

# PRESCRIPTION MONOGRAPH

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**Compounded Active Ingredients:** Glycine/Sermorelin

**Form:** Nasal Spray

## Drug Class:

- Glycine: Non-essential amino acid
  - Sermorelin: Synthetic GHRH analog that contains 28 amino acids. It has been shown to stimulate GH release, improve IGF-1, and can help support proper immune function<sup>1</sup>.
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## Mechanism of Action:

Glycine is intended to <sup>2</sup>:

- Act as a neurotransmitter in the CNS (spinal cord, brainstem)
- Enhance sleep quality, glucose metabolism, and collagen synthesis
- Modulate inflammation and oxidative stress
- Play a role in GH release potentiation, particularly during sleep

Sermorelin is intended to <sup>3</sup>:

- Mimic endogenous GHRH (1-29), stimulating the anterior pituitary to release growth hormone (GH)
  - Stimulate IGF-1 production via GH induction
  - Promote muscle growth, fat loss, cellular repair, and anti-aging effects
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## Indications Commonly Prescribed For:

- Age-related GH deficiency
  - Fatigue, muscle loss, or slow recovery
  - Sleep disturbances
  - Metabolic syndrome or insulin resistance
  - Anti-aging and wellness protocols
  - Adjunct in body recomposition and performance enhancement
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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.

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## Contraindications:

- Active malignancy (due to GH-stimulating potential)
  - Known hypersensitivity to sermorelin or glycine
  - Severe hepatic or renal impairment
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**Cautions:** Let your Healthcare provider know of any changes of vision while on this compounded preparation

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**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:**

Sermorelin:

- May elevate cortisol, thyroid hormones, or IGF-1 levels
- Do not use in patients with untreated pituitary adenomas or acromegaly

Glycine: Generally safe; caution in schizophrenia (may exacerbate NMDA effects)

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## **Adverse Reactions:**

Common:

- Flushing, Nausea
- Headaches
- Sedation

Serious:

- Hypotension (from vasodilation)
  - Bradycardia
  - Allergic reaction (rare)
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## **Interactions:**

- No known major drug interactions
  - May theoretically interact with chemotherapeutics that rely on redox mechanisms
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## **Use in Specific Populations:**

- Pregnancy/Lactation: Not recommended; safety unknown
  - Pediatrics: Sermorelin is FDA-approved for pediatric GH deficiency (under supervision)
  - Geriatrics: Off-label anti-aging protocols; monitor IGF-1 levels and comorbidities
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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:**

- Baseline and periodic IGF-1 levels
  - Liver and renal function
  - Fasting glucose/insulin
  - Monitor sleep, body composition, mood, and energy levels
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## **Citations:**

1. Walker RF. Sermorelin: A better approach to management of adult-onset growth hormone insufficiency? Clin Interv Aging. 2006;1(4):307-8.
  2. Wang W, Wu Z, Dai Z, Yang Y, Wang J, Wu G. Glycine metabolism in animals and humans: implications for nutrition and health. Amino Acids. 2013;45(3):463-477. doi:10.1007/s00726-013-1493-1.
  3. Prakash A, Goa KL. Sermorelin: a review of its use in the diagnosis and treatment of children with idiopathic growth hormone deficiency. BioDrugs. 1999;12(2):139-157. doi:10.2165/00063030-199912020-00007.
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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.