

# The Wolverine Blend

Harriman Precision  
Health

BPC-157 + TB-500 — PATIENT EDUCATION GUIDE  
— PEPTIDE THERAPY

Physician-Supervised  
Telemedicine Wellness  
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## What Is the Wolverine Blend?

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The Wolverine Blend is a physician-supervised protocol combining two of the most research-supported regenerative peptides available: BPC-157 (Body Protection Compound-157) and TB-500 (synthetic Thymosin Beta-4). The name is a reference to the Marvel character known for near-instant regenerative healing — and the clinical rationale behind the pairing is that these two peptides target overlapping but distinct stages of the tissue repair cascade, producing a synergistic effect that neither achieves alone.<sup>1,2</sup>

BPC-157 is derived from a protective protein in human gastric juice and acts primarily at the local level — driving collagen synthesis, upregulating growth factor receptors, and initiating repair at specific injury sites.<sup>3</sup> TB-500 is a synthetic fragment of Thymosin Beta-4, a protein naturally released by platelets and macrophages at injury sites, which operates systemically — regulating cell migration, reducing fibrosis, and supporting recovery across multiple tissue types simultaneously.<sup>4</sup> Together, they address every major phase of the healing cascade from acute inflammation through long-term tissue remodeling.

**Why combine them?** *BPC-157 works locally — targeting the specific injury site. TB-500 works systemically — traveling throughout the body to support broad-spectrum repair. The two peptides target complementary pathways and do not compete with one another, making the combination additive at minimum and synergistic in most clinical applications.*<sup>1,5</sup>

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## How the Two Peptides Work Together

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The synergy of the Wolverine Blend is best understood through the three

phases of tissue healing. BPC-157 and TB-500 each play distinct but reinforcing roles at every stage:<sup>1,6</sup>

Healing Phase	Timing	BPC-157 Role	TB-500 Role
<b>Phase 1: Inflammation</b>	<b>Days 1–5</b>	Upregulates growth factor signaling (IGF-1, VEGF, HGF) at the injury site; modulates nitric oxide to reduce excessive inflammation	Suppresses inflammatory cytokine response; mobilizes macrophages and stem cells to the repair zone
<b>Phase 2: Proliferation</b>	<b>Days 5–21</b>	Drives fibroblast proliferation and collagen synthesis; promotes angiogenesis and new blood vessel formation locally	Continues stem cell mobilization; regulates actin dynamics to support rapid cell migration into the repair zone; enhances vascular remodeling systemically
<b>Phase 3: Remodeling</b>	<b>Weeks 3–8+</b>	Supports extracellular matrix reorganization; improves mechanical quality and alignment of repaired collagen fibers	Reduces scar formation and fibrosis; promotes maturation of new connective tissue; systemic anti-fibrotic signaling across all healing sites

## What the Wolverine Blend Is Used For

The Wolverine Blend is the most comprehensive peptide recovery protocol offered at Harriman Precision Health. It is best suited for patients with

significant healing demands, multiple injury sites, post-surgical recovery needs, or those who want the maximum regenerative benefit from a single protocol. Common applications include:

Tendon and ligament injuries (rotator cuff, ACL, Achilles, patellar tendon), muscle tears and strains, chronic joint pain and degenerative joint conditions, post-surgical tissue repair and recovery acceleration, overuse syndromes from training or repetitive occupational activity, general recovery optimization and injury-resilience protocols, and gut healing needs concurrent with musculoskeletal repair — where BPC-157's gastrointestinal protective properties add an additional layer of systemic benefit not available from TB-500 alone.<sup>2,3,7</sup>

## What to Expect: Timeline of Results

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The Wolverine Blend follows a loading and maintenance structure driven primarily by the TB-500 component, with BPC-157 providing consistent daily support throughout. Most patients notice the first signs of reduced inflammation and improved comfort within the first one to three weeks — often faster than either peptide used in isolation.<sup>8</sup> Functional improvements in range of motion, pain with activity, and exercise recovery typically become apparent by weeks four through six. The most significant structural tissue repair — collagen remodeling, scar reduction, and mechanical strength restoration — develops from weeks six through twelve and continues to consolidate after the active cycle ends.<sup>5,6</sup> Patients with long-standing or chronic injuries may benefit from a second cycle after the four-week rest period.

## Standard Protocol

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Component	Parameter	Details
<b>BPC-157</b>	Dose	250–500 mcg
	Frequency	Once daily throughout the cycle
	Route	Subcutaneous injection (abdominal fat pad or near injury site)
<b>TB-500</b>	Loading Dose	2.0–2.5 mg, twice weekly (Weeks 1–4)

	Maintenance Dose	2.0–2.5 mg, once weekly (Weeks 5–12)
	Route	Subcutaneous injection; rotate injection sites
<b>Cycle Length</b>	8–12 weeks total	
<b>Rest Period</b>	4 weeks off before repeating if an additional cycle is desired	
<b>Medication Source</b>	Compounded by Empower Pharmacy (Houston, TX) — licensed compounding partner	

Both peptides are self-administered at home using insulin-style syringes provided through your program. Full injection training and reconstitution instructions are included. All protocols are individualized by your supervising physician.

## Safety Profile

The Wolverine Blend carries the combined safety profile of BPC-157 and TB-500 individually. Neither peptide is a hormone, neither suppresses the HPG axis, and post-cycle therapy is not required. Neither is a controlled substance. Side effects are generally mild and temporary — the most common being brief injection site reactions and occasional mild fatigue or a feeling of heaviness during the TB-500 loading phase, which typically resolves within the first one to two weeks.<sup>8,9</sup>

The most clinically relevant safety consideration for the combined protocol is TB-500's pro-angiogenic activity. Because TB-500 promotes new blood vessel formation systemically, it is used with caution in patients with a history of cancer or active malignancy, as new vasculature in tumor-adjacent tissue is a theoretical concern.<sup>9</sup> This is reviewed at intake. BPC-157 should not be combined with NSAIDs during the cycle, as these medications suppress the inflammatory pathways BPC-157 partially leverages to initiate repair.<sup>3</sup> Acetaminophen or topical pain management alternatives are preferred during treatment.

## How to Maximize Your Results

The Wolverine Blend is the most powerful recovery protocol we offer — and your lifestyle during the cycle directly determines how fully that potential is

realized.

## Evidence-Informed Optimization Strategies

- › **Collagen + Vitamin C (Morning)**<sup>10,11</sup> — Both BPC-157 and TB-500 actively stimulate collagen synthesis and fibroblast activity. Providing the raw material — 10–15 g of hydrolyzed collagen peptides alongside 500–1,000 mg of vitamin C each morning — gives your body exactly what it needs to capitalize on the signaling both peptides generate. Vitamin C is non-negotiable for collagen cross-linking and cannot be produced by the body; dietary or supplemental intake is essential during an active healing cycle.
- › **High-Quality Protein (0.7–1.0 g/lb body weight daily)**<sup>12</sup> — Both peptides drive cellular repair processes that require amino acid substrate. Leucine-rich proteins — whey, poultry, lean beef, eggs — fuel satellite cell proliferation, collagen production, and tissue matrix rebuilding. Inadequate protein is one of the most common reasons peptide therapy underperforms.
- › **Prioritize Sleep — 7–9 Hours**<sup>13</sup> — Growth hormone surges during slow-wave sleep and amplifies everything both peptides are doing at the cellular level. This is the primary tissue regeneration window. If sleep quality is consistently poor, discuss CJC-1295/Ipamorelin with your provider as a complementary addition.
- › **Stay Well Hydrated**<sup>14</sup> — Aim for 64+ oz of water daily. TB-500's systemic action depends on healthy circulation and vascular function. Dehydration impairs both, and also contributes to the mild headaches some patients experience during the loading phase. Electrolyte balance matters here too.
- › **Anti-Inflammatory Diet**<sup>15</sup> — Omega-3 fatty acids (2–4 g of fish oil daily), curcumin, berries, and leafy greens reduce systemic inflammatory background and support the healing environment both peptides create. Chronic dietary inflammation is one of the most consistent factors that blunts regenerative therapy response.
- › **Avoid NSAIDs**<sup>3</sup> — Ibuprofen and naproxen suppress the same inflammatory signaling BPC-157 uses to initiate tissue repair. Avoid these throughout your cycle. Acetaminophen or topical options are safe alternatives for pain management.

- › **Targeted Rehabilitation Movement** — Light activity, progressive stretching, and structured physical therapy provide the mechanical loading signals that guide repaired tissue to remodel in the correct orientation. TB-500's enhancement of cell migration and BPC-157's collagen remodeling work best when paired with purposeful movement. Avoid overtraining the injured area — healing tissue needs stimulus, not stress.
- › **Micronutrient Foundation**<sup>16</sup> — Magnesium (muscle relaxation, sleep quality), zinc (wound healing enzyme function), and vitamin D (inflammatory modulation, musculoskeletal integrity) are the three micronutrients most consistently linked to tissue repair outcomes. Supplement if dietary intake is inconsistent.

## Frequently Asked Questions

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### ***Should I choose the Wolverine Blend or just one peptide individually?***

The Wolverine Blend is best for patients with significant healing demands — multiple injury sites, post-surgical recovery, chronic musculoskeletal conditions, or those seeking maximum regenerative benefit. If your goal is more targeted — for example, gut healing specifically, or a single acute tendon injury — BPC-157 alone may be sufficient. If systemic recovery and longevity are the primary goals, TB-500 alone is a strong option. Your physician will help determine the right protocol for your individual situation.

### ***Are the two peptides injected together or separately?***

Both peptides are available as separate compounds or as a pre-blended vial from Empower Pharmacy. On days when both are scheduled (during the TB-500 loading phase), they can be drawn into the same syringe and administered in a single injection. Your care team will provide specific instructions based on your prescription.

### ***How does the injection schedule work?***

BPC-157 is injected once daily throughout the cycle. During weeks one through four (loading phase), TB-500 is added twice weekly on non-consecutive days. During weeks five through twelve (maintenance phase), TB-500 shifts to once weekly. Your care team will walk you through a simple weekly schedule at onboarding.

### ***Can I combine the Wolverine Blend with TRT or GLP-1 therapy?***

Yes. The Wolverine Blend is fully compatible with testosterone replacement therapy and GLP-1 weight loss programs. Many patients find the combination particularly valuable — GLP-1-driven weight loss can accelerate joint recovery, and TRT supports the muscle protein synthesis that both peptides are working to rebuild. Discuss stacking options with your physician at your follow-up.

### ***How is my medication sourced?***

All peptides are compounded by Empower Pharmacy, our licensed Houston-based compounding pharmacy partner, under strict quality and sterility standards.

**Important Notice:** This document is for educational purposes only and does not constitute medical advice. All therapies at Harriman Precision Health are physician-supervised and protocols are individualized to your health history and goals. Results may vary. Both BPC-157 and TB-500 are off-label compounded therapies. Patients with a history of cancer or active malignancy should discuss this with their physician prior to initiating TB-500-containing protocols. This material should not be used for self-diagnosis or self-treatment. Questions? Contact us through your patient portal.

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## **References**

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*Research cited includes preclinical (animal model) studies, emerging human data, and published clinical practice guidance from physician-supervised peptide therapy programs. The majority of BPC-157 and TB-500 research has been conducted in animal models; large-scale randomized human clinical trials are ongoing. All therapies at Harriman Precision Health are physician-supervised, used off-label, and protocols are individualized to each patient's health history and goals. This document does not constitute a guarantee of clinical outcomes.*