

Gender Affirming Care: Puberty Blockers

Science Facts and Analysis from Science for Georgia

Gender Affirming Care for gender dysmorphia has recently been in the spotlight due to multiple proposed laws and multiple lawsuits.

Care for gender dysmorphia is misunderstood, in part because it is new to most of society, and in part, because of sensational headlines and politicization surrounding it. Below we seek to address some common misconceptions and provide evidence-based research.

What are Puberty Blockers?

[Gonadotropin-releasing hormone \(GnRH\) analogues](#), most commonly known as puberty blockers, are taken to stop the body from producing natural sex hormones such as estrogen and testosterone. Puberty blockers have been used for decades as a standard treatment for precocious (early) puberty to reduce adverse health risks and to avoid traumatic social experiences in youth development. Controversy over this treatment has only arisen recently with its use as a part of gender-affirming care for youth diagnosed with gender dysphoria. Other possible parts of gender-affirming care include social transition, counseling, voice therapy hormone therapy, and gender affirming surgery. While there is a detailed medical standard of care for each of these treatments, there is no one linear pathway. Rather, it is important that patients have a [supportive and thoughtful care team](#) that helps them to make appropriate decisions for their unique case.

Puberty blockers are a part of the standard of care, as they give youth time to live in their gender identity and consider further action. Going through puberty that [does not match](#) one's identity can have serious negative social and mental health impacts. This can lead to severe outcomes of [depression](#), [self-harm](#), and even [suicide](#). Access to pubertal suppression has been associated with a lower [rate of suicidal ideation](#) among those who wanted treatment.

What are some common misconceptions?

Using puberty blockers for gender-affirming care is “highly experimental”

Off-label uses of medication are extremely common in medicine and pediatrics. [For example](#), 85% of more than 55,000 children admitted to pediatric intensive care units in the USA were treated with at least one off-label medication (the average number was 4.5), and these medications included neurological, antimicrobial, and cardiovascular drugs.

Minors who seek transgender care are automatically put on puberty blockers.

This is not true. There are several criteria which must be evaluated and addressed before beginning puberty blockers. These steps are outlined by the [WPATH Standard of Care](#). First, it is recommended to allow minors to start the [Tanner II Stage](#) of puberty, which is the first stage of puberty, to determine if gender dysphoria does dissipate with the onset of puberty or if it worsens. Second, the adolescent must have demonstrated a long pattern of gender dysphoria. Third, any coexisting mental, physical, or social problems must be addressed. Fourth, the minor must give informed consent and when they have not reached the age of medical consent the parent must also give informed consent.

Science for Georgia, Inc.
1700 Northside Dr, Ste A7, PMB 916, Atlanta, GA 30318
Scienceforgeorgia.org • info@sci4ga.org



Gender Affirming Care: Puberty Blockers

Science Facts and Analysis from Science for Georgia

Those who go on puberty blockers are not given the opportunity to stop and are always moved on to cross-sex hormone therapy.

This is not true. [Hormone therapy](#) is typically considered the next step in transitioning but is not taken by all those who are diagnosed with gender dysphoria. It involves taking testosterone or anti-androgen and estrogen to make secondary sex characteristics (hair, voice, build, etc.) align with the patient's gender identity. Since hormone therapy is not as reversible as puberty blockers, another round of assessment and informed consent is the standard of care. While it is true that [only a very small minority](#) of those who go on puberty blockers do not move forward to hormone therapy, [a study](#) confirms the ability to make medical decisions with proper care and informed consent and does not demonstrate coercion to continue treatment. Another study found that transgender youth who were prescribed puberty blockers were [not more likely to start hormone therapy](#) than those who weren't.

Puberty blockers worsen gender dysphoria and if they aren't prescribed, gender dysphoria goes away eventually.

This is not true. Puberty blockers are used to "press pause" on puberty and give those with gender dysphoria more time to think about their gender identity. It is true that some gender dysphoria [dissipates after puberty begins](#); this is why puberty blockers are not prescribed until after the start of natural puberty. Those whose gender dysphoria persists then go on puberty blockers to allow for a pause and greater time to let gender identity form. [This case report](#) found that identity formation continues even as patients go on puberty blockers.

Puberty blockers are irreversible.

This is not true. Puberty blockers [are reversible](#) and once the use stops, puberty resumes. Puberty blockers are also not meant to be taken permanently and are just one treatment in a [standard of care](#).

Puberty blockers cause infertility.

[In a study](#) of use of puberty blockers for females with central precocious puberty, there was no evidence of increased chance of infertility. If regular puberty is resumed and puberty blockers are not started before Tanner II there should be [no long-term impacts on fertility](#). It should be noted that this research is generally focused on patients who are female at birth.

Puberty blockers cause irrevocable harm to bone density.

A reduction in bone density is a possible [side effect](#) of puberty blockers that some people experience, but with medical care, bone density can be addressed.

Hormone changes during puberty are a significant catalyst in bone growth and mineralization.

There is a [long-term detriment to bone density](#) as an impact of long-term pubertal suppression.

This is because pubertal suppression is not supposed to last throughout the entirety of adolescence. When patients shift from pubertal suppression to cross-sex hormone therapy, problems of bone density are mitigated. This is a serious medical concern that is monitored by the patient's medical team. There are also other [protective regimens](#) such as exercise, Vitamin D, and calcium that can be used to combat any serious side effects.



Gender Affirming Care: Puberty Blockers

Science Facts and Analysis from Science for Georgia

Minors are not capable of making decisions about the medical treatment they receive.

This claim is harder to consider under scientific principles, as most people think about it from a perspective of anecdotal evidence and opinions about maturity. [A qualitative study](#) demonstrated that youth aged 14-18 have the capacity to make gender decisions with informed consent structures. [Another study](#) evaluated the ability to make medical decisions more broadly and found that 14-year-olds did just as well as 21-year-olds in a test of medical decision-making competence. It is important that more unbiased and science-based research is done on this topic. It is important to note that parental consent is part of treatment.

There isn't evidence that gender-affirming care is lifesaving, or even effective.

Despite the [many studies](#) that have been conducted indicating [positive mental health outcomes](#) for those who have received gender-affirming care, some discussion and disagreement has continued to pop up in the medical community. In a nutshell, [some critics](#) consider the studies flawed or inconclusive. While the discussion of best practices in data collection and interpretation is one which is best left for specialists, several things have held true across a multitude of studies with varying methodologies:

- (1) Trans and nonbinary youth face disproportionately severe mental health burdens
- (2) Removing access to gender-affirming care leaves many without substantial alternative options and
- (3) It is the decision of the teams of doctors and the patients themselves to carefully assess the risks and interpret the research to find what is best for them.

At the worst these are procedures with an unclear success rate and some minor risks, which can be said of a broad range of common medical procedures. This is not a reason to suspect the entire entity of medicine but is sometimes the nature of medical data. Meanwhile, it seems [most medical experts agree](#) on the harm posed by recent legislative restrictions on care.

The research has changed.

Research is an important part of scientific discovery, and it is an important part of all medical treatment plans.

It is vital to observe what biases may exist in any research studies, even when they appear as peer reviewed articles. For gender dysmorphia, there has been an increase in studies used as evidence against the standard of care funded by the Society for Evidence-Based Gender Medicine (SEGM). This non-profit, activist group is [not a scientific organization](#) and has been found to [misrepresent themselves](#) as a mainstream medical association.

For all scientific studies, it is important to check the funding and conflicts of interest of any study. If you are unsure, you can always look to see who the researcher, physician, or group associates with and where their funding comes from. [Learn how to read an academic paper here.](#)



Gender Affirming Care: Puberty Blockers

Science Facts and Analysis from Science for Georgia

What is happening right now?

Last year, [SB 140](#) went into effect and banned minors from receiving gender-affirming care in the form of cross hormone therapy and surgery. At the time, this bill was considered a compromise as puberty blockers were left off the list of banned treatments and minors who had already started cross-hormone therapy could continue. However, during this legislative session, [two sections](#) were added to [HB 1170](#), an unrelated bill on naloxone, that would ban puberty blockers for minors. Those who are already on puberty blockers would no longer be allowed to continue treatment and will be forced to undergo puberty that does not match their gender identity. The bill passed through the senate health and human services committee after it was presented midway through the meeting and no notice was given to democratic committee members or advocates who would oppose the bill. The committee only heard testimony from opponents who were given notice of the change, none of whom were professionals in the field.

References

<https://www.mayoclinic.org/diseases-conditions/gender-dysphoria/in-depth/pubertal-blockers/art-20459075>

<https://opa.hhs.gov/sites/default/files/2023-08/gender-affirming-care-young-people.pdf>

<https://www.cmaj.ca/content/191/3/E69>

<https://pubmed.ncbi.nlm.nih.gov/35212746/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6913646/>

<https://journals.sagepub.com/doi/abs/10.1177/0886260520915554>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7073269/>

[https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(21\)00233-9/abstract](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(21)00233-9/abstract)

https://www.wpath.org/media/cms/Documents/SOC%20v7/SOC%20V7_English.pdf

<https://www.ncbi.nlm.nih.gov/books/NBK470280/>

<https://www.issm.info/sexual-health-qa/what-is-cross-sex-hormone-therapy>

<https://pubmed.ncbi.nlm.nih.gov/35177147/>

[https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(22\)00254-1/abstract#%20](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(22)00254-1/abstract#%20)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9627413/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6336471/>

<https://www.sciencedirect.com/science/article/pii/S2773021222000426>

<https://opa.hhs.gov/sites/default/files/2023-08/gender-affirming-care-young-people.pdf>

<https://karger.com/hrp/article/91/6/357/162902/Use-of-Gonadotropin-Releasing-Hormone-Analogs-in>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9578106/>

<https://link.springer.com/article/10.1007/s11673-020-10086-9#Sec2>

<https://publications.aap.org/pediatrics/article-abstract/141/4/e20173742/37799/Hormonal-Treatment-in-Young-People-With-Gender?redirectedFrom=fulltext?autologincheck=redirected>

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789423>

<https://link.springer.com/article/10.1007/s11930-023-00358-x#author-information>

<https://www.sciencedirect.com/science/article/abs/pii/S1054139X21004353>

<https://medicine.yale.edu/lgbtqi/research/gender-affirming-care/biased-science/>

<https://guides.library.cornell.edu/c.php?g=1306898&p=9630480>

<https://sciencelookup.org/knowledge-base1/how-to-read-scientific-papers/>



Gender Affirming Care: Puberty Blockers

Science Facts and Analysis from Science for Georgia

<https://www.legis.ga.gov/legislation/64231>

<https://sciencelookup.org/wp-content/uploads/2024/03/Legislative-Scorecard-HB-1170-Section-2and3.pdf>

<https://www.legis.ga.gov/legislation/66760>

About Science for Georgia

Science for Georgia is a 501c3 dedicated to bridging the gap between scientists and the public through training, outreach opportunities, and direct contact with the public, policymakers, and the press. Science for Georgia highlights how science can impact people's lives and advocates for the responsible use of science in public policy.

Please reach out with any questions or comments info@sci4ga.org

