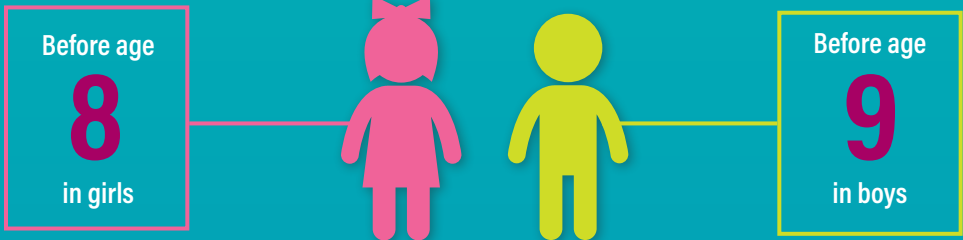


WHAT IS CPP? FACTS TO KNOW

Central precocious puberty (CPP) is when a child shows signs of puberty sooner than normal.^{1,2}



CPP can be diagnosed in children as young as **2 years old**.³

CPP affects  **1 in 5,000-10,000**

1 in 5,000-10,000

 children⁴

CPP is more common

in girls

than boys

Although the exact cause is unknown, CPP results from early release of gonadotropin-releasing hormone (GnRH) by a part of the brain called the hypothalamus.⁵



- > The early release of GnRH leads to the production of estrogen and testosterone by the ovaries or testicles
- > Estrogen and testosterone cause the physical changes of puberty

Common signs of puberty in **girls** and **boys** are:

Girls⁶⁻⁸



- Breast development
- Menstrual period
- Pubic or underarm hair
- Oily skin/acne
- Adult body odor
- Sudden growth spurt

Boys⁷⁻¹⁰



- Testicle & penis enlargement
- Erections
- Voice change
- Facial hair
- Muscle growth
- Pubic or underarm hair
- Oily skin/acne
- Adult body odor
- Sudden growth spurt

Without treatment, as adults, children with CPP will be shorter in height due to the premature fusion of growth plates.¹¹

CPP has also been associated with low self-esteem and higher anxiety, irritability or withdrawal.^{5,12,13}



GnRH inhibitors are the primary CPP treatment and can help preserve time in childhood.¹⁴

For more information, please visit www.factsaboutearlypuberty.com

©Copyright 2023 Azurity Pharmaceuticals, Woburn, MA, PP-NP-US-0839

1. Muir A. Precocious puberty. *Pediatr Res*. 2006;27:373-381. 2. Carel JC, Léger J. Clinical practice. Precocious puberty. *N Engl J Med*. 2008;359(22):2365-2377. 3. Koplowitz R, et al. Evaluation and Referral of Children with Signs of Early Puberty. *Pediatrics*. 2016. 137(10):e20153732. 4. Patach CI, Sigwell WG. Treatment of central precocious puberty. *Best Pract Res Clin Endocrinol Metab*. 2012;26:165-181. 5. Precocious puberty. Mayo Clinic. Web site. <http://www.mayoclinic.org/diseases-conditions/precocious-puberty/symptoms-causes/dcc-20269003>. Accessed March 22, 2023. 6. Physical development in girls: what to expect. *Healthychildren.org* Web site. <https://www.healthychildren.org/English/ages-stages/gradeschool/puberty/Pages/Physical-Development-Girls-What-to-Expect.aspx>. Accessed March 22, 2023. 7. What causes acne? *Healthychildren.org* Web site. <https://www.healthychildren.org/English/health-issues/skin/Pages/What-Causes-Acne.aspx>. Accessed March 22, 2023. 8. Preventing body odor. *WebMD* Web site. <http://www.webmd.com/skin-problems-and-treatments/preventing-body-odor>. Accessed March 22, 2023. 9. Physical development in boys: what to expect. *Healthychildren.org* Web site. <https://www.healthychildren.org/English/ages-stages/gradeschool/puberty/Pages/Physical-Development-Boys-What-to-Expect.aspx>. Accessed March 22, 2023. 10. Physical development, ages 11 to 14 years—topic overview. *WebMD* Web site. <http://www.webmd.com/children/physical-development/ages-11-to-14-years-topic-overview>. Accessed March 22, 2023. 11. Carel JC, Lahlou N, Roger M & Chaussain JL. Precocious puberty and statural growth. *Human Reproduction Update*. 2004;10:135-147. 12. Mendile, L, et al. Detrimental Psychological Outcomes Associated with Early Pubertal Timing in Adolescent Girls. *Dev Res*. 2007; 27(2): 151-171. 13. Johansson T & Ritzen EM. Very long-term follow-up of girls with early and late menarche. *Endocrine Development*. 2005;6:126-136. 14. Fauga JS. Treatment and outcomes of precocious puberty: an update. *J Clin Endocrinol Metab*. 2013;98(6):2988-207.