



In a 1990 study published in the New England Journal of Medicine. The administration of human growth hormone for six months was accompanied by an 8.8 % increase in lean body mass, a 14.4 % decrease in adipose-tissue mass, and a 23.2% improvement in overall body composition. There was a 1.6% increase in average lumbar vertebral bone density, and skin was transformed into a much more youthful appearance with significantly less wrinkles and increased thickness of 7.1 percent.

Change in body composition			
	Weight		
	150 pounds	200 pounds	250 pounds
Average increase lean muscle	13.2 lbs	17.6 lbs	22 lbs
Average loss of body fat	21.6 lbs	28.8 lbs	36 lbs
Overall body composition improvement	34.8 lbs	46.4 lbs	58 lbs

**Conclusion of the study's authors:** *“Diminished secretion of growth hormone is responsible in part for the decrease of lean body mass, the expansion of adipose-tissue mass (fat), and the thinning of the skin that occur in old age. The effects of six months of human growth hormone on lean body mass and adipose tissue reversed the equivalent of 10-20 years of aging.”*

In another study published in the New England Journal of Medicine, individuals received 6 months of growth hormone plus gonadal steroids (estrogen and progesterin for women and testosterone for men). Body composition was analyzed along with strength, lipid profile, and aerobic capacity. There was significant increase in lean muscle mass and a decrease in the percent body fat by 3.5-18%. There was a significant increase in aerobic capacity, and there was an improvement in the lipid profile (decrease in total and LDL “bad” cholesterol). There was also a decrease in blood pressure. Overall, there was found to be a significant additive effect of gonadal steroids (estrogen/progesterone/testosterone) and hgh resulting in dramatic improvements in body composition and functioning with a reversal of the aging process.