

# Testosterone replacement therapy for male patients with hypogonadism

## Information for patients

This leaflet answers some of the questions you may have about having testosterone replacement therapy for male patients with hypogonadism. It explains the reason for treatment and the aims of treatment. It will also provide information concerning monitoring and possible side effects. If you have any other questions or concerns, please speak to the doctors or nurses caring for you.



## What is testosterone replacement therapy?

Hypogonadism is the medical term for testosterone deficiency and simply means having a low testosterone level. It happens when the testes do not function normally. This can be due to a problem in the testes, where testosterone is made, or a problem in the pituitary gland underneath the brain, which controls the function of the testes. Low testosterone can happen in men of any age. However, there is a progressive decline in testosterone levels as men get older.

If your own body does not make enough testosterone, you may benefit from having supplemental testosterone. If indicated, testosterone replacement therapy will be initiated by your endocrinologist. Testosterone is commonly given by three monthly injections using testosterone undecanoate (Nebido®) but can also be given using alternative forms of testosterone at different intervals.

## Why do I need this treatment?

If you have been having symptoms of low testosterone and blood testing has shown that your testosterone is low, you may be advised to start testosterone replacement therapy.

Symptoms of low testosterone may include:

- Fatigue
- Lethargy
- Depression
- Anxiety
- Irritability
- Low libido
- Erectile dysfunction
- Reduced exercise tolerance and strength
- Excessive sweating and night sweats
- Poor concentration or memory
- Needing to shave less often

There may be other causes of these symptoms so it is worth noting that testosterone replacement therapy may not resolve some of these symptoms.

### **What are the benefits?**

Testosterone replacement therapy aims to improve the symptoms that you may have been experiencing, such as those listed. If your bone density has reduced because of low testosterone, we may also be aiming to improve your bone density with the treatment. An improvement in symptoms may occur with treatment, but bear in mind this is not the case for every person. Testosterone levels will be measured routinely to monitor if the treatment is safe and effective.

### **What are the risks?**

Testosterone replacement therapy may cause increased levels of haemoglobin or haematocrit indicating a thickening of the blood. This may be associated with an increased risk of heart attack, stroke and blood clots. Your blood will be tested prior to treatment and routinely during treatment to monitor your haemoglobin and haematocrit level.

Testosterone treatment can also cause an enlarged prostate or other prostate disorders. During treatment, your prostate specific antigen (PSA) will be measured to monitor for any changes. This is particularly important in men over 45 years of age and any changes in urinary symptoms should be reported to whoever is prescribing your testosterone.

Other side effects may include:

- Weight gain
- Increased appetite
- Hot flushes
- Acne

- Depression
- Restlessness
- Irritability
- Aggression
- Tiredness
- General weakness
- Excessive sweating

As a result of using testosterone replacement, your natural production of testosterone may be reduced. This may also lead to a reduction in sperm production. This will mean that your fertility will be affected by going onto testosterone replacement therapy.

If you are considering having children in the future, you should discuss this with your endocrinologist prior to starting treatment.

It is important to report any of the above symptoms or any other concerns to whoever is prescribing your medication, this may be your endocrinology specialist or your GP.

## **Blood tests**

It is important that you have regular blood tests whilst having testosterone treatment to make sure that it is working effectively and safely for you.

It usually takes 3 months for your Endocrinology specialist team to stabilise your testosterone treatment and during this time the specialist team will order blood tests for you. You can either have these taken at the hospital or your GP surgery.

As you continue to have testosterone treatment you will need to make sure that you have further blood tests between 3-6 months

after starting, then at 12 months and then annually thereafter. You will need to arrange these blood tests with your GP Practice.

## **Testosterone replacement therapy options**

The two common options are injection or gel.

### **Testosterone injection**

Testosterone undecanoate (brand name Nebido®) is commonly used for testosterone replacement therapy. This injection is given intramuscularly (into the muscle) every 12 weeks initially by the nursing team. This interval can be altered if advised by your endocrinologist.

Alternatively, replacement therapy can be given using Sustanon® (a combination of four forms of testosterone) by more frequent injections (every two to four weeks).

The advantage of having injections is reduced frequency. The disadvantages include pain at injection site, the need for a health professional to administer the injection and end-of-dose fluctuation in symptoms.

### **Testosterone gel**

Testosterone can also be replaced using a testosterone gel that is absorbed through the skin. There are various formulations available which are applied in different ways.

#### **For Tostran® (2% testosterone gel)**

Apply gel on clean, dry, intact skin of abdomen (tummy) or both inner thighs, preferably in the morning. Gently rub in with a finger until dry before dressing. Wash hands with soap and water after applying gel. Avoid washing application site for at least two hours.

Not to be applied on genital area.

**For Testim® (50mg/5g gel tube)**

The gel should be applied once a day, at about the same time each day, to clean, dry, intact, skin of the shoulders and/or upper arms, preferably in the morning. For patients who wash in the morning, TESTIM should be applied after washing, bathing or showering. Thoroughly wash hands immediately with soap and water after applying gel. Allow gel to dry for a few minutes and then dress with clothing that covers the application sites.  
Not to be applied to the genitals.

**For Testogel® (50mg/5g gel sachet)**

Apply thin layer of gel on clean, dry, healthy skin such as shoulders, arms or abdomen, immediately after sachet is opened. Not to be applied on genital area as high alcohol content may cause local irritation. Allow to dry for 3 to 5 minutes before dressing. Wash hands with soap and water after applying gel. Avoid a shower or bath for at least 6 hours.

**For Testogel® (16.2mg/g gel pump)**

Apply thin layer of gel on clean, dry, healthy skin over right and left upper arms and shoulders. Not to be applied on genital area as high alcohol content may cause local irritation. Allow to dry for 3 to 5 minutes before dressing. Wash hands with soap and water after applying gel and cover the site with clothing once gel dried. Avoid a shower or bath for at least 2 hours.

**For Testavan® (20mg/g gel pump)**

Manufacturer advises applying one pump of gel evenly onto clean, dry, intact skin over upper arm and shoulder using the applicator, without getting any gel on the hands. Repeat on opposite upper arm and shoulder if two pumps are required and repeat again on initial

upper arm and shoulder if three pumps are required. Allow to dry completely before dressing and cover application site with clothing. Wash hands with soap and water immediately if gel was touched during application. Avoid a shower or bath for at least 2 hours.

The advantages of using testosterone gel include self-administration and stable blood levels of testosterone. The disadvantages include skin irritation and the need to limit skin-to-skin contact with others at the site of application.

## **Contact**

If you have any queries or concerns, please contact whoever is prescribing your testosterone for you this may be either your local endocrinologist or your GP.

Approved by BNSSG Area Prescribing & Medicines Optimisation Committee (APMOC)  
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