HERITAGE HAVENS

NUTRITION & PEPTIDE WELLNESS COHORT

GH Peptide Reference

CJC-1295, Ipamorelin, Tesamorelin, and GHRP-2 — mechanisms, protocols, and clinical context

Nutrition & Peptide Wellness Cohort · Month 4

Educational Reference Only

Growth hormone peptides are not approved for anti-aging or body composition use by the FDA. This document summarizes published literature. Any protocol requires physician prescription and supervision. Never self-prescribe or obtain from unverified sources.

GH BIOLOGY

Understanding the Growth Hormone Axis

Before exploring GH peptides, you need to understand the natural system they work within. GH is released from the pituitary gland in pulses — the largest of which occurs during Stage 3 deep sleep. GH does not act directly on most tissues; instead, it signals the liver to produce IGF-1 (Insulin-like Growth Factor 1), which is responsible for most of GH's anabolic and regenerative effects.

Molecule	Source	Role	Peptide Connection
GHRH (Growth Hormone Releasing Hormone)	Hypothalamus	Signals pituitary to release GH	CJC-1295 mimics this signal
Ghrelin / GHSR ligands	Stomach + hypothalamus	Alternative GH release pathway; hunger signal	Ipamorelin, GHRP-2 mimic these
Growth Hormone (GH)	Pituitary gland	Stimulates IGF-1; fat metabolism; cell repair	Target of all GH secretagogues
IGF-1 (Insulin-like Growth Factor 1)	Liver (primarily)	Mediates most anabolic/regenerative GH effects	Monitored in lab work during protocols
Somatostatin	Hypothalamus	Inhibits GH release — the 'off switch'	Ipamorelin does NOT suppress somatostatin

CJC-1295

CJC-1295 — GHRH Analog

Mechanism of Action

CJC-1295 is a synthetic analog of GHRH (growth hormone releasing hormone) — the natural signal your hypothalamus sends to your pituitary to release GH. CJC-1295 has been modified to have a significantly longer half-life than endogenous GHRH (approximately 7–8 days for the DAC form vs. minutes for natural GHRH). It binds to Drug Affinity Complex (DAC) proteins in the blood, extending its action and providing a sustained stimulus for pulsatile GH release.

Parameter	Details
Half-life	~7–10 days (with DAC); ~30 min (without DAC / Mod GRF 1-29)
Route	Subcutaneous injection
Studied dose range	100–300 mcg per dose; 1–3x per week (DAC form)

Parameter	Details
Timing	Before bed — aligns with natural overnight GH pulse
Primary effects	Sustained increase in baseline GH and IGF-1; improved body composition; enhanced recovery
Cycle	5 days on / 2 days off, or 12 weeks on / 4 weeks off depending on formulation
Stack note	Most effective when combined with Ipamorelin — synergistic mechanisms
Monitoring	IGF-1 levels before and during protocol; fasting glucose; insulin

IPAMORELIN

Ipamorelin — GH Secretagogue (GHSR Agonist)

Why Ipamorelin Is Considered the 'Clean' GH Peptide

Ipamorelin is a selective growth hormone secretagogue receptor (GHSR) agonist — it mimics ghrelin's action at the pituitary level to stimulate GH release. What makes Ipamorelin uniquely desirable is its selectivity: unlike other GH secretagogues (GHRP-6, GHRP-2), it does NOT significantly raise cortisol or prolactin. This means you get GH stimulation without the unwanted hormonal side effects that make other peptides less favorable.

Parameter	Details
Half-life	~2 hours
Route	Subcutaneous injection
Studied dose range	100–300 mcg per dose
Timing	Before bed (synergistic with CJC-1295); can also be used post-workout
Primary effects	Pulsatile GH release; improved sleep quality; body composition; joint recovery
Cortisol effect	Minimal — this is a key distinguishing advantage over GHRP-2 and GHRP-6
Stack note	CJC-1295 + Ipamorelin is the most widely used GH secretagogue stack in clinical practice
Cycle	5 on / 2 off or per prescriber protocol

TESAMORELIN

Tesamorelin — FDA-Approved GHRH Analog

Tesamorelin holds the distinction of being the only GH-axis peptide with FDA approval — specifically for HIV-associated lipodystrophy (abdominal fat accumulation in HIV+ patients on antiretroviral therapy). Its approval gives it a stronger clinical evidence base than most peptides in this cohort.

Parameter	Details
FDA Status	APPROVED — for HIV-associated lipodystrophy (Egrifta brand name)
Half-life	~26 minutes — shorter than CJC-1295
Route	Subcutaneous injection
Studied dose range	1–2 mg daily
Primary studied effects	Visceral fat reduction; improved body composition; GH/IGF-1 normalization
Off-label interest	General body composition; metabolic syndrome; adult GH deficiency
Monitoring	IGF-1, fasting glucose, HbA1c — tesamorelin can raise blood glucose
Important note	Contraindicated in active malignancy; use with caution in insulin resistance

GHRP-2

GHRP-2 — For Comparison Context

GHRP-2 (Growth Hormone Releasing Peptide 2) is included here for educational context — it is a potent GH secretagogue but has a less favorable side effect profile compared to Ipamorelin, which is why Ipamorelin has largely replaced it in clinical practice.

Parameter	Details
GH stimulation	Very potent — stronger than Ipamorelin at equivalent doses
Cortisol effect	RAISES cortisol — the primary disadvantage vs. Ipamorelin
Prolactin effect	RAISES prolactin — can cause side effects in sensitive individuals
Appetite stimulation	Significant — via ghrelin pathway (can be advantageous in wasting conditions)
Current use	Declining in favor of Ipamorelin in most body composition/anti-aging protocols
When still used	Severe GH deficiency; wasting conditions; post-surgical recovery where stronger effect needed

CLINICAL CONTEXT

Expected Benefits, Timeline & Monitoring

Reported Benefits (Clinical Literature)

- Improved body composition — lean mass increase, visceral fat reduction
- Enhanced sleep quality — particularly deeper Stage 3 sleep
- Faster recovery from exercise and injury
- Improved skin quality and elasticity
- Increased bone mineral density (longer-term)
- Mental clarity and mood improvement
- Reduced fatigue and improved energy levels

Monitoring Requirements

- Baseline IGF-1 — and every 6–8 weeks during protocol
- Fasting glucose and HbA1c — GH can raise blood sugar
- Cortisol (if GHRP-2 used) — check AM cortisol at 6 weeks
- Body composition assessment at 8 and 16 weeks
- Report any unusual fluid retention, joint aching, or tingling to prescriber
- Note: IGF-1 should stay within mid-range normal — not maxed

Key Principles for GH Peptide Protocols

- Do not eat within 2–3 hours of GH peptide administration — insulin and GH are antagonistic
- Optimize sleep first — GH peptides amplify the natural pulse; they cannot create one where deep sleep is absent
- Pair with resistance training — GH stimulates muscle protein synthesis most when muscle fibers are signaling for repair
- Monitor IGF-1 — elevated IGF-1 has theoretical cancer-promotion risk; stay in mid-range normal
- Cycle consistently — receptor desensitization occurs with continuous use; 5 on/2 off minimum
- These peptides are not replacements for proper nutrition, sleep, training, and stress management