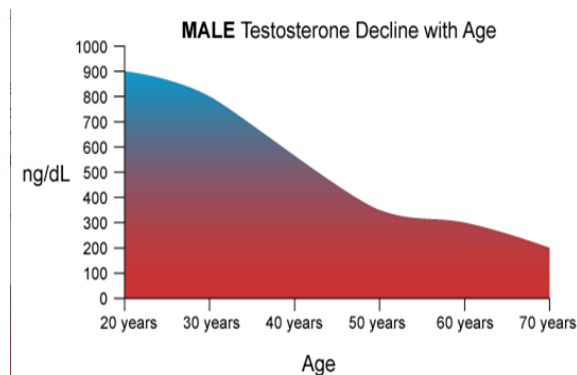


## What is Andropause?

As I work with middle-aged clients who come to me to optimize their brain function, and to sharpen their mental focus, their hormone status are often central to my evaluation. Quite often, men are familiar with menopause, but surprisingly, many have not heard of andropause. Andropause is an expected physiologic response as men age. Unlike women who go from regular monthly cycles of hormonal fluctuation to irregular cycles during peri-menopause and eventual menopause when menstruation no longer exists, men's primary sex hormone testosterone declines steadily with age.



In general, there is a 1% decline each year in most men after age 30. The Massachusetts Male Aging Study showed a 30-year fall in Total Testosterone in men averaging 48%. Decline in Free Testosterone (bioactive form of Testosterone) is even more significant, up to 85%.

The 2016 ISSAM International Expert Consensus Resolutions issued the statement that "Testosterone deficiency (TD) is a well-established, significant medical condition that negatively affects male sexuality, reproduction, general health and quality of life." TD negatively impacts general health and quality of life in men. TD can also occur in younger men, as I have often detected in my practice. There are many root causes of testosterone decline beyond the age range.

Some of the common conditions that can cause decline in or suboptimal production of testosterone are:

- Obesity
- Metabolic Syndrome/Diabetes
- Chronic stress
- Lack of sleep
- Medications
- Toxins (especially pesticides and Cadmium (commonly in cigarettes))

Obese males have more fat cells that store toxins. Visceral fat (the stubborn belly fat that wraps around your organs) can also store excessive estrogen and vice versa, estrogen has a direct effect to promote fat cell storage with there is an excessive levels. As you can see this is a vicious cycle.

What I found to be alarming is how common environmental toxins as a major cause in the drop in testosterone levels in our area. The heavy spray of GMO crops in the agricultural industry around us cannot be overlooked.

### Effects of Testosterone Restoration

- Improves energy, lean muscle mass, mood, motivation and well-being
- Reduces depression & anxiety
- Improves sexual desire, sensation and stamina
- Improves physical endurance and muscle strength
- Improves flow-mediated arterial dilation, therefore **decreases** risk of **heart attack**

Contrary to the common misconception that testosterone supplements increases a man's risk for heart attack, appropriate therapies for replacing what has been lost provides many health benefits and longevity. I recommend a great and easy read by the Harvard professor Dr. Abraham Morgentaler, "Testosterone for Life – Recharge your Vitality, Sex drive, Muscle mass and Overall health!"