PEPTIDE THERAPY

A PATIENT GUIDE

What each peptide is, what it may help with, and how it's taken

WHAT ARE PEPTIDES?

Peptides are short chains of amino acids, the same building blocks that make up proteins. Your body makes thousands of them naturally, and they act as **messengers**: signaling cells to repair tissue, release hormones, calm inflammation, or burn energy.

Therapeutic peptides either copy one of these natural signals or are designed to fine-tune it. Because they work with your body's own pathways, they tend to be targeted. But "natural" does not mean risk-free, so every protocol at Larrea is individualized by Dr. Tecaya, NMD.

How Peptides Are Taken

SubQ (subcutaneous): A small injection just under the skin, usually in the belly or thigh, with a tiny insulin-style needle. This is the most common route.

IM (intramuscular): An injection into a muscle.

Oral / sublingual: A capsule swallowed or dissolved under the tongue.

Intranasal: A nasal spray.

Topical: A cream or serum applied to the skin or scalp.

FDA-Approved vs. Not

Each peptide in this guide is labeled with its FDA status.

FDA-approved means a branded version has passed large clinical trials for a specific use.

Not FDA-approved means the peptide has not been through that process. Many have promising early research, often in lab or animal studies, but less human data. Your provider will talk through what is known, and what isn't, before you start.

Safety first

- Your provider sets your dose, schedule, and length of treatment. Don't change them on your own.
- Our peptides come from licensed U.S. compounding pharmacies. Avoid "research use only" peptides sold online: their purity and contents aren't verified.
- Tell your provider if you are pregnant, planning a pregnancy, or breastfeeding, and about all medications and health conditions.
- Some therapies require labs before and during treatment.
- Report any unusual or lasting side effects, including injection-site reactions, right away.

QUICK REFERENCE

Peptide	Category	How it's taken	FDA status
Semaglutide	Weight & Metabolism	Weekly SubQ injection	**FDA-approved**
Tirzepatide	Weight & Metabolism	Weekly SubQ injection	**FDA-approved**
5-Amino-1MQ	Weight & Metabolism	Daily oral capsule	Not approved
MOTS-c	Weight & Metabolism	SubQ injection, typically twice weekly	Not approved
Ipamorelin	Growth Hormone Support	SubQ injection, usually nightly	Not approved
CJC-1295	Growth Hormone Support	SubQ injection, usually nightly	Not approved
Tesamorelin	Growth Hormone Support	SubQ injection	**FDA-approved**
BPC-157	Recovery & Repair	SubQ (near the injury), IM, or oral (for gut concerns)	Not approved
TB-500 (Thymosin Beta-4)	Recovery & Repair	SubQ or IM injection	Not approved
The Wolverine Protocol	Recovery & Repair	SubQ or IM, typically twice daily	See components
Selank	Brain, Mood & Focus	Nasal spray	Not approved
Semax	Brain, Mood & Focus	Nasal spray (sometimes SubQ)	Not approved
Pinealon	Brain, Mood & Focus	SubQ injection or nasal spray	Not approved

Peptide	Category	How it's taken	FDA status
Dihexa	Brain, Mood & Focus	Oral, topical, or SubQ	Not approved
Epithalon	Longevity & Cellular Aging	SubQ injection, 15-day course	Not approved
FOXO4-DRI	Longevity & Cellular Aging	SubQ injection, cycled	Not approved
Larazotide	Gut & Immune Health	Oral or sublingual	Not approved
Thymosin Alpha-1	Gut & Immune Health	SubQ injection	Not approved
GHK-Cu (Copper Peptide)	Skin, Hair & Aesthetics	Topical, scalp, or SubQ	Not approved
SNAP-8	Skin, Hair & Aesthetics	Topical cream	Not approved
PT-141 (Bremelanotide)	Sexual Health	SubQ injection (or nasal) about 45 minutes before activity	**FDA-approved**

WEIGHT & METABOLISM

Semaglutide FDA-APPROVED

Ozempic®, Wegovy®

Mimics GLP-1, a natural gut hormone that tells your brain you are full. It also slows how quickly your stomach empties and helps regulate blood sugar.

May help with: Weight loss, appetite control, blood sugar regulation, fatty liver, cardiovascular health, type 2 diabetes

How it's taken: Weekly SubQ injection

Good to know

- The dose starts low and increases gradually.
- A steady loss of about 1–3 lbs per week is the goal.
- Labs are required every 3 months.
- Nausea and constipation are the most common side effects, especially when the dose goes up.
- Not for anyone with a personal or family history of medullary thyroid cancer or MEN2.

Tirzepatide FDA-APPROVED

Mounjaro®, Zepbound®

Acts on two gut-hormone receptors (GLP-1 and GIP) instead of one, for broader metabolic effects: appetite control, fat loss, and improved insulin sensitivity.

May help with: Weight loss, body composition, insulin resistance, metabolic syndrome, type 2 diabetes, visceral (deep belly) fat

How it's taken: Weekly SubQ injection

Good to know

- The dose starts low and increases gradually.
- Often paired with growth-hormone-support peptides to help preserve muscle while losing fat.
- Same common side effects and thyroid caution as semaglutide.

5-Amino-1MQ NOT FDA-APPROVED

A small molecule (not technically a peptide) that blocks NNMT, an enzyme that slows metabolism in fat cells. It may help support NAD+ and cellular energy.

May help with: Fat loss, metabolic support, insulin sensitivity, lean body composition

How it's taken: Daily oral capsule

Good to know

- Often combined with GLP-1 therapy.
- Research so far is mostly in lab and animal studies.

MOTS-c NOT FDA-APPROVED

A peptide your own mitochondria (the "power plants" of your cells) make. It activates the same energy pathway (AMPK) that exercise does, helping cells take up glucose.

May help with: Metabolic health, insulin sensitivity, mitochondrial support, inflammation

How it's taken: SubQ injection, typically twice weekly

Good to know

- Sometimes called an "exercise mimetic," but it works best alongside movement, not instead of it.
- Human research is still early.

GROWTH HORMONE SUPPORT

These peptides encourage your own pituitary gland to release growth hormone (GH) in natural pulses, rather than replacing GH directly. Your IGF-1 level (a marker of GH activity) is checked before starting and monitored during treatment.

Ipamorelin NOT FDA-APPROVED

Signals the pituitary to release growth hormone in natural pulses. It is selective: it does not meaningfully raise cortisol (stress hormone) or prolactin.

May help with: Body composition, recovery, sleep quality, healthy aging

How it's taken: SubQ injection, usually nightly

Good to know

- Usually paired with CJC-1295 or tesamorelin.
- Nightly dosing lines up with your body's natural nighttime GH release.

CJC-1295 NOT FDA-APPROVED

A long-acting version of GHRH, the signal that tells your pituitary to release growth hormone. It increases the size and frequency of your natural GH pulses.

May help with: Preserving lean muscle (especially during weight loss), recovery, body composition, healthy aging

How it's taken: SubQ injection, usually nightly

Good to know

- Usually paired with ipamorelin.
- A good fit when muscle preservation is the main goal.

Tesamorelin FDA-APPROVED

Egrifta® — approved for HIV-related abdominal fat

A GHRH analog that boosts natural GH pulses. In clinical trials it reduced visceral fat, the deep abdominal fat linked to metabolic disease.

May help with: Visceral (deep belly) fat, body composition, metabolic syndrome

How it's taken: SubQ injection

Good to know

- Often paired with ipamorelin.
- Best suited to patients focused on stubborn abdominal fat.

RECOVERY & REPAIR

BPC-157 NOT FDA-APPROVED

A lab-made peptide based on a protective protein found in stomach juice. It is studied for supporting new blood vessel growth and repair of tendons, ligaments, and the gut lining.

May help with: Tendon and ligament repair, muscle recovery, gut lining and GI healing

How it's taken: SubQ (near the injury), IM, or oral (for gut concerns)

Good to know

- Injected near the injury for a local effect; taken by mouth for GI concerns.
- Often paired with TB-500.
- Research is mostly in animals; human studies are limited.

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

Based on a natural repair protein made by the thymus. It helps cells migrate to injured areas, supports new blood vessel growth, and calms inflammation throughout the body.

May help with: Wound healing, muscle and tendon repair, inflammation

How it's taken: SubQ or IM injection

Good to know

- Works body-wide, complementing BPC-157's local effects.
- Research is mostly in animals; human studies are limited.

The Wolverine Protocol BPC-157 + TB-500

Larrea's flagship injury-recovery protocol, combining BPC-157 (local repair signaling) with TB-500 (body-wide repair and anti-inflammatory support).

May help with: Acute injury, surgical recovery, tendon/ligament repair, chronic pain, joint health

How it's taken: SubQ or IM, typically twice daily

Good to know

- Your provider will tailor timing and duration to your injury or procedure.

BRAIN, MOOD & FOCUS

Selank NOT FDA-APPROVED

A calming peptide derived from tuftsin (an immune peptide). It supports the brain's GABA, serotonin, and dopamine systems to ease anxiety without sedation.

May help with: Anxiety, stress resilience, mood stability, focus, brain fog

How it's taken: Nasal spray

Good to know

- Designed to calm without drowsiness.
- Studies to date suggest a low risk of dependence or tolerance.
- Often paired with Semax.

Semax NOT FDA-APPROVED

A peptide derived from ACTH that raises BDNF, a growth factor that supports brain cells. It also supports healthy blood flow in the brain.

May help with: Focus, memory, mood, neuroprotection

How it's taken: Nasal spray (sometimes SubQ)

Good to know

- The nasal route reaches the brain quickly.
- Studied mainly in Russia for stroke recovery and attention.
- Often paired with Selank.

Pinealon NOT FDA-APPROVED

A short peptide that supports healthy gene activity and energy production in brain cells.

May help with: Cognitive decline, memory, brain fog, sleep quality, circadian rhythm

How it's taken: SubQ injection or nasal spray

Good to know

- Step 2 of the cognitive longevity protocol, after Epithalon.

Dihexa NOT FDA-APPROVED

A compound derived from angiotensin IV that, in lab studies, strongly promotes new connections (synapses) between brain cells.

May help with: Cognitive decline, memory, recovery after brain injury

How it's taken: Oral, topical, or SubQ

Good to know

- Started at a low dose because effects build over time.
- Research so far is in lab and animal studies.

LONGEVITY & CELLULAR AGING

Epithalon NOT FDA-APPROVED

A short peptide modeled on a pineal gland extract. It is studied for activating telomerase (which protects the ends of chromosomes) and for supporting melatonin and healthy cortisol rhythms.

May help with: Cellular aging, sleep and circadian rhythm, age-related immune decline

How it's taken: SubQ injection, 15-day course

Good to know

- Step 1 of the cognitive longevity protocol, followed by Pinealon.
- Given as a 15-day course, repeated seasonally.

FOXO4-DRI NOT FDA-APPROVED

Designed to help the body clear senescent "zombie" cells, which are old cells that stop dividing but linger and drive inflammation.

May help with: Cellular aging, chronic inflammation, frailty

How it's taken: SubQ injection, cycled

Good to know

- Cycled intermittently, never used continuously.
- Research so far is in lab and animal studies.

GUT & IMMUNE HEALTH

Larazotide NOT FDA-APPROVED

Helps keep the "tight junctions" of the gut lining closed by blocking zonulin, a protein that loosens them. It works at the gut barrier without suppressing the immune system.

May help with: Leaky gut (intestinal permeability), celiac disease support, autoimmune gut support

How it's taken: Oral or sublingual

Good to know

- Studied in human clinical trials for celiac disease, but not FDA-approved.
- Pairs well with GI protocols and elimination diets, such as a gluten-free diet.

Thymosin Alpha-1 NOT FDA-APPROVED

Approved in some other countries

A peptide naturally made by the thymus gland. It helps T-cells (key immune cells) mature and brings an over- or under-active immune response back toward balance.

May help with: Chronic infections, post-viral fatigue, immune support, autoimmune modulation

How it's taken: SubQ injection

Good to know

- Used clinically for chronic Lyme, EBV/CMV reactivation, CIRS, and post-COVID immune issues.
- Generally well tolerated.

SKIN, HAIR & AESTHETICS

GHK-Cu (Copper Peptide) NOT FDA-APPROVED

A copper-binding peptide found naturally in your blood that declines with age. It supports collagen production, tissue repair, and antioxidant defense.

May help with: Skin rejuvenation, wound healing, hair restoration, scar reduction

How it's taken: Topical, scalp, or SubQ

Good to know

- Applied topically or to the scalp for targeted results; SubQ for body-wide effects.
- Works well with microneedling.
- Not for anyone with Wilson's disease (a copper-processing disorder).

SNAP-8 NOT FDA-APPROVED

Cosmetic ingredient

A cosmetic peptide that softens expression lines by reducing the nerve signals that make facial muscles contract.

May help with: Forehead lines, crow's feet, frown lines

How it's taken: Topical cream

Good to know

- Results build over 4–6 weeks.
- A needle-free option; effects are gentler than injectable neuromodulators like Botox®.
- Complements GHK-Cu in a full skin protocol.

SEXUAL HEALTH

PT-141 (Bremelanotide) FDA-APPROVED

Vyleesi® — approved for low desire in premenopausal women

Works in the brain on the pathways that drive desire and arousal, rather than on blood flow like erectile-dysfunction medications.

May help with: Low libido in men and women, sexual dysfunction, arousal support

How it's taken: SubQ injection (or nasal) about 45 minutes before activity

Good to know

- Nausea and flushing are common side effects.
- Can temporarily raise blood pressure. Tell your provider if you have high blood pressure or heart disease.

YOUR PLAN IS PERSONAL

Peptides work best as part of a whole-person plan that includes nutrition, sleep, movement, and stress care. They are not a replacement for these.

Bring your questions to your next visit. We're happy to walk through how any of these fit your goals.

This guide is educational and is not a substitute for individualized medical advice. All protocols are individualized by Dr. Tecaya, NMD, and prepared by LegitScript-certified 503A compounding pharmacies.