

Thyroid Protocols

Please read this document all the way through, including the information on Hyperthyroidism and Graves' disease. The thyroid can go from hyper to hypo and sometimes these conditions have similar symptoms. This information will help you understand the thyroid more thoroughly, so you can customize your personal protocol. Use the following pages as a guide. It is not intended to be a substitute for consulting with your healthcare provider.

Hypothyroidism and Hashimoto's Disease

What exactly are these two conditions?

Regular hypothyroidism is most commonly found in underdeveloped countries that do not have adequate iodine in their food supply. Ninety percent of hypothyroidism in the US and Europe is Hashimoto's disease, where the body becomes confused and begins attacking healthy thyroid tissue.

"Hashimoto's is more than just hypothyroidism. Most patients with Hashimoto's will present with acid reflux, nutrient deficiencies, anemia, intestinal permeability, food sensitivities, gum disorders and hypoglycemia in addition to the 'typical' hypothyroid symptoms such as weight gain, cold intolerance, hair loss, fatigue, and constipation."

This quote above is from my friend Izabella Wentz, PharmD and author of *Hashimoto's Thyroiditis: Lifestyle Interventions for Finding and Treating the Root Cause.*

What is Hashimoto's Disease?

Hashimoto's Thyroiditis is an autoimmune condition that results in the destruction of the thyroid gland. This damage eventually leads to inadequate thyroid hormone production, or hypothyroidism. Hashimoto's peaks during times of significant hormonal change such as puberty, pregnancy, menopause, or severely stressful life events.

What causes Hashimoto's?

- Genetics (pregnancy or chronic stress can "turn it on")
- Bacterial, viral, or protozoal infections



- Heavy metal toxicity and other environmental toxins (mold/fungus)
- Hormonal imbalances
- Certain medications

Hashimoto's can also be associated with other autoimmune diseases like Type 1 Diabetes, MS, Rheumatoid Arthritis, Celiac disease, Lupus, and Addison's disease.

How does Hashimoto's develop?

When our immune system is unable to distinguish the difference between a foreign invader and our own body, it begins to attack itself. The real problem with Hashimoto's is with the immune system and not the thyroid.

Here is the theory:

Thyroid cells are damaged by triggers such as too much iodine, fluoride, metals, chronic stress, gluten consumption, bacteria, protozoa, viral infections, and more.

Dying thyroid cells send out an SOS stress signal to the immune cells to come and save the thyroid from the attackers.

The immune cells get confused and accidentally attack the thyroid instead of the invaders (bad bacteria, viruses, etc.) because they got the wrong message.

The poor thyroid has now run out of resources to regenerate thyroid cells, and the cells become confused.

The thyroid gives up and is no longer able to produce enough hormones.

This is a perfect storm that was not caused by any singular event, but a series of events that developed over time.

How do you test for Hashimoto's Thyroiditis?

Self-Test for enlarged thyroid

Dr. Izabella's at-home test recommends checking your neck. The only tools you'll need are a handheld mirror and a glass of water.

Directions:

• Hold the mirror in your hand and look at the area of the neck between your Adam's apple and your collarbone. Be sure not to confuse the thyroid with the Adam's apple so that this check is accurate.



- While still looking in the mirror, tip your head back, and take a drink from the glass of water.
- As you swallow, check at your neck for bulges or protrusions. If you see any, this may indicate an enlarged thyroid gland or nodule. This is a good indication that you should have a full thyroid blood panel done, for further inspection.

Note: if your temperature is chronically low (below 98.6 degrees) and decreases after eating, that is also a sign of thyroid trouble.

Lab Tests

Thyroid Antibodies

If you have Hashimoto's Thyroiditis, in addition to high TSH (same goes for hypothyroidism) and low T3 and T4, you will have elevated antibodies.

Thyroid Peroxidase (TPO): More than 90% of people with Hashimoto's have **thyroid peroxidase antibodies** (TPO-Ab) and 80% have thyroglobulin antibodies. In addition to checking the regular TSH, T3, and T4, make certain to get these two tested as well. If your doctor won't test for these, it's time to find another doctor.

Stress can be the root cause of hormonal imbalance. It is important to make sure it is not contributing to your Hashimoto's. It is a good idea to test for the hormone, ReverseT3. This will tell you if your adrenal glands or stress are contributing to your thyroid issue and you can make the appropriate changes in your life to promote healing.

Note: If your labs come back with elevated antibodies, you MUST follow a 100% gluten-free diet to lower your numbers. Not even a little bit is allowed.

Your Main Thyroid Hormones

Triiodothyronine (T3): The main biologically active hormone that determines energy level, metabolism (weight), regulates digestion (chronically constipated people, please check this), body temperature, and mental clarity.

Thyroxine (T4): This prohormone is 300% LESS active than T3. Because T4 converts to the active form of T3, it is important to make sure you are converting your hormones properly. Candida overgrowth in the GI tract inhibits this conversion, so thank goodness you are addressing this condition.



Reverse T3 (rT3): Regular T3 is our metabolic accelerator. Reverse T3 (rT3) is the metabolic break. If you are under an inordinate amount of stress and the adrenals are secreting too much cortisol, your body will produce rT3, which binds to thyroid receptors and blocks them or slows them down instead of activating them. Your body does this to keep your thyroid from working too hard during stressful situations.

Therefore, it is vitally important to control stress by separating out what is real stress and what is perceived stress. In the wise words of Mark Twain, "I've had a lot of worries in my life, most of which never happened."

This is also why we advocate for "primary food", slowing down, going inward, releasing stored toxic emotions that no longer serve you, and truly nourishing yourself in an honest, authentic way. **You are worth it. Do not run yourself into the ground!**

TSH

According to the National Academy of Clinical Biochemists, 95% of individuals without thyroid disease have TSH concentrations below 2.5. The current reference range defined by the American College of Clinical Endocrinology is between 0.3-3.0.

Traditional Western lab values are as lax as 0.2-5.0. This is dangerous because many physicians will only look for values outside of this "normal range" and then thyroid issues can go undiagnosed. **This is an excellent reason to always ask for a copy of your lab work and dive into it yourself!**

Functional medicine practitioners have shrunk this window down tremendously, and they believe a healthy individual's TSH should be between 1 and 2.

The thyroid hormones are often referred to as the "Goldilocks" hormones because they operate in a very narrow range. When they are out of that range, even a little bit, the resulting symptoms can wreak havoc on your life.

If you want to know about medications, please read Izabella's book, *Hashimoto's Thyroiditis*, starting on page 36.



Supplements

The supplements below are only suggestions. Please do not take everything on the list. Evaluate your health and add 4 or 5 of these to your current protocol.

Make sure you read the information about Hyperthyroidism and Graves' as well before making your final supplement decisions.

L-Tyrosine (for Hypothyroidism only): Take 1 capsule at breakfast and 1 at lunch. Tyrosine is required for the production of thyroid hormones, especially T3. In Hashimoto's it can drive an already tired thyroid to work even harder, so be careful and only take this supplement AFTER your lab work returns without antibodies. Retest T3 after 6-8 weeks of taking this supplement.

MethylAssist: Take 1 capsule daily, to provide methylated B vitamins for individuals who have an MTHFR mutation (half the population) and are not able to utilize regular B vitamins or convert folic acid into folate

PlantForce Liquid Iron: Take 2 teaspoons daily, if iron deficiency is indicated. This supplement contains honey, so wait until after the cleanse to start taking it.

<u>Ultra C-400 (non-corn based)</u>: Take 3-4 daily in divided doses, to boost adrenal function and take pressure off the thyroid

Selenium (for Hashimoto's): Take 1 capsule daily, if antibodies are below 300 or 2 capsules daily if they are above 300. Maintain this protocol for 8-16 weeks. This trace mineral helps reduce antibodies. Once you begin to heal and make adequate T3 on your own, selenium will contribute to maintaining that production.

Probiotic Complete DF: Take 1 capsule before bed or first thing in the morning, for immune system support

Digestive Enzymes Ultra: Take 1-2 capsules per meal, to assist with digestion and absorption of nutrients

Zinc: Take 1-2 capsules daily, to help convert T3 to T4 (zinc deficiency is common with Hashimoto's.) Individuals recovering from Candida/fungus usually benefit from taking zinc for at least 4 weeks

High Potency Fish Oil: Take 2 capsules daily – helpful for all types of thyroid problems, especially Grave's and Hashimoto's

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And just the right amount of iodine...

We need iodine for the thyroid to function and become hypothyroid without it, but too much will cause a decrease in thyroid function when the body attempts to protect itself from hyperthyroidism.

Maximum daily iodine is 150 mcg (220 mcg if you are pregnant), but **do not take** ANY if you have Hashimoto's until your antibodies return to normal.

The body only needs 52 mcg of iodine daily to produce the thyroid hormones it needs. You are probably already getting that amount with the foods you are eating in this program.

Iodine Containing Foods (not all from this list are appropriate while on the program):

- Apples
- Bananas
- Cod
- Corn
- Crabs
- Eggs
- Green peas
- Haddock
- Oysters
- Mussels

- Raw cheese
- Haddock
- Prunes
- Raw cheese
- Raw milk
- Sardines
- Seaweed
- Shrimp
- Tuna
- Yogurt

Prunes

You **DO NOT** have to eliminate these foods if you have Hashimoto's, but you may want to restrict them to 1 serving of these foods daily. If you have hypothyroidism, you can increase these foods in your diet.

The recommended dose for hypothyroidism is 1000-3000 ug/day. This is based on lab results or low body temperature (see your Thyroid Temperature handout). If you don't run lab work, err on the side of caution with 1000ug or 1 serving of sea vegetables daily for 4 weeks and then retest your temperature and pulse. If they are still low, you can increase the amount of iodine you consume.

The best way to figure out your relationship to iodine and how much you should consume is to test it. Purchase liquid iodine from your local drug store. Place a drop on the upper part of your arm and see if the body absorbs it. If the iodine stain is gone within 45 minutes, that indicates your body needs more iodine.



Hyperthyroidism and Graves' Disease

What is Hyperthyroidism?

Hyperthyroidism is defined as an overactive thyroid gland where the gland is producing an excess of thyroid hormones that circulate in the bloodstream.

Symptoms of Hyperthyroidism or Graves' Disease:

- Eye sensitivity
- Excessive sweating
- Hair thinning out
- Heart palpitations
- High blood pressure
- Insomnia, always waking up between 1-4am and/or having trouble going to sleep
- Irregular or very light menstruation
- Persistent anxiety, nervousness, inability to concentrate
- Thinning of the outside of the eyebrows (mostly in Graves' Disease)
- Unexplained weight loss (except Graves', an autoimmune condition of overactive thyroid that can also come with weight gain)

Lab Results That May Indicate Hyperthyroidism or Grave's Disease:

If you have symptoms of Hyperthyroidism or Graves' Disease and your lab work shows the following:

- Low TSH
- High T3
- High T4

Consider having additional testing to rule out Graves' Disease:

- Thyroid stimulating immunoglobulin (TSI)
- Thyroid Peroxidase Antibodies (TPO)
- TSH receptor antibodies

The results will all be negative if you do not have Graves' disease. Graves' disease can also be diagnosed with a standard thyroid scan (ultrasound).

Triggers for Grave's disease include:

• Autoimmunity in the family



- Genetics it can be hereditary (5x more widespread in women than men)
- Medications
- Poor food choices that lower immunity
- Prolonged, chronic stress
- Repeated radiation to the neck
- Smoking
- Viruses and other pathogens

What causes Grave's Disease?

Graves' Disease is an autoimmune disease caused by antibodies in the blood that attack the thyroid gland, resulting in lumps or nodules. When these nodules or lumps grow, they contribute to an increase in thyroid hormone levels, causing a number of unwanted symptoms. This type of hyperthyroidism tends to run in families, and it occurs more often in young women. Genetic mutations like MTHFR (a lack of ability to methylate efficiently), viral infections, a lack of iodine, and radiation can all be contributing factors.

Supplements that may help with the reduction of nodules:

- Cod Liver Oil
- Chlorella
- Methyl Assist
- Liposomal Glutathione
- Pau d'Arco Tea

What if you are already on thyroid meds?

Excessive intake of thyroid medication can cause hypothyroidism to become hyperthyroidism.

If you take thyroid medication, it is important to get lab testing done every 8 weeks and adjust your dose accordingly.

Many people with high cholesterol are put on heart medications that are high in iodine, so it is worthwhile to test regularly. Elevated thyroid levels can end up making the situation worse.

What if you have had your thyroid removed?

It's likely you will need some medication for the long haul, but the dose can usually be significantly decreased as you improve the rest of your health.



The amount of supplemental T3 and T4 depends on how much of your thyroid you had removed, so it should be compounded specifically for you versus taking a generic dose.

An integrative MD can help you decide the best course of treatment. Armour or natural glandulars are not usually the best choices, because they contain the complete hormone and will raise ALL thyroid levels.

Protocols for Hyperthyroidism and Grave's Disease

Diet

- Avoid polyunsaturated fats (PUFAs): grapeseed, safflower, sunflower, canola, soybean, and cottonseed oils.
- Consume grass-fed beef 2-3x/week or supplement with Floradix or another non-binding liquid iron supplement, if iron levels are low.
- Consume high Vitamin C foods like red bell peppers, papaya, kiwi and Camu Camu.
- Consume omega-3 fatty acids by including wild salmon, anchovies, and herring in your diet
- Consume moderate amounts of raw broccoli and cruciferous vegetables. These foods contain goitrogens that can help to slightly decrease the amount of thyroid hormone that your thyroid produces.
- Drink a small cup of warm water with 2-3 teaspoons of coconut oil, about 45 minutes before bed, for a better night's sleep.
- Limit or eliminate alcohol, tobacco, and caffeine as much as possible
- For Grave's Disease, include bone broth with collagen and coconut oil (or MCT oil mixture) once a day, preferably at night.
- Good quality, safe, raw milk provides the exact ratio of carbs, fats, and protein that the thyroid needs to balance hormone production. If you can find a good source, consume up to 12 ounces daily.
- If you drink bone broth in the morning, then make a higher fat snack before bed to help balance blood sugar. Try 1/2 banana rolled in pink salt with a handful of raw cashews to boost serotonin production.
- If you have Grave's, consume fewer PUFAs in your diet. This means minimizing your intake of nuts and seeds. Avocado and olive oil should be the only unsaturated fat in your diet.



- Include organic berries, turmeric, and broccoli sprouts in your diet. These are indirect antioxidants that support cellular cleanup and help to boost the immune system.
- Remove gluten, soy, peanuts, and refined sugar/flour completely from your diet.
- With Graves' (or Hashimoto's), consider implementing the autoimmune protocol (AIP) which eliminates nightshade vegetables such as white potatoes, tomatoes, eggplants, sweet and hot peppers, cayenne, red pepper, and tomatillos. Remove all NSAIDS (Advil, Aleve), emulsifiers, thickeners and artificial sweeteners (including powdered stevia, dark liquid stevia is OK).

Lifestyle

- Acupuncture assists greatly with correcting hormonal imbalances and inciting the body's natural healing process.
- Exercise appropriately 30 minutes to an hour, 5 days a week. Cardio is great for hyperthyroidism, as is walking and yoga.
- Homeopathy an experienced homeopath can help you determine the most appropriate treatment for you.
- Massage ideal for removing stress and anxiety from the body.

Supplements

Please evaluate your needs and choose accordingly. It isn't necessary to add all of these supplements to your protocol.

MethylAssist: Take 1 capsule daily, to provide methylated B vitamins for individuals who have an MTHFR mutation (half the population) and are not able to utilize regular B vitamins or convert folic acid into folate.

Alpha Lipoic Acid: Take 100 mg 3 times a day – essential antioxidant support

L-Carnitine: Take 1-2 capsules between meals for 4-6 weeks for decreasing thyroid activity (essential for both Graves' and Hyperthyroidism).

Probiotic Complete DF: Take 1 capsule daily, before bed or first thing in the morning, for immune system support.

Pau d'Arco Tea: Take 1 cup, twice daily, away from probiotics – to help fight viruses and bacterial infections.

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<u>GI Support and Soothe</u>: Take 1 capsule with each meal for gut lining repair.

High Potency Fish Oil Take 2 capsules daily.

Trace Minerals: Take 1-2 capsules with meals, to promote cellular function throughout the body

<u>Ultra C-400 (non-corn based)</u>: Take 3-4 daily in divided doses, to boost adrenal function and take pressure off the thyroid.

Digestive Enzymes Ultra: Take 1-2 capsules per meal, to assist with digestion and absorption of nutrients.

PS 100 (phosphatidylserine): Take 1-2 capsules in the evening, for restful sleep, emotional well-being, and cognitive functioning (it binds to high cortisol levels and pulls them down).

L-Theanine: Take 1-6 capsules daily for anxiety - start with one and increase the dose until anxiety lessens.