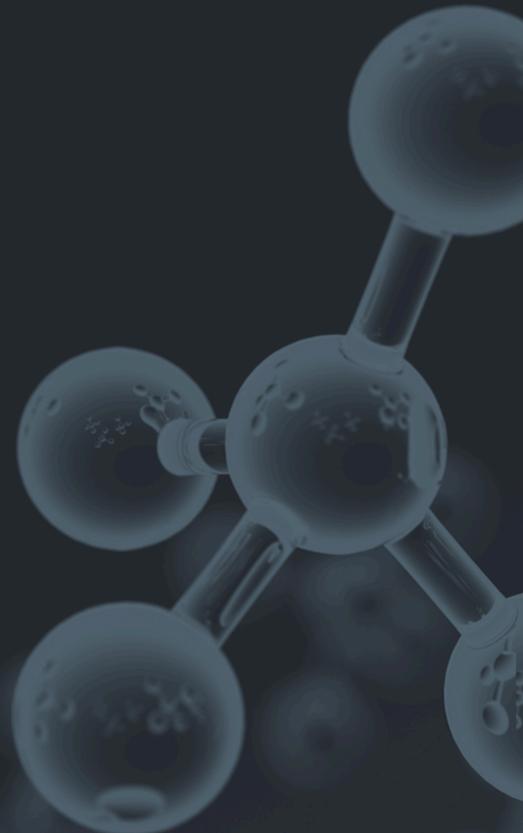
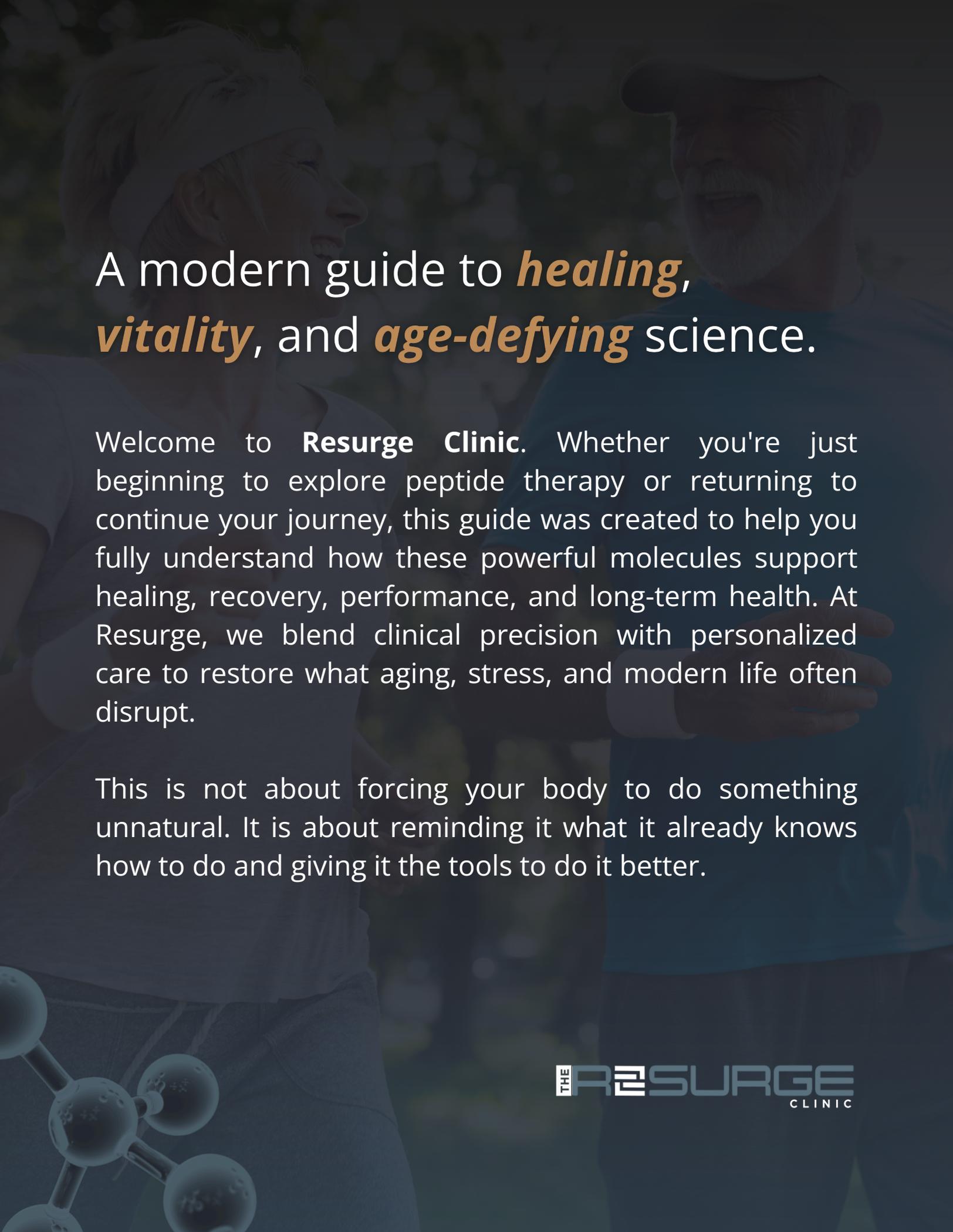




# ADVANCED PEPTIDE AND FUNCTIONAL THERAPY AT RESURGE CLINIC





A modern guide to *healing*,  
*vitality*, and *age-defying* science.

Welcome to **Resurge Clinic**. Whether you're just beginning to explore peptide therapy or returning to continue your journey, this guide was created to help you fully understand how these powerful molecules support healing, recovery, performance, and long-term health. At Resurge, we blend clinical precision with personalized care to restore what aging, stress, and modern life often disrupt.

This is not about forcing your body to do something unnatural. It is about reminding it what it already knows how to do and giving it the tools to do it better.

# What Are Peptides and How Do They Work

Peptides are short chains of amino acids that act as natural messengers in the body. Each peptide sends a unique signal to your cells. Some encourage the body to build collagen, others tell it to release growth hormone, reduce inflammation, or repair damaged tissue. These messages work through the body's built-in communication system and enhance rather than override it.

Since peptides already exist in the body, they are generally well tolerated. Once they deliver their signal, they break down and are cleared naturally. When used under medical supervision, peptides can target and improve specific functions with minimal side effects.

## What Peptides Can Help With:

- **Tissue Repair and Recovery**
  - Certain peptides promote the healing of muscles, tendons, ligaments, gut lining, and nerve tissue. These are often used after injury, surgery, or chronic inflammation.
- **Fat Metabolism and Weight Management**
  - Some peptides regulate appetite and blood sugar, while others increase the body's ability to burn stored fat for energy.
- **Hormonal Balance**
  - Rather than replacing hormones, some peptides stimulate natural hormone production. For example, they can support growth hormone release, helping maintain muscle mass and metabolic function.
- **Immune System Support**
  - Specific peptides enhance immune response, calm chronic inflammation, and may improve resilience in autoimmune conditions.

- **Cognitive Health, Sleep, and Mood**
  - Neuropeptides affect brain chemistry and may improve mental clarity, emotional stability, and sleep quality.
- **Skin and Cellular Aging**
  - Other peptides improve skin elasticity, boost collagen, and support mitochondrial function for healthier aging from the inside out.



## How Peptides Are Delivered:

- **Subcutaneous injections**
  - The most common and effective method. These are shallow injections into the fat under your skin, often done at home with minimal discomfort.
- **Oral capsules**
  - Best for peptides that stay stable during digestion. Often used for gut healing or brain-targeted peptides.
- **Topical creams and serums**
  - Used for cosmetic or localized healing purposes, especially for skin regeneration.
- **Nasal sprays and troches**
  - Designed for quick absorption through mucous membranes, often chosen for peptides that affect the brain or nervous system.

At Resurge, we select the best delivery format for each peptide depending on your goals, the type of peptide, and how your body responds.

# Why Peptide Therapy



As we age, our body's natural messaging system becomes less efficient. Cells stop responding the way they used to. Hormones decrease. Repair slows down. Fatigue builds up. Inflammation increases. Peptides help restore these messages and re-activate the body's ability to function at a higher level.

Peptide therapy is not limited to one goal. It can be used for energy, metabolism, aging, sleep, focus, healing, or overall wellness. Because peptides work in such specific ways, we are able to personalize treatments based on what your body needs most.

## Reasons people choose peptide therapy:

- **To restore energy and reduce fatigue**
  - Some peptides support mitochondrial health, helping your body produce energy more efficiently. This can reduce burnout, support exercise recovery, and help you feel more resilient.
- **To improve metabolism and body composition**
  - Peptides like GLP-1 agonists reduce appetite, improve insulin sensitivity, and promote fat loss. Others help maintain or build lean muscle mass.

- **To support graceful aging**
  - With age, changes in hormones, skin quality, memory, and libido are common. Peptides can help stabilize many of these processes without forcing the body or using synthetic hormones.
- **To accelerate healing**
  - Many patients use peptides to recover faster from injuries, surgery, or chronic inflammation. These therapies can reduce pain and restore function more quickly.
- **To improve focus, sleep, and emotional stability**
  - At Resurge, our goal is not to mask symptoms but to improve how your systems communicate and function together. When used intentionally, peptides can help restore balance, performance, and well-being in a way that feels both natural and sustainable.

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# Are Peptides Safe and Do They Actually Work

Safety is one of the first things people ask about when it comes to peptide therapy. That makes sense. These are powerful compounds, and they deserve serious attention. When used correctly and under proper supervision, peptides are among the safest and most targeted therapies available in modern functional medicine.

Peptides are already part of your body. They are naturally produced by cells to send signals that regulate healing, energy production, hormone balance, inflammation, and other core functions. The peptides used in therapy are simply concentrated and refined versions of those same molecules, designed to activate the body's repair systems more effectively.

## Why peptides are considered safe and effective:

- **They mimic natural signals**
  - Peptides are not foreign chemicals. They interact with the body through existing receptors and pathways. This reduces the chance of unwanted effects and makes them easier for the body to process and break down.
- **They are used in precise doses**
  - Peptide therapy is not one-size-fits-all. The right dose depends on your body type, goals, and response. At Resurge, we carefully adjust your dosing to maximize benefits without pushing your system too hard.
- **They are short-acting and targeted**
  - Unlike some medications that stay in your body for long periods, most peptides break down naturally within hours. Their short half-life makes them easier to control and fine-tune.
- **They are monitored by trained professionals**
  - When you work with a clinic like Resurge, your progress is tracked through regular check-ins, lab work, and symptom reviews. This allows us to make real-time adjustments to your therapy plan based on how your body responds.

- **They have a growing body of research behind them**
  - While some peptides are still emerging, many have been studied for decades and used in both clinical and performance settings with excellent results.

Peptides are not over-the-counter supplements. They are specialized tools that require the right expertise to use well. When guided by a knowledgeable provider and sourced from quality pharmacies, they are not just safe — they are often life-changing.

## SECTION 4

# BPC-157 – The Healing Peptide Everyone Should Know About

BPC-157 is one of the most versatile peptides available for tissue repair and recovery. It stands for "Body Protection Compound," and it is a synthetic version of a protein fragment found in human gastric juice. While it is not FDA approved, it has been widely researched for its effects on healing, inflammation, and cell protection.

### What BPC-157 does:

- **Accelerates healing of soft tissue**
  - It supports the repair of muscles, tendons, ligaments, and joints. This makes it popular among athletes and anyone recovering from injury or surgery.
- **Reduces gut inflammation and restores the intestinal lining**
  - BPC-157 has been studied for conditions like leaky gut, IBS, ulcers, and Crohn's disease.
- **Protects nerves and supports neurological recovery**
  - It may help reduce nerve pain and promote healing after brain or spinal injuries.

- **Improves circulation and reduces oxidative stress**
  - This makes it useful for recovery from stress, fatigue, or systemic inflammation.

### **How BPC-157 is taken:**

- **Subcutaneous injection**
  - This is the most common and effective method, especially when targeting systemic healing or injury recovery.
- **Oral capsule**
  - Often used for gut-related conditions, as it can work locally in the digestive tract.
- **Topical application**
  - Used occasionally for local wound healing or skin recovery, though not the most common format.



### **Who benefits from BPC-157:**

- People recovering from tendon or ligament injuries
- Individuals with gut inflammation, ulcers, or leaky gut symptoms
- Those managing chronic inflammation or systemic pain
- Athletes or active adults wanting faster recovery and repair

BPC-157 is not a quick fix, but when used consistently and with the right dosing, it can help speed up recovery, calm inflammation, and support deeper tissue repair.

# GHK-Cu – The Skin, Hair, and Brain Peptide

GHK-Cu is a small peptide naturally found in human plasma, saliva, and other tissues. It is known as a copper-binding peptide, meaning it binds to copper ions and uses them to activate repair processes in the body. GHK-Cu plays a key role in skin regeneration, hair growth, inflammation control, and even brain function.

What makes this peptide unique is its ability to influence how your genes express themselves. It turns on signals related to tissue repair and healing, while turning off those linked to inflammation and damage. For people looking to restore skin quality, slow aging, or support brain health, GHK-Cu offers an elegant and well-studied solution.

## What GHK-Cu can help with:

- **Improving skin texture and reducing wrinkles**
  - GHK-Cu helps increase collagen and elastin production in the skin. Over time, this can reduce fine lines, improve elasticity, and restore a more youthful appearance
- **Stimulating hair regrowth**
  - It supports healthy hair follicle function, especially in people experiencing thinning or early-stage hair loss.
- **Calming inflammation**
  - GHK-Cu has anti-inflammatory properties that make it helpful for wound healing, skin irritation, and other inflammatory conditions.
- **Supporting brain and nerve health**
  - Some studies suggest it may help protect neurons, reduce oxidative stress, and improve cognitive performance over time.
- **Accelerating wound repair**
  - It promotes the production of key structural molecules like glycosaminoglycans and promotes blood vessel growth in healing tissues.

## How GHK-Cu is used:

- **Topical cream or serum**
  - This is the most popular form, especially for skin and hair-related applications. It is often applied once or twice daily to the face, scalp, or target areas.
- **Subcutaneous injection**
  - This format may be used for full-body anti-aging benefits or when targeting internal inflammation and tissue repair.
- **Foam or liquid serum for scalp use**
  - GHK-Cu is often combined with other growth factors in hair restoration protocols for improved effectiveness.

## Who benefits from GHK-Cu:

- People looking to improve skin firmness, texture, or reduce signs of aging
- Men and women experiencing hair thinning or poor hair growth
- Individuals recovering from surgery or dealing with slow-healing wounds
- Anyone focused on longevity, brain health, and reducing oxidative stress



GHK-Cu is often called one of the most well-rounded regenerative peptides available today. It is gentle, well tolerated, and has applications across cosmetic, neurological, and cellular repair fields.

# CJC-1295 – Growth Hormone Support for Recovery and Aging

CJC-1295 is a peptide that helps your body release more of its own growth hormone. It works by stimulating the pituitary gland, which is the part of your brain responsible for hormone production. Unlike synthetic growth hormone therapy, CJC-1295 does not replace your body's hormones. Instead, it encourages your system to function more like it did when you were younger.

What makes CJC-1295 especially effective is that it has a longer half-life than similar peptides. That means it stays active in the body for an extended period, allowing for more consistent hormone release and better long-term benefits.

## What CJC-1295 can help with:

- **Improving sleep and recovery**
  - Deeper, more restorative sleep is one of the first things people notice. Growth hormone release happens mostly during deep sleep, so improving this stage helps the entire system recover and regenerate.
- **Increasing lean muscle and reducing fat**
  - Higher natural growth hormone levels help support fat loss, particularly around the midsection, while also maintaining or increasing lean muscle tissue.
- **Enhancing energy and exercise performance**
  - CJC-1295 may increase stamina and reduce recovery time from workouts or physical activity.
- **Supporting skin and joint health**
  - Growth hormone supports collagen production and tissue repair, making this peptide helpful for people dealing with joint stiffness, skin thinning, or slow healing.

## How CJC-1295 is used:

- **Subcutaneous injection**

- CJC-1295 is usually injected a few times per week. It is often combined with another peptide called Ipamorelin to boost results and minimize unwanted side effects.

- **Timing**

- For best results, it is often taken in the evening, allowing it to align with your body's natural growth hormone release during sleep.

## Who benefits from GHK-Cu:

- Adults noticing signs of aging such as slower recovery, poor sleep, or decreased muscle tone
- Individuals trying to improve body composition without stimulants or harsh fat-burners
- Athletes or active people looking for better performance, recovery, and repair
- Anyone interested in supporting healthy aging at the hormonal and cellular level



CJC-1295 offers a gentle but effective way to bring your hormone environment closer to what it once was. When combined with a healthy lifestyle and consistent use, many people experience better energy, improved sleep, and more balanced body composition over time.

# Ipamorelin – A Gentle Peptide for Fat Loss and Muscle Maintenance

Ipamorelin is a growth hormone–releasing peptide known for its clean, targeted action and minimal side effects. It helps your body produce more of its own growth hormone without overstimulating other systems. That makes it a smart option for people who want the benefits of hormone support without the risks of overstimulation, blood sugar spikes, or unwanted water retention.

Unlike older peptides that triggered multiple hormones at once, Ipamorelin is highly selective. It focuses on stimulating growth hormone release through the pituitary gland, which plays a central role in metabolism, muscle growth, and tissue repair.

## What Ipamorelin can help with:

- **Improving fat loss**
  - Increased growth hormone levels help the body use stored fat as energy. Over time, this can help reduce body fat, especially around the abdomen and lower back.
- **Preserving and building lean muscle**
  - Ipamorelin supports muscle protein synthesis, which is especially useful during weight loss or after periods of inactivity.
- **Enhancing recovery and joint repair**
  - This peptide helps tissues repair more efficiently. Many people notice faster recovery from workouts or less joint discomfort.
- **Improving sleep and recovery**
  - Like CJC-1295, Ipamorelin supports deeper stages of sleep, where the most meaningful hormone and repair activity takes place.

- **Reducing inflammation and cortisol**
  - One unique feature of Ipamorelin is that it does not increase cortisol or stress hormone levels. This makes it well tolerated, even for people with adrenal sensitivity or chronic stress.

### **How Ipamorelin is used:**

- **Subcutaneous injection**
  - Typically administered once or twice daily, either on its own or in combination with CJC-1295 for synergistic effects.
- **Flexible timing**
  - Some people use it before bed to enhance overnight recovery. Others use it post-workout or in the morning to support daytime metabolism.

### **Who benefits from Ipamorelin:**

- Adults looking to reduce fat while preserving muscle tone
- People who are sensitive to stimulants or traditional fat burners
- Individuals with low growth hormone levels or sluggish recovery
- Those who want improved sleep, tissue healing, and anti-aging support without aggressive hormone replacement

Ipamorelin is one of the most balanced and widely used peptides in functional medicine today. Its safety profile, gentle action, and noticeable benefits make it a top choice for people at many different stages of their health journey.

# Tesamorelin – Targeting Visceral Fat and Cognitive Support

Tesamorelin is a synthetic peptide that stimulates the release of growth hormone by mimicking the body's natural growth hormone-releasing hormone (GHRH). It was originally developed to treat excess abdominal fat in patients with HIV-related lipodystrophy, but its benefits reach far beyond that specific condition. Tesamorelin has been shown to significantly reduce visceral fat — the deep belly fat that surrounds internal organs and increases the risk of metabolic disease.

Unlike cosmetic fat loss, reducing visceral fat has major health benefits. This type of fat is linked to chronic inflammation, insulin resistance, and even cognitive decline. Tesamorelin helps reverse these risks by improving the body's ability to burn internal fat stores and regulate key metabolic hormones.

## What Tesamorelin can help with:

- **Reducing visceral (organ-surrounding) fat**
  - This is not just belly fat under the skin. Visceral fat sits deep in the abdomen and contributes to inflammation, poor insulin sensitivity, and higher cardiovascular risk.
- **Improving metabolic markers**
  - Tesamorelin has been shown to improve insulin response, triglyceride levels, and other indicators of metabolic health.
- **Supporting cognitive function**
  - In emerging studies, Tesamorelin has shown potential benefits for brain aging and memory by reducing inflammation and improving hormone balance in the brain.

- **Preserving lean muscle mass**
  - While it helps reduce fat, it also maintains or slightly increases muscle, especially when combined with strength training or activity.

### **How Tesamorelin is used:**

- **Subcutaneous injection**
  - Usually taken once daily, often in the evening. It is important to stay consistent with timing for optimal hormone signaling.
- **Short- to medium-term cycles**
  - Most people use it for 3 to 6 months at a time to target visceral fat and reset metabolic function, although longer use may be appropriate in some cases.

### **Who benefits from Tesamorelin:**

- Men and women with stubborn visceral fat despite exercise and diet
- Adults with metabolic syndrome or early signs of insulin resistance
- Individuals who want to reduce internal inflammation and support brain health
- People seeking a non-stimulant solution for sustainable body composition improvement

Tesamorelin is a more focused peptide than some of the broader hormone support compounds. Its main strength lies in reducing deep abdominal fat and supporting healthier hormone balance from the inside out.

# GLP-1s – Peptides for Appetite Control, Blood Sugar, and Sustainable Weight Loss

GLP-1 stands for glucagon-like peptide-1, a natural hormone released by the gut when you eat. It helps regulate blood sugar, slow down digestion, and send satiety signals to the brain. In recent years, medications that mimic GLP-1 activity have become some of the most effective tools for weight loss and metabolic balance.

Semaglutide and Tirzepatide are two of the most widely used GLP-1 receptor agonists. They are typically prescribed for individuals with insulin resistance, type 2 diabetes, or excess body weight. When used alongside medical supervision, they can dramatically reduce appetite, improve energy metabolism, and help the body regulate its own insulin and glucose more effectively.

## What GLP-1 agonists can help with:

- **Reducing hunger and controlling cravings**
  - These peptides slow down how quickly food leaves your stomach and reduce the urge to overeat, leading to more natural portion control and fewer spikes in hunger.
- **Improving insulin sensitivity and blood sugar balance**
  - GLP-1s help your body respond more efficiently to the insulin it produces, lowering blood sugar levels and reducing the likelihood of storing excess fat.
- **Promoting long-term weight loss**
  - Clinical studies show that people using these peptides can lose a significant amount of body weight over time, especially when combined with healthy lifestyle changes.
- **Protecting the cardiovascular system**
  - Some GLP-1 therapies have also been linked to improved blood pressure, reduced inflammation, and lower cardiovascular risk.



### How GLP-1s are used:

- **Subcutaneous injection**
  - Most GLP-1 therapies are injected once weekly using a small pre-filled pen device. Some newer options are also being developed in oral form.
- **Slow and steady dosing**
  - To avoid side effects like nausea or fatigue, the dose is gradually increased over several weeks until the full therapeutic level is reached.

### Who benefits from GLP-1 therapies:

- Individuals struggling with excess weight, especially those who have tried diet and exercise without long-term success
- Adults with prediabetes, type 2 diabetes, or insulin resistance
- People looking to reduce inflammation and improve metabolic health at the root level
- Anyone seeking an evidence-based, sustainable solution for weight loss that does not involve stimulants or crash diets

GLP-1s are not just about numbers on a scale. They help restore your body's ability to regulate appetite, blood sugar, and fat storage in a way that aligns with your biology. At Resurge, we work with you to personalize your dosing and ensure that treatment supports both your goals and your long-term health.

# Thymosin Alpha-1 – Immune Strength, Resilience, and Inflammation Control

Thymosin Alpha-1, often shortened to Tα1, is a peptide naturally produced by the thymus gland. This small gland is responsible for training and activating the immune system, especially during early development. As we age, thymic function declines, and our immune system becomes less responsive and more prone to chronic inflammation. Thymosin Alpha-1 helps reverse that decline.

Unlike immune stimulants that push your system to work harder, Thymosin Alpha-1 brings the immune system back into balance. It increases the activity of cells that fight infection while reducing unnecessary inflammation and autoimmunity. This makes it an ideal therapy for both short-term immune support and long-term immune regulation.

## What Thymosin Alpha-1 can help with:

- **Enhancing immune defense**
  - Tα1 strengthens the activity of T cells and natural killer cells, both of which are essential for identifying and eliminating harmful viruses, bacteria, and damaged cells.
- **Regulating inflammation**
  - It helps calm overactive immune responses that lead to chronic inflammation, which is often at the root of fatigue, brain fog, joint pain, and accelerated aging.
- **Supporting resilience during stress or illness**
  - Many people use Thymosin Alpha-1 during high-stress periods or after illness to recover more quickly and reduce long-term complications.
- **Improving immune function in aging adults**
  - As the immune system weakens with age, this peptide helps restore immune balance and responsiveness.

## How Thymosin Alpha-1 is used:

- **Subcutaneous injection**
  - Typically injected several times per week for a set treatment cycle, depending on the goal. It is often used in 30 to 60 day protocols.
- **Flexible dosing strategy**
  - It can be used during acute immune challenges or as part of a broader longevity and inflammation-reduction program.



## Who benefits from Thymosin Alpha-1:

- Adults with frequent infections, poor immune resilience, or slow recovery
- Individuals with chronic inflammation, autoimmunity, or long-term stress
- Those interested in supporting their body's natural defenses during travel, illness, or aging
- People undergoing surgery or healing from injury who want stronger repair and protection

Thymosin Alpha-1 is one of the most trusted immune peptides used in clinical settings worldwide. Its ability to enhance the immune system without overstimulating it makes it a valuable option for both prevention and recovery.

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# Thymosin Beta-4 (AKA TB-500) – Tissue Regeneration and Injury Recovery

Thymosin Beta-4, or **TB4**, is a naturally occurring peptide found in high concentrations at sites of tissue damage. It plays a key role in wound healing, cellular regeneration, and inflammation control. Clinically, this peptide is often referred to as TB-500 — a synthetic, stable fragment of the full-length TB4 protein. **TB-500** is designed to be more practical for therapeutic use, offering enhanced stability and dosing consistency, while delivering the core benefits of native TB4.

Despite the clinical shorthand, we'll refer to it here as **Thymosin Beta-4** to emphasize its biologically foundational role in cellular healing.

## How Thymosin Beta-4 works:

TB4 supports early-stage injury repair by activating stem cells, stimulating actin production (a protein essential for cell migration), and promoting the formation of new blood vessels. It also reduces excess inflammation and limits scar tissue formation, allowing tissues to recover more cleanly and functionally.

## What Thymosin Beta-4 can help with:

- **Speeding up injury recovery**
  - TB4 supports the repair of muscle, tendon, and ligament damage. It helps reduce inflammation and improves the flexibility and integrity of newly forming tissue.
- **Improving joint mobility and reducing stiffness**
  - Often used for arthritis, chronic pain, or mobility restrictions, TB4 helps improve joint range of motion by softening scarred or fibrotic tissue and promoting smoother movement.

- **Promoting wound healing**
  - This peptide has been studied for both internal and external healing applications, including post-surgical incisions, skin trauma, and mucosal injuries.
- **Increasing blood vessel formation and oxygen delivery**
  - TB4 stimulates angiogenesis (new blood vessel formation), allowing damaged tissue to receive more oxygen and nutrients while clearing waste more efficiently.

### **How Thymosin Beta-4 is used:**

- **Subcutaneous injection**
  - Administered just beneath the skin, typically two to three times per week during active healing phases.
- **Timing and cycle**
  - Often introduced shortly after an injury, surgical procedure, or laser treatment. Standard protocols run for 4 to 6 weeks, with adjustments based on tissue type and severity.

### **Who benefits from Thymosin Beta-4:**

- Athletes and active adults recovering from sprains, tendonitis, or muscle tears
- Individuals dealing with chronic joint pain, stiffness, or mobility limitations
- Patients recovering from surgery, trauma, or intensive cosmetic procedures
- Anyone looking to accelerate recovery from wounds or reduce fibrotic scarring

Thymosin Beta-4 doesn't simply mask pain or inflammation. It works at the structural level to help your body rebuild stronger, more functional tissue. When combined with physical therapy, healthy movement, and proper nutrition, TB4 can help shorten recovery time and improve long-term mobility in a way few other therapies can.

# Epitalon – Deep Cellular Anti-Aging and Longevity Support

Epitalon is a unique peptide with one of the most compelling reputations in the field of longevity. Originally discovered in Russia through decades of anti-aging research, Epitalon acts at the genetic level to support cellular repair and slow down biological aging. Its main mechanism involves the activation of telomerase — an enzyme that rebuilds telomeres, the protective caps on the ends of DNA strands.

As we age, telomeres naturally shorten. This shortening process is associated with cellular aging, reduced regenerative capacity, and a higher risk of chronic disease. By protecting and lengthening telomeres, Epitalon may help your cells stay younger and function more efficiently for longer.

## What Epitalon can help with:

- **Supporting longevity and cellular repair**
  - Epitalon helps maintain the integrity of DNA, which allows cells to divide and renew without accumulating damage as quickly.
- **Improving deep sleep and circadian rhythm**
  - One of the first effects people notice is improved sleep quality. Epitalon helps regulate melatonin production, restoring more natural sleep cycles.
- **Reducing oxidative stress and inflammation**
  - This peptide supports antioxidant systems in the body, helping reduce the internal “wear and tear” that accelerates aging.
- **Enhancing immune and hormonal function**
  - By improving overall cellular efficiency, Epitalon may support better immune resilience and more balanced hormone signaling.

## How Epitalon is used:

- **Subcutaneous injection**
  - Typically used in short courses, such as five to ten days per month, repeated two to three times per year as part of a long-term longevity plan.
- **Cycled protocol**
  - Because its effects are long-lasting, it is often used only a few times per year rather than on a continuous daily basis

## Who benefits from Epitalon:

- Adults focused on healthy aging and lifespan extension
- People experiencing poor sleep, low energy, or signs of early cellular aging
- Anyone building a long-term strategy for brain health, immune strength, and inflammation control
- Individuals seeking a deeper level of prevention and cellular resilience



Epitalon is not about quick fixes. It is a foundational peptide used by many longevity-focused practitioners to support graceful aging at the root level. While it works quietly in the background, its long-term benefits can be profound.

# Methylene Blue – Brain Energy, Mitochondria, and Neuroprotection

Methylene Blue is not technically a peptide, but it earns a place in advanced therapeutic protocols because of its profound effects on brain function, cellular energy, and mitochondrial performance. Originally used as a dye and later as a treatment for various infections, it is now studied for its role in enhancing cognitive function, protecting neurons, and supporting mood and focus.

At the cellular level, Methylene Blue acts as a metabolic enhancer. It helps mitochondria — the energy factories in your cells — work more efficiently by improving electron flow in the energy production chain. This is especially important in the brain, where neurons demand high amounts of clean, sustained energy.

## What Methylene Blue can help with:

- **Improving mental clarity and focus**
  - Methylene Blue supports more efficient brain energy use, which can improve attention span, working memory, and mental sharpness.
- **Protecting against neurodegeneration**
  - Research suggests it may protect neurons from damage, reduce oxidative stress, and support long-term brain health.
- **Lifting mood and improving resilience to stress**
  - It may enhance the function of key neurotransmitters like dopamine and serotonin, helping improve mood, motivation, and emotional stability.
- **Supporting mitochondrial performance throughout the body**
  - By optimizing how your cells make energy, Methylene Blue can help reduce fatigue and support cellular repair across multiple systems.

## How Methylene Blue is used:

- **Oral capsule or liquid microdose**
  - Most protocols involve very small amounts, taken one or more times per week. Microdosing is key, as higher doses can have the opposite effect.
- **Intermittent use**
  - It is often used during periods of cognitive stress, low energy, or during neuro-recovery protocols, and may be paired with other peptides for synergistic effects.

## Who benefits from Methylene Blue:

- People experiencing brain fog, low energy, or early signs of cognitive decline
- Professionals or students needing enhanced focus and mental stamina
- Individuals recovering from neurological stress, trauma, or burnout
- Anyone looking to protect long-term brain and mitochondrial health



Methylene Blue is a precision tool. When used in the right dose and context, it can unlock a level of mental energy and cellular efficiency that few other compounds offer. At Resurge, we include it selectively for those who want sharper thinking and more sustainable brain performance.

## 5-Amino-1MQ – Fat Loss, Muscle Preservation, and Energy at the Cellular Level

5-Amino-1MQ is a small molecule that influences one of the body's master regulators of metabolism: the enzyme NNMT (nicotinamide N-methyltransferase). When NNMT activity is too high, it can slow down your body's energy production, promote fat storage, and make it harder to lose weight. 5-Amino-1MQ works by temporarily lowering this activity, helping your cells burn more fat and produce more clean energy.

This compound is gaining attention not only for weight loss, but also for improving insulin sensitivity, preserving lean muscle during calorie deficits, and enhancing overall cellular function. It does not rely on stimulants, hormones, or appetite suppression, making it an excellent choice for those looking to shift body composition without side effects.

### What 5-Amino-1MQ can help with:

- **Accelerating fat loss**
  - By improving how fat is broken down and used for energy, 5-Amino-1MQ can help reduce stubborn body fat, especially when combined with a proper diet and exercise.
- **Preserving lean muscle**
  - Unlike many weight loss tools that cause muscle breakdown, this compound helps maintain muscle mass during fat-burning phases.
- **Improving cellular energy metabolism**
  - It increases NAD<sup>+</sup> availability, which plays a key role in mitochondrial energy production and longevity.
- **Enhancing metabolic flexibility**
  - This means your body can switch more easily between burning fat and glucose depending on your activity and food intake.

## How 5-Amino-1MQ is used:

- **Oral capsule**
  - Typically taken once or twice daily, often during active fat loss programs or body recomposition plans. It is easy to take and does not require injections.
- **Short to medium-term cycles**
  - Most people use it for 4 to 8 weeks at a time, though longer durations may be used in certain protocols.

## Who benefits from 5-Amino-1MQ:

- Individuals looking to lose weight while preserving strength and energy
- Adults with sluggish metabolism or insulin resistance
- Athletes and active individuals during cutting or lean-out phases
- People who want a non-stimulant boost to energy and body composition



5-Amino-1MQ is a metabolic enhancer that works with your body's natural systems. It does not push or override your biology. Instead, it helps you become more efficient at using stored energy while maintaining lean, functional tissue.

# Melanotan I – Skin Pigmentation, UV Protection, and Libido Support

Melanotan I is a lab-made version of a naturally occurring peptide called alpha-melanocyte-stimulating hormone ( $\alpha$ -MSH). This hormone influences how much melanin your skin produces, which determines your skin's natural color and its ability to tan. Melanotan I stimulates your melanocytes — the skin cells that produce pigment — to gradually deepen your skin tone even with limited sun exposure.

While originally developed to help prevent skin cancer in fair-skinned individuals, Melanotan I has since gained popularity for aesthetic tanning, improved photoprotection, and even its surprising side effect of boosting libido. It works with your body's natural systems, helping enhance pigmentation safely and progressively without relying on harmful tanning beds or chemical sprays.

## What Melanotan I can help with:

- **Developing a natural tan with less sun exposure**
  - This peptide activates melanin production in the skin, allowing you to achieve a deeper, more even tan while spending less time in direct UV light.
- **Reducing the risk of sunburn**
  - Increased melanin gives your skin more natural defense against UV damage. While it is not a replacement for sunscreen, it can add a layer of internal protection.
- **Improving skin tone and pigment balance**
  - Some users report more even coloration or fading of white spots or pigment irregularities over time.
- **Enhancing libido and sexual arousal**
  - One unexpected but clinically observed effect is a boost in sexual desire and response. This is believed to be linked to Melanotan I's impact on brain chemistry and arousal pathways.

## How Melanotan I is used:

- **Subcutaneous injection**
  - It is typically injected daily or every other day for several weeks until the desired skin tone is reached, then maintained with less frequent dosing.
- **Requires time and sunlight**
  - While Melanotan I enhances melanin production, your skin still needs some UV exposure to activate the tanning response. A few minutes of natural light each day is usually enough.



## Who benefits from Melanotan I:

- Fair-skinned individuals who burn easily or tan poorly
- People looking for a consistent tan without tanning beds or spray products
- Individuals seeking added UV protection or skin pigment enhancement
- Men and women experiencing low libido or sexual arousal dysfunction

Melanotan I is used off-label and is not a cosmetic shortcut. It works best when paired with safe sun exposure, good hydration, and realistic expectations. At Resurge, we use it carefully with patients who understand both the benefits and limitations, ensuring that treatment supports both aesthetic goals and overall wellness.

# KPV – Anti-Inflammatory Peptide for Gut, Skin, and Vaginal Tissue Healing

KPV is a short peptide fragment derived from the full-length alpha-MSH (melanocyte-stimulating hormone). It retains the anti-inflammatory properties of alpha-MSH without affecting pigmentation or hormone levels. KPV is best known for its ability to **calm immune overactivation** in mucosal tissues such as the gut, skin, and vaginal walls.

Clinically, it is often paired with BPC-157 in "**guttide**" protocols to enhance mucosal repair in patients with leaky gut, pelvic floor inflammation, or autoimmune flares. KPV is gentle, highly targeted, and safe for long-term use.

## What KPV can help with:

- **Reducing inflammation in vaginal or gut tissues**
  - Particularly useful for patients with chronic pelvic pain, vulvodynia, IBS, or local autoimmune syndromes.
- **Improving tissue healing and sensitivity**
  - Supports wound closure and reduces inflammatory cytokines that impair comfort or function in sensitive tissues.
- **Decreasing histamine reactivity and immune flares**
  - Useful for women with MCAS-like symptoms, eczema, or vaginal irritation related to immune hyperreactivity.

## How KPV is used:

- **Oral capsules:** Typically 200–500 mcg daily for systemic inflammation or gut health
- **Topical:** Often compounded in creams for vaginal or vulvar irritation, post-laser healing, or dermatitis
- **Rectal/vaginal suppository:** For local inflammatory conditions of the bowel or vaginal mucosa

## Who benefits from KPV:

- Women with vaginal pain, burning, or inflammation not explained by infection
- Patients with gut permeability, leaky gut, or chronic GI discomfort
- Autoimmune or inflammatory pelvic syndromes that resist traditional therapy

KPV is often overlooked, but it offers profound anti-inflammatory support without suppressing the immune system. It can safely be combined with regenerative peptides or hormones for multi-layered tissue healing.

## SECTION 17

# Sermorelin – Growth Hormone Support for Sleep, Recovery, and Aging

Sermorelin is a synthetic analog of growth hormone–releasing hormone (GHRH) that stimulates your pituitary gland to release more natural growth hormone (GH). Unlike synthetic GH injections, Sermorelin enhances your own rhythms, helping restore hormonal balance without shutting down your natural production.

It is a shorter-acting version of GHRH, which means it mimics the body's natural nighttime GH release. It is widely used in longevity, weight loss, and recovery protocols — and has shown benefit in improving **sleep quality, tissue healing, libido, and body composition**.

## What Sermorelin can help with:

- **Improving deep sleep and circadian rhythm**
  - GH is released primarily during deep sleep. Sermorelin helps restore that cycle.
- **Supporting recovery and tissue repair**
  - It enhances collagen production, immune response, and cellular recovery after injury or exercise.

- **Boosting libido and energy indirectly**
  - By improving sleep and cellular repair, Sermorelin helps restore mood, confidence, and sexual vitality.
- **Reducing belly fat and supporting lean muscle mass**
  - Especially helpful during menopause when metabolic shifts make body recomposition more difficult.

### How Sermorelin is used:

- **Route:** Subcutaneous injection
- **Dose:** 200–500 mcg nightly, 5–7 nights per week
- **Timing:** Best taken at bedtime, 2–3 hours after the last meal (low insulin state)
- **Duration:** 3–6 month cycles, with reassessment of IGF-1 and symptom changes

### Who benefits from Sermorelin:

- Adults experiencing fatigue, poor recovery, or difficulty losing fat
- Women with aging-related declines in skin elasticity, libido, or sleep
- Anyone looking for GH support without using direct growth hormone



Sermorelin helps your body remember how to repair itself. It is one of the gentlest and most natural ways to support tissue healing, lean body mass, and sexual function over time.

# MOTS-c – The Mitochondrial Peptide for Energy, Metabolism, and Cellular Resilience

MOTS-c is a mitochondrial-derived peptide that regulates metabolism, glucose usage, and cell survival. Unlike other peptides that act on hormones or neurotransmitters, MOTS-c works at the cellular level to **optimize mitochondrial function** and improve **metabolic flexibility**.

This peptide is especially beneficial in people who feel "metabolically stuck" — those with stubborn belly fat, fatigue, insulin resistance, or hormone-resistant weight gain. Emerging research shows it may also improve cognitive clarity and stress resilience.

## What MOTS-c can help with:

- **Improving energy and mitochondrial efficiency**
  - It supports ATP production, allowing cells to make clean energy more efficiently.
- **Enhancing metabolic flexibility**
  - Helps your body switch between burning carbs and fat more easily, supporting weight loss and insulin sensitivity.
- **Reducing visceral fat and inflammation**
  - MOTS-c modulates immune signaling and may lower inflammatory cytokines that impair hormone function.
- **Supporting mood and cognitive function**
  - Some studies suggest neuroprotective effects and improved brain energy metabolism

## How Sermorelin is used:

- **Route:** Subcutaneous injection
- **Dose:** 5 to 15 mg subcutaneously, 2 to 3 times per week

- **Timing:** Can be taken in the morning or pre-workout
- **Cycle:** Used in 6 to 12 week blocks for metabolic or performance goals

### **Who benefits from MOTS-c:**

- Women with fatigue, metabolic slowdown, or unexplained weight gain
- Those with PCOS, insulin resistance, or peri/menopausal metabolic shifts
- Patients who feel “burned out” and are not responding to hormones or lifestyle changes

MOTS-c offers a new frontier in metabolic medicine. It supports energy, body composition, and mental clarity from the inside out — starting at the cellular power plant.

## **SECTION 19**

# **What to Expect with Peptide Therapy and How to Get Started**

Peptide therapy is not a quick fix. It is a progressive, personalized process designed to restore balance, strengthen systems, and support long-term change from the inside out. Some people notice subtle benefits within the first week. For others, it may take four to six weeks to feel the full effects. The key is consistency and the right clinical plan tailored to your body.

At Resurge Clinic, we focus on building a peptide strategy that fits your goals, lifestyle, and medical needs. Whether you're seeking help with fat loss, hormone support, tissue healing, sleep, energy, or brain health, we begin by understanding your starting point and designing the right combination of therapies for you.

## What you can expect at Resurge:

- **A personalized consultation**
  - You'll meet with one of our experienced providers to review your health history, goals, symptoms, and lab work if available. This helps us determine which peptides make sense for your biology and your life.
- **A custom treatment plan**
  - Based on your needs, we'll build a plan that includes specific peptides, dosing instructions, format options, and timing strategies. We also coach you on how to self-administer injections if needed.
- **Follow-up and adjustment**
  - Your response is tracked over time. We'll check in regularly to adjust the dose, add or remove peptides, and answer your questions. This ensures your treatment evolves as your body changes.
- **Expert guidance at every step**
  - Our team stays up to date on the latest research and clinical best practices. You'll always know that your care is based on real science and your provider's experience — not internet hype.

Peptides are not just for athletes or biohackers. They are for people who want to take control of their health, age more gracefully, recover more completely, and feel more like themselves again. The right therapy can help unlock your body's natural healing intelligence in ways you may not have experienced in years.

# Ready to Begin?

You do not have to figure this out alone. Our team is here to guide you with clinical insight, compassion, and clarity. If you are ready to explore what peptide therapy can do for you, we invite you to schedule a consultation and take the next step in your health journey.

[Schedule a Consultation](#)

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# Peptide Bundles

| BUNDLE NAME                                    | PEPTIDES                            | PURPOSE   | WHY IT WORKS  |
|--|-------------------------------------|---|---|
| <b>Inflammation Recovery Stack</b>             | KPV, BPC-157, Thymosin Beta-4       | Reduce inflammation, promote tissue healing, and accelerate recovery from injury      | KPV calms immune activation. BPC-157 accelerates microvascular repair. Thymosin Beta-4 stimulates collagen and actin for full-thickness tissue regeneration.            |
| <b>Mito-Metabolic Performance Stack</b>        | MOTS-c, Methylene Blue, 5-Amino-1MQ | Boost mitochondrial energy, enhance fat metabolism, and support metabolic flexibility | MOTS-c improves cellular energy regulation. Methylene Blue increases ATP output in mitochondria. 5-Amino-1MQ inhibits NNMT, enhancing fat loss and insulin sensitivity. |
| <b>Hormone-Repair Optimization Stack</b>       | CJC-1295, Ipamorelin, Sermorelin    | Support natural GH production, sleep cycles, and tissue repair                        | CJC-1295 and Ipamorelin stimulate GH release without spikes in cortisol. Sermorelin restores natural pulsatility and supports anabolic repair during sleep.             |
| <b>Resilient Immunity &amp; Recovery Stack</b> | Thymosin Alpha-1, Epitalon, GHK-Cu  | Strengthen immune modulation, improve tissue resilience, and reduce signs of aging    | Thymosin Alpha-1 balances immune response. Epitalon activates telomerase and circadian genes. GHK-Cu rejuvenates connective tissue, skin, and mucosal surfaces.         |
| <b>Aesthetic &amp; Skin Repair Stack</b>       | GHK-Cu, Methylene Blue, Epitalon    | Improve skin tone, elasticity, and cellular aging from within                         | GHK-Cu promotes collagen and elastin. Methylene Blue boosts mitochondrial energy in skin cells. Epitalon supports longevity pathways and skin cell lifespan.            |



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