Dr. Trevor Bachmeyer's

Peptide Protocol Guide

A Comprehensive Reference for Longevity & Performance

Compiled January 2026

Disclaimer: This document is for educational and research purposes only. It is not medical advice. Consult with a qualified healthcare professional before starting any peptide protocol. Many peptides discussed are not FDA-approved for human use.

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1. Introduction: Dr. Trevor Bachmeyer's Philosophy

Dr. Trevor Bachmeyer ("The Spartan") is the founder of The Awakening Challenge, The Spartan Army, CEO of SmashweRx, and Body Hacks Global. After surviving lung cancer at age 48, he dedicated himself to understanding and reversing the biological failures that cause disease and aging.

1.1. The Three Fundamental Biological Failures

According to Dr. Bachmeyer, virtually all major diseases stem from three core biological dysfunctions:

1. Systemic Inflammation
- Not localized swelling, but low-grade silent civil war inside your body
- TNF-alpha, IL-6, and other cytokines attack your own tissues
- Damages blood vessels, confuses immune cells, creates chronic chaos

2. Insulin Resistance
- Cells become "deaf" to insulin signals
- Leads to hyperinsulinemia (excess insulin production)
- Promotes fat storage, damages kidneys, hardens arteries, accelerates aging

3. ATP Shortage (Mitochondrial Dysfunction)
- Mitochondria are the "power plants" of cells
- When they fail, cells can't repair DNA, clear waste, or communicate
- "You are only as young as your mitochondrial function"

1.2. The Top 5 Killers Linked to These Failures

1. Heart Disease

2. Cancer
3. Chronic Lower Respiratory Disease
4. Stroke (Cerebrovascular Disease)
5. Alzheimer’s Disease & Dementia

2. Dr. Bachmeyer's Core Peptide Protocol

Based on his videos and teachings, Dr. Bachmeyer recommends these peptides as his primary longevity and health optimization stack:

2.1. Quick Reference Table

Peptide	Primary Target	Dose Range	Frequency
Retatrutide	Metabolic/Insulin	2-12 mg	Weekly
BPC-157	Tissue Repair	200-500 mcg	Daily
MOTS-c	Mitochondria/Energy	200-1000 mcg	Daily
SS-31 (Elamipretide)	Mitochondrial ETC	5-40 mg	Daily
TB-500	Cardiac/Healing	500-1000 mcg	Daily
Epithalon	Telomeres/Aging	5 mg	Daily x 20 days

3. Peptide 1: Retatrutide

> **Dr. Bachmeyer's Take:** "It's the guillotine. It just cuts off the head of everything that gets in your way… the most potent agent ever created for reversing insulin resistance."

3.1. What It Does

- **Triple Agonist:** Targets GLP-1, GIP, and Glucagon receptors simultaneously
- **Reverses insulin resistance** by "changing the locks back"
- **Weight loss** occurs because body finally accesses stored fat
- **Reduces inflammation** via GLP-1 receptors on immune cells
- **Improves mitochondrial biogenesis** through improved cellular signaling

3.2. Mechanism Breakdown

- **GLP-1:** Slows digestion, shuts off hunger, signals hypothalamus
- **GIP:** Makes muscles act like "sponges" for nutrients
- **Glucagon:** Forces fat oxidation, no option but to burn fat

3.3. Clinical Results

Phase 2 trials showed up to **24.2% body weight reduction** at 48 weeks with the 12mg dose.

3.4. Dosing Protocol

Phase	Weekly Dose	Duration
Initial	2 mg	Weeks 1-4
Escalation 1	4 mg	Weeks 5-8
Escalation 2	8 mg	Weeks 9-12
Maximum	12 mg	Week 13+

3.5. Administration

- **Route:** Subcutaneous injection
- **Frequency:** Once weekly (same day each week)
- **Half-life:** 6 days
- **Reconstitution:** Add 2.0 mL bacteriostatic water to 10mg vial = 5 mg/mL

3.6. Key Notes

- Start low to assess GI tolerance (nausea is common initially)
- Don't rush titration - stay at a dose until well-tolerated
- Can stay at 8mg if weight loss is satisfactory
- Not FDA-approved (expected 2027)

4. Peptide 2: BPC-157

> **Dr. Bachmeyer's Take:** "BPC-157 is the Inspector Gadget of repair. It just has the tool for everything… Every scar that you just accepted, BPC says 'Hold my beer. Watch me.'"

4.1. What It Does

- **Systemwide tissue repair** - tendons, ligaments, bone, gut, nerves, blood vessels
- **Suppresses NF-kappa B** inflammatory pathway
- **Promotes resolution** of inflammation (doesn't just block it)
- **Increases insulin receptors** on cells
- **Upregulates VEGF** for new blood vessel formation
- **Repairs endothelial lining** of all vasculature

4.2. Mechanism

- Derived from gastric juice proteins (body protection compound)
- Drives angiogenesis, cell migration, and collagen synthesis
- Modulates nitric oxide system for improved blood flow
- Stimulates Nerve Growth Factor (NGF) for nerve regeneration

4.3. Dosing Protocol

Level	Daily Dose	Application
Beginner	200-250 mcg	General healing
Standard	300-400 mcg	Most applications
Advanced	400-500 mcg	Acute injuries

4.4. Weight-Based Guidelines

- Under 150 lbs: 200-300 mcg daily
- 150-200 lbs: 300-400 mcg daily
- Over 200 lbs: 400-500 mcg daily

4.5. Administration

- **Route:** Subcutaneous (near injury site for localized healing)
- **Frequency:** 1-2x daily (split dosing maintains levels)
- **Reconstitution:** 2 mL bacteriostatic water to 5mg vial = 2.5 mg/mL
- **Cycle:** 4-8 weeks on, 2-4 weeks off

4.6. Important Notes

- **NOT effective orally** - gets destroyed by stomach acid despite claims
- Inject as close to injury site as safely possible
- Generally extremely well-tolerated

5. Peptide 3: MOTS-c

Dr. Bachmeyer's Take: "MOTS-c is gangster… It's the firmware update that all of your cells have been waiting for. It keeps you from running on vapor."

5.1. What It Does

- **Mitochondrial reset** - encoded in mitochondrial DNA itself
- **Activates AMPK** pathway (master metabolic switch)
- **Improves insulin sensitivity** dramatically
- **Increases fatty acid oxidation**
- **Boosts exercise capacity**
- **Makes stress a training tool** instead of destructive force

5.2. Mechanism

- 16-amino-acid mitochondrial-derived peptide (MDP)
- Mimics effects of exercise and caloric restriction
- Forces creation of new, efficient mitochondria (biogenesis)
- Bypasses broken insulin signaling pathways
- Reduces oxidative stress from damaged mitochondria

5.3. Dr. Bachmeyer's Assessment

"It makes your mitochondria begin churning out energy like they are decades younger. You don't just feel better - you **are** better at a molecular level."

5.4. Dosing Protocol

Phase	Daily Dose	Duration
Start	200 mcg	Weeks 1-2
Titration 1	400 mcg	Weeks 3-4
Titration 2	600 mcg	Weeks 5-6
Titration 3	800 mcg	Weeks 7-8
Target	1000 mcg	Weeks 9+

5.5. Administration

- **Route:** Subcutaneous
- **Frequency:** Once daily
- **Reconstitution:** 3.0 mL to 10mg vial = 3.33 mg/mL
- **Cycle:** 8-16 weeks
- **Storage Note:** Degrades rapidly - use within 7 days of reconstitution

6. Peptide 4: SS-31 (Elamipretide)

Dr. Bachmeyer's Take: "SS-31 targets the mitochondria with stunning laser precision… It's like putting in a high-performance, cleaner-burning fuel additive into every single one of your metabolic cellular engines."

6.1. What It Does

- **Stabilizes mitochondrial membrane** - prevents electron leakage
- **Improves electron transport chain (ETC) efficiency**
- **Produces 30-40% more ATP** from the same fuel with less waste
- **Reduces free radical production** at the source
- **Enhances insulin sensitivity** through improved cellular energy

6.2. Mechanism

- Cardiolipin-targeted antioxidant peptide
- Concentrates in inner mitochondrial membrane
- Reduces oxidative stress at NLRP3 inflammasome
- Directly targets the engine of the power plant

6.3. For Cancer Prevention (per Dr. Bachmeyer)

- Healthy mitochondria regulate apoptosis (programmed cell death)
- When damaged cells don't die, they replicate = cancer
- SS-31 maintains the mitochondrial "failsafe mechanism"

6.4. Dosing Protocol

Application	Daily Dose	Notes
General Longevity	5-20 mg	Start low
Clinical Trials	40 mg	IV infusion
Subcutaneous	10-20 mg	Research protocols

6.5. Administration

- **Route:** Subcutaneous or IV (clinical)
- **Frequency:** Daily or 3-5x weekly
- Currently in clinical trials for heart failure and mitochondrial disease
- Less community data available compared to other peptides

7. Peptide 5: TB-500

Dr. Bachmeyer's Take: "TB-500 is probably one of the most gangster ones I've ever seen. For one massive reason: the heart… It gives your heart something that modern medicine says it can't ever have: **regeneration**."

7.1. What It Does

- **Cardiac repair and regeneration**
- **Promotes angiogenesis** (new blood vessel formation)
- **Accelerates wound healing** systemwide
- **Stem cell recruitment**
- **Reduces ischemic damage** from lack of blood flow

7.2. Mechanism (Actin Regulation)

- Fragment of Thymosin Beta-4
- Drives **actin polymerization** - the scaffolding for cell movement
- Enables cell migration, division, and repair
- Promotes collagen deposition

7.3. Why It Matters for the Heart

"The number one killer of humans is cardiovascular collapse. Your heart doesn't get second chances… When muscle dies, it stays dead. Except TB-500 can drive cardiac remodeling and build new blood vessels."

7.4. Dosing Protocol

Phase	Daily Dose	Duration
Loading	500 mcg	Weeks 1-2
Increase	600 mcg	Weeks 3-4
Building	750 mcg	Weeks 5-8
Maintenance	1000 mcg	Weeks 9-12+

7.5. Administration

- **Route:** Subcutaneous
- **Frequency:** Daily or 2-3x weekly
- **Reconstitution:** 3.0 mL to 5mg vial = 1.67 mg/mL
- **Cycle:** 8-16 weeks
- **Note:** Banned by WADA for athletic competition

8. Peptide 6: Epithalon

Dr. Bachmeyer's Take: "Epithalon saves you from the clock itself… It lengthens the fuse on your DNA instead of watching it blow up. In animal models, it literally **extended lifespan** - not just healthspan."

8.1. What It Does

- **Reactivates telomerase** enzyme
- **Lengthens telomeres** (the "caps" on chromosomes)
- **Resets circadian rhythm** via pineal gland
- **Restores melatonin production**
- **Extended lifespan** in animal models

8.2. The Telomere Problem

- Every time cells divide, telomeres get shorter
- When telomeres fray too much, cells become senescent (alive but useless)
- Epithalon rebuilds telomeres, extending cellular lifespan

8.3. Dosing Protocol

Protocol	Daily Dose	Schedule
Standard	5 mg	20 consecutive days
Alternative	10 mg	10 consecutive days
Off Cycle	—	4-6 months

8.4. Administration

- **Route:** Subcutaneous
- **Frequency:** Once daily, preferably at bedtime
- **Reconstitution:** 2.0 mL to 10mg vial = 5 mg/mL
- **Cycle:** 20 days on, 4-6 months off (typically 2 cycles/year)
- **Timing:** Evening to synergize with natural melatonin

9. Complete Protocol Summary

9.1. Dr. Bachmeyer's "Big 5" Stack Logic

The Full System Coverage:

1. **Retatrutide** → Fixes systemic metabolic dysregulation, demolishes inflammation
2. **BPC-157** → Repairs tissue damage caused by dysregulation
3. **MOTS-c** → Builds new efficient mitochondria (biogenesis)
4. **SS-31** → Supercharges and protects existing mitochondria
5. **TB-500** → Keeps the heart running when all statistics say you should fail

Bonus: Epithalon → Addresses the clock (telomere attrition)

9.2. Sample Weekly Schedule

Peptide	Mon	Wed	Fri
Retatrutide	✓ (weekly)	—	—
BPC-157	✓	✓	✓
MOTS-c	✓	✓	✓
TB-500	✓	✓	✓

Note: This is a sample - daily protocols for BPC-157, MOTS-c, and TB-500 are also common.

9.3. Stacking Considerations

- **BPC-157 + TB-500:** Synergistic for tissue repair
- **MOTS-c + SS-31:** Complementary mitochondrial support
- **Retatrutide:** Can be combined with others
- **Epithalon:** Often run as separate 20-day cycles

10. Practical Information

10.1. Reconstitution Quick Reference

Peptide	Vial Size	Add BAC Water	Concentration
Retatrutide	10 mg	2.0 mL	5.0 mg/mL
BPC-157	5 mg	2.0 mL	2.5 mg/mL
MOTS-c	10 mg	3.0 mL	3.33 mg/mL
TB-500	5 mg	3.0 mL	1.67 mg/mL
Epithalon	10 mg	2.0 mL	5.0 mg/mL

10.2. Storage Guidelines

- **Lyophilized (powder):** Freeze at –20°C (-4°F) long-term
- **Reconstituted:** Refrigerate 2-8°C (35-46°F)
- **Shelf life after reconstitution:**
  - Most peptides: 2-4 weeks
  - MOTS-c: 7 days (degrades faster)
- **Avoid:** Freeze-thaw cycles, direct light, room temperature storage

10.3. Injection Best Practices

- Use U-100 insulin syringes (29-31 gauge)
- Rotate injection sites: abdomen, thighs, upper arms
- Clean vial stopper and skin with alcohol
- Inject slowly, wait a few seconds before withdrawing
- Dispose of syringes in sharps container

10.4. Where to Source

Dr. Bachmeyer mentions his own sources:

- Elite Biogenics (his company)
- Emphasizes importance of purity and testing
- Look for third-party COAs (Certificate of Analysis)

11. Important Disclaimers

Legal Status:
- Most peptides are sold for “research purposes only”
- Not FDA-approved for human use (except some in clinical trials)
- Retatrutide expected FDA approval: 2027
- TB-500 banned by WADA for athletic competition
- Regulations vary by country

Medical Disclaimer:
- This document is educational, not medical advice
- Consult a qualified healthcare provider before use
- Individual responses vary significantly
- Monitor for adverse reactions
- Report concerns to a medical professional immediately

Contraindications (General):
- Active cancer (angiogenic peptides may promote tumor growth)
- Pregnancy or breastfeeding
- Autoimmune conditions (depending on peptide)
- Concurrent use of blood thinners (some peptides)
- Always disclose peptide use to healthcare providers

“You’re not old. You are under-repaired.” — Dr. Trevor Bachmeyer

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Sources: Dr. Trevor Bachmeyer YouTube Channel, Phase 2/3 Clinical Trial Data (NEJM), PeptideDosages.com protocols, Alpha Rejuvenation dosing guides, published research on each compound.

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