



LVL UP RX · CLIENT EDUCATION SERIES

THE WOLVERINE BLEND

BPC-157 · TB-500

The Gold Standard Healing Stack Repair Faster. Recover Stronger. Heal Everything.

A complete research guide to BPC-157, TB-500, and the synergy that makes the Wolverine Blend extraordinary.

FOR RESEARCH PURPOSES ONLY

Everything you need to know about BPC-157, TB-500 & the Wolverine Blend

01	What Is BPC-157?	Origins, mechanism & why it's called the Wolverine peptide
02	BPC-157 Key Benefits	Healing, gut repair, joints, inflammation & more
03	What Is TB-500?	Systemic recovery, flexibility & body-wide healing
04	TB-500 Key Benefits	Muscles, tendons, cardiac tissue & neurological repair
05	The Wolverine Blend	Why BPC-157 + TB-500 together is the gold standard
06	Who Is It For?	Ideal candidates, use cases & buyer profiles
07	Protocols & Delivery	How each is administered and combined
08	What to Expect	Week-by-week timeline and realistic outcomes
09	Research Notes	Disclaimer, compliance & selected references

“

BPC-157 and TB-500 don't just complement each other — they operate on entirely different healing pathways, making their combination far more powerful than either compound alone. The Wolverine Blend is the most complete recovery stack in research peptide science.

Table of Contents

What's inside this guide

1

WHAT IS BPC-157?

The Body Protective Compound

What Is BPC-157?

The research peptide nicknamed 'The Wolverine Peptide'

BPC-157 (Body Protective Compound 157) is a synthetic pentadecapeptide — a chain of 15 amino acids — derived from a protective protein naturally found in human gastric juice. First isolated in the 1990s, it has since become one of the most extensively researched healing peptides in existence, with hundreds of studies documenting its regenerative effects across virtually every tissue type in the body.

Unlike many research compounds that target a single mechanism, BPC-157 operates through multiple pathways simultaneously — making it extraordinarily versatile. It is most recognized for dramatically accelerating healing of tendons, ligaments, muscles, gut tissue, and bone, while simultaneously reducing inflammation and protecting neural tissue.

15AMINO ACIDS
pentadecapeptide**1990s**FIRST STUDIED
gastric origin**Oral**OR INJECTABLE
dual delivery**500+**STUDIES
most researched

The Science: How BPC-157 Works

BPC-157 exerts its healing effects through several well-documented mechanisms:

Angiogenesis

Stimulates formation of new blood vessels at injury sites, dramatically improving blood flow and nutrient delivery to damaged tissue — a primary driver of its accelerated healing effects.

Growth Factor Upregulation

Upregulates growth hormone receptors and interacts with the nitric oxide (NO) system — a key signaling pathway for tissue repair, vascular health, and inflammation control.

Tendon Fibroblast Activation

Directly stimulates tendon fibroblasts — the cells responsible for producing collagen in connective tissue — making it particularly effective for tendon and ligament injuries.

Gut Mucosal Protection

Derived from gastric juice, BPC-157 has a natural affinity for gut tissue. It protects and repairs the mucosal lining, promotes healing of ulcers, and has shown effectiveness in IBD-related tissue damage research.

Neuroprotection

Exerts neuroprotective effects by modulating dopamine and serotonin systems, and supporting nerve repair following injury.

WHY "THE WOLVERINE PEPTIDE": BPC-157's healing speed across multiple tissue types led the fitness and biohacker community to nickname it after Marvel's Wolverine — known for near-instant regeneration. The research behind BPC-157's

BPC-157 Key Benefits

Research-supported areas of effect across multiple tissue types

Musculoskeletal Healing

BPC-157 is most recognized for its profound effects on connective tissue repair:

- ◆ Significantly faster tendon-to-bone healing in multiple animal models
- ◆ Accelerated recovery from muscle tears, strains, and surgical incisions
- ◆ Reduced healing time for ligament injuries including ACL and rotator cuff damage
- ◆ Cartilage protection and potential regeneration in joint research
- ◆ Bone fracture healing acceleration documented in studies

Gut Health & GI Repair

One of BPC-157's most unique attributes is its effectiveness on the gastrointestinal system:

- ◆ Heals gastric and intestinal ulcers in research models
- ◆ Repairs intestinal mucosal lining — relevant to leaky gut research
- ◆ Reduces GI inflammation associated with IBD-like conditions
- ◆ Counteracts NSAID-induced gut damage
- ◆ Can be administered orally — survives partial digestion and acts locally in the gut

Inflammation, Pain & Neurological Effects

- ◆ Downregulates pro-inflammatory cytokines at injury sites; systemic anti-inflammatory effects
- ◆ Reduces joint pain and swelling in research models
- ◆ Neuroprotective properties — documented nerve repair and modulation of dopamine/serotonin pathways
- ◆ Protects against traumatic brain injury in preclinical studies
- ◆ Liver and organ protection in alcohol and NSAID toxicity research

AREA	KEY RESEARCH FINDING	DELIVERY
Tendons & Ligaments	Accelerated collagen synthesis & fibroblast activity	SubQ or oral
Gut Lining	Mucosal repair, ulcer healing, anti-inflammatory	Oral or SubQ
Muscles	Faster healing of tears, strains, surgical sites	SubQ
Joints & Cartilage	Pain reduction, cartilage protection	SubQ
Nerves	Neuroprotection, dopamine/serotonin modulation	SubQ
Bone	Fracture healing acceleration	SubQ

BPC-157

Body Protective Compound — Key Benefits

3

WHAT IS TB-500?*Thymosin Beta-4 Fragment — Systemic Recovery*

What Is TB-500?

The body-wide healing signal your cells already understand

TB-500 is a synthetic peptide fragment derived from Thymosin Beta-4 (TB4) — a naturally occurring protein present in virtually every cell of the human body. It was first identified as a key regulator of actin — a structural protein essential for cell movement, division, and repair. TB-500 isolates the active region of TB4 responsible for its most powerful biological effects.

What sets TB-500 apart is its systemic action. Rather than concentrating effects at a local injection site, TB-500 travels throughout the entire body via the bloodstream, identifying and targeting areas of damage, inflammation, or stress wherever they exist — making it uniquely valuable for individuals with multiple injuries, widespread inflammation, or systemic recovery needs.

TB4DERIVED FROM
Thymosin Beta-4**43aa**AMINO ACIDS
full TB4 protein**Sys.**SYSTEMIC ACTION
body-wide**Anti**INFLAMMATORY
& pro-healing

The Science: How TB-500 Works

Actin Regulation & Cell Migration

TB-500 binds to actin monomers, facilitating cell migration to injury sites — mobilizing the body's repair cells and directing them where they're needed most.

Angiogenesis

Promotes the formation of new blood vessels at damaged tissue sites, improving oxygenation and nutrient delivery to accelerate repair.

Anti-Inflammatory Signaling

Powerfully downregulates inflammatory cytokines and mediators throughout the body — one of the most effective systemic anti-inflammatory research compounds available.

Cardiac Tissue Repair

Studied for its unique ability to promote cardiac muscle cell survival and repair following injury — an area of significant ongoing research interest.

Neurological Regeneration

Supports the repair and regeneration of neural tissue, including myelin sheath repair, making it of interest in neurorecovery research.

TB-500

Thymosin Beta-4 Fragment — Systemic Recovery

4

TB-500 KEY BENEFITS*What the Research Suggests*

TB-500 Key Benefits

Systemic healing, flexibility & body-wide tissue repair

Injury Recovery, Flexibility & Cardiac Health

- ◆ Accelerated healing of muscles, tendons, and ligaments — particularly chronic or slow-healing injuries
- ◆ Unique ability to address multiple injuries simultaneously due to systemic distribution
- ◆ Documented improvement in flexibility and range of motion; reduces connective tissue stiffness
- ◆ Promotes cardiomyocyte survival following cardiac stress; studied for cardiac tissue protection
- ◆ Supports vascular repair through angiogenesis stimulation

Neurological Support

- ◆ Supports myelin sheath repair — the protective coating around nerve fibers
- ◆ Studied for potential in peripheral nerve injury recovery
- ◆ May reduce neuroinflammation associated with chronic injury

BPC-157 vs TB-500 — Understanding the Difference

Both compounds heal — but in fundamentally different ways, which is exactly why they work so powerfully together.

	BPC-157	TB-500
Origin	Gastric juice protein fragment	Thymosin Beta-4 fragment
Primary Action	Local & targeted repair	Systemic, body-wide healing
Best For	Specific injuries, gut, tendons	Widespread inflammation, multiple injuries
Delivery	SubQ injection or oral	SubQ injection
Gut Health	Yes — primary strength	Limited
Cardiac Repair	Some evidence	Yes — primary strength
Neural Support	Yes — dopamine/serotonin	Yes — myelin repair
Flexibility	Indirect via inflammation	Yes — direct effect

TB-500

LVL UP[®]

Thymosin Beta-4 Fragment — Key Benefits

W

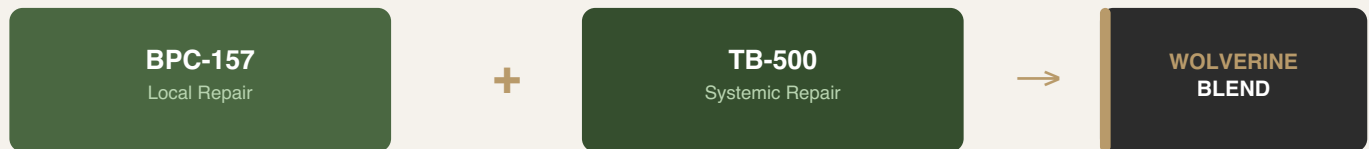
THE WOLVERINE BLEND

BPC-157 + TB-500 · The Gold Standard Healing Stack

The Wolverine Blend

Why BPC-157 + TB-500 is the gold standard healing stack

The Wolverine Blend combines BPC-157 and TB-500 into a single protocol — creating a healing system substantially more effective than either compound used alone. The reason is simple: they work on entirely different but perfectly complementary biological pathways.



The Synergy Explained

Local + Systemic Coverage

BPC-157 excels at concentrated, targeted repair — a specific tendon, the gut lining, a joint. TB-500 travels systemically, seeking out damage throughout the entire body. Together, they ensure no area of damage is left unaddressed.

Dual Angiogenesis Stimulation

Both compounds independently stimulate angiogenesis. When combined, this effect is amplified — flooding injured tissue with blood flow, oxygen, and healing nutrients at a level neither compound could achieve alone.

Complementary Anti-Inflammatory Action

BPC-157 reduces local inflammatory signals at specific injury sites while TB-500 downregulates systemic inflammatory cytokines throughout the body — comprehensive reduction of both localized and chronic inflammation.

Full Connective Tissue Coverage

BPC-157's strength in tendon fibroblast activation and gut affinity complements TB-500's superiority in muscle belly repair and flexibility restoration — covering every layer of connective and soft tissue.

Neural & Cardiac Protection

TB-500's cardiac tissue repair and myelin support combine with BPC-157's dopamine/serotonin modulation to provide comprehensive neuroprotective coverage — uniquely valuable for post-surgical or traumatic injury recovery.

The Wolverine Blend

BPC-157 + TB-500 — The Gold Standard Stack

5

WHO IS IT FOR?

Ideal Candidates & Use Cases

Who Is the Wolverine Blend For?

Ideal candidates and research use cases

Athletes & Active Individuals

Anyone dealing with sports injuries, overuse damage, or the accumulated wear of an active lifestyle. BPC-157 + TB-500 is the most researched peptide combination in the athletic recovery space — used globally for faster return to training.

Post-Surgery Recovery

Individuals recovering from orthopedic surgery or soft tissue repair. Research suggests both compounds may accelerate tissue healing and reduce post-operative inflammation, potentially shortening recovery windows.

Chronic Injury Sufferers

Those with injuries that haven't healed adequately — rotator cuff damage, knee issues, plantar fasciitis, chronic back pain. The systemic reach of TB-500 combined with BPC-157's targeted repair makes this stack particularly relevant.

Gut Health Research

Individuals with compromised gut lining, chronic digestive inflammation, or damage from heavy NSAID use. BPC-157's oral bioavailability allows it to act directly on GI tissue — a unique advantage.

Anti-Aging & Longevity

Older adults experiencing slower recovery, joint degradation, reduced flexibility, or chronic inflammation. The Wolverine Blend addresses tissue-level accelerators of physical aging directly.

High-Performance Professionals

Those whose physical performance or recovery capacity is critical to their livelihood — professionals, first responders, or anyone for whom downtime has significant consequences.

6

PROTOCOLS & DELIVERY

Application Methods & General Guidance

Protocols & Delivery

How the Wolverine Blend is administered in research contexts

Both compounds are typically administered via subcutaneous (SubQ) injection using a standard insulin syringe. BPC-157 has the additional option of oral administration for gut-specific research.

COMPOUND	DELIVERY	TIMING	NOTES
----------	----------	--------	-------

Who Is It For?

Ideal Candidates & Delivery Protocols

BPC-157	SubQ or oral	Morning or post-workout	Oral for gut focus; SubQ for systemic/injury
TB-500	SubQ injection	Flexible — 2x weekly	Often dosed less frequently than BPC-157
Wolverine Blend	SubQ	Same syringe if combined	Consult provider for personal protocol

Reconstitution: Add bacteriostatic water slowly to lyophilized powder. Swirl gently — do not shake. Refrigerate after reconstitution. Use within 30–60 days. Never freeze reconstituted peptides.

Who Is It For?

Ideal Candidates & Delivery Protocols

7

WHAT TO EXPECT

Timeline, Results & Realistic Outcomes

What to Expect

A realistic, research-grounded timeline for the Wolverine Blend

Results from BPC-157 and TB-500 tend to build progressively. BPC-157's effects typically emerge faster — particularly for acute injuries and gut symptoms — while TB-500's systemic benefits develop over several weeks.

TIMEFRAME	BPC-157	TB-500
Days 1–7	Reduced local pain & inflammation; gut improvement if oral	Early anti-inflammatory effects; gut & systemic effects initiate
Week 2–3	Noticeable healing acceleration; tendon pain reducing	Improved flexibility & range of motion begins
Week 4–6	Significant repair progress; chronic injuries improving	Widespread inflammation substantially reduced
Week 8–12	Near-complete healing for many acute injuries	Full flexibility gains; cardiac support accumulating
Ongoing	Maintenance for chronic conditions or injury prevention	Continued systemic anti-aging support

WOLVERINE BLEND COMBINED EFFECT: Days 1–7: pain reduction begins across all areas. Weeks 2–4: injury healing + flexibility improving simultaneously. Weeks 6–8: comprehensive recovery across all areas. Week 8–12: most users report transformative results. Ongoing: long-term tissue quality, resilience & injury resistance.

Side Effect Profile

Both BPC-157 and TB-500 are considered among the most well-tolerated research peptides available:

- Injection site: mild temporary redness or swelling; resolves quickly
- BPC-157 oral: rare mild GI discomfort at higher doses in some research subjects
- TB-500: occasional mild fatigue reported in early protocol phase
- No documented hormonal disruption, receptor downregulation, or systemic toxicity
- No known negative interactions with most common supplements
- Both compounds are bioidentical — derived from proteins the human body naturally produces

As with all research compounds, individual responses vary. Starting at conservative doses and assessing tolerance before increasing is always recommended. Consulting a qualified healthcare provider before beginning any protocol is strongly advised.

Research Notes & Disclaimer

Please read carefully.

All products offered by LVL UP RX are sold strictly as research compounds for investigational use only. They are not intended for human consumption and are not approved by the FDA or any equivalent regulatory authority for therapeutic, preventive, or diagnostic use in humans.

The Research Landscape

BPC-157 and TB-500 both have extensive preclinical research bases — primarily in rodent and in vitro models — with a growing body of anecdotal evidence from human research communities. BPC-157 has been studied in over 500 published papers. Human clinical trials remain limited but are ongoing. This guide presents findings accurately and without exaggeration.

What We Will Never Claim

- That BPC-157 or TB-500 treats, cures, or prevents any disease or medical condition
- That these products are FDA approved or safe for human use as medicine
- That results are guaranteed — individual responses vary significantly
- That the Wolverine Blend replaces medical treatment or professional healthcare guidance

Selected Research References

- Chang, C.H. et al. (2011). The promoting effect of pentadecapeptide BPC 157 on tendon healing involves tendon outgrowth, cell survival, and cell migration. *Journal of Applied Physiology*.
- Sikiric, P. et al. (2018). Brain-gut Axis and Pentadecapeptide BPC 157: Theoretical and Practical Implications. *Current Neuropharmacology*.
- Sikiric, P. et al. (2013). Stable gastric pentadecapeptide BPC 157 in trials for inflammatory bowel disease. *Current Pharmaceutical Design*.
- Goldstein, A.L. et al. (2012). Thymosin beta4: A multi-functional regenerative peptide. *Expert Opinion on Biological Therapy*.
- Bock-Marquette, I. et al. (2004). Thymosin beta4 activates integrin-linked kinase and promotes cardiac cell migration, survival and cardiac repair. *Nature*.
- Smart, N. et al. (2007). Thymosin beta4 induces adult epicardial progenitor mobilization and neovascularization. *Nature*.
- Ruff, D. et al. (2010). A phase I/IIa trial of thymosin beta4 in patients with pressure ulcers. *Annals of the New York Academy of Sciences*.

“

At LVL UP RX, we believe the most valuable thing we can give our customers alongside our products is knowledge. An informed decision is always the best decision. The Wolverine Blend represents decades of research — and we're here to help you understand every part of it.

LVL UP RX · PEPTIDES · SCIENCE-BACKED. RESULTS-DRIVEN.

For research use only. Not for human consumption. Consult a qualified healthcare professional.