

MOTS-C Overview

What is MOTS-c?

MOTS-c (Mitochondrial Open Reading Frame of the 12S rRNA-c) is a naturally occurring peptide encoded by mitochondrial DNA. Unlike most peptides, which are produced from nuclear DNA, MOTS-c originates from the mitochondria and acts as a signaling molecule involved in energy metabolism.

MOTS-c has been studied for its potential role in improving metabolic health, insulin sensitivity, exercise performance, and healthy aging. It is considered an investigational peptide and is not FDA-approved for anti-aging, weight loss, or wellness.

How Does MOTS-c Work?

MOTS-c helps regulate cellular metabolism by:

- Improving insulin sensitivity
- Increasing glucose uptake into skeletal muscle
- Activating AMPK (AMP-activated protein kinase), often referred to as the body's "metabolic master switch"
- Encouraging cells to utilize fat and glucose more efficiently
- Supporting mitochondrial function and energy production
- Reducing metabolic stress during aging

Unlike GLP-1 medications, MOTS-c does not significantly suppress appetite. Instead, it helps the body become more metabolically efficient.

Potential Benefits

- Improved insulin sensitivity
- Enhanced metabolic flexibility
- Increased cellular energy production
- Better exercise endurance and recovery
- Support for fat loss when combined with diet and exercise
- Improved mitochondrial health
- Potential support for healthy aging and longevity
- May help preserve lean muscle during weight loss
- Improved overall energy levels

Most evidence comes from animal studies and early human research. More large clinical trials are needed.

Unlike growth hormone peptides, MOTS-c does not need to be administered daily.

When to Inject

MOTS-c may be administered:

- In the morning
- Before exercise
- At any consistent time of day

Inject subcutaneously in the abdomen, thigh, or upper arm, rotating injection sites.

Potential Side Effects

MOTS-c is generally well tolerated. Possible side effects include:

- Mild injection-site irritation
- Temporary fatigue after injection
- Mild headache
- Nausea (uncommon)
- Temporary muscle soreness

Because human research is still limited, long-term safety has not been fully established.

Recommended Monitoring

Depending on treatment goals, consider monitoring:

- Fasting glucose
- Hemoglobin A1c
- Fasting insulin
- Comprehensive Metabolic Panel (CMP)
- Lipid panel
- Weight and body composition
- Waist circumference
- Blood pressure

Routine IGF-1 monitoring is not necessary, as MOTS-c does not directly stimulate growth hormone production.

Clinical Pearls

- MOTS-c appears to work best when combined with regular exercise, particularly resistance training and aerobic activity.
- It may complement GLP-1 receptor agonists by improving metabolic efficiency and insulin sensitivity, though clinical data on combination therapy are still limited.
- Unlike stimulants, MOTS-c does not typically increase heart rate or blood pressure.
- Many patients report improvements in energy, exercise endurance, and recovery over several weeks of therapy.
- Because it targets mitochondrial function rather than appetite, MOTS-c may be particularly useful for patients focused on longevity, metabolic health, and preserving lean muscle.

Prices and dosing:

- **\$180** for 10 mg vial
- **We** mix the powder with 1 ml of solution
- **Keep refrigerated after mixing**
- 100 units in the vial after mixing
- Starting dose is injection of 25 units in fatty area such as belly, love handle, back of the arm, or muscle - shoulder, leg, gluteus
- 4 shots total administered 1 shot every 5 days (example January 1st shot#1, January 6th shot #2, January 11th shot #3, January 16th shot #4)
- wait 3 months and repeat as needed, can increase the dose if desired
- **Purchase multiple vials at the same time and receive 5% off**
- **Available for pick up at 700 court street, suit 3, Clearwater FL 33756**