

## **Anti-Aging**

### **Discussion Human Growth Hormone**

Human growth hormone (HGH) is kind of the master switch hormone regulating the growth and maintenance of essentially all tissues in and of the body. Unfortunately HGH levels start dropping in your 20s and then dramatically through your 30s such that by the time you are 40 years old your HGH level may be only 1/4<sup>th</sup> of what it was when you were 19 years old and when you are 70 year old it is less than 1/40<sup>th</sup> of that. It is for these reasons that HGH is often regarded as the primary hormone involved in the aging process and hence “anti-aging” therapy evolved.

HGH is produced in the brain by the pituitary gland. Other than decline from the “natural” aging process, HGH levels can be low following head trauma or brain tumors, from AIDS wasting syndrome, or congenital growth hormone deficiency.

#### Signs and Symptoms of Low HGH:

- Fatigue
- Low libido
- Weight gain (especially abdominal fat)
- Dry & thinning skin
- Decreased stamina &/or strength
- Depressed immune system & frequent colds
- Osteoporosis
- Joint & muscle aches and pains
- Slowed thinking/mentation
- Increased risk of Heart disease
- Increased risk of Strokes

If you have several of these symptoms above you should schedule an appointment with a physician specializing in hormone replacement therapy and optimization to review them and arrange for a comprehensive HGH evaluation.

Your initial tests should include: *Blood tests* to check your level of Insulin-like Growth Factor 1 (IGF-1) which is a protein produced in response to stimulation by HGH. IGF-1 gives a better overall picture of what your HGH levels are on average instead of checking an HGH level itself, which fluctuates widely throughout the day and night. Please note that your HGH level may still be considered low even if within the labs “normal range” if you are experiencing the above noted signs and symptoms &/or your occupation and lifestyle simply require a higher level.

Treatment for low HGH includes: Utilizing bio-identical human growth hormone replacement therapy, only effective as a daily subcutaneous injection (similar to insulin) given anywhere between 3-6 days per week. Be aware that there exist many ineffective phony HGH products available, especially on the internet, administered in either pill or

liquid spray form. Anti-aging physicians usually try to supplement HGH to boost your IGF-1 levels to the upper 25% of the normal range – thus achieving effects while still keeping the levels within the physiologic normal range. Also by doing this the most common potential side effects including water retention and aching joints are greatly minimized. Finally, despite a lot of discussion and concern over the potential side effect that HGH supplementation may cause cancer, there is not a single case reported or study that concluded this to be true!