Gender Identity
South West

# INFORMATION ABOUT MASCULINISING HORMONE THERAPY

Please read this document before your hormone therapy consultation. We will consider the likely individual costs, benefits, and risks of hormone therapy as they may apply to you and your situation during the consultation.

## Introduction

Testosterone is the sex steroid hormone that promotes typically masculine physical development. This medication is unlicensed in England for the treatment of gender dysphoria. It is, however, frequently recommended and prescribed based upon currently available research evidence, authoritative clinical guidelines, and the judgment of a gender specialist endocrinologist or nurse.

## General risks and limitations of masculinising hormone therapy

The side-effects and safety of masculinising hormone therapy are not completely known. There may be long-term risks that are not yet known.

You should take medications as prescribed. Taking more medicine than that prescribed will not make changes happen more quickly or effectively but will increase health risks. In addition, your body can convert excess testosterone into estrogen, and that can slow down or stop your development of more masculine features.

Masculinising hormone therapy may cause physical changes that other people will notice; some people have experienced harassment, discrimination, and violence and lost loved ones because of this.

Masculinising hormone therapy may not produce the type and level of change that you hoped for. You may therefore continue to experience dysphoria and any associated negative effects.

## How is testosterone taken?

There are several preparations of testosterone available including short and long-acting injections and transdermal gels. Long-acting injections are administered by a health professional. The injection is into the large muscle of the buttock usually given every 10-14 weeks at your GP practice. Short-acting injections are also available; with training, users may self-administer them every 3-4 weeks. Transdermal gel is self-administered daily to the abdomen or thighs. The dose used for each preparation differs from product-to-product and from patient-to-patient dependent upon need. Testosterone needs to be taken continually to maintain some of its effects.

## Who should not take testosterone?

Testosterone should not be used by anyone who is, or is planning to become, pregnant. However, we also understand that many people would like to be parents and some trans and non-binary people may consider carrying a pregnancy. We are very happy to talk with you about this and to support and work with you if this is your choice.

**Testosterone should be used with caution and only after a full discussion of the risks with a specialist endocrinologist or nurse if you have:**

- angina (cardiac chest pain on exertion) or uncontrolled cardiac disease
- breast cancer or other cancers that grow quicker when oestrogens are present
- a family history of heart disease or breast cancer
- had a blood clot (thrombosis, deep vein thrombosis, pulmonary embolism)
- high levels of cholesterol
- liver disease
- a high red-blood-cell count (also known as polycythaemia or erythrocytosis)
- acne
- obesity
- smokes cigarettes

**Physical changes**

It can take several months or longer for the effects of testosterone to become noticeable. We cannot predict how fast, or how much, change will happen.

**Permanent changes**

The following changes will occur and will remain even if you decide to stop hormone therapy:

**Voice**

- The pitch of your voice will deepen (expected onset after 3-12 months; expected maximum effect after 1-2 years)

**Head, facial and body hair**

- Your facial hair will increase and you are likely to develop a noticeable moustache or beard, with the development of thicker darker hairs (expected onset after 3-6 months; expected maximum effect after 3-5 years)
- You are likely to notice hair loss at the temples and crown of the head and there is a possibility that you may become completely bald (expected onset more than 12 months; extent and time to maximum effect varies)
- You will develop thicker, and coarser hairs on your abdomen, arms, back, chest, and legs (expected onset after 3-6 months; expected maximum effect after 3-5 years)

**Genital appearance and sensation**

- Your clitoris will get bigger, typically growing to between about one to two and half centimetres (expected onset after 3-6 months; expected maximum effect after 1-2 years) and may become more sensitive

**Temporary changes**

The following changes will occur but are likely to gradually go away if you stop hormone therapy:

**Body shape, appearance and function**

- Your skin may become coarser and oilier, and you may develop acne, which can cause facial scarring (expected onset after 1-6 months; expected maximum effect after 1-2 years)
- You will probably have more fat on your abdomen and less on your buttocks, hips, and thighs. It will be redistributed to a more masculine/less feminine shape, changing from a gynaecoid “pear shape”

to an android “apple shape” (expected onset after 3-6 months; expected maximum effect after 2-5 years).
- You may develop more muscle mass and strength, particularly if you exercise (expected onset after 6-12 months; expected maximum effect after 2-5 years)
- Your menstrual periods are likely to stop two to six months after starting treatment

**Sexual experience and function**

- Your sex drive, or libido, may increase (expected onset after 1-3 months; extent and time to maximum effect varies).
- You may develop vaginal atrophy (dryness, thinning of vaginal wall) (expected onset after 3-6 months; expected maximum effect after 1-2 years) which can cause pain, discomfort, tearing or abrasions during intercourse and increase your risk of contracting sexually transmitted infections (STI’s)

**Emotional and behavioural changes**

Some patients describe having more energy and drive whilst others report a slight increase in aggression.

**Gonadotropin releasing-hormone analogues**

If menstruation persists despite using testosterone therapy, and this is distressing for you, drugs called gonadotropin releasing-hormone analogues (GnRHa) can be used to suppress them. These drugs are given by injection every one, three or six months, depending on the preparation used.

Menstruation can also be suppressed by long-acting reversible contraception. Methods include intrauterine device/system, contraceptive injection, or implant. Speak to your endocrinologist, specialist nurse or GP if you would like to pursue this method.

**Fertility**

The effects of testosterone on your fertility are unpredictable. You may or may not be able to get pregnant, even if you stop taking testosterone. You might still get pregnant even after testosterone stops your menstrual periods.

You must not take testosterone if you are pregnant, or plan to become pregnant, because of the risk to the unborn baby. You should use effective contraception if you have peno-vaginal intercourse or other intimate sexual contact with a fertile person with a penis.

**Specific limitations of masculinising hormone therapy**

- Whilst losing some fat around your upper body may make your breasts appear slightly smaller, they will not shrink very much.
- Although your voice will deepen, other aspects of the way you speak and communicate may not make you appear more masculine.

If you have any concerns about these issues, there are other treatment options available, such as:

- Chest surgery
- Voice and communication therapy

**Specific physical health risks of taking testosterone**

Testosterone can:

- Cause changes that might increase your risk of heart disease including higher blood pressure, increased abdominal weight, less good cholesterol and more bad cholesterol. This is made worse if you have a family history of heart disease, are overweight or smoke cigarettes.
- Cause changes that might increase your risk of stroke or heart attack by increasing your red blood cell production (polycythaemia) and increasing your risk of blood clots (thrombophlebitis).
- Convert to Estrogen if over-used and this may increase your risk of cancers of the breast, the ovaries, or the uterus.
- Cause vaginal atrophy that can result in pain and discomfort and tears and abrasions during penetrative sex and making you more prone to thrush and sexually transmitted infection.
- Cause headaches or migraines.

**Specific physical health risks of taking gonadotropin releasing-hormone analogues**

Taking gonadotropin releasing-hormone analogues to stop your periods may increase your risk of:

- Changes in sexual function (as noted above)
- Osteoporosis (softening of the bones, leading to increased risk of fractures)
- Reduced upper body muscle development and strength
- Mood problems including depression

These effects are much less likely to be experienced if you are taking testosterone regularly at the same time.

If you take gonadotropin releasing-hormone analogues without testosterone for more than two years, your risk of developing sexual problems, osteoporosis (softening of the bones, leading to increased risk of fractures), reduced upper body muscle development and strength, depression, coronary heart disease (chest pain on exertion, angina, heart attacks), obesity and diabetes is increased.

**Prevention of medical complications**

You must provide information relating to your personal and family medical history to your endocrinologist or specialist nurse in order that they can discuss any specific risk factors that may be relevant for you and decide on the best course of treatment.

You must let your endocrinologist or specialist nurse know of any other substances or medications that you are taking including alcohol, diet supplements, herbs, other hormones, and street drugs as there may be interactions that may bring about unwanted effects, some of which may be life-threatening.

You must take your medication as prescribed and let your endocrinologist, specialist nurse and/or GP know if you have any problems, side-effects or are unhappy with the treatment. Your endocrinologist or specialist nurse may review and change your prescription if indicated.

You should have your blood pressure and weight checked every six months and have blood tests as recommended by your endocrinologist or specialist nurse to monitor the effectiveness of your treatment and to check for unwanted effects. You should also get your cholesterol level checked by your GP from time to time. Routine breast exams, mammograms and cervical Pap smear tests may also be recommended by your clinician.

**Stopping treatment**

You can choose to stop taking these medicines at any time. It is recommended that you do that with the help of your endocrinologist or specialist nurse to help make sure that you do not experience any unwanted effects.

Your clinician may suggest that you cut the dose or stop taking it if certain conditions develop. This may happen if the side effects are severe or there are health risks that cannot be controlled.