



HOLTORF MEDICAL GROUP, INC.

CENTER FOR HORMONE IMBALANCE, HYPOTHYROIDISM AND FATIGUE

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Human Growth Hormone (HGH)

A BETTER TERM for growth hormone (HGH) would be Healing Hormone or Anti-Aging Hormone. Growth hormone is naturally produced by our pituitary gland and is essential for bone and organ growth in our youth. Although HGH is no longer needed for growth after reaching adulthood, HGH is essential for many other vital functions, and the significantly lowered levels seen as we age are correlated with everything from diminished energy, cardiovascular disease, weight gain (fat), decreased muscle mass, wrinkles, and most other conditions we associate with aging.

Growth Hormone diminishes rapidly after the age of 30 and it is this rapid decline that results in many negative aspects of aging, including increased body fat, decreased muscle mass, increased wrinkles, cancer, and heart disease. It is found that HGH deficient patients have almost a 50% higher rate of death from heart disease than those with more optimal levels. In a 1990 New England Journal of Medicine article, Dr. Rudman reported on his study with the use of HGH in elderly veterans. He discovered that their body fat and wrinkles decreased and lean muscle mass, strength, and bone density increased. The usual progression of aging was halted and reversed by bringing an individual's growth hormone to a more optimal (youthful) level.

In 1999, the National Institute on Aging completed another landmark study that was designed to either refute or substantiate the results of Dr. Rudman and also to extend his study by measuring other parameters. This was a double-blind, placebo-controlled, multi-center trial in both men and women with a large number of patients. This study involved not only growth hormone but also the estrogen, progesterone and testosterone. This study not only confirmed the benefits of growth hormone, but also demonstrated that the addition estrogen/progesterone and testosterone improved the effectiveness of growth hormone.

Thierry Hertoghe, M.D. published a study in which he investigated the signs of symptoms of individuals aged 27 to 82 before and after 2 months of growth hormone treatment (self reported questioners by the patients) (results in black box).

This study and numerous others demonstrate that treatment with growth hormone results in significant improvements in both physical appearance and in emotional and mental well-being. The enhancement in quality-of-life with the use of growth hormone is truly remarkable.

The FDA has approved hgh for adult deficiency after being the most scrutinized pharmaceutical in history. After many years of research and clinical use, growth hormone has proven to have an excellent long and short-term safety profile with almost no side effects.

“The effects of six months of human growth hormone on lean body mass and adipose tissue reversed the equivalent of changes incurred during 10-20 years of aging.” “The overall deterioration of the body that comes with growing old is not inevitable... We now realize that some aspects of it can be prevented or reversed.”

Dr. Daniel Rudman, MD
New England Journal of Medicine

After 2 months treatment (0.75 I.U./day)

(Percent of patients reporting improvement)

Physical Signs	
• Less wrinkles on face (75.5%)	• Less body fat (48%)
• Less sagging skin on face and neck (67%)	• Better skin (thicker) (34.5%)
• Firmer muscles (60.7%)	• Thicker head hair (28.1%)
Emotional/mental	
• Improved emotional state (71.4%)	• Improved assertiveness (73.1%)
• Increased energy (86.8%)	• Improved sense of power (77.8%)
• Improved physical stamina (86.04%)	• Improved self-esteem (50%)
• Increased ability to stay up late (82.5%)	• Depression improved or eliminated (82.7%)
• Improved resistance to stress ((83.7%)	• Improved sociability (77.8%)
• Significantly decreased Anxiety (calmer) (73.5%)	• Decreased tendency to give sharp verbal retorts (71.0%)
Other noted benefits include:	
• Increase in libido	• Decreased blood pressure
• Reversal of balding with regrowth of hair	• Improved memory
• Improved cholesterol profile	• Decreased heart disease and athrosclerosis
• Faster wound healing with lower infection rate	• Improved sleep
• Decrease in hospitalization and sick days from work	• Decreased disease and cancer
• Increase in exercise capacity and energy level	• Increased life expectancy