Peptide Perspectives™

THE LIVER SUPPORT STACK

Peptides, Antioxidants & Cellular Liver Health



THE LIVER'S KEY FUNCTIONS

- **Metabolic Processing** — Manages fats, glucose, and amino acids (e.g., triglycerides, insulin sensitivity).
- **Bile & Drug Processing** — Produces bile, helps digest fats, and breaks down medications and toxins.
- **Glutathione & Detox Defense** — Produces glutathione (GSH) to neutralize reactive compounds and oxidative stress.
- **Cellular Energy (ATP)** — Supports mitochondrial function and overall metabolic health.

KEY TAKEAWAY

- The liver is central to metabolism, detoxification, and cellular energy.
- Targeting mitochondrial function, redox balance, and inflammation may support liver health.
- Peptide stacks are experimental with no proven human benefit for MASH or liver fibrosis.

FOUR KEY PATHWAYS FOR LIVER HEALTH

Mitochondrial Stress & Cardiolipin

- Protects mitochondrial membranes (e.g., cardiolipin).
- May improve energy production and reduce oxidative damage.

AMPK Metabolic Adaptation

- A cellular "metabolic switch" that improves fat utilization.
- Supports insulin sensitivity and reduces liver fat accumulation.

Glutathione Redox Balance

- Increases antioxidant defenses (e.g., glutathione, GSH).
- Helps neutralize oxidative stress and reactive compounds.

Inflammation & Fibrosis

- May reduce pro-inflammatory signaling (e.g., NF-κB).
- Targets pathways involved in liver scarring (fibrosis).

FIVE EXPERIMENTAL STACKS: COMMUNITY DOSING (NOT VALIDATED)

MOTS-C + SS-31

- Targets metabolic signaling and mitochondrial function.
- May support energy, fat metabolism, and liver health (preclinical).

COMMUNITY-REPORTED DOSING (NOT VALIDATED)

MOTS-C	5 mg SC 3×/week or 10 mg SC 2×/week
SS-31	5–10 mg SC daily

OVAGEN (EDL) + SS-31

- Ovagen: experimental bioregulator with reported liver and metabolic effects (preclinical).
- SS-31: mitochondrial protection and cellular resilience.

COMMUNITY-REPORTED DOSING (NOT VALIDATED)

Ovagen (EDL)	Inconsistent reports: • 100–200 mcg daily for 10–20 days OR • 1–2 mg daily for ~10 days
	⚠ *Ranges conflict; neither validated.*
SS-31	5–10 mg SC daily

MOTS-C + HUMANIN

- MOTS-C: supports mitochondrial function and metabolic health.
- Humanin: mitochondria-derived peptide studied for cell survival and stress resistance.

COMMUNITY-REPORTED DOSING (NOT VALIDATED)

MOTS-C	5 mg SC 3×/week or 10 mg SC 2×/week
Humanin (native)	0.5–5 mg SC once daily or several times/week (very variable).

⚠ *Note: Native Humanin (SHLP-1) is different from the HNG analogue. No published human dosing trial.*

SS-31 + HUMANIN

- SS-31: stabilizes mitochondrial membranes and reduces oxidative stress.
- Humanin: may help reduce cellular stress and support mitochondrial health.

COMMUNITY-REPORTED DOSING (NOT VALIDATED)

SS-31	5–10 mg SC daily
Humanin (native)	0.5–5 mg SC once daily or several times/week (very variable).

⚠ *Note: No established human dose; high uncertainty.*

MOTS-C + GLUTATHIONE SUPPORT

- MOTS-C: metabolic and mitochondrial support.
- NAC and glutathione are antioxidant supports that may increase glutathione (GSH) levels and support liver function.

COMMUNITY-REPORTED DOSING (NOT VALIDATED)

MOTS-C	5 mg SC 3×/week or 10 mg SC 2×/week
NAC (oral)	600–1,200 mg/day
Glutathione (oral)	250–1,000 mg/day

Note: Not tested in combination with MOTS-C for liver disease.

⚠ COMMUNITY FIGURES ARE ANECDOTAL, NOT SAFE OR EFFECTIVE TREATMENT DOSES. NO LIVER-SPECIFIC STACK PROTOCOL EXISTS.

COMPLEMENTARY SUPPLEMENTS

(RESEARCH CONTEXT & TYPICAL RANGE)

NAC (N-Acetylcysteine)	**600 – 1,200 mg/day** Supports glutathione, antioxidant defense, and liver health.
Glutathione (Oral)	**250 – 1,000 mg/day** May increase antioxidant capacity (oral absorption is variable).
Omega-3s (EPA + DHA)	**1 – 4 g/day (combined EPA+DHA)** Supports liver fat reduction and inflammation (studied in MASLD/MASH).
Alpha-Lipoic Acid (ALA)	**300 – 600 mg/day** Antioxidant that may improve insulin sensitivity and liver markers.
Vitamin E (α-tocopherol)	**800 IU/day** ⚠ Only in selected clinical studies (e.g., non-diabetic MASH). Not for universal use.
Choline	**Adequate intake** (e.g., 425 mg/day men). 550 mg/day women) Supports liver fat metabolism and VLDL export.

CLINICAL EVIDENCE: APPROVED & INVESTIGATIONAL

Semaglutide (*GLP-1 agonist*) — ✓ **FDA-APPROVED for selected MASH (F2–F3 fibrosis)** Improved liver fat and MASH resolution vs. placebo in clinical trials.

Resmetirom (*THR-β agonist*) — ✓ **FDA-APPROVED for MASH (F2–F3 fibrosis)** Reduces liver fat and improves histology (MASH resolution and fibrosis).

Tirzepatide (*GLP-1/GIP agonist*) — **Phase 2 evidence (not approved)** Reduced liver fat and improved metabolic markers; larger trials are ongoing.

FORZINITY® (Elamipretide)

- ✓ FDA-APPROVED only for Barth syndrome (a rare genetic disorder).
- ⚠ Distinct from community SS-31 peptide regimens and not approved for liver disease.

CLINICAL ENDPOINTS IN LIVER RESEARCH

- **ALT / AST** – liver cell injury (often improve with treatment).
- **MRI Liver Fat** – quantifies liver fat content (e.g., MRI-PDFF).
- **Elastography** (e.g., FibroScan®) – measures liver stiffness (a marker of fibrosis).
- **Liver Biopsy** – gold standard for confirming inflammation (MASH) and fibrosis stage.
- **Clinical Liver Events** – progression to cirrhosis, liver failure, or liver-related complications.

SAFETY & IMPORTANT CONSIDERATIONS

- ⚠ Supplements can cause liver injury (e.g., high-dose vitamin A, certain herbal products, or multi-ingredient blends).
- ⚠ Monitor liver enzymes (ALT/AST) when using new compounds.
- ⚠ Quality and purity vary widely in research peptides.
- ⚠ Peptide stacks for liver health are experimental with no human MASH or fibrosis benefit.
- ⚠ Discuss any liver concerns with a qualified healthcare provider.

EXPERIMENTAL PEPTIDE STACKS HAVE NOT SHOWN HUMAN MASH OR FIBROSIS BENEFIT.

Educational research overview / November 2026 / Not medical advice