Biological Integrity

Integrating the Mind and Body

FACT SHEET: PUBERTY BLOCKERS FOR SEX-IDENTITY DISTRESS

August 2026

What is Puberty?

Puberty is a critical time-limited period of healthy physical, cognitive, emotional and social development during which an infertile child becomes a fertile and more mature adolescent.

What are puberty blockers (PBs)?

Puberty blockers are gonadotropin releasing hormone agonists (GnRH) which are generally safe and effective for treating precocious puberty in children, some gynecological conditions including endometriosis in women, and prostate cancer in men. Lupron is the brand name of the most commonly prescribed GnRH agonist in the U.S..[1]

Why are PBs considered safe for precocious puberty but dangerous for SID?

Children with precocious puberty have a disease. Short-term use of PBs can prevent the harms of precocious puberty, meaning the benefit of PBs in this case can outweigh their risks (which are disclosed as a matter of informed consent). Children with SID do not have a disease of the body; they have physically healthy bodies. Blocking puberty in youth with SID therefore diseases their bodies by disrupting their normal puberty. When used for SID, PBs permanently disrupt a period of critical physical, cognitive, emotional and social development. The harm is permanent because no one can return the time these children lose in normal pubertal development. Whether SID children are on PBs for several months or several years, that is an amount of normal development that is permanently stolen from them which can lead to irreversible bone loss, impaired brain development, infertility and sexual dysfunction.

Moreover, prior to the routine use of puberty blockers, the vast majority of youth experiencing SID desisted and identified with their sex by young adulthood.[2, 3] With the routine use of puberty blockers, the vast majority of SID children continue to reject their sex, use dangerous cross-sex hormones, and may even pursue sex-rejecting surgeries.[4,5,6,7,8] Blocking normal puberty in SID children robs them of the developmental period during which many might otherwise outgrow their distress and embrace their bodies.

Neuro-psychological harm from puberty blockers:

Lupron's package insert warns of emotional lability, irritability, seizures, brain swelling, headache, blurred vision and loss of vision as potential side effects and recommends *monitoring patients for development of new or worsening psychiatric symptoms.*[9]

An important study published in the British Medical Journal reports ***no psychological benefit to youth with sex-identity distress***. According to Oxford University Professor Michael Biggs, "there was no statistically significant difference in psychosocial functioning between the group given blockers and the group given only psychological support. In addition, there is unpublished evidence that after a year on [puberty blockers] children reported greater self-harm, and the girls also experienced more behavioral and emotional problems and expressed greater dissatisfaction with their body—so puberty blockers exacerbated sex-identity distress."[10]

Loss of bone density and height from puberty blockers:

Up to one third of sex-identity distressed patients treated with puberty blockers have a lower bone density than 97.7% of their age-matched peers.[11] A study aiming to assess development of bone mineral density during GnRH therapy and subsequent sex-rejecting procedures until age 22 showed loss of bone mass; these adolescents do not achieve their optimal height or bone density.[12]

Permanent sterility and sexual dysfunction from puberty blockers:

A UCSF publication on fertility options for persons who reject their sex state that "currently it is not possible for children who have not undergone natal puberty (and who may have used cross-sex hormones) to preserve gametes."[13] Dr. Marci Bowers, a vaginoplasty surgeon who underwent sex-rejecting procedures at 38 years old has said that "every single child or adolescent who was truly blocked at Tanner Stage 2 [when hormones begin their work of advancing a child to adulthood] has never experienced orgasm. I mean, it's really about zero."[14]

Harm to the developing brain from puberty blockers:

Since sex hormones secreted during puberty are responsible for the organizational development of the brain, and puberty blockers prevent this normal secretion, it is possible for puberty blockers to harm children's brain development.[15] Lupron has been demonstrated to impair memory in adults taking it to treat gynecological conditions, breast cancer and prostate cancer.[16]

A 2024 review by Sallie Baxendale extensively examined the cognitive impacts of puberty blockers on animals and children. The review indicated that animal studies showed a non-reversible negative impact on cognitive and behavioral functions. In human studies, the evidence suggested detrimental effects on IQ among those treated with puberty blockers for precocious puberty. Specifically, one study documented an average decrease in full-scale IQ of 7 points, including a case where an individual's IQ fell by 15 points from 138 to 123 after treatment. Another case study involving a sex-distressed child reported a drop of 9 points in global (overall) IQ and 15 points in working memory during the course of treatment with puberty blockers.[17]

REFERENCES

1. Cleveland Clinic.(2022) Gonadotropin Releasing Hormone. Available at: Cleveland Clinic - Gonadotropin releasing hormone. Accessed Aug. 3, 2026.

2. Zucker KJ. (2018) The myth of persistence: Response to "A critical commentary on

follow-up studies and 'desistance' theories about transgender and gender non-conforming children" by Temple Newhook et al. (2018), International Journal of Transgenderism, 19:2, 231-245, DOI: 10.1080/15532739.2018.1468293
3. Ristori J, Steensma TD. Gender dysphoria in childhood. Int Rev Psychiatry. 2016;28(1):13-20.
4. Brik T, Vrouenraets LJJJ, de Vries MC, Hannema SE. Trajectories of adolescents treated with gonadotropin releasing hormone analogues for gender dysphoria [published online ahead of print March 9, 2020]. Arch Sex Behav. doi:10.1007/s10508-020-01660-8
5. Kuper LE, Stewart S, Preston S, Lau M, Lopez X. Body dissatisfaction and mental health outcomes of youth on gender-affirming hormone therapy. Pediatrics. 2020;145(4):e20193006
6. Annelou L.C. de Vries, et al., "Puberty suppression in adolescents with gender identity disorder: A prospective follow-up study" The Journal of Sexual Medicine 8(8): 2276–2283 (2011).
7. Wiepjes CM, Nota NM, de Blok CJM, et al. The Amsterdam cohort of gender dysphoria study (1972-2015): trends in prevalence, treatment, and regrets. J Sex Med. 2018;15(4):582–590
8. Carmichael P, Butler G, et al. Short-term outcomes of pubertal suppression in a selected cohort of 12 to 15 year old young people with persistent gender dysphoria in the UK. medRxiv 2020.12.01.20241653.
9. Lupron Depot Package insert
10. https://www.bmj.com/content/372/bmj.n356.full
11. Biggs M. Revisiting the effect of GnRH analogue treatment on bone mineral density in young adolescents with gender dysphoria *Journal of Pediatric Endocrinology and Metabolism*, vol. 34, no. 7, 2021, pp. 937-939.
12. Daniel Klink, Martine Caris, Annemieke Heijboer, Michael van Trotsenburg, Joost Rotteveel, Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents With Gender Dysphoria, *The Journal of Clinical Endocrinology & Metabolism*, Volume 100, Issue 2, 1 February 2015, Pages E270–E275. (2015)
13. Amato P. "Fertility Options for Transgender Persons." UCSF Transgender Care. June 17, 2016.
14. Shrier A. "Top Trans Doctors Blow Whistle on 'Sloppy' Care. In exclusive interviews, two prominent providers sound off on puberty blockers, 'affirmative' care, the inhibition of sexual pleasure, and the suppression of dissent in their field." The Free Press. October 4, 2021.
15. Vigil P, et al., "Endocrine Modulation of the Adolescent Brain: A Review" *Journal of Pediatric & Adolescent Gynecology* 24(6):330-337 (December 2011).
16. Craig MC, Fletcher PC, Daly EM, Rymer J, et al. Gonadotropin hormone releasing hormone agonists alter prefrontal function during verbal encoding in young women. Psychoneuroendocrinology. 2007;32(8-10):1116-27. DOI:10.1016/j.psyneuen.2007.09.009
17. Baxendale, S. The impact of suppressing puberty on neuropsychological function: A review. *Acta Paediatrica, (2024) 113*(7), 1156-1167.]