Improving Blood Sugar Utilization

HGH can cause insulin resistance and further complicate the conditions of type 2 diabetics. On the other hand, IGF-1 actually has similar properties to insulin and helps improve the blood sugar profiles in these individuals. Studies were conducted by researchers at the Nemours Children's Clinic in Jacksonville, Florida, on three groups of individuals with insulin resistance. They concluded that patients treated with IGF-1 had less muscle loss, improved outcomes from surgery and normalized blood sugar levels, even when administered with conflicting pharmaceuticals that are known to cause insulin resistance.

Improving Heart Functions

IGF-1 has been shown to improve the cardiac functions of patients with congestive heart failure. In a randomized double-blind study conducted by Dr. Marc Donath at the University Hospital of Zurich, the administration of IGF-1 to patients was associated with a 27% rise in cardiac index and a 21% boost in the stroke volume index. The heart improved in strength and pumped more blood. This was also accompanied by a reduction in systemic vascular resistance, a 25% decline in pulmonary artery pressure and a 33% decrease in the right arterial pressure, while the placebo group experienced no such improvements.

Repairing Nerve Damage

IGF-1 has been shown to repair and reconnect severed nerve endings up to a distance of six millimeters. According to scientists at the Institute of Neurobiology at the University of Gothenburg, IGF-1 by itself or in a combination with other growth factors can stimulate nerve regeneration. IGF-1 has been shown to have a remarkable growth effect on spinal cord motor neurons by increasing neural activity in the spinal culture by 150-270%. It has also been shown to significantly decrease the preprogrammed cell death in embryos and to have a tenfold increase on the intramuscular nerve sprouting in laboratory mice.

Researchers at the University of Michigan have also demonstrated that IGF-1 can stimulate the protective covering around the nerves, the myelin sheath. In debilitating diseases like multiple sclerosis and ALS (Lou Gehrig's disease), damage around the myelin sheath prevents signals between the brain and the nerves from being transmitted. IGF-1 was the most effective of the growth factors in inducing the growth of the myelin sheath and neuron cell and also help the nerves remain normal and re-grow even when diabetic conditions were present.

The results of these studies are tremendous for individuals with MS and ALS who experience a loss of cortical motor neurons and for other diseases that affect the peripheral nerves.

Relieving Fibromyalgia

Individuals with fibromyalgia are growth hormone and IGF-1 deficient. They experience muscle weakness, a reduced exercise capacity and chronic fatigue syndrome. A recent study found that 40% of fibromyalgia patients had lower IGF-1 levels as compared to normally healthy adults in their age and gender group. The study then looked at fifty of these same individuals and found that over 82% of them lacked the ability to properly secrete growth hormone.

IGF-1 is the metabolite of growth hormone. It is proven to improve muscular endurance, strength and immune response. Directly administering a natural IGF-1 substitute in lieu of this lack of proper growth hormone secretion could prove to be an ideal natural alternative for those thousands of individuals suffering from fibromyalgia.

Improving Immune System Responses

There is an interesting relationship between IGF-1 and the immune system. The activity between all major immune cell types such as T-cells, B-cells, natural killer cells and macrophages is altered with increased IGF-1 levels. This is because increased IGF-1 levels are involved in the production of lymphocytes, and in turn, can actually produce more IGF-1. This provides an alternate source of IGF-1 production other than the liver and a baseline for cellular communication between the immune system and the neuro-endocrine system.

Reducing Prostrate-Specific Antigens

In a study by Dr. L. Cass Terry of the Medical College of Wisconsin, IGF-1 levels were found to not be associated with heightened prostate specific antigen (PSA) levels. The findings, published in the International Journal of Anti-Aging Medicine, indicated that prostate cancer incidences rise as men increase in age, whereas the blood levels of IGF-1 significantly decrease over the same timeframe at a rate of about 14% per decade after the age of thirty. In fact, IGF-1 may reduce PSA readings that are greater than four. The study also found that in over 3,000 patients, no increase in prostate cancer or any other malignancy was found in long-term treatment.

In another study, Dr. Ronald Klatz, President of the American Academy of Anti-Aging Medicine, found that there were no reported cases of cancer among 800 treated patients, proving that increased IGF-1 levels may have a protective and stimulating effect on the immune system. Further studies have shown that alternative therapies in treating prostate cancer with direct supplementation of endocrine hormones have actually significantly reduced PSA levels above fifty down to normal ranges of zero to four. This is attributed to the natural production killer immune cells that were able to destroy the cancer cells.