
READER'S GUIDE

The Peptide Field Guide

Twenty-four peptides and fifteen stacks, graded by evidence, with the doses people actually use

The word peptide covers insulin, Ozempic, and a vial from a chemical supplier with equal accuracy, which is why the conversation about peptides is so confused. This guide sorts the two dozen you are most likely to be offered into six families, grades each one by the human evidence behind it, states where the FDA stands, and records the doses and schedules people have used, with the source of each. A separate chapter reviews the pre-packaged stacks vendors sell, and explains why mixing peptides in one vial is a bad idea by construction. It is meant to be the first thing you read and the last thing you check.

WHO THIS IS FOR

Written for adults who are using, considering, or being sold peptides for weight, recovery, aging, cognition, or appearance. It summarizes the published record and the regulatory position as of the edition date. It is not medical advice, and the doses recorded here are reports of use, not recommendations.

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01 What a peptide is ¹

A peptide is a short chain of amino acids, usually somewhere between two and fifty. Proteins are the same thing, longer. The body runs on peptides: insulin, oxytocin, and the gut hormones that control appetite are all peptides, and so are dozens of approved medicines from the 1920s onward. Nothing about the word implies natural, safe, or experimental.

MADE HOW	Chemically synthesized one amino acid at a time, or produced in engineered cells. Synthesis leaves truncated and modified chains behind; purification is what separates a drug from a research chemical.
TAKEN HOW	Mostly by injection, because the stomach digests peptides. A few survive digestion (BPC-157) or are engineered to (oral semaglutide). Some work through the nose or on the skin.
CLEARED HOW	Most last minutes to hours in the blood. Weekly drugs like semaglutide are chemically anchored to albumin so they last days.

THREE THINGS THAT SHARE THE NAME

An approved peptide drug has a manufacturer, a label, and trials behind every claim. A compounded peptide is made by a pharmacy from an ingredient FDA has allowed for the purpose. A research chemical is sold by a supplier with no pharmacy, no label, and no one accountable for what is in the vial. This guide marks which is which.

02 How to read a claim¹

Every entry in this guide carries an evidence grade. The grade says nothing about whether a peptide works; it says how much anyone actually knows.

GRADE	WHAT IT MEANS	EXAMPLE
A	FDA-approved, with randomized trials measuring outcomes that matter, such as weight, blood sugar, or heart attacks	Semaglutide, tirzepatide
B	Investigational, but with randomized placebo-controlled trials completed or under way	Retatrutide, cagrilintide
C	Human data exist but are small, uncontrolled, or for a different form of the molecule	BPC-157, LL-37, tesamorelin off-label
D	Animal or laboratory data only; no controlled human study of the product as sold	TB-500, epitalon, dihexa

- Rodent healing is not human healing. Most compounds that mend rat tendons have never been tested in people, and many that were failed.
- A case series without a control group cannot separate a drug from placebo, natural recovery, or the injection itself.
- "Topline" results are a company's summary before peer review. They are usually right about the headline and silent about the details.
- A study of the full protein does not validate a fragment sold under a different name.

03 The regulatory map^{2,3,4}

Whether a pharmacy may compound a peptide turns on one list: the bulk substances FDA allows under section 503A of the Food, Drug, and Cosmetic Act. A substance qualifies if it has a United States Pharmacopeia monograph, is a component of an approved drug, or has been added to the list by rulemaking. Everything else is off limits, whatever the seller says.

THE STATUS BADGES USED IN THIS GUIDE

BADGE	MEANING
FDA-approved	A manufacturer's product with a label. Compounded copies are allowed only during a shortage or for a documented patient-specific need.
Compoundable	Not approved, but the ingredient is on the 503A list or qualifies as a component of a prior approved drug. A licensed pharmacy may make it on a prescription.
Under FDA review	Removed from the do-not-compound category in April 2026 and recommended for listing by FDA's advisory committee in July 2026. Not on the list until rulemaking finishes.
FDA: do not compound	On Category 2 of the 503A nominations: FDA has identified a significant safety concern. Pharmacies may not use it.
Research chemical only	No approval, no listing, no pharmacy pathway. Sold with "research use only" labels that protect the seller, not the buyer.

WHAT CHANGED IN 2026

In April 2026, FDA removed twelve peptides from Category 2 after their nominations were withdrawn. In July, its Pharmacy Compounding Advisory Committee voted to recommend six of them (BPC-157, TB-500, KPV, MOTS-c, epitalon, semax) for the 503A list and voted against one (DSIP). None is listed yet. A recommendation is not a rule, and a rule is not an approval.

04 How to read the dosing sections ⁵

Each entry records the doses and schedules humans have used, because that is the question readers actually have and the one sellers answer least honestly. Every dose carries its source, and the source is the point.

SOURCE	WHAT STANDS BEHIND IT
FDA label	Dose-finding trials, a defined titration, and years of monitoring. The only doses in this guide that have been validated.
Trial protocols	What investigators used in registered studies. Chosen for the trial, not for you, and sometimes abandoned afterward.
Clinic protocols	What telehealth and anti-aging clinics prescribe. Converged by custom and marketing, not by dose-response data.
Community reports	What people say they inject, collected from forums and sellers' instructions. No verification of dose, product, or outcome.

UNITS, MILLIGRAMS, AND MICROGRAMS

Peptide doses are written in three unit systems. Vials are labeled in milligrams, small-peptide doses in micrograms (a thousandth of a milligram), and insulin syringes in units (100 units per milliliter). The formula is $\text{units} = (\text{dose} \div \text{concentration}) \times 100$, with dose and concentration in the same unit. A 5 mg vial reconstituted with 2 mL is 2,500 mcg/mL; a 250 mcg dose is 0.1 mL, or 10 units. One misplaced decimal is a tenfold or thousandfold error, and the FDA has logged overdoses of exactly that kind.

- A research-chemical vial's stated strength is unverified. The arithmetic assumes the label is honest, which nobody has checked.
- Reconstituted peptide is a multi-dose vial with no tested beyond-use date. Refrigerate it and assume it degrades within weeks.
- "Cycles," "loading phases," and "five on, two off" schedules are borrowed from bodybuilding, not from pharmacology.

05 Metabolic: the incretins and their heirs 6,7,8,9,10,11,12,13

The gut-hormone drugs are the reason peptides became a household word. Four are approved or nearly so, all with large trials; one older entry failed its trials and lingers as a research chemical.

Semaglutide ^{6,7,8}

Ozempic, Wegovy, Rybelsus

GRADE A · APPROVED, WITH OUTCOME TRIALS

FDA-APPROVED

GLP-1 RECEPTOR AGONIST

HOW IT WORKS	Mimics the gut hormone GLP-1: more insulin when glucose is high, slower stomach emptying, and less appetite through the brain. Anchored to albumin so it lasts a week.
THE CLAIMS	Weight loss, blood-sugar control, fewer heart attacks and strokes, kidney protection.
HUMAN EVIDENCE	Grade A. About 15% body weight lost at 68 weeks on 2.4 mg in STEP 1. In SELECT, 20% fewer major cardiovascular events over three years in people with heart disease and obesity. Oral tablets approved for diabetes (Rybelsus) and, since late 2025, for weight management.
RISKS	Nausea, vomiting, diarrhea, and constipation, worst at each step up. Boxed warning for thyroid C-cell tumors; pancreatitis, gallbladder disease, dehydration, and slowed stomach emptying under anesthesia. Not for use in pregnancy.
STATUS	Approved 2017 (diabetes) and 2021 (weight). The shortage that allowed compounded copies ended; pharmacies had to stop by April and May 2025.

DOSES PEOPLE HAVE USED · FROM THE FDA LABEL

Dose	Injection: 0.25 mg weekly to start, rising to 2.4 mg (Wegovy) or 2 mg (Ozempic). Oral: 3, 7, or 14 mg daily (Rybelsus); 25 mg daily (oral Wegovy).
Schedule	Injection: 0.25 mg for 4 weeks, then 0.5, 1, 1.7, and 2.4 mg, each step held at least 4 weeks. Same day each week. Missed dose taken within 5 days, otherwise skipped.
The only weight-loss peptide with an oral label and an outcomes trial.	

VERDICT The reference drug of the whole field. If a compounded product is offered as a cheaper equivalent, ask what patient-specific reason the pharmacy is relying on, because the shortage exemption is gone.

FULL READER'S GUIDE:
NEWPORTPEPTIDESOCIETY.COM/GUIDES/SEMAGLUTIDE

Tirzepatide ^{9,10}

Mounjaro, Zepbound

GRADE A · APPROVED, WITH OUTCOME TRIALS

FDA-APPROVED

DUAL GIP AND GLP-1 RECEPTOR AGONIST

HOW IT WORKS	Activates GLP-1 and GIP receptors together. GIP adds effects on fat tissue and insulin sensitivity and appears to blunt the nausea of GLP-1 alone.
THE CLAIMS	Larger weight loss than semaglutide, blood-sugar control, sleep apnea improvement.
HUMAN EVIDENCE	Grade A. About 21% weight lost at 72 weeks on 15 mg in SURMOUNT-1; beat semaglutide head-to-head in SURMOUNT-5 (20.2% versus 13.7%). Approved for obstructive sleep apnea with obesity in 2024.
RISKS	Same class effects as semaglutide, with the same boxed warning. Compounded vials add a dosing-error risk: the FDA has recorded 5- to 20-fold overdoses from confusing milligrams, milliliters, and units.
STATUS	Approved 2022 (diabetes) and 2023 (weight). Compounded copies had to stop in February and March 2025 after the shortage ended.

DOSES PEOPLE HAVE USED · FROM THE FDA LABEL

Dose	2.5 mg weekly to start; maintenance at 5, 10, or 15 mg.
Schedule	2.5 mg for 4 weeks, then 5 mg; increase by 2.5 mg no sooner than every 4 weeks, as tolerated, to a maximum of 15 mg. Missed dose taken within 4 days.

Reported use, not a recommendation.

VERDICT The most effective approved weight-loss drug, and the one most often sold compounded. The full guide covers what changes when it comes from a vial.

FULL READER'S GUIDE:
[NEWPORTPEPTIDESOCIETY.COM/GUIDES/TIRZEPATIDE](https://newportpeptidesociety.com/guides/tirzepatide)

Retatrutide ¹¹

LY3437943

TRIPLE GIP, GLP-1, AND
GLUCAGON RECEPTOR
AGONIST

GRADE B · INVESTIGATIONAL, RANDOMIZED TRIALS

RESEARCH CHEMICAL ONLY

HOW IT WORKS	Adds glucagon-receptor activation to the incretin pair. Glucagon raises energy expenditure and burns liver fat; the incretins keep its sugar-raising side in check.
THE CLAIMS	The largest weight loss of any drug; liver-fat clearance.
HUMAN EVIDENCE	Grade B. In the Phase 3 TRIUMPH-1 topline, 28.3% weight lost at 80 weeks on 12 mg (placebo 2.2%), with 45% of participants losing 30% or more. Phase 2 liver substudy: more than 80% relative reduction in liver fat.
RISKS	Digestive effects at higher rates than tirzepatide. Resting heart rate rose 5 to 10 beats per minute, peaking around six months. Skin tingling or sensitivity in about one in five at 12 mg. Discontinuation for side effects 11% at 12 mg in TRIUMPH-1.
STATUS	Not approved. Lilly plans to file in early 2027. FDA told state boards in April 2025 that retatrutide may not be compounded under 503A or 503B; warning letters to sellers followed in September 2025.

DOSES PEOPLE HAVE USED · FROM TRIAL PROTOCOLS

Dose	Started at 2 mg weekly; maintenance arms of 4, 9, and 12 mg.
Schedule	Stepped up roughly every four weeks to the assigned maintenance dose. Weight loss continued past a year at every dose; trials ran 68 to 104 weeks.

There is no label. Escalation details differ between trials. Nothing below an FDA label has been validated in a dose-finding trial.

VERDICT The most exciting drug in the field and one of the most dangerous to buy today, because nothing sold as retatrutide has a pharmacy behind it. The full guide explains why.

FULL READER'S GUIDE:
[NEWPORTPEPTIDESOCIETY.COM/GUIDES/RETATRUTIDE](https://newportpeptidesociety.com/guides/retatrutide)

Liraglutide ¹²

Saxenda, Victoza, generics

GRADE A · APPROVED, WITH OUTCOME TRIALS

FDA-APPROVED

GLP-1 RECEPTOR AGONIST (DAILY)

HOW IT WORKS	The first-generation GLP-1 analog, fatty-acid modified to last about a day rather than a week.
THE CLAIMS	Weight loss and blood-sugar control with a long safety record.
HUMAN EVIDENCE	Grade A. About 8% weight lost at 56 weeks on 3 mg in the SCALE trial, against 2.6% for placebo. Cardiovascular benefit shown in diabetes (LEADER).
RISKS	Class effects: digestive symptoms, boxed thyroid warning, pancreatitis, gallbladder disease.
STATUS	Approved 2010 (diabetes) and 2014 (weight). Generic versions available since 2024, which has made it the cheapest approved option.

DOSES PEOPLE HAVE USED · FROM THE FDA LABEL

Dose	0.6 mg daily to start; 1.2 or 1.8 mg for diabetes; 3 mg for weight.
Schedule	Increase by 0.6 mg each week to the target dose. Daily injection, any time of day.
Reported use, not a recommendation.	

VERDICT Weaker than the weekly drugs and needs a daily shot, but approved, generic, and a legitimate answer to a compounded-copy sales pitch.

Cagrilintide with semaglutide¹³

CagriSema

GRADE B · INVESTIGATIONAL, RANDOMIZED TRIALS

RESEARCH CHEMICAL ONLY

AMYLIN ANALOG PAIRED WITH A GLP-1 AGONIST

HOW IT WORKS	Cagrilintide mimics amylin, a pancreatic hormone that slows stomach emptying and promotes fullness through a separate brain pathway; combined with semaglutide in one weekly injection.
THE CLAIMS	Weight loss beyond semaglutide alone, with less nausea than incretin-only escalation.
HUMAN EVIDENCE	Grade B. In REDEFINE 1, about 20% weight lost at 68 weeks, more among those who reached the full dose. Head-to-head against tirzepatide under way.
RISKS	Digestive effects similar to semaglutide. Long-term amylin-analog safety data are limited to the trial program.
STATUS	Filed with FDA in 2026; not approved and not compoundable. Products sold as cagrilintide are research chemicals.

DOSES PEOPLE HAVE USED · FROM TRIAL PROTOCOLS

Dose	2.4 mg cagrilintide with 2.4 mg semaglutide weekly at full dose.
Schedule	Escalated over 16 weeks in the Phase 3 program, with flexible dosing allowed.

No label yet; under FDA review. Nothing below an FDA label has been validated in a dose-finding trial.

VERDICT Likely the next approved weight-loss combination. Until then, a vial labeled cagrilintide has the same problem as one labeled retatrutide.

FULL READER'S GUIDE:

[NEWPORTPEPTIDESOCIETY.COM/GUIDES/CAGRILINTIDE-SEMAGLUTIDE](https://newportpeptidesociety.com/guides/cagrilintide-semaglutide)

AOD-9604³

Growth hormone fragment 176-191

GRADE C · SMALL HUMAN STUDIES ONLY

FDA: DO NOT COMPOUND

MODIFIED FRAGMENT OF HUMAN GROWTH HORMONE

HOW IT WORKS	The tail end of the growth hormone molecule, thought to carry its fat-burning effect without its growth or blood-sugar effects.
THE CLAIMS	Fat loss without the side effects of growth hormone.
HUMAN EVIDENCE	Grade C. Randomized trials of the oral form in obesity, run in the mid-2000s, showed no meaningful weight loss and the program was abandoned. No trial of the injected form as sold.
RISKS	Few reported in trials. The product sold today has no sterility or identity certification.
STATUS	Placed in Category 2 in 2023; FDA's list now shows its nomination withdrawn, with nothing pending. May not be compounded. Not among the peptides sent for review in April 2026.

DOSES PEOPLE HAVE USED · COMMUNITY REPORTS

Dose	250 to 300 mcg by subcutaneous injection daily.
Schedule	Daily in the morning, often for 8 to 12 weeks. The abandoned trials used oral doses up to 1 mg daily.

Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.

VERDICT A drug that already failed its human trials, still sold on the strength of its name. Skip it.

o6 The growth hormone axis ^{14,15,16,3}

These peptides do not contain growth hormone; they tell the pituitary to release it. That distinction lets clinics prescribe them where growth hormone itself is tightly controlled. The evidence that a pulse of growth hormone improves anything in a healthy adult is thin.

Sermorelin¹⁴

GHRH 1-29, formerly Geref

GRADE C · SMALL HUMAN STUDIES ONLY

COMPOUNDABLE (503A)

GROWTH HORMONE-RELEASING HORMONE ANALOG

HOW IT WORKS	The active fragment of the hypothalamic hormone that prompts the pituitary to release growth hormone. Produces a pulse rather than a sustained level.
THE CLAIMS	Better sleep, recovery, body composition, and skin; "natural" growth hormone support.
HUMAN EVIDENCE	Grade C. Approved from 1997 as a diagnostic agent and a treatment for children with growth hormone deficiency; the brand was withdrawn in 2008 for commercial reasons. Small studies in older adults showed modest rises in growth hormone and lean mass. No outcome trial for wellness use.
RISKS	Injection-site reactions, flushing, headache. Raising growth hormone raises IGF-1, with theoretical concerns for insulin resistance and tumor growth over long use.
STATUS	Eligible for compounding as a component of a previously approved drug. The most-prescribed peptide in anti-aging clinics.

DOSES PEOPLE HAVE USED · AS OFFERED BY CLINICS

Dose	200 to 500 mcg by subcutaneous injection.
Schedule	Nightly at bedtime, often five days on and two off, for three to six months. The historic pediatric label dose was 30 mcg per kilogram daily.

Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.

VERDICT Legal to compound and probably harmless in the short term, with nothing to show that it does what the clinic brochure says.

FULL READER'S GUIDE:
NEWPORTPEPTIDESOCIETY.COM/GUIDES/SERMORELIN

Tesamorelin ¹⁵

Egrifta

GRADE A · APPROVED, WITH OUTCOME TRIALS

FDA-APPROVED

GROWTH HORMONE-RELEASING
HORMONE ANALOG (STABILIZED)

HOW IT WORKS	A stabilized version of the full GHRH molecule, longer-acting than sermorelin.
THE CLAIMS	Reduces belly fat; marketed off-label for body composition and cognition.
HUMAN EVIDENCE	Grade A for one use: reduced visceral fat by about 15% over 26 weeks in people with HIV-associated lipodystrophy in two randomized trials. Grade C for everything else; a small trial suggested cognitive benefit in older adults.
RISKS	Joint pain, swelling, tingling, and injection-site reactions; raised IGF-1 and glucose. Not for use in active cancer or pregnancy.
STATUS	Approved 2010 for HIV-related abdominal fat. Off-label use is legal; compounded copies are not, outside a documented patient-specific need.

DOSES PEOPLE HAVE USED · FROM THE FDA LABEL

Dose	2 mg daily (original); 1.4 mg daily (Egrifta SV); 1.28 mg daily (Egrifta WR, 2025).
Schedule	Once daily by subcutaneous injection into the abdomen. Clinics prescribing off-label commonly use 1 to 2 mg nightly, five days a week.
Reported use, not a recommendation.	

VERDICT The one growth hormone releaser with an outcomes trial, for a condition most buyers do not have.

FULL READER'S GUIDE:
NEWPORTPEPTIDESOCIETY.COM/GUIDES/TESAMORELIN

CJC-1295 and ipamorelin^{16,3}

GRADE C · SMALL HUMAN STUDIES ONLY

FDA: DO NOT COMPOUND

"The GH stack"; CJC-1295 with or without DAC

GHRH ANALOG (CJC-1295) PLUS A
GHRELIN-RECEPTOR AGONIST
(IPAMORELIN)

HOW IT WORKS	Two signals to the pituitary at once: CJC-1295 mimics GHRH, ipamorelin mimics ghrelin's growth hormone-releasing action while sparing appetite and cortisol. The DAC form of CJC-1295 lasts about a week.
THE CLAIMS	Larger growth hormone pulses than either alone; recovery, sleep, fat loss, anti-aging.
HUMAN EVIDENCE	Grade C. Each raised growth hormone in small early-phase studies; ipamorelin's development for post-operative bowel recovery was stopped after a failed Phase 2. No study of the combination, and no outcome data for wellness use.
RISKS	Flushing, water retention, headache, tingling; raised IGF-1. A 2006 trial of CJC-1295 was halted after a participant death, though causation was never established. FDA's stated concern is impurities and immunogenicity in compounded product.
STATUS	Both were placed in Category 2 in 2023; FDA's list now shows both nominations withdrawn (ipamorelin stays in Category 2 for outsourcing facilities), with no review pending. Pharmacies may not compound them. Widely sold anyway.

DOSES PEOPLE HAVE USED · AS OFFERED BY CLINICS

Dose	100 to 300 mcg of each, injected together.
Schedule	Nightly, sometimes two or three times daily, five days on and two off, for 8 to 12 weeks. CJC-1295 with DAC: 1 to 2 mg once weekly.
Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.	

VERDICT The most common peptide stack in clinics and one FDA explicitly forbids pharmacies to make. Anyone supplying it is either outside the law or a chemical vendor.

FULL READER'S GUIDE: [NEWPORTPEPTIDESOCIETY.COM/GUIDES/CJC-1295-IPAMORELIN](https://newportpeptidesociety.com/guides/cjc-1295-ipamorelin)

o7 Healing and recovery ^{17,18,19,20,21,4}

The recovery peptides are where the gap between reputation and evidence is widest. Four of the five below were on FDA's do-not-compound list until April 2026 and are now under review; none has a controlled human trial in the form sold.

BPC-157^{17,18}

Body protection compound; pentadecapeptide

GRADE C · SMALL HUMAN STUDIES ONLY

UNDER FDA REVIEW

SYNTHETIC 15-AMINO-ACID FRAGMENT OF A GASTRIC PROTEIN

HOW IT WORKS	Proposed: new blood-vessel growth, nitric-oxide modulation, and growth-factor signaling in tendon and fibroblast cells. Survives stomach acid, so it is taken by mouth as well as injected.
THE CLAIMS	Tendon, ligament, muscle, and gut healing; protection from NSAID damage.
HUMAN EVIDENCE	Grade C. Hundreds of rodent studies, almost all from one laboratory. Three small uncontrolled human reports: knee injections in 16 patients, bladder instillation in 12, and an intravenous safety pilot in 2. No randomized trial.
RISKS	No serious harm in the tiny human studies; anecdotally injection-site irritation, nausea, dizziness. Promotes blood-vessel growth, a pathway tumors use. FDA's 2023 concern: impurities and immune reactions in compounded product. Banned by WADA.
STATUS	Removed from Category 2 in April 2026; the July 2026 advisory committee voted 8 to 6 to recommend listing. Not compoundable until rulemaking completes.

DOSES PEOPLE HAVE USED · AS OFFERED BY CLINICS

Dose	200 to 500 mcg by subcutaneous injection; 250 to 500 mcg by mouth.
Schedule	Once or twice daily, often near the injury, for two to six weeks. Clinic joint injections vary; the published knee series did not standardize dose.
Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.	

VERDICT The best-known peptide with the least human data. The full guide lays out every study.

FULL READER'S GUIDE: [NEWPORTPEPTIDESOCIETY.COM/GUIDES/BPC-157](https://newportpeptidesociety.com/guides/bpc-157)

TB-500 ¹⁹

Thymosin beta-4 fragment (17-23)

GRADE D · ANIMAL OR LAB DATA ONLY

UNDER FDA REVIEW

SYNTHETIC FRAGMENT OF THYMOSIN BETA-4

HOW IT WORKS	The parent protein regulates actin, the cell's scaffolding, and promotes cell migration and blood-vessel growth. The fragment sold as TB-500 is the actin-binding segment.
THE CLAIMS	Faster muscle, tendon, and ligament healing; usually stacked with BPC-157.
HUMAN EVIDENCE	Grade D for the fragment. The full thymosin beta-4 protein has been through small human trials for wounds and dry eye with mixed results. The fragment has none.
RISKS	Unknown. The parent protein promotes cell migration and vessel growth, a concern for anyone with a cancer history. Banned by WADA.
STATUS	Removed from Category 2 in April 2026; recommended for listing by the July 2026 committee. Not compoundable as of this edition.

DOSES PEOPLE HAVE USED · COMMUNITY REPORTS

Dose	2 to 2.5 mg by subcutaneous injection.
Schedule	Twice weekly for four to six weeks (a "loading phase"), then 2 to 2.5 mg every one to two weeks. Some protocols use 5 mg weekly.
Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.	

VERDICT Second in popularity to BPC-157 and behind it on evidence. The doses above are folklore.

KPV²⁰

GRADE D · ANIMAL OR LAB DATA ONLY

Lysine-proline-valine; alpha-MSH fragment 11-13

UNDER FDA REVIEW

ANTI-INFLAMMATORY TRIPEPTIDE

HOW IT WORKS	The last three amino acids of alpha-melanocyte-stimulating hormone, which damp inflammatory signaling in gut and skin cells without the hormone's pigment effects.
THE CLAIMS	Calms inflammatory bowel disease, gut permeability, and skin inflammation.
HUMAN EVIDENCE	Grade D. Mouse colitis models and cell studies. No human trial.
RISKS	Unknown in humans. Oral use has the fewest theoretical concerns of the peptides here.
STATUS	Removed from Category 2 in April 2026; recommended for listing in July 2026. Not compoundable yet.

DOSES PEOPLE HAVE USED · COMMUNITY REPORTS

Dose	250 to 500 mcg by mouth; 200 to 500 mcg by subcutaneous injection; topical creams for skin.
Schedule	Once or twice daily for four to eight weeks.
Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.	

VERDICT Plausible mechanism, mouse data only. Wait for a human trial before paying for it.

GHK-Cu²¹

Copper peptide; glycyl-histidyl-lysine copper

GRADE C · SMALL HUMAN STUDIES ONLY

UNDER FDA REVIEW

COPPER-BINDING TRIPEPTIDE

HOW IT WORKS	A naturally occurring peptide that carries copper into cells and switches on genes involved in collagen synthesis, wound repair, and antioxidant defense.
THE CLAIMS	Skin firmness and wrinkles (topical); hair growth; wound and tissue repair (injected).
HUMAN EVIDENCE	Grade C for topical use: several small controlled cosmetic studies show improved skin thickness and fine lines. Grade D for injection: no human study.
RISKS	Topical: mild irritation. Injection: unknown; copper loading and unverified sterility.
STATUS	Topical cosmetic use is unregulated and legal. The injectable was removed from Category 2 in April 2026 but was not among the seven peptides reviewed in July; not compoundable.

DOSES PEOPLE HAVE USED · AS OFFERED BY CLINICS

Dose	Topical: 1 to 3% serums and creams. Injection: 1 to 2 mg subcutaneously.
Schedule	Topical: once or twice daily, ongoing. Injection: daily for four to six weeks in clinic protocols.

The topical evidence does not transfer to injection. Nothing below an FDA label has been validated in a dose-finding trial.

VERDICT A reasonable skin ingredient and an unreasonable injection. The name is doing a lot of work across that gap.

FULL READER'S GUIDE: [NEWPORTPEPTIDESOCIETY.COM/GUIDES/GHK-CU](https://newportpeptidesociety.com/guides/ghk-cu)

LL-37⁴

Cathelicidin antimicrobial peptide

GRADE C · SMALL HUMAN STUDIES ONLY

RESEARCH CHEMICAL ONLY

HUMAN ANTIMICROBIAL PEPTIDE

HOW IT WORKS	The body's own broad-spectrum antimicrobial, released by skin and immune cells; also drives wound closure and inflammation.
THE CLAIMS	Kills bacteria and biofilms, heals chronic wounds, treats chronic infections.
HUMAN EVIDENCE	Grade C. A randomized Phase 2 trial of topical LL-37 improved healing of venous leg ulcers. No human data for injection.
RISKS	LL-37 is pro-inflammatory at high concentrations and is implicated in psoriasis and rosacea. Injected use has no safety data.
STATUS	Removed from Category 2 in April 2026 but not reviewed for listing in July; no pharmacy pathway.

DOSES PEOPLE HAVE USED · COMMUNITY REPORTS

Dose 100 mcg by subcutaneous injection.

Schedule Daily for two to four weeks. The wound trial applied it topically twice weekly.

Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.

VERDICT Real wound-healing evidence for the topical form; the injected form is a guess.

o8 Longevity, mitochondria, and immunity ^{22,23,24,25}

Longevity is where the field's language runs furthest ahead of its data. One entry here is an approved drug for a rare disease being resold as an anti-aging agent; the others rest on mouse studies or decades-old work from a single Russian institute.

MOTS-c ²²

Mitochondrial open reading frame of the 12S rRNA-c

GRADE D · ANIMAL OR LAB DATA ONLY

UNDER FDA REVIEW

MITOCHONDRIAL-DERIVED PEPTIDE

HOW IT WORKS	Encoded in mitochondrial DNA; activates AMPK, the energy sensor that exercise switches on, and improves glucose handling in muscle.
THE CLAIMS	An "exercise mimetic": endurance, insulin sensitivity, fat loss, longevity.
HUMAN EVIDENCE	Grade D. Mouse studies show improved glucose tolerance and exercise capacity. One small Phase 1 trial of a modified analog (CB4211) in humans; nothing on MOTS-c as sold.
RISKS	Unknown in humans. Anecdotal injection-site reactions and transient fatigue.
STATUS	Removed from Category 2 in April 2026; recommended for listing by the July 2026 committee. Not compoundable yet.

DOSES PEOPLE HAVE USED · AS OFFERED BY CLINICS

Dose	5 to 10 mg by subcutaneous injection.
Schedule	One to three times weekly for four to eight weeks.
Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.	

VERDICT Interesting biology, no human evidence. The doses are invented.

FULL READER'S GUIDE: [NEWPORTPEPTIDESOCIETY.COM/GUIDES/MOTS-C](https://newportpeptidesociety.com/guides/mots-c)

Epitalon ²³

Epithalon, epithalamin (the extract), AEDG peptide

GRADE D · ANIMAL OR LAB DATA ONLY

UNDER FDA REVIEW

SYNTHETIC TETRAPEPTIDE MODELED ON A PINEAL EXTRACT

HOW IT WORKS	Proposed to activate telomerase and normalize melatonin rhythms.
THE CLAIMS	Telomere lengthening, sleep, life extension.
HUMAN EVIDENCE	Grade D. Cell studies of telomerase activation and Russian studies from the 1990s and 2000s of the parent extract in elderly patients, without modern controls or replication.
RISKS	Unknown. Telomerase activation is a double-edged claim: it is also how cancer cells become immortal.
STATUS	Removed from Category 2 in April 2026; recommended for listing in July 2026. Not compoundable yet.

DOSES PEOPLE HAVE USED · COMMUNITY REPORTS

Dose 5 to 10 mg by subcutaneous or intramuscular injection.

Schedule Daily for 10 to 20 days, repeated once or twice a year. The Russian protocols used 10 mg for 10 days.

Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.

VERDICT The evidence is old, thin, and from one source. Treat the life-extension claim as marketing.

FULL READER'S GUIDE: [NEWPORTPEPTIDESOCIETY.COM/GUIDES/EPITALON](https://newportpeptidesociety.com/guides/epitalon)

Elamipretide ²⁴

SS-31, Bendavia; Forzinity

GRADE A · APPROVED, WITH OUTCOME TRIALS

FDA-APPROVED

MITOCHONDRIA-TARGETED TETRAPEPTIDE

HOW IT WORKS	Binds cardiolipin in the inner mitochondrial membrane, stabilizing the electron transport chain and reducing oxidative damage.
THE CLAIMS	Mitochondrial repair, heart and muscle function, healthy aging.
HUMAN EVIDENCE	Grade A for one rare disease: approved in September 2025 for Barth syndrome, a genetic cardiomyopathy, on muscle-strength and functional endpoints. Trials in heart failure, mitochondrial myopathy, and macular degeneration have been mixed or negative.
RISKS	Injection-site reactions were near-universal in trials. Long-term data limited to small rare-disease populations.
STATUS	Approved for Barth syndrome only. Products sold as SS-31 are research chemicals; compounding a copy of an approved drug is not permitted outside a documented need.

DOSES PEOPLE HAVE USED · FROM THE FDA LABEL

Dose	40 mg daily by subcutaneous injection (Barth syndrome).
Schedule	Once daily. Community "SS-31" use reports 5 to 10 mg daily or several times weekly, with no basis.
Reported use, not a recommendation.	

VERDICT A real drug for a rare disease, being resold as a longevity peptide on the strength of the word mitochondria.

Thymosin alpha-I ²⁵

Thymalfasin, Zadaxin

GRADE B · INVESTIGATIONAL, RANDOMIZED TRIALS

RESEARCH CHEMICAL ONLY

THYMIC IMMUNOMODULATORY PEPTIDE

HOW IT WORKS	Enhances T-cell maturation and dendritic-cell function; the body's own signal for immune competence.
THE CLAIMS	Immune support, infection resistance, cancer adjunct, long COVID.
HUMAN EVIDENCE	Grade B abroad: approved in more than thirty countries for hepatitis B and as a vaccine adjuvant, with randomized trials in hepatitis, sepsis, and some cancers. Never approved in the United States; wellness claims are untested.
RISKS	Injection-site reactions; otherwise well tolerated in trials.
STATUS	Not FDA-approved. Its compounding status has been contested since FDA declined to add it to the 503A list; not lawfully compoundable as of this edition.

DOSES PEOPLE HAVE USED · FROM THE FDA LABEL

Dose	1.6 mg by subcutaneous injection (foreign label).
Schedule	Twice weekly for six to twelve months in hepatitis B. Clinics use 1.5 to 3 mg two or three times weekly for shorter courses.
Label is non-US (Zadaxin).	

VERDICT The best-studied peptide on this page, for indications almost nobody buying it has.

09 Brain and mood ^{26,27,28,29}

Most nootropic peptides trace back to Soviet-era institutes, where several were approved on trials that would not pass Western review. Nasal delivery is the norm, which at least avoids injecting an unverified product.

Semax²⁶

ACTH 4-10 analog

SYNTHETIC MELANOCORTIN
FRAGMENT (NOOTROPIC)

GRADE C · SMALL HUMAN STUDIES ONLY

UNDER FDA REVIEW

HOW IT WORKS	Modeled on a fragment of ACTH; raises brain-derived neurotrophic factor and modulates attention and stress circuits without hormonal effects.
THE CLAIMS	Focus, memory, resilience to stress, stroke recovery.
HUMAN EVIDENCE	Grade C. Approved in Russia since the 1990s for stroke and cognitive impairment on local trials; no Western randomized trial.
RISKS	Nasal irritation, headache, restlessness; hair loss reported anecdotally with heavy use. No long-term data.
STATUS	Removed from Category 2 in April 2026; recommended for listing by the July 2026 committee. Not compoundable yet.

DOSES PEOPLE HAVE USED · FROM THE FDA LABEL

Dose	0.1% nasal solution, one to two drops per nostril (about 200 to 600 mcg per day); 1% solution for stroke.
Schedule	Two or three times daily for up to two weeks, then a break. Community use extends this to daily use for months.

Label is Russian; not an FDA label.

VERDICT

The nootropic peptide with the most human use, all of it outside Western evidence standards.

Selank²⁶

Tuftsian analog

GRADE C · SMALL HUMAN STUDIES ONLY

RESEARCH CHEMICAL ONLY

SYNTHETIC HEPTAPEPTIDE (ANXIOLYTIC)

HOW IT WORKS	Modeled on the immune peptide tuftsian; modulates GABA signaling and enkephalin breakdown.
THE CLAIMS	Anxiety relief without sedation, focus, immune modulation.
HUMAN EVIDENCE	Grade C. Russian approval for anxiety on small local trials; no Western trial.
RISKS	Mild; fatigue and nasal irritation reported. Long-term effects unknown.
STATUS	Not reviewed by FDA; no pharmacy pathway in the United States.

DOSES PEOPLE HAVE USED · FROM THE FDA LABEL

Dose	0.15% nasal solution, one to two drops per nostril (about 250 to 750 mcg per day).
Schedule	Two or three times daily for two weeks.
Label is Russian.	

VERDICT Gentle by report and unproven by Western standards. The safest entry in this chapter, which is not the same as effective.

Dihexa ²⁷

N-hexanoic-Tyr-Ile-(6) aminohexanoic amide;
PNB-0408

GRADE D · ANIMAL OR LAB DATA ONLY

RESEARCH CHEMICAL ONLY

ANGIOTENSIN IV ANALOG (HEPATOCYTE GROWTH FACTOR SYSTEM)

HOW IT WORKS	Binds the hepatocyte growth factor system and, in animals, drives synapse formation in memory circuits with unusual potency.
THE CLAIMS	Memory, cognition, recovery from brain injury.
HUMAN EVIDENCE	Grade D. Rat studies from one laboratory showing reversal of experimental memory deficits. No human data of any kind.
RISKS	Unknown, and the concern is real: the same growth-factor system drives tumor growth, and the molecule is orders of magnitude more potent than the natural ligand.
STATUS	Removed from Category 2 in April 2026 but not reviewed for listing; research chemical only.

DOSES PEOPLE HAVE USED · COMMUNITY REPORTS

Dose	8 to 20 mg by mouth or applied to the skin.
Schedule	Daily for two to four weeks, cycled. None of it measured in a human.
Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.	

VERDICT The entry in this guide with the largest ratio of potency to safety data. Not a candidate for self-experimentation.

DSIP ^{28,29}

Delta sleep-inducing peptide, emideltide

GRADE C · SMALL HUMAN STUDIES ONLY

RESEARCH CHEMICAL ONLY

NEUROPEPTIDE (SLEEP)

HOW IT WORKS	Isolated from rabbit brain in the 1970s; proposed to promote slow-wave sleep and modulate stress hormones.
THE CLAIMS	Deeper sleep, stress reduction, pain relief.
HUMAN EVIDENCE	Grade C. Small human studies from the 1980s and 1990s, intravenous and mostly inconclusive. Nothing modern.
RISKS	Unknown in modern use; drowsiness and headache reported.
STATUS	Removed from Category 2 in April 2026; the July 2026 advisory committee voted against adding it to the 503A list.

DOSES PEOPLE HAVE USED · COMMUNITY REPORTS

Dose	100 to 200 mcg by subcutaneous injection.
Schedule	At bedtime, nightly or several times weekly. The old trials used intravenous doses by body weight.
Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.	

VERDICT The one peptide the FDA committee rejected outright this year. There are better-studied ways to sleep.

10

Two melanocortin peptides, one approved and one notorious, plus a note on the cosmetic peptides that appear in serums and do not need a syringe.

Bremelanotide ³⁰

PT-141, Vyleesi

GRADE A · APPROVED, WITH OUTCOME TRIALS

FDA-APPROVED

MELANOCORTIN-4 RECEPTOR AGONIST

HOW IT WORKS	Activates melanocortin receptors in the brain involved in sexual arousal; a cousin of melanotan II with its tanning activity minimized.
THE CLAIMS	Increased sexual desire and arousal in women and men.
HUMAN EVIDENCE	Grade A for one use: approved in 2019 for low sexual desire in premenopausal women, on two randomized trials showing a modest increase in desire scores. Off-label use in men and in erectile dysfunction rests on small early studies.
RISKS	Nausea in about 40% of users, flushing, headache, injection-site reactions; a transient rise in blood pressure, so not for uncontrolled hypertension or heart disease. Darkening of skin and gums with repeated use.
STATUS	Approved 2019. Compounded PT-141 sold outside a patient-specific need is a copy of an approved drug.

DOSES PEOPLE HAVE USED · FROM THE FDA LABEL

Dose	1.75 mg by subcutaneous autoinjector.
Schedule	As needed, at least 45 minutes before sexual activity. No more than one dose in 24 hours or eight doses a month.
Reported use, not a recommendation.	

VERDICT An approved drug with a modest effect and a lot of nausea. The compounded version is the same molecule with less certainty about what is in it.

FULL READER'S GUIDE: NEWPORTPEPTIDESOCIETY.COM/GUIDES/PT-141

Melanotan II ³¹

MT-2

GRADE C · SMALL HUMAN STUDIES ONLY

RESEARCH CHEMICAL ONLY

NON-SELECTIVE MELANOCORTIN RECEPTOR AGONIST

HOW IT WORKS	Activates melanocortin receptors broadly: pigment cells (tanning), brain arousal circuits (libido), and appetite circuits.
THE CLAIMS	Tanning without sun, libido, appetite suppression.
HUMAN EVIDENCE	Grade C. Early-phase trials in the 1990s confirmed tanning and erections and were abandoned; bremelanotide was developed from it. No modern trial.
RISKS	Nausea, flushing, spontaneous erections and priapism, new and darkening moles. Case reports of melanoma arising during use. Sold only as an unregulated injectable, with the sterility and purity problems that implies.
STATUS	Never approved anywhere. Removed from Category 2 in April 2026 but not reviewed for listing; illegal to sell for human use in the United States, United Kingdom, and Australia.

DOSES PEOPLE HAVE USED · COMMUNITY REPORTS

Dose	0.25 to 0.5 mg by subcutaneous injection to start, rising to 1 mg.
Schedule	Daily during a "loading" phase of one to two weeks, then 0.5 to 1 mg once or twice weekly to maintain. Sun exposure is used to develop the tan.

Reported use, not a recommendation. Nothing below an FDA label has been validated in a dose-finding trial.

VERDICT Works as advertised, which is the problem: a tanning injection with melanoma case reports and no manufacturer.

FULL READER'S GUIDE:
NEWPORTPEPTIDESOCIETY.COM/GUIDES/MELANOTAN-II

COSMETIC PEPTIDES IN SERUMS

Argireline (acetyl hexapeptide-8), Matrixyl (palmitoyl pentapeptide-4), and topical GHK-Cu are regulated as cosmetics, applied to the skin, and supported by small controlled studies showing modest improvement in fine lines over weeks of daily use. They cannot penetrate deeply enough to matter beyond the surface, which is also why they are safe. They are the only peptides in this guide that need no discussion of syringes.

II The stacks: fifteen bundles, reviewed ^{3,4,33,34,35}

Research-chemical vendors rarely sell one peptide any more. They sell a Wolverine, a GLOW, a KLOW: two to four peptides bundled under a brand name, often pre-mixed in a single vial. This chapter reviews the fifteen most common bundles against one test, and the test has four parts.

WHAT A STACK HAS TO PASS

QUESTION	WHY IT MATTERS
Does each component work on its own for the stated goal?	A stack of two grade-D peptides is still grade D. Bundling does not add evidence.
Do the components do different things?	Most stacks pair two peptides with the same mechanism (redundant) or with nothing in common (unrelated). Genuine complementarity is rare.
Has anyone studied the combination in people?	For every bundle below, no. The one combination with a trial program, cagrilintide with semaglutide, is a pharmaceutical product, not a vendor bundle.
Is the added risk justified?	Stacks multiply the dosing arithmetic, hide which component caused a side effect, and add cost. Pre-mixed vials add a problem of their own.

THE BLEND VIAL

A pre-mixed vial fixes the ratio between peptides, so you cannot lower one without lowering all of them, and you cannot stop one to see whether it was causing the nausea. The stated milligrams per vial are split among the components in proportions the label may or may not state. And nobody has tested whether three or four peptides remain stable and intact mixed together in bacteriostatic water for weeks. The blend is the vendor's invention, and it is bad pharmacology by construction.

Wolverine ^{17,18,19,33}

Sold as: Wolverine stack, Wolverine blend, healing stack

OVERLAPPING MECHANISMS

UNDER FDA REVIEW

BPC-157	Gastric pentadecapeptide; rodent tendon and gut healing	GRADE C
TB-500	Thymosin beta-4 fragment; cell migration and vessel growth	GRADE D
THE PITCH	Faster healing of tendons, ligaments, muscle, and nerve; the original and most popular recovery stack.	
RATIONALE	Both peptides are proposed to work through new blood-vessel growth and cell migration into injured tissue. Vendors describe them as complementary (BPC-157 for gut and tendon, TB-500 for muscle); the animal literature does not support a division of labor.	
COMBINATION EVIDENCE	None. One of the three human BPC-157 reports used thymosin beta-4 in some knee injections, without a comparison group.	
RISKS	Unknown for both; both promote blood-vessel growth, a concern with any cancer history. Both banned by WADA.	
STATUS	Both components were recommended for the 503A list by FDA's advisory committee in July 2026; neither is listed yet. All product sold today is research chemical.	

AS SOLD · COMMUNITY REPORTS

BPC-157 250 to 500 mcg daily plus TB-500 2 to 2.5 mg twice weekly for four to six weeks, then TB-500 weekly. Blend vials typically contain 10 mg of each, dosed at 250 to 500 mcg of the blend daily, which delivers only 250 to 500 mcg of TB-500 per day, a fraction of the usual protocol.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT The least bad stack, which is faint praise: two unproven peptides doing roughly the same unproven thing, at a blend ratio that under-doses one of them by the vendors' own protocols.

GLOW^{21,33,34}

Sold as: GLOW blend, GLOW stack

UNRELATED MECHANISMS

RESEARCH CHEMICAL ONLY

GHK-Cu (injected)	Copper tripeptide; collagen and repair genes	GRADE D
BPC-157	Healing peptide	GRADE C
TB-500	Healing peptide	GRADE D

THE PITCH	Healing plus skin: a Wolverine for people who also want the glow.
RATIONALE	GHK-Cu's human evidence is entirely topical. Injecting it to reach the skin has no data and no clear rationale; the two healing peptides are the same redundant pair as above.
COMBINATION EVIDENCE	None.
RISKS	Systemic copper loading from daily injected GHK-Cu, on top of the unknowns of the other two. Blend stability untested.
STATUS	Injectable GHK-Cu was removed from Category 2 in April 2026 and is on FDA's advisory agenda before February 2027; not compoundable. The blend has no pharmacy pathway regardless.

AS SOLD · COMMUNITY REPORTS

Sold as a 70 mg blend vial, typically 50 mg GHK-Cu with 10 mg each of BPC-157 and TB-500, dosed at 500 mcg to 1 mg of blend daily for four to eight weeks. GHK-Cu dominates the vial by weight, so the daily dose of each healing peptide is around 70 to 140 mcg.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT A skincare ingredient injected in bulk, with the healing peptides diluted to token doses. The name is the product.

KLOW^{20,33,34}

Sold as: KLOW blend

UNRELATED MECHANISMS

RESEARCH CHEMICAL ONLY

KPV	Anti-inflammatory tripeptide; mouse colitis data	GRADE D
GHK-Cu (injected)	Copper tripeptide	GRADE D
BPC-157	Healing peptide	GRADE C
TB-500	Healing peptide	GRADE D

THE PITCH	Everything at once: healing, skin, and gut inflammation.
RATIONALE	Four peptides with four different proposed targets, none demonstrated in humans, combined because they were already in the catalog.
COMBINATION EVIDENCE	None.
RISKS	The blend-vial problem at its worst: four ingredients, one syringe, no way to isolate a reaction. Stability of the mixture untested.
STATUS	KPV, BPC-157, and TB-500 were recommended for the 503A list in July 2026; injectable GHK-Cu is pending review. None is listed; the blend has no pathway.

AS SOLD · COMMUNITY REPORTS

An 80 mg blend vial (GLOW plus 10 mg KPV), dosed at 500 mcg to 1 mg daily. Each of the three minor components lands at roughly 60 to 125 mcg per day. Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT The clearest example of a stack designed by inventory rather than pharmacology. Skip.

CJC-1295 with ipamorelin ^{16,35,3}

Sold as: The GH stack, CJC/lpa, growth hormone secretagogue blend

COMPLEMENTARY MECHANISMS

FDA: DO NOT COMPOUND

CJC-1295 (no DAC)	GHRH analog; tells the pituitary to release growth hormone	GRADE C
Ipamorelin	Ghrelin-receptor agonist; amplifies the pulse	GRADE C
THE PITCH	Bigger growth hormone pulses than either alone, for muscle, fat loss, sleep, and recovery.	
RATIONALE	This one is real physiology: GHRH analogs and ghrelin-receptor agonists act on different pituitary pathways, and combining them produces a larger growth hormone pulse than either alone in short-term studies of the class.	
COMBINATION EVIDENCE	Hormone-level studies only, in small groups over days. No trial has measured muscle, fat, or any outcome from the combination, and ipamorelin's own development program was abandoned after a failed Phase 2.	
RISKS	Water retention, tingling, flushing, raised IGF-1 and glucose. FDA's stated concern for both is impurities and immunogenicity in compounded product. A 2006 CJC-1295 trial was halted after a participant death, never attributed.	
STATUS	Neither is nominated, listed, or under review for compounding (both nominations withdrawn; ipamorelin stays in Category 2 for outsourcing facilities). Pharmacies may not compound either; every clinic offering the stack is sourcing outside the law.	

AS SOLD · AS OFFERED BY CLINICS

100 to 300 mcg of each, injected together at bedtime, five days on and two off, for 8 to 12 weeks. Blend vials of 5 mg plus 5 mg, or 10 plus 10, dosed at 200 to 600 mcg of blend nightly.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT The one stack with a genuine mechanism for combining, and no evidence that the bigger pulse does anything for you. Also the one stack FDA explicitly forbids pharmacies to make.

Tesamorelin with ipamorelin^{15,3}

COMPLEMENTARY MECHANISMS

FDA: DO NOT COMPOUND

Sold as: Tesa/lpa, the fat-loss GH stack

Tesamorelin	Approved GHRH analog; visceral fat in HIV lipodystrophy	GRADE A
Ipamorelin	Ghrelin-receptor agonist	GRADE C

THE PITCH	The "clinically proven" fat-loss stack.
RATIONALE	Same GHRH-plus-secretagogue logic as above, with an approved GHRH analog in place of CJC-1295.
COMBINATION EVIDENCE	None. The Phase 3 evidence is tesamorelin alone, in people with HIV-related abdominal fat, for a 15% reduction in visceral fat. Adding ipamorelin has never been studied, and "clinically proven" in the marketing refers to a trial the buyer was not in.
RISKS	Joint pain, swelling, tingling, and raised glucose from tesamorelin; ipamorelin's unknowns on top. Not for active cancer.
STATUS	Tesamorelin is approved (Egrifta), and off-label prescribing is legal; compounded copies are not. Ipamorelin may not be compounded (nomination withdrawn; Category 2 for outsourcing facilities). The stack as sold combines a copied approved drug with a forbidden one.

AS SOLD · AS OFFERED BY CLINICS

Tesamorelin 1 to 2 mg plus ipamorelin 200 to 300 mcg, injected at bedtime, five to seven nights a week, for 12 weeks or more.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT Borrowed credibility. The approved half has a real effect in a population most buyers are not in; the other half adds nothing shown.

Fat-loss bundles ^{3,22}

Sold as: AOD-9604 stacks; AOD with tesamorelin, MOTS-c, or 5-amino-1MQ

UNRELATED MECHANISMS

FDA: DO NOT COMPOUND

AOD-9604	Growth hormone fragment; failed human obesity trials	GRADE C
Tesamorelin or MOTS-c	GHRH analog, or a mitochondrial peptide with mouse data	GRADE D

THE PITCH	Targeted fat loss without growth hormone's side effects.
RATIONALE	AOD-9604 is the anchor, and it showed no meaningful weight loss in randomized trials of its own. Pairing it with something else does not revive it. 5-amino-1MQ, often included, is not a peptide and has no human data.
COMBINATION EVIDENCE	None.
RISKS	Low from AOD-9604 itself in trials; the unknowns of research-chemical sourcing apply.
STATUS	AOD-9604 may not be compounded (its nomination was withdrawn, with nothing pending). MOTS-c is under review; tesamorelin copies are not permitted.

AS SOLD · COMMUNITY REPORTS

AOD-9604 250 to 300 mcg daily, with tesamorelin 1 mg nightly or MOTS-c 5 to 10 mg weekly, for 8 to 12 weeks.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT A drug that failed, sold in a bundle so the failure is harder to notice. The approved GLP-1 drugs exist; use one.

Retatrutide with cagrilintide ^{11,13}

COMPLEMENTARY MECHANISMS

RESEARCH CHEMICAL ONLY

Sold as: GLP-3 plus amylin, the "maximal" stack,
reta/cagri

Retatrutide	Triple GIP/GLP-1/glucagon agonist; Phase 3	GRADE B
Cagrilintide	Amylin analog; Phase 3 in combination with semaglutide	GRADE B

THE PITCH	The largest weight loss possible: the strongest incretin drug plus an amylin analog.
RATIONALE	Pharmacologically sound. Amylin and incretin signals act through different pathways, and a company is running exactly this logic as a product (cagrilintide with semaglutide). Retatrutide with cagrilintide has never been combined in any trial.
COMBINATION EVIDENCE	None for this pair. Each has Phase 3 data alone; both are research chemicals when sold together.
RISKS	Additive nausea, vomiting, and gastric slowing; retatrutide's heart-rate rise; both sourced with no pharmacy, no identity or potency testing, and dosing in milligrams from unverified vials. FDA has told pharmacies retatrutide may not be compounded and has issued warning letters to sellers.
STATUS	Neither is approved. Retatrutide is explicitly barred from compounding; cagrilintide is under FDA review only as part of an approved-drug application.

AS SOLD · COMMUNITY REPORTS

Retatrutide escalated from 2 mg toward 8 to 12 mg weekly, with cagrilintide added at 0.25 mg and escalated toward 2.4 mg weekly. Vendors sell them as separate vials, sometimes as a blend.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT The only stack with a rationale a pharmacologist would sign, executed with two unregulated vials of the two most potent molecules in this guide. Sound idea, dangerous product, and the approved version of the idea is arriving.

GLP-1 with BPC-157 ^{6,9,17}

Sold as: The gut-protection stack; sema/tirz plus BPC

UNRELATED MECHANISMS

UNDER FDA REVIEW

Semaglutide or tirzepatide	Approved incretin drug	GRADE A
BPC-157	Healing peptide with rodent gut data	GRADE C
THE PITCH	Fewer digestive side effects from the GLP-1 drug, and protection of the gut lining.	
RATIONALE	GLP-1 side effects come from slowed stomach emptying and brain signaling, not from gut injury. Nothing in BPC-157's rodent work addresses that mechanism.	
COMBINATION EVIDENCE	None.	
RISKS	Adds an unregulated peptide to an approved drug that already carries a boxed warning; no interaction data.	
STATUS	The incretin is approved; BPC-157 is under FDA review and not yet compoundable.	

AS SOLD · COMMUNITY REPORTS

The incretin drug at its labeled titration, with BPC-157 250 to 500 mcg daily by injection or mouth alongside.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT A solution in search of a mechanism. Slower titration and smaller meals do what this stack claims to do, for free.

Longevity bundles ^{22,23,24}

Sold as: Anti-aging stack; epitalon with MOTS-c, sometimes SS-31, humanin, or NAD+

UNRELATED MECHANISMS

UNDER FDA REVIEW

Epitalon	Pineal tetrapeptide; telomerase claims	GRADE D
MOTS-c	Mitochondrial peptide; mouse metabolism data	GRADE D
SS-31 or NAD+	An approved rare-disease drug resold, or a non-peptide	GRADE D

THE PITCH	Cellular aging addressed from every angle: telomeres, mitochondria, energy metabolism.
RATIONALE	Each component targets a different aging theory, and none has human evidence for aging. Combining unrelated hypotheses does not produce a treatment.
COMBINATION EVIDENCE	None.
RISKS	Unknown for each. Telomerase activation and growth signaling are the biology of cancer as well as of aging.
STATUS	Epitalon and MOTS-c were recommended for the 503A list in July 2026 but are not listed. Elamipretide (SS-31) is an approved drug for Barth syndrome; copies are not permitted. NAD+ is not a peptide.

AS SOLD · COMMUNITY REPORTS

Epitalon 5 to 10 mg daily for 10 to 20 days, once or twice a year; MOTS-c 5 to 10 mg one to three times weekly; SS-31 5 to 10 mg daily or several times weekly. Sold as separate vials.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT Marketing bundle. The word longevity is carrying three mouse studies and a rare-disease drug.

Semax with Selank ²⁶

COMPLEMENTARY MECHANISMS

Sold as: The cognitive stack, the nootropic pair

UNDER FDA REVIEW

Semax	ACTH-fragment nootropic; Russian approval for stroke and cognition	GRADE C
Selank	Tuftsin-analog anxiolytic; Russian approval for anxiety	GRADE C

THE PITCH	Focus and drive from one, calm from the other; a balanced nootropic.
RATIONALE	Plausibly complementary by report: one stimulating, one anxiolytic, both nasal. The complementarity is anecdotal, and neither has a Western randomized trial.
COMBINATION EVIDENCE	None.
RISKS	Nasal irritation, headache, restlessness; no long-term data. No injection, so no sterility risk.
STATUS	Semax was recommended for the 503A list in July 2026; Selank has no US pathway. Both sold as research chemicals here.

AS SOLD · FROM THE FDA LABEL

Semax 0.1% nasal, one to two drops per nostril two or three times daily (200 to 600 mcg); Selank 0.15% nasal, the same schedule (250 to 750 mcg). The Russian labels specify two-week courses; community use runs for months. Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT The least harmful stack in this chapter, and possibly the most pleasant. That is not the same as effective, and nobody has checked.

Sleep bundles ^{28,23,4}

Sold as: DSIP with epitalon; sleep stack

UNRELATED MECHANISMS

RESEARCH CHEMICAL ONLY

DSIP	Delta sleep-inducing peptide; inconclusive 1980s trials	GRADE C
Epitalon	Pineal tetrapeptide; melatonin-rhythm claims	GRADE D
THE PITCH	Deeper, more restorative sleep without sedatives.	
RATIONALE	Two peptides with weak, old, and separate claims, paired because both mention sleep.	
COMBINATION EVIDENCE	None.	
RISKS	Drowsiness and headache reported; otherwise unknown.	
STATUS	FDA's advisory committee voted against adding DSIP to the 503A list in July 2026. Epitalon was recommended but is not listed.	

AS SOLD · COMMUNITY REPORTS

DSIP 100 to 200 mcg at bedtime, nightly or several times weekly, with epitalon 5 to 10 mg daily in 10- to 20-day courses.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT One component the FDA panel just rejected, one with no sleep data. Skip.

Immune bundles 25,29,20

Sold as: Thymosin alpha-1 with LL-37, sometimes KPV; the immune stack

UNRELATED MECHANISMS

RESEARCH CHEMICAL ONLY

Thymosin alpha-1	Thymic immunomodulator; approved abroad for hepatitis B	GRADE B
LL-37	Antimicrobial peptide; one topical wound trial	GRADE C
KPV (optional)	Anti-inflammatory tripeptide; mouse data	GRADE D

THE PITCH	Immune resilience: fewer infections, faster recovery, support for chronic illness.
RATIONALE	Thymosin alpha-1 modulates T-cell function; LL-37 is a direct antimicrobial that is pro-inflammatory at high doses; KPV is anti-inflammatory. The three pull in different directions, and injected LL-37 has never been studied.
COMBINATION EVIDENCE	None.
RISKS	Injection-site reactions from all three; the pro-inflammatory potential of injected LL-37 is unstudied.
STATUS	Thymosin alpha-1 is not FDA-approved and its compounding status is contested; LL-37 has no pathway; KPV is under review.

AS SOLD · AS OFFERED BY CLINICS

Thymosin alpha-1 1.5 to 3 mg two or three times weekly; LL-37 100 mcg daily; KPV 250 to 500 mcg daily; for four to eight weeks.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT One real drug for indications the buyer does not have, stacked with a guess and a mouse study.

Hair bundles ^{21,36}

Sold as: GHK-Cu with PTD-DBM and zinc thymulin, topical;
the hair stack

UNRELATED MECHANISMS

RESEARCH CHEMICAL ONLY

GHK-Cu (topical)	Copper tripeptide; small cosmetic studies	GRADE C
PTD-DBM	Wnt-pathway peptide; one mouse hair-regrowth study	GRADE D
Zinc thymulin	Thymic peptide complexed with zinc; sparse data	GRADE D

THE PITCH	Regrowth from the follicle: copper, Wnt signaling, and zinc in one topical.
RATIONALE	Three separate hypotheses applied to the scalp. Topical delivery makes the stack low-risk and also limits how deep any of it reaches.
COMBINATION EVIDENCE	None.
RISKS	Scalp irritation. No systemic exposure of consequence.
STATUS	Topical cosmetic use is unregulated. None is approved for hair loss; minoxidil and finasteride are.

AS SOLD · COMMUNITY REPORTS

Topical solutions of GHK-Cu 1 to 3% with PTD-DBM and zinc thymulin, applied to the scalp once or twice daily, often alongside microneedling.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT Harmless and unproven. If you want regrowth with evidence, the approved options are cheaper.

Libido bundles ^{30,37}

Sold as: PT-141 with kisspeptin; the desire stack

UNRELATED MECHANISMS

RESEARCH CHEMICAL ONLY

Bremelanotide (PT-141)	Approved melanocortin agonist for low desire in premenopausal women	GRADE A
Kisspeptin-10	Reproductive-axis peptide; research use in fertility	GRADE C

THE PITCH	Desire and arousal from the brain (PT-141) and the hormonal axis (kisspeptin).
RATIONALE	PT-141 acts on central arousal circuits. Kisspeptin drives the hormone cascade that releases LH and testosterone; small studies have shown effects on sexual-brain activity, none on desire in a way that adds to PT-141.
COMBINATION EVIDENCE	None.
RISKS	PT-141's nausea and blood-pressure rise; kisspeptin's are unknown outside trials.
STATUS	Bremelanotide is approved (Vyleesi); compounded copies are not permitted outside a documented need. Kisspeptin has no pathway.

AS SOLD · COMMUNITY REPORTS

PT-141 1 to 2 mg by injection as needed before sex; kisspeptin-10 100 mcg by injection, as needed or a few times weekly.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT Half of this stack is an approved drug you can be prescribed. The other half is a fertility-clinic research tool doing nothing here.

Fertility-on-TRT bundles ^{38,37}

Sold as: Gonadorelin with kisspeptin, sometimes hCG; the testicular-support stack

OVERLAPPING MECHANISMS

COMPOUNDABLE (503A)

Gonadorelin	GnRH; keeps LH and FSH signaling alive during testosterone therapy	GRADE C
Kisspeptin-10	Upstream of GnRH; research use	GRADE C
hCG (optional)	LH mimic; approved drug with a long history in this exact use	GRADE A

THE PITCH	Keep testicular size, sperm production, and natural signaling while on testosterone.
RATIONALE	Gonadorelin, kisspeptin, and hCG all push the same axis at different points. hCG has decades of use for this purpose; gonadorelin became the compounded substitute when hCG compounding was restricted in 2020; kisspeptin adds a third push at the top of a chain the other two already cover.
COMBINATION EVIDENCE	None for the trio. hCG alone has observational support for preserving sperm production on testosterone therapy.
RISKS	Gonadorelin's short half-life makes twice-weekly dosing pharmacologically questionable; hCG raises estradiol; kisspeptin unknown.
STATUS	Gonadorelin is compoundable as a component of a formerly approved drug and is widely prescribed with testosterone. hCG is an approved biologic with restricted compounding. Kisspeptin has no pathway.

AS SOLD · AS OFFERED BY CLINICS

Gonadorelin 100 to 250 mcg by injection two or three times weekly; hCG 250 to 500 IU two or three times weekly where available; kisspeptin-10 100 mcg a few times weekly.

Reported use, not a recommendation. No combination here has been tested in a human trial.

VERDICT A sensible core (hCG, or gonadorelin where hCG is unavailable) padded with a third peptide that does nothing the first two do not.

NOT PEPTIDES, NOT COVERED

The same catalogs sell NAD+, 5-amino-1MQ, SLU-PP-332, tesofensine, MK-677, methylene blue, and SARMs, often inside the bundles above. None is a peptide. This guide leaves them out rather than review them badly; their absence here is not an endorsement.

THE STACKS AT A GLANCE

STACK	RATIONALE	COMBINATION EVIDENCE	VERDICT
Wolverine	Overlapping	None	Least bad; still unproven
GLOW	Unrelated	None	Marketing bundle
KLOW	Unrelated	None	Skip
CJC-1295 + ipamorelin	Complementary	Hormone levels only	Real mechanism, no benefit shown, forbidden to compound
Tesamorelin + ipamorelin	Complementary	None	Borrowed credibility
Fat-loss bundles (AOD)	Unrelated	None	Skip
Retatrutide + cagrilintide	Complementary	None for the pair	Sound idea, dangerous product
GLP-1 + BPC-157	Unrelated	None	Marketing bundle
Longevity bundles	Unrelated	None	Marketing bundle
Semax + Selank	Complementary	None	Least harmful; unproven
Sleep bundles	Unrelated	None	Skip
Immune bundles	Unrelated	None	One real drug, two guesses
Hair bundles (topical)	Unrelated	None	Harmless and unproven
Libido bundles	Unrelated	None	Half approved
Fertility-on-TRT	Overlapping	hCG alone only	Sensible core, padded

12 How to read a seller ^{2,3,5}

Whatever the peptide, the questions are the same. A legitimate source can answer all of them in a sentence each.

- ☐ Is this peptide FDA-approved, on the 503A list, or neither? Which badge in this guide applies?
- ☐ Who prescribed it, and who made it? A licensed pharmacy has a state license number I can check.
- ☐ What is the concentration on the label, in mg/mL or mcg/mL, and will it be the same next time?
- ☐ What is my dose in micrograms or milligrams, in milliliters, and in syringe units, written down?
- ☐ Can I see a certificate of analysis for this batch showing identity, purity, and sterility?
- ☐ What is the beyond-use date once the vial is reconstituted, and how is it stored?
- ☐ What is the human evidence for my use, and which grade in this guide does it earn?
- ☐ What happens, and who is responsible, if I have a serious reaction?
- ☐ Am I subject to anti-doping rules at work or in sport?
- ☐ What proven treatment am I delaying by trying this first?

PHRASES THAT SHOULD END THE CONVERSATION

"Research use only" on a vial meant for you. "Pharmaceutical grade" with no pharmacy named. "FDA-registered facility" (registration is not approval). "Clinically proven" without a citation. "Same as Ozempic" for a product that is not.

13 At a glance

EVERY PEPTIDE IN THIS GUIDE. DOSES ARE AS USED, NOT AS RECOMMENDED; SEE EACH ENTRY FOR THE SOURCE.

PEPTIDE	FAMILY	GRADE	STATUS	DOSE AS USED
Semaglutide	Metabolic	A	Approved	0.25 – 2.4 mg weekly; 25 mg oral daily
Tirzepatide	Metabolic	A	Approved	2.5 – 15 mg weekly
Retatrutide	Metabolic	B	Research chemical	2 – 12 mg weekly (trials)
Liraglutide	Metabolic	A	Approved	0.6 – 3 mg daily
CagriSema	Metabolic	B	Research chemical	2.4 + 2.4 mg weekly (trials)
AOD-9604	Metabolic	C	Do not compound	250–300 mcg daily
Sermorelin	GH axis	C	Compoundable	200–500 mcg nightly
Tesamorelin	GH axis	A	Approved	1.28–2 mg daily
CJC-1295 / ipamorelin	GH axis	C	Do not compound	100–300 mcg each nightly
BPC-157	Healing	C	Under review	200–500 mcg daily
TB-500	Healing	D	Under review	2–2.5 mg twice weekly
KPV	Healing	D	Under review	250–500 mcg daily
GHK-Cu	Healing	C	Under review	1–3% topical; 1–2 mg injected
LL-37	Healing	C	Research chemical	100 mcg daily
MOTS-c	Longevity	D	Under review	5–10 mg 1–3× weekly
Epitalon	Longevity	D	Under review	5–10 mg daily × 10–20 days
Elamipretide	Longevity	A	Approved (Barth)	40 mg daily (label)
Thymosin alpha-1	Immunity	B	Research chemical	1.6 mg twice weekly
Semax	Brain	C	Under review	200–600 mcg nasal daily
Selank	Brain	C	Research chemical	250–750 mcg nasal daily
Dihexa	Brain	D	Research chemical	8–20 mg oral daily
DSIP	Brain	C	Research chemical	100–200 mcg at bedtime
Bremelanotide	Sexual health	A	Approved	1.75 mg as needed
Melanotan II	Skin	C	Research chemical	0.25–1 mg, then weekly

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This guide is an educational summary of published sources and is not medical advice. Doses and schedules are recorded as they appear in FDA labels, trial protocols, clinic protocols, or community reports, and are labeled accordingly; outside an FDA label, none has been validated in a dose-finding trial, and recording a dose is not a recommendation to use it. Regulatory statuses are current as of the edition date and change with FDA rulemaking.

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