



SARA SUTHERLAND FITNESS · STRONG & LEAN METHOD

# PEPTIDES

# 101

*The science-backed start to feeling well.*

## INSIDE THIS GUIDE

- Understand how peptides actually work — without the hype.
- Learn which categories matter and which questions to ask.
- Walk through 33 peptide profiles in plain language.
- Know exactly how to get started — with real medical support.

*Curated for clients of Sara Sutherland Fitness*

Clinical material adapted with permission from

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SECTION ONE

# What peptides are and how they work.

*Plain language. Real science. No hype.*



## WHAT ARE PEPTIDES?

# The cellular switches that restore function.

*Peptides are short chains of amino acids that act like biological text messages — precisely signaling your cells to repair, regenerate, defend, or optimize, without overriding your body's natural intelligence.*

## The simple version

Imagine your body as a big orchestra. Peptides are the sheet music — guiding each instrument (muscles, brain, immune system, skin) to play the right note at the right time. When your body forgets what to do because of stress, aging, or illness, peptides come in and remind it.

## KEY FUNCTIONS

### RESTORATION

Reignite lost function — mitochondrial energy, immune coordination.

### REGENERATION

Support tissue repair — muscle, gut, skin, brain.

### NEUROMODULATION

Improve mood, focus, and resilience to stress.

### IMMUNE BALANCE

Calm autoimmunity, fight infections, reduce inflammation.

### METABOLIC

Shift fuel use, increase insulin sensitivity, reduce visceral fat.

### LONGEVITY

Support telomere function, sleep architecture, biologic youth.

## WHY PEPTIDES WORK SO WELL



# They're built from the language your body already speaks.

1

**BIOIDENTICAL**

Most peptides mimic signals your body already makes. Your cells recognize them as familiar — and respond accordingly.

2

**TARGETED**

Each peptide has a specific function, organ system, or receptor it acts on. You're not flooding the body with a broad signal.

3

**INTELLIGENT**

Many peptides work through feedback loops — turning on and off based on the body's real-time need.

4

**STACKABLE**

Different peptides can be paired safely and synergistically for compound benefit.

5

**ADAPTABLE**

As your conditions change, peptides often respond in real time — without overcorrection.

*When your body forgets what to do — peptides come in and remind it.*



SECTION TWO

# Safety & how to get started.

*What to look for, what to avoid, and where physicians come in.*

## ARE PEPTIDES SAFE?



# Yes — when used responsibly.

*And especially when prescribed and monitored by a licensed physician.*

## THE SAFETY TRUTH (NOT THE FEAR-BASED HYPE)

Peptides are not synthetic hormones or broad-spectrum pharmaceuticals. Most are bioidentical to signals your body already makes — meaning your cells already know how to respond. They work with your body, not against it. They fade out naturally — no accumulation, no toxicity. When you stop, your body simply returns to baseline.

## WHY PEPTIDES ARE SAFE WHEN USED CORRECTLY

### BIOIDENTICAL

Your body recognizes them as familiar.

### SHORT-ACTING

Short half-life means low risk of buildup.

### SELF-REGULATING

Many rely on receptor feedback loops to avoid overstimulation.

### CLINICALLY USED

Some are FDA-approved for HIV, burns, cancer recovery, brain trauma.

### PRECISELY DOSED

Micro to physiologic doses — never mega-doses.

## HOW TO GET STARTED



# You don't need to know everything.

*You just need the right guidance, strategy, and starting point.*

## 1 STEP 1 Clarify your goal

*Start with one outcome — that determines your ideal peptide or stack.*

- Regain energy
- Sleep deeper
- Calm inflammation
- Improve recovery
- Burn visceral fat

## 2 STEP 2 Work with someone who knows the map

*Peptides aren't plug-and-play supplements. They're power tools — and you need someone who knows which wire to cut (or activate).*

- Select the right peptides — and avoid ones you don't need
- Customize dosing and timing
- Stack peptides safely with your supplements or meds
- Track biomarkers so you see real results



## HOW TO GET STARTED

# You don't need to know everything.

*You just need the right guidance, strategy, and starting point.*

## 3 STEP 3 Cycle intelligently

*Peptides work best in targeted sprints, not indefinite marathons.*

- 6–12 week cycles are common
- Then rest, reassess, and retarget
- Many peptides work even better when pulsed

## 4 STEP 4 Support the system

*Peptides are powerful — **but they don't replace the foundation**: sleep, movement, micronutrients, gut integrity, mitochondrial function. Think of peptides as the spark — not the fuel tank.*

- Sleep — the multiplier
- Movement — strength + conditioning
- Micronutrients — protein-forward nutrition
- Gut + mitochondrial function — supported, not assumed

## PEPTIDES TO GET STARTED WITH



# The map. The full library.

Each peptide in this guide is profiled in the pages that follow.

## WELLNESS PEPTIDES

- 5-Amino-1MQ
- AOD-9604
- BPC-157
- Cerebrolysin
- CJC-1295
- DSIP
- EPITALON
- GHK-Cu
- GHRP-2
- GHRP-6
- Humanin
- Ipamorelin
- Kisspeptin-10
- KPV
- LL-37
- MELANOTAN I
- MELANOTAN II
- MOTS-C
- NAD+
- OXYTOCIN
- PT-141
- SELANK
- SEMAX
- SERMORELIN
- SS-31
- TB-500 / THYMOSIN BETA-4
- TESAMORELIN
- THYMOSIN ALPHA - 1

## METABOLIC / GLP FAMILY

- **GLP-1SM**  
*The Satiety Signal*
- **SEMAGLUTIDE**  
*The Satiety Signal*
- **GLP-2TZ**  
*The Dual-Powered Powerhouse*
- **TIRZEPATIDE**  
*The Dual-Powered Powerhouse*
- **GLP-3RT**  
*The Triple Threat Metabolic Accelerator*

*"Peptides don't replace your biology. They help it remember how to heal, restore, and thrive."*

— Dr. Seeds

# 5-AMINO-1MQ

## *The Metabolic Unblocker*

### WHAT IS IT?

5-Amino-1MQ is a small molecule that inhibits NNMT, an enzyme that interferes with metabolic efficiency and NAD<sup>+</sup> production.

### HOW DOES IT WORK?

NNMT activity increases as we age, especially in fat cells, leading to a sluggish metabolism and increased fat storage. This compound essentially removes the brakes from your metabolism. Precision-tuning so your engine runs cleaner, hotter, and more efficiently — with fewer byproducts (fat)

### TOP USE CASES

- 1 Fat loss**  
Reduction in fat cell size and increase metabolic activity, especially in stubborn visceral fat. Often used in body recomposition protocols.
- 2 Metabolic Optimization**  
Increases NAD<sup>+</sup> levels, supporting better insulin sensitivity, glucose metabolism, and mitochondrial efficiency.
- 3 Energy & Endurance Support**  
Boosts cellular energy output, making it appealing to those with chronic fatigue or low stamina.
- 4 Anti-Aging & Longevity Support**  
Through NAD<sup>+</sup> elevation and enhanced mitochondrial function, it aligns with other NAD<sup>+</sup>-supportive longevity strategies.
- 5 Cognitive Clarity (Secondary Benefit)**  
By improving energy at the cellular level, some report improved focus and reduced brain fog.

### SIDE EFFECTS

Mild headaches · Increased urination · Appetite suppression · Jitters/wired feeling

### DO NOT USE IF

Past or Active Cancer · Severe Liver or Kidney Dysfunction · Children or Adolescents · Those taking Methylation Modulators

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# AOD-9604

## Targeted Fat Mobilizer

### WHAT IS IT?

AOD-9604 is a special lab-made piece of a hormone your body already makes to grow (called growth hormone). But this tiny piece doesn't make you grow it just helps your body burn fat.

### HOW DOES IT WORK?

AOD-9604 works by increasing fat breakdown (lipolysis) while decreasing fat formation (lipogenesis). It works especially well on visceral and stubborn abdominal fat without impacting blood sugar levels. AOD-9604 is your fat GPS—it tells your body exactly where to burn, without disrupting other hormones or growth signals.

### TOP USE CASES

1

#### Weight Management

Promotes fat breakdown without raising IGF-1 or altering blood sugar levels.

2

#### Bone & Cartilage support

Demonstrates potential benefits for osteoporosis and cartilage repair.

3

#### Joint Health

Improved joint recovery.

### SIDE EFFECTS

Mild headache · Nausea · Injection site reaction/irritation

### DO NOT USE IF

Past or Active hormone-related cancer · Liver or bone disease · Children or Adolescents

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# BPC-157

## *The Cellular Medic*

### WHAT IS IT?

BPC-157 is a peptide derived from a protein found in your stomach—part of your body’s natural healing system. It’s been called the Swiss Army knife of peptides because of how many tissues it helps repair.

### HOW DOES IT WORK?

It works by helping your tissues fix themselves faster, making new blood vessels grow to bring in more healing, calming down inflammation, and protecting the gut, brain, muscles, and joints. It orchestrates the repair process with precision at the site of injury.

### TOP USE CASES

1

#### Gut Healing

Helps repair the stomach lining, especially for things like ulcers, IBD, or leaky gut

2

#### Injury Recovery

Speeds healing of muscles, tendons, and ligaments — often used after strains or surgery

3

#### Joint Pain & Arthritis

Reduces swelling and supports tissue repair in joints

4

#### Brain & Nerve Repair

May protect the brain and help nerves heal after injury or trauma

5

#### Post-Surgical Recovery

Used to reduce healing time and scar tissue formation

### SIDE EFFECTS

Injection site irritation (mild redness or soreness if injected under the skin) · Mild dizziness or nausea (rare) · Headaches (occasional)

### DO NOT USE IF

Active Cancer · Severe Cardiovascular Disease · Children or Adolescents

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# CEREBROLYSIN

## *The Brain Rebuilder*

### WHAT IS IT?

Imagine your brain is like a busy city with lots of roads and buildings. Over time, some roads get damaged, and buildings get old. Cerebrolysin is like a team of tiny construction workers that go into your brain to fix broken roads, build new connections, and help the brain talk to itself better.

### HOW DOES IT WORK?

Cerebrolysin's tiny proteins wake up your brain cells and help them heal, grow, and remember things better.

### TOP USE CASES

1

#### Stroke Recovery

Helps brain cells repair and form new pathways after stroke

2

#### Alzheimer's & Dementia

Supports memory, clarity, and slows brain aging (used in Europe)

3

#### Traumatic Brain Injury (TBI)

Aids brain regeneration after concussions or serious injuries

4

#### Cognitive Decline (Aging Brain)

Boosts focus, memory, and neuroplasticity in older adults

5

#### Neurodevelopmental Disorders

Studied in autism and ADHD to improve processing and behavior

### SIDE EFFECTS

Injection site irritation (mild redness or soreness if injected under the skin) · Mild headache · Dizziness or overstimulated; trouble sleeping if taken too late

### DO NOT USE IF

Epilepsy or Seizure Activity · High Blood Pressure Psychiatric Instability · Allergy to Porcine Proteins

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# CJC-1295

## *The Recovery Conductor*

### WHAT IS IT?

CJC-1295 is like a whistle your body blows to say, “Hey, it’s time to grow, repair, and recover!” It’s not growth hormone itself — it just tells your body to make more of your own.

### HOW DOES IT WORK?

Cerebrolysin’s tiny proteins wake up your brain cells and help them heal, grow, and remember things better.

### TOP USE CASES

1

#### **Fat Loss & Body Recomposition**

Encourages lipolysis and lean muscle growth while preserving muscle mass

2

#### **Recovery from Training or Injury**

Speeds up tissue repair and regeneration (great for athletes or aging adults)

3

#### **Sleep & Energy Optimization**

Growth hormone release at night improves deep sleep and energy

4

#### **Skin, Hair, & Joint Health**

Supports collagen production, elasticity, and joint cushioning

5

#### **Anti-Aging & Longevity**

Enhances natural hormone production, reducing age-related decline in strength, metabolism, and focus

### SIDE EFFECTS

Mild water retention or bloating · Mild headache or flushing after injection · Injection site irritation

### DO NOT USE IF

Active cancer or tumor history Unmanaged diabetes · Heart or kidney disease · Children or adolescents

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# DSIP

## *The Deep Rest Rebuilder*

### WHAT IS IT?

DSIP is like a tiny helper in your brain that whispers, “It’s time to rest and heal.” It doesn’t knock you out — it just helps your body slide into deep sleep where healing, hormone repair, and brain detox happen.

### HOW DOES IT WORK?

It restores your circadian engine by supporting natural delta wave activity, regulating cortisol rhythms, and promoting neurotransmitter balance like GABA and serotonin. Imagine it like the night janitor for your brain and body: it shows up when the lights go off and gets all the real work done while you rest.

### TOP USE CASES

1

#### Sleep Optimization

Deepens sleep quality and increases time in delta-wave sleep (Stage 3–4)

2

#### Stress & Cortisol Regulation

Balances HPA axis and may reduce nighttime anxiety or cortisol spikes

3

#### Recovery & Muscle Repair

Enhances growth hormone pulses during sleep — essential for tissue regeneration

4

#### Mood Stabilization

Supports GABA and serotonin balance, improving mood and mental clarity

5

#### Shift Work or Jet Lag Reset

Helps re-align circadian rhythm disrupted by travel or irregular schedules

### SIDE EFFECTS

Mild grogginess if taken too late · Vivid dreams or altered dream patterns · Mild dizziness or sedation

### DO NOT USE IF

Severe depression · Sedatives or benzodiazepines · Epilepsy or seizure disorders · Children or adolescents

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# EPITALON

## *The Telomere Tuner*

### WHAT IS IT?

Epitalon is like a vitamin for your cells' timekeepers, called telomeres - they protect DNA like the plastic ends on shoelaces. As cells divide and we age, they shorten. Epitalon helps your body keep working like it's supposed to — for a lot longer.

### HOW DOES IT WORK?

Epitalon is not a stimulant. It's a biological reprogrammer — nudging your cells to function like they did when you were younger by restoring their blueprint integrity.

### TOP USE CASES

1

#### Longevity & Anti-Aging

Telomere lengthening → slows cellular aging and senescence

2

#### Sleep Optimization

Resets pineal gland output → restores deep, natural sleep cycles

3

#### Immune Function in Aging Adults

Stimulates thymus and bone marrow output, increasing immune surveillance

4

#### Cancer Prevention & Recovery Support

Downregulates oncogene expression and boosts anti-tumor immune signaling

5

#### Hormone & Circadian Rhythm Rebalancing

Normalizes melatonin and biological timing → enhances metabolic function, brain health, and mood

### SIDE EFFECTS

Mild fatigue or "healing tiredness" · Mild sleep disruption early on · Injection site redness

### DO NOT USE IF

Active Cancer · Untreated Autoimmune Disorders · Severe Pineal Gland Disorders · Children or adolescents

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# GHK-CU

## *The Youth Code Messenger*

### WHAT IS IT?

GHK-Cu is like a tiny mailman inside your body. But instead of delivering letters, it delivers messages to your skin, brain, and tissues that say: “Heal this!” “Grow that!” “Calm down!”

### HOW DOES IT WORK?

GHK-Cu is already in our body but levels drop as we age. Supporting levels simply reminds our body how to regenerate, restore, and rejuvenate using its own innate intelligence.

### TOP USE CASES

1

#### **Skin Regeneration & Anti-Aging**

Improves elasticity, smoothness, pigmentation, and collagen structure

2

#### **Hair Regrowth**

Stimulates hair follicle stem cells → increased hair density and reduced shedding

3

#### **Wound & Scar Healing**

Speeds epithelial repair, reduces scar tissue formation

4

#### **Neurological Repair & Cognitive Decline**

Reduces inflammation in brain tissue and supports nerve regeneration

5

#### **Inflammation & Immune Modulation**

Suppresses inflammatory gene expression and supports tissue homeostasis

### SIDE EFFECTS

Mild fatigue or “rebuilding fatigue” · Injection site redness ·  
Need to add Zinc supplement for support

### DO NOT USE IF

Active copper metabolism disorders · Severe metal allergies ·  
Children under the age of 16

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# GHRP-2

## *The Pituitary Primer*

### WHAT IS IT?

GHRP-2 is like a little knock on the door of your pituitary gland, which controls growth hormone (GH). It says, “Hey, it’s time to wake up and make more GH!” Your body listens, and makes more to help heal faster, burn fat, build muscle, and sleep deeper.

### HOW DOES IT WORK?

GHRP-2 doesn’t replace growth hormone — it restarts the signal that tells your body to make more of its own, naturally and rhythmically.

### TOP USE CASES

1

#### **Growth Hormone Deficiency or Age-Related Decline**

Re-activates GH pulses for energy, repair, and metabolism

2

#### **Muscle Recovery & Injury Healing**

Speeds recovery post-training or surgery by boosting IGF-1

3

#### **Body Recomposition & Fat Loss**

Promotes lipolysis and lean mass development when paired with training

4

#### **Sleep Quality Improvement**

Enhances deep, restorative sleep via GH and cortisol modulation

5

#### **Appetite Stimulation (in catabolic states)**

Used in wasting, underweight, or high- stress individuals to support nutrient intake

### SIDE EFFECTS

Mild hunger or appetite spikes · Mild water retention ·  
Numbness or tingling in hands/fingers

### DO NOT USE IF

Active Cancer · Uncontrolled Diabetes or Insulin Resistance ·  
Severe Sleep Apnea

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# GHRP-6

## *The Rebuilder with an Appetite*

### WHAT IS IT?

GHRP-6 is a tiny messenger that walks up to your brain and says, “Time to make more growth hormone!” This helps your body burn fat, heal faster, sleep better, and grow muscle. But GHRP-6 also tells your stomach, “Hey, let’s get some food in here!” — so it can really boost appetite too.

### HOW DOES IT WORK?

GHRP-6 mimics ghrelin, the “hunger hormone.” This triggers a powerful pulse of growth hormone from the pituitary without suppressing natural production.

### TOP USE CASES

1

#### Rapid Recovery & Healing

Enhances IGF-1 and collagen repair post-surgery, injury, or training

2

#### Muscle Growth & Strength

Increases anabolic signaling, improves nitrogen retention

3

#### Fat Loss (with appetite balance)

Burns fat via GH + IGF-1 but increases hunger — best when paired with training or appetite control

4

#### Sleep Quality Improvement

Improves restorative stages of sleep via GH surge

5

#### Wasting Conditions or Appetite Support

Helpful in underweight, cachexia, or elderly patients needing anabolic support and appetite boost

### SIDE EFFECTS

Increased appetite · Water retention / mild bloating ·  
Numbness or tingling in hands/feet

### DO NOT USE IF

Active Cancer · Uncontrolled Diabetes or Insulin Resistance  
Disordered Eating

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# HUMANIN

## *The Mitochondrial Bodyguard*

### WHAT IS IT?

Humanin acts as a cytoprotective agent, shielding your cells from stress, dysfunction, and apoptosis (cell suicide).

### HOW DOES IT WORK?

Think of your cells as little cities, and your mitochondria as the power plants that keep the lights on. Over time, those power plants get tired, make mistakes, and stop working well — especially when your body is under stress or aging. Humanin protects the city from damage, keeps the power plant running smoothly, and tells the cell not to die too early.

### TOP USE CASES

1

#### Cellular Protection & Anti-Apoptosis

Prevents unnecessary cell death during metabolic or oxidative stress

2

#### Neurodegenerative Defense

Protects neurons in Alzheimer's, Parkinson's, and post-stroke models

3

#### Insulin Resistance & Metabolic Support

Enhances insulin sensitivity, reduces inflammation in adipose tissue

4

#### Longevity & Age Reversal Pathways

Circulating levels drop with age — replacement may slow aging processes

5

#### Cardiovascular Health

Protects endothelial cells, reduces oxidative damage, and prevents atherosclerosis progression in early models

### SIDE EFFECTS

Mild fatigue · Temporary decrease in appetite · Injection site irritation

### DO NOT USE IF

Active Cancer · Mitochondrial DNA mutation disorders · Children or Adolescents

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# IPAMORELIN

## *The Gentle GH Signal*

### WHAT IS IT?

Ipamorelin is a selective ghrelin receptor agonist that stimulates natural growth hormone release without affecting other hormonal systems like cortisol, prolactin, or ACTH.

### HOW DOES IT WORK?

Imagine your body has a “growth and repair button” in your brain. When you’re a kid, your body presses that button all the time — so you grow, heal fast, and sleep like a rock. Ipamorelin is like a polite tap on that button — it tells your brain: “Hey, let’s keep healing, recovering, and building — just like we used to.”

### TOP USE CASES

1

#### **Growth Hormone Decline (Aging or Stress-Driven)**

Re-establishes youthful GH pulses without hormone replacement

2

#### **Fat Loss & Body Recomposition**

Increases fat oxidation, preserves lean mass — especially in midlife or menopause

3

#### **Injury Recovery & Performance Repair**

Enhances collagen synthesis, soft tissue healing, and bone regeneration

4

#### **Sleep Optimization & Circadian Rhythm Reset**

Improves deep sleep cycles and nighttime GH peaks

5

#### **Wellness in Sensitive or High-Stress Individuals**

Preferred over GHRP-2/6 due to no cortisol/prolactin elevation and minimal side effects

### SIDE EFFECTS

Mild fatigue · Vivid dreams · Lightheadedness or drop in blood sugar

### DO NOT USE IF

Active Cancer · Uncontrolled diabetes or insulin resistance · Children or Adolescents

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# KISSPEPTIN-10

## *The Hormone Igniter*

### WHAT IS IT?

Kisspeptin-10 is a naturally occurring peptide released by neurons in the hypothalamus. It doesn't replace hormones. It restores your body's ability to make them in rhythm.

### HOW DOES IT WORK?

Your brain has a control center for your hormones. It decides when it's time to grow, reproduce, or rest. But sometimes that center gets quiet, like a light switch turned off. Kisspeptin-10 is the finger that flips the switch back on. It tells your brain, "Hey, it's time to make hormones again — safely and naturally."

### TOP USE CASES

1

#### Low Testosterone or Estrogen (HPG Suppression)

Kickstarts natural hormone production without exogenous hormones

2

#### Post-Birth Control Hormone Reset

Re-initiates GnRH pulse and ovulatory cycles

3

#### Fertility Optimization

Improves natural LH/FSH production and ovulation or spermatogenesis

4

#### Post-Steroid or HRT Taper Recovery

Restores endogenous hormone signaling after suppression

5

#### Puberty-Related Disorders (investigational)

Used in research for delayed or precocious puberty and Kallmann syndrome

### SIDE EFFECTS

Mild cramping / Spotting or cycle Irregularity  
Mood Fluctuations  
Increased Libido

### DO NOT USE IF

Active Reproductive Cancer · Severe Pituitary Damage ·  
Uncontrolled Mood Disorders · Children or Adolescents

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# KPV

## *The Inflammation Neutralizer*

### WHAT IS IT?

KPV modulates the immune system by calming inflammatory signaling rather than suppressing it — allowing healing to begin without impairing immune function.

### HOW DOES IT WORK?

When your body gets hurt or sick, it sends out fire alarms — that's called inflammation. But sometimes the alarms don't shut off, and your body stays stuck in overdrive. KPV is like a firefighter peptide. It shows up quietly, puts out the flames, and tells your body, "Hey, it's safe to heal now."

### TOP USE CASES

1

#### **Gut Inflammation (IBD, leaky gut, post-antibiotics)**

Restores mucosal lining, reduces cytokine-driven gut damage

2

#### **Skin Conditions (eczema, psoriasis, rosacea)**

Calms immune overactivation, supports skin barrier regeneration

3

#### **MCAS & Histamine Intolerance**

Regulates mast cell activation, reduces histamine symptoms without antihistamines

4

#### **Post-COVID or Chronic Inflammatory Fatigue**

Shuts down residual cytokine storms and immune dysregulation

5

#### **Wound & Surgical Recovery**

Speeds repair by lowering inflammatory resistance

### SIDE EFFECTS

Drowsiness or "calm fatigue" · Increased bowel movements · Mild Injection Site Redness

### DO NOT USE IF

Severe immunodeficiency · Allergy to melanocyte peptides (rare) · Children or Adolescents

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# LL-37

## *The Immune System's First Responder*

### WHAT IS IT?

LL-37 is produced by white blood cells, epithelial cells, and bone marrow — and plays a central role in innate immune defense and tissue repair.

### HOW DOES IT WORK?

LL-37 is one of the first defenders that shows up when viruses, bacteria, and toxins show up. It doesn't just attack germs — it also helps clean up the mess, calm down the noise, and start the healing process. It's like having a smart SWAT team that knows when to fight, when to clean up, and when to call off the alarms.

### TOP USE CASES

1

#### **Chronic Infections (Lyme, EBV, mold, post-viral)**

Attacks pathogens and breaks down biofilm without harming host cells

2

#### **SIBO, Leaky Gut, and GI Dysbiosis**

Resets the gut-immune interface and modulates microbial balance

3

#### **Respiratory & Sinus Infections**

Fights intracellular pathogens and improves airway healing

4

#### **Wound Healing & Skin Inflammation**

Accelerates epithelial repair and reduces local infections or inflammation

5

#### **Immune Priming Post-Viral or Vaccine**

Used in long-haul/post-COVID protocols to reset immune function

### SIDE EFFECTS

Flu-like symptoms (Herx reaction) · Temporary gut cramping or discomfort · Sleep disruption or hypervigilance

### DO NOT USE IF

Active Autoimmune Flares · Uncontrolled mold or Lyme die-off · Severe mast cell instability · Organ transplant recipients

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# MELANOTAN I

## *The Cellular Photoguardian*

### WHAT IS IT?

Melanotan I mimics the effects of alpha-MSH (melanocyte-stimulating hormone) — a hormone involved in pigmentation, immune modulation, and DNA protection.

### HOW DOES IT WORK?

When you go out into the sun, your body tries to protect you by making melanin — a natural pigment that acts like sunblock from the inside out. Melanotin I signals your body to make more melanin and also helps calm inflammation, support your immune system, and keep your skin healthier over time.

### TOP USE CASES

1

#### Sun Sensitivity & DNA Protection

Supports melanin production to reduce sunburn, DNA damage, and oxidative stress

2

#### Vitiligo & Pigmentation Disorders

Stimulates melanocyte activity in depigmented patches

3

#### Inflammatory Skin Conditions (eczema, psoriasis)

Reduces local immune overactivation via melanocortin signaling

4

#### Mitochondrial Repair & Anti-Aging

Protects skin cells from oxidative stress and UV-induced aging

5

#### Melanoma Prevention (at-risk populations)

Promotes eumelanin dominance — a more protective form of melanin with reduced free radical formation

### SIDE EFFECTS

Mild flushing or warmth · Mild nausea (rare) · Temporary darkening of moles/freckles

### DO NOT USE IF

History of Melanoma · Severe autoimmune disorders or In flare Children

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# MELANOTAN II

## *The Neuroendocrine Amplifier*

### WHAT IS IT?

Melanotan II is a non-selective melanocortin receptor agonist, mimicking alpha-MSH with high potency. It affects both peripheral and central melanocortin receptors increasing skin pigment, libido, sexual behavior, and Immune modulation.

### HOW DOES IT WORK?

Melanotan II is like a stong, multitasking coach that works in your brain and skin. It Increases melanin, wakes up the libido center, and shifts your body towards fat burning & energy efficiency. It's powerful and not everyone needs this much motivation at once.

### TOP USE CASES

1

#### Libido & Erectile Dysfunction (ED)

Activates central arousal pathways — effective even when PDE5 inhibitors (like Viagra) fail

2

#### Sun Protection & Pigmentation

Increases eumelanin (protective pigment), reducing sunburn risk and UV DNA damage

3

#### Metabolic Support in Appetite Dysregulation

May reduce hunger and increase energy expenditure through MC4R signaling

4

#### Mood Enhancement

Improves outlook, confidence, and self-perception in some users

5

#### Fat Loss Adjunct (biohacker use)

Mildly increases fat oxidation and satiety when cycled appropriately

### SIDE EFFECTS

Nausea ; Appetite suppression or altered mood · Yawning, flushing, or feeling “wired” · Spontaneous erections (men)

### DO NOT USE IF

History of Melanoma · Severe autoimmune disorders or In flare  
Uncontrolled cardiovascular disease

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# MOTS-C

## *The Mitochondrial Metabolic Master Switch*

### WHAT IS IT?

MOTS-c is one of only a few known mitochondrial-derived peptides (MDPs) — meaning it is coded in mitochondrial DNA, not the nucleus. This makes it a real-time responder to metabolic stress, especially in muscles, fat, and brain tissue.

### HOW DOES IT WORK?

Imagine your cells have tiny engines called mitochondria. These engines make all your energy — but sometimes they get tired or confused, especially with age or stress. MOTS-c is like the mitochondria's "reset button." It helps your whole body use food smarter, age slower, and bounce back faster.

### TOP USE CASES

1

#### Fat Loss & Metabolic Recomposition

Increases fat oxidation and muscle insulin sensitivity while preserving lean mass

2

#### Insulin Resistance & Type 2 Diabetes

Improves glucose uptake, reduces hepatic glucose production, enhances AMPK function

3

#### Exercise Performance & Recovery

Increases VO<sub>2</sub> max, mitochondrial density, and skeletal muscle efficiency

4

#### Longevity & Anti-Aging Protocols

Cellular stress resilience, inflammation reduction, and DNA protection

5

#### Post-Illness or Burnout Recovery

Rebuilds mitochondrial function after stress, illness, or overtraining

### SIDE EFFECTS

Mild fatigue or soreness · Temporary appetite suppression · Improved mood and energy

### DO NOT USE IF

Active Cancer(s) · Hypoglycemic-prone individuals · Unmanaged adrenal fatigue or thyroid dysfunction · Children or Adolescents

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# NAD+

## *The Cellular Spark That Rewrites Time*

### WHAT IS IT?

NAD<sup>+</sup> is a redox coenzyme found in every living cell. It helps with energy production, supports longevity genes, DNA repairs, and regulates the circadian rhythm.

### HOW DOES IT WORK?

Every cell in your body runs on energy — just like your phone needs a battery. NAD<sup>+</sup> is the charger. Without it, your cells can't work, heal, or stay alive. It helps turn food into fuel, keeps your brain sharp, and even helps your body fix damage, like a clean-up crew and repair technician rolled into one.

### TOP USE CASES

1

#### Fatigue & Mitochondrial Dysfunction

Supports ATP production and reverses burnout or post-viral energy crashes

2

#### Cognitive Decline & Brain Fog

Enhances neuroplasticity, BDNF, and neurorepair pathways

3

#### Anti-Aging & Longevity

Activates sirtuins, reduces inflammation, and supports DNA stability

4

#### Detox & Recovery (Alcohol, Mold, Infections)

Recharges cells after oxidative or toxic insult

5

#### Athletic Performance & Recovery

Reduces ROS, enhances endurance, supports tissue repair

### SIDE EFFECTS

Headache or brain fog · Fatigue or lightheadedness · Improved mood and energy

### DO NOT USE IF

Active Cancer(s) · Methylation issues · Uncontrolled anxiety or panic disorders · Clients on immunosuppressants

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# OXYTOCIN

## *The Neurochemical of Safety and Repair*

### WHAT IS IT?

Oxytocin is a 9–amino acid neuropeptide made in the hypothalamus and secreted by the posterior pituitary. While best known for its role in birth and bonding, oxytocin is more about signal safety at the cellular level.

### HOW DOES IT WORK?

Oxytocin is like your body's "hug signal." It tells your brain and body: "Hey — you're safe now. You can rest, you can trust, you can heal." When it rises, the body lets go of tension, immune stress calms down, and healing accelerates.

### TOP USE CASES

1

#### Stress Recovery & Burnout

Rebuilds parasympathetic tone, lowers cortisol, supports nervous system reset

2

#### Social Anxiety & Connection Disorders

Improves trust, comfort, and relational bonding

3

#### Libido & Sexual Function

Enhances orgasm, bonding, and arousal in both men and women

4

#### Post-Trauma or Emotional Numbness

Reintegrates emotional processing and improves affect regulation

5

#### Gut Healing & Inflammation

Calms enteric nervous system, improves vagal tone, reduces gut permeability

### SIDE EFFECTS

Drowsiness or Calm Emotional Sensitivity Rebound Irritability

### DO NOT USE IF

Active schizophrenia or mania Late-term pregnancy · Severe unresolved trauma · Children under 12

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# PT-141

## *The NeuroLibido Reset Molecule*

### WHAT IS IT?

PT-141 is a synthetic analog of alpha-MSH, derived from Melanotan II, but designed specifically for sexual arousal without significant effects on skin pigmentation.

### HOW DOES IT WORK?

PT-141 is like a whisper in your brain that says “it’s time to feel turned on.” It doesn’t work like Viagra. Instead of pushing blood around, it turns on your brain’s interest switch — helping you feel confident, connected, and ready again. Both men and women can use it, and it’s not just about sex — it’s about feeling like yourself again.

### TOP USE CASES

1

#### Female Hypoactive Sexual Desire Disorder (HSDD)

FDA-approved to restore interest and arousal in women

2

#### Erectile Dysfunction in Men

Works when traditional PDE5 inhibitors (Viagra, Cialis) fail

3

#### Libido Loss After Stress or Illness

Rebuilds interest and response after burnout, hormone shifts, or trauma

4

#### Couples Seeking Deeper Connection

Enhances emotional readiness and intimacy — not just physical response

5

#### Neuroendocrine Imbalance (Menopause/Andropause)

Addresses brain-based libido loss tied to aging and stress

### SIDE EFFECTS

Nausea · Flushing or warmth · Fatigue or slight dizziness

### DO NOT USE IF

Severe uncontrolled hypertension · History of cardiovascular events · Chronic nausea or GI issues

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# SELANK

## *The Neurocalm Coding Peptide*

### WHAT IS IT?

Selank is a synthetic peptide analog of tuftsin, a naturally occurring immune-modulating tetrapeptide. Unlike drugs that block stress or sedation pathways, Selank enhances the brain's resilience

### HOW DOES IT WORK?

Selank is like a super-smart brain message that tells your mind: "It's safe now — you can calm down and think clearly again." It helps you feel focused but relaxed, like when you've had a great night's sleep, a deep breath, and someone told you everything's going to be okay — all at once.

### TOP USE CASES

1

#### Anxiety Without Sedation

Calms the nervous system without causing fatigue or fog

2

#### Focus + Calm in High-Stress Situations

Ideal for test-taking, public speaking, or pressure performance

3

#### Mood Support (Especially Apathy or Flattened Affect)

Restores serotonin and dopamine regulation

4

#### Post-Viral or Immune-Based Brain Fog

Combats inflammation-driven neurotransmitter disruption

5

#### Sleep Cycle Recalibration

Reduces nighttime cortisol surges and sleep disruptions

### SIDE EFFECTS

Dry nasal passages (with Intranasal delivery) · Mood lift or subtle euphoria · Fatigue or slight dizziness

### DO NOT USE IF

Severe psychiatric instability · People seeking a "buzz" · Clients with impaired nasal mucosa

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# SEMAX

## *The Brain Builder Peptide*

### WHAT IS IT?

Semax is a synthetic peptide that's engineered to deliver neuroprotective benefits without steroid effects.

### HOW DOES IT WORK?

Semax is like brain fertilizer. It helps your brain grow stronger, learn faster, and bounce back from stress. It tells your brain cells to wake up, stay healthy, and keep making smart connections. It doesn't hype you up — it helps your brain think better, for longer.

### TOP USE CASES

1

#### Brain Fog & Cognitive Fatigue

Recharges mental clarity after illness, burnout, or overload

2

#### Memory & Learning Enhancement

Improves neuroplasticity and information retention

3

#### Post-Stroke or TBI Recovery

Enhances neural repair and motor/cognitive restoration

4

#### ADHD & Focus Deficits

Optimizes dopamine and executive function signaling

5

#### Mood Disorders with Apathy or Cognitive Drag

Increases dopamine and BDNF, even in treatment-resistant cases

### SIDE EFFECTS

Mild overstimulation · Head pressure or nasal irritation ·  
Temporary sleep disturbance if taken too late

### DO NOT USE IF

Uncontrolled bipolar or mania · Epilepsy (poorly managed) ·  
Clients needing sedation over stimulation

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# SERMORELIN

*The XXX Whisperer*

## WHAT IS IT?

Tesamorelin, a clinically validated growth hormone–releasing hormone (GHRH) analog with deep metabolic, cognitive, and body composition benefits — especially in reversing visceral fat accumulation and restoring hormone signaling in the hypothalamic-pituitary axis.

## HOW DOES IT WORK?

Tesamorelin is like a whisper to your brain, reminding it to make more of your own growth hormone — the stuff that helps you burn fat, build muscle, and think clearly.

## TOP USE CASES

1

### Visceral Fat Reduction

FDA-approved for reducing abdominal fat in lipodystrophy and aging

2

### Growth Hormone Deficiency (Functional)

Restores physiologic GH and IGF-1 without suppression

3

### Cognitive Support in Aging

Enhances memory, processing speed, and executive function

4

### Muscle Preservation in Midlife

Supports lean mass retention during fat loss or andropause/menopause

5

### Metabolic Syndrome / Insulin Resistance

Improves fat distribution and glycemic parameters via visceral fat loss

## SIDE EFFECTS

Mild joint stiffness / water retention · Injection site redness or itch  
Increased hunger

## DO NOT USE IF

Active or suspected cancer Uncontrolled diabetes Children

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# SS-31

## *The Mitochondrial Medic*

### WHAT IS IT?

SS-31 is a mitochondrial rescue peptide designed to restore bioenergetic integrity, reverse oxidative damage, and reignite the cellular engine where dysfunction begins: the inner mitochondrial membrane.

### HOW DOES IT WORK?

SS-31 is like a tiny helper that dives into your cells' batteries (called mitochondria) and fixes the broken parts, so your body has more energy. When your cells are tired, sick, or old, they don't make energy well — SS-31 goes inside and helps the batteries recharge, clean up waste, and work like new again.

### TOP USE CASES

1

#### **Mitochondrial Dysfunction (Fatigue, Fibromyalgia)**

Rebuilds energy production and reduces oxidative damage

2

#### **Age-Related Muscle Loss (Sarcopenia)**

Restores mitochondrial output in skeletal muscle

3

#### **Neurodegeneration (Alzheimer's, Parkinson's)**

Protects neurons from oxidative stress and mitochondrial collapse

4

#### **Heart Failure / Cardiomyopathy**

Improves cardiac bioenergetics and function (clinical trials)

5

#### **Retinal Disease / Vision Loss (Mitochondrial Origin)**

Improves mitochondrial density and reduces degeneration in the retina

### SIDE EFFECTS

Mild injection site irritation · Transient nausea or flushing ·  
Temporary sleep disturbance if taken too late

### DO NOT USE IF

Cancer patients on active chemotherapy · Clients with active  
mitochondrial DNA mutations

Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.

# TB-500 / THYMOSIN BETA-4

## *The Structural Rebuilder*

### WHAT IS IT?

TB-500 is a synthetic peptide fragment of Thymosin Beta-4, a protein found naturally in nearly all human and animal cells — especially those involved in injury response, inflammation resolution, and tissue repair.

### HOW DOES IT WORK?

TB-500 is like a cellular construction worker that shows up when your body gets hurt. It cleans up the mess, tells the cells where to go, and helps your body build new, strong tissue in the right place. It works on skin, muscle, tendons, the heart, and even inside your gut.

### TOP USE CASES

1

#### Soft Tissue Injury (Tendons, Ligaments, Fascia)

Accelerates recovery and restores movement patterns

2

#### Cardiac Injury (Post-MI or ischemia)

Promotes cardiac muscle repair and reduces scarring

3

#### Chronic Inflammation & Fibrosis

Reprograms cytokine signaling to reduce tissue degradation

4

#### Gut Mucosal Repair (Leaky Gut, IBD)

Enhances epithelial healing in the GI tract

5

#### Post-Surgical Healing or Injury Recovery

Reduces scar formation and improves wound closure

### SIDE EFFECTS

Increased hunger or fatigue early on · Mild injection site irritation

### DO NOT USE IF

Active or suspected cancer · Recent blood clots or clotting disorders Autoimmune Flares

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# TESAMORELIN

## *The Visceral Fat Whisperer*

### WHAT IS IT?

Tesamorelin, a clinically validated growth hormone–releasing hormone (GHRH) analog with deep metabolic, cognitive, and body composition benefits — especially in reversing visceral fat accumulation and restoring hormone signaling in the hypothalamic-pituitary axis.

### HOW DOES IT WORK?

Tesamorelin is like a whisper to your brain, reminding it to make more of your own growth hormone — the stuff that helps you burn fat, build muscle, and think clearly.

### TOP USE CASES

1

#### Visceral Fat Reduction

FDA-approved for reducing abdominal fat in lipodystrophy and aging

2

#### Growth Hormone Deficiency (Functional)

Restores physiologic GH and IGF-1 without suppression

3

#### Cognitive Support in Aging

Enhances memory, processing speed, and executive function

4

#### Muscle Preservation in Midlife

Supports lean mass retention during fat loss or andropause/menopause

5

#### Metabolic Syndrome / Insulin Resistance

Improves fat distribution and glycemic parameters via visceral fat loss

### SIDE EFFECTS

Mild joint stiffness / water retention Increased hunger ·  
Injection site redness or itch

### DO NOT USE IF

Active or suspected cancer Uncontrolled diabetes Children

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# THYMOSIN ALPHA - 1

## *The Immune Intel Officer*

### WHAT IS IT?

Tα1 is a naturally occurring peptide derived from the thymus gland, a core organ in the development of T-cells, which are the front-line defenders in your adaptive immune system.

### HOW DOES IT WORK?

Thymosin Alpha-1 is like the coach of your immune system. It helps your immune cells know what to do, where to go, and when to stop — like making sure your body's defense team works smarter, not harder.

### TOP USE CASES

1

#### Chronic Viral Infections (e.g. EBV, CMV, Lyme)

Restores immune vigilance without excess inflammation

2

#### Autoimmunity & Immune Dysregulation

Improves immune tolerance and T-reg function

3

#### Cancer Immunotherapy Support

Enhances immune responsiveness to tumors (under MD guidance)

4

#### Post-COVID & Long-Haul Syndrome

Reduces viral debris reactivation + resolves immune overactivation

5

#### Immune Support in Aging or Immunosuppression

Rebuilds immune memory and function, especially in those over 50

### SIDE EFFECTS

Mild redness at injection site · Fatigue or flu-like symptoms · Improved sleep or vivid dreams

### DO NOT USE IF

Clients with organ transplant · Active hyperthyroidism or Graves' · Patients on immune checkpoint inhibitors

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SECTION THREE

# The "Weight-Loss" Peptides.

*What you need to know before you make a decision.*

# GLP-1SM

## *The Satiety Signal*

### WHAT IS IT?

Semaglutide is like a helper that tells your brain, “Hey, I’m full!” and your body, “Let’s use blood sugar better.”

### HOW DOES IT WORK?

It helps people feel full sooner, eat less without trying so hard, and keeps their energy steady by helping insulin do its job better. Over time, it can help with weight loss, blood sugar balance, and inflammation.

### TOP USE CASES

- 1 Weight Loss / Appetite Control**  
 Proven significant reductions in weight and body fat
- 2 Type 2 Diabetes Management**  
 Stabilizes post-meal glucose and lowers A1C
- 3 Insulin Resistance & PCOS**  
 Improves sensitivity and lowers circulating insulin
- 4 Inflammation Reduction**  
 Lower CRP and other inflammatory markers
- 5 Cardiovascular Risk**  
 Decreases in triglycerides and modest improvements in blood pressure

### SIDE EFFECTS

Nausea (especially early on) · Bloating, constipation, or diarrhea · Fatigue or brain fog (usually transient) · Appetite loss (which can be too much for some) · Rare: gallbladder issues, pancreatitis, or thyroid tumor warning in predisposed individuals

### DO NOT USE IF

Medullary thyroid carcinoma or MEN2 syndrome history · Active or history of pancreatitis · Pregnant or breastfeeding

*Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.*

# SEMAGLUTIDE

## *The Satiety Signal*

### WHAT IS IT?

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### HOW DOES IT WORK?

It helps people feel full sooner, eat less without trying so hard, and keeps their energy steady by helping insulin do its job better. Over time, it can help with weight loss, blood sugar balance, and inflammation.

### TOP USE CASES

1

#### Weight Loss / Appetite Control

Proven significant reductions in weight and body fat

2

#### Type 2 Diabetes Management

Stabilizes post-meal glucose and lowers A1C

3

#### Insulin Resistance & PCOS

Improves sensitivity and lowers circulating insulin

4

#### Inflammation Reduction

Lower CRP and other inflammatory markers

5

#### Cardiovascular Risk

Decreases in triglycerides and modest improvements in blood pressure

### SIDE EFFECTS

Nausea (especially early on) · Bloating, constipation, or diarrhea · Fatigue or brain fog (usually transient) · Appetite loss (which can be too much for some) · Rare: gallbladder issues, pancreatitis, or thyroid tumor warning in predisposed individuals

### DO NOT USE IF

Medullary thyroid carcinoma or MEN2 syndrome history · Active or history of pancreatitis · Pregnant or breastfeeding

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# GLP-2TZ

## *The Dual-Powered Powerhouse*

### WHAT IS IT?

Think of Tirzepatide like a coach giving your body two smart instructions at once: 1. “Hey, use your insulin better!” 2. “And don’t spike your blood sugar when you eat!”

### HOW DOES IT WORK?

It helps you feel full faster, lowers cravings, and tells your cells to use energy smarter. Over time, it helps your body shift from fat-storing mode to fat-burning mode — while also improving how your brain and gut talk to each other.

### TOP USE CASES

- 1 Weight Loss / Fat Loss**  
 Significant reductions in visceral fat and body weight
- 2 Blood Sugar Regulation**  
 Supports insulin function and glycemic control (especially in type 2 diabetes)
- 3 Appetite Suppression**  
 Reduced food noise, cravings, and portion sizes
- 4 Cardiometabolic Health**  
 May reduce triglycerides, A1C, inflammation, and LDL
- 5 Cognitive Clarity (Long Term)**  
 GLP-1 activity supports gut-brain connection, mitochondrial repair, and inflammation reduction

### SIDE EFFECTS

Nausea (most common) · Bloating, gas, or constipation · Fatigue or headache (typically transient) · Appetite suppression to the point of under-eating · Rare: severe GI upset, pancreatitis warning in those with a history

### DO NOT USE IF

Medullary thyroid carcinoma or MEN2 syndrome history · Active or history of pancreatitis · Pregnant or breastfeeding

*Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.*

# TIRZEPATIDE

## *The Dual-Powered Powerhouse*

### WHAT IS IT?

Think of Tirzepatide like a coach giving your body two smart instructions at once: 1. “Hey, use your insulin better!” 2. “And don’t spike your blood sugar when you eat!”

### HOW DOES IT WORK?

It helps you feel full faster, lowers cravings, and tells your cells to use energy smarter. Over time, it helps your body shift from fat-storing mode to fat-burning mode — while also improving how your brain and gut talk to each other.

### TOP USE CASES

- 1 Weight Loss / Fat Loss**  
 Significant reductions in visceral fat and body weight
- 2 Blood Sugar Regulation**  
 Supports insulin function and glycemic control (especially in type 2 diabetes)
- 3 Appetite Suppression**  
 Reduced food noise, cravings, and portion sizes
- 4 Cardiometabolic Health**  
 May reduce triglycerides, A1C, inflammation, and LDL
- 5 Cognitive Clarity (Long Term)**  
 GLP-1 activity supports gut-brain connection, mitochondrial repair, and inflammation reduction

### SIDE EFFECTS

Nausea (most common) · Bloating, gas, or constipation · Fatigue or headache (typically transient) · Appetite suppression to the point of under-eating · Rare: severe GI upset, pancreatitis warning in those with a history

### DO NOT USE IF

Medullary thyroid carcinoma or MEN2 syndrome history · Active or history of pancreatitis · Pregnant or breastfeeding

*Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.*

# GLP-3RT

## *The Triple Threat Metabolic Accelerator*

### WHAT IS IT?

Retatrutide is like a super-coach that talks to three different players in your body—your hunger, your sugar, and your fat-burning systems. It helps you eat less, balance your sugar, and burn fat—all at the same time.

### HOW DOES IT WORK?

Retatrutide is a triple agonist, which means it mimics three powerful hormones in your body - GLP-1 (glucagon-like peptide-1), GIP (glucose-dependent insulinotropic polypeptide), and Glucagon receptor agonism

### TOP USE CASES

- 1 **Severe Obesity or High Body Fat**  
Most potent fat loss effects in trials to date
- 2 **Advanced Insulin Resistance / Prediabetes**  
Profound improvements in metabolic markers
- 3 **Fatty Liver (NAFLD/NASH)**  
Supports fat clearance and insulin balance
- 4 **Metabolic Syndrome**  
Lowers triglycerides, improves cholesterol ratios
- 5 **Cardiometabolic Health**  
Potential improvements in heart and vascular markers beyond weight loss

### SIDE EFFECTS

Nausea and GI upset (early phases) · Appetite suppression to the point of under-nourishment if not carefully managed · Constipation, bloating, or fatigue · Risk of lean muscle loss without adequate protein/resistance training · Still under investigation: long-term glucagon receptor effects on the liver and heart

### DO NOT USE IF

Medullary thyroid carcinoma or MEN2 syndrome history · Active or history of pancreatitis · Chronic GI disorders

*Educational only. Every protocol — including whether a peptide is appropriate for you — is decided and monitored by a US-licensed physician in our telehealth network.*

## I M P O R T A N T



# This is not medical advice.

## EDUCATIONAL CONTENT

The information provided in this guide is for educational and informational purposes only and is not intended as, nor should it be construed as, medical advice, diagnosis, or treatment. Nothing contained here should be considered a substitute for professional medical advice from a licensed healthcare provider.

Always seek the advice of your physician or other qualified healthcare provider with any questions you may have regarding a medical condition or treatment. Never disregard professional medical advice or delay seeking it because of something you have read here.

## HOW STRONG & LEAN WORKS

Sara Sutherland is a coach — not a clinician. She does not prescribe peptides, design protocols, or order labs.

All medical decisions — including whether a peptide is appropriate for you, which one, at what dose, and for how long — are made by a US-licensed physician in our telehealth network. All compounded medications are produced by licensed US 503A pharmacies.

Sara's role is coaching: learning your goals, helping you build the lifestyle system around it, and making sure the whole thing becomes a system instead of a stack of separate appointments. She will guide you through connecting all of the dots to build your best life!

WHERE TO GO FROM HERE



# Your next steps.

*Pick the one that fits where you are right now.*

## 01

### START MY PEPTIDE JOURNEY

Ready to start your own physician-guided peptide journey alongside coaching, DNA testing, and bloodwork? This is the full Strong & Lean Medical Wellness Path — built as one system.

## 02

### CUSTOM BLOODWORK ANALYSIS

Been told your bloodwork is "normal" but know something's off? Schedule a 1:1 call with Sara to walk through your labs and map what you'd want a physician to look at next.

## 03

### GET A FULL PROTOCOL

Already done your labs and just need a trusted source? Membership-only access to our US physician network and member pricing on physician-prescribed peptides.

## 04

### UNDERSTAND YOUR BLOODWORK

Get on the waitlist for the upcoming Strong & Lean Bloodwork Blueprint — a plain-language guide to understanding what your labs are actually telling you.

Visit [sarasutherlandfitness.com](https://sarasutherlandfitness.com) · @sarasutherlandfitness on Instagram

## MEET YOUR COACH



# Hi, I'm Sara.

*Founder, Sara Sutherland Fitness · Creator, Strong & Lean Method*

I've spent the last two decades helping adults — especially over 40 — build the kind of fitness that holds up to real life. Busy work, busy families, hormones in motion, and zero patience for diet-culture nonsense.

I'm the founder of Sara Sutherland Fitness and the Strong & Lean Method — a system that combines things most coaches keep separate: building a foundation of healthy habits, progressive strength training, nutrition education that doesn't moralize food, and a medical wellness layer built with a US-licensed telehealth physician network.

That last piece is why you're reading this guide.

I'm a coach, not a clinician. I don't prescribe peptides, design protocols, or run labs — those decisions belong to your physician. What I do is help adults who are already doing the work — already lifting, already prioritizing sleep, already paying attention — and who have hit the kind of plateau the work alone won't move. For those, I pair the right physician partner with the coaching and structure that make a peptide protocol actually translate into the results you can keep.

If you find yourself nodding along to these pages — and wondering what doing this properly with a real team could look like — the previous page is where this conversation can become an action.



CLINICAL MATERIAL ADAPTED WITH PERMISSION



# Meet Julie Richard.

*FMS, CNAS · Functional Medicine Specialist*

The clinical content in this guide is adapted — with Julie's permission — from her original Peptides 101 framework. Julie is the clinical voice behind these profiles, and her work is what makes this guide a substantive starting point instead of a watered-down overview.

Julie Richard is not your average wellness expert. She's a former chemical engineer with over 20 years of experience in high-level systems thinking, now using that same analytical precision to decode the human body. After being misdiagnosed with pancreatic cancer and undergoing a life-altering Whipple surgery, Julie left her engineering career behind to heal herself from the inside out. What followed was an intensive journey through nutrition science, functional lab work, and cutting-edge research on chronic illness.

Today, she holds certifications as a nutritionist, dietitian, phlebotomist, and functional medicine specialist — helping chronically ill people navigate complex, misunderstood symptoms with clinical clarity and compassion. After nearly losing her life to sepsis in 2024 and facing permanent disability from Lyme disease, she rebuilt her body with peptides, pharmaceutical-grade supplements, and hormone replacement therapy — and now shares those protocols with her own clients.

Sara is grateful to share this material with the Strong & Lean community, with Julie's blessing. Her mission and Sara's are aligned: give clients the tools, data, and confidence to reclaim their health.



FOR THE NERDS



## Studies & sources.

*The peptide profiles in this guide draw on a body of published research and clinical practice. A curated reference list is maintained by Julie Richard and available on request — email us for the source compilation.*

REQUEST THE SOURCE LIST

**Email [sara@sarasutherlandfitness.com](mailto:sara@sarasutherlandfitness.com)**

Subject line: "Peptides 101 source list"

We'll send you the underlying clinical references for the peptides profiled in this guide, plus a recommended reading list for going deeper.



## PHASE ONE - THE FOUNDATION

# DNA and Labs

*Stop guessing. Stop the gaslighting.*

Let's start with the beginning. Who you are at the DNA level and the current state of key biomarkers. From the same Strong & Lean approach — calm, clear, and systems built around habits.

JOIN THE WAITLIST → [sarasutherlandfitness.com/labs](https://sarasutherlandfitness.com/labs)



P H A S E 2 - S T R O N G A N D L E A N E L I T E

# Bloodwork Blueprint

*Your body, decoded.*

What "normal" actually means on your bloodwork — and what to do next. The companion guide to Peptides 101 and the phase that really takes you to elite health status.

JOIN THE WAITLIST →  
[sarasutherlandfitness.com/bloodwork](https://sarasutherlandfitness.com/bloodwork)



SARA SUTHERLAND FITNESS · STRONG & LEAN METHOD

# PEPTIDES

## 101

*The science-backed start to feeling well.*

THANK YOU FOR READING THIS GUIDE

*Curated for clients of Sara Sutherland Fitness*

Clinical material adapted with permission from

**Julie Richard, FMS, CNAS · Functional Medicine Specialist**