

Endocrine Chart

Hormone	Changes with Aging	Potential Clinical Signs	Comments
Luteinizing Hormone (LH); Follicle Stimulating Hormone (FSH)	Decreasing levels of testosterone – after age 30	<ul style="list-style-type: none"> • Pain in bones • Muscular weakness • Increase in body fat (especially abdominal area) • Chronic fatigue • Decrease in sexual activity • Impaired potency 	<ul style="list-style-type: none"> • Men's testosterone levels fall gradually and over a long period of time. • Not all men are affected by a drop in testosterone levels. • Changes in testosterone levels resulting from regular physical activity in older adults are not conclusive.
Thyroid Stimulating Hormone (TSH)	TSH increase arises from age-related alteration in the TSH set point or reduced TSH bioactivity rather than a lack of understanding thyroid disease.	Symptoms of aging can easily be confused with hypothyroidism, and in the past decreased thyroid function was believed to be one of the primary factors of the aging process.	The literature is non-conclusive to changes in TSH during light to moderate physical activity. However, the evidence appears to be strong in terms of increased TSH blood levels with heavy exercise. The increases in TSH levels were not linked to clinical signs of hyperthyroidism.
Growth hormone (GH)	Secretion of GH tends to decrease in older adults.	<ul style="list-style-type: none"> • Lack of energy or fatigue • Decreased sexual desire • Muscle weakness • Sleep problems • Weight gain (body fat) 	The actions of GH in response to exercise have been linked to the fitness level of individuals. The literature suggests that GH activity is lesser in trained versus untrained individuals in similar intensities of exercise. These differences are not clearly understood, yet the conclusions point to suggesting that regular physical activity affects the control processes of GH.