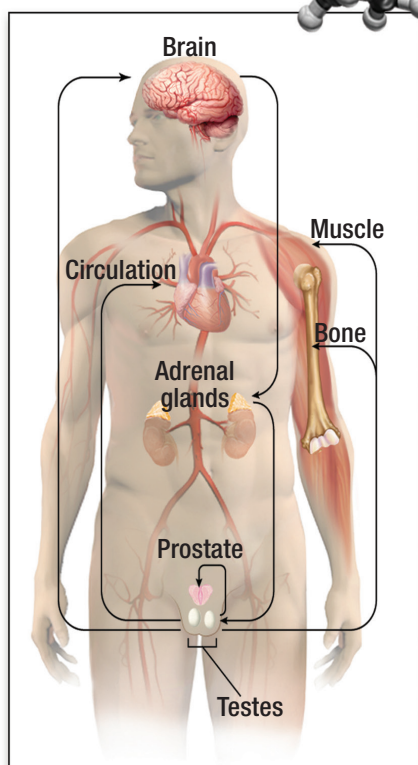
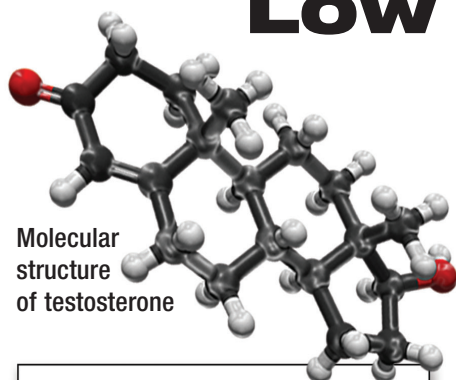


Low Testosterone



Hair loss

Lack of energy

Male Hypogonadism

Testosterone is a hormone produced in the testicles. Low testosterone, often referred to as "low T," is defined as a testosterone blood level that is below the normal range for an adult male. Low testosterone levels are caused by hypogonadism, a condition in which the testicles do not make enough testosterone. Hypogonadism can occur at any age, often as a result of infection or testicular injury. It may also be due to a problem with the pituitary gland, which under normal circumstances stimulates the testicles to make testosterone. There are a number of other conditions that can result in low testosterone levels. Because of intense marketing of treatments for low testosterone, more men are visiting their doctors to request testosterone replacement therapy.

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Testosterone Levels Decline as a Man Ages

Testosterone is responsible for many masculine physical traits, including muscle mass and strength, sperm production, sex drive, bone strength, and red blood cell production. Testosterone levels rise during puberty, peak at around 30 years of age, and slowly decline with age. It is not abnormal for testosterone to drop below the normal range once a man reaches his 70s.

Causes of Low T

Conditions associated with low testosterone include infertility, erectile dysfunction, bone fragility, and weak muscles. Although not every man with low testosterone has symptoms, the most common complaints are fatigue, low sex drive, hair loss, and problems concentrating. Other conditions, such as thyroid disorders and depression, have similar symptoms. A laboratory test to measure testosterone in the blood will determine whether the symptoms are due to low testosterone.

A number of other conditions can cause testosterone to fall below normal levels, including other hormone imbalances, testicular cancer or cancer treatment, genetic conditions, infection, injury to the testicles, obesity, type 2 diabetes, heavy alcohol use, liver disease, and HIV/AIDS. Drugs such as spironolactone, digoxin, and steroids can decrease testosterone. If testosterone levels are low, the cause should be investigated.

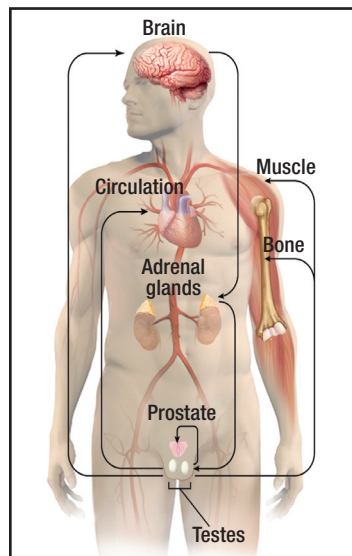
Treatment of Low T

If a healthy young male has a low testosterone level, the cause can be corrected or testosterone can be prescribed. Testosterone levels commonly decline with age, so there is considerable debate about whether to prescribe replacement therapy for older men with low testosterone. If the testosterone level is very low, a man is at risk for weakened bones (osteoporosis), but testosterone supplementation to prevent fragile bones is controversial. The use of testosterone supplementation in older men with normal testosterone to restore the masculine traits of their youth is even more controversial. There is no clinical evidence that testosterone has a positive effect in these men, so its use cannot be routinely recommended.

If deemed appropriate, testosterone may be supplemented with a prescription-only product. A variety of dosage forms are available. For example, testosterone may be given by injection every few weeks. There is also a tablet-shaped patch (Striant), known as a *buccal tablet*, that is placed on the front upper gum under the lip, where it slowly releases testosterone over 12 hours. A testosterone skin patch, topical solution, and gel are available for daily skin application. The solution and gel formulations must be thoroughly washed from the hands to avoid skin-to-skin contact and transfer to others. Another product is Testopel, which consists of tiny pellets that are implanted under the skin and slowly release testosterone over 3 to 6 months.

The side effects of testosterone replacement therapy include enlarged breasts, enlarged prostate, acne, and increased red blood cell production. Men with prostate cancer are usually not candidates for testosterone therapy, and men with breast cancer should not receive testosterone. Sales of herbal testosterone “supplements” or “stimulants” have skyrocketed as men attempt to regain their youth using these “all-natural” products. Unfortunately, these products have not been studied carefully for safety or effectiveness.

If you have questions about prescription testosterone products and their proper use, your pharmacist can help. Your pharmacist can also tell you about natural products or supplements that are marketed to treat “low T.”



Insufficient testosterone production by the testicles (testes) is a normal part of aging, but it can also be caused by some health conditions.