Comment submitted by Family Watch International

Regarding Proposed Rule: "Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance: Sex-Related Eligibility Criteria for Male and Female Athletic Teams"

Submitted to:
DEPARTMENT OF EDUCATION
34 CFR Part 106
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RIN 1870–AA19
AGENCY: Office for Civil Rights, Department of Education
ACTION: Notice of proposed rulemaking (NPRM)

May 15, 2023

Biological males are different in ways that, in most cases, give them an advantage in athletic competitions.[1] The current regulations governing Title IX as it applies to athletics is premised on the reality of biological differences between men and women. The proposed regulation would elide this reality and add a subsection that could negate the purpose of allowing of sex-specific athletic teams.

The draft regulation promises flexibility to schools, but that flexibility is illusory. Without allowing schools to simply make the choice to have sex specific teams as the current regulation allows, every decision will now be assessed by regulators for reasonableness in the context of a regulatory scheme that implies that simply allowing sex-specific teams (as has been allowed since Title IX was enacted) is suspect.

This implication—that schools must make a special showing to justify sex-specific teams—is unreasonable. There is a large body of empirical evidence demonstrating that it is eminently reasonable to separate athletic teams on the basis of biological sex rather than gender identity.

At puberty, testosterone in young men typically increases to 10-20 times that of a healthy young woman. This increased testosterone enhances athletic performance in a number of ways that give young men an advantage in competition.[2] The concern with athletes using steroids is related to this because these drugs are "synthetic derivatives of testosterone."[3] Researchers in New Zealand have explained that "testosterone contributes to physiological factors including body composition, skeletal structure, and the cardiovascular and respiratory systems across the life span, with significant influence during the pubertal period. These physiological factors underpin strength, speed and recovery—with all three elements required to be competitive in

almost all sports. As testosterone underpins strength, speed and recovery, it follows that testosterone benefits athletic performance."[4]

Biological males have a number of additional advantages over biological females including:

- Larger lungs and the ability to process oxygen faster.[5]
- Larger hearts and more hemoglobin in their blood.[6]
- Increased muscle mass.[7]
- More myoglobin in muscle fibers to provide energy from oxygen.[8]
- Larger, longer, and more dense bones.[9]

Summarizing, *Live Science* explains the many biological advantages that males have over females in athletic competition:

> height, weight, broader shoulders, greater circulating blood volume, greater resistance to dehydration, larger lung capacity, thicker skin, faster sensory frame shifting, more hemoglobin in the blood, greater upper-body strength, faster reaction times, greater bone density in the arms, larger sweat capacity, higher systolic blood pressure, higher muscle-to-fat ratio, and larger hearts.[10]

As a result, males are physically stronger on average,[11] and, on average, are faster.[12]

As female athletes in Connecticut recently explained in seeking legal protection from mandatory inclusion of male athletes in female sports, "male athletes consistently achieve records 10-20% higher than comparably fit and trained women across almost all athletic events, with even wider consistent disparities in long-term endurance events and contests of sheer strength such as weight-lifting."[13]

Importantly, these advantages remain even when they "transition" to appear as the opposite sex.[14] This is true because the physiological differences caused by increased testosterone will already have taken place so the advantages in muscle mass, bone structure, etc., will be established regardless for a male who "transitions" to the appearance of female even after the "transition."

Researchers explain: "A transwoman [biological male but transitioning to a female appearance] athlete with testosterone levels under 10nmol/L for 1 year will retain at least some of the physiological parameters that underpin athletic performance. This, coupled with the fact that transwomen athletes are allowed to compete with more than five times the testosterone level of a cis-woman [biological female], suggests transwomen have a performance advantage."[15]

Additionally, "indirect effects of testosterone will not be altered by hormone therapy. For example, hormone therapy will not alter bone structure, lung volume or heart size of the transwoman athlete, especially if she transitions postpuberty, so natural advantages including joint articulation, stroke volume and maximal oxygen uptake will be maintained."[16]

A Swedish study looked at 11 biological males who had been given puberty blockers and cross-sex hormones and now identified as female and found they "were still stronger and had more muscle mass following 12 months of treatment."[17]

Of course, for males who identity as female and do not undergo any surgical or hormonal treatment to change their sex, all of the average advantages from biological maleness will be unchanged.

The current regulation is simple and provides schools the necessary flexibility to make decisions on athletic competition including how to accommodate individual student needs. The proposed regulation adds a layer of unnecessary oversight that incentivizes schools to prioritize gender identity over biological sex in athletic eligibility so as to avoid liability.

The proposal is unnecessary and will create pressure for schools to allow biological males to compete in female sports and deprive women and young women of athletic opportunities. It will negatively and unfairly impact biological females.

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[1] Tia Ghose, "Women in Combat: Physical Differences May Mean Uphill Battle" *Live Science* (December 7, 2015), https://www.livescience.com/52998-women-combat-gender-differences.html.
[2] David J. Handelsman, et al., "Circulating Testosterone as the Hormonal Basis of Sex Differences in Athletic Performance" *Endocrine Reviews* 39(5):803-829 (October 2018).
[3] Kavitha Ganesan, et al., "Anabolic Steroids", https://www.ncbi.nlm.nih.gov/books/NBK482418/.
[4] Taryn Knox, Lynley C. Anderson & Alison Heather, "Transwomen in elite sport: scientific and ethical considerations" *Journal of Medical Ethics* 45(6):396-403 (2019), page 397, https://jme.bmj.com/content/medethics/45/6/395.full.pdf.
[5] Elizabeth A. Townsend, et al., "Sex differences and sex steroids in lung health and disease" *Endocrinology Reviews* 33:1–47 (2012).
[6] William G. Murphy, "The sex difference in haemoglobin levels in adults - mechanisms, causes, and consequences" *Blood Reviews* 28:41–7 (2014).
[7] Shalender Bhasin, et al., "Testosterone dose-response relationships in healthy young men" *American Journal of Physiology, Endocrinology & Metabolism* 281:E1172–E1181 (2001).
[8] Arny A. Ferrando, et al., "Differential Anabolic Effects of Testosterone and Amino Acid Feeding in Older Men" *Journal of Clinical Endocrinology & Metabolism* 88(1):358-362 (January 2003).
[9] Thomas F. Lang, "The bone-muscle relationship in men and women" *Journal of Osteoporosis* 2011:1–4 (2011); David J. Handelsman, "Sex differences in athletic performance emerge coinciding with the onset of male puberty" *Clinical Endocrinology* 87:68–72 (2017); Dirk Vanderschueren, et al., "Sex steroid actions in male bone" *Endocrinology Reviews* 35:906–60 (2014).
[10] Tia Ghose, "Women in Combat: Physical Differences May Mean Uphill Battle" *Live Science* (December 7, 2015), https://www.livescience.com/52998-women-combat-gender-differences.html.
[11] Ian Janssen, et al., "Skeletal muscle mass and distribution in 468 men and women aged 18–88 yr" *Journal of Applied Physiology* 89(1):81-88 (2000).
[12] Laura Geggel, "Why Do Men Run Faster Than Women?" *Live Science* (May 27, 2017), https://www.livescience.com/59289-why-men-run-faster-than-women.html.
[13] Complaint, Soule v. Connecticut Association of Schools, Inc., (U.S. District Court, District of Connecticut. 2020), p. 14.
[14] Taryn Knox, Lynley C. Anderson, Alison Heather, "Transwomen in elite sport: scientific and ethical considerations" *Journal of Medical Ethics* 45(6):396-403 (2019), https://jme.bmj.com/content/medethics/45/6/395.full.pdf.
[15] Ibid, page 398.
[16] Ibid.

[17] Anna Wiik, et al., "Muscle strength, size and composition following 12 months of gender-affirming treatment in transgender individuals: retained advantage for the transwomen" *Journal of Clinical Endocrinology and Metabolism* 105(3) (March 1, 2020).