

## Andropause

Andropause describes an emotional and physical change that many men experience as they age due to falling testosterone levels. Although the manifestations of Andropause are generally related to aging, they are also associated with significant hormonal alterations in the endocrine system. Researchers have known for years that the production of hormones by the testes slowly decreases as men age. Only recently has interest developed in the clinical implications of Andropause. This stage in a male's life has several names including male climacteric Andropause, late onset hypogonadism, and irritable male syndrome (IMS) or androgen decline in the aging male (ADAM).

The process of Andropause is much more subtle than that of female menopause. Male hormone production slowly falls over a period of years and thus the symptoms can often be mistaken for stress, aging or depression. Androgen is unlike menopause where the production of ovarian estrogen and progesterone suddenly declines and this makes the journey of menopause unmistakably clear.

As one ages, there is an increase in fat cells, which in turn causes an elevation in an enzyme called aromatase. This enzyme transforms testosterone to estrogen in the body. Secondly, estrogen can indirectly cause an increase in a protein called sex-hormone-binding-globulin (SHBG), which binds to free testosterone and prevents its action. This protein will ultimately cause a decrease in testosterone.

In obese patients, there is excess aromatase enzyme activity causing the testosterone to convert to estradiol causing estrogen overload and testosterone deficiency. Poor liver function is another entity that causes excess estrogen because the liver then cannot detoxify the small amounts of estrogen that even men have. In this case, total testosterone levels would be normal and estrogen levels would be high as much of the testosterone is being changed into estradiol, and the free or usable testosterone levels would be low. This often occurs with excess alcohol

consumption. Andropause is a fairly common condition and the incidence of it increases with age.

The occurrence of Andropause occurs in the following ages:

- 40 to 49 years of age- 2-5%
- 50-59 years of age- 30%
- 60 to 69 year of age- 20% to 45%;
- 70 to 79 years of age- 34% to 70%
- 80 years of age- 91%

The "spread" of normal ranges is fairly large because different specialists use different ways to measure androgens and use different levels to define Andropause.

### **Common Symptoms of Andropause**

- Mood changes including depression, anger and irritability
- A decrease in intellectual activity
- Fatigue, loss of a sense of well being
- Changes in hair growth and skin quality
- A decrease in bone density, resulting in osteoporosis
- A decrease in lean body mass, along with decreases in muscle mass and strength
- An increase in fat surrounding the internal organs
- Diminished sexual desire and erectile quality. In particular, a decrease in nocturnal erections is a significant sign of decreased androgens
- Joint aches and stiffness of hands
- Night sweats
- Sleep disturbances
- Premature aging

### **Testing- The Comprehensive Male Hormone Panel**

This is a full male hormone panel which includes Testosterone levels as well as Estrogen, PSA, Cortisol, DHEA and all four thyroid hormones (TSH, T4, T3, and TPO). Testing is done through a combination of blood and saliva and is available through Dr Cobi's clinic.