

PRESCRIPTION MONOGRAPH

Compounded Active Ingredients: Glycine/Sermorelin

Form: Injection

Drug Class:

- Glycine: Non-essential amino acid
 - Sermorelin: Synthetic GHRH analog that contains 28 amino acids.
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Mechanism of Action:

Glycine is intended to²:

- 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^{1,3}:

- 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 injections 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.

Contraindications:

- Active malignancy (due to GH-stimulating potential)
 - Known hypersensitivity to sermorelin or glycine
 - Severe hepatic or renal impairment (glycine caution)
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Cautions: Take care when injecting the compounded preparation in only specified areas from your health care provider. Check the vial before use for any cloudiness or discoloration before use.

How to Use: This medication is a subcutaneous injection and is delivered in a premixed liquid form. Wash your hands with soap and water before giving the injection. Wipe the rubber stopper of the vial with an alcohol swab. Take a syringe and pull the plunger down to the necessary prescribed amount. This is achieved when the plunger reaches the line for the amount prescribed. Push the needle through the rubber stopper of the vial. Push the plunger down to put air into the vial. Invert the vial and then slowly pull the plunger down past the prescribed dose. If there are bubbles in the syringe, tap the syringe to allow the air bubbles to rise to the top. Slowly push the plunger up until the tip reaches the line for the prescribed dose and removes the bubble of air. Pull the syringe out of the vials rubber stopper. Inject at predetermined injection site as instructed by healthcare practitioner. Discard any remainder from punctured vial after 28 days.

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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)

Adverse Reactions:

Common:

- Flushing, Nausea
- Headaches
- Sedation

Serious:

- Hypotension (from vasodilation)
 - Bradycardia (if infused too rapidly)
 - Allergic reaction (rare)
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Interactions:

- Glucocorticoids: may reduce effectiveness by suppressing natural growth hormone production
 - CNS depressants: may enhance drowsiness or fatigue
 - Insulin/Antidiabetic: monitor closely in patients using insulin, metformin, or other glucose-lowering agents
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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.