

Is It Really Low Thyroid?

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Thyroid medication topped the list of prescription drugs dispensed in the United States in 2015. For many, symptoms are not improving when put on thyroid medication by their doctor; however, most of these people still affirm that they are tired, exhausted, and have trouble getting motivated.¹

"It's a strong signal that this is an overused medication," said Dr. Juan Brito, an endocrinologist at the Mayo Clinic. "Some people really need this medicine, but not the vast majority of people who are taking it."

As people age, they tend to see their doctors more. Many patients will have the complaints of fatigue, low energy, weight gain, constipation, mental "fogginess", etc. Clinicians will typically order a Thyroid Stimulating Hormone (TSH) and T4 blood tests as part of a routine panel. The pituitary gland detects low thyroid function, which is indicated with low T4 and more so with T3 Free. In response to low thyroid function, the pituitary gland produces TSH to stimulate the thyroid to produce more T4 hormone. The T4, then needs to be converted into the more active T3 Free to be used by the body. A high TSH and low T4 and/or T3 indicate common low thyroid function. Thyroid medication would then be prescribed, even when TSH and T4 readings are only slightly outside of the clinical ranges. A slightly elevated TSH may represent a normal consequence of aging or maybe even just a temporary problem. Patients with these test results rarely develop serious hypothyroidism.¹

Many people relate weight gain to low thyroid. But there are a number of signs and symptoms that low thyroid can cause:

- Depression
- Fatigue
- Chronic Fatigue Syndrome
- Fibromyalgia
- Anemia
- Infertility
- High Cholesterol
- Accelerated aging
- Muscle weakness and stiffness

These are just to name a few.

The prevalence of hypothyroid symptoms can be vague and non-specific. This is one reason why so many people are placed on medication. If you are taking medication for your thyroid, but aren't feeling better, then you may need to look a bit deeper.

Proper Testing

Thyroid function should never be based on just testing the TSH and T4 in the blood. Levels vary day to day, even hour to hour, and often stabilize on their own.¹ Other thyroid tests that should be included are T4 and T3. T4 converts to T3 outside the thyroid in most all tissues, with the liver and kidney doing the most conversion. In fact, 80% of the most active T3 is produced outside the thyroid. T3 is most responsible for increasing metabolic rate. The T3 Free test is unbound levels of the hormone and what is available for use by the body. There are however, many environmental factors, illnesses and drugs that can affect conversion of T4 to T3.

Auto Immune Disease

Hashimoto's disease is seen or causes low thyroid function and is usually autoimmune inflammatory that will show elevated levels of various antibodies such as TPO Ab, Tg Ab and Reverse T3 that can or should be tested.

Other factors to consider when the thyroid is suspected to not be working properly

Vitamin D Status

Studies show that many people who have low thyroid, or hypothyroidism, suffer from low Vitamin D and low Calcium and that the degree and the severity of their low thyroid was associated with the deficiency levels.³ The population of vitamin D deficient individuals is a lot higher than you might think. One study showed that almost 82% of the autoimmune thyroid disease patients had low Vitamin D.⁴ So, can low levels of vitamin D actually cause low thyroid? Researchers who presented their work at the American Thyroid Association annual meeting in October 2014 showed that among the Hashimoto's patients in their study, a lower level of Vitamin D was associated with a higher TSH level and larger thyroid. The researchers conclude that:

"low vitamin D is involved in the disease process that causes Hashimoto's thyroiditis, and that vitamin D and autoimmune thyroid disease are linked."⁵

Testing your 25-hydroxy vitamin D blood test is the best way to determine your vitamin D status and how much vitamin D you need to take. Adults can usually safely take 5000 iu/day. Infants and young children should have their vitamin D levels checked as well. Infants can safely take vitamin D daily at around 400 iu/day.

Iodine and L-tyrosine Deficiency

Did you know that Thyroid cells are the only cells in the body that can absorb iodine? These cells are what make T4 and T3. You don't want too much Iodine nor too little. This is why Iodine supplementation needs to be taken with precautionary measures and under the guidance of an experienced nutritionist that tests properly. Just small changes in iodine intake are sufficient to reset the thyroid system. The recommended daily allowance (RDA) of Iodine is 150-300 mcg. To give you an idea on how little this is, one teaspoon of iodized salt contains approximately 400 mcg iodine. Foods rich in Iodine include seaweed, kelp and chlorella are examples.

L-tyrosine works with Iodine to make T3 and T4. Although it is rare to be deficient in tyrosine, foods rich in this amino acid are meats, fish, eggs, nuts, and beans.

Selenium

Selenium has a very important role in your thyroid's function. Selenium helps antioxidants and enzymes within the thyroid to control damage done by free radicals created from making T4. Too many free radicals means too much inflammation. If you have a selenium deficiency then your thyroid's production of T4 is effected and therefore so is your energy and metabolism. There is no consensus on the dose of selenium required to optimize any person's thyroid function, however a safe amount to take would be 200 mcg daily.

Soy

Excess consumption of soy can affect thyroid function. If you have elevated thyroid antibodies or autoimmune thyroid disease that is not being treated, be aware that soy can be a trigger for

developing hypothyroidism.² A 2011 study published in the Journal of Clinical Endocrinology and Metabolism found that in people who have mild or subclinical hypothyroidism, "there is a 3-fold increased risk of developing hypothyroidism with dietary supplementation of 16 mg soy phytoestrogens."² If thyroid function is lowered by soy then the pituitary tries to stimulate more thyroid function hence, the elevated TSH.

Overconsumption of soy is probably more common than you think. Be sure to read all the labels of foods and supplements. It is recommended to avoid soy milk, soy nuts, soy protein isolate, soy in cereal and in candy. In the U.S., however, some people take in as much as 80 to 100 mg of soy isoflavones a day (compared to Asians consuming between 10 to 30 mg).²

Think you have thyroid dysfunction?

When the various amino acids, proteins, and hormones are out of sync there are a variety of diseases and symptoms that may appear. Altered thyroid function can produce symptoms that are pretty vague. Instead of chasing symptoms, proper testing is advised to avoid taking medication or even supplements that you may or may not need. It is important to do a comprehensive blood test and hair tissue mineral analysis to detect deficiencies or toxicities that may be affecting your health. This testing is also important to know exactly what vitamins or minerals your body needs to work efficiently.

Contact us today to get started and improve your body safely and naturally.

References

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2. Shomon, Mary. "Is Soy Safe for Thyroid Health?" *Verywell Health*, Verywellhealth, May 2018, www.verywellhealth.com/soy-and-the-thyroid-3231800.
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4. Botelho, I.M. et. al., "Hashimoto's Thyroiditis and Vitamin D Insufficiency: Study of Prevalence and Relationship with Thyroid Autoimmunity Markers," "Abstracts from the American Thyroid Association," *Thyroid*, Volume 24, Supplement 1, 2014, Poster 19, October 2014 [Online](#)