic-cycling-veteran-anna-meares-is-bigger-stronger-than-ever-ahead-of-rio-olympics/news-story/a10dd02fe7024c6ce2f5dfbe75943f66

and may even enhance, muscle mass and strength attributes.”

and therefore reason:

“Considering transgender women athletes who train during testosterone suppression, it is plausible to conclude that any losses will be similar to or even smaller in magnitude [approximately -5%] than documented in the longitudinal studies described in this review.”

Confirming this hypothesis, Ivy is publicly open that she has been able to build large amounts of muscle while suppressing testosterone.^{39,40} Whether this capacity translates to other sports remains to be seen, but it is clearly possible for transwomen track cyclists to not only mitigate loss of mass/strength while suppressing testosterone, but to make large gains.

“My body hasn't produced a drop of testosterone since 2013. But in 2017 when I started training for track sprint cycling, a shift in training TYPE and VOLUME led to me packing on 25lbs of muscle in 4mo...with NO testosterone.”

“I built these legs without any endogenous testosterone.”

4.2.4. Ivy defends her apparent physical advantage by comparison with fellow track cyclist and Olympic gold medallist Elis Ligtlee, who is 2.5 cm taller and 4.5 kg heavier than Ivy. Strength is derived from muscle mass, the majority component of LBM. In terms of body composition, compared with females, males have lower fat % and higher LBM %.⁴¹ A difference of around 10 kg of LBM is carried through to athlete populations.⁴² Thus, Ivy mistakes total body weight as a marker for strength-producing mass, where she retains advantage.

4.3. Kate Weatherly (NZ) | DHI MTB: Pre-transition, Weatherly competed as a junior male, completing 8 races with an average finish in the 12th percentile, with no wins. Weatherly transitioned in 2014, aged 17 years old, but continued to compete as male. Between 2014 and 2017, Weatherly competed in the male open (sub-elite) category, completing 28 races with an average finish in the 48th percentile, again with no wins and a highest finish of fifth position. In 2018, Weatherly switched to female

³⁹ www.twitter.com/SportIsARight/status/1357736492827889664

⁴⁰ www.twitter.com/SportIsARight/status/1342166121072439297

⁴¹ www.bsd.biomedcentral.com/track/pdf/10.1186/s13293-018-0189-3.pdf

⁴² www.bjism.bmj.com/content/52/4/219.long

competition and entered directly at the female elite level. Weatherly has completed 25 races with an average finish in the 79th percentile, has accumulated 8 wins, 3 second places, and third place at a UCI World Cup event.⁴³ Weatherly has gained a significant ranking advantage from switching categories, moving from mediocre open male to winning elite female. This positional gain did not necessitate improved performance on Weatherly's part.

- 4.4. Jillian Bearden | Road cycling:** Before transition, Bearden cycled in the male category.⁴⁴ Given the availability of pre-transition data, she has thus been the subject of lab studies to measure how transition (in 2014) has affected her power output. Three years before transition (2011), Bearden's 8-minute test shows an average power of 338 watts and a lactate threshold at 304 watts. Two years after transition (2016), Bearden's matched scores were 300 watts and 270 watts, respectively. This represents a loss of 11% power output and lactate threshold. Comparison of male and female road cyclists in the Gila TT, obtained via Strava, reveals a 47% power gap in favour of males.⁴⁵ Clearly, power losses of 11% do not close the gap between male and female road cyclists.

⁴³ www.rootsandrain.com/rider54373/anton-weatherly/results
www.rootsandrain.com/rider136238/kate-weatherly/results

⁴⁴ An extensive and sensitive article covering Jillian Bearden's story can be found here:
www.cyclingtips.com/2016/12/paving-the-way-for-transgender-cyclists-the-story-of-jillian-bearden

⁴⁵ www.source-e.net/rider-resources/male-female-whats-power-difference-bike

5. RESPONSE TO PROPOSED POLICY - LISTENING TO FEMALE RIDERS

5.1. Statement from Alison Sydor (CAN) | XC MTB and road cycling | Olympic XC MTB Silver Medallist 1996 | UCI XC MTB World Champion 1994-1996

I commend British Cycling for having an open consultation on their transgender participation policy. I know many female athletes around the world are quite nervous to speak up about this subject, and if I was an active elite/pro/amateur cyclist I would probably be keeping my opinions to myself. However as a retired former professional mountain bike and road athlete I feel able and compelled to speak out about this situation, and I am saddened that too many female athletes have felt bullied and silenced by activists. This is wrong, and I hope that both the UCI and all cycling national sporting organisations become more aware and take action to reprimand those who bully, perpetuate incorrect information and shame female athletes such that their voices on this subject are not being heard.

The female sport category exists for a wholly reasonable and legitimate reason. Female athletes appreciate their own category and have worked hard to grow it and its legitimacy. As a former professional cyclist I know what it's like to feel like a second class citizen in my sport. A female athlete's lot in my day was to constantly have to justify our races, our prizes, our access to National Team funding and our access to a sliver of the media attention. In this current climate of trans activism I have watched as female athletes have been made to feel now also like 2nd class citizens in their own category!

Just yesterday [28th April 2021] in Canada, the CBC (National Broadcaster) ran a story about the various state bills in the US being introduced and debated to protect the female sport category eligibility for female sexed athletes only. Of course many in the media have characterized these bills as anti trans vs pro female. Current masters sprint world champion Veronica Ivy (formerly Rachel McKinnon) was quoted describing:

“non-existent rights of cis women and girls [to fair sport]”

and defending the actual non-existent:

“rights of trans kids to play with their peers [in the sex category of their choice].”

Female athletes are being made to feel lesser by this activist (and UCI title holder), and the media unquestioningly promote these statements, something I worry may ultimately have repercussions in our efforts to keep young females involved in cycle sport.

It can be argued that athletes give up a number of normal citizen rights to compete in sport, for example, privacy for doping controls. But it's understood we give up these rights and follow the rules of our sports by free choice. Competing in sport is, in my view, a privilege not a right. That said we should and must find ways to accommodate anyone who wants to play. This accommodation however need not compromise the fairness, safety and indeed integrity of our games.

The situation with transgender athletes is one of a group seeking an accommodation by sport. It's up to sport authorities and maybe the law to decide if this accommodation can be made while not undermining the legitimate interests of other competitors. As a female athlete where there was no women's race, I have sought an accommodation to race with the men's 1-2 field, or with the elite juniors. This was acceptable to all as it was understood that, while I was often quite competitive in these groups, I was "punching up not down". Punching down is called "sandbagging" and not considered good sportsmanship. It is incumbent on sport policy makers to make sure that no accommodations for groups are made where the accommodated is in an advantaged position. In Canada this very concept was affirmed in the Ontario Human Rights case of Youth Bowling Council v. McLeod.⁴⁶ In the case of transgender athletes, accommodating trans men in the male category is without controversy, it is only the accommodation of trans women in the female category that requires the appropriate work be done to ensure fairness for female athletes is maintained.

We often hear that trans athletes just want to play and do sport for health and fitness, and I am certain that for a great majority that is the case. However it's impossible to deny that many trans women do want to compete as female athletes at the highest levels, where the fairness question is more materially consequential. In Canadian cycling we have had 3 such prominent trans athletes in recent years:

1. Michelle Dumaresq won a Canadian Championship Downhill title and with it the sole funded position on the National Team for a UCI World Championship.
2. Kristen Worley transitioned as an adult and had Olympic track team aspirations for the 2004 and 2008 Games.
3. Rachel McKinnon (now Veronica Ivy) attended the National Championships with aspirations to contend for the Canadian Olympic Team as a track athlete.

When the IOC first introduced its Stockholm Consensus in 2003 allowing transgender athletes to compete in the sex category they transitioned to, they did not anticipate their policy would have much effect on the Olympic Games at all; however as we have now seen, this policy has had a ripple effect through all of sport.

Fast forward to 2021. The IOC policy's once stringent legal and surgical requirements have been dropped in favour of simply lowering one's testosterone with medication for a year to a level still (even with the recent UCI adoption and proposed British Cycling limit of 5 nmol/l) above that of any healthy female athlete.

There is already a pro woman, Kate Weatherly, on the downhill mountain bike scene who transitioned after racing as a junior male and has now finished on a Women's UCI World Cup runner up podium step. There is a young former male track athlete in the UK, Emily Bridges, who has transitioned to female and may indeed have a full elite female career ahead of them. After going through male puberty, having been advantaged with the greater opportunities almost all talented young male athletes have

⁴⁶ www.archive.org/stream/boi88_015/boi88_015_djvu.txt

relative to their female counterparts and after simply lowering their testosterone for one year using medications, they can now compete - as is their dream - for a spot on the Women's Olympic team in 2024. Their junior championship pursuit time in 2019 was 2.5 seconds faster than the current women's world record.

I think almost every athlete, trans and non trans, would be in agreement that the current policies regarding transgender athlete eligibility are problematic due to the lack of science underpinning them. In 2017, Canadian transgender athlete Kristen Worley took the Ontario CA, Canadian CA, the UCI, and the IOC to Ontario Human rights court with a complaint about of the lack of science underpinning the policies regarding her eligibility.⁴⁷ All athletes who want to play fair want proper rules in place that are science based.

Additionally I would like to add that given the incredible diversity of cycling disciplines any trans athlete policy needs to be event specific. It is well documented that the male sport advantage over female athletes varies depending on the nature of the event, that is, more strength or endurance based, more upper body or lower body intensive. Track sprinters are more like power lifters and road cyclists are more like marathon runners – and the male advantage for both these activities are very different. By lowering testosterone levels it may be possible to reduce the male advantage for some cycling events and not for others.

It's also important that policy makers keep their minds open to all options for inclusion. This may be a third category, a third classification within the women's races, or perhaps considering the male category as the open class while still recognizing the athletes gender identity on the results sheet (as has been done with a trans woman competitor in the US).

For the love of sport and inclusive participation I know many cyclists in British Columbia where I live compete in weekly club events in non-gendered, self-identified ability classes eg A, B and C. Even as a professional, this type of racing was some of my favourite to do. Many sports could do well to better develop more co-ed, ability based competitions for recreational athletes.

It is for the best of the entire sport community and even society in general to make sport opportunities available and welcoming to all who want to play. However the female category has existed and still exists as a protected category for a legitimate reason. Athletes have every right to seek any accommodation that they would like, however there is no "right" to expect that accommodation to be granted. It's ultimately poor leadership from the sport governing bodies if there is a real or even high probability that such accommodation would put transgender athletes in an advantaged position relative to the female athletes who will be accommodating them.

⁴⁷ <https://www.hrlsc.on.ca/sites/default/files/docs/en/Media/2017-07-06%20%20Worley%20v%20%20OCA%20%20CC%20MOS%20public.pdf>

5.2. Statement from Jennifer Wagner-Assali (USA) | Track cycling | Orthopedic surgeon

My name is Jennifer Wagner-Assali and I am a Houston cyclist. Thankfully I did not have to face the issue of males identifying as females in female sport categories when I was younger, but I have competed against several as an adult in the elite and masters categories of cycling. You won't hear from many women like me, because they are scared to speak out and say how they really feel. I get hundreds of private messages from women who are against this, but the fear of being called names such as "bigot" or "transphobic" prevents them from simply stating the truth.

If humans could actually change their sex, this would be a non-issue. Men could actually become a woman and there would be nothing to debate. They would play sports in their new category. However, we all know this is not the case. Humans cannot change their sex, and presenting oneself socially as the opposite sex does not change biological reality. Lowering testosterone is not a proxy for girl or womanhood.

Having to race or compete against a male is demeaning to women who have fought so hard to be able to compete fairly. We already often race shorter distances, win less prize money, and compete at the less desirable time-slots compared to men. Now we also have to share the start line and podium with them, and these rules were made without asking us our opinion. If you try to protest, you are told, "these are the rules, deal with it" or told you're being discriminatory. However females are not strangers to discrimination, we know it is actually we who are being oppressed in this situation.

I have lost out on prize money, a world championship medal, and dignity by being forced to accept this rule of allowing males in the female category. Many of my friends have experienced the same. I just can't imagine being a young girl right now getting into sport for the first time and being told this is the new normal. I may have not entered sports in the first place.

The science is clear - males retain physical advantage after a year of testosterone suppression, staying higher than biological females that take testosterone for a year!

Please stand up for females and let us keep sports fair and safe for all the girls and women that will come after us. We deserve it.

SEX MATTERS SUMMARY

The gap between male and female cycling performance, across all cycling disciplines and assessed by race times and power metrics, is large.

Multiple studies of transwomen meeting the testosterone criteria proposed by British Cycling generate an emerging consensus that testosterone suppression for 12 months does not remove or render negligible the male athletic advantage acquired under high-testosterone conditions at puberty.

Thus, there is no scientific evidence to support the policy that British Cycling has developed to include transwomen in female categories, nor that it will, according to the UCI and whose guidance British Cycling adopt, **guarantee** a level playing field.

THUS, THE PROPOSED POLICY FAILS TO PROTECT FAIRNESS FOR FEMALE RIDERS.