Improving Muscle Building

· Increases Proliferation and growth of lean muscle cells without corresponding rise in fat tissue.

· Increases uptake of amino acids into muscle cells, helping to regenerate muscle tissue after exercise and assure that muscle protein synthesis takes place.

· Increases uptake of glucose into muscle cells.

· Improves utilization of fat for energy.

· Decreases utilization of carbohydrates.

· Reduces catabolism (muscle break down) after training and workouts.

Increasing Human Metabolism

· Improves white blood cell production.

· Restores the immune-promoting lymphoid tissue.

· Stimulates the proliferation of both B and T lymphocytes that help to kill viruses.

· Increases the uptake and degradation of dangerous LDL cholesterol by macrophages.

· Improves nitrogen retention (Muscle preservation) and increase sodium excretion.

· Improves parathyroid function vitamin D interaction to produce a dense bone matrix.

· Reduces the urinary hydroxyproline excretion.

Losing Fat

One of the major issues with losing weight and restricting calorie intake is the accompanying loss of muscle mass. Lean muscle mass has been directly proven to stimulate an increased metabolism and fat loss. Studies have shown that individuals receiving growth hormones lose 12% of their body fat every six months. HGH increases the fat burning mechanism intrinsic to IGF-1, thereby not only preserving lean muscle mass but also increasing it. IGF-1 also reduces cortisol levels and improves and regulates hormonal levels, which can be affected by calorie restricted diets.

Improving the preservation of lean muscle mass when fat loss is experienced would also benefit the health of an individual during weight loss procedures. Studies have shown that the pituitary gland contains the same amount of growth hormone through an individual's lifetime. With age, however, the ability to release that growth hormone is somehow blocked in the feedback loop between IGF-1 in the liver and the hypothalamus of the brain. Instead of reduced levels of IGF-1 signaling to the brain to direct the pituitary gland to make more growth hormone, this feedback loop is broken down with age. It is for this reason why supplementing IGF-1 is not associated with negative feedback loops.

Slowing the Aging Process

In a study at the international Anti-Aging Systems in London, IGF-1 and HGH were isolated and administered to separate muscle tissues. The IGF-1 injection had an anabolic effect on the muscle tissue, with marked increase in its size whereas the HGH administered muscle remained the same. This study shows that HGH must be converted into IGF-1 before it can be metabolized by the body.

HGH is the primary hormone of the endocrine system. As it pulsates out from the pituitary gland, it is quickly converted by the liver into IGF-1, the metabolite form of the hormone that is ready to use by the body. Levels of HGH significantly decrease as humans get older, especially after the age of 40. The decline in HGH is directly associated with certain aging signs like wrinkling skin, graying hair, decreased energy and sexual function, increased body fat, heart disease, and weak and brittle bones. All of these symptoms of aging can be slowed down and even reversed with administering natural IGF-1 to counteract the biological aging process.

The International Anti-Aging Systems concluded that a mere 2,500 nanograms of IGF-1 taken sublingually is a therapeutic amount to help slow down the aging process. In addition, research by Dr. Keith Kelly has shown that IGF-1 reverses the shrinking of the thymus, which is one of the most important immune modulation organs in the body. This research shows exciting benefits of IGF-1 for those looking to halt and reverse the aging process.

Increasing Lifespan

IGF-1 has the potential to increase lifespan. The blueprint of life that determines age is DNA. Dr. Vincent Giampapa, Director of Clinical Research at the Longevity Institute International has studied how natural sources of IGF-1 may soon be able to turn old cells into new ones. IGF-1 can help produce new healthy cells and keep them in a healthy state for as long as possible. The cells ability to function relies on the genetic material of DNA. This resides in the nucleus of the cell that codes for all proteins, hormones and enzymes that make the cell run. Oxygen radicals and other factors such as UV light are constantly damaging DNA. It has the ability to repair itself but this ability is dramatically reduced within the aging process. Certain antioxidants can reduce the damage to DNA, but none have been shown to be as effective as IGF-1 in doing so.

European researchers have shown that IGF-1 is capable of doing what other antioxidants

cannot. IGF-1 initiates the transportation of nucleic acids into the nucleus of the cell where DNA resides. It provides the raw materials necessary to repair damage to DNA and initiate cell division, helping to retard the aging process.