

# Understanding Puberty-Pausing Medications

## Why is this important?

In 2023, NCTE tracked **500+ bills** (National Center for Transgender Equality, 2023) introduced in state legislatures, targeting the rights of transgender Americans. Of this alarming wave of legislation, an estimated **147 bills attempted to severely restrict or ban the provision of age-appropriate, evidence-based transition-related care**, including puberty-pausing medications. (National Center for Transgender Equality, 2023) **20 states have passed legislation restricting or outright banning this medically necessary healthcare** for transgender youth (Lawyers for Good Government; National Center for Transgender Equality; Trans Formations Project, 2023; Cline, 2023). The Williams Institute estimates that 146,300 transgender youth have lost or are at risk of losing access to lifesaving health care as a result of this legislation (Redfield, Conron, Tentindo, & Browning, 2023).

Attempts to restrict access to medically necessary care for transgender youth rely on misinformation regarding the safety and efficacy of the medications provided to transgender adolescents (Kremen, et al., 2021). The anti-trans extremists who promote these bans exploit the public's unfamiliarity with transgender youth, to falsely characterize them as a new phenomenon. They make (disproven) claims (Turban, Dolotina, Freitag, King, & Keuroghlian, 2023) that being transgender is a "social contagion", citing debunked diagnoses (Tannehill, 2018) of "rapid onset gender dysphoria" (Ashley, 2018)(Turban, Dolotina, Dana, & Keuroghlian, 2022). But **it is baseless fear, not scientific fact**, which underpins the attacks on youth's freedom to access medically necessary healthcare.

## What is a "puberty pausing medication"?

These medications are often called "puberty blockers", but we suggest that it's more precise to refer to them as "puberty-pausing medications"; which more accurately describes their mechanism of action and the reversibility of their effects. Whether an adolescent is transgender or not, puberty-pausing medications are prescribed to pause (not block) the effects of endogenous (internal) puberty on the body.

The development of these medications began in **1971**, when **gonadotropin-releasing hormone (GnRH)** was first isolated (A, Schally; A, Arimura; A, Kastin, et al. 1971). Once replicated, this synthetic GnRH demonstrated the same down-stream effects as endogenous GnRH. It was eventually discovered that continuous administration of GnRH resulted in a "paradoxical" downregulation (decrease in activity) of the **hypothalamic-pituitary-gonadal (HPG)** axis, the hormone cascade (discussed in detail in following sections) responsible for the production of sex hormones (Belchetz, Plant, Nakai, & Keogh, 1978). These medications are known as **GnRH agonists**.

Beyond transgender healthcare, GnRH agonists are the gold-standard treatment for "**precocious puberty**" (Eugster, 2019) in children regardless of gender identity, where puberty begins prematurely relative to the child's age (Chen & Eugster, 2015). The use of these medications to treat precocious puberty began in the **early 1980s**, through a collaboration between Massachusetts General Hospital and Boston Children's Hospital, where they were first demonstrated to be effective, safe, and reversible in pausing the effects of puberty (Boepple, Mansfield, ME, & al., 1986).

For transgender adolescents, these medications alleviate the distress caused by pubertal development that is inconsistent with their true gender identity, and have been used for this purpose since the early **1990s** (Carswell, Lopez, & Rosenthal, 2022) (Bonifacio, Maser, Stadelman, & Palmert, 2019). Rather than being "new" or "experimental" as anti-trans extremists may claim, these medications have been around for three decades.

## What is gender dysphoria?

As defined by the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision* (American Psychiatric Association, 2022) gender dysphoria describes distress resulting from the "incongruence" of a person's "*experienced/expressed gender and their assigned gender*". The diagnosis does not refer to **not being transgender in and of itself**. This distress results from

external perceptions & behaviors and/or a person's perceptions of their own body (Kuper E. L., Stewart, Preston, Lau, & Lopez, 2020). For transgender adolescents, the onset of puberty can cause severe gender dysphoria. Not every transgender person experiences the same degree of dysphoria and so not every person seeks the same types of transition-related care.

This diagnosis is important for people seeking transition-related healthcare who rely on insurance coverage to make this medically necessary care accessible since a diagnosis of gender dysphoria is often required by health insurers before they authorize payment for that care. **Due to high healthcare costs in the U.S.** (Gunja, Gumas, & Il, 2023) **a diagnosis of gender-dysphoria may be the only way to access this lifesaving healthcare.**

## What happens to the body during puberty?

If you can visualize a loop of runners with one passing a baton to the next, then you're halfway to conceptualizing how an intricate system of hormonal activity influences pubertal development. This process is sometimes called a hormone cascade. The cascade responsible for pubertal development is the hypothalamic-pituitary-gonadal (HPG) axis.

The brain's **hypothalamus** is responsible for the release of Gonadotropin-Releasing Hormone (GnRH) (A, Schally; A, Arimura; A, Kastin, 1971) (Conn & Crowley, 1991). GnRH travels to the brain's **anterior pituitary gland** to stimulate the production of two **gonadotropins**, follicle-stimulating hormone (FSH) and luteinizing hormone (LH) (Plant, 2015). From there, LH and FSH travel from the anterior pituitary gland to certain cells in the **testes** (sertoli & leydig cells) or **ovaries** (granulosa & theca cells). This leads to the **production of sex hormones**, such as androgens (testosterone, androgen binding protein, dihydrotestosterone, & androstenedione) and estrogens (estrone, estradiol, & estriol). The gonads will also produce a hormone called **inhibin** (Luisi, Florio, Reis, & Petraglia, 2005) which will help create a **feedback loop** to the hypothalamus and anterior pituitary gland, to regulate this cycle of hormone production. **To recap:** the secretion of GnRH causes the release of LH & FSH, which in turn causes the release of sex hormones & inhibin, which provide negative feedback to the hypothalamus and anterior-pituitary gland, to regulate further secretion of GnRH, creating the cycle of the HPG axis.

Regulated by the HPG axis, hormones gradually influence changes in an individual's anatomy and physiology. In people assigned male at birth pubertal changes to the body typically include the growth of facial hair, the deepening of the voice, the development of more "masculine" skeletal features, and the increase in testes and phallus size. In people assigned female at birth, pubertal changes typically include gradual widening of the pelvic bone, breast development, the development of pubic hair, and the onset of menses or menstruation. The development of puberty is measured in five developmental stages, referred to as "**Tanner Stages**"<sup>1</sup>, of which there are five. Most puberty-pausing medications are generally prescribed at **Tanner Stage 2** (Finlayson & al., 2019).

## What do puberty-pausing medications do to the body?

Puberty pausing medications **temporarily pause** the production of sex hormones, to alleviate the distress caused by the onset of puberty (Kuper E. L., Stewart, Preston, Lau, & Lopez, 2020). In most people assigned male at birth, puberty-pausing medications pause the growth of facial and body hair, the deepening of the voice, masculinizing skeletal changes, and pause the growth of genitalia. In most people assigned female at birth, puberty-pausing medications pause breast development, redistribution of body fat, pubic hair growth, and pause/delay menstruation. In all cases, puberty-pausing medications pause or delay changes to an adolescent's body during the length of time that an adolescent is on the medication.

## How do Puberty-Pausing Medications Achieve this Result?

Puberty-pausing medications temporarily pause the effects of endogenous puberty, by modifying the feedback loops of the HPG axis (Kumar & Sharma, 2014). The HPG axis is the primary hormonal cascade that regulates the creation of sex hormones (Abreu & Kaiser, 2016) (Plant, 2015). There are two categories of GnRH analogs (Kumar & Sharma, 2014), GnRH agonists and GnRH antagonists. Each of the two uses **similar but distinct** mechanisms of action, to pause the effects of endogenous puberty.

**GnRH agonists** bind to GnRH receptors of the anterior pituitary gland and continuously stimulate it, resulting in **controlled downregulation of the HPG axis**. This results in an initial increase in LH and FSH and subsequent sex hormone secretion. GnRH receptors on the anterior pituitary gland quickly become **desensitized** though, in turn pausing LH & FSH and subsequent sex

<sup>1</sup> The biometrics used to develop the categorization of Tanner Staging, relied heavily on the physiological norms of white, cisgender, and non-intersex individuals.

hormone production for as long as the medication is in the patient's system. This is the down-regulation mentioned previously, which refers to the decrease in sensitivity of the GnRH receptors, due to continuous stimulation (Finlayson & al., 2019). This will pause pubertal development, and depending on the age at which treatment begins, some effects of puberty may be modestly reversed. Some examples of GnRH agonists are leuprolide, goserelin, and histrelin.

**GnRH antagonists** bind to the GnRH receptor; however, they render the body's GnRH ineffective, by **temporarily preventing it from binding to the receptor** (Conn & Crowley, 1991). This achieves similar effects without causing an initial increase in hormone levels.

## Are there side effects?

**Yes. Every medication has potential side effects.** Any medication without potential side effects is unlikely to have any therapeutic effects either (U.S. Food & Drug Association, 2022). Side effects associated with the use of puberty pausing medications are no more severe than the side effects of other treatments commonly provided to children. Puberty-pausing medications are generally well tolerated and **their effects are reversible** (Finlayson & al., 2019). The possible and expected side effects are thoroughly discussed with adolescents and their parents/guardians, before beginning treatment. **Once treatment has begun, side effects are closely monitored** and patients' health is evaluated frequently (Hembree, et al., 2017) (Finlayson & al., 2019), with follow-up visits:

- **Every 3-6 months** to evaluate blood pressure, height, weight, and pubertal development.
- **Every 6-2 months** to evaluate hormone and vitamin levels.
- **Every year** to evaluate bone density.

Of the studies linking puberty-pausing medications with bone-density loss, few demonstrated controls for evaluating factors like exercise, smoking, vitamin D intake, and calcium intake which significantly impact bone density (Giordano & Holm, 2020). Prescribers are encouraged to offset concerns with bone development by ensuring the patient receives the recommended amounts of vitamin D and calcium (400 iu & >1000mg a day), **which few children in the U.S. receive at baseline** (Finlayson & al., 2019).

There are few studies linking puberty-pausing medications with long-term impaired fertility. Puberty-pausing medications alone do not permanently impair fertility (Warton & McDougall, 2022) (Guaraldi, Beccuti, Gori, & Ghizzoni, 2016) 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. Studies have shown no significant impairment of executive function, from treatment with GnRH agonists (Staphorsius, et al., 2015).

## Are the effects reversible?

**Yes. The effects of puberty-pausing medications are fully reversible** (Heger, Sippell, & Partsch, 2005) (Finlayson & al., 2019) (Hembree, et al., 2017). **After treatment has ended** the body's endogenous hormone production and pubertal development will resume. Generally the HPG axis resumes pubertal development within 6 to 12 months of discontinuing treatment with puberty-pausing medications (Neely, et al., 2011). From this point, the adolescent will either continue on with their endogenous pubertal development or be prescribed gender-affirming hormone-replacement therapy, sometimes described as exogenous puberty.

Long-term reproductive function, fertility, ovarian function, and menstrual cycles in people assigned female at birth are not impaired by the prescribed use of puberty-pausing medications (Magiakou M. A., et al., 2010) (Thornton, Geffner, Neely, Gould, & Danoff, 2014) (Jay, et al., 1992). In people assigned male at birth, spermatogenesis is resumed after treatment has ended (Giordano & Holm, 2020). In a majority of baseline cases with no underlying/pre-existing conditions bone mineral density returns to normal with no long-term impairments (Guaraldi, Beccuti, Gori, & Ghizzoni, 2016) (Carel, Eugster, Rogol, Ghizzoni, & Palmert, 2009). Bone health is either improved by the body's own resumed endogenous hormone production (Pasquino, et al., 2008) or by prescribed subsequent gender-affirming hormone therapy (Giacomelli & Meriggiola, 2022).

In a study in the Netherlands, 98% of adolescents on puberty pausing medications to treat gender dysphoria continue seeking further transition-related care upon follow-up with their providers (Catharina van de Loos, Hannema, Klink, den Heijer, & Wiepjes, 2022). This demonstrates that the prescription of these medications for gender dysphoria is based on consistently appropriate diagnoses.

## Are they safe?

**Yes, and they've safely been in use for decades across a range of age groups** (Boepple, Mansfield, ME, & al., 1986) (Conn & Crowley, 1991) (Carswell, Lopez, & Rosenthal, 2022). Claims that these medications are “experimental” are irresponsible attempts to misinform the public and incite fear regarding a well-established form of medically necessary healthcare. A large body of evidence confirms that puberty-pausing medications are not experimental and have been safely in use & rigorously studied for over four decades to treat precocious puberty and for three decades to treat gender-dysphoria. (Magiakou M. A., et al., 2010).

The Food and Drug Association (FDA) has already approved several GnRH agonists for pediatric use in the treatment of precocious puberty, among other conditions mentioned elsewhere in this review (Finlayson & al., 2019) (Davis, Alkhoury, & Burnweit, 2014). The medications used to treat gender dysphoria in adolescents are the same that have been prescribed to cisgender adolescents for precocious puberty for approximately 40 years (Boepple, Mansfield, ME, & al., 1986) (Carswell, Lopez, & Rosenthal, 2022) (Finlayson & al., 2019). They have also been used in a range of medical contexts such as fertility treatment plans (Saleh & Taylor, 2023), the treatment of endometriosis (Veth, et al., 2021), and the treatment of hormone-sensitive cancers like prostate cancer (Pan & McKay, 2021) (Choi & Lee, 2011) or ovarian cancer (Gründker & Emons, 2021).

Organizations such as the American Medical Association (American Medical Association, 2021), the American Academy of Pediatrics (American Academy of Pediatrics., 2022), the American Psychiatric Association (American Psychiatric Association, 2020) the American Psychological Association (American Psychological Association, 2022), and the Endocrine Society (Endocrine Society, 2020), among countless other **legitimate** medical organizations, affirm the safety and efficacy of puberty-pausing medications for youth experiencing gender dysphoria, as well as their **lifesaving** capacity for transgender youth.

## Have they been studied?

**Yes. Calling puberty-pausing medications “experimental” is factually incorrect** (Giordano & Holm, 2020). This report’s bibliography demonstrates that these medications have been rigorously studied by numerous providers, in numerous journals, and by numerous medical associations since their discovery in the early **1980s**. These medications have been safely in use with adolescent patients for decades and have been used to treat gender dysphoria in transgender adolescents for approximately 30 years (Carswell, Lopez, & Rosenthal, 2022). Their use has been rigorously studied and multiple professional associations have released standards of care, that outline the safe and effective provision of this medically necessary healthcare (Rafferty, et al., 2018).

## Regarding Randomized Control Trials:

One claim made by anti-trans extremists is that these medications are experimental because they haven’t been tested in randomized controlled trials. Such claims indicate a misunderstanding of Randomized Control Trials (RCTs) and the negative mental health impacts of unchecked gender dysphoria. **It’s practically impossible to conduct such trials because of the drug’s effectiveness** (Giordano & Holm, 2020) (Ashley, Tordoff, Olson-Kennedy, & Restar, 2019). It would quickly become evident for staff and patients, who was in the trial’s active treatment arm and who was not. This breakdown in participant blinding opens the results up to bias, undermining the data. Additionally, because the goal of this treatment is **to pause the development of irreversible pubertal development**, upon realizing they are not receiving treatment, many patients would drop out of the trial to seek treatment elsewhere.

**More importantly**, providers generally agree that for transgender youth, it would be unethical to conduct RCTs on transgender adolescents since treatment is sought to address the severe psychological distress caused by the onset of puberty (Green, DeChants, Price, & Davis, 2021) (Kuper L. E., Stewart, Preston, Lau, & Lopez, 2020). Such a trial would leave this distress unchecked for some patients, resulting in negative mental health outcomes (such as suicidality) (Green, DeChants, Price, & Davis, 2021) as irreversible changes occur within their bodies as a result of endogenous puberty (Ashley, Tordoff, Olson-Kennedy, & Restar, 2019). This would violate the principle of nonmaleficence (Varkey, 2020), **to do no harm**, for all involved.

## Regarding Off-Label Use:

Another myth about puberty-pausing medications is that they are “experimental” because they are prescribed “off-label”. But, off-label prescription is very common and necessary (Allen, et al., 2018), particularly in pediatrics where fewer drugs are available for on-label use (Balan, Azmi Ahmad Hassali, & Mak, 2018). As stated by the American Medical Association “*Off-label drug use is not the same as experimental or research use*” (Furey & Wilkins, 2016). Some drugs that receive FDA approval are eventually

found to be unsafe for their on-label use (US Food & Drug Administration, 2004), while other medications are safely prescribed for off-label uses, such as the prescription of finasteride or dutasteride (prostate medications) to treat androgenic alopecia typically referred to as “male pattern balding” (Zhou, et al., 2019). 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 (Shuib, Wu, & Xiao, 2021).

As noted previously it is also near-impossible and unethical to perform certain trials for these medications. However, it’s likely these medications could receive approval for treatment of gender dysphoria, based on data that is currently available (Giordano & Holm, 2020). One substantial barrier is the lack of incentive to advocate for a population that is often overlooked and discriminated against. The medications that are approved for use in treating precocious puberty in part received approval because it is considered an “orphan condition” (US Food & Drug Administration, 1988). Orphan conditions are rare-diseases that often have financial and regulatory incentives tied to treatment research an approval that stoke the desire to engage in the lengthy process of seeking approval (Giordano & Holm, 2020).

Off-label use is not an indication that a specific medication is “experimental” (Meadows & Hollowell, 2008). As stated in a publication by the American Academy of Pediatrics, *“Evidence, not label indication, remains the gold standard from which practitioners should draw when making therapeutic decisions for their patients.”* (Neville, et al., 2014)

## Are they easy to get?

**No.** Transgender adolescents generally seek puberty-pausing medications after they’ve begun taking steps such as social transitioning (Hembree, et al., 2017), demonstrating that these medications follow self-identification of gender identity, rather than the inverse, which is a common myth about the effects of these medications. Puberty-Pausing medications are generally not prescribed until the onset of Tanner Stage 2 (approximately 12-13 years of age) (Hembree, et al., 2009). They’re only prescribed after extensive medical and mental health evaluations, and after many discussions between doctor, parents, and the adolescent in question (Chen, et al., 2016) (Hembree, et al., 2017) (Vrouenraets L. J., de Vries, de Vries, van der Miesen, & Hein, 2021). Doctors overwhelmingly follow timelines recommended by major medical associations, 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 (Finlayson & al., 2019).

## Are Adolescents too young to decide?

The truth of the matter is that, whether or not an adolescent has the capacity to make this decision, **they do not make this decision on their own.** The decision to begin treatment with puberty-pausing medications is one that involves the adolescent patients’ family and healthcare providers, and only after extensive counselling from medical and behavioral-health experts (Rafferty, et al., 2018) (Finlayson & al., 2019). It is worth noting though that a growing body of research has affirmed that many transgender youth do in fact generally have the capacity to comprehend and consent to care, through an informed consent model of medicine (Vrouenraets L. J., de Vries, de Vries, van der Miesen, & Hein, 2021) (Ashley, 2023) (Clark & Virani, 2021).

## What are their benefits?

All youth deserve to be able to live freely and comfortably as their authentic selves. Access to these medications can play a crucial role in enabling transgender youth to thrive like their cisgender peers (van der Miesen, Steensma, de Vries, Bos, & Popma, 2020). When treatment begins during early stages of puberty, puberty-pausing medications are able to pause the development of a number of secondary sex characteristics that can cause severe levels of distress for adolescents well into adulthood. **While puberty-pausing medications are reversible, the effects of endogenous puberty largely are not.**

Beginning gender-affirming hormone therapy in adulthood may remedy some sources of dysphoria, but there are changes that hormones alone cannot remedy like certain degrees of hair loss, development of facial hair for transgender women, breast development for transgender men, and the hormonal effects on the skeleton. For example, a transgender girl may experience severe psychological distress as her voice drops, her shoulders widen, her face becomes more stereotypically masculine, she develops facial hair, and her “adam’s apple” becomes more prominent. Puberty-pausing medications can prevent this girl from enduring the psychologically damaging effects this may have. Preventing such changes will render some aspects of their transition less invasive or unnecessary altogether, and is associated with greater satisfaction regarding an individual’s transition (Vance, Ehrensaft, & Rosenthal, 2014).



**An example:** A point of persistent distress that transgender women may experience in adulthood is the masculinization of their facial features such as the forehead, nose, malar region, mandible, and thyroid cartilage (Dang, et al., 2021). There are some surgical options to alleviate this distress, like facial feminization surgery, but other aspects of skeletal development cannot be addressed. What surgical options there are can be inaccessible due to economic barriers, can require multiple invasive procedures, and long periods of healing. By giving patients the freedom to prevent such changes we may spare them the psychological, medical, and financial impacts of seeking facial feminization surgery.

Transgender youth are already more likely to experience anxiety, depression, and suicidal ideation (Price-Feeney, Green, & Dorison, 2020), compared to cisgender youth (Thoma, et al., 2019), due to overlapping factors such as gender-dysphoria, lack of support & acceptance, and minority stress (Pellicane & Ciesla, 2022) (Chodzen, Hidalgo, Chen, & Garofalo, 2019). Countless studies show that when youth can access transition-related healthcare they experience reduced rates of suicidality (Green, DeChants, Price, & Davis, 2021). Calling transition-related care “lifesaving” may sound like hyperbole, but when transgender youth cannot access this care, they are at greater risk of depression and suicidality (Matouk & Wald, 2022) (Turban, King, Carswell, & Keuroghlian, 2020).

## Conclusion

The evidence shows that when transgender youth receive transition-related care, they are less likely to experience depression and suicidality (Tordoff, et al., 2022). Compared to people beginning HRT later in life, those who began in their teens showed lower levels of depression and suicidality the earlier they began (Digitale, 2022). A recent study found that *“suicidal ideation was 135% lower in people who began hormones in early adolescence [and] 62% lower in those who began in late adolescence”* (Turban, King, Kobe, Reisner, & Keuroghlian, 2022). It's clear that the sooner transgender adolescents can access transition-related care, the greater the impact this care has on their overall well-being.

It would be inappropriate to stop using GnRH agonists to suppress pubertal development in children with gender dysphoria while we wait for more data. Forcing transgender adolescents to progress through endogenous puberty could do severe psychological harm to many patients and make later treatment, especially surgery, more difficult or less effective. Countless medical professionals, major medical associations, and advocates have warned of the dangerous impact that barring or restricting access to this lifesaving medication could have on transgender youth (American Academy of Child & Adolescent Psychiatry, 2019). It is well-documented that access to this medically-necessary care reduces rates of suicidality and improves overall psychological functioning (van der Miesen, Steensma, de Vries, Bos, & Popma, 2020) (Costa, et al., 2015) (de Vries, et al., 2014) (Tordoff, et al., 2022) (Matouk & Wald, 2022) (Turban, King, Carswell, & Keuroghlian, 2020). To provide access to this lifesaving, medically necessary healthcare, we must enable transgender children to live authentically as themselves as all children deserve. To deny them access to this lifesaving care is not only bad policy but would violate the ethics of nonmaleficence that the healthcare field is founded upon.

## Glossary of Terms

**Endogenous:** Originates from within the body.

**Exogenous:** A substance that is introduced into the body through external means.

**Agonist:** A substance that binds to a cell's receptor and stimulates it, to achieve a biological effect.

**Antagonist:** A substance that binds to a cell's receptor and blocks stimulation, to achieve a biological effect.

**Mechanism of Action:** The physiological interaction of a medication with the human body to achieve a therapeutic effect.

**Assigned Male at Birth:** The best practice term to refer to a person who received a male assignment at birth based on the dominant morphology of the infant's genitals. Often used as a shorthand to refer to a system of anatomical or physiological structures and/or features that often are attributed to this binary assignment.

**Assigned Female at Birth:** The best practice term to refer to a person who received a female assignment at birth based on the dominant morphology of the infant's genitals. Often used as a shorthand to refer to a system of anatomical or physiological structures and/or features that often are attributed to this binary assignment.

**Gender Identity:** Any label given to describe a gender, such as “man” or “woman”, “nonbinary”; possessed by every individual, including cisgender people.

**Transgender:** An umbrella term used to describe people whose gender differs from the gender/sex they were assigned at birth. A multitude of different experiences and identities are contained within this umbrella.

**Intersex:** An umbrella term used to refer to bodies whose development does not conform to the medical binary. Intersex bodies challenge the normative criteria of male and female sexed bodies. These variations are naturally occurring and present no inherent medical risk. The term points to a broad range of sex-variation manifested in configurations, combinations, and sometimes absences of certain organs, dual genitalia, fused genitalia, variations of karyotype/chromosomes patterns, hormones, and/or reproductive capacity. Intersex is a term often invoked with the intention to allude to the way these bodies are subjected to non-consensual medical interventions and are otherwise marginalized within society.

**Transitioning/Transition:** The social, legal, and/or medical process a transgender person may go through to make their gender identity fit their gender expression, presentation, or sex. This word means many different things to different people, and a person doesn’t have to experience all or any transitioning elements to identify as and be respected as their true gender.

**Cisgender:** Used to describe people whose gender identity aligns with the sex they were assigned at birth.

## Recommended Citations

### APA

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### AMA

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### Chicago

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### AP

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