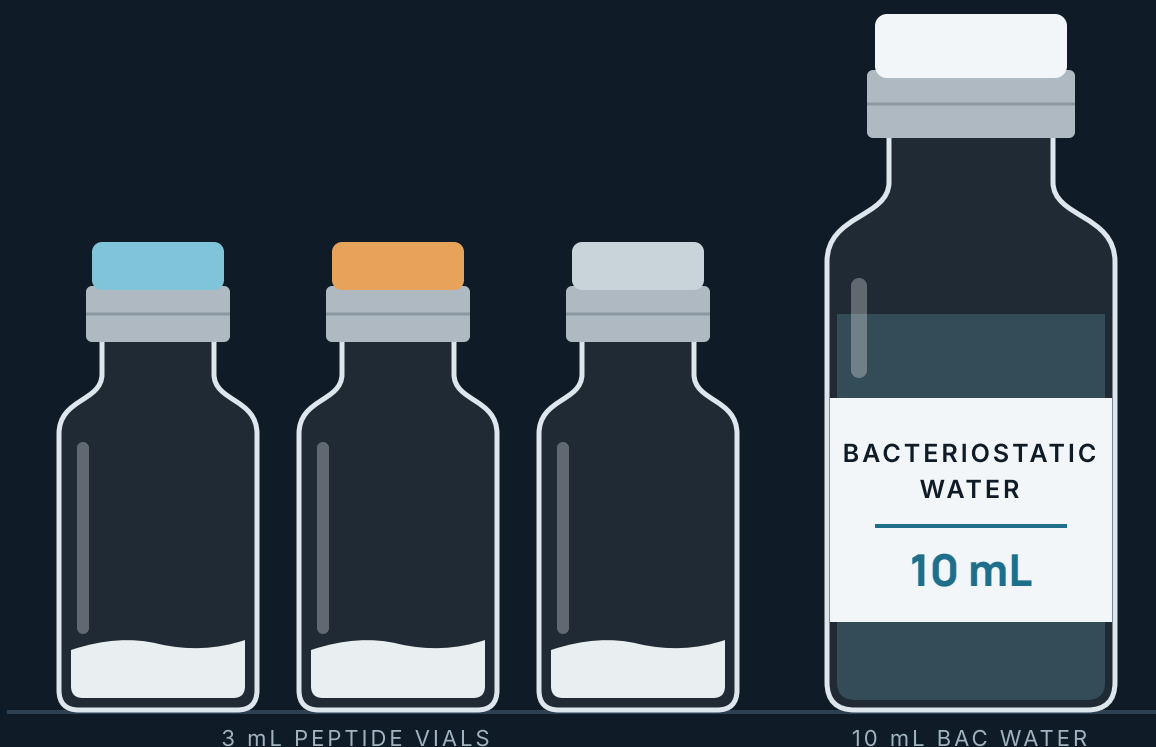




The Unofficial Peptide Playbook

What I Wish I Knew Before I Started

Choosing, mixing, dosing, storing and sourcing peptides, without the expensive mistakes.

01

What to Take

02

Where to Buy

03

Gear

04

Mix and Dose

05

Store It

06

Support It

Introduction

This guide covers the practical side of running peptides at home: which peptides to consider, where to buy them, the gear to use, how to mix and dose them, and how to store them so they last.

Why I made this

Here's what nobody prints on the label: the system isn't built around getting you help. It's built around what you'll pay. Drug makers price the newest weight-loss drugs at over \$1,000 a month. Pharmacies and clinics take their cut. Insurance keeps saying no. And the most promising peptides, like retatrutide, sit in the approval line while the people who need them wait.

I got tired of watching people get priced out. Friends ask me about peptides all the time, and I learned the hard way: money spent on gear that broke, sellers I couldn't trust and mistakes I didn't need to make.

So here it is: everything I wish someone had handed me, in plain English, so you can start right, stay safe and keep your money for what actually works.

01

What to Take

Peptides worth knowing, what they do and the evidence behind them.

02

Where to Buy

Grey market sellers, checking them on Finnricks, and the code names they use.

03

Gear

Syringes, needles, pens and cartridges that are worth the money.

04

Mix and Dose

Mixing a vial, the math, dosing schedules and filling cartridges.

05

Store It

Freezer and fridge setup so your peptides last.

06

Support It

The guide is free. If it helped, a small tip on the last page keeps it going.

Product links point to the exact items recommended. Prices change, so check each listing before ordering.

This is a practical reference, not medical advice. Read the disclaimer on the next page before using anything in this guide.

Read This First

This guide shares one person's research and experience to help people make safer choices. It is not a substitute for a doctor.

Not medical advice

This guide is for information and education only. The author is not a doctor, pharmacist or licensed medical professional, and nothing here is medical, legal or professional advice.

Your health, your decision

You are solely responsible for your own health decisions. Talk to a licensed healthcare provider before using any peptide or medication, especially if you have a medical condition, take other medication, or are pregnant or breastfeeding. Not for anyone under 18.

No liability

By reading or using this guide, you agree that the author, and anyone who shares, hosts or distributes it, is not responsible or liable for any injury, illness, side effect, loss or damage that results from using or relying on it. You use the information at your own risk.

No guarantees

The information may be incomplete, out of date or wrong. Research, products, prices, sellers and laws change, and results vary from person to person.

Not FDA approved

Many substances in this guide are not approved for human use and are sold for research only. Laws differ by location. You are responsible for knowing and following the laws where you live.

No endorsements

Mentions of sellers, products, apps and websites are not endorsements or guarantees of quality or safety. The author is not paid by or affiliated with any seller or product listed.

Having a serious reaction? Trouble breathing, chest pain, severe stomach pain, swelling of the face or throat: stop and call 911 or get emergency care right away.

Recommended Peptides

Grouped by goal. The evidence ranges from FDA approval to animal studies only, so each card shows where it stands. Details on the following pages.

● FDA approved ● Approved outside the US ● Large human trials ● Mostly animal or lab studies

WEIGHT LOSS

Retatrutide

● Phase 3 trials

The strongest weight-loss peptide tested so far. Hits three receptors; 19% to 28% of body weight lost over 80 weeks. Weekly.

Cagrilintide

● Phase 3 trials

Amylin copy that curbs appetite through a different pathway than GLP-1s. Paired with semaglutide it gave about 20% weight loss. Weekly.

RECOVERY, SKIN AND GUT

KLOW

● Animal and lab studies

Four-in-one blend: GHK-Cu, BPC-157, TB-500 and KPV. For injuries, skin and hair, and gut and joint inflammation. One vial covers all four.

GROWTH HORMONE SECRETAGOGUES

Tesamorelin

● FDA approved

Raises your own growth hormone. Approved to cut belly fat in one patient group; cut liver fat in trials. Daily.

Ipamorelin + CJC-1295

● Limited human data

The popular bedtime stack for a natural-style growth hormone pulse, without the cortisol spike. Use CJC without DAC.

CELLULAR RESET AND IMMUNE

MOTS-c

● Animal and lab studies

Mitochondrial peptide that flips on AMPK, the energy switch. Used as a metabolic reset after a fat-loss cycle.

Thymosin Alpha-1

● Approved abroad

Immune regulator that boosts T-cell function. Approved for hepatitis B in many countries, not the US.

BRAIN AND MOOD

Semax

● Approved in Russia

Focus and memory. Raises BDNF, a brain growth factor, in animals. Used for stroke recovery in Russia. Nasal spray or injection.

Selank

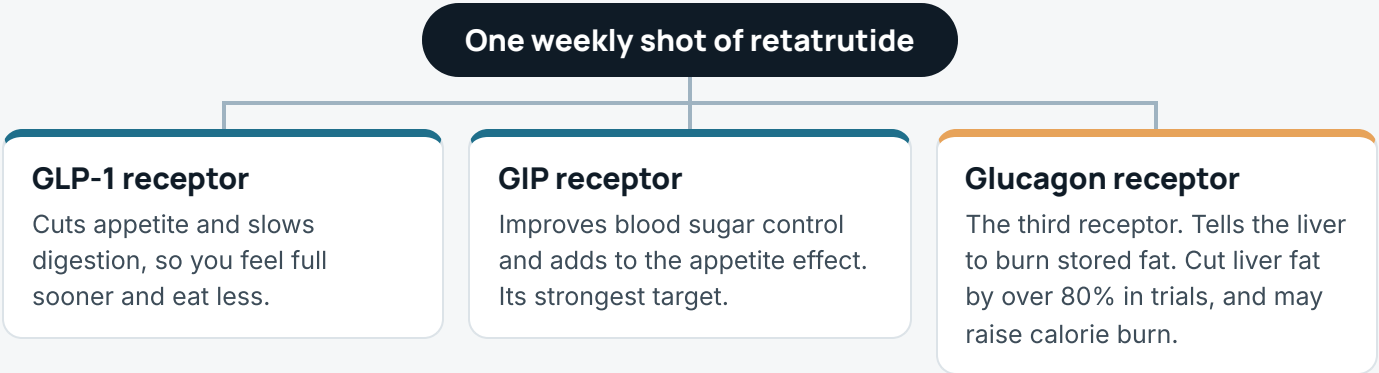
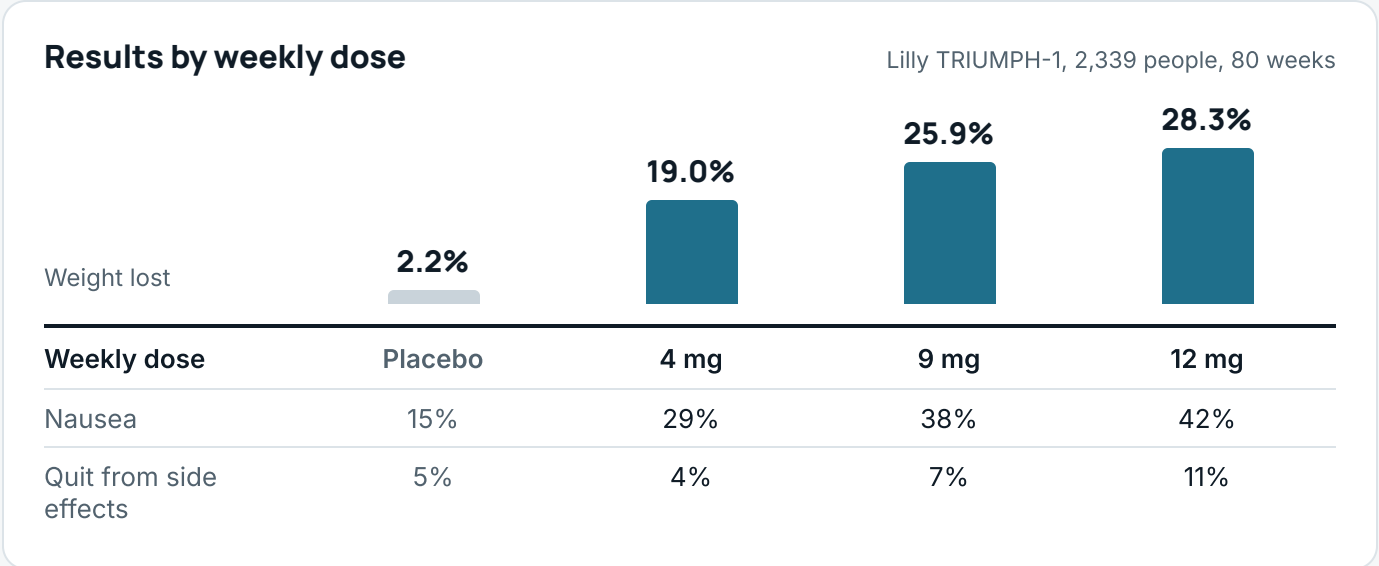
● Approved in Russia

Calm without sedation. Approved in Russia for anxiety; small trials matched a benzodiazepine. Nasal spray or injection.

None of these are FDA approved for the uses described here except where noted. Doses on the following pages come from clinical trials or FDA labels where they exist. This is not medical advice.

Retatrutide

Eli Lilly's once-weekly "triple agonist." Semaglutide (Ozempic) hits one hormone receptor and tirzepatide (Mounjaro) hits two. Retatrutide hits three, and in head-to-head trials it beat Ozempic by roughly 2 to 1.



Picking a dose
2–4 mg still works well for losing; with a lot to lose, 8–12 mg brings the biggest results. Smaller people, and many women, start at 0.5–1 mg. At goal, 2–4 mg to maintain (untested in trials, so watch the scale).

How trials dosed it
Once a week. Step up no sooner than every 4 weeks: it takes about a month to feel a dose's full effect. Trials started at 2 mg; phase 2 also had a 1 mg group. Phase 3 uses 4, 9 and 12 mg. Going slow cuts the nausea.

Side effects: nausea, vomiting and diarrhea, mostly while stepping up; skin tingling or sensitivity (about 12% at 9 to 12 mg); a rise in heart rate. **Not FDA approved.** Lilly plans to file in early 2027, and any retatrutide sold online today is unregulated.

Sources: Eli Lilly TRIUMPH-1 topline results (May 2026) and TRANSCEND-T2D-2 (Oct 2026); Jastreboff et al., NEJM 2023; Sanyal et al., Nature Medicine 2024.

Cagrilintide

Novo Nordisk's long-acting copy of amylin, a fullness hormone. It works on a different pathway from GLP-1 drugs, which is why it adds to them instead of doubling up.

GLP-1 drugs (sema, tirz, reta)

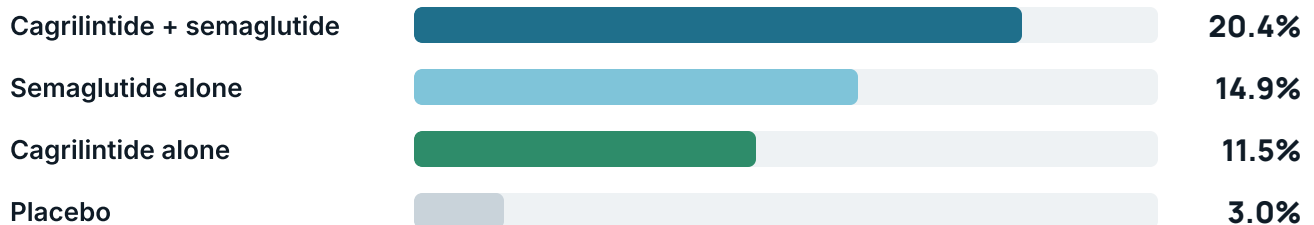
Copy gut hormones that cut appetite and slow digestion.

Cagrilintide (amylin)

Copies amylin, a fullness hormone released with insulin. It signals "full" through a separate route, so the effects stack.

Weight lost in 68 weeks

Novo Nordisk REDEFINE 1, NEJM 2025



People who stayed on the combo the whole time lost 22.7%. 40% of them lost a quarter or more of their body weight.

HOW TRIALS DOSED IT

Once a week, stepped up every 4 weeks to 2.4 mg. Sold by grey-market sellers as "GLP-1 C," and with retatrutide as "GLP-5."

WITH RETATRUTIDE?

People stack the two, but no trial has tested that combination. Expect stomach side effects to add up, so start low.

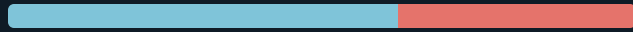
Side effects: stomach issues (nausea, vomiting, constipation) in 80% on the combo vs 74% on semaglutide alone, mostly mild. **Status:** CagriSema was filed with the FDA in December 2025; a decision is expected by the end of 2026. In a head-to-head trial it lost to tirzepatide (23% vs 25.5%).

Protein Is Not Optional

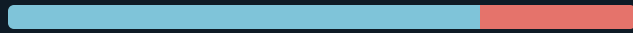
GLP-1 drugs like retatrutide cut your appetite hard. If you don't eat enough protein and lift, a big share of the weight you lose comes from muscle. You end up smaller but weaker, with a slower metabolism and a higher risk of injury.

HOW MUCH OF THE LOSS IS LEAN MASS

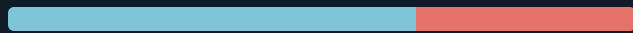
Semaglutide (Wegovy): about 38%



Tirzepatide (Zepbound): about 25%



Retatrutide: about 35%



■ Fat ■ Lean mass

WHAT LOSING MUSCLE MEANS

Less strength for daily life, a slower metabolism that makes weight easier to regain, and weaker support for joints and bones, so falls and injuries hurt more.

DAILY TARGET

1.2–1.6 g

per kg of goal weight

For most people that is **about 80–130 g a day**. Example: goal weight 180 lb (82 kg) = 98–131 g.

Use goal weight, not current weight. Split it into **25–30 g per meal**. Don't go above 2 g per kg.

Never hungry and barely eating? Your dose is too high. These drugs should quiet your appetite, not shut it off. You still need to eat to keep your muscles and body healthy. Step your dose down.

Easy protein

Chicken or fish, 3 oz	~21 g
Protein shake, 1 scoop	20–25 g
Greek yogurt, 6 oz	~15 g
Cottage cheese, ½ cup	~14 g
Tofu, ½ cup	~10 g
Egg, 1 large	~6 g

Hitting it with no appetite

Protein first. Eat it before anything else on the plate.

Drink it. Shakes are the easiest way to close the gap.

Small meals. Every 3–4 hours beats big meals, which bring on nausea.

Move, then lift

Walk daily if lifting hurts at first. Add light weights or bands 2–3 times a week as soon as you can.

Take vitamins

Eating less means fewer nutrients. Take a daily multivitamin.

Water and fiber

Constipation is common. Drink plenty and eat fiber.

Kidney disease? Get your protein target from your doctor. Sources: Mozaffarian et al., joint advisory on nutrition with GLP-1 therapy (ACLM, ASN, OMA, TOS), Obesity 2025; Wilding et al., NEJM 2021 (STEP 1); Look et al., Diabetes Obes Metab 2025 (SURMOUNT-1); Coskun et al., Lancet Diabetes Endocrinol 2025 (retatrutide, 36 weeks, type 2 diabetes). Lean mass on scans includes water and organs, so true muscle loss is smaller than these figures.

KLOW

Four recovery peptides in one vial. Instead of buying and mixing GHK-Cu, BPC-157, TB-500 and KPV separately, KLOW combines them in a fixed 5:1:1:1 ratio. People use it for injuries, skin and hair, and gut and joint inflammation.

What's in an 80 mg vial

Most common formula

GHK-Cu 50 mg

BPC 10

TB-500 10

KPV 10

GHK-Cu

A copper peptide your body makes naturally; levels drop with age. Where BPC and TB-500 target internal tissue, GHK-Cu signals collagen renewal, skin density and repair. Skin-cream studies in people show firmer skin and fewer wrinkles. Hair growth has only been shown in lab and animal studies, and injected use only in animals.

BPC-157

Based on a protein found in stomach juice. Used for tendon, ligament and gut healing. Strong results in animal studies; only small, uncontrolled reports in people so far.

TB-500

A short piece of thymosin beta-4, a repair protein. Used for muscle and soft-tissue recovery and flexibility. No human trials of TB-500 itself.

KPV

Lysine-Proline-Valine, the tail end of alpha-MSH, a natural anti-inflammatory hormone. Used to calm gut inflammation (IBS, colitis) and skin flares. It healed colitis in mice; no human trials yet. An FDA panel reviewed it in July 2026 for inflammation and wound healing.

Why people like it

One vial, one shot, four peptides that target healing from different angles.

The evidence gap

No study has tested the four together, and none are FDA approved. An FDA panel backed compounding three of them in July 2026.

Banned in sport

BPC-157 is on the anti-doping (WADA) banned list for tested athletes.

Expect some sting. The copper in GHK-Cu often burns going in and can leave redness or small marks at the injection spot. These are temporary and fade. Mixing with the full 3 mL of bac water, injecting slowly and rotating sites all help.

Growth Hormone Secretagogues

Secretagogues (GHS) signal your pituitary gland to release more of your own growth hormone, which raises IGF-1, the hormone that carries out most of growth hormone's effects. It is a gentler route than injecting growth hormone itself.

● FDA approved as Egrifta

Tesamorelin

Mimics GHRH, the brain's "release growth hormone" signal. Proven to shrink visceral (belly) fat; approved for that in adults with HIV-related fat buildup.

Label dose	1.4 mg daily (Egrifta SV)
Belly fat	About 15% less visceral fat in 26 weeks
Fatty liver	Liver fat down 37% vs placebo in 1 year; less liver scarring
Common side effects	Injection-site redness, joint and muscle aches, swelling

● Not approved · limited human data

Ipamorelin

Mimics ghrelin, the "hunger hormone," at the growth hormone switch. Gives a clean pulse of growth hormone without raising cortisol or prolactin, which older peptides in its class do.

Used for	Sleep, recovery, body composition
Often paired with	Tesamorelin or CJC-1295
Human trials	One gut-recovery trial; no benefit vs placebo

THE POPULAR STACK

● Little human data

CJC-1295 (no DAC) + Ipamorelin

CJC-1295 without DAC (also sold as Mod GRF 1-29) is a GHRH copy like tesamorelin, but short-acting: it gives a quick growth hormone pulse, much like the body's own. Paired with ipamorelin, one presses the GHRH switch and the other the ghrelin switch, so together they release more growth hormone than either alone. Usually taken at bedtime to match the natural nighttime pulse.

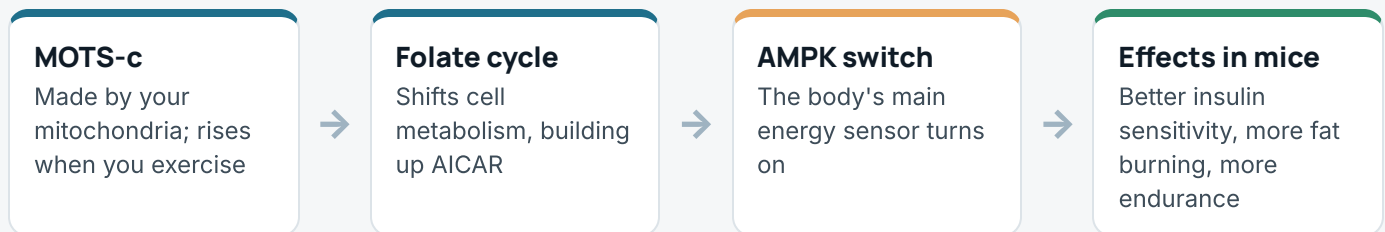
"DAC" is an add-on that makes CJC-1295 last about a week instead of minutes. The no-DAC version is preferred for a natural pulse. No published trials have tested this stack.

Watch for: both raise IGF-1 and can raise blood sugar and cause water retention. The tesamorelin label says not to use it with active cancer, pituitary problems or pregnancy. Ipamorelin is banned for tested athletes.

MOTS-c

A 16-amino-acid peptide your mitochondria make, sometimes called an "exercise mimic." It flips on AMPK, the body's master energy switch. People use it as a metabolic reset after a fat-loss cycle, to help restore insulin sensitivity and energy.

How it works



What the evidence shows

- **Strong in mice**
Prevents weight gain and insulin resistance
On a high-fat diet, treated mice stayed leaner and kept normal insulin response. Old mice doubled their treadmill running capacity.
- **Seen in people**
Your body makes more during exercise
In young men, levels in muscle rose about 12-fold after cycling. This shows it is part of the exercise response, not that injecting it helps.
- **One small trial**
A modified version, CB4211, in 20 people
Over 4 weeks it lowered liver enzymes and blood sugar, but liver fat fell no more than placebo. The company stopped developing it.
- **No trials**
Injected MOTS-c itself
No human trial has tested injected MOTS-c. Long-term safety is unknown.

HOW PEOPLE USE IT

Commonly 5 mg per shot, a few times a week, for 4 to 8 weeks, then a break. A 10 mg vial with 1 mL of bac water makes 5 mg = 50 units. These are community habits, not trial doses.

SIDE EFFECTS AND STATUS

Injection-site redness and early tiredness are reported; watch for low-blood-sugar signs. Not FDA approved. An FDA panel voted 7–5 in July 2026 to allow compounding, not yet final. Banned in tested sports since 2025.

Brain and Immune Peptides

Three peptides with approvals outside the US: two nasal sprays for focus and calm, and an immune booster. The human research is small, and there are no established doses.

BRAIN AND MOOD

- Approved in Russia

Semax

Built from a fragment of ACTH, a brain hormone. Used for focus, memory and mental stamina under heavy workloads.

HOW IT WORKS

Raises BDNF, a growth factor for brain cells (shown in animals).

EVIDENCE

Approved in Russia for stroke and cognitive problems. Only small Russian human studies.

FORM

Nasal spray (the approved form in Russia) or injection under the skin from a powder vial.

US STATUS

Not approved. FDA panel voted 8–5 in July 2026 to allow compounding for migraine and stroke-related uses; not final.

- Approved in Russia

Selank

A copy of tuftsin, a natural immune peptide. Used for calm, steady mood and stress resilience without drowsiness.

HOW IT WORKS

Balances serotonin and dopamine signaling; calming without sedation.

EVIDENCE

Approved in Russia for anxiety (2009). In a 62-person trial it matched a benzodiazepine; no placebo trials.

FORM

Nasal spray (the approved form in Russia) or injection under the skin from a powder vial.

US STATUS

Not approved; never reviewed by the FDA.

IMMUNE

- Approved in ~35 countries

Thymosin Alpha-1

A natural thymus peptide that strengthens T-cells, the immune system's targeted defenders. Used for immune support and stubborn infections.

EVIDENCE

Approved abroad (as Zadaxin) for hepatitis B and to boost vaccines in weak immune systems. A 1,106-person sepsis trial showed no survival benefit.

FORM

Injection under the skin.

US STATUS

Not approved. An FDA panel voted 4–17 against compounding it in 2024.

Using Semax and Selank

Both are approved in Russia as nasal drops, and that’s how they were tested. Grey-market sellers ship them as powder, which you can turn into a nasal spray or inject.

Make the spray

Peptide	Vial + bac water	Strength	Per spray (0.1 mL)
Semax	10 mg + 10 mL	1 mg per mL	100 mcg
Selank	5 mg + 5 mL	1 mg per mL	100 mcg

Mix in the vial, then draw it into a clean metered nasal spray bottle. Bottles vary: pump 10 sprays into a syringe to check yours really gives 0.1 mL per spray.

HOW TO SPRAY IT

1

Blow your nose
Start clear so the spray can absorb.

2

Head slightly forward
Tip the nozzle toward the outer side of the nostril, away from the middle wall.

3

Spray and breathe in gently
Don’t sniff hard. A hard sniff sends it down your throat: wasted dose, bitter taste.

4

Wait 5 minutes
Don’t blow your nose. Alternate nostrils each spray.

Semax

RUSSIAN LABEL
2–3 drops per nostril, up to 4 times a day, for 10–14 days (about 800–1,200 mcg a day).

COMMON NASAL USE
2–6 sprays a day (200–600 mcg), mornings only.

BY INJECTION
200–400 mcg under the skin. No human safety data for this route.

Can overstimulate. Take it early, skip caffeine with it, and avoid it with anxiety or seizure history.

Selank

RUSSIAN LABEL
2 drops per nostril, 3 times a day, for 14 days (about 900 mcg a day).

COMMON NASAL USE
1 spray per nostril, 2–3 times a day (400–600 mcg).

BY INJECTION
250–500 mcg under the skin, once a day.

Mild headache early on is common. Check with a doctor if you take anxiety meds, antidepressants or sedatives.

More is not better. Stick to the amounts above and take a 1–3 week break after each 2-week course. Keep the spray in the fridge, toss it after 28 days or if it turns cloudy.

Grey Market Dealers

The “research use only” label is what lets these sellers skip the pharmacy license and the prescription: that’s what makes it the grey market. Some sellers also require a business or research account and ask you to confirm the order is for research. A sole proprietorship (a business in your own name, reported on your taxes, no state filing needed in most states) counts as a business; the research confirmation is yours to make. Many sellers don’t ask. Nothing here is FDA-approved, so lab testing is your best protection.

FINDING A SELLER

Check the data before you buy

Finnrick · lab test results

Independent lab results for 2,000+ sellers, rated by peptide. See the next page for how to use it.

finnrick.com

Trustpilot · customer reviews

Search the seller's website to read buyer reviews. Look for shipping problems and orders that never arrived.

trustpilot.com

HOW TO VET ANY SELLER

Certificate of analysis (COA). Best if each batch has one from a lab you can look up. No COA isn’t automatically bad (many Chinese sellers don’t post them), it’s just a bigger risk.

Pay by card when you can. A card lets you dispute a charge. Crypto does not.

Lot numbers match. If there is a COA, the lot on your vial should match it.

Buying a kit from China? Test a vial. Check the seller on finnrick.com first. If you buy a box of 10, send one vial in for testing (Finnrick tests US vials free) before you use the rest.

Finding Sellers on Finnrick

Buyers send in vials from the sellers they used, and Finnrick also buys some itself. Outside labs test them and Finnrick publishes the results, so you can pick a seller by real test data instead of the seller's own claims.

finnrick.com**2,010**

sellers tracked

12,700+

published lab tests

Freeaccount to see all
sellers**Free**testing of your vial
(US)

How to pick a seller

- 1 Start with the peptide.** Open Products, pick the peptide (e.g. BPC-157), and see which sellers rank highest for it.
- 2 Look at the test count.** A score from 20+ tests means more than one from 2 or 3.
- 3 Open the seller's page.** Check the score for your peptide, not just the overall score, and read any intelligence report.
- 4 Check recent tests.** Newer results count more. A run of recent fails is a warning even if the score looks fine.

READING A FAIL

In the default view, a vial fails if it is the wrong peptide, under 99.5% pure, or more than 35% off the label. A 98% vial counts as a fail, yet 98% is normal research-grade quality. So a 60% seller is not automatically bad: open the tests and see why. Real red flags are the wrong peptide, low purity, or amounts far off the label. Purity tests do not check for endotoxins.

WHY THE PEPTIDE MATTERS

The same seller can score above 90% on one peptide and below 50% on another. Always check the score for the peptide you are buying.

Test your own vial

Community testing · free

Identity, purity and amount. Results in about 4 weeks and published publicly. All vial details required. US only, individuals only.

Standard testing · \$249

Adds endotoxin testing. Results stay private and come back faster.

What Sellers Call Them

Many sellers don't print the full name. Lilly has reported thousands of retatrutide listings to sites like Amazon, so sellers relabel with codes. Here is what to look for.

Full name	Also known as	What sellers may call it
Retatrutide	Triple agonist (GIP, GLP-1, glucagon)	GLP-3, GLP-3 RT, GLP-3 R, RT, Reta, 3RT, NL-3 RT
Retatrutide + cagrilintide	Blend	GLP-5
Tirzepatide	Mounjaro / Zepbound	GLP-2 TZ, GLP-2 T, GLP-2 TRZ, TZ, Tirz
Semaglutide	Ozempic / Wegovy	GLP-1 S, GLP-1 SG, GLP-1 SM, SG, Sema
Cagrilintide	Amylin analog	GLP-1 C, Cagri
Tesamorelin	Egrifta	Tesa
Ipamorelin	GH secretagogue	Ipa
CJC-1295 (no DAC)	GHRH analog	CJC, Mod GRF 1-29
BPC-157	Body Protection Compound	BPC
TB-500	Thymosin beta-4 fragment	TB, TB4
GHK-Cu	Copper peptide	GHK, copper peptide
GHK-Cu + BPC-157 + TB-500	Blend	GLOW
GHK-Cu + BPC-157 + TB-500 + KPV	Blend	KLOW
MOTS-c	Mitochondrial peptide	MOTS-c, MOTSc

"GLP-2" and "GLP-3" are just labels

There is no GLP-3 hormone, and GLP-2 is a real, different hormone that tirzepatide doesn't touch. Sellers use the numbers to mean one, two or three receptors.

Check the certificate

Whatever the label says, the lab certificate should name the actual compound. Watch out: "Triple G" is also used for a different Novo Nordisk drug.

Filling Syringes

For adding bac water, transferring peptide and filling cartridges. Use a 3 mL Luer Lock syringe: a full vial or pen cartridge holds 3 mL, so you can move it all in one draw, and the needle twists on and off. Two ways to buy it:

A Fully assembled

SIMPLEST



3 mL Luer Lock Syringe, 25G × 5/8" needle attached

50 count · sterile · individually sealed · **\$13.99** · [View on Amazon](#)

amazon.com/dp/B0CPLT847R

PROS

One sealed package, nothing to attach, fewest touch points.

CONS

Thicker, longer needle. Harder on small rubber tops and too thick for two needles in a cartridge top.

B Syringe and 30G needles, bought separately

GENTLEST



BH Supplies 3 mL Luer Lock Syringes

No needle · 100 count · sterile

\$15.99

[View on Amazon](#)

amazon.com/dp/B07BQFTHMQ



30G × 1/2" Luer Lock Needles

100 count · sterile · individually sealed

\$8.99

[View on Amazon](#)

amazon.com/dp/B08H1Q1PMQ

PROS

Thin, short needle. Easy on tiny vials, fits two in a cartridge top, doubles as the escape needle.

CONS

You attach the needle yourself. Thin needles bend if pushed at an angle.

Best of both: option A is Luer Lock too. Twist off its 25G needle and twist on a 30G from option B.

Don't touch the hub

Twist the needle on by its cap. Touch nothing that touches the peptide.

Bevel up, then straighten

Enter the rubber top at about 45°, slanted side up, then straighten. It cuts coring roughly in half.

Use once

New needle for every transfer. Sharps container after.

Coring: a needle punching a bit of rubber out of the stopper. Thicker needles core more often. Prices from Amazon as of October 2026.

Dosing Syringes

For injecting by syringe instead of a pen. Stick to established brands with strong reviews. All three are 1 mL (100-unit) syringes with a thin 31G × 5/16" needle. The higher the gauge, the thinner the needle and the less it hurts.



BEST VALUE

GLUCO-CARE 1 mL

31G × 5/16" · 100 count

\$16.97

[View on Amazon](https://www.amazon.com/dp/B0H22B1WZC)

[amazon.com/dp/B0H22B1WZC](https://www.amazon.com/dp/B0H22B1WZC)



TRUSTED BRAND

UltiCare 1 mL

31G × 5/16" · 100 count

\$29.69

[View on Amazon](https://www.amazon.com/dp/B01ET9Y6P2)

[amazon.com/dp/B01ET9Y6P2](https://www.amazon.com/dp/B01ET9Y6P2)



NAME BRAND · THINNEST

BD Ultra-Fine 1 mL

31G × 5/16" · 90 count

\$33.49

[View on Amazon](https://www.amazon.com/dp/B07DLPWYXY)

[amazon.com/dp/B07DLPWYXY](https://www.amazon.com/dp/B07DLPWYXY)

Reading the syringe

These are U-100 syringes: 100 units = 1 mL, so each unit is 0.01 mL. Use the math in section 04 to turn your dose in mg into units, then draw to that line.

Not for mixing

These thin needles bend in rubber tops. Mix with a filling syringe (previous page).

Room temperature

Let the dose reach room temperature before injecting.

Use once

New syringe every time. Dispose in a sharps container.

Getting rid of used needles

You don't need to buy a sharps container. A thick plastic bottle with a screw-on lid works, like a laundry detergent or sturdy juice jug. Thin water bottles can be poked through, so avoid those. Drop needles in point first, keep the lid tight, label it "Sharps, do not recycle," and throw it out when it's three-quarters full. Never toss loose needles in the trash.

Pens

A reusable pen makes dosing faster and more consistent than drawing every dose by syringe. Dial the units, inject, done.

TOP PICK

\$79.99

Gansulin Peptide Pen



DOSE DIAL

1–60 units, click-stop

BODY

All-metal, reusable

TAKES

Standard 3ml glass cartridges

INJECTION

Automatic

[Buy on Amazon](#)

[Buy on eBay](#)

amazon.com/dp/B0HBF7S75N

ebay.com/itm/188758243709

SPOT A REAL GANSULIN

Comes in a box. Genuine Gansulin pens ship boxed, never loose in a bag.

Ships from China. Real Gansulin pens come factory direct.

Serial-numbered. Each genuine pen carries its own serial number.

BUDGET PICK

\$65.99

ConviPen



Push-button automatic injection, adjustable dose dial, takes standard 3ml cartridges.

[View on Amazon](#)

amazon.com/dp/B0HG5R6YHS



NOT RECOMMENDED

About \$25–40

V1, V2 and V3 pens

Generic pens sold under these names, mostly made in China. Quality varies a lot, and many are very cheaply built. They're also harder to use: to reset after each cartridge you pull the plunger rod back by hand instead of twisting the dial.

Stick to these two. Other pens are cheaply made, can bend, and can hurt you. Buy a genuine, boxed Gansulin or a ConviPen from the links above.

Pen Needles and Cartridges

These are for the peptide pens only. Mixing and dosing syringes are on the previous pages. The higher the gauge (G), the thinner the needle and the less it hurts. That matters most for peptides injected daily, like GHK-Cu.



BEST · THINNEST

GLUCO-CARE Plus Pen Tips 33G x 4mm

2 boxes of 100 (200 needles)

\$17.94

[View on Amazon](#)

amazon.com/dp/B0H8N5Q8B5



BUDGET

iHome Pen Tips 32G x 4mm

1 box of 100 needles

\$9.99

[View on Amazon](#)

amazon.com/dp/B0GVB6KT4W



CARTRIDGES

3ml Peptide Pen Cartridges

40 pack, sterile, sealed. Hold 3 mL like a vial, but longer and thinner

\$15.99

[View on Amazon](#)

amazon.com/dp/B0H8T3GCTM

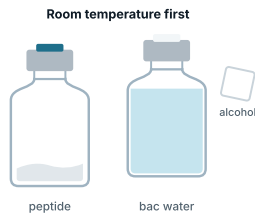
HOW TO USE THE PEN

- 1 Fill a cartridge.** Transfer the mixed peptide from its vial into an empty cartridge using a syringe and an escape needle. See Filling a Cartridge in section 04.
- 2 Load the pen.** Unscrew the cartridge holder, drop the cartridge in metal-cap end first, and screw it back on.
- 3 Attach a new needle.** Wipe the cartridge top with alcohol. Peel the tab, screw the needle on, pull off both caps.
- 4 Prime it.** Dial 2 units, point the needle up, tap out air, and press until a drop appears. Do this with every new cartridge.
- 5 Dial your dose.** Turn the dial to the number of units for your dose (see section 04).
- 6 Inject.** Pinch the skin, insert straight in, press the button all the way, and hold for 10 seconds.
- 7 Remove the needle.** Recap it with the outer cap, unscrew it, and drop it in a sharps container.
- 8 Store the pen.** Cap it and keep it in the fridge. Let it reach room temperature before the next injection.

New needle every time. Never reuse or share a pen needle. A used needle is dull and no longer sterile.

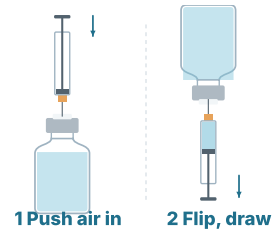
How to Mix (“Reconstitute”) a Vial

Use a 3 mL filling syringe with a thin needle (section 03). Work on a clean surface, go slowly, and never touch the needle or the rubber tops after wiping them.



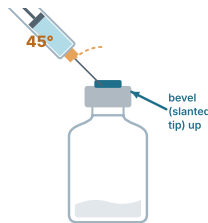
1 Warm up and wipe

Let both vials reach room temperature: cold powder dissolves slowly, tempting you to shake, and can draw in moisture. Pop the caps, wipe each top with alcohol, let it dry.



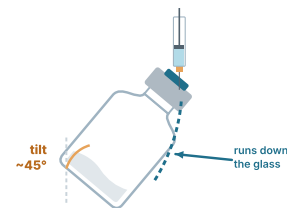
2 Draw the bac water

Vial standing flat: push in as much air as the water you will take. Then flip it, keep the tip in the liquid, and pull to your amount.



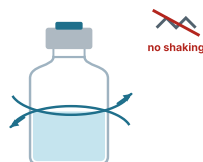
3 Go in at 45°, bevel up

Hold the needle at about 45° with the slanted side of the tip facing up, push through the rubber, then straighten slightly. This protects the stopper.



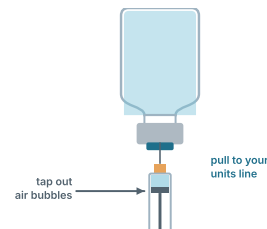
4 Tilt it and let it run down the glass

Tilt the vial about 45° and aim the tip at the inside wall. Push slowly so the water trickles down the side. A hard spray onto the powder makes it foam, and foaming can damage the peptide.



5 Swirl gently, never shake

Roll the vial between your fingers or swirl slowly until fully clear. Shaking creates foam that can break peptides down. If powder remains, wait a few minutes and swirl again.



6 Draw a dose

Flip the vial, keep the tip in the liquid, and pull to your units. Tap out bubbles and re-check the line. Adding air is optional, only if the plunger pulls back. If you do, push it in with the vial standing flat on the table, then flip.

Warning Signs: When to Toss It

Check the vial before you mix, after you mix and before every dose. When in doubt, throw it out: a new vial costs far less than an infection.

BEFORE YOU MIX

The powder

Good: a dry white powder or a solid white “puck.” It can look shrunken or stuck to the glass and still be fine.

Toss it if:

- It is yellow, brown or any odd color.
- It looks wet, sticky or clumped (moisture got in).
- The glass is cracked or the cap or seal is loose, torn or missing.
- The lot number doesn't match the seller's test results.

AFTER YOU MIX

The liquid

Good: clear like water. **Exception:** GHK-Cu and KLOW are blue from the copper. That is normal.

Toss it if:

- It is still cloudy after resting 15–20 minutes in the fridge and a gentle swirl.
- You see floaters, specks, strings or sediment.
- The color changes over the following days.
- It won't dissolve or turns thick or gel-like.

EVERY TIME YOU DOSE

The vial over time

Good: still clear (or blue for KLOW), within its 3–4 weeks after mixing, kept in the fridge.

Toss it if:

- It is past 3–4 weeks since mixing, or the bac water is past 28 days.
- It was frozen after mixing or left out warm for hours.
- It goes cloudy or gets specks after being clear.
- A needle or the rubber top was touched or dropped.

AFTER YOU INJECT

Your skin and body

Normal: a small bump, a little redness or a sting (KLOW burns more) that fades in a day or two.

See a doctor if:

- Redness keeps spreading or gets worse after 2 days.
- The spot is hot, hard, very painful or oozing pus.
- Red streaks run from the spot, or you get a fever or chills.

Call 911: hives, swelling of the face or throat, or trouble breathing.

Mix it gently

Most bad vials are made at home: shaking, foaming, spraying water hard onto the powder. Swirl, never shake.

Label the date

Write the mix date on every vial so you know when it expires.

Bad batch? Test it

Send a vial from the same lot to Finnrick (free in the US) and warn others.

Reconstitution and Dosing

Peptides ship as a dry powder. Add bacteriostatic (bac) water to dissolve it, then measure each dose on an insulin syringe. Only reconstitute or inject at room temperature.

THE MATH

Concentration

$\text{mg in vial} \div \text{mL of bac water} = \text{mg per mL}$

Units to draw

$(\text{dose in mg} \div \text{mg per mL}) \times 100$

Easy rule: 1 mL of bac water for every 10 mg. That makes every vial 10 mg per mL, so 1 unit = 0.1 mg and your units are just your dose in mg $\times$ 10. No calculator needed, and the dose lands on an easy-to-read line when you draw. Retatrutide 4 mg = 40 units; 8 mg = 80 units. For small-dose peptides (under 1 mg, like ipamorelin), add more water so the dose isn't just 1–2 units. Big vials over 30 mg, like KLOW: use the full 3 mL the vial holds and get your units from the calculator. The extra water also eases the burn KLOW's GHK-Cu is known for.

Bac water: 28 days once opened

Once the top is punctured, throw the bottle out after 28 days to avoid contamination.

Mixed peptides: 3 to 4 weeks

Most last about 28 days in the fridge. GHK-Cu is shorter, about 3 weeks. After that they can degrade or grow bacteria.



DON'T SKIP THIS

Care Touch Alcohol Prep Pads

400 count · 70% isopropyl · sterile, individually wrapped

\$9.99

[View on Amazon](https://www.amazon.com/dp/B06XS38XH6)

[amazon.com/dp/B06XS38XH6](https://www.amazon.com/dp/B06XS38XH6)

Wipe with a fresh pad every time:

- The rubber top of every vial, bac water included, before each needle goes in.
- The pen cartridge top before each new pen needle.
- Your skin where you inject.

Let it air-dry about 30 seconds. Wet alcohol stings and can be carried into the vial. Don't blow on it.

Never freeze mixed peptides. Once bac water is added, peptides are not meant to be frozen, and freezing will ruin them. Keep mixed vials in the fridge. Never freeze bac water either. Only unmixed powder goes in the freezer.

Mixing Chart

How much bac water to add to each vial, and how many units to draw per dose. Retatrutide vials are sized so each one lasts a month.

MIXING CHART

Peptide	Vial	Bac water	Units per dose
Retatrutide 2 mg/week	10 mg	1 mL	2 mg = 20
Retatrutide 4 mg/week	20 mg	2 mL	4 mg = 40
Retatrutide 8 mg/week	40 mg	3 mL	8 mg = 60
Retatrutide 12 mg/week	60 mg	3 mL	12 mg = 60
Tesamorelin	10 mg	1 mL	1.4 mg = 14
KLOW	80 mg	3 mL	4 mg = 15 · 5 mg = 19 (5 on, 2 off)

Each retatrutide vial is sized for one month: 5 weekly doses inside the 28-day window. 8 and 12 mg use a stronger mix so the dose stays at 60 units, within one syringe or pen dial. MOTS-c: 10 mg vial + 1 mL, 5 mg = 50 units. CJC-1295 + ipamorelin: use the calculator.

Open the free peptide dosing calculator

omnicalculator.com/health/peptide-dosage

Label every vial
Write the peptide, the mL of water added and the mix date on it.

Units, not mL
U-100 syringes and pens count in units: 100 units = 1 mL.

Double-check
Run any new vial size through the calculator before your first dose.

Retatrutide doses from Lilly trials; tesamorelin from the FDA label; KLOW and MOTS-c from common community protocols, not trials.

Dosing Schedules

How often, how much, and when to break. Units assume the mixing chart on the previous page.

Peptide	How often	Dose	Cycle and breaks
Retatrutide ● Trials	Once a week	Start 0.5–2 mg (lower if you're smaller; many women start low), step up after a month at each dose (it takes that long to feel it). 2–4 mg works for losing; 8–12 mg with a lot to lose; 2–4 mg to maintain.	No set break. Step down to 2–4 mg instead of stopping; quitting cold often brings weight back.
Cagrilintide ● Trials	Once a week	0.25 → 0.5 → 1.0 → 1.7 → 2.4 mg, about 4 weeks per step.	No set break. Taper down rather than stopping cold.
KLOW ● Community	5 days on, 2 off	4–5 mg a shot (15–19 units at 80 mg + 3 mL). One vial lasts about a month at 4 mg.	8–12 weeks on, then 4 weeks off.
Tesamorelin ● Drug label	Once a day	1.4 mg (Egrifta SV label).	Trials ran 6–12 months; check IGF-1 before going longer.
CJC-1295 + Ipamorelin ● Community	Bedtime, 5 days on, 2 off	Start around 100 mcg of each and work up. Inject on an empty stomach, 2+ hours after eating.	8–12 weeks on, then 4–8 weeks off.
MOTS-c ● Community	2–3 times a week	5 mg a shot (50 units at 10 mg + 1 mL).	4–8 weeks on, then 4 weeks off.
Semax ● Community	Daily, mornings	Nasal: 2–6 sprays a day (200–600 mcg). Or 200–400 mcg injected.	2 weeks on, then 1–3 weeks off.
Selank ● Community	2–3 times a day	Nasal: 1–2 sprays per nostril (200–400 mcg). Or 250–500 mcg injected once a day.	2 weeks on, then 1–3 weeks off.
Thymosin Alpha-1 ● Community	Twice a week, 3–4 days apart	1.5 mg a shot.	8–12 weeks on, then about 1 month off.

STACKING SAFELY

Start low

Begin at the bottom of each range.

One new peptide at a time

Wait 2–4 weeks before adding another, so you know what causes what.

Don't double up

Too much of the same kind can be bad: never two weight-loss GLP-1s at once.

Feel off? Drop the newest

Stop the last thing you added first. Breaks are part of the plan.

Trials = clinical trial doses. Drug label = approved dose in the US or abroad. Community = common practice with no trial behind it. Not medical advice.

Calculator and Apps

Let a calculator do the dose math, and an app track every shot, vial and refill. Always double-check the number against the Reconstitution math in this section.

FREE PEPTIDE CALCULATOR

Omni Calculator: Peptide Dosage

Enter vial mg, bac water mL and your dose. It tells you how far to pull a U-100 syringe. Reviewed by an MD and not tied to any seller.

[Open calculator](#)

omnicalculator.com/health/peptide-dosage

Tracker apps

WHAT WE USE

Regimen

Awaken Labs · iPhone + Android

★ 4.8 iPhone (26) · ★ 4.7 Android (339)

Tracks peptides, GLP-1s and TRT, with a built-in reconstitution calculator and Apple Health sync. Free; Pro is \$4.99/mo or \$39.99/yr.

[App Store](#)

apps.apple.com/app/regimen/id6753905449

[Google Play](#)

play.google.com/store/apps/details?id=com.regimen.app

TOP RATED ON IPHONE

Peptide Tracker & Calculator

David Dzeveckij · iPhone

★ 4.8 (588 ratings)

Dose log, injection-site rotation and vial inventory.

[App Store](#)

apps.apple.com/app/id6744902384

PepTracker: Dose Log

J. Villagomez Peredo · iPhone

★ 4.7 (175 ratings)

Simple dose log for peptides, GLP-1s and testosterone.

[App Store](#)

apps.apple.com/us/app/peptracker-dose-log/id6747189889

TOP RATED ON ANDROID

Peptide Tracker

Flat Six Labs · Android

★ 4.8 (705 reviews) · 10K+ downloads

Dose tracking and reminders.

[Google Play](#)

play.google.com/store/apps/details?id=ai.peptidetrapper.dev

Log every shot

Date, dose and site. It stops double doses and missed weeks.

Rotate sites

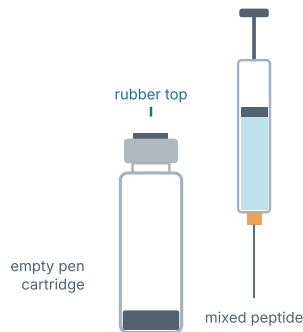
Move between belly, thighs and arms so one spot doesn't get sore.

Track mix dates

Log when each vial was mixed so you know when it expires.

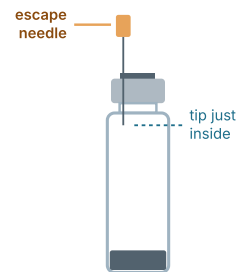
Filling a Peptide Pen Cartridge

A peptide pen cartridge is sealed, so air needs a way out as the peptide goes in. A second needle, the escape needle, lets it escape, so pressure never builds up and cracks the cartridge. It is also the cleanest way to fill one. Hold the cartridge upright, metal cap on top. Both needles are the same thin twist-on needle (orange hub).



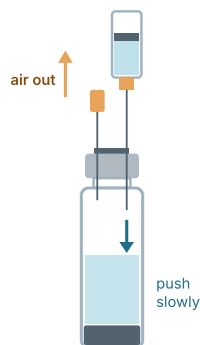
1 Get ready

Draw the mixed peptide into a syringe. Wipe the cartridge's rubber top with alcohol.



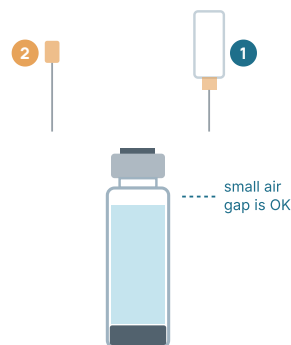
2 Insert the escape needle

Push it through one side of the rubber top. Keep the tip just inside, near the top.



3 Fill slowly

Push the syringe needle through the other side of the top and inject slowly. Air leaves through the escape needle.



4 Remove both needles

Stop just short of the top. Pull out the syringe first, then the escape needle. Priming the pen clears the small air gap.

Never fill from the back

Do not push the rubber plunger to the top and fill from behind. It is not clean.

Tip above the liquid

If liquid reaches the escape needle, it will leak out.

Fresh needles

Use a new escape needle for each fill. See section 03.

Storage and Longevity

Store 3ml peptide vials in insulated Hydrapeak 32oz containers with silicone vial inserts, kept in the freezer. This protects vials from temperature swings and keeps them viable for years.



BUY 3 MINIMUM

Hydrapeak 32oz Vacuum Insulated Food Jar

Leak-proof, vacuum-insulated steel. Get each in a different color to sort your peptides.

\$22.95 each

[View on Amazon](#)

amazon.com/dp/B0C64DPRD8



BUY 1 SET PER JAR

Silicone 3ml Vial Insert Set for Hydrapeak 32oz

Holds 3ml vials. Pick "1 short + 2 tall" for the 32oz jar. Silicone, not plastic: plastic cracks in the cold.

\$11.99 per set

[View on Amazon](#)

amazon.com/dp/B0FQBTKYQB



Do not buy cheaper knockoffs of the Hydrapeak containers. The silicone inserts are made to fit the genuine Hydrapeak 32oz jar. Cheap plastic cases crack in the freezer and don't insulate like a vacuum-insulated jar; I started with those and had to upgrade.

LONG-TERM

Freezer

Best: a dedicated stand-alone freezer. It is opened less, so temperatures stay steadier.

Okay: a regular kitchen freezer. Keep the containers at the back, away from the door.

Stored this way, unmixed peptides stay stable for several years.

IN USE

Fridge

Start with 3 jars: 2 stay in the freezer, 1 is the transfer jar for the fridge.

Transfer inside the freezer. Open both jars in the freezer and move vials there. Never take the freezer jars out.

Then move the transfer jar to the fridge. The fridge is for short-term use; the freezer is for long-term storage.

Freeze once. Repeated freezing and thawing damages peptides. Once they go in the freezer, leave them there and move only what you need to the fridge jar. Never freeze peptides after bac water is added, and never freeze bac water.

If This Helped You

I know money is tight. It might be the whole reason you're here: the pharmacy price was out of reach, or insurance said no. I get it, and that's exactly who I made this for.

This guide is free, and it will stay free. I wrote it so you wouldn't have to learn the hard way: the wasted vials, the wrong needles, the bad sellers, the dose that came on too fast.

If it saved you even one of those mistakes, and you have a few dollars to spare, I'd be grateful for anything. Even enough for a coffee. And if you can't, that's okay. Use it, share it, and stay safe.



@UnofficialPlaybook

Venmo · point your phone camera at the code

Send a tip on Venmo

venmo.com/u/UnofficialPlaybook

Thank you. Donations are a gift and completely optional. They don't buy medical advice, support or a guarantee of any kind. Everything in the disclaimer at the front still applies.