

Free Testosterone



Does this test have other names?

Free T-index

What is this test?

This test measures the amount of unattached, or "free," testosterone in your blood.

Testosterone is a male sex hormone (androgen) that helps male features develop. Most testosterone is made in the testes (in men) and the ovaries (in women). A small amount is made in the adrenal glands.

Testosterone causes the changes that occur in boys during puberty. It helps hair and muscles grow. It also helps the penis and testes grow. Testosterone also causes a boy's voice to deepen. Men continue to make testosterone. It boosts sex drive and helps make sperm.

Women's ovaries also make small amounts of testosterone. It helps many organs and body processes in women.

The pituitary gland in your brain controls the amount of testosterone your body makes.

Most of the testosterone in your blood attaches to 2 proteins: albumin and sex hormone binding globulin. Some testosterone is free, which means it is not attached to proteins. Free testosterone and albumin-bound testosterone are also referred to as bioavailable testosterone. This is the testosterone that is easily used by your body.

If your healthcare provider thinks that you have low or high testosterone, your total testosterone levels will be checked first. This looks at all 3 types of testosterone. The free testosterone can help give more information when total testosterone is low.

Both men and women can have health problems because of low or high levels of testosterone. Women with high levels of testosterone may have polycystic ovary syndrome (PCOS). This condition can cause:

- Infertility
- Lack of menstruation
- Acne
- Obesity
- Blood sugar problems
- Extra hair growth, especially on the face

Men with low levels of testosterone (hypogonadism) may have:

- Loss of sex drive
- Low energy
- Bone loss
- Infertility

Testosterone levels in men drop as they age. But this not considered to be hypogonadism. The FDA currently advises against treating men with low testosterone caused only by aging.

Why do I need this test?

You may need this test to find out whether a low sex drive is caused by a low level of testosterone. In recent years, healthcare providers have used testosterone therapy to treat both men and women with low sex drives.

The test is also done for men with andropause, or late-onset hypogonadism. This is a condition caused by decreased testosterone. Men with this condition may have:

- Anemia
- Depression
- Decreased bone density
- Lack of energy or fatigue
- Loss of muscle mass
- Poor concentration
- Erectile dysfunction or inability to have an orgasm
- Infertility

Men with HIV/AIDS may also have low testosterone levels.

Symptoms of high testosterone in women include:

- Irregular or no menstruation
- Extra hair growth, especially on the face
- Blood sugar imbalance
- Infertility
- Thinning hair on the scalp

If you are a man and this test reveals your free testosterone is lower than normal, your healthcare provider may prescribe testosterone therapy. The FDA has not approved any testosterone medicines for women.

What other tests might I have along with this test?

Men may have other tests, including:

- **Blood tests for other hormones.** These include tests to check levels of luteinizing hormone, follicle-stimulating hormone, thyroid-stimulating hormone, and prolactin. These are all hormones made by the pituitary gland.
- **Sperm analysis.** This test counts the number of live sperm in the liquid that a man ejaculates. This test is often used to look for an infertility problem.
- **Testicular biopsy.** This is a tissue sample from the testes.
- **MRI of the pituitary gland.** This is an imaging test to look for growths on the gland.

Women may have other blood tests to check:

- **Androstenedione, total testosterone, and dehydroepiandrosterone sulfate.** These are other types of androgen hormones.
- **LH, FSH, TSH, and prolactin.** These are all hormones made by the pituitary gland.

- **Partial 21-hydroxylase deficiency.** This condition affects the adrenal glands. High-risk groups for this condition include Ashkenazi Jews.

What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

How is this test done?

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand. This test is usually done in the morning because testosterone levels tend to be highest at that time. You may need to have this test more than once, and at different times of the day, to confirm low testosterone levels. This is because your testosterone level can change from morning to evening and from day to day.

Does this test pose any risks?

Having a blood test with a needle carries some risks. These include bleeding, infection, bruising, and feeling lightheaded. When the needle pricks your arm or hand, you may feel a slight sting or pain. Afterward, the site may be sore.

What might affect my test results?

Drinking a lot of alcohol can affect men's hormone levels. Obesity and diabetes can also affect men's testosterone levels.

For women, some health conditions, such as PCOS, can increase free testosterone.

How do I get ready for this test?

You don't need to prepare for this test. But be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use.

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