

TB-500 Comprehensive Dosing Guide (5 mg & 10 mg Specifications)

I. Overview

TB-500 is a synthetic peptide fragment corresponding to the active region of thymosin beta-4 (Tβ4), a naturally occurring 43-amino-acid protein involved in tissue repair and regeneration[1][2]. This educational protocol presents a once-daily subcutaneous-injection regimen with practical dilution ratios for accurate measurement using insulin syringes in research settings. This guideline covers dosing protocols for both 5mg and 10mg vial specifications.

Research Background: Refer to relevant TB-500 peptide reviews for evidence regarding mechanism of action, human and pre-clinical studies, limitations and safety.

II. Dosing & Reconstitution Guidelines

2.1. 5 mg Specification

Reconstitution: Add 3.0mL bacteriostatic water → concentration approx. 1.67 mg/mL

U-100 insulin syringe conversion: 1 unit = 0.01 mL ≈ 16.7 mcg

Post-reconstitution shelf-life: Use within 28 days under refrigeration (2-8°C)[8]; do not freeze reconstituted solution

2.2. 10 mg Specification

Reconstitution: Add 3.0mL bacteriostatic water → concentration approx. 3.33 mg/mL

U-100 insulin syringe conversion: 1 unit = 0.01 mL ≈ 33.3 mcg

Post-reconstitution shelf-life: Use within 28 days under refrigeration (2-8°C)[8]; do not freeze reconstituted solution

Standard / Progressive Protocol (Once-Daily, Subcutaneous Injection)

All specifications follow the identical daily-dose regimen; injection volume (syringe units) varies due to differing concentrations.

Stage	Daily Dose (mcg)	5 mg Specification (1.67 mg/mL)	10mg Specification (3.33 mg/mL)
Weeks 1-2	500 mcg	30 units (0.30 mL)	15 units (0.15 mL)
Weeks 3-4	600 mcg	36 units (0.36 mL)	18 units (0.18 mL)
Weeks 5-8	750 mcg	45 units (0.45 mL)	23 units (0.23 mL)
Weeks 9-12	1000 mcg	60 units (0.60 mL)	30 units (0.30 mL)

Frequency: Once-daily subcutaneous injection.

Protocol Note: This protocol uses the maximum practical dilution volume (3.0mL) to keep per-injection unit counts within a range for reliable accurate measurement. Average total weekly dose is approximately 5 mg, consistent with research protocols[3][4].

III. Reconstitution Procedure

1. Withdraw 3.0 mL bacteriostatic water using a sterile syringe.
2. Inject slowly along the inner vial wall to avoid foam formation.
3. Gently swirl or roll the vial until dissolved. Do not shake.
4. Label with date and concentration; store refrigerated at 2-8°C (35.6-46.4°F), protected from light.

IV. Required Supplies

5.1. 5 mg Specification (8-16-Week Planning)

Peptide vials (TB-500, 5 mg per vial):

8 weeks ≈ 8 vials

12 weeks ≈ 12 vials

16 weeks ≈ 16 vials

Insulin syringes (U-100):

Weekly: 7 syringes (1 per day)

This dosage reference is for informational and research purposes only.
It does not replace professional medical advice and is not for human consumption.

8 weeks: 56 syringes

12 weeks: 84 syringes

16 weeks: 112 syringes

Bacteriostatic water (10 mL vials): Approx. 3.0mL required per vial for reconstitution.

8 weeks (8 vials): 24 mL → 3 × 10 mL vials

12 weeks (12 vials): 36 mL → 4 × 10 mL vials

16 weeks (16 vials): 48 mL → 5 × 10 mL vials

Alcohol swabs: 2 swabs per day (one for vial stopper, one for injection site).

Weekly: 14 swabs

8 weeks: 112 swabs → recommended: 2 boxes ×100-count

12 weeks: 168 swabs → recommended: 2 boxes ×100-count

16 weeks: 224 swabs → recommended: 3 boxes ×100-count

5.2. 10 mg Specification (8-16-Week Planning)

Peptide vials (TB-500, 10 mg per vial):

8 weeks ≈ 4 vials

12 weeks ≈ 7 vials

16 weeks ≈ 10 vials

Insulin syringes (U-100):

Weekly: 7 syringes (1 per day)

8 weeks: 56 syringes

12 weeks: 84 syringes

16 weeks: 112 syringes

Bacteriostatic water (10 mL vials): Approx. 3.0mL required per vial for reconstitution.

8 weeks (4 vials): 12 mL → 2 × 10 mL vials

12 weeks (7 vials): 21 mL → 3 × 10 mL vials

16 weeks (10 vials): 30 mL → 3 × 10 mL vials

Alcohol swabs: 2 swabs per day (one for vial stopper, one for injection site).

Weekly: 14 swabs

8 weeks: 112 swabs → recommended: 2 boxes ×100-count

12 weeks: 168 swabs → recommended: 2 boxes ×100-count

16 weeks: 224 swabs → recommended: 3 boxes ×100-count

V. Protocol Summary

Brief Summary:

Objective: Support tissue repair, wound healing and angiogenesis via mechanisms of active thymosin beta-4 fragment[5][6].

Timing: Daily subcutaneous injection for 8-12 weeks (may extend to 16 weeks per research objectives).

Dose Range: 500-1000 mcg per day with gradual titration (average approx. 5 mg per week).

Reconstitution: Reconstitute vials of different specifications separately with 3.0mL diluent to achieve accurately measurable concentrations.

Storage: Lyophilized powder stored frozen; reconstituted solution refrigerated; avoid repeated freeze-thaw cycles for reconstituted solution.

VI. Dosing Protocol

Starting Dose: 500 mcg once-daily; increase by approx. 100-150 mcg every 2 weeks based on tolerability.

Target Dose: Reach 750-1000 mcg once-daily from Weeks 5-12.

Frequency: Once-daily subcutaneous injection.

Cycle Duration: 8-12 weeks; may extend to 16 weeks per research protocol.

Injection Time: Fixed time each day; systematically rotate injection sites.

VII. Storage Instructions

Proper storage preserves peptide quality and activity.

Lyophilized Powder: Store original sealed vials at –20°C (–4°F) under dry and dark conditions; minimise moisture exposure[7].

Post-Reconstitution: Refrigerate at 2-8°C (35.6-46.4°F). Do not freeze reconstituted solution, as freezing may denature peptide.

Before Use: Allow refrigerated vials to reach room-temperature before opening to reduce internal condensation.

Reconstituted Vial: When bacteriostatic-water preservative is used, use within 28 days[8].

VIII. Important Considerations

Practical points for research-protocol consistency and safety.

Use a new sterile insulin syringe for every injection; dispose immediately into an approved sharps container.

Systematically rotate injection sites (abdomen, thighs, upper arms) to reduce local irritation and prevent lipohypertrophy[9].

Inject slowly; pause briefly before withdrawing the needle to prevent solution reflux.

Document daily dose, injection site and any observations to maintain consistency.

Regulatory Note: TB-500 is prohibited for competitive sport under WADA rules and is not FDA-approved for human administration[10].

IX. Injection Technique

General subcutaneous-injection guidance derived from clinical best-practice resources[14][15].

Wipe vial rubber stopper and skin site with alcohol swabs; allow both to air-dry fully.

Pinch up a skin fold at the injection site; insert needle at 45-90° angle into subcutaneous tissue[14].

Aspiration is not required for subcutaneous injection; inject slowly and steadily[14].

Systematically rotate injection sites among approved areas (abdomen, thighs, upper arms) to prevent lipohypertrophy[9].

Wait 5-10 seconds after injection before withdrawing needle to prevent solution leakage.

Important Disclaimer: This document serves educational- research purposes only and does not constitute medical advice, diagnosis or treatment. TB- 500 is not FDA- approved for human use and is for research- use only. TB- 500 is a prohibited substance in competitive sports per WADA regulations. Always consult a qualified healthcare- provider before commencing any peptide- based protocol. Individual responses may vary; appropriate medical supervision is essential for safety- and- efficacy monitoring.

Research Use Only