

Thyroid-Stimulating Hormone



Does this test have other names?

TSH, thyrotropin test

What is this test?

This is a blood test that measures your level of thyroid-stimulating hormone (TSH). Healthcare providers use this test to diagnose problems affecting the thyroid.

Your thyroid is a butterfly-shaped gland near the base of your throat above your collarbones. The thyroid makes 2 hormones, T3 and T4. These hormones affect your energy levels, mood, weight, and other important parts of your health.

The pituitary gland in your brain makes a chemical called TSH. TSH triggers your thyroid to make T3 and T4. When your pituitary gland makes too much or too little TSH, this can cause your thyroid to be overactive (hyperthyroidism) or underactive (hypothyroidism).

Why do I need this test?

You may need this test if you have symptoms of thyroid problems.

Symptoms of hyperthyroidism include:

- Anxiety and mood swings
- Irritability
- Weakness in the arms and legs
- Insomnia
- Hand tremors
- Sweating
- Low tolerance for heat
- Irregular heartbeat
- Fatigue
- Unexplained weight loss
- More frequent bowel movements than usual
- Eye irritation or bulging eyes, which are symptoms of Graves disease, a common cause of hyperthyroidism
- Menstrual irregularity
- Enlarged breasts and erectile dysfunction in men

Symptoms of hypothyroidism include:

- Fatigue

- Low tolerance for cold
- Weight gain
- Hair loss
- Swelling around the eyes
- Slower heart rate
- Shortness of breath
- Constipation
- Menstrual irregularity
- Loss of consciousness, although this is rare

Healthcare providers may also check TSH levels when diagnosing depression and dementia.

What other tests might I have along with this test?

You may have tests to check your levels of:

- T4, total and free
- T3, total and free
- Thyroglobulin, which helps make and store thyroid hormones
- TSH receptor-stimulator antibodies, which is used to diagnose Graves disease
- Thyroid peroxidase antibodies and antithyroglobulin antibodies, to diagnose Hashimoto thyroiditis

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.

Low TSH levels may mean you have hyperthyroidism. High TSH levels can mean you have hypothyroidism. The results of other thyroid tests can help to find the cause.

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?

Some medicines keep the pituitary gland from releasing TSH. These include:

- Phenothiazines

- Phenytoin
- Dopamine
- Glucocorticoids

Other medicines and supplements that can affect thyroid tests include:

- Beta blockers
- Dexamethasone
- Enoxaparin
- Furosemide
- Heparin
- Nonsteroidal anti-inflammatory drugs
- Salicylates
- Lithium
- Estrogens
- Biotin

How do I get ready for this test?

Certain medicines or herbs can affect thyroid test results.

Be sure your healthcare provider knows about all the 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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