

Peptides, explained like a human.

You've seen the word everywhere — gyms, TikTok, wellness clinics across Southern California. This is the plain-English version: what peptides actually are, and why the *where* matters as much as the *what*.

So... what is a peptide?

A peptide is a **short chain of amino acids** — the same building blocks that make up protein, just far smaller. Scientists describe them as the body's **signaling molecules**: little messengers that tell your cells what to do.

Think of it this way: if proteins are long letters, peptides are the **text messages** your body sends between cells — short, specific instructions. You already make thousands of them every day. Insulin? That's a peptide.

Because they're natural messengers, peptides have become a serious area of medicine. Researchers count **more than 60 peptide-based medicines already approved** and **150+ more in clinical development** — a well-established, fast-growing category, not a fad.

WHAT THE RESEARCH SAYS

- ▶ Peptides are **naturally occurring signaling molecules** (neuropeptides, peptide hormones) — and 60+ peptide drugs are approved with 150+ in development. (*Hellinger et al., Nature Reviews Methods Primers, 2023*)
- ▶ If needles are your hang-up, you're normal: a large research review found needle fear affects **20–30% of young adults** and makes **~16% of adults skip even a flu shot**. (*McLenon & Rogers, J Adv Nursing, 2018*)

The catch: not all "peptides" are equal

The exact same word covers two completely different things — a **prescription from a medical practice**, and a **vial from a website**. They are not remotely the same, and the difference is your safety. The next page shows exactly how to tell them apart.

Medicine vs. mail-order.

Here's the uncomfortable truth about buying peptides online — and why every plan at Regen Therapy MD runs through the same four steps, no exceptions.

WHY SOURCING MATTERS

A global analysis of nearly **68,000 medicine samples** found about **1 in 8 essential medicines were substandard or falsified** — wrong strength, wrong contents, or fake. (*Ozawa et al., JAMA Network Open, 2018*)

That's the risk you inherit from any seller with **no physician, no pharmacy, and no batch testing**. A website with a cart can't protect you from any of it.

The Regen Therapy MD method — 4 steps, always

1 A real physician evaluation.

Led by our Medical Director, Dr. Hootan Zandifar, MD (UCLA David Geffen School of Medicine). A conversation about your history and goals — never a checkout button.

2 Baseline bloodwork, before anything.

Labs personalize your plan and screen for reasons to wait. Without data, a "protocol" is just a template. We test, we don't guess.

3 Licensed U.S. compounding pharmacies.

Your formulas are prepared by named, licensed pharmacies with a **batch-specific Certificate of Analysis** — the paperwork that proves what's actually in the vial.

4 Follow-up that never stops.

Test, adjust, retest. Your physician measures progress in real data — and needle-free options like the Peptide Patch (stick it on and go) are offered where they fit. Individual results vary.

The 30-second sniff test

- ✓ **Green flags:** a licensed physician evaluates you · labs come first · a named U.S. pharmacy · a batch COA that matches your vial's lot number.
- ✗ **Red flags:** "research use only" or "no prescription needed" · no physician, no labs · a generic or missing COA · prices too good to be true · vague sourcing.

Which peptide is right for you?

Peptides aren't one-size-fits-all. The right one — and the right way to take it — depends on your goals, your bloodwork, and your history. Below is the menu we work from. Your physician helps you find the fit; you don't have to decode it alone.

HOW WE MATCH YOU TO A PEPTIDE

- ▶ **Your goals.** Recovery, energy, healthy aging, metabolic support, focus, or intimacy — we start with what you actually want to change.
- ▶ **Your labs.** Baseline bloodwork rules options in or out and personalizes dosing. No labs, no plan.
- ▶ **Your format.** Where it fits, needle-free delivery through our **Peptide Patch** line (Recovery, Energy, Longevity Patch & more). Where a patch isn't appropriate, **conventional injectable or oral** formats. Your physician chooses.

The six goals on the menu

- **Recovery & Healing**
- **Metabolic**
- **Cognitive & Focus**
- **Vitality & Growth Hormone**
- **Longevity & Immune**
- **Sexual Health**

Every peptide in this guide is offered only inside a physician-supervised plan. Not every formula suits a patch, and GLP-1 medications are given by injection. Names are shown generically. This is educational, not medical advice, and individual results vary.

THE PEPTIDE MENU

Recovery & Healing

3 OPTIONS

BPC-157 NOT FDA-APPROVED

BPC-157 is a synthetic peptide (a short chain of amino acids) related to a protein found naturally in the stomach. In laboratory and animal research it has been studied for its possible role in soft-tissue processes such as tendon, ligament, and muscle recovery, as well as gastrointestinal and wound healing; most of this research is in animal models, and its effects have not been confirmed in humans. It is not FDA-approved and is available only through a physician via a licensed U.S. compounding pharmacy. If a physician determines it is appropriate, the delivery format (such as a subcutaneous injection or a compounded oral capsule) is decided by your supervising physician; this information is educational rather than medical advice, and individual results vary.

According to PubMed: Gwyer et al. *Cell and Tissue Research*. 2019. doi.org/10.1007/s00441-019-03016-8

Thymosin Beta-4 (TB-500) NOT FDA-APPROVED

Thymosin Beta-4 is a small protein that occurs naturally in the body and is released by cells around areas of injury. In laboratory, preclinical, and early-phase human research, it has been studied for its possible role in tissue repair and regeneration, including cell migration, the formation of new blood vessels, and inflammation and scarring in tissues such as skin, eye, and heart. It is not FDA-approved and is available only through a physician via a licensed U.S. compounding pharmacy, and when it is provided it is typically given as a subcutaneous or intramuscular injection under physician supervision. Whether it is appropriate for you is a decision made with your physician; this information is educational rather than medical advice, and individual results vary.

According to PubMed: Goldstein et al. *Expert Opinion on Biological Therapy*. 2011. doi.org/10.1517/14712598.2012.634793

GHK-Cu NOT FDA-APPROVED

GHK-Cu is a small, naturally occurring copper-binding peptide (glycyl-L-histidyl-L-lysine bound to copper) that is normally present in the body and becomes less abundant as people get older. In laboratory and animal studies, and in reviews of that research, it has been studied for its possible role in wound healing, skin repair, and antioxidant and anti-inflammatory activity. This is educational information only and not medical advice; it is not FDA-approved as a drug and is available only through a physician via a licensed U.S. compounding pharmacy. If your physician decides it is appropriate for you, they will also determine the form it takes, such as a topical cream or serum or a subcutaneous injection, and individual results vary.

According to PubMed: Pickart et al. *BioMed research international*. 2015. doi.org/10.1155/2015/648108

Vitality & Growth Hormone

4 OPTIONS

Sermorelin NOT FDA-APPROVED

Sermorelin is a synthetic peptide that mirrors a short, active portion of the body's own growth hormone-releasing hormone (GHRH), the natural signal that prompts the pituitary gland to release growth hormone. In published research it has been studied as a provocative test to help evaluate how well the pituitary secretes growth hormone, and it has been researched in children with idiopathic growth hormone deficiency. It is not FDA-approved; the previously approved product was discontinued, and it is available only through a physician via a licensed U.S. compounding pharmacy. Whether it is appropriate for you, and how it would be administered, is a decision made by a supervising physician based on your individual evaluation; this information is educational, not medical advice, and individual results vary.

According to PubMed: Prakash & Goa *BioDrugs*. 1999. doi.org/10.2165/00063030-199912020-00007

Ipamorelin NOT FDA-APPROVED

Ipamorelin is a small synthetic peptide (a pentapeptide) classified as a growth hormone secretagogue, meaning it is designed to signal the body's own pituitary gland to release growth hormone. In laboratory and animal research it has been studied for its selective effect on growth hormone release — notably, in those models, without raising cortisol or other stress hormones. It is not FDA-approved and is available only through a physician via a licensed U.S. compounding pharmacy; when used, it is typically prepared as a subcutaneous injection under physician supervision. Whether it is appropriate for you is a decision your physician makes from an individual evaluation; this information is educational, not medical advice, and individual results vary.

According to PubMed: Raun et al. *European Journal of Endocrinology*. 1998. doi.org/10.1530/eje.0.1390552

Vitality & Growth Hormone (cont.)

4 OPTIONS

CJC-1295 NOT FDA-APPROVED

CJC-1295 is a long-acting synthetic analog of growth hormone-releasing hormone (GHRH), the natural signal that prompts the body's own pituitary gland to release growth hormone. In research with healthy adults, it has been studied for its effect on the body's own growth hormone and insulin-like growth factor 1 (IGF-1) levels, and it continues to be investigated in the context of growth hormone-related and body-composition research. CJC-1295 is not FDA-approved and is available only through a physician via a licensed U.S. compounding pharmacy; when used, it is typically prepared as a subcutaneous injection under physician supervision. This information is educational and not medical advice, whether CJC-1295 is appropriate for you is a decision for your physician based on an individual health evaluation, and individual results vary.

According to PubMed: Teichman et al. *The Journal of Clinical Endocrinology and Metabolism*. 2005. doi.org/10.1210/jc.2005-1536

Tesamorelin FDA-APPROVED (GENERIC)

Tesamorelin is a lab-made version of a natural signaling hormone (growth hormone-releasing hormone) that prompts the body to release its own growth hormone. It is FDA-approved for the reduction of excess visceral abdominal fat in people living with HIV-associated lipodystrophy, and researchers have also studied its effects on body composition and related measures. Any other use would be off-label and would depend on your physician's evaluation of whether it is appropriate for you. This information is educational and not medical advice, results vary from person to person, and the form and dosing of any treatment are decisions made with your physician.

According to PubMed: Dhillon S *Drugs*. 2011. doi.org/10.2165/11202240-000000000-00000

Metabolic

3 OPTIONS

Semaglutide GLP-1 - INJECTION ONLY

Semaglutide is a GLP-1 receptor agonist, a peptide that acts on the body's appetite and blood-sugar signaling pathways. It has been studied in peer-reviewed clinical trials for chronic weight management in adults with overweight or obesity and for blood-sugar control in adults with type 2 diabetes, generally alongside lifestyle and dietary changes. Semaglutide is FDA-approved in this class and is given as a once-weekly subcutaneous (under-the-skin) injection under physician supervision; it is not available as a patch. Whether it may be appropriate for you is a decision your physician makes based on your weight, metabolic profile, and overall health history; this information is educational, not medical advice, and individual results vary.

According to PubMed: Wilding et al. *N Engl J Med*. 2021. doi.org/10.1056/NEJMoa2032183

Tirzepatide GLP-1 - INJECTION ONLY

Tirzepatide is a peptide given as a once-weekly injection under physician supervision; it is not available as a patch. In peer-reviewed clinical trials it has been studied for blood sugar control in adults with type 2 diabetes and researched for weight management, and investigators have also examined its effects on related cardiometabolic markers. It is FDA-approved for type 2 diabetes and for chronic weight management in eligible adults. Whether it is appropriate for you is entirely your physician's decision, based on your individual health history; this information is educational, not medical advice, and individual results vary.

According to PubMed: Sinha et al. *Journal of obesity & metabolic syndrome*. 2023. doi.org/10.7570/jomes22067

AOD-9604 NOT FDA-APPROVED

AOD-9604 is a small peptide based on a fragment of the naturally occurring human growth hormone molecule. In research settings it has been studied for its potential effects on fat metabolism and body weight, and it has been investigated as an anti-obesity candidate in early clinical development. It is not FDA-approved and is available only through a physician via a licensed U.S. compounding pharmacy, typically as a subcutaneous injection under physician supervision. Whether it is appropriate for you, and how it would be prepared or delivered, is a decision your physician makes based on your health history; this information is educational, not medical advice, and individual results vary.

According to PubMed: Halford *Current opinion in investigational drugs (London, England : 2000)*. 2006. [PubMed 16625817](https://pubmed.ncbi.nlm.nih.gov/16625817/)

Longevity & Immune

2 OPTIONS

Epithalon NOT FDA-APPROVED

Epithalon is a small synthetic peptide made of four amino acids, modeled on a natural substance associated with the pineal gland. In laboratory and animal research, it has been studied for its potential role in healthy aging and cellular protection, including effects on the enzyme telomerase, antioxidant activity, and neuroendocrine and immune signaling. Because most of the current evidence comes from preclinical and early-stage studies rather than large human trials, it is not FDA-approved and is available only through a licensed physician via a U.S. compounding pharmacy. This information is educational and not medical advice; whether Epithalon is appropriate, and in what form, is a decision your physician makes with you based on your personal health history, and individual results vary.

According to PubMed: Aranj et al. *International Journal of Molecular Sciences*. 2025. doi.org/10.3390/ijms26062691

Thymosin Alpha-1 NOT FDA-APPROVED

Thymosin Alpha-1 is a small protein (peptide) that occurs naturally in the thymus gland, which helps coordinate the body's immune system. In published research it has been studied for its role in immune function, and it has been researched in areas such as certain infections, immune-compromised states, and response to vaccines. It is not approved by the FDA in the U.S. and is available only through a physician via a licensed U.S. compounding pharmacy; whether it is prepared for you, and how it is delivered (typically as a subcutaneous injection), is a decision your supervising physician would make. This information is educational and not medical advice, and individual results vary.

According to PubMed: Dominari et al. *World Journal of Virology*. 2020. doi.org/10.5501/wjv.v9.i5.67

Cognitive & Focus

2 OPTIONS

Selank NOT FDA-APPROVED

Selank is a lab-made peptide (a short chain of amino acids) modeled on a naturally occurring peptide called tuftsin. In published laboratory and early clinical research, it has been studied for its potential calming (anxiolytic) effects and for possible influences on attention and memory, which is why it is grouped under cognitive and focus support. It is not FDA-approved and is available only through a physician via a licensed U.S. compounding pharmacy; whether it is appropriate for you is a decision for your physician, who also determines the form of administration (such as a subcutaneous injection or an intranasal spray). This information is educational, not medical advice, and individual results vary.

According to PubMed: Vyunova et al. *Protein and Peptide Letters*. 2018. doi.org/10.2174/0929866525666180925144642

Semax NOT FDA-APPROVED

Semax is a synthetic peptide based on a small fragment of a naturally occurring hormone (ACTH) that has been studied in laboratory and animal research for its effects on the brain and nervous system. Researchers have investigated it in areas such as memory, learning, focus, and neuroprotection, though this work does not establish what it does in people. It is not FDA-approved and is available in the U.S. only through a physician via a licensed compounding pharmacy. Whether Semax is appropriate for you, and in what form it might be prepared, is a decision made with your supervising physician; this information is educational only, is not medical advice, and individual results vary.

According to PubMed: Radchenko et al. *Acta Naturae*. 2025. doi.org/10.32607/actanaturae.27808

Sexual Health

1 OPTION

Bremelanotide (PT-141) FDA-APPROVED (GENERIC)

Bremelanotide is a lab-made peptide that acts on melanocortin receptors in the nervous system, a pathway involved in sexual desire and arousal. It is FDA-approved for hypoactive sexual desire disorder (persistently low sexual desire that causes distress) in premenopausal women, and it has been studied primarily in that group; any other use is considered off-label. Researchers have studied it in relation to sexual desire and the distress associated with low desire, and studies have noted side effects such as nausea, flushing, and headache. Whether it is appropriate for you, and how it would be given (typically an as-needed injection under a physician's supervision), is a decision made with a supervising physician; this information is educational, not medical advice, and individual results vary.

According to PubMed: Mayer & Lynch *The Annals of pharmacotherapy*. 2020. doi.org/10.1177/1060028019899152

TAKE THIS TO ANY CONSULTATION

3 questions that reveal everything.

Ask any provider these — including us. A real program answers all three without hesitation.

1 "Who is the licensed physician overseeing my care — and will I have baseline labs first?"
Listen for a name and a lab order, not a sales pitch.

2 "Which licensed U.S. compounding pharmacy dispenses my medication?"
A named, state-licensed pharmacy — not "our supplier," not silence.

3 "Can I see a batch-specific Certificate of Analysis that matches my vial's lot number?"
It should already exist. If it doesn't, that's your answer.

Ready to do this the right way?

Regen Therapy MD is a physician-supervised peptide & longevity clinic serving Beverly Hills, Santa Monica, Brentwood, the Westside & all of Southern California — plus telehealth where licensed. Real doctors. Real labs. Verified sourcing. Needle-free where it fits.

Book a consultation → book.mypatientnow.com/practice/TqZLiT

Sources (peer-reviewed, via PubMed)

1. Hellinger R, et al. Peptidomics. *Nature Reviews Methods Primers*. 2023. <https://doi.org/10.1038/s43586-023-00205-2>
2. McLenon J, Rogers MAM. The fear of needles: a systematic review and meta-analysis. *J Adv Nurs*. 2018. <https://doi.org/10.1111/jan.13818>
3. Ozawa S, et al. Prevalence and Estimated Economic Burden of Substandard and Falsified Medicines in Low- and Middle-Income Countries. *JAMA Network Open*. 2018. <https://doi.org/10.1001/jamanetworkopen.2018.1662>