



# GAPS MASTERCLASS

## MODULE 5

### GAPS & Thyroid Health

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Nothing in this guide is intended to replace common sense, legal or other medical advice—it is meant to inform the reader. Apply it to your own set of circumstances with care.

Any health recommendations are based on my experience as a GAPS Practitioner and of those I trust. Any recommendations are from sources that I would use for my own family or clients but I make no guarantees about the service or rates you will receive from these providers.

I think you will receive great value from this guide. Please email me at [melanie@honestbody.com](mailto:melanie@honestbody.com) with any errors or incorrect links so that I can update the materials.



*Welcome to:*

## MASTERCLASS MODULE 5

In this workbook, we will be discussing:

1. Thyroid basics
2. Gut health & the thyroid
3. GAPS Thyroid Troubleshooting
4. Why you want Functional Testing
5. Helpful strategies

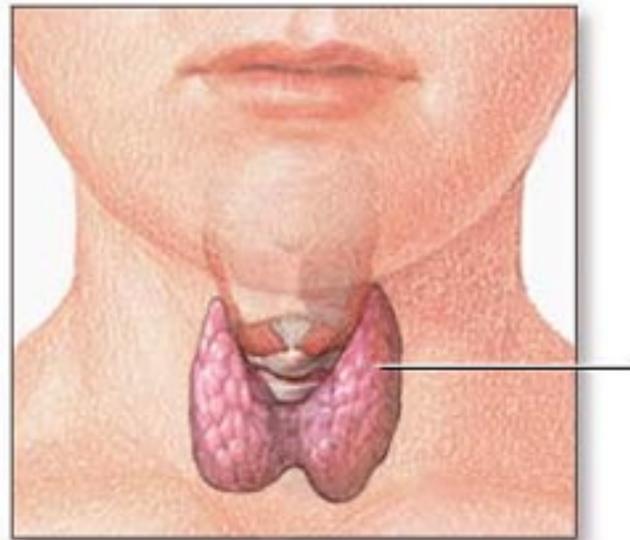
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# THYROID BASICS

In this section, we'll "place" the thyroid on the map of our body.

## What (and Where) Is the Thyroid?

You can think of the thyroid gland as a butterfly-shaped gland (a pretty impressive butterfly) that sits in the front of your neck and wraps around your windpipe.



Our glands (more specifically, our endocrine glands) are responsible for secreting our body's hormones...the tiny hormone messengers which are about the size of a grain of salt. Note\*\* *Every cell in the body has receptors for thyroid hormone.*

Before we discuss the thyroid, we need to first talk about its "higher-ups," the endocrine traffic control. Thyroid management begins first in the brain, which we'll consider the traffic control tower. We'll discuss the importance of the brain a little further on. In the brain are these 3 traffic controls—the **pineal gland**, the **hypothalamus gland**, and the **pituitary gland**.

The **pineal gland** handles our sleep/wake cycles, circadian rhythms, and has some say in the management of our reproductive hormone secretion.

In relation to the **thyroid gland**, the **hypothalamus** and the **pituitary gland** have the most direct influence. They work together in what is called **negative feedback loops**.

## Negative Feedback Loops

Negative feedback loops are important to hormone secretion and regulation. Here is a how the negative feedback loop works in the hypothalamus-pituitary-thyroid axis:

The hypothalamus sends its messenger (**TRH**, thyroid releasing hormone) to the pituitary.

**HYPOTHALAMUS** → **PITUITARY**

The pituitary in turn sends its messenger (**TSH**, thyroid stimulating hormone) to the thyroid.

**PITUITARY** → **THYROID**

The thyroid then builds and secretes its hormones (**T4** and **T3**, thyroxine and triiodothyronine) which then affect metabolism throughout the entire body.

**THYROID** → **ENTIRE BODY**

When there is enough thyroid hormone in the blood, the hypothalamus is inhibited from secreting more of the thyroid releasing hormone.

## What Does the Thyroid Do?

To quote functional medicine practitioner, Chris Kresser:

*The thyroid is “responsible for the most basic aspects of body function, impacting all major systems of the body. Thyroid hormone directly acts on the brain, the G.I. tract, the cardiovascular system, bone metabolism, red blood cell metabolism, gall bladder and liver function, steroid hormone production, glucose metabolism, lipid and cholesterol metabolism, protein metabolism and body temperature regulation. For starters. You can think of the thyroid as the central gear in a sophisticated engine. If that gear breaks, the entire engine goes down with it.”*

## THE GUT PERSPECTIVE

This is the part where the gut-thyroid connection comes in. Do you remember the part about our thyroid being managed by the brain? If our gut health is compromised...so, too, will our brain function be compromised.

## How Gut Health Affects Thyroid Health

If our digestive system is leaky and inflamed, our brain barrier will be leaky and inflamed as well, thus impairing the function of our hormonal messaging in the “control tower” of the brain. If a fire broke out in an airport control tower, the air traffic controllers would be hard pressed to attend to the air traffic, while at the same time trying not to get scorched, right?

When the gut is leaky and inflamed, and the bacterial population is compromised, then our immune system (largely housed in the digestive system) is overwhelmed and confused—mistaking and tagging our own tissues for destruction, which then receive the “friendly fire” of the immune system. This can lead to Hashimoto’s autoimmune thyroiditis,

in which the tissue under fire is the thyroid gland. It also leads to **functional hypothyroidism**. “Functional hypothyroidism has been defined as a state where blood levels of thyroid hormone fall within normal range, but where temperature tests and other indicators show mild thyroid hormone deficiency (Standard in Natural Solutions). Even mild thyroid hormone deficiency can have far-reaching effects [source].” **Studies also show that 90% of people with hypothyroidism are producing antibodies to their thyroid tissues, meaning that it is largely an autoimmune condition.**

Also, inflammation can halt the conversion of T4 into T3 (the useful form of thyroid hormone). Do you remember from Module 1 how inflammation can shut down the cellular receptors? There are cellular receptors on every cell in the body for thyroid hormone. So the thyroid could be producing plenty of thyroid hormone, but the conversion and use of the hormone is not working right.

## Dr. NCM's FAQ on Thyroid Issues

**Question:** In addition to the GAPS diet to support a weak thyroid (hypothyroid), is careful supplementation with Lugol solution acceptable, or would this be discouraged?

**Answer:** Many people are deficient in iodine, which is essential for thyroid function. Every one of us has a unique individual need for iodine, so the standard daily recommended allowances are usually not helpful.

To test if your body needs iodine (and to supplement it) paint a patch the size of your hand on your skin using Lugol solution or an iodine tincture. The solution will color that patch of your skin brown. If in 24 hours the brown color has disappeared (which means that iodine got absorbed through the skin), then your body is deficient in iodine.

If you are on the GAPS introduction diet, you can supplement iodine by taking the Lugol solution or by painting the brown patch on your skin every day (choose a different patch of the skin every time).

If you are on the Full GAPS diet and your digestion is OK, introduce seaweed: there are many supplements of kelp on the market or other high-iodine varieties of seaweed (such as knotten wrack seaweed or askophyllum nodosum).

Eating seaweed (or taking it as a **supplement**) is the best way to supply your body with iodine long-term.

To work out what dose of seaweed you need, keep using the skin test while gradually increasing your daily dose of seaweed.

**Question:** What do you suggest for those with thyroid issues? Should medication be used until the body begins healing?

**Answer:** In GAPS people, the thyroid function can be affected in more than one way.

The thyroid gland may not function well or produce appropriate amounts of hormones. When those hormones are released into the blood stream, in order for them to accomplish their jobs they need to attach to receptors on tissues and organs all over the body.

In GAPS people, there are many toxins coming from the gut which occupy those receptors and do not allow the thyroid hormones to attach themselves. As a result, thyroid hormones cannot fulfill their jobs—this is called a “functional deficiency.”

So, the person may have normal amounts of thyroid hormones in the blood, but still be hypothyroid.

Autoimmunity is usually present in GAPS people and some of the antibodies may attack the thyroid gland. In most cases, this causes low thyroid function, but in some cases it may cause hyperthyroidism.

Working on the GAPS Nutritional Protocol will re-balance immunity and remove most of toxins from the body. So, the thyroid function will start improving.

In the meantime, if you have started taking a thyroid medication, continue with it during the program.

In about a year or so on the GAPS diet, you may find that you can start reducing your thyroid medication and eventually stop taking it. Iodine paint and seaweed supplementation will help you to restore your thyroid function quicker.

**Question:** I want to use GAPS to help heal Hashimoto's thyroiditis. Some sources (i.e. Kharrazian) recommend not eating dairy or eggs for people with this issue. I am wondering what your experience is with this?

**Answer:** Most GAPS people have an autoimmune component to their illness, because autoimmunity is born in the gut. Hashimoto's thyroiditis is an autoimmune disease.

By healing the gut and restoring normal gut flora, you will re-balance your immune system and remove autoimmunity. The gut wall in Hashimoto's patients is like a sieve—it is damaged and leaky, so the foods don't get the chance to be digested properly before they absorb.

If the diet is not focusing on healing and sealing the gut lining, then you finish up in a nightmare situation of avoiding all sorts of foods which do not digest properly before being absorbed through the damaged gut lining. These partially digested foods trigger the immunity and start autoimmune problems.

So, instead of avoiding foods, focus on healing and sealing your gut, and soon you will be able to eat all sorts of foods without them causing trouble. Please read more about this in the [Food Allergy](#) article at [www.GAPSdiet.com](http://www.GAPSdiet.com).

To heal your gut quickly and optimally, follow the Introduction Diet. If eggs or dairy are clearly causing symptoms in you, then avoid them for a while and try to introduce them later.

If you cannot link eggs or dairy to any particular symptoms now, then don't remove them. To make sure that there is no real allergy to these foods, use the Sensitivity Test.

**Question:** For those of us on thyroid medication, do we continue with our medications while starting the diet?

**Answer:** Yes, while starting the diet you may want to continue with your medication, particularly if you took it for a while and it is helping. When you are over the die-off and detoxification and are starting to feel much better, then you may want to gradually reduce your medication and see how you feel.

Most long-term medications get built into your body's physiology, so you have to withdraw the drug slowly and gradually, so your body has time to re-adjust to life without it. It is a very individual process and cannot be rigidly prescribed by anyone; only your body knows how fast

to proceed. So, you need to listen to your body and move ahead by trial-and-error: for every two steps forward there may be a step back.

**Question:** There is a lot of talk online about low-carb diets affecting thyroid function and fertility. I would appreciate your comments on this, as some people are concerned about doing the GAPS diet for these reasons.

**Answer:** GAPS Diet does not have to be low-carb; it is up to you what proportions of meat to vegetables to consume. People with thyroid problems recover well on the GAPS program.

Restoring fertility in women and men requires less carbohydrates and more animal products, particularly animal fats.

## GAPS TROUBLESHOOTING

By now, you should have an inkling that gut health is pretty important to the thyroid gland, and that GAPS should ultimately be pretty helpful for thyroid and endocrine issues, if done properly, right?

But what if instead of feeling better, you're hitting a wall?

### Experimentation and Patience

It might be that your carbohydrate intake needs adjustment. The consensus among GAPS practitioners seems to be that the amount of carbs is bio-individual (of course!).

**Some do well with an abundance of of GAPS legal carbs** (should be primarily vegetables, but this also can include fruit, GAPS baked goods, honey, and GAPS legal legumes, nuts, etc).

Some do well with a very low carb and high fat diet.

**You're going to have to check in with your body on this one.** If you are having trouble with a lower carb approach, try a week of high amounts of vegetables, like 8–11 cups of veggies a day, or vice versa.

## THYROID SELF-ASSESSMENT

Here are some simple self-assessment questions.

### Thyroid Self-Assessment Questions

In this section, we'll talk about some of the indicators for determining if you have thyroid dysfunction. They are questions to ask yourself, and they will give you an indication of whether you should be looking into better thyroid management or not.

Rate these questions on a 0, 1, 2, or 3 scale.

0 = Symptom does not occur

1 = Yes, minor or mild symptom, rarely occurs (monthly)

2 = Moderate symptom, occurs occasionally (weekly)

3 = Severe symptom, occurs frequently (daily)

### Overactive Thyroid

#### 1. Are you sensitive or allergic to iodine?

This can actually be confused with too much iodine in the body. Too much iodine buildup is called **iodism**. It *is* possible to be allergic to iodine and these symptoms are like those of an overactive thyroid. You can become sensitive to iodine if there is too much thyroid hormone circulating in the body.

## **2. Do you have difficulty gaining weight, even if eating a lot?**

This can signify an overactive thyroid. The thyroid gland and its hormones accelerates the metabolism. Possible issues include a diffuse goiter, Grave's disease (increased levels of thyroid stimulating immunoglobulins), and a thyroid tumor.

\*\*Note: Weight-gain issues not related to thyroid can be caused by parasites or extreme gut dysbiosis, in which the organisms are stealing the food's nutrients.

## **3. Are you nervous or emotional? Do you find it difficult to work under pressure? Do you have inward trembling?**

These symptoms also suggest an overactive thyroid, with the same possible issues of #2.

## **4. Do you "flush" or have hot flashes easily?**

An overactive thyroid may be the cause. (Other possible causes are liver congestion, menopause, and Acne Rosacea. Look into low stomach acid for Acne Rosacea.)

## **5. Do you have a fast pulse at rest?**

There are other possible causes of a fast pulse, like allergies from gut dysbiosis, but one cause is an overactive thyroid gland.

## **6. Do you have an intolerance to heat and high temperatures?**

This is also suggestive of an overactive thyroid.

## **Low Thyroid Function**

### **1. Do you have difficulty losing weight?**

This is one of the many signs of a low thyroid function. Other factors to consider would be liver congestion, poor digestion, and blood sugar dysregulation.

**2. Are you mentally sluggish or do you have reduced initiative?  
Are you easily tired or sleepy during the day?**

The thyroid produces hormones which accelerate the metabolism. Another possibility would be low adrenal function.

**3. Are you sensitive to the cold? Do you have poor circulation (cold extremities)?**

These are signs of low thyroid function. Other possible causes are Raynaud's disease, and atherosclerosis in the small vessels.

**4. Do you have chronic constipation? Are your stools hard, dry, small, or difficult to pass? Do you frequently go a day without a bowel movement?**

Inadequate hydration and other digestive factors are a common cause of constipation, but a low thyroid function can be a cause.

**5. Have you had excessive hair loss, or is your hair really coarse?**

This is a classic sign of low thyroid function. Other possible causes are essential fatty acid deficiencies or poor protein usage.

**6. Do you have morning headaches that wear off during the day?**

This can be a sign of low thyroid function and/or low blood sugar.

**7. Have you lost the last 1/3 of your eyebrows (closest to the side of the head)?**

Hair loss in the eyebrows is a sign of low thyroid function.

**8. Do you experience seasonal sadness?**

This is both a sign of low thyroid function, as well as low adrenal function. It can be due to changes in the diurnal rhythms, which affect the adrenal hormones. It is also connected to the pituitary gland, which is sensitive to daylight...and would affect the pituitary hormones that stimulate the thyroid (TSH) and the adrenals (ACTH)

# FUNCTIONAL TESTING

The most important issue with thyroid testing is that the standard care lab ranges are based on groups of people that included those with existing hypothyroidism. Their TSH levels were tested and then a bell curve analysis was done, with the people in the middle of the bell curve then being considered the standard for “normal.”

To quote Chris Kresser,

*“The standard of care for a Hashimoto’s patient is to simply wait until the immune system has destroyed enough thyroid tissue to classify them as hypothyroid, and then give them thyroid hormone replacement. If they start to exhibit other symptoms commonly associated with their condition, like depression or insulin resistance, they’ll get additional drugs for those problems.*

Doesn’t make a lot of sense does it?

Functional practitioners have a completely different range of lab numbers, basing their lab ranges on optimal numbers for good organ and system function, not on numbers that signify disease states.

## Don’t Just Test TSH!

The standard care lab test ordered for suspected thyroid issues is the TSH test, measuring the level of thyroid stimulating hormone in the blood. However, this is just a tiny piece of the thyroid puzzle.

*What if* there is enough TSH in the blood but your cells are not receiving it because of inflammation?

*What if* you are deficient in the key nutrients that help the thyroid to produce its hormones?

*What if* you are producing enough T4, but you are undergoing a lot of stress and your T4 is predominantly converting to RT3 (reverse T3) rather than T3?

*What if* your immune system has tagged your thyroid tissue for destruction?

All of these “what ifs” would not be determined by simply checking TSH. Below is a list of tests proposed by many good functional practitioners to get to the root of your thyroid issues.

## The Full Thyroid Testing Panel

These are tests recommended by functional thyroid health specialist, Dr. Datis Kharrazian, who wrote an excellent book on thyroid disorders.

Here are the tests that you want to be asking for, or better yet, what your functional practitioner will be asking for on your behalf.

See **Thyroid QuickSheet** for descriptions and functional lab numbers.

- TSH - Thyroid Stimulating Hormone
- TT4 - Total Thyroxine
- FTI - Free Thyroxine Index
- FT4 - Free Thyroxine
- FT3 - Free Triiodothyronine
- rT3 - Reverse T3
- TBG - Thyroid Binding Globulin
- Thyroid Antibodies - (TPO Ab, TGB Ab, TSH Ab or TSI)

# OPTIONS FOR GAPS CARE

## Dietary Strategies

1. **Manage your goitrogens.** Goitrogens are foods that suppress the function of the thyroid gland by interfering with iodine uptake. Dr. NCM recommends 3 tablespoons or less of sauerkraut juice, or even taking a break for a year and fermenting other vegetables if you have a thyroid condition. The vegetables that are the biggest offenders are cabbage, broccoli, and cauliflower, but the good news is that boiling them and draining the cooking water can reduce the goitrogens by up to 90%.
2. **Get your iodine from food** (if you are able to have iodine). The best sources are sea vegetables and seafood (ever try fish head soup?). Seafood also is a good supplier of zinc and selenium—very important to the thyroid.
3. **Drink at least 8 glasses of water a day.** This can be made much easier if you add fresh squeezed lemon or a splash of apple cider vinegar.
4. **In addition to GAPS,** experiment with your GAPS legal carbohydrate intake. GAPS does not need to be low-carb or high carb; find the ratio that works best for you.

## Lifestyle Strategies

1. **Hydrotherapy**—this is good for both hyper and hypothyroid issues. Alternating hot and cold treatment for the thyroid gland. Here is the method: Place a hot compress on the neck/thyroid area for 3 minutes, followed by a cold compress for 1 minute. Repeat 3 times.

This should be done 2x a day for a week, and then 1x a day for a month.

2. **Moderate Exercise**—such as yoga, swimming, walking, & strength training...good for both hyper and hypothyroid issues. Exercise uses up excess thyroid hormone, and also stimulates a low-functioning thyroid and the body's metabolism.
3. **Sleep**—again, sleep. This is good for...everything.

## Supplement Strategies

Supplement strategies are broken up into two categories—low functioning thyroid conditions like hypothyroid and Hashimoto's, and hyper-functioning thyroid conditions.

**\*\*NOTE\*\*** These supplements give a starting point. If thyroid or endocrine function is acutely dysfunctional, further supplemental strategies may be needed. This should not be construed as medical advice. Please consult with your own health practitioner.

### Overactive Thyroid

To be tried for a period of about 30 days.

**Bio-AE Mulsion Forte:** 5 drops 2x a day for 7 days, then 1 drop 2x a day

**Cytozyme THY:** 5 tablets, 3x a day

**Bio-Trophic Plus:** 4 tablets, 3 times a day

**LI-Zyme Forte:** 2 tablets every waking hour for 10 days, then 3 tablets, 3x a day

**L-Carnitine:** 1,000 milligrams, 3x a day

If also presenting with Hashimoto's thyroiditis, add:

**SE-Zyme Forte:** 2 tablets daily

**Bio-D Mulsion Forte:** 2-3 drops daily

**E-200 High Gamma:** 2 capsules daily, or soy-free Vitamin E **like this**.

Paint daily with iodine if tolerated, and if it disappears within 24 hours.

## Low Thyroid Function

**L-Tyrosine:** 2 capsules, 2x a day

**Iodine paint:** If tolerated, in some cases iodine supplementation can exacerbate a thyroid condition. Skin painting is safest.

**G.T.A.:** 2 tablets in the morning and 2 at noon. If the TSH hormone is above 20.0, use **GTA-Forte II:** 1 capsule, 2x a day instead of GTA

**BioMega-3:** 2 capsules, 3x a day

**Nuclezyme Forte:** 1 capsule, 3x a day

If the T-3 is decreased in relation to the T-4, add **Meda-Stim:** 1-2 capsules in the morning and at noon. More info [here](#).

If presenting with Hashimoto's thyroiditis, add:

**SE-Zyme Forte:** 2 tablets daily

**Bio-D Mulsion Forte:** 2 - 3 drops daily

**E-200 High Gamma:** 2 capsules daily, or soy-free Vitamin E [like this](#)

## RESOURCES

### GAPS Thyroid QuickSheet

[Click Here](#) — Quick list of thyroid lab tests and functional ranges

### Online Learning & Websites

[The Thyroid Sessions](#) — by Sean Croxton of Underground Wellness

[Replenish PDX Hashimoto's](#) — by Andrea Nakayama

[Article on Grave's Disease](#) — by Chris Kresser

[Articles on Thyroid Issues](#) — Chris Kresser

[Natural Endocrine Solutions](#) — by Dr. Eric Osansky

**The Thyroid Book website** — by Dr. Datis Kharrazian

## **Books**

**Why Do I Still Have Thyroid Symptoms When My Lab Tests Are**

**Normal?** — by Dr. Datis Kharrazian

**Thyroid Disorders** — E-Book by Chris Kresser...great free resource!