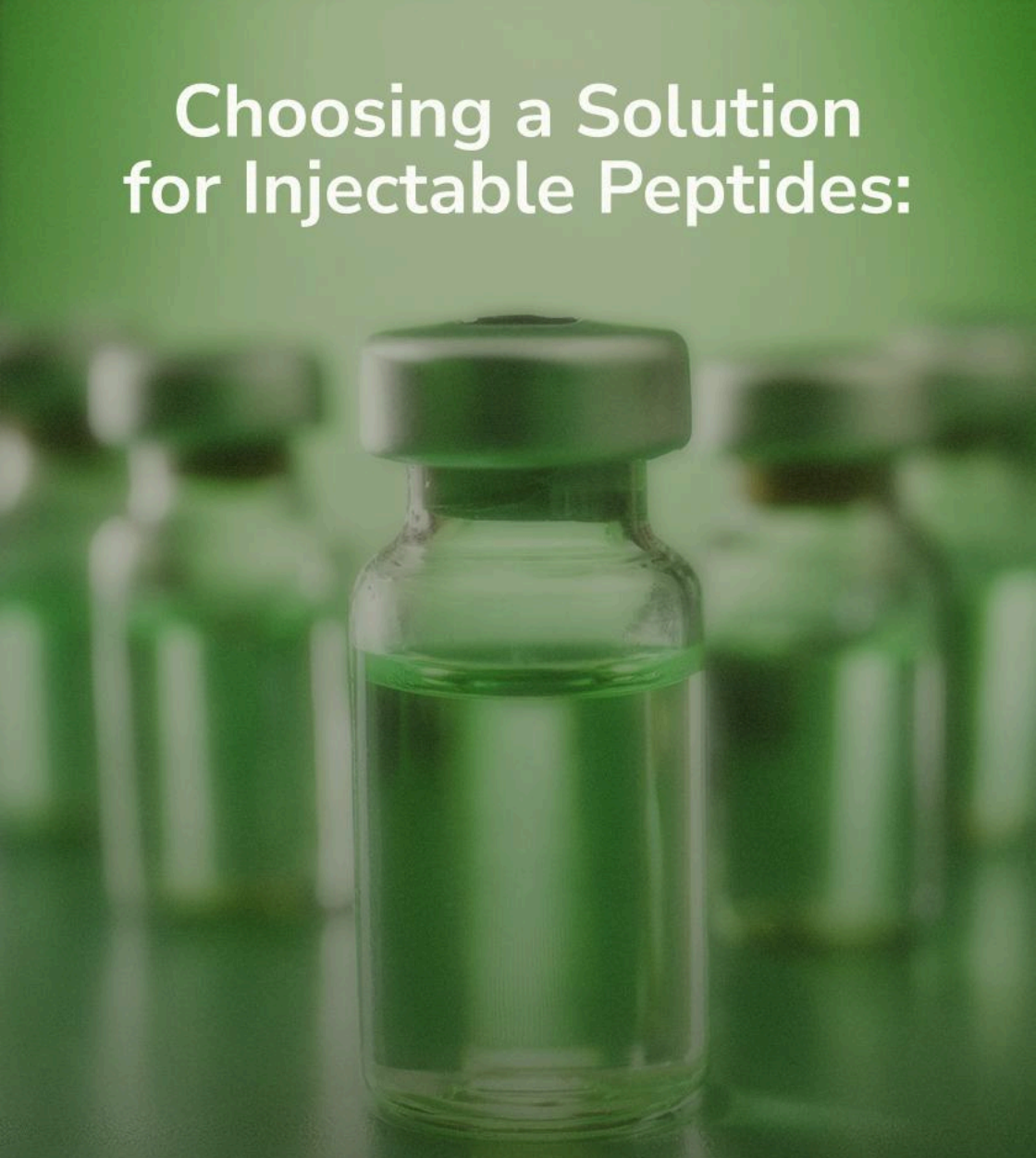
Choosing a Solution for Injectable Peptides:



A Practical Overview

This section outlines which types of solvents are commonly used with injectable peptides and their key limitations. It does not provide preparation or administration instructions. Always follow the official product information and consult a licensed healthcare professional.

Commonly Used Diluents

Sterile Water for Injection (SWFI)

Sterile, preservative-free water for parenteral use. Best suited for single-use reconstitution when preservatives must be avoided.

Limitation: no antimicrobial protection; stability after reconstitution is usually short and peptide-specific.

Bacteriostatic Water (0.9% Benzyl Alcohol)

Sterile water containing a preservative, supplied in multi-dose vials. Allows repeated withdrawals within the labelled in-use period.

Limitation: benzyl alcohol may affect peptide stability and is contraindicated in neonates; not permitted for all products.

For a deeper discussion of its safety role and limitations, see “The Role of Bacteriostatic Water in Safe and Sterile Injections.”

0.9% Sodium Chloride (Normal Saline)

Isotonic sodium chloride solution for injection.
May improve comfort or solubility for certain peptides.

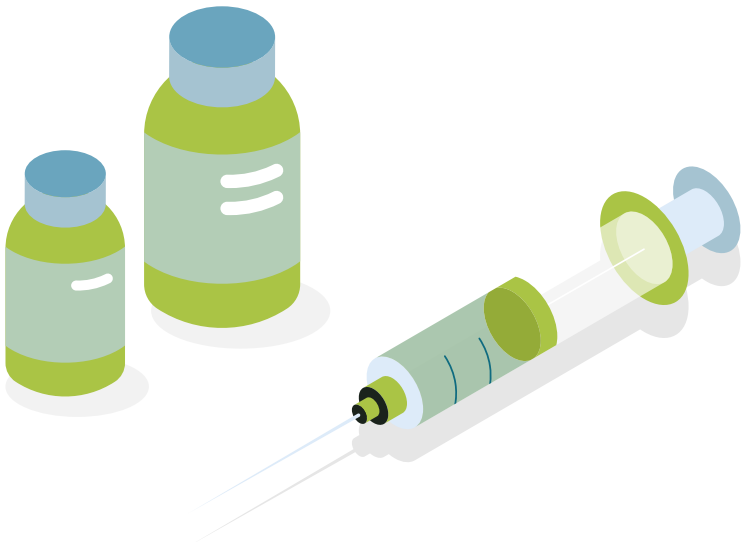
Limitation: ionic strength can reduce stability or promote aggregation; use only if manufacturer-approved.

Not for Routine Clinical Use

Laboratory buffers (e.g., PBS) **and organic solvents** (e.g., DMSO, acetic acid)

Used in research to control pH or dissolve difficult peptides.

Limitation: not approved for routine human injection unless produced under GMP and explicitly authorized for clinical use.



How the Correct Diluent Is Determined

- Manufacturer-approved instructions and compatibility data
- Peptide solubility, charge, and sensitivity to pH and salts
- Presence or absence of preservatives
- Approved storage conditions and in-use shelf-life

Key Safety Notes

- Do not substitute diluents unless explicitly allowed by the manufacturer
- Do not assume compatibility across different peptides
- Reconstituted solutions degrade faster than lyophilized powders
- All handling decisions should be verified with a licensed clinician or pharmacist