

GnRH Stimulation Test

[Gonad-gopher Stim-mule](#)

GnRH stimulation test is the gold standard to diagnose precocious puberty. It is used to determine the hypothalamic-pituitary axis's reactivity to the presence of increased gonadotropin (LH and FSH) levels after injection of GnRH.

Increased GnRH, FSH, LH, and Sex Hormones

[Up-arrow Gonad-gopher, Fish, Luge, and Sex-harmonica](#)

Central precocious puberty is characterized by increased GnRH, FSH, LH, and sex hormones.

Bone Age

[Bone Birthday-cake \(Age\)](#)

Bone age can be used to determine the likelihood of precocious puberty as well as its progression. Radiography of the hand and wrist is used. Diagnosis can be made if bone age is 2 years older relative to the child's age.

Brain MRI or CT

[Brain M-R-eyes and Cat-scanner](#)

Brain MRI or CT is often recommended to evaluate the presence of brain pathology that may cause central precocious puberty. It is used after patients are diagnosed with central precocious puberty with a GnRH stimulation test.

Management

Treat Underlying Disorder

[Treating Disorders Under the Table](#)

If patients are found to have an underlying disorder that causes central precocious puberty, treating the underlying disorder is the mainstay of treatment.

GnRH Agonists

[Gonad-gopher Dragonist](#)

Gonadotropin-releasing hormone (GnRH) agonists will suppress the release of pituitary gonadotropins and peripheral sex steroids. Leuprolide is the most common GnRH agonist used. Other GnRH agonists that can be used include Buserelin and Goserelin. Patients should be monitored and scheduled for follow up in 4-6 months.