

## Thyroid-Stimulating Hormone (TSH) Test

### What is the thyroid-stimulating hormone (TSH) test?

This blood test measures how well your thyroid gland is working because the gland can be under-active or over-active. The test measures your body's response to the thyroid hormone level in your blood. The TSH test is one of several thyroid tests and the one most often used to look for thyroid disease.

Your body controls the activity of your thyroid gland by producing thyroid-stimulating hormone (TSH). A high TSH level means that your thyroid gland is under-active. When your thyroid gland is under-active and not producing enough thyroid hormone, your body produces more TSH to stimulate the gland and increase its activity. A low TSH level means that your thyroid gland is over-active. When your thyroid gland is overactive and producing too much thyroid hormone, your body decreases the amount of TSH to slow production of thyroid hormone.

### Why is this test done?

The thyroid gland produces hormones that are important for brain, nervous system, bone, and muscle development. It also controls your metabolism (the process of turning the food you eat into energy). The thyroid gland is critical for maintaining body temperature and controlling heart rate, appetite, and digestive tract function.

### How do I prepare for this test?

- You don't need to fast or limit your activity before the test
- You may need to avoid taking certain medicines before the test because they might affect the test result. Make sure your health care provider knows about any medicines, herbs, or supplements that you are taking.
- Talk to your health care provider if you have any questions.

### How is it done?

A small amount of blood is taken from your arm with a needle. The blood is collected in tubes and sent to a lab. Having this test will take just a few minutes of your time. There is no risk of getting AIDS, hepatitis, or any other blood-borne disease from this test.

### How will I get the test result?

Ask your health care provider when and how you will get the result of your test.

### What does the test result mean?

Normal values for blood thyroid level vary from lab to lab, depending on how the instruments are calibrated. Normal values are usually shown next to your results in the lab report.

A **higher than normal** TSH level means there is not enough thyroid hormone in your blood. This condition is called hypothyroidism. You may have hypothyroidism because:

- Your thyroid gland is damaged.
- Your thyroid gland is not working normally.
- Your thyroid gland is infected or inflamed.
- You had an overactive thyroid gland that was removed or destroyed and you are not taking enough replacement thyroid hormone.

A **lower than normal** TSH level means there is too much thyroid hormone in your blood. This condition is called hyperthyroidism. You may have hyperthyroidism because:

- You had an overactive thyroid gland that was removed or destroyed and you are taking too much replacement thyroid hormone.
- Your thyroid gland is infected or inflamed.
- Your thyroid gland has grown too large.
- Your thyroid has a tumor that is producing extra thyroid hormone.

### **What if my test result is not normal?**

Test results are only one part of a larger picture that takes into account your medical history and current health. Sometimes a test needs to be repeated to check the first result. Talk to your health care provider about your results and ask questions.

If your test results are not normal, ask your health care provider:

- If you need additional tests.
- What you can do to work toward a normal value.
- When you need to be tested again.