

DEBUNKING THE MYTHS OF HYPOTHYROIDISM

Hypothyroidism is characterized by an insufficient level of thyroid hormone, compared to what is required to meet bodily demand. Hypothyroidism is due to either inadequate thyroid hormone production (primary hypothyroidism) or inappropriate assimilation of the thyroid hormones being produced.

Primary hypothyroidism can have a variety of causes, including but not limited to iodine deficiency, postpartum thyroiditis, autoimmune thyroiditis and drug-induced hypothyroidism.¹ Autoimmune thyroid diseases, such as Hashimoto's thyroiditis, are the leading cause of hypothyroidism in the United States and other iodine-sufficient areas worldwide.

Regardless of the cause, hypothyroidism exhibits a variety of symptoms and is likely to require lifelong thyroid hormone supplementation. Therefore, appropriate thyroid replacement is crucial.²

Conventional Testing Is Not Enough

Unfortunately, hypothyroidism symptoms are often untreated or undertreated. This is because many doctors rely solely on the thyroid stimulating hormone (TSH) blood test, which is simply not enough.

COMMON SYMPTOMS OF HYPOTHYROIDISM



If you have symptoms of hypothyroidism, **measuring TSH alone often does not provide enough information about the functionality of your thyroid gland or how thyroid hormones are being utilized within your body to guide appropriate treatment.**

HOW TO ORDER

You may place refills:

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Physicians Preference Pharmacy standards are more stringent than those of the United States Pharmacopeia (USP). In addition to onsite weight testing, we send multiple samples per week to an outside laboratory for potency testing. Physicians Preference Pharmacy ranks first in Houston for the number of samples sent for potency testing and in the top 8% of pharmacies nationwide.

Physicians Preference Pharmacy is a Houston-based, PCAB-accredited compounding pharmacy serving physicians and patients since 2001. We are licensed to work with doctors and ship to patients in all 50 states.

A COMMON SCENARIO

A 45-year-old woman visits her doctor for an annual check-up with classic signs and symptoms of hypothyroidism: hair loss, cold intolerance, fatigue, difficulty losing weight, depression and brittle, ridged nails. Lab results are ordered and indicate that her TSH is within “normal” range. Her doctor says her thyroid is normal but prescribes Zoloft to help with the depression, recommends Rogaine for the hair loss and dismisses all other symptoms as “normal signs of aging.” At a six-month follow-up appointment, she has a fuller head of hair but still complains of all the same symptoms, and now she also has a diminished sex drive.

Here’s the problem.

If your TSH level falls within the “normal” range on a blood test, but your symptoms are still consistent with those of hypothyroidism, this frequently results in the prescribing of unnecessary medications to mask symptoms. In many cases, symptoms are dismissed altogether. Part of the problem is that patients are treated based on lab results, rather than their symptoms, while the root cause is never actually addressed.

How lab reference ranges are determined.

“Normal” lab reference ranges are determined by measuring a given lab test parameter (i.e., TSH) amongst the population within a certain geographical area and assessing the average spread of that test. When your lab result falls within this range, it is considered “normal.”

But what if I don’t feel normal?

Why are symptoms simply being masked or dismissed? It is important to recognize that a “normal” lab result does not prove health, nor does it warrant dismissal of symptoms. This is why many people with “normal” TSH levels continue experiencing symptoms of hypothyroidism when left untreated.

Untreated hypothyroidism poses a major threat to several body systems, including those which regulate energy, mood, menstruation, fertility, healing, body temperature, concentration and maintenance of a healthy skin barrier to fight off pathogens and infection.

binding globulin (TBG) problems are perceived. It may also be helpful when conventional test results are inconsistent with symptoms.

► **rT3:** Reverse T3, the biologically inactive form of T3, is produced as a natural consequence of thyroid hormone production. When excessive amounts of thyroid hormone are shunted towards rT3 production, little is left over to be converted into the active thyroid hormone. This can happen for several reasons, including stress (cortisol increases conversion of T4 into rT3), poor blood sugar management and insulin resistance, inflammation, crash dieting, nutritional deficiencies and chronic illness.

► **TPOAb:** The presence of TPO antibodies in the blood suggests that the cause of thyroid disease is an autoimmune disorder, such as Hashimoto’s disease, where the immune system makes antibodies that mistakenly attack normal tissue. TPOAb are estimated to be present in more than 90% of patients with chronic thyroiditis.⁴ This is more frequent in females and increases with age.

Once a comprehensive thyroid panel has been collected and reviewed, your doctor can prescribe a treatment regimen with the appropriate thyroid medication and follow up with you to monitor your response and resolution of symptoms.

Customized Compounded Thyroid Hormone Replacement

There are several types of thyroid hormone therapies available to treat the symptoms associated with hypothyroidism. At Physicians Preference Pharmacy, we specialize in compounded oral thyroid hormone replacement, offering customized doses for each individual, in both oral capsule and sublingual tablet dosage forms. Small differences in doses of thyroid hormone medications make a huge difference in their safety and efficacy, so choosing a customized dose and dosage is crucial for achieving optimal thyroid support and function.

Compounded thyroid hormone replacement

What Should Be Ordered on a Thyroid Panel

A comprehensive initial thyroid blood panel for patients exhibiting symptoms of hypothyroidism should include: TSH, T3 (tri-iodothyronine), T4 (thyroxine), FT3 (free T3), FT4 (free T4), rT3 (Reverse T3) and TPOAb (thyroid peroxidase antibodies).³

► **TSH:** TSH is released from the pituitary gland and acts on the thyroid gland to stimulate the production of thyroid hormones. Measuring TSH helps identify an underactive or overactive thyroid.

► **T3:** T3 is the active form of thyroid hormone and assists in regulating metabolism, body temperature and heart rate. Some T3 is produced directly by the thyroid gland, while the remaining results from the conversion of T4 to T3.

► **T4:** T4 is the primary hormone secreted into the bloodstream by the thyroid gland and plays an important role in digestion, weight control, muscle function and more.

► **FT3:** FT3 levels help evaluate how much of the active thyroid hormone produced is readily available for the body to use. Additionally, it helps in assessing abnormal binding protein disorders.

► **FT4:** FT4 may be indicated when thyroid



options available at Physicians Preference Pharmacy:

- Desiccated porcine thyroid capsules
- T3/T4 slow-release capsules
- T3 slow-release capsules
- T4 slow-release capsules
- T3/T4 sublingual tablets
- T3 sublingual tablets
- T4 sublingual tablets

Because of our commitment to your complete health and wellness, all our compounded preparations are free of lactose, parabens, artificial sweeteners and any unnecessary dyes, binders and fillers which may negatively impact treatment.

Thyroid Supplementation From Physicians Preference Pharmacy:

Physicians Preference Pharmacy compounds thyroid medications using two different types of active ingredients: either desiccated porcine thyroid powder or bio-identical T3 and T4 powder. Desiccated porcine thyroid powder is extracted

from the thyroid gland of pigs whereas bio-identical T3 and T4 are chemically identical to the hormones produced by the human body and are typically sourced from wild yams.

- Desiccated Porcine Thyroid capsules are good for anyone requiring supplementation of both T3 and T4 who respond better to a higher ratio of T3 to T4, or for those who have previously shown a sluggish response to T3/T4.
- Bio-identical T3, T4 and T3/T4 are sufficient for most people requiring supplementation and are appropriate for vegans, those who prefer a non-animal-derived product and individuals who request vegetable capsules.

Most individuals respond well to oral capsules. Others, specifically those with poor gut health or liver function, should consider sublingual products for improved absorption and drug efficacy. Both the gut (microbiome) and the liver are involved in the conversion of T4 to T3, which is required to maintain optimal thyroid levels. These bodily systems are frequently overlooked, which

is why prescribing T4-only products, such as Synthroid®, often produces little benefit.

Appropriate Treatment Is Crucial

As you can see, diagnosing and treating hypothyroidism is much more complex than a simple TSH test and a Synthroid® prescription. A comprehensive thyroid panel is recommended, along with evaluation of gut and liver function and lifestyle choices such as diet, vitamin and mineral intake and bodily stressors.

Appropriate treatment of hypothyroidism can make a tremendous difference in your energy, mood, weight and overall health and well-being. Talk to your doctor about testing and treatment. For more information on compounded thyroid hormone replacement products, **please contact our pharmacists at Physicians Preference Pharmacy at 281-828-9088.**

How do you know if you have HYPOTHYROIDISM?

Get proper diagnosis from a doctor:



Listen to patient's symptoms
Evaluate clinical history
Evaluate family history
Low body temperature (below 98.6 ° F)
Test for Autoimmune Thyroiditis (Hashimoto's)

TSH blood test fails many patients.



Have you been told
"Your blood work is normal"?

The TSH "normal range" is so wide that majority of people fall within the range and don't get diagnosed properly.

REFERENCES

¹ Gaitonde DY, et al. Hypothyroidism: An Update. *Am Fam Physician*. 2012 Aug 1;86(3):244-251. <https://www.aafp.org/afp/2012/0801/p244.html>

² Patil N, et al. Hypothyroidism. [Updated 2021 Aug 11]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK519536/>

³ Thyroid #4: Comprehensive Blood Test Panel. *Walk-In-Lab*. <https://www.walkinlab.com/products/view/thyroid-4-comprehensive-blood-test-panel>

⁴ Estimated prevalence of antithyroid antibodies (in percent). UpToDate. 2021. https://www.uptodate.com/contents/image?imageKey=ENDO%2F76522&topicKey=ENDO%2F7854&source=see_link