

Free Androgen Index



Does this test have other names?

FAI

What is this test?

A free androgen index (FAI) is a ratio figured out after a blood test for testosterone. It's used to see if you have abnormal androgen levels.

Both men and women make male hormones called androgens, which include testosterone. During puberty, testosterone helps children develop into adults. As you age, levels of this hormone can fall. This causes health problems for both men and women.

A testosterone test is a blood test that measures total testosterone, free testosterone, and a protein called sex-hormone binding globulin (SHBG). A free androgen index measures testosterone in your blood and compares the total amount of testosterone to SHBG in your body.

Why do I need this test?

You may need this test if you show signs of abnormal androgen levels, which differ in women and men.

These hormones aid in the development of sex organs and other gender-linked traits. For example, androgens play a role in making the female hormone estrogen. When a woman makes too many androgen hormones, she may develop extra body hair and facial hair. With too little androgen hormones, a woman may become very tired, lose bone mass, or have little interest in sex.

If you are a woman, you may have this test if you have extra hair on your body or face. It's possible that abnormal hair growth stems from an ovarian tumor or a condition called polycystic ovarian syndrome (PCOS). Among other things, PCOS causes your ovaries to make too much testosterone. Other symptoms of PCOS include obesity, an irregular menstrual cycle, and prediabetes or diabetes.

Testosterone helps boys develop male traits and makes facial hair in men. If a teen boy isn't developing normally, it's possible that the testes might not be making enough of this hormone. Adult men who don't make enough testosterone may feel weak, lose muscle strength and mass, develop breasts, or lose interest in sex.

What other tests might I have along with this test?

You may also need these tests:

- Total testosterone
- Prolactin
- Follicle-stimulating hormone (FSH) and luteinizing hormone (LH)
- Thyroid-stimulating hormone

If you are a woman, you may also get these tests:

- Ferriman-Gallwey scale to measure if you have an abnormal amount of body hair (hirsutism)
- 24-hour determination of urinary free cortisol for Cushing syndrome, a condition that often causes excessive body hair
- Dehydroepiandrosterone sulfate, or DHEA-S, a marker for an adrenal source of androgens

- 17-alpha-hydroxyprogesterone (17-OHP)
- ACTH stimulation of 17-OHP, if your 17-OHP level is not clearly normal
- Ovarian ultrasound to find out if you have an ovarian tumor
- Adrenal CT scan to check for an adrenal tumor or other abnormalities

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.

Test results also vary by age, gender, and overall health. Approximate normal ranges of serum testosterone for adults are listed below.

Males:

- 270 to 1,070 nanograms per deciliter (ng/dL)

If you are male and your level of total testosterone falls below 200 ng/dL, you may be diagnosed with hypogonadism. This is an androgen deficiency that causes testosterone levels to drop.

Females:

- 15 to 70 ng/dL

Your hormone levels may be affected by a temporary health condition, such as pregnancy. You may also have results that aren't clear and need to be retested.

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.

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?

If you are pregnant, your ovaries may make too much testosterone as part of a normal pregnancy. Having a tumor or cyst in your ovaries or adrenal gland can also cause your testosterone level to rise.

People with Cushing syndrome may also have higher levels of testosterone.

Certain medicines can affect hormone production, including some steroids and opiates. Let your healthcare provider know about any prescription medicine you take.

How do I get ready for this test?

You don't need to prepare for this test. Tell your healthcare provider 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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