

Thyroid Blood Testing - Aviva Romm MD
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A comprehensive thyroid panel should have these tests to assess thyroid function

TSH

Total T4

Free T4 - FT4

Total T3

Free T3 - FT3

rT3 - reverse T3

Thyroid antibodies:

TPOAb - Thyroid peroxidase antibody

TgAb - Thyroidglobulin Antibody

If checking for cancer risk : Thyroglobulin

TSH - Thyroid Stimulating Hormone - a hormone produced by the pituitary gland that signals to the thyroid to produce thyroid hormones T4 & T3 - its like a thermostat

Labs consider the upper range to be between 4 and 5 mU/L but experts believe the upper end of normal is actually more like 2.5 - 3 mU/L. Many integrative and functional medicine doctors find their patients feel best at an upper limit of 1.5 - 2 mU/L

Sometimes you can have a normal TSH but still are having the symptoms of low thyroid function because of a poor conversation of T4 to T3 because of thyroid hormone resistance at the level of your cells. Stress can suppress (high cortisol levels) the pituitary gland enough to interfere with producing TSH so you can sometimes see low TSH with low T3 and T4 .

T3 - Triiodothyronine

T4 - Thyroxine - T4 is produced in much larger amounts and then it is converted to T3 the active form of thyroid hormone (the body tightly controls this level so it won't go into overdrive)

A high TSH and low FT4 and FT3 in your bloodwork indicates hypothyroidism.

A normal TSH, normal FT4 and low FT3 can indicate T4 to T3 conversion problems.

A normal or high TSH, normal FT4 and high FT3 can indicate cellular resistance to FT3 can still lead to hypothyroid symptoms because the active hormone can't get to the cell to do its job.

Thyroid Antibodies Testing. TPOab and TgAb - this measures potential auto-immunity normally called Hashimotos Thyroiditis - but some people don't initially test positive and the testing can be repeated every 6 months to trend improvement.

Reverse T3 - rT3 is the 3rd most abundant form of thyroid hormone. When your body wants to conserve rather than "burn" energy, it will divert the active T3 into inactive "reserve" form. This can happen when you are sick, under stress, undernourished and experiencing grief. If FT3 is low this can be because it is being diverted into rT3 which can be elevated.

Selenium is an important trace mineral for supporting the thyroid and the conversation of T4 to T3 properly. It also helps with the lowering of thyroid antibodies.

Think about heavy metals impacting health - mercury, lead, cadmium, arsenic.

Fluoride and bromide exposure from water and flame-retardant products can interfere with healthy thyroid function.

Heavy metals as mentioned above

Gluten intolerance

All of these can inhibit thyroid function.