



# TEXAS UROLOGY

## TESTOSTERONE REPLACEMENT THERAPY

### INCIDENCE AND TREATMENT OF HYPOGONADISM

Hypogonadism (low testosterone) is estimated to occur in 4 to 5 million men. Low testosterone levels are especially common in older males. Greater than 60% of men over age 65 had testosterone levels below the normal values of men aged 30 to 35. Unfortunately, male hypogonadism appears to be under-diagnosed and under-treated. In clinical practice, the symptoms of hypogonadism in men are often attributed to other problems not reported by the patient and not recognized by many physicians.

### SIGNS AND SYMPTOMS OF LOW TESTOSTERONE

Low testosterone, or male hypogonadism, is associated with a number of signs and symptoms. Loss of libido (sex drive) and erectile dysfunction are two hallmark symptoms of hypogonadism. Lethargy, or loss of energy, is also commonly seen in these men. Mood and behavioral symptoms, namely depression, irritability, and loss of motivation may also occur with low testosterone levels. Furthermore, reduced muscle mass and muscle strength is also associated with low testosterone levels. A deficiency of the body's testosterone also has a negative effect on bone mass and is a risk factor for osteoporosis. Regression of secondary sexual characteristics, such as reduced ancillary and pubic hair, is another sign of hypogonadism in men.

### DIAGNOSTIC TESTOSTERONE TESTING

A commonly used blood test to evaluate for hypogonadism is a morning total testosterone level. A morning sample is recommended because testosterone levels demonstrate a variation in which a maximum level is reached in the early morning.

### ALTERNATIVE TREATMENTS

Current treatments for low testosterone include muscle injections every other week to monthly which produce a sharp rise and fall in blood levels (or skin patches).

Over the past five to six years a new form of therapy has become available – topical gels. Topical gels are applied to clean, dry skin of the shoulders, upper arms, and/or abdomen. This is done in the morning following a shower. Within two hours the gel is absorbed and effective for the remainder of the day. The gel has an almost immediate increase in the blood levels of testosterone, however, it can take two to three months to see an improvement in symptoms.

Results of topical therapy include increase in sex drive, decrease in body fat, increase in lean body mass, increase in bone formation, and decrease in fatigue. Side effects include a small incidence of acne and skin reaction.

**It is important to obtain a follow-up testosterone level which should be at least six hours after application and should be done in one to two months following initiation of therapy. Additionally, every six months a PSA to screen for prostate cancer should be performed. Additionally, periodic checks of the blood count and liver functions should be checked at least annually.**

LEWISVILLE  
541 W. Main  
Suite 150  
Lewisville, TX 75057  
TEL. 972-420-8500  
FAX 972-221-6302

CARROLLTON  
Trinity Medical Center  
4333 N. Josey Lane, Bldg. II, Suite 104  
Carrollton, TX 75010  
TEL. 972-394-4500  
FAX 972-394-8180

FLOWER MOUND  
3101 Churchill  
Suite 320  
Flower Mound, TX 75022  
TEL. 214-513-1227  
FAX 214-513-2059

## RISK OF TESTOSTERONE TRANSFER

Transfer of topical gel to another person can occur if you anticipate contact with a partner and vigorous skin-to-skin contact is made with the application site within the first two hours. The following precautions are recommended to minimize potential transfer of testosterone gel from treated skin to another person.

- Patients should wash their hands immediately with soap and water after applying the gel.
- Patients should cover the application site with clothing up to two hours after application
- In the event that unwashed or unclothed skin to which the testosterone gel has been applied does come in contact with the skin of another person, the general area of contact on the other person should be washed with soap and water as soon as possible. Studies show that residual testosterone is removed from the skin surface by washing with soap and water.
- Pregnant women should avoid skin contact with testosterone gel application sites in men. Testosterone may cause fetal harm.

## TESTOSTERONE REPLACEMENT IN GENERAL

Testosterone replacement therapy is a lifelong treatment. The body will stop production of testosterone by the testicles over time, which can lead to shrinking of the testicles. With discontinuation of replacement therapy, the testicles will often not be able to resume production of testosterone. This is more common with the testosterone injections than topical therapy.

## ANDROGEN MANAGEMENT AND CONSIDERATIONS

Within the medical community on the part of some physicians, there is concern about the use of testosterone cream and the increased risks of developing prostate cancer or enlargement. To date, there is no clinical study that shows an increased incidence of prostate cancer associated with testosterone replacement therapy. Swelling of the legs with or without heart failure may be a serious complication in patients with pre-existing heart, kidney, or liver disease. In addition, breast enlargement frequently develops and occasionally persists in patients being treated for hypogonadism. You should be aware that the treatment of hypogonadal men with testosterone may potentiate sleep apnea in some patients, especially those with risk factors such as obesity or chronic lung disease. The PSA (prostate specific antigen) should be checked prior to initiation of therapy and periodically to rule out prostate cancer.

## DOSING

The recommended starting dose is one tube daily. In follow-up, if there has been no significant increase in the blood levels of testosterone, then consideration can be made to increasing the dosage to two tubes a day.