

# YOUR ULTIMATE PEPTIDE THERAPY GUIDE

Unlock the power of peptides with this ultimate guide—packed with the latest insights on optimizing health, enhancing recovery, boosting vitality, supporting immune health, and achieving peak performance.



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# WHAT ARE PEPTIDES?

Peptides are similar to proteins, just smaller. Like proteins, they are made of chains of amino acids, but peptides are simply shorter. In general, peptides are composed of between two and 50 amino acids, whereas proteins have more than 100 amino acids. They can perform a wide range of very precise cellular functions.

The human body naturally produces more than 7,000 known peptides, and there's extensive research underway to identify how these peptides work and how we can utilize them. Peptides are present in every cell of the human body. Your body naturally produces peptides, but as you age, production slows down and levels decline.

# WHAT ARE THE BENEFITS OF PEPTIDE THERAPY?

Peptide therapy can be personalized to provide numerous precise health benefits. Some specific benefits include:

- *Weight loss*
- *Better sexual function*
- *Increased energy*
- *Stronger immune system*
- *Improved brain function*
- *Better sleep*
- *Muscle and joint repair*
- *Improved hormone levels*
- *Reduced inflammation*
- *Hair growth*
- *Improved muscle mass*
- *Better skin quality*
- *Improved exercise recovery*
- *Improved digestion*
- *Increased sex drive*
- *Age reversal! (Yes!)*

LEARN MORE

# WHO CAN BENEFIT FROM PEPTIDE THERAPY?

Peptides are amazing molecules that can help almost anyone, especially high performers who ...

- *Struggle with belly fat (no matter how well they eat or how much they exercise).*
- *Train hard, but aren't building muscle or seeing the results they want.*
- *Struggle with recovery from workouts.*
- *Suffer with low energy or fatigue.*
- *Experience a decline in sex drive or sexual performance.*
- *Struggle with poor sleep.*
- *Suffer from poor mood, anxiety or depression.*
- *Suffer from chronic fatigue, joint pain, and chronic inflammation.*
- *Struggle with poor gut health.*
- *Wants to reverse the aging process!*

In this guide, we'll share details about specific peptides that can optimize your health and overall performance.



## WEIGHT LOSS / METABOLISM



### CJC-1295 / Ipamorelin

- Combination of two peptides often used in tandem to boost endogenous production of growth hormone.
- Growth hormone releasing hormone (GHRH) analogue. This acts on the pituitary gland to stimulate secretion of growth hormone. It also acts systemically to promote effects similar to those from growth hormone itself.
- Ipamorelin is a growth hormone releasing peptide that activates the ghrelin receptor at the pituitary gland to block the inhibitory effect of somatostatin and further increase growth hormone secretion.

#### **BENEFITS INCLUDE:**

- *Increased energy.*
- *Improved ability to burn fat.*
- *Increased muscle mass.*
- *Improved sleep quality, leading to more restful and restorative sleep.*
- *Enhanced cognition, focus and memory.*
- *Improved wound healing and injury repair.*
- *Better recovery from workouts.*
- *Increase bone density.*
- *Increased sex drive.*
- *Strengthened immune system.*
- *Optimized cardiovascular health.*





### Tesamorelin

- Powerful growth hormone releasing hormone (GHRH) analogue. This acts on the pituitary gland to stimulate secretion of growth hormone, and also massively increases IGF-1.
- As a GHRH analogue, it acts systemically to promote effects similar to those of growth hormone itself.

#### BENEFITS INCLUDE:

- Abdominal weight loss.
- Increased muscle mass.
- Improved sleep quality, leading to more restful and restorative sleep.
- Enhanced cognition, focus and memory.
- Improved wound healing and injury repair.
- Better exercise recovery.
- Boosted metabolism.

### Semaglutide

- Mimics the action of a natural hormone called Glucagon-like peptide-1 (GLP-1) that is released from the intestines.
- Regulates regions in the brain responsible for hunger, where it helps regulate appetite and leads to reduced hunger and increased feelings of fullness.
- Delays stomach emptying, leading to improved control of eating, reduced cravings and suppressed appetite.
- Increases secretion of insulin and inhibits glucagon by the pancreas, thereby improving glucose (sugar) metabolism.
- By reducing appetite and increasing satiety, semaglutide helps individuals consume fewer calories.
- Studies show weight loss as well as significant improvement in Hemoglobin A1c and cardiovascular risk scores.
- FDA-approved for the treatment of type 2 diabetes as well as obesity.
- Improves insulin sensitivity and blood sugar levels and reduces fat storage.

### Retatrutide

- Novel peptide that activates the glucagon-like peptide-1 receptor (GLP-1R), glucagon receptor (GCGR), and gastrin-releasing peptide receptor (GRPR).
- Regulates appetite and increases metabolism.
- Improves blood sugar levels by enhancing insulin sensitivity (blood sugar regulation).
- May also improve lipid levels and reduce cardiovascular risk.



### Tirzepatide

- Novel peptide that targets both GLP-1 (glucagon-like peptide-1) and GIP (gastric inhibitory peptide) receptors.
  - Used for managing type 2 diabetes and has also shown significant potential for weight loss.
  - Increases energy expenditure and fat oxidation, contributing to fat loss.
  - Improves insulin sensitivity and helps regulate blood glucose levels which reduces fat storage and supports better energy metabolism.
  - Activates receptors in the brain to regulate appetite and satiety.
  - Slows stomach emptying which improves satiety and helps control overall food consumption.
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### Amlexanox

- Inhibits histamine, leukotrienes, and the inflammatory kinases IKK-3 and TBK1 that are elevated in obesity.
  - Activates AMP-kinase, which improves metabolism.
  - Helps improve Hemoglobin A1c and blood glucose control leading to reduced weight, insulin resistance, fatty liver and inflammation.
  - Has antioxidant, anti-inflammatory and immunity-enhancing properties.
  - Promotes cells to burn fat as an energy source.
  - Suppresses appetite and promotes weight loss.
- 

### Mots-c

- Mitochondrial peptide.
- Promotes mitochondrial biogenesis.
- Enhances ability of mitochondria to burn fat, increases healthy brown fat.
- Activates AMP-kinase which improves glucose metabolism.
- Promotes bone formation.
- Improves insulin sensitivity and glucose metabolism by increasing glucose uptake into muscle cells.
- Considered an exercise-mimetic, meaning it imitates exercise on the body.
- Promotes weight loss and heart health.



### Humanin

- Small peptide from mitochondria of the heart, liver, kidneys, muscles, and brain.
- Supports the health and efficiency of mitochondria and protects them from damage so cells can generate more energy.
- Specifically protects pancreatic beta cells, which are responsible for producing insulin. By reducing oxidative stress and inflammation in these cells, it helps maintain their function and support insulin production.
- Enhances insulin signaling pathways, making cells more responsive to insulin and more effectively promotes glucose uptake into cells.
- Reduces inflammation which improves cellular function and energy production.
- Boosts the body's ability to repair damaged proteins and remove waste products from cells which helps maintain cellular health and efficiency and indirectly supports better energy levels.
- Reduces oxidative stress by promoting the activity of antioxidant enzymes, which reduces oxidative damage to cellular components, including those involved in energy production.
- Stimulates a process called autophagy, which is the body's way of cleaning out damaged cells and proteins. By removing these damaged components, cells can function more efficiently, and contribute to increased energy production.

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### 5-amino-1MQ

- Derivative of methylquinolinium that increases NAD<sup>+</sup> levels by blocking the NNMT enzyme.
- Improves fat-burning metabolism and improves mitochondrial function.
- Enhances cellular metabolism and helps the body burn more energy.
- Decreases fat cell size and fat deposits.
- Promotes weight loss and can increase muscle growth.
- Can reverse type II diabetes and diet-induced obesity.



## ENERGY / MITOCHONDRIAL FUNCTION



### SS-31

- Tetrapeptide also known as Elamipretide.
- Binds specifically to the inner mitochondrial membrane, where it helps protect mitochondrial against toxic oxidative insults and downregulates production of mitochondrial free radicals.
- May reduce the accumulation of damaged mitochondrial proteins.
- May help reduce oxidative stress and damage within cells.
- Boosts mitochondrial function and increases ATP (energy) production.
- Has a cellular anti-aging effect.
- Targets senescent cells (zombie cells) for either repair or removal.
- Particularly valuable in conditions where mitochondrial dysfunction plays a role, such as neurodegenerative diseases and cardiovascular disorder.
- Can enhance mitochondrial function and improve energy production at the cellular level, which can be beneficial in conditions associated with impaired mitochondrial function such as post-COVID fatigue, exercise endurance/ performance and Parkinson's disease.



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## INFLAMMATION & RECOVERY



### BPC Arginate

- Gastric peptide composed of 15 amino acids isolated from gastric enzymes.
- Decreases gut, musculoskeletal, and systemic inflammation.
- Combats stomach ulcers, leaky gut, irritable bowel syndrome, and inflammatory bowel disease.
- Accelerated wound healing.
- Enhanced tendon and ligament repair.
- Reduced pain in damaged areas.
- Quicker recovery times after musculoskeletal injury.
- Improved bone healing.
- Supports Improves digestive function and liver health.
- Anti-aging effects through improved cellular function.



### Thymosin Beta

- 43 amino acid peptide produced by the thymus gland involved in cell proliferation, migration, and differentiation through its regulation of actin.
- Occurs naturally as an essential component of cell structure which plays a crucial role in protecting, regenerating, and remodeling of injured or damaged tissues.
- Promotes joint, tissue, muscle and ligament regeneration and wound repair.
- Promotes migration of cells, formation of blood vessels, maturation of stem cells, survival of various cell types and reduction of pro-inflammatory cytokines. Also known as an excellent immune modulator.

#### BENEFITS INCLUDE:

- *Improved musculoskeletal, joint and wound repair.*
- *Increased endurance and strength.*
- *Improved chronic fatigue.*
- *Decreased inflammation.*
- *Improved muscle tone.*
- *Suppressed muscle spasms.*
- *Improved auto-immune function.*
- *Protection against oxidative damage.*

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### VIP (Vasoactive Intestinal Peptide)

- Produced in various tissues throughout the body, including the intestines, pancreas, and nervous system.
- Helps regulate the contraction and relaxation of smooth muscles in the gastrointestinal tract to aid in the coordinated movement of food and fluids through the intestines.
- Stimulates the secretion of digestive enzymes and fluids, including gastrin, secretin, bicarbonate and mucus which enhances digestion and neutralizes stomach acid, providing an optimal environment for enzyme activity and nutrient absorption.
- Promotes mucus production, which protects the gut lining from damage caused by acidic or abrasive substances.
- Widens blood vessels in the gastrointestinal tract (vasodilation) to support nutrient absorption and oxygen delivery to the intestinal tissues.
- Has anti-inflammatory properties, which can help manage conditions such as inflammatory bowel disease (IBD) and other inflammatory gastrointestinal disorders.
- Modulates immune responses within the gut, which helps maintain gut health and suppress inflammation.



### Pentosan

- Reduces inflammation, protecting mucosal surfaces, and improving blood flow to affected areas.
- Used primarily to manage pain and inflammation in conditions like interstitial cystitis and osteoarthritis.
- The injectable form allows for direct administration when oral forms are not suitable or effective.
- May inhibit the release of pro-inflammatory cytokines.
- Has been reported to improve blood flow in inflamed areas, which improves the healing process and reduces inflammation.



## ATHLETIC PERFORMANCE & MUSCLE GAIN



### CJC-1295 / Ipamorelin

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- Considered an exercise-mimetic, meaning it imitates exercise on the body.
- Promotes weight loss and heart health.
- Promotes bone formation.







### Sermorelin

- Synthetic peptide that mimics the action of growth hormone-releasing hormone (GHRH), which stimulates the pituitary gland to produce more growth hormone naturally.
  - Supports muscle growth, repair, and overall muscle health, which can be beneficial for individuals looking to improve muscle mass and recovery, particularly in the context of aging or athletic training.
  - Can help increase lipolysis (fat breakdown) and improve body composition by reducing body fat and increasing lean muscle mass.
  - Improves sleep quality, leading to more restful and restorative sleep.
  - May have positive effects on cognitive function, memory, and overall brain health.
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### PEG-MGF

- An isoform of insulin-like growth factor-1 (IGF-1).
  - Increases stem cell proliferation, allowing for more rapid bony and soft tissue repair (e.g., tendon, ligament, muscle) after injury.
  - Especially beneficial for individuals requiring enhanced recovery.
  - Increases muscle mass by stimulating muscular stem cells.
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### ACE-031

- Research compound known as myostatin propeptide, that has shown potential benefits in muscle growth and repair.
- Inhibits myostatin, a protein that negatively regulates muscle growth. By blocking myostatin, it promotes increased muscle mass and strength.
- May also aid in muscle repair and recovery, potentially benefiting athletes or individuals undergoing rehabilitation from muscle injuries.





### IGF-LR3

- Insulin-like Growth Factor (IGF-1) analogue.
- Promotes nitrogen retention and facilitates protein synthesis.

#### **BENEFITS INCLUDE:**

- *Increases in lean muscle mass by promoting development of fresh muscle fibers and cells.*
- *Improved athletic performance.*
- *Improved muscle recovery after workouts or injury.*
- *Reduced body fat.*
- *Promotes utilization of fat for energy production.*
- *Increases metabolism.*
- *Antioxidant effects.*



## COGNITIVE FUNCTION



### Selank

- Variant of the immunomodulatory spleen peptide tuftsin.
- Modulates the expression of Interleukin-6 (IL-6) and affects the balance of T-helper cell cytokines.
- Enhances GABA's effect on the brain thus leading to a reduction in anxiety.
- Has been shown to influence the concentration of monoamine neurotransmitters and the regulation of noradrenergic and serotonergic brain systems.
- Elevates expression of brain-derived neurotrophic factor (BDNF), a protein important for neuron survival, function and growth. Higher BDNF levels are associated with reduced anxiety and depression.
- Inhibits enzymes involved in the degradation of enkephalins and other endogenous regulatory peptides.
- Increases serotonin levels which can improve mood.

#### BENEFITS INCLUDE:

- *Enhanced memory and attention span.*
- *Better and steady mood as well as feelings of gratification and happiness.*
- *Improved memory and learning.*
- *Potential PTSD and ADHD treatment.*
- *Also supports the immune system through increased production of IL-6 and T-helper cell cytokines.*
- *Antidepressant and anti-stress effects.*
- *Anxiolytic activity similar to benzodiazepines with little to no side effects.*
- *Enhanced mental concentration.*
- *Decreased anxiety and stress levels.*
- *Improved energy.*



### Semax

- Modified snippet of adrenocorticotrophic hormone (ACTH).
- Best known for its nootropic, neurogenic/neurorestorative and neuroprotective properties.
- Used for the treatment of many CNS diseases (ischemic brain stroke, dys-circulatory encephalopathy, optic nerve atrophy, etc.).

#### **BENEFITS INCLUDE:**

- *Nootropic (cognitive-enhancing).*
- *Enhanced mental concentration.*
- *Improves memory and learning.*
- *Decreased anxiety and stress levels.*
- *Improved adaptability under extreme conditions in healthy persons.*
- *Increased attention and short-term memory.*
- *Increased brain BDNF levels.*
- *Reduced cerebral inflammation during recovery from stroke or hypoxic event.*
- *Treatment of ADHD.*
- *Neuroprotection of the brain from various types of stress and damage.*

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### DHH-B

- Dihydro Honokiol-B, an anti-inflammatory, anti-bacterial, and anti-allergic agent derived from the bark of the magnolia tree.
- Has high antioxidant properties that lower levels of inflammation and oxidative stress in the brain and throughout the body.
- Has neuroprotective and neuromodulatory effects.
- Has therapeutic potential for treatment of anxiety.
- May suppress unhealthful levels of cortisol, a stress-response hormone.
- Boosts GABA, a neurotransmitter that quiets excitatory neurons in the brain, exerts a calming effect, and helps reduce anxiety and promote sleep.
- Activates the endocannabinoid system which plays a role in elevating mood, reducing inflammation, boosting immune health, pain relief, and preventing disease.
- Therapeutic effect on pain, cerebrovascular injury, epilepsy, and cognitive disorders including Alzheimer's disease.



### Dihexa

- Oligopeptide drug derived from angiotensin IV that binds with high affinity to hepatocyte growth factor (HGF) and potentiates its activity.
- Found to potentially improve cognitive function in animal models of -like mental impairment.
- Found to be 7X more potent than brain-derived neurotrophic factor in terms of neurotrophic activity.
- Augments synaptic connectivity; may be beneficial with Alzheimer's disease and Parkinson's Disease.

#### **BENEFITS INCLUDE:**

- *Improved cognitive function.*
- *Improved short-term and long-term memory.*
- *Management of depression.*
- *Enhanced creative thinking and social interaction.*
- *Improved brain focus.*
- *Improved neuroregeneration.*

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### PE 22-28

- Synthetic peptide developed for neuroprotection and brain health.
- Exerts its neuroprotective effects by reducing oxidative stress, inflammation, and neuronal cell death.
- May support cognitive health and counteract neurodegeneration in diseases such as Alzheimer's disease, Parkinson's disease, and other conditions associated with cognitive decline.
- Has antidepressant properties by regulating serotonin, dopamine and norepinephrine, which are crucial for mood regulation.
- Decreases brain inflammation and improves cellular repair.





### Humanin

- Small peptide from mitochondria of the heart, liver, kidneys, muscles, and brain.
- Supports the health and efficiency of mitochondria and protects them from damage so cells can generate more energy.
- Can help prevent cell death and improve cognitive function, particularly in neurodegenerative conditions like Alzheimer's disease.
- May support the growth of new neurons, a process known as neurogenesis, which is important for brain plasticity and repair.
- Specifically protects pancreatic beta cells, which are responsible for producing insulin. By reducing oxidative stress and inflammation in these cells, it helps maintain their function and support insulin production.
- Reduces inflammation which improves cellular function and energy production.
- Enhances insulin signaling pathways, making cells more responsive to insulin and more effectively promotes glucose uptake into cells.
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- Reduces oxidative stress by promoting the activity of antioxidant enzymes, which reduces oxidative damage to cellular components, including those involved in energy production.
- Stimulates a process called autophagy, which is the body's way of cleaning out damaged cells and proteins. By removing these damaged components, cells can function more efficiently, and contribute to increased energy production.

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### P21

- Exerts neuroprotective effects by supporting the health of neurons (nerve cells) and protecting them from damage.
- May enhance cognitive functions such as learning and memory by promoting neural plasticity - the brain's ability to adapt and reorganize itself, which is crucial for learning and memory formation.
- May help improve synaptic plasticity, which is the ability of synapses (the connections between neurons) to strengthen or weaken over time in response to increases or decreases in their activity, which can lead to better learning and memory capabilities.



### Pinealon

- Derived from pineal gland.
  - Has potential neuroprotective and cognitive benefits.
  - May support brain health, memory, cognitive performance and learning by promoting neuronal plasticity.
  - Protects the brain from neurodegenerative diseases by supporting cellular health and reducing oxidative stress and inflammation in neural tissues.
  - Improves mood and reduce stress by influencing neurotransmitter activity and supporting overall mental well-being.
  - Assists in regulating circadian rhythms and improving sleep quality.
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- *Improved wound healing and injury repair.*



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- May have positive effects on cognitive function, memory, and overall brain health.



## GUT HEALTH



### Guttides: BPC-157 + KPV

#### BPC- Body Protection Compound 157

- Gastric peptide composed of 15 amino acids isolated from gastric enzymes.
- Decreases gut, musculoskeletal, and systemic inflammation.
- Supports Improves digestive function and liver health.
- Increases collagen production in the stomach lining and Improves mucous secretion.
- Promotes healing of the gut lining and may help repair damage to the mucosal layer, which can be beneficial in conditions like stomach ulcers, leaky gut, irritable bowel syndrome, and inflammatory bowel disease.
- Anti-aging effects through improved cellular function.
- May have anti-inflammatory effects, which can help reduce inflammation in the gut and support healing.
- Strengthens the gut barrier, potentially reducing the risk of harmful substances passing through the intestinal lining and into the bloodstream.
- Accelerated wound healing.
- Enhanced tendon and ligament repair.
- Reduced pain in damaged areas.
- Quicker recovery times after musculoskeletal injury.
- Improved bone healing.



### Guttides: BPC-157 + KPV

#### KPV - Lysine-Proline-Valine

- Naturally-occurring peptide in the body made of 3 amino acids: lysine, proline and valine.
- Strong anti-inflammatory effects by reducing cytokine secretion from colonic cells.
- May contribute to the healing of damaged tissues in the gut, supporting recovery from gastrointestinal injuries or inflammatory conditions such as Crohn's, ulcerative colitis and Celiac disease.

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### VIP (Vasoactive Intestinal Peptide)

- Produced in various tissues throughout the body, including the intestines, pancreas, and nervous system.
- Promotes mucus production, which protects the gut lining from damage caused by acidic or abrasive substances.
- Helps regulate the contraction and relaxation of smooth muscles in the gastrointestinal tract to aid in the coordinated movement of food and fluids through the intestines.
- Widens blood vessels in the gastrointestinal tract (vasodilation) to support nutrient absorption and oxygen delivery to the intestinal tissues.
- Stimulates the secretion of digestive enzymes and fluids, including gastrin, secretin, bicarbonate and mucus which enhances digestion and neutralizes stomach acid, providing an optimal environment for enzyme activity and nutrient absorption.
- Has anti-inflammatory properties, which can help manage conditions such as inflammatory bowel disease (IBD) and other inflammatory gastrointestinal disorders.
- Modulates immune responses within the gut, which helps maintain gut health and suppress inflammation.

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### LL-37

- Cathelicidin antimicrobial peptide endogenously expressed in epithelial cells of the testis, skin, the gastrointestinal tract, and the respiratory tract, and in leukocytes such as monocytes, neutrophils, T cells, NK cells, and B cells.
- Can help restore healthy gut microbiome.
- Stimulates wound healing.
- Immune system stimulator.
- Has antimicrobial activity against numerous bacteria, viruses, and fungi.







### Larazotide

- Synthetic peptide designed to improve gut health by targeting gut permeability.
- Supports function of tight junctions, the structures between cells in the gut lining that help maintain the barrier function of the intestine.
- Helps manage conditions where the gut lining becomes too permeable, a phenomenon often referred to as "leaky gut."
- By potentially strengthening the tight junctions, it may help reduce the passage of harmful substances from the gut into the bloodstream.
- May help mitigate symptoms of celiac disease, like diarrhea, abdominal pain, and bloating.
- Has shown potential in managing symptoms of inflammatory bowel diseases (IBD), such as Crohn's disease and ulcerative colitis, by improving gut barrier function.
- Might aid in better nutrient absorption and overall gut health.



## IMMUNE FUNCTION



### Thymosin Alpha

- Naturally-occurring peptide produced by the thymus gland that diminishes with age.
- Has long been recognized as an excellent immune modulator that enhances and restores healthy immune function, with applications in treating various diseases including viral infections, cancers, and immunodeficiency disorders.
- Increases innate immunity and helps fight against harmful autoimmune processes.
- Increases production of immune-related cytokine.
- Improves visibility of infected cells to the immune system.
- Directly inhibits viral replication and makes virally infected cells more detectable.
- Stimulates stem cells to produce new immune cells.
- Helps restore immune function in immunocompromised states.

#### **BENEFITS INCLUDE:**

- *Reduced inflammation, especially from chronic diseases.*
- *Improved chronic fatigue.*
- *Improved overall immune function.*
- *Anti-viral, anti-bacterial, and antifungal effects.*
- *Protection against oxidative damage.*
- *Slowing or halting cancer growth.*



### VIP (Vasoactive Intestinal Peptide)

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### Thymulin

- Produced by the thymus gland, known for its role in the maturation of T-cells, which are essential for the adaptive immune response.
  - By supporting T-cell function and overall immune system activity, it can enhance the body's ability to defend against infections and diseases.
  - May have a role in regulating autoimmune responses.
- 

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- Can help restore healthy gut microbiome.
- Stimulates wound healing.
- Has antimicrobial activity against numerous bacteria, viruses, and fungi.



## LONGEVITY



### Epitalon

- Active component of bovine pineal gland extract known as epithalamin.
- May be the ultimate anti-aging peptide.
- Proven to increase telomere length (via increased telomerase activity) and decrease mortality in animal studies.
- Stimulates healthy pineal gland synthesis of serotonin and melatonin.
- Slows down aging of the reproductive system.
- Improves conversion of T4 to T3 thyroid hormone (normalizes deiodinase function).
- Improves glucose tolerance and decreases insulin and triglyceride levels.
- Studies show consistent increase in longevity and decrease in mortality and cancer.
- Improves hypothalamic-pituitary dysfunction seen with disease and aging.
- Provide immune support by improving natural killer cell and T-helper cell function.



### Humanin

- Small peptide from mitochondria of the heart, liver, kidneys, muscles, and brain.
- Supports the health and efficiency of mitochondria and protects them from damage so cells can generate more energy.
- Specifically protects pancreatic beta cells, which are responsible for producing insulin. By reducing oxidative stress and inflammation in these cells, it helps maintain their function and support insulin production.
- Enhances insulin signaling pathways, making cells more responsive to insulin and more effectively promotes glucose uptake into cells.
- Boosts the body's ability to repair damaged proteins and remove waste products from cells which helps maintain cellular health and efficiency and indirectly supports better energy levels.
- Reduces oxidative stress by promoting the activity of antioxidant enzymes, which reduces oxidative damage to cellular components, including those involved in energy production.
- Stimulates a process called autophagy, which is the body's way of cleaning out damaged cells and proteins. By removing these damaged components, cells can function more efficiently, and contribute to increased energy production.
- Reduces inflammation which improves cellular function and energy production.





## SEXUAL HEALTH

### Melanotan 2

- Analogue of  $\alpha$ -melanocyte-stimulating hormone ( $\alpha$ -MSH).
- Increases sexual arousal and stimulates melanogenesis through activation of melanocortin receptors.

#### BENEFITS INCLUDE:

- *Increased libido and improved erectile function.*
- *Protection against skin cancer.*
- *Possible anti-inflammatory effect for treatment of Chronic Inflammatory Response Syndrome (CIRS).*
- *Weight loss / fat burn.*
- *Skin tan.*

### PT-141 / Bremelanotide

- Analogue of  $\alpha$ -melanocyte-stimulating hormone ( $\alpha$ -MSH).
- Active metabolite of Melanotan II.
- Increases libido and improves sexual function.
- Also effective for increasing arousal, desire, and sexual satisfaction in women.

### Kisspeptin 10

- Stimulates the release of gonadotropin-releasing hormone (GnRH) from the hypothalamus, which then stimulates.
- Positive effect on libido and mood.
- Boost luteinizing hormone (LH) release from the pituitary gland and testosterone secretion from the testes.



## COSMETIC



### GHK-Cu

- Naturally-occurring copper peptide that triggers collagen synthesis and promotes cell restoration and regeneration.
- Known to stimulate the production of collagen, glycosaminoglycan and other extracellular matrix components to promote wound healing and accelerated tissue repair and regeneration.
- Helps improve skin firmness and elasticity, making it a popular ingredient in anti-aging skincare products.
- Improves skin elasticity by increasing collagen levels by up to 70%.
- Reduce fine lines and wrinkles by up to 35%.
- Has antioxidant properties that help protect cells from oxidative damage caused by free radicals. This contributes to overall skin health and protection.
- Can enhance the health of hair follicles and promote the anagen (growth) phase of the hair cycle to prevent and correct hair loss.
- Has anti-inflammatory effects, which can help soothe irritated skin and reduce redness and swelling, making it beneficial for conditions like acne or rosacea.
- Can heal nerves and reduce certain types of nerve pain.
- Can be used topically or systemically.





## PTD-DBM

- Protein Transduction Domain-fused Disheveled Binding Motif (PTD-DBM).
  - Man-made peptide which stimulates hair regrowth and hair follicle neogenesis by blocking the hair-loss protein CXXC5 to stimulate hair restoration.
  - Works on pattern baldness.
  - Works on damaged scalps.
  - Also stimulates wound healing and wound-induced hair neogenesis.
  - Applied topically and microneedled into the scalp to promote hair growth.
  - Proactively prevents hair loss.
  - Stimulates new hair follicles.
  - Treats androgenetic alopecia.
  - Grows full natural hair.
- 

## Melanotan 2

- Analogue of  $\alpha$ -melanocyte-stimulating hormone ( $\alpha$ -MSH).
- Promotes skin tanning by stimulating melanogenesis through activation of melanocortin receptors.

### **BENEFITS INCLUDE:**

- *Skin tan.*
  - *Protection against skin cancer.*
  - *Increased libido and improved erectile function.*
  - *Weight loss / fat burn.*
  - *Possible anti-inflammatory effect for treatment of Chronic Inflammatory Response Syndrome (CIRS).*
- 

## Sermorelin

- Improves skin elasticity, reduces wrinkles, and supports overall physical and cognitive health.
- Synthetic peptide that mimics the action of growth hormone-releasing hormone (GHRH), which stimulates the pituitary gland to produce more growth hormone naturally.
- Supports muscle growth, repair, and overall muscle health, which can be beneficial for individuals looking to improve muscle mass and recovery, particularly in the context of aging or athletic training.
- Can help increase lipolysis (fat breakdown) and improve body composition by reducing body fat and increasing lean muscle mass.
- Improves sleep quality, leading to more restful and restorative sleep.
- May have positive effects on cognitive function, memory, and overall brain health.



## Tesamorelin

- Improves skin elasticity, reduces wrinkles, and supports overall physical and cognitive health.
- Powerful growth hormone releasing hormone (GHRH) analogue. This acts on the pituitary gland to stimulate secretion of growth hormone, and also massively increases IGF-1.
- As a GHRH analogue, it acts systemically to promote effects similar to those of growth hormone itself.

### BENEFITS INCLUDE:

- *Abdominal weight loss.*
- *Increased muscle mass.*
- *Improved sleep quality, leading to more restful and restorative sleep.*
- *Enhanced cognition, focus and memory.*
- *Improved wound healing and injury repair.*
- *Better exercise recovery.*
- *Boosted metabolism.*

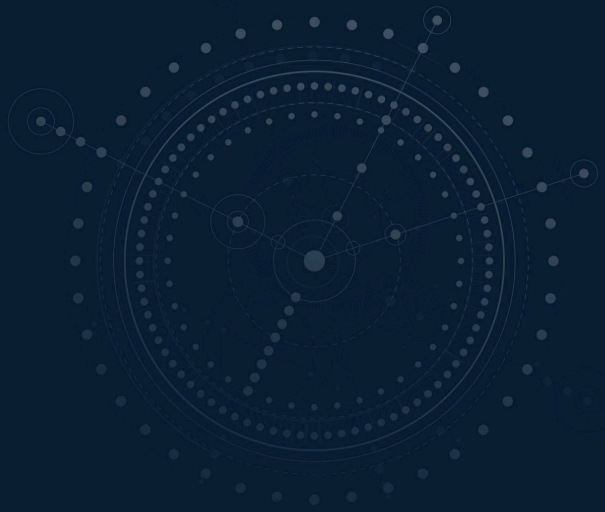
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## CJC-1295/Ipamorelin

- Improves skin elasticity, reduces wrinkles, and supports overall physical and cognitive health.
- Combination of two peptides often used in tandem to boost endogenous production of growth hormone.
- Growth hormone releasing hormone (GHRH) analogue. This acts on the pituitary gland to stimulate secretion of growth hormone. It also acts systemically to promote effects similar to those from growth hormone itself.
- Ipamorelin is a growth hormone releasing peptide that activates the ghrelin receptor at the pituitary gland to block the inhibitory effect of somatostatin and further increase growth hormone secretion.

### BENEFITS INCLUDE:

- *Increased energy.*
- *Improved ability to burn fat.*
- *Increased muscle mass.*
- *Improved sleep quality, leading to more restful and restorative sleep.*
- *Enhanced cognition, focus and memory.*
- *Improved wound healing and injury repair.*
- *Better recovery from workouts.*
- *Increase bone density.*
- *Increased sex drive.*
- *Strengthened immune system.*
- *Optimized cardiovascular health.*



## HOW DO I GET STARTED?

*These peptides offer exciting possibilities for improving health, performance and longevity. They work with your body's natural processes to potentially enhance libido, sexual function, skin quality, muscle and more. As with any treatment, it's important to consult with a healthcare professional to determine the best options for your individual needs.*

*If you're interested in learning more about peptide therapy for improving your health or upgrading your performance, schedule an appointment with a health advisor at the Gapin Institute.*

### **SCHEDULE A CONSULTATION TODAY**

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