Hexarelin | MOD-GRF-1 4x mouth spray

Background

Hexarelin | MOD-GRF-1 4x mouth spray supplement is a potent anti-aging formulary blend comprised of two well-known growth hormone secretagogues. The synergistic actions of these two peptides are designed to stimulate natural release of endogenous human growth hormone (hGH) to promote lean body mass and fat metabolism, and aid to regulate the glycemic profile. As an anti-aging supplement blend, this mouth spray formulary is suggested to accelerate muscle and tissue repair and recovery in athletes and non-athletes, and, by extension, offer anti-inflammatory and cardioprotective properties.

Hexarelin is a synthetic analogue of ghrelin, e.g., the "hunger hormone" associated with food intake and growth hormone (GH) release. As a growth hormone secretagogue receptor agonist peptide composed of a six amino acid sequence, it is widely associated with cardioprotective properties. Often compared to another ghrelin derivative ipamorelin, there are some key differences. Although both peptides function to promote lean body mass and decrease adipose tissue, hexarelin appears to be more effective in decreasing insulin resistance, and, by extension, reducing fat accumulation. [5] The suggested mechanism of action for hexarelin appears to be in optimizing muscle cell metabolism, e.g., fueling muscle growth by enhancing the effects of growth hormone and insulin-like growth factor 1. [6]

Modified growth hormone releasing factor (MOD GRF 1-29) is a synthetic analog of the first 29 amino acids of growth-hormone-releasing hormone (GHRH). [8] As a growth hormone secretagogue, MOD GRF 1-29 promotes the release of endogenous human growth hormone (hGH) via one of two pathways, the GHRH signaling pathway or the separate ghrelin route. [9] The peptide analog is a modified version of the shortest fully functional fragment of GHRH and suggested to act by binding to the growth-hormone-releasing hormone receptor (GHRHR) on cells in the anterior pituitary.

Research

According to Mao et al. (2014) hexarelin is a synthetic growth hormone-releasing peptide that acts like the natural analog ghrelin (the "hunger hormone" associated with food intake and growth hormone release) in activating the growth hormone secretagogue receptor (GHSR) in the brain. [1] In a brief review, the authors suggest hexarelin has cardioprotective properties in common cardiovascular conditions such as cardiac fibrosis, ischemic heart disease, cardiac dysfunction, and atherosclerosis. [1] Broglio et al. (2002) evaluated the effects of acute hexarelin administration on cardiac performance in patients with coronary artery disease. [2] The researchers applied acute administration of hexarelin compared to GH-releasing hormone, recombinant human (rh)-GH, or placebo in male patients (n = 24). [2] They found that the acute administration of hexarelin improves cardiac performance without any relevant variation in systemic vascular resistance, e.g., quick increase in left ventricular ejection fraction, cardiac index, and cardiac output and decrease of wedge pressure. [2] Imazio et al. (2002) investigated the GH-independent cardiotropic activities of hexarelin in patients with severe left ventricular dysfunction. [3] The researchers applied growth

hormone (GH) levels and left ventricular ejection fraction (LVEF) as outcomes (n = 13) compared to seven normal participants and seven participants with growth-hormone deficiency (GHD) with intravenous hexarelin administration. [3] They found that acute hexarelin administration increases LVEF in patients with left ventricular dysfunction due to ischemic, normal patients, and those with GHD. [3] In an earlier study, Broglio et al. (2001) explored cardiac effects of hexarelin administration in humans (n = 7 normal, n = 7 growth-hormone deficient, and n = 12 severe dilated cardiomyopathy). [4] Their findings suggest that acute administration of the peptide produces a positive inotropic effect, in other words increases contractility of the heart muscle. [4]

Campbell et al. (1992) examined the immunological and biological properties of synthesized human growth hormone releasing factor (hGRF) (1–29) analogs compared to parent compounds. [10] The authors found the analogs retain full immunoreactivity and potent bioactivity, both in vitro and in vivo, allowing their use in analytical biochemistry evaluation procedures. [10] MOD GRF 1-29 is thought to function as a powerful GHRH analog and associated with tissue repair, and improvements in intestinal inflammation and heart function. [11] Similar in structure to the popular GHRH analog Sermorelin, a minor adjustment in four amino acids may add extra stability to MOD GRF 1-29 in storage and exposure. [11] Additionally, MOD GRF 1-29 may be compounded with Fragment 176-191 and Ipamorelin blends to potentially unlock a synergistic effect in amplifying secretion of endogenous growth hormone (GH) production and fat metabolism. [11]

Interestingly, the first 29 amino acids of growth-hormone-releasing hormone (GHRH) were realized to be equipotent to its full 44 amino acid structure. [12, 13] MOD GRF (1-29) replaces the 2nd, 8th, 15th, and 27th amino acids of growth hormone releasing factor (hGRF) (1–29) (four amino acids) to attenuate metabolic clearance and significantly extending half-life. [14, 15] Either standalone or in compounded blends, MOD GRF 1-29 is a potent anti-aging therapeutic agent. It is thought the combination of Hexarelin | MOD-GRF-1 in a supplement blend provides synergistic anti-aging activities, particularly amplified ability to promote the release of endogenous human growth hormone (hGH) and antioxidant protective factors.

Conclusion

Hexarelin is a synthetic analogue of ghrelin composed of a six amino acid sequence. The peptide is associated with a powerful effect on the growth hormone (GH) axis. The suggested mechanism of action for hexarelin appears to be in optimizing muscle cell metabolism, playing a role in mitochondrial function. The peptide is most widely associated with improvements in many common cardiovascular conditions, additionally, demonstrating anti-aging properties due to ability to normalize GH and consequently induce IGF-1 secretion. [7] As a powerful growth hormone (GH) releasing growth hormone secretagogue receptor (GHSR) agonist, research potential is promising for discovery of additional benefits associated with this ghrelin derivative.

MOD GRF 1-29 is a modified version of the shortest fully functional fragment of growth-hormone-releasing hormone (GHRH) and suggested to act by binding to the growth-hormone-releasing hormone receptor (GHRHR) on cells in the anterior pituitary. As a growth hormone secretagogue, MOD GRF 1-29 promotes the release of endogenous human growth hormone

(hGH). [9] Potential associated benefits include increase in lean body mass, reduced body fat, and enhanced injury and tissue repair for both athletes and non-athletes. The GHRH analog may also play a role as a potent anti-inflammatory coupled with cardioprotective properties. [11]

Recombinant GH treatment, or those synthetic compounds that promote natural GH release can promote body composition improvements and positive affective benefits of subjective well-being. [16] Furthermore, positive anti-aging properties promoted by insulin-like growth factor I (IGF-I), a fundamental mediator of GH actions, lend support to the notion that GH has anti-aging activities. [16] Hexarelin | MOD-GRF-1 4x mouth spray supplement is a potent anti-aging formulary blend comprised of two well-known growth hormone secretagogues that may improve the perception of the quality of life.

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