

TESTOSTERONE AND THE MALE SPECIES

A man's virility and testosterone have long been known to enjoy a connection. Testosterone drives virility. It is created from cholesterol in the testicles. Production is driven by proteins created in the brain, and the pituitary gland, embedded deep in the underside of the brain.

But it does much more. It modulates the immune system, has a role in regulating blood pressure, mood, thinking. It probably even reduces the incidence of prostate cancer (this is if it is introduced back into the body during or after the testosterone decline but before the actual development of cancer).

The protein produced in the pituitary gland stimulates certain cells in the testes to produce testosterone. These cells approximate 700 million in number at birth. After the age of 20 there is a loss of these cells at a rate of 6 million per year. This results in a declination of 2% per year of the end product, testosterone.

In addition, the receptors for testosterone in the body become less sensitive, so these aging receptors are not as able to clearly "hear" what the testosterone molecule is trying to say. As men age, they make more of a sex hormone binding protein which when attached to the testosterone molecule makes it ineffective. To the extent that T (testosterone) is bound to the protein, it doesn't do anything productive in the body. Obesity and simple aging cause an increase in the amount of the protein in the body, adding to reduction in all related functions.

This condition is called "andropause" in Age Management medicine, and is identified by negative thinking, reclusivity, loss of focus and drive, questioning of one's values and accomplishments, cognitive impairment, decline in sex drive, fewer sexual thoughts, and erectile dysfunction.

The appearance of the male form changes and leads to a decline in lean body mass and strength, thinning of the bones (osteoporosis), increase in body fat and location of the same (central adiposity), diminution of thinking capacity, and negative effect on mood and self satisfaction. In other words, the organism begins to feel unhappy with just about everything in the worst cases. Of course, there are those who experience this to a lesser degree. Regular exercise is a life preserver.

In many instances, a lifetime of rambunctiousness (borne of high levels of testosterone) leads to injuries. These injuries heal but can manifest as chronic pain down the line as one ages, which interferes with the ability to stay active, and then, of course, the above escalates.

Osteoporosis occurs in 30% of men over the age of 60. Every sixth man over this age will suffer a hip fracture. Hip fractures can be lethal because if they occur in an osteoporotic man, they will not heal, leading to prolonged hospitalizations resulting in pneumonia, sepsis, deep venous thrombosis with pulmonary embolism and other medical conditions which result in death or further decline.

Stamina, focus, strength, mental acuity, mood suffer. Ultimately one or more of the diseases of aging leads to death.