



YOUR ULTIMATE PEPTIDE THERAPY GUIDE

If you're looking for the most cutting-edge advancements in optimizing health and upgrading performance, you might have heard of peptides or peptide therapy. Peptides have been around for decades, but they're finally commercially available in the United States.



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LEARN MORE

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 PEPTIDES?

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

- *Weight loss*
- *Increased energy*
- *Improved cognitive function*
- *Musculoskeletal repair*
- *Reduced inflammation*
- *Improved muscle mass*
- *Improved exercise recovery*
- *Improved libido*
- *Better sexual function*
- *Strengthened immune system*
- *Better sleep*
- *Increased testosterone levels*
- *Hair growth*
- *Better skin quality*
- *Improved digestive function*
- *Age reversal! (Yes!)*

LEARN MORE

WHAT ARE THE BENEFITS OF PEPTIDE THERAPY?

Peptides can benefit practically anyone, especially men who...

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

In this guide, we'll share some details about the specific peptides that support men's health and performance.



WEIGHT LOSS

CJC-1295 / IPAMORELIN

- Growth hormone secretagogues
- Combination of two peptides often used in tandem to boost endogenous production of growth hormone
- CJC-1295 is a 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:

- *Improved ability to burn fat*
- *Increased muscle mass*
- *Improved sleep*
- *Enhanced cognition, focus and memory*
- *Improved wound healing and injury repair*
- *Increase bone density*
- *Increased sex drive*
- *Strengthened immune system*
- *Optimized cardiovascular system*

PEPTIDE THERAPY/WEIGHT LOSS

TESAMORELIN

- Growth hormone secretagogue
- Powerful growth hormone releasing hormone analogue
- Similar to CJC-1295, it acts on the pituitary gland to stimulate secretion of growth hormone, but 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*
- *Enhanced cognition, focus and memory*
- *Improved wound healing and injury repair*
- *Boosted metabolism*

SEMAGLUTIDE

- Glucagon-like peptide-1 (GLP-1) receptor agonist.
- FDA-approved for the treatment of type 2 diabetes as well as obesity.
- Increases secretion of insulin and inhibits glucagon by the pancreas, thereby improving glucose (sugar) metabolism.
- Regulates regions in the brain responsible for hunger and delays gastric emptying, leading to improved control of eating, reduced cravings and suppressed appetite.
- Studies show weight loss as well as significant improvement in Hemoglobin A1c and cardiovascular risk scores.

PEPTIDE THERAPY/WEIGHT LOSS

AMLEXANOX

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

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
- 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
- Promotes bone formation

5-AMINO-1MQ

- Derivative of methylquinolinium that blocks the NNMT enzyme
- Improves fat-burning metabolism and improves mitochondrial function
- Increases NAD+ levels
- Promotes weight loss and can increase muscle growth
- Can reverse type II diabetes and diet-induced obesity



INFLAMMATION AND RECOVERY

BPC-157

- Gastric peptide composed of 15 amino acids isolated from gastric enzymes.
- Reduces gut, musculoskeletal, and systemic inflammation
- Combats stomach ulcers, leaky gut, irritable bowel syndrome, and inflammatory bowel disease
- Improves digestive function and promotes healing of the liver
- Improves wound healing
- Improves repair of musculoskeletal injury
- Work as an anti-inflammatory agent



PEPTIDE THERAPY/ INFLAMMATION & RECOVERY

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 MAY 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*

ATHLETIC PERFORMANCE AND MUSCLE GAIN

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PEPTIDE THERAPY / ATHLETIC PERFORMANCE

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- Promotes bone formation



PEPTIDE THERAPY / ATHLETIC PERFORMANCE

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*

PEG-MGF

- Pegylated Mechano Growth Factor - 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



COGNITIVE FUNCTION

SELANK

- Analogue of the immunomodulatory spleen peptide tuftsin
- Modulates the expression of Interleukin-6 (IL-6) and affects the balance of T-helper cell cytokines
- Has been shown to influence the concentration of monoamine neurotransmitters and the regulation of noradrenergic and serotonergic brain systems
- Elevate expression of brain-derived neurotropic factor (BDNF)
- Inhibits enzymes involved in the degradation of enkephalins and other endogenous regulatory peptides

BENEFITS MAY INCLUDE:

- *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 cerebral energy*
- *Better and steady mood as well as feelings of gratification and happiness*
- *Improved memory and learning*
- *Potential PTSD and ADHD treatment*
- *Also has immunostimulatory effect through IL- 6 and T-helper cell cytokines*

PEPTIDE THERAPY / COGNITIVE FUNCTION

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*

DIHEXA

- Oligopeptide drug derived from angiotensin IV that binds with high affinity to hepatocyte growth factor (HGF) and potentiates its activity.
- Found to potently 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*



PEPTIDE THERAPY / COGNITIVE FUNCTION

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



GUT HEALTH

BPC-157

- Gastric peptide composed of 15 amino acids isolated from gastric enzymes.
- Reduces gut, musculoskeletal, and systemic inflammation.
- Combats stomach ulcers, leaky gut, irritable bowel syndrome, and inflammatory bowel disease.
- Improves digestive function and promotes healing of the liver.
- Improves wound healing.
- Improves repair of musculoskeletal injury.
- Work as an anti-inflammatory agent.

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

PEPTIDE THERAPY / GUT HEALTH

VIP

- Vasoactive Intestinal Polypeptide - 28 amino acid protein that belongs to the glucagon/secretin family
- Stimulates contractility in the heart and acts as a potent vasodilator
- Lowers blood pressure and relaxes the smooth muscle of trachea, stomach and gallbladder
- Functions as a neuromodulator and neurotransmitter
- Seems to be an important neuropeptide involved in regulating inflammation
- Improves gastrointestinal / pancreatic health
- Possible treatment for Chronic Inflammatory Response Syndrome (CIRS)

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.
- Increases innate immunity and helps fight against harmful autoimmune processes.

BENEFITS MAY 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*
- *Halting cancer growth*

PEPTIDE THERAPY / IMMUNE FUNCTION

VIP

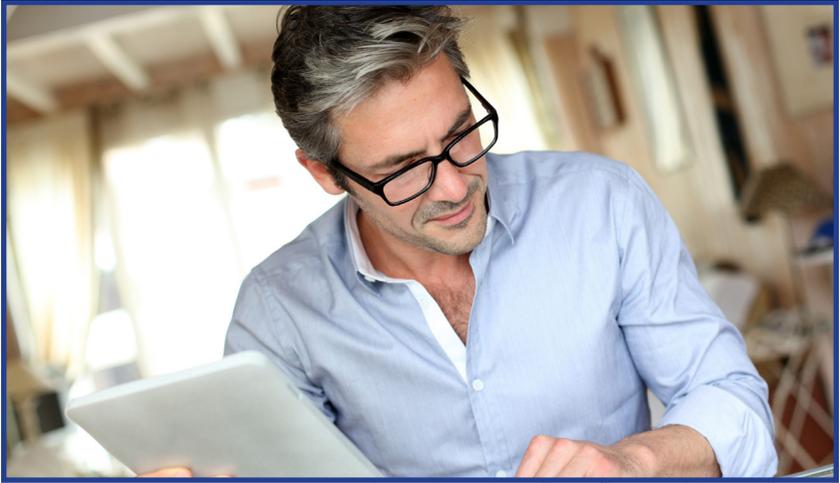
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- Improves gastrointestinal / pancreatic health
- Possible treatment for Chronic Inflammatory Response Syndrome (CIRS)

SS-31

- Tetrapeptide also called Elamipretide and cellular anti-aging effect.
- Protects mitochondrial against toxic oxidative insults and downregulates production of mitochondrial free radicals.
- Boosts mitochondrial function and increases ATP (energy) production.
- Targets senescent cells (zombie cells) for either repair or removal.

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.
- Immune system stimulator
- 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
- Increases 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.



MEN'S HEALTH

MELANOTAN 2

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

BENEFITS MAY INCLUDE:

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

PEPTIDE THERAPY / MEN'S HEALTH

PT - 141 / BREMALANOTIDE

- Analogue of α -melanocyte-stimulating hormone (α -MSH.)
- Active metabolite of melanotan II.
- Increases libido and erectile function.
- Also effective for women.

KISSPEPTIN 10

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



COSMETIC

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BENEFITS MAY INCLUDE:

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

PEPTIDE THERAPY / COSMETIC

PTD-DBM

- Protein Transduction Domain-fused Dishevelled 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.
- Also stimulates wound healing and wound-induced hair neogenesis.
- Applied topically and microneedled into the scalp to promote hair growth.

BENEFITS MAY INCLUDE:

- *Works on pattern baldness*
- *Proactively prevents hair loss*
- *Stimulates new hair follicles*
- *Treats androgenetic alopecia*
- *Works on damaged scalps*
- *Grows full natural hair*

GHK-CU

- Naturally-occurring copper peptide
- Stimulates collagen and glycosaminoglycan in skin fibroblasts to promote wound healing
- Improves skin elasticity by increasing collagen levels by up to 70%
- Reduce fine lines and wrinkles by 35%
- Act as an anti-inflammatory to reduce pain
- Prevent and correct hair loss
- Heal nerves and reduce certain types of nerve pain
- Can be used topically or systemically



HOW DO I GET STARTED?

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

In addition to following the most current peptide research, Dr. Gapin has trained under Dr. Seeds, the leading authority on peptide therapy and is a member of the International Peptide Society. Dr. Gapin and his team will help you determine which peptides could help you live the life you've always wanted.

Schedule a Consultation TODAY

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