

What is Testosterone & Low T?

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Testosterone is a hormone found in humans, as well as in other animals. The testicles primarily make testosterone in men. Women's ovaries also make testosterone, though in much smaller amounts. Testosterone production starts to increase significantly during puberty, and begins to dip after age 30 or so.

Testosterone is most often associated with sex drive, and it plays a vital role in sperm production. But it also affects bone and muscle mass, the way men store fat in the body, and even red blood cell production. A man's testosterone levels can also affect his mood.

A drop in testosterone levels can contribute to:

- moodiness
- weight gain
- loss of muscle mass
- diminished libido

Testosterone levels can be checked with a simple blood test. Men whose natural testosterone production has dropped significantly can use artificial testosterone to treat low testosterone (low T). Testosterone



replacement therapy comes with risks and benefits.

Causes and Symptoms of Low T

Testosterone production naturally tapers off as a man ages, but other factors can cause hormone levels to drop too. Injury to the testicles and chemotherapy or radiation treatment for cancer can adversely affect testosterone production. Chronic diseases, such as AIDS, kidney disease, alcoholism, and cirrhosis of the liver can reduce testosterone production. Stress can also lead to low T.

A noticeable decrease in a man's sex drive may be a symptom of low T. Decreased energy and weight gain are also signs that testosterone production is fading. Feelings of depression and diminished self-esteem can accompany low T. Over time, bones can become thinner and more vulnerable to fracture. Lower testosterone can also result in less body hair.

Moderately elevated testosterone levels in men tend to produce few noticeable symptoms. Boys with higher levels of testosterone may begin puberty earlier. Women with excessive testosterone may develop masculine features.

Testing Testosterone

There is a wide range for what is considered a "normal" or healthy level of testosterone circulating in the bloodstream. The normal range of testosterone for men is between 300 and 1,000 ng/dL, according to the [National Institutes of Health](#) (NIH). Ask your doctor to test your testosterone levels along with your usual blood work if you have concerns about low T.

Abnormally high levels of testosterone could mean a man has an adrenal gland disorder or even cancer of the testes. It may instead have a less serious cause. Congenital adrenal hyperplasia, which can affect males and females, is a rare but natural cause for elevated testosterone



production. Your doctor may order other tests if your levels are exceedingly high.

Unusually low testosterone levels could be a sign of pituitary gland problems. The pituitary gland sends a signaling hormone to the testicles to produce more testosterone. A low T test result could indicate that the pituitary gland isn't working properly. A young teen with low testosterone levels may simply be experiencing delayed puberty.

Testosterone Replacement Therapy

Reduced testosterone production, a condition known as hypogonadism, doesn't always require treatment. A low T test result should trigger a check of your prostate health and your red blood cell production. Serious medical issues sometimes coincide with decreased testosterone production, and they should be diagnosed and treated if necessary.

You may be a candidate for testosterone replacement therapy if low T is interfering with your health and quality of life. Artificial testosterone can be administered orally, through injections, or with gels or patches on the skin.

It's important to note that while replacement therapy may produce desired results, such as greater muscle mass and a stronger sex drive, the treatment does carry some side effects. Oily skin and some fluid retention are common. The testicles may shrink, and sperm production could decrease significantly. Some studies have found no greater risk of prostate cancer with testosterone replacement therapy, but it continues to be a topic of ongoing research.

Apart from some of the physical side effects, research shows little [evidence](#) of abnormal or unhealthy psychological changes in men receiving supervised testosterone therapy to treat their low T. However, those who abuse anabolic steroids may experience episodes of



aggressive or violent behavior, along with physical side effects. Bodybuilders, athletes, and those seeking to build muscle mass or achieve other benefits from artificial testosterone should be aware of the mental and physical risks involved.