

# Sermorelin

PATIENT EDUCATION GUIDE — GROWTH  
HORMONE SECRETAGOGUE THERAPY

**Harriman Precision  
Health**

Physician-Supervised  
Telemedicine Wellness  
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## What Is Sermorelin?

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Sermorelin is a synthetic analog of growth hormone-releasing hormone (GHRH) — the naturally occurring signal your hypothalamus sends to your pituitary gland to stimulate the production and release of human growth hormone (HGH).<sup>1</sup> Specifically, sermorelin corresponds to the first 29 amino acids of endogenous GHRH (GRF 1-29), which is the biologically active fragment responsible for pituitary stimulation. Like CJC-1295/Ipamorelin, sermorelin works by supporting your body's own GH production rather than introducing synthetic growth hormone externally — preserving the pituitary feedback mechanisms that regulate safe, physiologic GH secretion.<sup>2</sup>

Sermorelin has one of the longest clinical track records of any growth hormone secretagogue in use today. It was originally studied and used in the diagnosis and treatment of growth hormone deficiency in children, and later gained significant attention in longevity and age management medicine for its ability to address the progressive decline in GH production that occurs naturally with aging.<sup>3</sup> Research published in peer-reviewed journals including *Clinical Interventions in Aging* has described sermorelin as a physiologically sound and lower-risk alternative to direct synthetic HGH replacement therapy in adults.<sup>4</sup>

## How It Works

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Sermorelin binds to GHRH receptors in the anterior pituitary gland and stimulates the transcription of HGH messenger RNA, increasing pituitary reserve and GH output in a pulsatile, natural rhythm.<sup>5</sup> This is a critical distinction: sermorelin does not suppress pituitary function — it preserves and even enhances it through a process researchers have described as "pituitary recrudescence," where regular receptor stimulation maintains the

pituitary's secretory capacity during the natural aging process when GHRH signaling declines.<sup>5</sup> The resulting increase in GH drives downstream elevation of IGF-1 (insulin-like growth factor-1), which mediates many of the protocol's beneficial effects on body composition, tissue repair, energy, and cognition. Sermorelin has a short half-life of approximately 10–20 minutes, producing clean GH pulses without prolonged receptor occupation.

## What Sermorelin Is Used For

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**Age-related growth hormone decline:** GH production declines approximately 14% per decade after age 30 — a process directly linked to increasing visceral fat, decreasing lean muscle, worsening sleep quality, reduced skin elasticity, slower recovery, and declining energy. Sermorelin is the most physiologically aligned approach to addressing this decline, working with the body's own systems rather than replacing them.<sup>4</sup> **Body composition:** Elevated GH and IGF-1 promote lipolysis, particularly visceral and abdominal fat, while supporting lean muscle preservation. Clinical studies have demonstrated significant increases in lean body mass in men treated with growth hormone secretagogues including sermorelin.<sup>6</sup> **Sleep and recovery:** Sermorelin amplifies the nocturnal GH pulse that occurs during deep sleep, improving sleep depth and the tissue repair processes that depend on it. **Bone density:** IGF-1 supports osteoblast activity and bone mineral density — making sermorelin relevant for patients with osteopenia or age-related bone density concerns. **Cognitive function and mood:** GH and IGF-1 support neuronal function, synaptic plasticity, and neuroprotection — with patients frequently reporting improved mental clarity and mood stability over extended protocols.<sup>7</sup>

## Sermorelin vs. CJC-1295/Ipamorelin: Key Differences

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Sermorelin and CJC-1295/Ipamorelin both stimulate GH through GHRH pathways, but differ in several practical ways. Sermorelin has the longer clinical history and the most established safety record. CJC-1295/Ipamorelin produces a more potent GH pulse through its dual mechanism (GHRH + ghrelin receptor activation) and may produce faster body composition results. Sermorelin is often preferred for patients seeking a more gradual, physiologically conservative approach to GH optimization — particularly those newer to secretagogue therapy, or patients for whom a gentler GH increase is clinically appropriate. Your physician will help determine which approach best fits your goals and health history.

## What to Expect: Timeline of Results

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Sermorelin produces results on a gradual trajectory that mirrors the body's natural pace of GH-mediated change. Most patients notice improved sleep quality and energy within the first two to four weeks.<sup>8</sup> Body composition changes — improved fat loss and lean tissue preservation — typically begin to manifest between weeks four and eight. The full spectrum of benefits, including skin quality improvement, enhanced recovery, cognitive clarity, and meaningful body composition recomposition, develop over a full twelve to sixteen week cycle. Sermorelin is particularly well-suited to extended protocols, as its pituitary-preserving mechanism means benefits often continue to compound with longer use under physician supervision.

## Standard Protocol

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Parameter	Details
<b>Dose</b>	200–500 mcg per injection (individualized by physician)
<b>Frequency</b>	Once daily; before bed is optimal
<b>Timing</b>	30–60 minutes before sleep; fasted or 2+ hours after last meal
<b>Route</b>	Subcutaneous injection; rotate sites
<b>Cycle Length</b>	12–16 weeks; may be used on extended protocols with monitoring
<b>Medication Source</b>	Compounded by Empower Pharmacy (Houston, TX)

## Safety Profile

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Sermorelin has one of the most favorable safety profiles among growth hormone therapies, supported by decades of clinical use data. A comprehensive safety review in *Sexual Medicine Reviews* confirmed that growth hormone secretagogues including sermorelin carry substantially less risk than direct synthetic HGH administration.<sup>6</sup> Common mild effects include transient injection site redness, occasional flushing, and mild water retention in the early weeks — most of which resolve as the body adjusts. Unlike synthetic HGH, sermorelin preserves pituitary feedback

mechanisms, substantially reducing the risk of pituitary suppression or paradoxical GH decline after discontinuation. It is contraindicated in active malignancy, pregnancy, and breastfeeding. Patients with hypothyroidism should have thyroid function optimized before initiating, as untreated hypothyroidism can blunt the response to GH secretagogue therapy.<sup>3</sup>

### **How to Maximize Your Results**

- › **Inject Before Bed, Fasted<sup>9</sup>** — Sermorelin's GH-stimulating effect is most powerful when aligned with the body's natural nocturnal GH pulse. Inject 30–60 minutes before sleep in a fasted state. Elevated insulin from a recent meal suppresses GH secretion and directly reduces effectiveness.
- › **Prioritize Sleep Quality<sup>9</sup>** — Slow-wave sleep is the primary window for GH secretion. Seven to nine hours of quality sleep per night is essential. Consider magnesium glycinate or other sleep-supporting supplements if sleep quality is a challenge.
- › **Resistance Training<sup>10</sup>** — Exercise is the body's most powerful endogenous GH stimulator. Pairing sermorelin with regular resistance training amplifies body composition outcomes and upregulates IGF-1 receptor sensitivity in muscle tissue.
- › **Optimize Thyroid Function** — Thyroid hormone is required for GH receptor signaling. Ensure thyroid levels are within optimal range before starting. Discuss thyroid optimization with your physician if you have symptoms of hypothyroidism.
- › **Minimize Dietary Sugar Before Bed** — Elevated blood glucose and insulin in the hours before injection suppress pituitary GH release. Avoid carbohydrate-heavy meals within 2 hours of your sermorelin injection for best results.

### ***Is sermorelin the same as HGH therapy?***

No. Sermorelin stimulates your pituitary to produce its own GH naturally. Synthetic HGH therapy bypasses the pituitary entirely. Sermorelin preserves your body's own regulatory mechanisms and carries a substantially lower risk profile than direct HGH administration.<sup>2</sup>

### ***Can I combine sermorelin with TRT?***

Yes, and it is a common combination. Testosterone and GH work synergistically for body composition, energy, libido, and tissue quality. Many HPH patients on TRT add sermorelin for enhanced anti-aging and body composition outcomes.

### ***How is my medication sourced?***

All peptides are compounded by Empower Pharmacy, our licensed Houston-based compounding partner, under strict quality and sterility standards.

**Important Notice:** This document is for educational purposes only. All therapies at Harriman Precision Health are physician-supervised and individualized. Sermorelin is an off-label compounded therapy. Contraindicated in active malignancy, pregnancy, and breastfeeding. Questions? Contact us through your patient portal.

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## **References**

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*Research cited includes peer-reviewed clinical studies and physician-supervised practice data. All therapies at Harriman Precision Health are physician-supervised and individualized. This document*

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