

The Complete Peptide Protocol Handbook

Dosing, Reconstitution, Stacking & Protocol Design
for 20+ Research Compounds

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1. Reconstitution Basics

Reconstitution is the process of adding bacteriostatic water (BAC water) to a lyophilized (freeze-dried) peptide vial to create an injectable solution. This is the most critical step in peptide preparation.

What You Need

1. Peptide vial (lyophilized powder)
2. Bacteriostatic water (BAC water with 0.9% benzyl alcohol)
3. Insulin syringes (29-31 gauge, 0.5mL or 1mL)
4. Alcohol swabs

Step-by-Step Reconstitution

Step 1: Swab the tops of both the peptide vial and BAC water vial with alcohol.

Step 2: Draw your desired amount of BAC water into the syringe. Standard amounts: 1mL or 2mL.

Step 3: Insert the needle into the peptide vial at an angle. Let the water trickle down the side of the vial. NEVER spray directly onto the powder.

Step 4: Gently swirl (do not shake) until the powder is fully dissolved. The solution should be clear.

Step 5: Store the reconstituted vial in the refrigerator (2-8C). Use within 4-6 weeks.

Reconstitution Math

The amount of BAC water you add determines the concentration per unit on your syringe.

Peptide Amount	BAC Water	Concentration	10 units (0.1mL) =
5mg	1mL	5mg/mL	0.5mg (500mcg)
5mg	2mL	2.5mg/mL	0.25mg (250mcg)
10mg	1mL	10mg/mL	1mg (1000mcg)
10mg	2mL	5mg/mL	0.5mg (500mcg)
50mg (GHK-Cu)	2mL	25mg/mL	2.5mg

2. Dosing Calculator Guide

Use this formula to calculate your exact dose on an insulin syringe:

$$\text{Units to draw} = (\text{Desired dose} / \text{Concentration}) \times 100$$

Example: You have a 5mg vial of BPC-157 reconstituted with 2mL BAC water. You want a 250mcg dose.

Concentration = 5mg / 2mL = 2.5mg/mL = 2500mcg/mL

Units = (250 / 2500) x 100 = **10 units** on the syringe

Quick Reference: Common Doses

Peptide	Typical Dose	Reconstitution	Draw
BPC-157 (5mg)	250mcg 2x/day	2mL BAC	10 units
TB-500 (5mg)	2.5mg 2x/week	1mL BAC	50 units
CJC-1295 no DAC (2mg)	100mcg before bed	1mL BAC	5 units
Ipamorelin (5mg)	200mcg before bed	2mL BAC	8 units
GHK-Cu (50mg)	1-2mg/day	2mL BAC	4-8 units
MT-2 (10mg)	250mcg loading	2mL BAC	5 units
PT-141 (10mg)	1-2mg PRN	2mL BAC	20-40 units
Semaglutide (5mg)	0.25mg/week start	2mL BAC	10 units
Tirzepatide (5mg)	2.5mg/week start	1mL BAC	50 units

3. Injection Technique & Storage

Subcutaneous Injection (SubQ)

Most peptides are administered via subcutaneous injection into the fatty tissue layer just beneath the skin. This is simple, virtually painless with an insulin syringe, and can be done at home.

Best injection sites: Lower abdomen (2 inches from navel), love handles, outer thigh.

Technique: Pinch a fold of skin, insert the needle at a 45-degree angle, inject slowly, release the skin, withdraw.

Rotate sites to avoid lipodystrophy (tissue hardening). Never inject into the same spot consecutively.

Storage Guidelines

Form	Storage	Shelf Life
Unreconstituted (powder)	Room temp or freezer	12-24 months
Reconstituted (liquid)	Refrigerator (2-8C)	4-6 weeks
BAC water	Room temperature	24+ months
Nasal sprays	Refrigerator	3-6 months
Capsules (MK-677)	Cool, dry place	12+ months

4. Healing & Recovery Protocols

Protocol A: Joint & Tendon Repair

Compounds: BPC-157 + TB-500

Duration: 4-8 weeks

BPC-157: 250mcg injected SubQ near the injury site, 2x per day (morning and evening).

TB-500: 2.5mg SubQ 2x per week for the first 4 weeks (loading), then 2.5mg 1x per week (maintenance).

Notes: BPC-157 works locally (inject near the injury). TB-500 is systemic (inject anywhere). Together they provide both localized tissue repair and systemic healing signaling. This is the most popular peptide stack in existence.

Synogen Products: BPC-157 (\$59.99), TB-500 (\$64.99), or BPC+TB Blend (\$84.99)

Protocol B: Post-Surgery Recovery

Compounds: BPC-157 + TB-500 + GHK-Cu

Duration: 6-12 weeks

BPC-157: 500mcg/day (250mcg 2x)

TB-500: 5mg/week (2.5mg 2x) for 4 weeks, then 2.5mg/week

GHK-Cu: 1-2mg/day SubQ for skin healing and collagen synthesis

Notes: GHK-Cu accelerates wound healing and reduces scarring. Combined with BPC and TB, this is the most comprehensive recovery stack available.

5. Growth Hormone Secretagogue Protocols

Protocol A: GH Optimization Stack

Compounds: CJC-1295 no DAC + Ipamorelin

Duration: 8-12 weeks on, 4 weeks off

CJC-1295 no DAC: 100mcg SubQ before bed

Ipamorelin: 200mcg SubQ before bed (inject together or separately)

Timing: Inject on an empty stomach, at least 2 hours after last meal. GH is released in a pulse during deep sleep, so bedtime dosing maximizes the effect.

Benefits: Improved sleep quality, faster recovery, fat loss, muscle fullness, improved skin elasticity, anti-aging effects.

Notes: This is the gold standard GH secretagogue stack. The CJC provides the sustained GH release while Ipamorelin provides the acute pulse. 5 days on, 2 days off is recommended to prevent desensitization.

Synogen Products: CJC+IPA Blend (\$79.99) or separately CJC-1295 (\$54.99) + Ipamorelin (\$59.99)

Protocol B: MK-677 (Oral GH Secretagogue)

Compound: MK-677 (Ibutamoren)

Dose: 12.5-25mg orally, once daily before bed

Duration: 8-16 weeks

Notes: MK-677 is oral (capsule), no injection required. Expect increased appetite for the first 1-2 weeks which then subsides. Provides sustained elevated GH and IGF-1 levels. Can increase water retention initially. Monitor blood sugar if running long term.

6. Weight Loss / GLP-1 Protocols

Protocol A: Semaglutide

Dose escalation schedule (weekly injection):

Weeks	Dose	Purpose
Weeks 1-4	0.25mg/week	Introduction / assess tolerance
Weeks 5-8	0.5mg/week	Dose escalation
Weeks 9-12	1.0mg/week	Therapeutic dose
Weeks 13+	1.0-2.4mg/week	Maintenance (based on response)

Notes: Inject once weekly, same day each week. SubQ into abdomen or thigh. Expect nausea during dose escalation which resolves within days. Stay hydrated. High protein diet is critical to preserve muscle mass.

Protocol B: Tirzepatide

Dose escalation: 2.5mg/week for 4 weeks, then 5mg/week for 4 weeks, then 7.5-15mg/week based on response. Same injection protocol as semaglutide. Tirzepatide is a dual GIP/GLP-1 agonist and tends to produce greater weight loss with fewer GI side effects than semaglutide for most users.

Protocol C: Retatrutide

Dose escalation: Start at 1mg/week, increase by 1-2mg every 4 weeks up to 8-12mg/week. This is a triple agonist (GLP-1/GIP/Glucagon) and the most potent weight loss peptide currently available. The glucagon component adds direct fat oxidation on top of appetite suppression. Phase 2 trials showed 24.2% body weight reduction in 48 weeks.

7. Skin & Anti-Aging Protocols

Protocol A: GHK-Cu Skin Rejuvenation

Compound: GHK-Cu (Copper Peptide)

Dose: 1-2mg/day SubQ

Duration: 4-6 week cycles, 5 days on / 2 days off

Benefits: Stimulates collagen synthesis, reduces fine lines and wrinkles, improves skin elasticity, reduces hyperpigmentation, accelerates wound healing, promotes hair growth.

Protocol B: MT-2 (Tanning)

Loading phase: 250mcg/day SubQ for 7-10 days (inject before UV exposure or tanning bed)

Maintenance: 250mcg 2-3x per week

Notes: Start low to assess tolerance. Common sides include mild nausea (subsides after first few doses) and increased libido. Use with controlled UV exposure for gradual, even tan development. Always use eye protection in tanning beds.

Protocol C: GLOW Blend (Full Skin Stack)

Compounds: BPC-157 10mg + GHK-Cu 50mg + TB-500 10mg (pre-mixed)

Dose: 0.1-0.2mL SubQ daily

Duration: 6-8 weeks

Notes: This is our premium pre-mixed skin rejuvenation blend. Combines the collagen-stimulating effects of GHK-Cu with the tissue-repair properties of BPC-157 and TB-500 for comprehensive skin renewal.

8. Cognitive Enhancement Protocols

Protocol A: Semax (Nootropic)

Form: Nasal spray

Dose: 200-600mcg/day intranasally (1-3 sprays per nostril)

Duration: 2-4 week cycles

Benefits: Enhanced focus, memory, and mental clarity. Neuroprotective. Increases BDNF (brain-derived neurotrophic factor). No crash or dependency.

Protocol B: Selank (Anxiolytic Nootropic)

Form: Nasal spray

Dose: 200-400mcg/day intranasally

Duration: 2-4 week cycles

Benefits: Anti-anxiety without sedation, improved mood stability, enhanced cognitive function under stress. Works synergistically with Semax.

Protocol C: NAD+ Nasal Spray

Dose: 100-200mg/day intranasally

Duration: Ongoing / as needed

Benefits: Cellular energy production, neuroprotection, DNA repair support, anti-aging. Intranasal delivery bypasses first-pass metabolism for higher bioavailability than oral supplements.

9. Longevity Protocols

Protocol A: Epithalon (Telomere Support)

Dose: 5-10mg/day SubQ

Duration: 10-20 day cycles, 2-3x per year

Notes: Epithalon (Epitalon) is a synthetic version of the naturally occurring peptide Epithalamin. Research suggests it may activate telomerase, the enzyme responsible for maintaining telomere length. Telomere shortening is associated with cellular aging.

Protocol B: MOTS-C (Mitochondrial Peptide)

Dose: 5-10mg SubQ, 3-5x per week

Duration: 4-8 week cycles

Notes: MOTS-C is a mitochondrial-derived peptide that enhances metabolic function. Research shows benefits in exercise capacity, glucose regulation, and cellular energy production. Best taken on training days.

Protocol C: Glutathione (Master Antioxidant)

Dose: 200-500mg SubQ, 2-3x per week

Duration: Ongoing

Notes: Glutathione is the body's most powerful antioxidant. Injectable form bypasses poor oral bioavailability. Supports detoxification, immune function, skin brightening, and overall cellular protection.

10. Stacking Guide & Synergies

Peptides can be stacked for synergistic effects. Here are the most effective combinations:

Stack	Compounds	Goal
Healing Stack	BPC-157 + TB-500	Injury repair, joint health
GH Stack	CJC-1295 + Ipamorelin	Growth hormone, sleep, recovery
Full Recovery	BPC-157 + TB-500 + CJC/IPA	Maximum healing + GH support
Weight Loss	Semaglutide + CJC/IPA	Fat loss + muscle preservation
Aggressive Cut	Tirzepatide or Retatrutide	Maximum weight loss
Skin Protocol	GHK-Cu + MT-2	Skin quality + tan
Skin Premium	GLOW Blend	Full skin rejuvenation
Cognitive Stack	Semax + Selank + NAD+	Focus + calm + energy
Longevity	Epithalon + MOTS-C + NAD+	Anti-aging + cellular health
Kitchen Sink	BPC/TB + CJC/IPA + GHK-Cu	Everything: heal, grow, glow

11. Side Effect Management

Compound	Common Sides	Management
BPC-157 / TB-500	Minimal. Rare: mild headache	Stay hydrated
CJC/Ipamorelin	Tingling, head rush post-inject	Normal GH pulse, subsides in mins
MK-677	Hunger spike, water retention	Subsides after 1-2 weeks. Low-carb helps
Semaglutide	Nausea, constipation	Slow dose escalation. Ginger, hydration
Tirzepatide	Nausea (milder than sema)	Same as above, usually less severe
Retatrutide	Nausea, diarrhea	Slow titration. Start at 1mg/week
MT-2	Nausea, facial flushing	Start at 100mcg, dose after meals
GHK-Cu	Injection site redness	Rotate sites, very mild
Semax / Selank	Nasal dryness	Saline spray between doses

12. Frequently Asked Questions

How long do peptides take to work?

Healing peptides (BPC/TB): noticeable improvement within 1-2 weeks. GH peptides (CJC/IPA): sleep improvement within days, body composition changes over 4-8 weeks. GLP-1s (Semaglutide): appetite suppression within the first week, visible weight loss by week 3-4. Skin peptides (GHK-Cu): visible changes in 3-4 weeks.

Can I mix different peptides in the same syringe?

Some peptides can be combined in one injection (e.g., CJC-1295 + Ipamorelin, or BPC-157 + TB-500). However, it's generally recommended to keep them in separate vials and draw them into the same syringe just before injection. Never mix reconstituted vials together for storage.

Do I need to cycle peptides?

Most peptides benefit from cycling. GH secretagogues: 5 days on, 2 off. Healing peptides: run for the duration of recovery then stop. GLP-1s: can be run continuously. Epithalon: 10-20 day cycles, 2-3x/year. MT-2: loading phase then maintenance indefinitely.

What's the difference between BPC-157 and TB-500?

BPC-157 works locally (best injected near the injury site) and excels at gut, tendon, and ligament repair. TB-500 is systemic (works throughout the body regardless of injection site) and is better for muscle tissue, blood vessel formation, and reducing inflammation. Together they're synergistic.

How do I store reconstituted peptides?

Always refrigerate at 2-8C (standard fridge). Use within 4-6 weeks. Never freeze reconstituted peptides. Keep away from light. Always swab the vial top with alcohol before drawing.

Is bacteriostatic water the same as sterile water?

No. BAC water contains 0.9% benzyl alcohol as a preservative, which prevents bacterial growth and allows multi-use over weeks. Sterile water has no preservative and should only be used for single-use applications. Always use BAC water for peptide reconstitution.

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