



FAQ: Testosterone

What is testosterone?

Testosterone is 1 of a few different “male hormones” or what doctors call “androgens.” Testosterone is the most important androgen that men make. It helps with muscle strength, sex drive, and bone strength.

What is low testosterone in men?

Low testosterone is when the body makes too little testosterone. The medical term for this is “androgen deficiency,” but many people call it just “low T.” As men get older, it is normal for levels of testosterone to get a bit lower. But when the levels of testosterone get **too** low, men can have symptoms.

What are the symptoms of low T?

The symptoms are different depending on how long a man has had low T.

At first, men with low T:

- Feel tired, especially at the end of the day
- Have little or no interest in sex (also called “low libido”)
- Feel sad, down, or depressed

After a year or more of having low T, men develop other symptoms or medical problems, including:

- Loss of muscle
- Bone thinning
- Loss of facial or body hair
- Growing breasts (also called “gynecomastia”)

What causes low T in men? — Low T in men can be caused by:

- Normal aging
- Injury or infection affecting the testicles (which make most of the testosterone in men)
- Certain treatments for cancer, including radiation, chemotherapy, and hormone therapy for prostate cancer
- Disorders that affect the pituitary gland, a gland at the base of the brain that controls all hormone-producing organs
- Other medical problems, such as liver and kidney disease, obesity, diabetes, and AIDS
- Other rare genetic problems

Should I see a doctor or nurse?

Yes, if you have symptoms of low T, see your doctor or nurse. There are many things that can cause those symptoms. Your doctor or nurse can try to find out what might be causing them. A blood test can show whether you have low T, but you might not need that test if something else is causing your symptoms.

How is low testosterone in men treated?

Low testosterone can be treated with testosterone replacement, which comes in shots, patches, gels, and tablets implanted in the fat tissue. But low testosterone is not always treated,

especially in men older than 60. That's because it's normal for testosterone to drop in men as they age. In fact, normal aging causes some of the same changes that happen in men with low testosterone, such as less energy or interest in sex.

Men older than 60 might have androgen replacement if:

More than 1 blood test shows very low testosterone

They have symptoms of low testosterone that bother them

The symptoms are not caused by another disease or condition that doctors can treat

Androgen replacement medicines (testosterone)

Brand name	How it's given	How often	Comments
Depo-testosterone	Injection (shot)	Every 1 to 2 weeks	Shot can be given at home. Hormone levels can go up and down between shots. May cost less than other testosterone medicines.
Androderm®	Patch worn on arm or upper body	Every night	Can cause a skin rash in some people.
AndroGel®	Gel put on the upper arm, shoulder, or belly (only put 1% strength on belly, not 1.62%)	Every morning	Comes in different strengths. Pump bottle gives exact dose.
Testim®	Gel put on the upper arm or shoulder	Every morning	Comes in 1-dose tubes. Some people notice a smell.
Fortesta®	Gel put on thighs	Every morning	Pump bottle gives exact dose
Axiron®	Liquid put on armpits	Every morning	Pump bottle with applicator gives exact dose
Testopel®	Tiny pellets given as a shot under skin	Every 3 to 4 months	Area where shot is given can become red and painful.
Compounded	Cream applied to skin daily	Every a.m.	Usually this is a low volume, 0.5-1 ml of cream total

Potential Risks: This is not a comprehensive list

1. Prostate — Prostate volumes and PSA increase in response to testosterone treatment. On average, values increase to those of men of the same age who have a normal testosterone.

Some men, especially those over the age of 50, experience an exacerbation of benign prostatic hyperplasia (BPH), a testosterone-dependent disease. However, in a 2010 meta-analysis of 51 randomized trials of testosterone therapy in men designed to look at the primary endpoints of mortality, cardiovascular events and risk factors, prostate outcomes and erythrocytosis, no significant effects of testosterone were seen on the incidence of prostate cancer, need for prostate biopsy, increase in PSA, or change in lower urinary tract symptoms/score when compared to the placebo/nonintervention group .

Men older than 40 years who have androgen replacement need regular screening tests for prostate cancer.

2. Sleep apnea — Sleep apnea may be worsened although the evidence for this is weak. Notify your doctor if you have symptoms of sleep apnea such as loud snoring, or if you stop breathing during sleep. Patients whose sleep apnea is well-treated with CPAP may take testosterone treatment.

3. Fertility: Using testosterone will decrease your sperm counts to ZERO. This may or may not be readily reversible.

4. Children and females should not be exposed to testosterone gel preparations. Skin should be washed prior to any skin-skin contact with women/children.

5. There have been studies linking testosterone replacement to an increase in cardiac "events" like heart attacks. These studies were not well-designed and it is not easy to translate these studies to all patients. However, the risk is not entirely well-defined and there could be evidence in the future that testosterone is not safe for some men

6. Hair loss: Particularly with levels that are "too high," some men may see a thinning of hair or "male pattern baldness."

7. Acne: Some men see a return or worsening of acne with testosterone replacement.

8. Thrombosis: The FDA has issued an advisory that testosterone supplementation increases the risk of forming blood clots. These blood clots can cause pulmonary embolism and sudden death.