



Statement of the National Center for Transgender Equality

Regarding Puberty Pausing Medications

House Judiciary Committee, Subcommittee on the Constitution and Limited Government

June 27, 2023

During the 2023 state legislative sessions, we have seen an escalating wave of proposed bans on transition-related healthcare that specifically target trans youth [1], and 20 states [2] (Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Indiana, Iowa, Louisiana, Mississippi, Missouri, Montana, South Dakota, Tennessee, Texas, Utah, West Virginia, Nebraska, North Dakota, and Oklahoma) have passed laws restricting or outright banning transition-related health care for transgender youth. Much of the rhetoric behind these dangerous bans relies on critical points of misinformation regarding the safety and efficacy of the medications provided to transgender adolescents. As of June 2023, 20 states have passed bans on transition-related care for transgender youth, targeting doctors and parents of trans youth.

While transgender people of every age have been part of our society for centuries, transgender issues are new to many in the US. This is partly because the growing acceptance of transgender people has resulted in increased visibility for transgender issues. This sense of unfamiliarity is exploited by lawmakers and media figures who want to criminalize and ban transition-related healthcare for children and adults. They exploit the public's unfamiliarity to characterize the existence of trans children as a new phenomenon, making easily disproven claims [3,4,5] that adolescents identifying as trans are a "social contagion." Furthermore, they falsely characterize [6] longstanding and medically necessary care as "experimental."

But politicians have no place interfering in medical decisions that should stay between youth, their parents, and their doctors. Transition-related health care has been safely in use for people of all ages for decades [7], and nearly every major medical association [8, 9] supports providing this medically necessary care and opposes this discriminatory government overreach by anti-trans politicians [10].

This misinformation and fearmongering is often unchecked in the media, inciting alarm and allowing false claims to be accepted as fact. That is why we at NCTE feel it is crucial to address the most common points of misunderstanding and to provide accurate information about these lifesaving medications.

What is a "puberty pausing medication"?

There are two types of puberty-pausing medications [11], gonadotropin-releasing hormone (GnRH) agonists and GnRH antagonists. These medications were initially developed to treat "precocious puberty" [12] in cisgender (i.e., not trans) children, where puberty begins prematurely relative to the child's age. These medications are also used to treat gender dysphoria in adolescents.

Puberty-pausing medications are used to pause (not suppress) the effects of puberty. The effects of puberty may cause children severe distress. These medications are sometimes called "puberty blockers," however, this term is not entirely accurate as these medications do not prevent puberty but merely pause or delay it.

What is gender dysphoria?

As defined by the Fifth Edition Diagnostic and Statistical Manual of Mental Disorders [13], “gender dysphoria” describes distress caused by the incongruence between a person’s gender and how they are perceived by others and/or aspects of their bodies. This distress is the result of others’ perceptions and behavior and/or a person’s perceptions of their own body, it is not the result not being trans in and of itself.

This diagnosis is important for people seeking transition-related health care who rely on insurance coverage to make this medically necessary care accessible due to the costs of health care in the U.S. Not every trans person experiences dysphoria to the same extent, if at all.

What do Puberty Pausing Medications do to the body?

In bodies producing more testosterone, puberty pausing medications delay or decrease the growth of facial and body hair, prevent deepening of the voice, delay skeletal changes typically regarded as masculine, and limit the growth of genitalia.

In bodies producing more estrogens, puberty pausing medications limit or pause breast development, redistribution of body fat, and pause/delay menstruation.

In all cases, puberty pausing medications delay changes to an adolescent’s body during the length of time that an adolescent is on the medication.

How do Puberty Pausing Medications do this?

These medications pause the creation of GnRH, a hormone produced in the hypothalamus of the brain, responsible for the release of follicle-stimulating hormone (FSH) [14] and luteinizing hormone (LH) [15] from the anterior pituitary gland, part of the hypothalamic-pituitary-gonadal axis [16,58]. LH and FSH catalyze the creation of other hormones related to sexual development, such as testosterone and estrogens [17].

GnRH agonists [18] bind to GnRH receptor and continuously stimulate it, resulting in a temporary increase in hormone production. The pituitary gland then becomes desensitized, pausing sex-hormone production.

GnRH antagonists [19] bind to the GnRH receptor; however, they do not stimulate it. They render the body’s GnRH ineffective, by preventing it from binding to the receptor, achieving similar effects without causing an initial increase in hormone levels.

Are the effects reversible?

Yes. The body’s hormone production will resume once the medication clears the body, which ranges from 3 to 6 months after the final dose. From this point, the adolescent will either discontinue treatment or begin hormone-replacement therapy.

In a study in the Netherlands, 98% [20] of adolescents on puberty pausing medications to treat gender dysphoria continue seeking further transition-related care upon follow-up with their providers. This demonstrates that the prescription of these medications for gender dysphoria is based on consistently appropriate diagnoses.

Are there side-effects?

Yes. Every medication has potential side effects. Side effects associated with the use of puberty pausing medications are no more severe than the side effects of other treatments provided to children. Potential and expected side effects are thoroughly reviewed by providers with adolescents and their parents/guardians, before beginning treatment. **Once treatment begins, side-effects are closely monitored by doctors and adolescents receive regular blood tests.**

Of the studies linking puberty blockers with bone-density loss, few demonstrated controls for evaluating factors like exercise, smoking, vitamin D, and calcium intake which significantly impact bone density [21,22]. Many doctors prescribe a calcium supplement alongside puberty-pausing medications to counteract this **potential** side effect.

There are few studies linking puberty pausing medications with permanent infertility. Puberty Pausing Medications alone do not permanently impair fertility [23] and reproductive capacity returns between 6 months to 2 years after the final dose, which is sufficient for adolescent patients who do not need to immediately resume reproductive capacity anyway.

Are they safe?

Yes. Puberty pausing medications have safely been in use for decades [7,24]. Organizations such as the American Medical Association [10, 25], the American Academy of Pediatrics [26], the American Psychiatric Association [27], the American Psychological Association [28], the and the Endocrine Society [29], among countless other professional organizations, affirm [9] both the safety & efficacy of puberty blockers [30] for youth experiencing gender dysphoria, and their life-saving capacity for trans youth.

The medications used to treat gender dysphoria in adolescents are the same that have been prescribed to cisgender adolescents for “precocious puberty” for over 40 years [7,12, 21,31,35]. The same types of medications are also used in fertility treatment plans [32,33] the treatment of endometriosis [34, 37], and the treatment of hormone-sensitive cancers like prostate cancer [19,36], further demonstrating that puberty blockers are not experimental [21].

Have they been studied?

Yes, claims that puberty blockers to treat gender dysphoria are “experimental” is factually incorrect [21,7]. These medications have been used to treat gender dysphoria transgender adolescents [38] for just under 25 years [7]. They have been rigorously studied their use in the treatment of gender dysphoria youth and their effectiveness and safety has been documented in a host of academic literature [39, 40, 41].

One claim made by anti-trans politicians is that these medications are experimental because they haven’t been tested in randomized controlled trials. However, it is practically impossible to conduct such trials [21,42], because of the drug’s effectiveness. It would quickly become evident who was in the trial’s active treatment arm, opening the results up to bias, and undermining the data.

Additionally, randomized-controlled trials may not be ethical in this context since adolescents in the control arm of the study won’t receive treatment, leaving this intense distress unchecked and resulting in negative mental health outcomes.

Like many drugs, puberty blockers are prescribed off-label. Off-label prescription is very common and necessary [43,44], particularly in pediatrics. As stated by the AMA “Off-label drug use is not the same as experimental or research use” [45]. Often drugs have only been tested on adults as part of their development and are therefore only licensed for use with adults, despite being safe and effective for treating minors.

Are they easy to get?

They’re generally only prescribed after extensive medical evaluation, mental health evaluation, and after many discussions between doctor, parents, and the adolescent in question (who professionals agree have the capacity to understand & consent to care) [39,46]. Doctors overwhelmingly follow timelines recommended by major medical associations [60], prescribing these medications only after a consistent pattern of gender dysphoria related to puberty is established. Once an adolescent initiates treatment their health is closely monitored by medical professionals [41].

What are their benefits?

When trans youth have their gender affirmed and are given medically necessary care it dramatically improves their mental health [47,48]. The lifesaving impact of this treatment cannot be overstated, as trans youth are already more likely to experience anxiety, depression, and suicidal ideation, compared to cisgender youth, due to overlapping factors such as gender-dysphoria, lack of support & acceptance, and minority stress. Countless studies show that providing youth with transition-related care, such as puberty-pausing medications, is associated with reduced rates of depression and suicidality especially amongst adolescents [49,50,51,52,53,54,55,56,59]. When politicians propose bans on this life-saving health care [57], they are putting the lives of approximately tens of thousands of transgender youth at risk [1].

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