Low Testosterone

You may have seen advertisements for treating low testosterone, or "low T."

Testosterone is an **androgen**, or male hormone. It is responsible for most male sexual characteristics. Testosterone is produced in the testicles and regulated by glands in the brain. Low testosterone, or hypogonadism, can result from a problem either in the testicles or in the brain. Doctors can treat low testosterone with a gel, patch, injection, or tablet that sticks onto the gums.

Diagnosis of Low Testosterone

Many of the signs and symptoms of low testosterone are vague. Some may develop over time. They can include

- loss of interest in sex
- difficulty getting an erection
- fertility problems
- tiredness and lack of energy
- depression
- loss of bone density, leading to brittle bones
- muscle weakness
- loss of body hair

Because these symptoms can have many causes, a blood test is necessary for the diagnosis. A blood sample is obtained in the morning, when testosterone levels are highest. The results must show low serum testosterone levels on 2 different mornings for a diagnosis of low testosterone.

Reasons for Low Testosterone

Like women, men experience a decrease in sex hormone levels as they age. This is a normal process, sometimes called male menopause or **androgen deficiency in the aging male** (**ADAM**).

Men with certain chronic conditions are more likely to have low testosterone. Some of these conditions get worse with age. They include type 2 diabetes, abnormal cholesterol levels, chronic lung disease, and HIV/AIDS. Other reasons for low testosterone include medications, other hormone disorders, and genetic conditions.

Treatment

If you have low testosterone, treatment can help your symptoms. Recent studies found that it helped with sexual function and depression. However, there are some risks to treatment. Short-term risks of androgen replacement therapy include

- prostate enlargement
- prostate cancer
- heart disease
- shrunken testicles
- acne
- lowered sperm count or sterility
- blood clots in legs

So far, researchers do not have a lot of information about the long-term risks of treatment. In a recent study, men aged 65 years or older with mobility problems and low testosterone levels were divided into 2 groups. One group received a testosterone gel and the other did not. The treatment group showed improved strength and mobility, but they also had more heart and blood vessel problems. Researchers discontinued the study early because of these risks.

A new study involving many countries will look at long-term health risks in men using androgen replacement therapy for low testosterone. Researchers are especially interested in whether treatment increases the risk of prostate cancer.

Is Treatment Right for You?

The Endocrine Society recommends treatment for men who are diagnosed as having low testosterone based on both a blood test and symptoms. It says treatment can improve sexual function and sense of well-being, muscle mass and strength, and bone mineral density.

The Endocrine Society recommends against treatment for men with breast or prostate cancer, severe sleep apnea, poorly controlled heart failure, and some other risk factors.

Think carefully about using any long-term medication and discuss the pros and cons with your doctor. Lifestyle changes such as adding or increasing exercise, eating a healthier diet, and losing weight may help the symptoms of low testosterone without need for medication.

FOR MORE INFORMATION

- Hormone Health Network
  www.hormone.org
- The Endocrine Society
  www.endo-society.org
- National Library of Medicine
  www.nlm.nih.gov/medlineplus/druginfo/meds/a605020.html

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Basaria S, Coviello AD, Travison TG, et al. Adverse events associated with testosterone administration. *N Engl J Med*. 2010;363(2):109-122

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