

PRESCRIPTION MONOGRAPH

Compounded Active Ingredients: Gonadorelin

Form: Nasal Spray

Drug Class:

- Gonadotropin-Releasing Hormone (GnRH) Agonist
 - Hypothalamic–pituitary–gonadal (HPG) axis modulator
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Mechanism of Action^{1,2}:

Gonadorelin is a synthetic decapeptide identical to endogenous GnRH, secreted by the hypothalamus. It is intended to stimulate the anterior pituitary to release luteinizing hormone (LH) and follicle-stimulating hormone (FSH). Its effect is pulse-dependent:

- Pulsatile dosing is intended to stimulate the pituitary to support gonadal function, puberty, spermatogenesis, and ovulation
 - Continuous dosing is intended to downregulate GnRH receptors to suppress gonadotropins and induce medical castration
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Indications Commonly Prescribed For:

- Diagnostic evaluation of pituitary function
 - Delayed puberty
 - Hypogonadotropic hypogonadism
 - Male infertility / subfertility
 - Puberty induction in adolescents with HPG axis dysfunction
 - Functional hypogonadism
 - Ovulation induction in women
 - Amenorrhea, PCOS evaluation
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Before Use: Let your doctor know if you have had any allergic reactions to nasal sprays in the past. Let your health care provider know if you are pregnant or breast feeding. Let your healthcare provider know of all supplements you are currently taking. Let them know of any thyroid or corticosteroid medications you are prescribed.

Contraindications:

- Hypersensitivity to GnRH or gonadorelin
 - Pregnancy (unless for ovulation induction under supervision)
 - Hormone-sensitive malignancy (depending on application)
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Cautions: Let your Healthcare provider know of any changes of vision while on this compounded preparation

How to Use: This medication is a nasal spray and is delivered in a premixed liquid form. Gently blow your nose to clear it from mucous before using the compound. Remove the ring and protective cap to reveal the nasal spray tip. Tilt head slightly forward, hold bottle with thumb on bottom and your index and middle fingers on top. Use your fingers to squeeze down on the pump while you breathe in slowly through your nose. If needed, repeat the process for the second nostril.

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Warnings and Precautions:

- Ovarian hyperstimulation risk in women with PCOS
 - May trigger pubertal progression if used incorrectly
 - Bone loss risk with chronic suppression protocols
 - Flare phenomenon with continuous dosing may transiently worsen symptoms
 - Requires specialized delivery devices for pulsatile therapy
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Adverse Reactions:

Common:

- Headache
- Flushing
- Nausea

Serious:

- Ovarian hyperstimulation
 - Anaphylaxis, Seizures
 - Pituitary apoplexy
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Interactions:

- May interfere with sex hormone measurements
 - Concurrent GnRH antagonists or agonists may negate effects
 - Corticosteroids and dopaminergic drugs may alter LH/FSH release
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Use in Specific Populations:

- Pregnancy: Contraindicated unless used for induction
 - Pediatrics: Common for delayed puberty; specialist monitoring required
 - Fertility patients: Useful in male/female infertility with HPG dysfunction
 - Elderly: Rarely used; consider desensitization risks
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Storage:

- Refrigerate at 2°C to 8°C (36°F to 46°F)
 - Can be stored at room temperature (up to 30°C or 86°F) for up to 48hrs
 - Do not freeze
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Monitoring Parameters:

- LH and FSH levels pre- and post-administration
 - Estradiol/Testosterone response in diagnostic or treatment cycles
 - Pubertal progression markers in pediatric applications
 - Semen analysis, ovulatory markers in fertility protocols
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Citations:

1. Zhang L, Cai K, Wang Y, et al. The Pulsatile Gonadorelin Pump Induces Earlier Spermatogenesis Than Cyclical Gonadotropin Therapy in Congenital Hypogonadotropic Hypogonadism Men. Am J Mens Health. 2019;13(1):1557988318818280. doi:10.1177/1557988318818280
 2. Ortac M, Hidir M, Salabas E, et al. Evaluation of gonadotropin-replacement therapy in male patients with hypogonadotropic hypogonadism. Asian J Androl. 2019;21(6):623-627. doi:10.4103/aja.aja_6_19
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Compounded medications are not FDA-approved and may differ in risks, benefits, and side effects from FDA-approved products. These statements have not been evaluated by the FDA and are not intended to diagnose, treat or cure any disease or condition and do not indicate any claims of safety or efficacy.
Individual results may vary.