

Testosterone Replacement Therapy



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Testosterone Replace Therapy (TRT) is used in men with low testosterone (T) for a condition known as hypogonadism (H). The definition of hypogonadism continues to evolve within medical and scientific circles, sometimes resulting in confusion and difficulty in assigning this specific diagnosis. Hypogonadism has been defined using a host of terms by varying organizations and specialty societies but the common thread through all terms is a condition in which testosterone is low resulting in one or more hypogonadism symptoms i.e., decreased sex drive, decreased muscle mass, erectile dysfunction, loss of bone density, fatigue, decreased exercise capacity, increased body fat, and decreased sense of well being.

The lack of a widely accepted definition for hypogonadism makes it difficult to determine the true incidence. Many studies have been conducted regarding incidence, prevalence and epidemiology of hypogonadism and one thing is evident, hypogonadism is more prevalent, more significant and associated with more risks and comorbidities than previously recognized.

The Massachusetts Male Aging Study (MMAS) determined that at least 2.4 million men between 40 and 69 have hypogonadism which translates into an incidence rate of 12.3 per 1000 person-years in the US. This means we can expect about 500,000 new cases of hypogonadism to develop annually. The Hypogonadism in Males Study (HIM) determined that the prevalence of hypogonadism is at least 38.7% overall and increases with age. The rate increased from 34% in 45 to 54 year olds to over 50% in 85 year olds. HIM also determined that the risk of having hypogonadism was higher in men with comorbidities, namely high cholesterol/lipids, diabetes, prostate disease, obesity, lung disease, loss of bone density, and erectile dysfunction (ED).

The World Health Organization (WHO) has declared the U.S. to be an "obese nation". The CDC reported in 2002 that 67% of men in the U.S. are overweight or obese. These finding underscore the growing need to address hypogonadism in this population. The relationship between hypogonadism and obesity may be due to increased aromatase activity in abdominal fat cells. This increases the conversion of testosterone to estrogen which contributes to gynecomastia (breast enlargement) and increased fat.

The MMAS identified a potential link between hypogonadism and Type II diabetes. This prospective study suggested a significant increase in development of insulin resistance and Type II diabetes could be predicted in men with hypogonadism.

Testosterone has also been shown to influence cardiovascular (CV) risk factors. The Telecom Study found that triglycerides, cholesterol and LDL (low density lipoprotein, bad cholesterol) were higher in men with hypogonadism while HDL (high density lipoprotein, good cholesterol) was higher in men with normal testosterone. The Rotterdam Study examined the association between low testosterone and CV risk. The low testosterone group had markedly higher BMI (body mass index), waist: hip ratio, blood pressure and severe aortic atherosclerosis. The investigators found a strong correlation between low testosterone and CV risk. A recent study by Shores & Colleagues determined that men with low testosterone had an all-cause 5 year mortality rate of 34.9% while men with normal testosterone exhibited a 20.1% rate. Shulman recently reported men with testosterone less than 200ng/dl have a 2-fold higher risk of death, 3-fold higher risk of cancer related death and 2 fold higher risk of CV related deaths as compared to men with testosterone levels of 410-509.

Even though the relationship between hypogonadism and erectile dysfunction seems intuitive, there has been reluctance by the medical community to accept this association. At a recent meeting of the Sexual Medicine Society of North America it was reported that 22% of ED patients under 30 years of age were diagnosed with hypogonadism. Testosterone is necessary for proper function of the complex cascade of reactions required for sexual function. There is no argument that TRT improves sexual desire and erection satisfaction. Studies also showed that TRT rescues patients who have failed PDE-5 inhibitor (Viagra, Levitra, Cialis) therapy.

Hypogonadism is a common and prevalent condition that has been shown to have immediate and long term adverse effects on the health and quality of life of men of all ages. Testosterone needs to be recognized as an integral part of the total health of men. TRT has many measurable benefits and is safe when administered and monitored appropriately by an experienced clinician. A review article was published in New England Journal of Medicine (2004; 350:482-492) by researchers, Drs. Morgantaler and Rhoden, who reviewed 72 research papers. Their conclusion was that most concerns were not justified when TRT is given in the appropriate patient and is monitored properly. The main concerns that were addressed were the fear of TRT causing prostate cancer, advancing CV disease and making BPH (benign prostatic hyperplasia) symptoms worse. The researchers were surprised to find that there was virtually no evidence supporting any of these fears. Most data actually supported the converse. Current studies and data support the obvious and immediate need to educate the lay public and medical community about the impact and importance of recognizing and treating hypogonadism.



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Free Seminar on Prostate Cancer will be held on September 23, 2008, 6:30 PM at the Holiday Inn Express & Suites. Call today to reserve your seat! (706) 324-7700, ext 233.

We are happy to announce that Dixie Woodham, LPN and Angela Hooper, LPN have joined UCC's Team.

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Melissa Fussell, PA-C, MPAS



Urology Center of Columbus is happy to announce our new addition to the UCC team!

Melissa Fussell is a Certified Physician Assistant practicing in the field of Urology for over 3 years. She has recently relocated to Columbus from Dublin, GA.

She possesses a broad knowledge of Urology and is comfortable treating both adult and pediatric patients.

She was raised in Macon, GA and attended Georgia College and State University

in Milledgeville where she received her undergraduate degree in 2000.

She graduated from South University in Savannah, GA with a master degree in Physician Assistant studies in 2004. She has been actively practicing as a Physician Assistant since fall of 2004.

She is a member of the Georgia Association of Physician Assistants, the American Association of Physician Assistants and the Urological Association of Physician Assistants.

Her educational background and previous urology experience is an asset to Urology Center of Columbus.

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