



KARYN SHANKS MD

Heart, Hope, Healing

How to Heal Thyroid Fatigue: Reclaim a Vibrant New You [Expert Guide]

BY KARYN SHANKS MD | JANUARY 27, 2020



Part One: Thyroid Fatigue is ‘Just the Smoke’

The chronic fatigue of hypothyroidism is ‘just the smoke’ rising high above the smoldering fire that lies beneath the surface. Said another way, the fatigue of hypothyroidism is a *symptom*—it’s not a disease. It’s not the defining thing that is wrong with you. It’s just one-of

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many-surface-level indicators of much larger and deeper problems: ‘the fire.’

The deeper problems leading to thyroid fatigue are most likely caused by two key factors: overwhelming inflammation and unmet nutritional needs.

But that’s not how hypothyroidism is explained or treated in the conventional practice of medicine. We are lead to believe that it is the *root* of our fatigue and foggy heads, that a simple thyroid hormone pill will fix us, that we know all we need to know.

Wrong. Misleading. Dangerous thinking. That kind of thinking fails to address the root cause of the thyroid fatigue and foundational dysfunction of the thyroid gland.

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Thyroid Fatigue is Caused by Inflammatory-Autoimmune Destruction and Unmet Nutritional Needs

You may feel better on that thyroid pill. Temporarily. But if we don’t address the *underlying causes* of the hypothyroidism—the inflammatory-autoimmune destruction and unmet nutritional needs—there will be much bigger and difficult-to-treat problems going forward. You won’t feel nearly as good as you *could* feel—as you *would* feel—if those deeper systemic problems were corrected.

Medicine—*sustainable* medicine, *root-cause* medicine—must go upstream to find *the origin* of hypothyroidism, and to make the necessary corrections. You’ll feel better, and—*this is huge*—we’ll stop the damage caused by the persistent inflammatory-autoimmune activity and unmet nutritional needs in its tracks. We’ll put the brakes on progress of the destructive inflammation that leads to heart attack, vascular disease, dementia, cancers, and much, much more.

Thought of in this way, the hypothyroidism we diagnose now, when properly treated in a [Karyn Shanks MD | How to Heal Thyroid Fatigue: Reclaim a Vibrant New You \[Expert Guide\]](#)

sustainable, root-cause-oriented way (think Functional Medicine), saves us from a world of hurt later on—it saves our lives.

What is Hypothyroidism?

Hypothyroidism, the cause of thyroid fatigue, is a condition of energy deficit that occurs when there is not enough thyroid hormone action to support optimal energy production in the body.

Thyroid hormone drives metabolism—the energy needed to support the work of the cells—all cells. This is much like the thermostat in your home that controls how much your heating and air conditioning units will work to produce the temperature changes (the energy) you desire. Thyroid hormone works in concert with other hormones within the *Brain-Thyroid-Adrenal-Mitochondrial axis* (see below) to create and sustain vital energy.

There are several scenarios that can lead to inadequate thyroid hormone action:

- **Insufficient production** of thyroid hormone (T4) within the thyroid gland due to gland destruction by inflammation and autoimmunity, radiation, or inadequate supply of nutrients involved in thyroid hormone synthesis.
- **Insufficient conversion** of thyroid hormone, T4, into its biologically active form, T3. This normally occurs within all our cells and can be disrupted as a result of illness, inflammation, unmet nutritional needs, and high levels of stress.
- **Problems with hypothalamic-pituitary control** of thyroid hormone production. This can occur because of trauma to the brain, severe inflammation, toxicity, unmet nutritional needs, and severe stress.
- **Thyroid hormone receptor insensitivity.** This occurs when the receptors for thyroid hormone become less responsive as a result of inflammation, toxicity, or unmet nutritional needs.

The Big Energy Picture: Brain-Thyroid-Adrenal-Mitochondrial (BTAM) Axis

The thyroid is part of a larger network of organs and processes that work together to produce and sustain energy. I call this the *Brain-Thyroid-Adrenal-Mitochondrial (BTAM) axis*. It sounds complicated, but even this is an over-simplification—the human body is so complex! But it

makes the point that many important players work in concert to provide for the energy needs of our bodies. It's never *just* the thyroid-ever.

Here's how the Brain-Thyroid-Adrenal-Mitochondrial axis work in a nutshell

- Our brains perceive our energy needs and orchestrate communication about them via control hormones of the hypothalamus and pituitary glands.
- The control hormones head straight to the thyroid and adrenal glands, literally changing gene expression in such a way that they either ramp up or turn down hormone production.
- Thyroid hormones act as the cell thermostats, while adrenal hormones regulate energy fuel supplies (carbon fragments used to manufacture energy from glucose and fatty acids) and blood pressure (to deliver the fuel supply where it's needed).
- Finally, the mitochondria are the microscopic sub-cellular organs that literally create the chemical energy we need to support and sustain us-at *everything*.

Thyroid Fatigue and Hypothyroidism: a Systemic Problem

Most thyroid fatigue and hypothyroidism in the United States is the result of an [inflammatory-autoimmune process](#). This drives damage to the thyroid gland and disruption of multiple nodes of the BTAM energy system. This destructive inflammation leads to decreased thyroid hormone production and action, and dysfunction of other aspects of energy production within the BTAM axis.

The inflammatory-autoimmune problem is usually compounded by unmet nutritional needs. These are deficiencies of the vital nutrients necessary for thyroid hormone production and support of thyroid gland health. Nutrient deficiencies contribute to persistent dysfunction of the entire BTAM energy system.

What happens when we treat hypothyroidism with *just* a thyroid hormone pill?

Standard treatment for hypothyroidism by conventional medicine is to provide thyroid hormone replacement, which is vital for restoration of the thermostat function of the BTAM energy system. Treating hypothyroidism with just a hormone pill, however, does not address the inflammatory-autoimmune process or nutritional deficiencies that are part of the cause, and that lead to inflammatory-autoimmune problems throughout the body.

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Understandably, it's the symptoms of our under-active thyroid gland that grab our immediate attention—the thyroid fatigue. The sluggishness, fuzzy-head, depression, or poor energy. We seize the opportunity for a fast solution to how we feel (who wouldn't?) and the promise of getting our lives back.

The thyroid hormone pill props us up but does not address the myriad other problems downstream from the root causes—the inflammation and unmet needs—that likewise make us miserable (think headaches, achy joints, irritable bowel, brain fog). And thyroid hormone doesn't support the other key players in our energy system.

What Gets Missed by Treating Thyroid Fatigue with Just a Pill

Thyroid hormone will drive the work of your cells. If your cells are already over burdened and struggling in the face of an unmet need, you will simply be adding fuel to the fire.

If, for instance, your adrenal hormone levels are inadequate to meet the energy demands for fuel or blood pressure support, additional thyroid hormone will ask your cells for what they cannot deliver. This will over stimulate your cells, and exacerbate nutrient deficiencies and cellular stress.

Likewise, if there are suboptimal levels of nutrients necessary to support the thyroid gland and other aspects of the BTAM energy system, ramping up the thermostat (increasing thyroid hormone) without addressing the supply of those nutrients, exacerbates the unmet needs. This will lead to worse and varied problems related to the functions of those nutrients—all players in diverse aspects of our biology.

If there are gut-related problems driving a systemic inflammatory-autoimmune process that damages your thyroid, simply taking a thyroid pill doesn't address that. It completely fails to explore and create solutions for the myriad forms of tissue damage taking place concurrently—also as a result of the gut-derived inflammation and toxicity.

These other possible points of damage may have yet to manifest themselves in symptoms that you can feel. Vascular disease, dementia, and cancers, depending on your genetics, may take many more years to become apparent—perhaps when it's too late. We can put a stop to these now.

After the Hypothyroidism Diagnosis: Follow the Smoke to the Fire

Enlist some help on this—you'll need a Functional Medicine doc, trained in clinical systems biology thinking, or one of the many excellent self-help books available on the subject.

Once hypothyroidism has been diagnosed: We now see the smoke. You've felt it for months, maybe years. Now, where's the fire? What is causing the inflammatory autoimmune problem? What nutrients are deficient? What do you need to do to heal?

By all means, accept the prescription for thyroid hormone. But never do this without simultaneously addressing inflammation, nutritional needs, and other existing challenges to your energy.

Part Two: How to Diagnose Thyroid Fatigue and Hypothyroid-Autoimmune Syndrome

Hypothyroidism and thyroid fatigue are just the smoke we see, rising above the smoldering fire of inflammation, autoimmunity, and unmet nutritional needs. It's a symptom of the hypothyroid-autoimmune syndrome that is the *root cause* of hypothyroidism and thyroid fatigue in the vast majority of Americans.

In part one of this series we explored this relationship, introducing the concept that hypothyroidism is just a *symptom* of a larger and more damaging disease process—not a disease itself. We addressed how treating the low thyroid function alone, while important, does not tackle the larger problem. Treating hypothyroidism with thyroid hormone alone, fails to address its inflammatory-autoimmune and nutritional underpinnings, putting you at risk for bigger problems.

Unresolved, now and down the road, the inflammatory-autoimmune process and unmet nutritional needs of thyroid fatigue lead to further *symptoms*—think unresolved fatigue, joint pain, muscle aches, and fuzzy brain, and *disease*—heart disease, dementia, and cancer—to name just a few.

In this article—part two of my series on hypothyroidism as part of a hypothyroid-autoimmune syndrome—we explore the comprehensive diagnostic process that leads to deeper understanding of the root causes that exist for you. And, ultimately, the solutions you seek.

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empowers your journey of healing.

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How to Diagnose Hypothyroidism

How to Assess Thyroid Function

Let's find out if low thyroid function is playing a role in your symptoms. The most common symptoms of hypothyroidism are: fatigue, sluggishness, brain fog, depression, lack of motivation, constipation, skin and hair changes.

You'll need a panel of tests to thoroughly understand thyroid function. This should include:

- **Thyroid stimulating hormone (TSH)**
- **Free T4**
- **Free T3**
- **Reverse T3**
- **Antibodies to Thyroglobulin and Thyroperoxidase enzyme**

TSH is made by the pituitary gland and controls thyroid synthesis of thyroid hormone (T4 primarily, and T3) in response to the brain's perception of need. Conventional lab reference ranges are typically from 0.2 to 4.5—with some variation from lab to lab. In Functional Medicine, we consider the ideal TSH range to be between 1 and 2, using this as our goal for thyroid hormone replacement.

Free T4 levels represent how well the thyroid gland is keeping up with thyroid hormone synthesis. Free T3 levels show us the robustness of T4-to-T3 conversion that takes place within the body cells (T3 is the more biologically active thyroid hormone in terms of driving metabolism, or work of the cells).

I often order a reverse T3, which represents an alternate pathway for thyroid hormone synthesis. Reverse T3 does not have appreciable metabolic activity. We see elevations of it when people are severely ill or stressed. Elevated reverse T3 represents an adaptation by the body to the potential crisis of low energy reserve or resilience. It shifts us to a reduction in metabolic activity that stops us in our tracks, to preserve what reserve we have for survival. Reverse T3 is an excellent indicator of having much bigger underlying problems to address.

I also order thyroid antibodies as part of my initial assessment of thyroid function. They are not indicators of function, per se, but provide us with evidence of the inflammatory-autoimmune process underlying the changes in thyroid function.

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How to Assess Function of the Brain-Thyroid-Adrenal-Mitochondrial (BTAM) Axis Nodes

When someone presents to me suffering from persistent fatigue and symptoms of energy deficit, I will evaluate the other aspects of the body energy system—the BTAM axis discussed in part one of this series.

This can be done quite easily as part of the initial consultation and lab evaluation:

- **Morning cortisol level** (between 7-8 am): this is a fast way to screen for adrenal cortisol production problems. For a deeper look at this system I also like to look at **saliva cortisol** levels at four times during my client's waking day. This way I can assess the circadian rhythm of cortisol secretion—an excellent indicator of adrenal resilience. I may also choose to order an **ACTH-Stimulation test** if I suspect more profound loss of adrenal function. This is essentially an adrenal stress test—it measures cortisol levels before and after provocation with an injection of the hormone, ACTH.
- **Sex hormone levels:** estradiol, total and free testosterone—these are good indicators of pituitary-hypothalamic (brain energy node) function.
- **Organic acid testing (OAT):** this is functional testing from urine that allows us to see blocks in the metabolic pathways of energy production. We can learn about global mitochondrial function (energy production within the mitochondria of the cells) and adequacy of nutrients involved in energy production. This can be obtained as part of a more comprehensive nutrition-energy-toxicity test panel called *NutrEval*, from Genova Diagnostics Lab.
- **A thorough review of symptoms and physical exam:** this will help us reveal problems with energy production within the BTAM axis, evidence of underlying inflammation, and unmet nutritional needs.

How to Assess Inflammatory-Autoimmune Status

This is how we look for evidence of an inflammatory-autoimmune process that likely accompanies the low thyroid function. Some of this assessment will be based on symptoms. We can also capture clues from our lab evaluation. This investigation looks for direct evidence of inflammation and autoimmunity, as well as potential causes or risk factors that make inflammation and autoimmunity more likely.

- **Thyroid antibodies** as mentioned above with the assessment of thyroid function.
- **Inflammation-autoimmunity markers:** sensitive C-reactive protein (hCRP), erythrocyte sedimentation rate (ESR), anti-nuclear antibody (ANA). These are all blood tests that can be ordered from conventional labs.
- **Toxicity markers:**

- GGT (liver enzyme sensitive to toxicity levels)–simple blood test from conventional lab.
 - RBC heavy metal levels (gives us a three month exposure assessment to inflammation-provoking and energy-damaging heavy metals like mercury and lead)–part of NutrEval from Genova Diagnostics lab.
 - Glutathione levels (the most important anti-oxidant/detoxicant in the human body)–also part of NutrEval.
 - Urine lipid peroxides (evidence of damaged fats from oxidative stress–fallout from inflammation)–NutrEval.
 - Urine 8-OHdG (evidence of damaged DNA)–NutrEval.
 - Urine heavy metal levels after a “provocation.” By using a chelating agent, such as DMSA, we can measure the amount of heavy metals drawn from tissues that are otherwise hard to test. These may indicate an increased body burden of metals that contribute to inflammation, autoimmunity, energy deficit, and thyroid dysfunction.
- **Blood sugar and insulin resistance markers:** these are common, profound drivers of inflammation and autoimmunity.
 - Fasting blood sugar
 - Fasting insulin
 - Hemoglobin A1C: provides assessment of three-month average glucose levels.
 - Post-prandial glucose and insulin (a glucose-insulin challenge test done 1-2 hours after a meal.
 - 3-4 hour glucose-insulin tolerance test: more standardized than post-meal challenge, but I find the latter is perfectly accurate and less logistically challenging for my clients.
 - **Stool evaluation for inflammation and the make-up of the microbiome.** I usually order this test based on symptoms, but will often order if someone has a compelling need to have this data–if they’ve been sick a long time, highly dysfunctional, preponderance of gut-related symptoms, clear gut-related inflammation (inflammatory bowel disease, for instance), client needs data to motivate behavior change. My work with clients always includes gut and microbiome optimization–if testing doesn’t change what we do or how we do it, we save the expense for something else.

How to Assess Nutritional Status

This part of the assessment starts with a thorough history and physical exam that can provide clues to nutritional needs. I also find comprehensive nutrition lab testing to be very helpful.

- **NutrEval from Genova Diagnostics lab:**

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- Organic acid testing for energy pathway assessment, micronutrient (essential vitamins and minerals) function, toxicity markers, gut microbiome markers.
- Amino acids
- Fatty acid levels
- Oxidative/inflammatory stress markers: glutathione, lipid peroxides, 8-OHdG
- RBC heavy metal screen
- **Homocysteine level:** good marker for adequate levels of folate, vitamin B12, vitamin B6, B-vitamins involved in methylation—a critical physiological process that helps manage inflammation and toxicity. This can be obtained from conventional lab and great marker for following over time as corrections are made.
- **Methylmalonic acid level:** used in addition to homocysteine level to assess vitamin B12 adequacy.
- **Fasting glucose, insulin and hemoglobin A1C** are excellent markers for glucose-insulin resistance status. This provides clues to the make up of a client's diet (carbohydrates, essential fats, and micronutrients), guiding advise for food plan changes.

How to Assess Lifestyle and Stress

My assessment of new clients with fatigue always includes an extensive evaluation of lifestyle, stress levels, how they manage stress, and history of trauma (which can drive persistent levels of stress in the body). Excesses of stress, negative stress mindset, and myriad lifestyle attributes can be potent drivers of inflammation and autoimmunity.

- History of severe emotional or physical trauma.
- Overwhelming stress, anxiety, depression.
- Suboptimal stress coping skills.
- Tendency to think of stress as bad (this is a stress mindset that puts people at risk for increased inflammation).
- Inadequate sleep (both duration and quality).
- Lack of movement, poor posture, excesses of sitting.
- Poor diet—the Standard American Diet (SAD).
- Lack of love and social support (increased risk of inflammatory diseases).
- Resistance to change—makes the behavior changes needed to improve health difficult.

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The Interaction Between Hypothyroidism and the Emotions

Now, this I have no scientific proof to support, but I want to throw it out there for your consideration. The thyroid gland sits right at the base of the neck, between the chest and head, just below the Adam's apple. The neck is considered to be the emotional center of the body most associated with our voices and ability to speak our truths.

In the Vedic Chakra system, it is said to be the energetic location of both hearing and speaking the truth. This represents the art of communication and using our voices to make known who we are and what we believe—an incredible challenge for most of us.

While I can't prove this, I find it interesting that so many of my clients with hypothyroidism are introverts, shy, and have difficulty standing up for themselves by using their voices. Why are the vast majority of people diagnosed with hypothyroidism women? Who are more likely to be culturally inhibited to using their full voices? Who tend to suck it up, make due, please, and make nice?

Whether you buy the thyroid-voice connection or not, there is ample scientific evidence associating repressed emotions with higher inflammation markers, increased activation of the stress system (which includes the BTAM energy system), and a host of negative chronic disease outcomes. These relationships make this topic well worth pursuing.

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Part Three: How to Heal Thyroid Fatigue and Hypothyroid-Autoimmune Syndrome

In part three of my Hypothyroidism series, you'll learn action steps you can use right now to heal the root causes of your under active thyroid.

In the first of this series I introduced hypothyroidism as a manifestation of damage from an autoimmune-inflammatory syndrome, amplified by unmet nutritional needs. This is the most common cause of hypothyroidism in the developed world. We learned that hypothyroidism is not a discrete disease, but rather a *symptom*—that it is, in essence, *just the smoke* from the *fire* of autoimmune-inflammatory illness that causes it.

In the second part of this series we discussed ways to diagnosis hypothyroidism and the [Karyn Shanks MD | How to Heal Thyroid Fatigue: Reclaim a Vibrant New You \[Expert Guide\]](#)

upstream factors that lead to the damaged thyroid. We learned how to identify the root causes of the autoimmune-inflammatory syndrome and how to determine the unmet nutritional needs that play a key role.

In this third part of my series we'll learn how to put the fire out—how to treat all aspects of the hypothyroid-autoimmune syndrome by implementing strategies to address it at the root cause level. This approach is the only way to achieve the sustainable healing we desire, and head off the myriad potential health problems—in addition to the damaged thyroid—that result from unchecked inflammation, autoimmunity, and nutritional deficiencies.

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Thyroid Fatigue: Treat the Fire (the Root Cause), Not the Smoke

Why not treat hypothyroidism by simply replacing the low thyroid hormone that leads to much of the fatigue and sluggishness?

As you read in parts one and two of this series, low thyroid function is only part of the problem in hypothyroid-autoimmune syndrome. The syndrome is a constellation of underlying problems (inflammation, autoimmunity, unmet nutritional needs) that contribute greatly to the symptoms (fatigue, sluggishness, depression, brain fog). These will not be fully addressed by thyroid hormone replacement alone.

Failing to identify and resolve the root causes of the inflammatory-autoimmune activity and unmet nutritional needs that drive low thyroid function, will lead inevitably to much bigger problems down the road—heart disease, vascular disease, dementia, neurodegenerative disorders, cancers, arthritis, and more.

Why doesn't everyone with inflammation develop hypothyroidism?

We're all genetically unique. Perhaps more importantly, we are all exposed to variations in the way we live and the environments we are exposed to everyday. [These drive changes in our genetic expression](#) that determine what happens to us. While some of us who are excessively inflamed and toxic manifest this as a damaged, under active thyroid gland, others of will have a different set of problems—perhaps migraine headaches, joint pain, high blood pressure, or mood disorders. Get the picture? Upstream trouble can lead to a wide variety of problems depending on the person. Our work is to go upstream—to the root—where it all begins.

Sustainable Hypothyroidism Treatment Must Be Comprehensive and Address the Root Causes

To sustainably resolve the autoimmune-thyroid syndrome—the leading cause of hypothyroidism in our developed world—we must treat the root causes. Our comprehensive approach must include solutions for the:

- Autoimmune-Inflammatory process that damages the thyroid—the triggers and mediators.
- Unmet Nutritional needs
- Imbalances in the other nodes of the Brain-Thyroid-Adrenal-Mitochondrial (BTAM) axis—the energy system of the body that have likewise taken a hit from the autoimmune-inflammatory process and unmet nutritional needs.

Hypothyroidism Treatment: Where to Start

It is important to address the low thyroid hormone levels, unmet nutritional needs, and imbalances in the BTAM axis *all at the same time*.

This is because thyroid hormone replacement will increase metabolism. Thyroid hormone drives work of the cells.

Driving cellular work places increased demands on the cells for energy production, detoxification, and other essential housekeeping functions. All of these functions require energy. Foundational support for these functions must be in place or we will be throwing gasoline on the fire—by adding to cellular stress that contributes to present and future problems.

When we treat hypothyroidism with thyroid hormone alone, many people will feel much better quickly, while others experience partial resolution of symptoms, or no improvement at all. While still others will feel *worse*. And everyone whose hypothyroidism is addressed with thyroid hormone alone, without attention paid to understanding and resolving the root causes, will inevitably go on to develop future problems. The persistent inflammatory-autoimmune process (because of unaddressed triggers and mediators) and unmet nutritional needs will, in fact, lead to future problems.

Hypothyroidism Treatment: How to Replace the Deficient Thyroid Hormones

Depending on your levels of TSH, Free T4, and Free T3, a thyroid hormone prescription should be offered to you.

There is no one-size-fits-all prescription for thyroid hormone replacement because we all have different needs. It is important that you work with someone who will listen to you carefully and be willing to make as many adjustments as possible to get it right.

We learned in Part Two of this series that your thyroid tests should be used to assist with both diagnosis and therapy. I use these test results—in addition to what you tell me about your symptoms—to guide what I choose to start treatment with and how we make adjustments over time.

Your blood should be drawn after an overnight fast, at approximately the same time each time you are tested, and before you take your morning dose of thyroid hormone. These are approximate optimal ranges for thyroid hormone tests—the *true* optimal will vary from person to person. I provide them here to give you a feel for what we're aiming for, though we may veer to one side or the other of the range if needed.

TSH: 1-2 UIU/ML (sometimes slightly lower or higher depending on symptoms)

Free T4: 1-1.5 ng/dl

Free T3: 3-4 pg/ml

Thyroid Antibodies (thyroid peroxidase Ab–TPO–or thyroglobulin Ab): 0 (no amount of elevation of thyroid antibodies is “normal” or “optimal.”)

Thyroid Hormone Preparations

My preference is to use thyroid hormone that contains a combination of the major thyroid hormones, T4 and T3. I typically choose a thyroid preparation derived from desiccated pig thyroid gland (Armour Thyroid, WP Thyroid, Nature-Throid).

People tend to feel better on T4-T3 combination thyroid hormone preparations compared with products containing T4 alone.

This is an observation confirmed by the medical literature (see references below) as far back as 1999. This may be due, in part, to suboptimal conversion of T4 to T3 in many people with hypothyroid-autoimmune syndrome. The inflammation, itself, as well as high levels of stress, deficiencies in energy production, or unmet nutritional needs can block the enzymatic conversion of T4 to T3. Recall it's the T3 that is necessary to achieve optimal thyroid hormone function at the cellular level. Elevations of reverse T3 (if measured) can confirm this, though it's not necessary.

Pigs make more T3 relative to T4 than humans do, so it is sometimes necessary to supplement the desiccated pig thyroid with a pure T4 (levo-thyroxine) product to avoid excessive amounts of T3. This typically only occurs in people who require larger doses of thyroid hormone to feel their best. Rarely, I find it necessary to use just T4 in particular clients sensitive to *any* T3 in their thyroid hormone replacement. They convert robustly, and are excessively stimulated by any amount of supplemental T3 (agitation, nervousness, anxiety, palpitations, sleeplessness, hair and skin changes, GI upset).

The vast majority of people feel great on desiccated thyroid provided in conjunction with a comprehensive approach to addressing the autoimmune and nutritional components of their under active thyroid.

Conventional Thyroid Hormone Replacement

Most conventional physicians treat their hypothyroid patients with synthetic forms of levo-thyroxine, or T4, alone. As discussed above, this is not adequate for a significant majority of people needing thyroid hormone replacement. We can usually do better than this by using a T4-T3 combination.

Many conventional docs object to the use of pig-derived thyroid products because of concerns about possible inconsistencies in the amounts of T3 and T4 from one batch to the next. They often cite difficulty regulating blood levels. This concern has not been valid for many decades as the thyroid hormones in the products are carefully standardized. In over twenty-five years of use of desiccated pig thyroid, I have not run into the problems they express concern about, and I am able to help my clients achieve stable regimens, confirmed by how they feel as well as their lab testing.

The dose of thyroid hormone is determined by an experienced clinician based on your symptoms as well as lab results. After initiation of thyroid hormone replacement, lab tests are done after 4-6 weeks to help assess adequacy of treatment, in addition to how you are feeling. I typically look at TSH, Free T4, and Free T3 results for this purpose.

How to Treat the Inflammatory-Autoimmune Activity of Thyroid Fatigue

Heal Your Gut

Say what? What's the gut got to do with my thyroid? I've written a lot about how gut health effects the body as a whole. Your gut lining is by far the largest repository of immune cells in the entire body (over 70% of all immune cells reside there). In addition, it is the barrier that protects you from toxins and irritants—both from the outside world (ingested) and gut environment (bacterial endotoxins and toxic fermentation products). Gut healing is non-negotiable for healing autoimmunity of any kind.

Your Gut Healing Action Plan

- **Avoid the use of gut lining irritants** (if possible): antibiotics, anti-inflammatory drugs (steroids, Ibuprofen, Aleve, Aspirin, and the like), alcohol, irritant foods (see next bullet point).
- **For at least three months, avoid food groups known to damage the gut lining (making it “leaky”) through immediate or delayed-type immune activation:** animal milk products, all grains (yes, even “healthy, whole grains”), eggs, beans (including coffee and vanilla) and legumes, nuts, nightshades (tomato, white potato, sweet and hot peppers, eggplant). This degree of restriction will not need to be lifelong but is necessary to give the gut a “rest” and allow the mucosa to heal. Reintroduction of “culprit” foods should be done carefully—just one at a time (in a week), noting any problems that may arise. In my opinion, testing for IgG or T-cell responses to foods is not enough to identify potential problem foods—elimination of all potential culprits is the best strategy.
- **Remove all sugars and processed foods:** including “healthy” sugars like maple syrup, honey, agave, dates, brown rice syrup—stevia is okay.
- **Support digestion with digestive enzymes and betaine HCl** (choose a product from a trusted source and follow manufacture's instructions as a starting point), especially if you tend to experience bloating or excessive fullness after meals. Also support digestion through relaxed eating (rather than on the run), slow chewing, and

cooked or lightly steamed foods (rather than raw).

- **Re-inoculate your gut with healthy flora:** Use fermented foods and beverages (Kombucha, sauerkraut, kimchi, for example). Not a fan of the strong flavor? Use a combination of lactobacilli, bifidobacteria, and saccharomyces boulardii at a dose of 60+ billion organisms per day. I like to combine these with soil-based organisms. Yeast sensitive? Nix the saccharomyces. Keep in mind that probiotic foods and supplements don't permanently restore your microbiome—you have to feed them as well—see next section:
- **Support your microbiome with pre-biotic non-digestible fiber sources:** most plant foods will contain these, so those with high plant consumption will typically not need to supplement. You can also use potato starch (Bob's Red Mill) 1/4-1 teaspoon twice daily for added support (start low-1/4 tsp and work up to adjust to increased gut fermentation). Note: for those with small intestinal bacterial overgrowth issues, both probiotics and prebiotics may exacerbate symptoms. If so, stop them and work with a trusted Functional Medicine practitioner to help you sort this out.
- **Nourish your gut lining:**
 - **Through systemic intensive nutrition:** eat meals that contain healthy protein sources (pasture-raised, wild-caught), plenty of healthy fat (coconut cream, coconut oil, medium chain triglyceride-MCT-oil, fresh-pressed or extra virgin olive oil, olives, avocados, avocado oil, fatty meat and fish), a wide variety of plants—emphasize crucifers (cabbage, kale, broccoli, cauliflower), dark green leafy and darkly colored vegetables and berries, and the onion family (onions, green onions, garlic, leeks, shallots).
 - **Through targeted gut nutrition:** bone broth 1 cup twice daily, l-glutamine 5 grams twice daily, fish oil 2-3 grams of combined EPA and DHA daily, GLA 200-400 mg daily.

Treat the Unmet Nutritional Needs

- Eat a nutrient-dense diet, while avoiding the potential gut irritants as described above. This should include attention to all macronutrients (protein, fat, and complex carbs), micronutrients (vitamins and minerals), phytonutrients and antioxidants. Follow my Gut-Immune Restoration Intensive Nutrition (GRIN) food plan and optimize healthy protein and fat, eat a wide variety of micronutrient, phytonutrient, and antioxidant-rich plant foods.
- Based on discovery of nutrient deficiencies from your personalized nutrient analysis (I use NutrEval from Genova Diagnostics lab)

Treat Excesses of Systemic Inflammation

In addition to the foundational gut healing and nutritional program already discussed, these are powerful ways to turn down inflammation overdrive.

- **Stress Reduction:** excesses of stress activate the nervous system and stress hormones in ways that both injure the gut lining and drive inflammation from the foundational genetic expression level. There are so many in-roads to this—pick your favorites and stick to them every day... take baby steps to improve sustainability: meditation, being in nature, walking, journaling, use of positive affirmations, laughter and lightheartedness, petting your dog, engaging in pleasurable activities, spending time with trusted friends.
 - **Mobilize your support team:** Most of us need the strength and fortification we receive from helpers on our healing journeys. You may need to build a team to support you.
 - Consider working with a Functional Medicine practitioner who will be well versed in the thyroid-autoimmune syndrome and can help you resolve it.
 - You may also benefit from working with a trusted counselor to help you explore yourself, develop self-awareness, learn new tools for managing stress, and who can love and support you on your journey. I recommend that you work with someone who is trained in mind-body approaches. They are likely to be the most familiar with the mind-body interplay in chronic symptoms and illness.
- **Treat allergies and infections**—seek help from a Functional Medicine practitioner for this.
- **Normalize blood sugar:**
 - Avoid all sugars in your diet.
 - Eat healthy fat at every meal.
- **Exercise and movement** of all kinds will help reduce systemic inflammation. Take baby steps: sit less, stand more, take the stairs more often, go for walks.
- **Sleep** is another way we can reduce systemic inflammation and support both gut and brain health. Sleep deprivation alone can result in persistent depression and fatigue.
- **Use anti-inflammatory supplements:** These will help modulate inflammation while you make changes in what you eat and heal your gut. Include daily:
 - Oil (2-4 grams of a combination of EPA and DHA)
 - GLA (240-500 mg), Probiotics (see “support your microbiome”),
 - Vitamin D (5000-10,000 IU per day is a typical dosage range to achieve an optimal 25-hydroxy vitamin D level of 60-80—have your doctor monitor your levels),
 - Curcumin (this is turmeric extract—use 3-4 grams in divided doses),

- Green tea (use fresh ground Sencha, 1/2-2 tsp),
- Cinnamon (2-4 tsp)
- Resveratrol (200-400 mg)
- N-Acetyl Cysteine (600-1200 mg)
- Liposomal Glutathione (200 mg)
- Alpha Lipoic Acid (200-400 mg)
- **Remove environmental toxins and support detoxification:** Environmental toxins drive systemic inflammation. They can easily overwhelm the detoxification processes of the liver, leading to toxic overload.
 - Remove all pesticides, herbicides, perfumes, and fragrances from your home and office.
 - Avoid the use of plastics—use BPA-free only and never heat food in them.
 - Avoid skin and hair-care products that contain chemicals and allergens.
 - Work with a Functional Medicine specialist to help evaluate and minimize your toxic exposures.
- **Bolster liver detoxification:**
 - With food: Include cruciferous veggies, onions and garlic, dark green leafy veggies, dark berries, pomegranate seeds or juice (1/4 cup daily), green tea.
 - With supplements: You can safely use high quality formulas that contain food extracts and nutrients that support liver detoxification pathways. I like Advaclear from Metagenics.
- **Support gut detoxification:** The gut is where toxins go once they have been processed by the liver. Your gut must function properly for the toxins to be successfully eliminated from the body. If by following the GRIN food plan you are not able to move your bowels fully at least once daily, try adding:
 - Magnesium glycinate 300-500 mg per day.
 - Vitamin C 1000 mg per day.
 - Drink more water—shoot for a minimum of two quarts daily in addition to other beverages.
 - Eat more fiber: veggies, dark berries, seeds (flax seed, chia seed, pumpkin seed).

Speak Your Truth: the Emotional Realm

of the Thyroid

In part two of this series I discussed the association between the anatomical location of the thyroid gland (base of the neck) and the emotions pertaining to speaking our truth. In the Vedic chakra system, the neck and thyroid gland represent the emotional location of speaking our most important truths—who we are, what we believe—our wisdom. We live in a society where women (the vast majority of hypothyroidism sufferers) are taught to suck it up and make nice. We often suppress our ideas and observations, and fail to let the world know who we truly are.

I have no proof of a causal link between repressed emotional expression and thyroid disease, however, the possibility fascinates me, and most of us need self-reflection and work in this area.

Not buying it? That's okay—there is a substantial body of scientific literature that associates repressed emotions with higher inflammation markers, increased activation of the stress system (part in parcel to the energy system—the BTAM axis), and a huge number of debilitating chronic symptoms and diseases. We still must dive into the emotional realm to heal.

Do you have a story that keeps you sick and tired and stuck? My free ebook, *Your Healing Story*, will show you how to write a new one. [Click here to learn more.](#)

Resources

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Genova Diagnostics Lab: www.gdx.net. Can order functional testing from them through your physician: NutrEval, Urine Provoked Heavy Metal testing, Adrenal Stress Profile (saliva cortisol and DHEA).

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Karyn Shanks, MD, is a physician who lives and practices in Iowa City. Her work is inspired by the science of Functional Medicine, body-mind principles, and wisdom gleaned from the transformational journeys of thousands of clients over her twenty-five-year career. Her work honors each individual and the power of their stories, their inner wisdom, and innate healing potential. She believes that the bones of healing are in what we do for ourselves. She is the author of Liftoff, a manual of energy recovery and healing through essential self-care practices.

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