SS-31 PROTOCOL

Clinically Studied mitochondria-targeted tetrapeptide
Mitochondrial Efficiency:

What it is

SS-31 *(Elamipretide) is a mitochondria-targeted tetrapeptide that binds cardiolipin on the inner mitochondrial membrane.*
Result: It doesn't "stimulate" mitochondria! This is energy economics at the cellular level.
It stabilizes the machinery so energy production stops leaking and starts compounding again
Mitochondrial Function → ATP Efficiency → Redox Balance

This is infrastructure repair, not stimulation.

Axis: Mitochondrial

Vial Composition

Component	Amount
SS-31	30 mg
Total per vial	**30 mg**
Reconstitution: bacteriostatic water	1 mL
Final concentration: mg/mL (total peptide/ml)	30.0 mg/mL

Dosing Protocol

Parameter	Specification
Injection timing	Morning (AM)
Dose (total) [5-10mg]	**5.0 mg**
SS-31	5.0 mg
Injection volume	0.17 mL (≈17 insulin units)
Frequency: days/week	5

Protocol Length

	Time Frame
Total duration: weeks	12
Active dosing days: days	60
Vials:	10

Supply Calculation

Item	Quantity
Total peptide required	300 mg
Vials required	10 vials (30 mg each)
Insulin syringes	60
BAC water	10 mL (recommended 1-10 mL vials

SS-31 PROTOCOL NOTES

SS-31 is a mitochondrial infrastructure compound, not a stimulant, hormone, or metabolic shortcut. Its value lies in repairing efficiency, not forcing output. Mechanistically, SS-31 binds to cardiolipin on the inner mitochondrial membrane, stabilizing the electron transport chain and reducing energy loss from electron leak. The result is improved ATP production with lower oxidative stress, restoring clean cellular energy signaling rather than artificially increasing demand.

Clinically, SS-31 shines in cases where patients are doing “everything right” but still feel flat—adequate sleep, nutrition, TRT or GH support in place, yet energy, endurance, or recovery remain suboptimal. This is often a mitochondrial quality issue, not a hormone deficiency. SS-31 addresses that directly by improving how existing mitochondria function, rather than stimulating new pathways.

The effects are gradual and cumulative, not acute. Patients typically do not “feel” SS-31 immediately; benefits emerge over weeks as cellular efficiency compounds. This makes it particularly useful as a foundational layer before or alongside more aggressive protocols such as fat loss, recomposition, endurance training, or GH-axis optimization. In practice, SS-31 often unlocks results from other compounds that previously underperformed.

SS-31 does not directly cause fat loss, muscle gain, or stimulation. Instead, it improves the energy economics of the cell, allowing downstream interventions—exercise, peptides like MOTS-c or 5-Amino-1MQ, and GH signaling—to work more effectively. For this reason, it is best positioned as a force multiplier rather than a standalone solution.

From a protocol design perspective, SS-31 is clean, non-disruptive, and system-supportive. It carries minimal downside, no endocrine suppression, and no tolerance issues when used in defined cycles. This makes it well suited for longevity-oriented patients, metabolically stressed individuals, and high performers who need durability rather than stimulation.

In short: SS-31 doesn’t push the system harder—it fixes the engine so effort finally pays off.