Sermorelin 10 mg

GHRH(1-29) Analog

Physiologic GH-Axis Support | Physician Reference

Overview

Sermorelin is a synthetic analog corresponding to the first 29 amino acids of human growth hormone-releasing hormone, GHRH(1-29), which is the shortest fully active fragment of the native hormone. It stimulates the pituitary to release growth hormone while preserving the physiologic, feedback-regulated pattern of secretion.

Sermorelin was previously FDA-approved as Geref for the diagnosis and treatment of growth hormone deficiency; the branded product has since been discontinued, and it is now supplied through compounding. Its use focuses on restoring age-related or functional decline in the GH and IGF-1 axis.

Mechanism at a Glance

Attribute	Description
Peptide class	GHRH(1-29) analog, the shortest fully active GHRH fragment
Primary target	GHRH receptor on pituitary somatotrophs
Core mechanism	Stimulation of endogenous GH synthesis and release; downstream IGF-1 elevation
Pharmacokinetics	Short half-life (roughly 10 to 20 minutes), producing a discrete GH pulse
Regulatory feedback	Preserved negative feedback and pulsatility, limiting supraphysiologic GH exposure
Administration	Subcutaneous injection, typically dosed at night
Regulatory status	Brand discontinued; available compounded; not DEA-scheduled

Mechanism of Action

Sermorelin (GHRH 1-29 Analog)

Sermorelin binds the GHRH receptor on pituitary somatotrophs and stimulates growth hormone synthesis and release. Because it acts upstream at the pituitary, endogenous negative feedback and the natural pulsatile rhythm of GH secretion are maintained, which reduces the risk of the supraphysiologic exposure associated with exogenous GH.

Its short half-life produces a discrete GH pulse rather than a sustained elevation, and the resulting rise in IGF-1 mediates the downstream effects on body composition, recovery, and sleep. Nighttime dosing aligns the induced pulse with the body's largest physiologic GH release during early sleep.

Clinical Application Matrix

The table summarizes the role sermorelin plays across common clinical goals. Primary indicates a principal effect; Supporting indicates a meaningful but secondary role.

Clinical Application	Role	Mechanistic Basis
GH and IGF-1 axis support	Primary	Pituitary GH release with preserved feedback
Body composition and lean mass	Supporting	GH-mediated shift in fat-to-lean ratio
Sleep quality	Supporting	GH pulse aligned with early-sleep physiology
Recovery and vitality	Supporting	IGF-1-mediated tissue and metabolic effects

Ideal Patient Candidate Profile

Sermorelin is most appropriate for consideration in patients presenting with one or more of the following:

- Symptoms consistent with age-related or functional GH-axis decline, with intact pituitary function
- Body-composition, recovery, or sleep goals
- Preference for stimulation of endogenous GH with preserved pulsatility over exogenous GH
- Interest in a well-characterized, historically approved GHRH agent
- Willingness to maintain consistent nightly subcutaneous dosing

Because sermorelin preserves feedback regulation, the risk of supraphysiologic GH is lower than with exogenous GH, but IGF-1 should still be monitored. It is contraindicated in active malignancy, and a history of malignancy requires careful risk-benefit evaluation.

Clinical and Compounding Context

- **Formulation** Compounded subcutaneous injection is the standard route, typically reconstituted from lyophilized powder.
- **Quality assurance** Physician should verify USP compliance and sterility testing at the sourcing compounding pharmacy.
- **Informed consent** Recommended for all patients; documentation should reflect investigational or off-label status, the available level of human trial data, and an individual risk-benefit discussion.
- **Monitoring** No universally established clinical monitoring protocol; practitioner discretion based on patient profile and treatment goals.
- **Regulatory** The branded product is discontinued; sermorelin is available compounded through licensed 503A pharmacies and is not DEA-scheduled.
- **Laboratory monitoring** Baseline and periodic IGF-1 is reasonable to track the GH-axis response.

Giovane Medical works with physicians to facilitate access to properly sourced, compounded peptide formulations and to support evidence-based protocol development.

For prescribing or physician partnership programs, contact the Giovane Medical clinical team.

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