

Spotlight on Health

Low Testosterone (Hypogonadism)

June is Men's Health Month, so we are looking at a health issue that affects men. Two to 6% of men have symptoms caused by low testosterone (low T).¹ (Low T is also called testosterone deficiency or hypogonadism.) In this newsletter, we discuss how a doctor can identify and treat low T.

What is Low T?

As you can tell from its name, low T is a condition marked by low levels of testosterone. Testosterone is a male sex hormone. It is important for sex drive, but it also affects muscle mass, bone density, and mood. That's why low T can cause many symptoms that aren't linked to sex (sidebar).

Not all men with low T have symptoms. And many symptoms of low T could be caused by other conditions. Plus, treatment comes with some risks. So for low T to be diagnosed, 2 criteria must be met.^{2,3}

- Symptoms of low T must be present (sidebar).
- Laboratory tests must show low T. If levels are in the low normal range, a doctor should order a second test to confirm.² Samples for all tests should be taken in the morning, when testosterone levels are highest.

What Causes Low T?

Low T has many causes, such as drugs, surgery, and disease. Treatment can be different for different causes. That's why doctors often do more tests to find the cause.

The causes of low T are linked to a problem either in the testicles or in other glands. Since testosterone is made in the testicles, a problem there could cause low T. This would be called primary hypogonadism.

Other glands make hormones that trigger the testicles to make testosterone. A problem in these glands could result in a low amount of these hormones in the blood. That, in turn, would cause low T. Low T that is caused by problems in glands other than the testicles is called secondary hypogonadism.

Knowing if low T is caused by primary or secondary hypogonadism helps the doctor know how best to treat the patient.



Symptoms of Low T

Low T can cause symptoms that affect many parts of the body.¹⁻³ But these symptoms can also be caused by other health issues. Thus, lab tests are also needed to diagnose low T.

- Reduced sex drive
- Erectile dysfunction
- Decreased muscle mass
- Decreased bone mineral density
- Depression
- Fatigue
- Increased body fat
- Irritability
- Lethargy
- Poor sleep

Can Low T be Treated?

The good news is that low T can be treated. A doctor can prescribe testosterone. This is called testosterone replacement therapy (TRT). But not everybody can be treated safely.² So even if a patient has low T, a doctor needs to make sure the patient is a good candidate for treatment.

TRT can harm patients with certain health issues. For instance, men with prostate cancer, breast cancer, or high red blood cell count (erythrocytosis) can be harmed by TRT. These people should not receive TRT. Other people may have health issues that need to be treated before TRT starts. A doctor should discuss all the benefits and risks of TRT with the patient before starting treatment.

A patient on TRT usually takes it for life. Once treatment begins, progress should be monitored by the doctor. The goal of treatment is normal levels of testosterone. If this goal is reached, it shows that treatment is working to raise levels. But symptoms should also improve. Hormone levels and symptoms should be looked at 3 to 6 months after starting TRT and then once each year.

How Laboratory Testing can Help

Quest Diagnostics offers tests that can help identify low T and its causes. Tests are also offered that help with treatment.

- **Diagnosing low T:** Tests can help confirm a man has low T.
- **Determining the cause:** Tests can help figure out what is causing low T.
- **Identifying candidates for TRT:** Tests can help a doctor know if treatment will be safe for the patient.
- **Monitoring TRT:** Tests can help a doctor know if treatment is raising hormone levels. They can also help a doctor know if treatment is causing side effects, such as high red blood cell count.^{2,3}

References

1. Dean JD, McMahon CG, Guay AT, et al. The International Society for Sexual Medicine's process of care for the assessment and management of testosterone deficiency in adult men. *J Sex Med.* 2015;12:1660-1686.
2. Bhasin S, Cunningham GR, Hayes FJ, et al. Testosterone therapy in men with androgen deficiency syndromes: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab.* 2010;95:2536-2559.
3. Wang C, Nieschlag E, Swerdloff R, et al. Investigation, treatment and monitoring of late-onset hypogonadism in males: ISA, ISSAM, EAU, EAA and ASA recommendations. *Eur J Endocrinol.* 2008;159:507-514.