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## Are testosterone supplements safe for men?

Testosterone supplements can have a hugely positive effect on the lives of men who have a medical need. Whether as a treatment for female-to-male gender-affirming hormone therapy or for testosterone deficiency, there are numerous mental and physical health benefits. As with any medication, it's important to be aware of the possible adverse effects of treatment. There are also crucial safety parameters in place to protect against health complications.

### Why do men need testosterone?

Testosterone has a bad-boy reputation as the aggressive male hormone. This is only a very small part of the picture and doesn't apply to most men. What's more, this perception significantly underplays the role of this hormone in our health.

In men, testosterone is the primary sex hormone, produced in the testicles (largely under the control of hormones produced in the brain). You've probably heard that it's essential for the development of male characteristics as well as the [sexual drive \(libido\)](#) and function.

What you may not know is that testosterone helps the regulation of healthy bone mass, muscle mass, fat distribution, and the production of red blood cells. Its role in these functions means testosterone has an important part to play in both the [mental](#) and the physical health of [transgender](#) and cisgender men.

# Female-to-male testosterone supplements

Testosterone supplementation for transgender (trans) men, known as testosterone hormone therapy (THT), is a gender-affirming treatment. The hormone induces physical male characteristics and suppresses female ones.

As a result, female-to-male (FTM) testosterone supplements help many trans men to feel more at home in their bodies. FTM testosterone helps to align their physical features with their internal sense of gender identity, helping to alleviate [gender dysphoria](#).

This can result in a [significant improvement in quality of life](#). It can also play an important part in mental health, for many helping to relieve [related depression and anxiety problems](#).

Co-director of **Trans Actual**, Chay Brown, describes the main outcomes of THT that have made him feel more like himself:

- Growth of body hair.
- Redistribution of fat – less on hips and back, more on the belly.
- Broadening out of the chest and shoulders.
- Voice-breaking (becoming deeper).
- An end to **periods**.

"However, not everyone's periods will stop on THT," he adds. "Some people also need to take oestrogen blockers.

"It's also important to understand that changes occur at different rates for everybody, which can in part be due to genetic disposition."

## Testosterone deficiency

Testosterone supplements can also be taken when the body is unable to produce enough testosterone – a condition known as [testosterone deficiency](#) (or hypogonadism). Low testosterone levels can have a significant impact on a man's health and quality of life.

Often, this condition develops [in older men](#) as part of the ageing process. [Research](#) also suggests that older men living with [obesity](#) and long-term diseases like [diabetes](#) and [high blood pressure](#) are at an even greater risk.

It can occur at any age as a result of conditions affecting the testicles (sometimes called primary testosterone deficiency) or the hypothalamus or [pituitary gland](#) in the brain (secondary testosterone deficiency).

Testosterone deficiency has been [linked to several serious conditions](#), including [metabolic syndrome](#), [type 2 diabetes](#), and [cardiovascular diseases](#) (like [stroke](#), [heart disease](#), and [heart failure](#)).

The condition may lead to a wide range of symptoms, ranging from physical changes such as decreased body growth and muscle mass to mental changes like [fatigue](#) and concentration difficulties. It can also lead to [erectile dysfunction](#) or even [infertility](#).

Treating testosterone deficiency with THT can lead to many improvements, including:

- Higher **energy levels**.
- Mental sharpness.
- Improved sexual function and libido.
- Masculinisation of characteristics.

If there is an underlying cause for the testosterone deficiency, THT alone is not enough and the condition will also need treating. It's important to note that the underlying cause will also affect the outlook.

## Testosterone side effects and safety

There are many significant possible benefits of THT for health and your quality of life. However, as with all medications, there are certain risks and safety parameters to consider with testosterone therapy. As such, it will only be prescribed by healthcare professionals to those who have a medical need - namely for FTM gender affirmation and for those with testosterone deficiency.

Generally speaking, [research](#) finds serious adverse effects to be rare when prescribed appropriately. This said, it's important for men to be aware of the possible risks so that they can make an informed decision about testosterone therapy.

## The International Medical Advisory Panel (IMAP) – risks associated with hormone therapy in order of risk level

### Likely increased risk

- A high concentration of red blood cells (**polycythaemia**) – is one of the **most common** adverse effects. This can increase the risk of **blood clots**.
- **Weight gain**.
- **Acne** – often an immediate side effect.
- Hair loss/male pattern baldness (**androgenic alopecia**) – usually occurs **within a few years** of starting THT.
- Disturbed breathing during sleep (**sleep apnoea**) – often an immediate side effect.

### Possible increased risk

- **Liver damage or inflammation**.
- Raised levels of blood fats (**hyperlipidaemia**) – includes higher levels of '**bad**' **cholesterol** (LDL).

### Possible increased risk – usually only with additional risk factors

- Diseases of the heart and blood vessels (cardiovascular disease) – there is mixed evidence relating to long-term THT, although some **studies** report increased risk in older men.
- **High blood pressure** (hypertension) – a higher risk with age and other factors such as obesity.
- Type 2 diabetes – a higher risk with age and other factors such as obesity.
- The destabilisation of certain psychiatric disorders – this risk is increased only in those with pre-existing disorders like **bipolar** and schizoaffective disorder.

### No increased risk, or inconclusive evidence

- Loss of bone density.
- Cancer of the **breast, cervix, ovaries**, and **uterus** – only in trans men who have retained these body parts.
- **Prostate cancer** – only in cis men.

## Meeting the requirements

As some adverse health effects are increased with certain risk factors, your doctor will assess you for pre-existing conditions such as high blood pressure, high cholesterol, and whether you're already at high risk for blood clots.

Your age can also increase your risk of developing serious health problems like cardiovascular disease. IMAP [advises](#) that pregnant trans men should not take testosterone supplements.

## Safe dosage

"Some people don't realise that it's not a case of the higher dosage, the better," advises Brown. "At a certain point, testosterone turns into oestrogen in the body. It's important to know that there are dosage limits in place not to limit effectivity, but for your safety."

The dosage of the testosterone you're taking should be the amount that gives you the optimum benefits with the least amount of relative risk. For both cis and trans men, testosterone supplements can be taken as tablets, injections, skin gels, or patches you apply to your skin.

The dosage that is safe for you to take will depend on a range of factors determined by your doctor. These factors include which supplement form you take (as [recommended by the National Institute for Health and Care Excellence](#)) and whether you are having THT for testosterone deficiency or as [masculinisation therapy](#).

## Monitoring

Brown also points out the importance of regular health monitoring while on testosterone supplements.

This includes:

- Red blood cell count (checking for 'thick blood').
- Liver function.
- **Kidney function.**
- Blood fat (lipid) levels - linked to having high 'bad' or low 'good' cholesterol levels.
- Bone mineral density - as higher doses of testosterone can lead to **osteoporosis**.
- Cancer screening for breasts, cervix, uterus, and ovaries - for trans men who retain these organs.
- Prostate cancer screening - for cis men.

Pre-treatment screenings for risks, dosage size, and monitoring are measures put in place to look after your safety and ensure you have a beneficial experience on testosterone.

Unfortunately, in the UK a number of people source testosterone supplementation from places other than their doctor. It's important to understand that medication from unauthorised providers can carry serious health risks.

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