



LIJEWELL™

PATH TO PEPTIDES

GROWTH HORMONE PEPTIDES:

WHAT THE RESEARCH SAYS

CJC-1295, Ipamorelin, and the science behind the most-prescribed peptide protocols at anti-aging clinics.

An Educational Overview of Emerging Scientific Research

FOR RESEARCH AND EDUCATIONAL PURPOSES ONLY

YOUR BODY'S NATURAL GROWTH HORMONE PRODUCTION DROPS BY ROUGHLY 14% EVERY DECADE AFTER AGE 30. BY 60, YOU'RE PRODUCING A FRACTION OF WHAT YOU DID AT 20. GROWTH HORMONE PEPTIDES ARE NOW THE #1 PRESCRIBED PROTOCOL AT ANTI-AGING CLINICS ACROSS THE COUNTRY.

But what does the science actually say? Are these peptides backed by research, or is this another case of clinic marketing outrunning the evidence? Let's look at the data.

WHY THIS MATTERS

Growth hormone (GH) does a lot more than help kids grow taller. In adults, it plays a critical role in muscle maintenance, fat metabolism, bone density, sleep quality, and tissue repair.¹

The age-related decline in GH production — a condition sometimes called somatopause — has been linked to increased body fat, decreased muscle mass, reduced energy, and slower recovery from injury.²

That's why researchers have been studying ways to safely stimulate the body's own GH production for decades. And that's where growth hormone peptides come in.

THE SCIENCE: HOW GROWTH HORMONE RELEASE WORKS

Think of growth hormone release like a thermostat system. Your brain has two main controls:

GHRH (Growth Hormone Releasing Hormone): This is the "ON" switch. It tells your pituitary gland — a pea-sized gland at the base of your brain — to release growth hormone.³

Somatostatin: This is the "OFF" switch. It tells the pituitary to stop releasing growth hormone. It prevents too much GH from being produced.⁴

Growth hormone peptides work by mimicking or enhancing the "ON" signal. They don't inject synthetic growth hormone into your body. Instead, they encourage your own pituitary gland to produce and release more of its natural growth hormone.

Key Difference: Taking synthetic growth hormone (HGH) puts an external hormone into your body. Growth hormone PEPTIDES ask your body to make MORE of its own. This is an important distinction — it means the body's natural feedback loops remain intact.⁵

THE KEY GROWTH HORMONE PEPTIDES

CJC-1295 (WITH DAC)

CJC-1295 is a modified version of GHRH — the body's natural "ON" switch for growth hormone. Scientists added a component called DAC (Drug Affinity Complex) that makes it last much longer in the body.⁶

Research published in the Journal of Clinical Endocrinology & Metabolism found that CJC-1295 increased growth hormone levels by **200–1,000%** in healthy adults, with effects lasting up to 6 days after a single administration.⁷

IPAMORELIN

Ipamorelin works differently than CJC-1295. It mimics a hormone called ghrelin (the "hunger hormone") and activates GH release through a separate pathway. The advantage: ipamorelin stimulates GH release very selectively — without significantly affecting cortisol or prolactin, which some older GH-releasing peptides did.⁸

A study in healthy adults showed ipamorelin produced a dose-dependent increase in growth hormone levels with a favorable side effect profile.⁹

THE CJC-1295 / IPAMORELIN COMBINATION

Clinics often use these two peptides together. The rationale: they stimulate GH release through two different pathways simultaneously – like pressing the gas pedal with both feet. CJC-1295 mimics GHRH (the natural signal), while ipamorelin mimics ghrelin (the hunger signal). Together, they may produce a stronger, more sustained GH pulse than either alone.¹⁰

Peptide	Mechanism	GH Increase	Duration	Research Level
CJC-1295 (with DAC)	Mimics GHRH	200-1,000%	~6 days per dose	Phase 2 clinical trials
Ipamorelin	Mimics ghrelin	Dose-dependent	~3-4 hours per dose	Phase 2 clinical trials
Sermorelin	Mimics GHRH	Moderate increase	~30 min per dose	FDA-approved (diagnostic)
Tesamorelin	Mimics GHRH	Significant increase	~24 hours	FDA-approved (lipodystrophy)
MK-677 (Ibutamoren)	Oral ghrelin mimetic	40-80% increase	~24 hours (oral)	Phase 2 clinical trials

WHAT RESEARCH SHOWS ABOUT BENEFITS

The research on GH-stimulating peptides spans several areas:

Body composition: Studies with tesamorelin (an FDA-approved GHRH analog) showed significant reductions in abdominal fat. A large trial found a 15-18% reduction in visceral fat over 26 weeks.¹¹

Muscle and recovery: Growth hormone plays a well-documented role in muscle protein synthesis and tissue repair. Older adults with GH deficiency show improved lean body mass when GH levels are restored to normal ranges.¹²

Sleep quality: GH is primarily released during deep sleep. Research suggests that GH-releasing peptides, particularly ipamorelin, may help promote deeper sleep patterns — which in turn supports natural GH production.¹³

Bone density: Long-term studies of GH replacement in deficient adults show improvements in bone mineral density, particularly in the spine and hip.¹⁴

IMPORTANT SCIENTIFIC CONTEXT

What's important to understand: Most research on CJC-1295 and ipamorelin specifically comes from Phase 1-2 clinical trials and preclinical studies. The larger body of evidence on GH restoration comes from studies of approved GH replacement therapy. Researchers use this data to form hypotheses about peptide effects, but large-scale randomized trials of CJC-1295/ipamorelin for anti-aging outcomes have not been completed.

Note on MK-677 (Ibutamoren): While often grouped with peptides, MK-677 is technically a **small molecule, not a peptide**. It's an oral compound that mimics ghrelin. It has research showing sustained GH elevation, but it also raises insulin levels and blood glucose — important considerations.¹⁵

WHAT TO KNOW

KEY TAKEAWAYS:

- Growth hormone production declines ~14% per decade after age 30.
- GH peptides stimulate your body's own GH production — they don't inject synthetic hormone.
- CJC-1295 and ipamorelin target two different GH release pathways.
- Research shows GH restoration improves body composition, recovery, sleep, and bone density.
- Most CJC-1295/ipamorelin research is Phase 1-2. Larger trials are needed.
- Tesamorelin and sermorelin are FDA-approved GH peptides for specific indications.
- Always work with a qualified healthcare provider for any hormone-related questions.

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This document is intended solely for educational purposes to increase awareness of emerging scientific research. It does not constitute medical

advice and should not be used to make healthcare decisions.

Regulatory Status: Tesamorelin (Egrifta) is FDA-approved for HIV-associated lipodystrophy. Sermorelin has FDA-approved diagnostic uses.

CJC-1295, ipamorelin, and MK-677 (ibutamoren) are research compounds and are NOT FDA-approved for any therapeutic use. Research peptides

are sold for laboratory and educational purposes only.

All healthcare decisions should be made in consultation with qualified medical professionals.

This publication is part of an ongoing educational series designed to promote scientific literacy and awareness of developments in health research.



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