

# **White Paper**

## **6C GHRH Mouth Spray**

### **A Novel Longevity-Oriented Approach to Supporting the Growth Hormone Axis**

#### **Executive Summary**

The Growth Hormone (GH) axis plays a central role in healthy aging, metabolic resilience, tissue repair, and body composition maintenance. Growth Hormone–Releasing Hormone (GHRH) is the body’s primary endogenous signal responsible for stimulating physiologic GH release from the anterior pituitary. The 6C GHRH Mouth Spray is designed as a practitioner-friendly delivery format intended to support the body’s natural GH pulsatility through the hypothalamic–pituitary signaling pathway. Emerging clinical research and decades of endocrine physiology suggest that GHRH analogs may represent a valuable tool in longevity-focused, age-management, and wellness-based clinical protocols.

#### **The Role of GH Decline in Aging**

Age-associated decline in growth hormone secretion has been linked in the medical literature to reduced lean muscle mass, increased adiposity, slower recovery and tissue repair, declining sleep quality, and reduced metabolic flexibility. Rather than introducing exogenous growth hormone, GHRH-based approaches aim to stimulate endogenous physiologic release, aligning with the body’s regulatory feedback systems.

#### **What is GHRH?**

Growth Hormone–Releasing Hormone is a hypothalamic peptide hormone that stimulates GH secretion via somatotroph cells in the anterior pituitary gland. Synthetic forms of GHRH are typically composed of the biologically active 29–amino acid segment that parallels endogenous GHRH.

#### **Mechanism of Action: Supporting the GH/IGF-1 Axis**

The GHRH → GH → IGF-1 endocrine pathway is one of the most significant regulatory systems involved in metabolic homeostasis, cellular regeneration, tissue repair signaling, and healthy body composition. In addition to pituitary stimulation, GHRH receptors are present in peripheral tissues, suggesting broader physiologic relevance.

#### **Why GHRH in Longevity and Age-Management Clinics?**

Longevity-focused clinicians increasingly seek interventions that preserve muscle and metabolic health, support restorative sleep cycles, enhance recovery capacity, and promote healthy aging pathways. GHRH analogs have been investigated in aging-related hormone decline, sleep disorders, mild cognitive impairment, and endocrine dysfunction.

## **Regenerative and Cellular Repair Signaling**

Beyond endocrine stimulation, GHRH analogs have demonstrated influence on cell growth, differentiation, proliferation pathways, angiogenesis, and tissue repair signaling.

## **Body Composition and Metabolic Research**

Reduced GH responsiveness is frequently observed in obese individuals, and GHRH analogs have been explored as part of weight and metabolic support research. Tesamorelin, a GHRH analog, has been studied in patients with excess abdominal fat, demonstrating measurable clinical effects in body composition outcomes.

## **Clinical Development and Research Activity**

GHRH peptides remain an active area of clinical research, with numerous clinical trials reaching advanced phases of investigation.

## **Conclusion: A Modern Peptide Tool for Longevity Practices**

The 6C GHRH Mouth Spray represents an innovative practitioner-oriented format built around one of the most foundational endocrine pathways in human aging physiology. By supporting endogenous GH release through the GHRH receptor pathway, GHRH peptides offer a compelling area of interest for longevity and age-management clinics, wellness optimization programs, metabolic resilience strategies, and recovery protocols.

## **Selected References**

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- 3 Mangili A et al. Tesamorelin response in abdominal fat. PLoS One. 2015.
- 4 Zheng L. Biology and therapeutic aspects of GHRH. J Pharm Sci. 2018.