

DSIP (Delta Sleep-Inducing Peptide)

Overview

DSIP (delta sleep-inducing peptide) is a naturally occurring nonapeptide (9 amino acids long) found in various bodily tissues. It promotes sleep by targeting specific areas of the brain and can easily cross the blood-brain barrier. DSIP is known to influence the circadian rhythm and is found in lower concentrations in patients with conditions such as schizophrenia and depression.

What Does DSIP Do?

While extensively studied for over 40 years, the precise mechanism of action for DSIP remains partially understood. Key points include:

- **Sleep Stages:** There are five stages of sleep (Stages 1-4 and REM). Stages 3-4 are considered “deep sleep” or “delta sleep,” characterized by slow brain waves.
 - **Cellular Repair:** DSIP not only helps with sleep disturbances but also supports cellular repair, improves REM sleep, resets circadian clock genes, and suppresses paradoxical sleep.
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Potential Benefits of DSIP

Research suggests that DSIP may offer various health benefits, including:

- **Enhanced Deep Sleep:** Improves sleep quality by facilitating deeper sleep rather than inducing sleep faster.
 - **Treatment of Withdrawal Syndromes:** Used in experiments for withdrawal symptoms since the 1980s with good tolerance, except for mild headaches in some patients.
 - **Hormone Optimization:** May support hormone levels, such as:
 - **Increased Luteinizing Hormone (LH):** Potentially increases testosterone levels.
 - **Growth Hormone (GH):** Enhances GH secretion, further improving sleep quality.
 - **Seizure Prevention:** Some studies in rats suggest potential for seizure prevention.
 - **Pain Reduction:** A pilot study found it may reduce chronic pain related to migraines and tinnitus.
 - **Antioxidant Properties:** In vitro studies indicate potential antioxidant effects, reducing cellular damage.
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Potential Side Effect

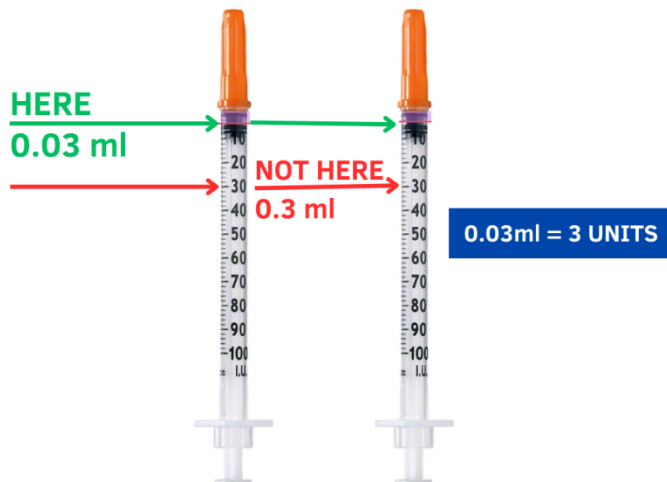
- **Possible Build-Up of Tolerance:** May require higher doses over time.
 - **Dose Sensitivity:** Too little may have no effect; too much can cause excessive sleepiness or paradoxical insomnia.
 - **Injection-Related Side Effects:** Pain and redness at the injection site.
 - **Other Side Effects:**
 - Headaches
 - Nausea
 - Potential increase in body temperature
 - **Drug Interactions:** The effects of DSIP may be blocked if taking Naloxone.
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Dosage Information

Recommended Starting Dose:

- **0.06mg** (0.03ml or 3 units) injected subcutaneously 1-3 hours before bedtime, no more than twice a week to avoid diminishing response.

0.03ml - 3 units (Not 30 UNITS)

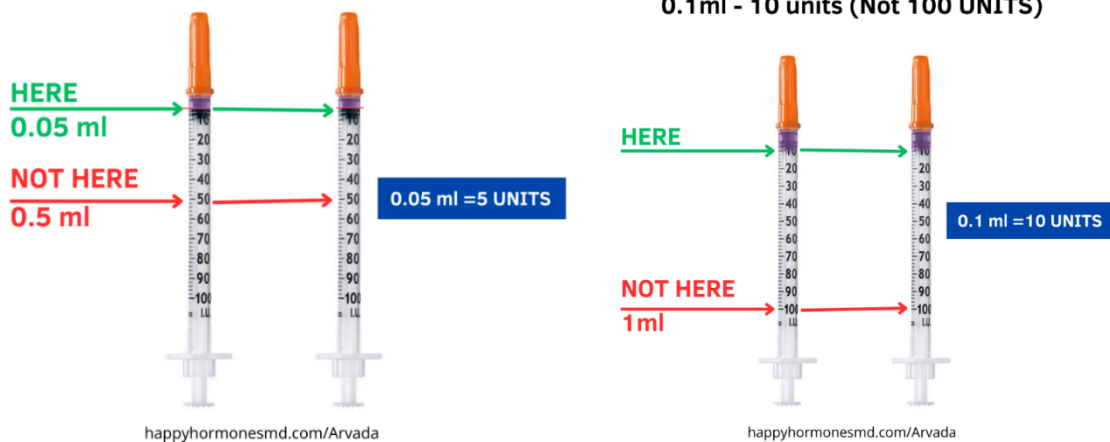


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Possible Dose Adjustment:

- May increase to **0.1mg – 0.2mg** (0.05ml – 0.1ml or 5-10 units) if no improvement with 0.06mg.

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- Caution: **More is not better!** Higher doses can lead to excessive sleepiness or even insomnia.

Cost

DSIP is currently only available as a research peptide. Please see document titled “Research Peptide Information” in the Education Folder under Records in the patient portal.

DSIP 6mg Vial (2mg/ml): \$93.50 (Includes shipping and bacteriostatic water for reconstitution). *(One vial lasts several months.)*

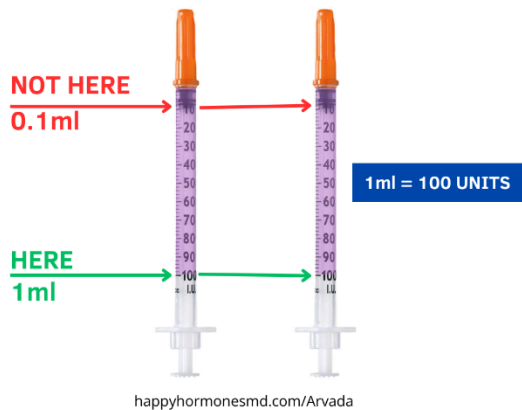
Reconstitution Instructions

IMPORTANT:

- Follow the instructions below regarding the amount of bacteriostatic water to use when reconstituting the peptide. **DO NOT** follow the instructions that come with the peptide.
- **Do NOT** throw away the vial of bacteriostatic water!!! It is a multiuse vial and can be used for your next order!

Inject **3 ml of bacteriostatic water** into the vial of powder (**3ml = 300 units**). You will need to inject 3 full 1ml syringes of water into vial.

1 ml - 100 units (Not 10 UNITS)



- See the **document** titled “*Reconstituting Medications in Powder Form*” in the Education Folder in the patient portal.
- See the following **Instructional videos** in the Education Folder in the patient portal:
 - “*Reconstituting Powdered Medications*”
 - “*Injection Video – Introduction*”
 - “*Injection Video – Drawing Up the Medication*”
 - “*Injection Video – Administering the Medication*”

Storage and Stability

- Vials are shipped as lyophilized powder, requiring no refrigeration during shipping.
- In Lyophilized Form:
 - Stable for up to 3 years in the freezer and 2 years in the refrigerator.
 - Protect from light.
- Once Reconstituted:
 - Stable for 6 weeks.
 - Must be refrigerated and kept away from light.
 - Avoid placing vials in the refrigerator door to prevent degradation from frequent temperature changes.

Important Disclosures

- These statements have not been evaluated by the US Food and Drug Administration (FDA).
 - DSIP is not intended to diagnose, treat, cure, or prevent any disease.
 - Compounded drugs and research peptides are not FDA-approved but are produced under strict quality control measures.
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Quality Assurance

- All peptides are subjected to third-party testing with publicly available Certificates of Analysis (COA).
- Testing includes:
 - RP-HPLC (Reversed-Phase High-Performance Liquid Chromatography)
 - Mass Spectrometry (MS)
 - Sterility Testing
 - Additional tests meeting or exceeding U.S. Pharmacopeia (USP) and USP-National Formulary (NF) regulations.

The manufacturer ensures quality, safety, and efficacy, complying with regulatory standards.
