

T3

T3 or triiodothyronine is one of the hormones produced by the thyroid gland. It plays an important role in controlling metabolism.

Another thyroid hormone – T4 (thyroxine) is usually present in larger amounts in blood, however T3 has a greater effect on metabolism.

In the blood, only very small amount of T3 is free (not bound to protein), the rest is bound to thyroxine-binding globulin. The total T3 test measures both bound and free T3 in the serum.

Production of T3 is controlled by the hypothalamus and the pituitary gland. When the T3 level decreases in the blood, the hypothalamus releases thyrotropin releasing hormone, which stimulates the pituitary gland to release TSH. This hormone then stimulates the thyroid to release more T3. And if T3 levels increase, with the help of negative feedback TSH release is inhibited.

Why the T3 Test is Performed?

T3 test is ordered if a person has symptoms of hyperthyroidism or if a person has abnormal TSH or T4 test result.

How the Test is Performed and How to Prepare for the Test?

A blood sample is taken from a vein. No special preparation is needed.

What Abnormal Results Mean

Higher-than-normal T3 levels may be due to:

- Graves' disease
- T3 thyrotoxicosis

Lower-than-normal T3 levels may be due to:

- Illness

- Hashimoto's disease
- Starvation

T3 levels are also elevated during pregnancy and liver disease.

Alternative Names

No alternative names.

Useful Information

Many medications may interfere with the test results: oral contraceptives, estrogen, large doses of aspirin, Clofibrate, Methadone, Amiodarone, androgens, antithyroid drugs, lithium, Phenytoin, Propranolol.