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Heart, Hope, Healing

Hypothyroidism–Part Three: How to Put Out the Fire

BY KARYN SHANKS MD | NOVEMBER 18, 2017



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 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 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.

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.

Hypothyroidism: Treat the Inflammatory-Autoimmune Activity

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.

Resources:

Karyn Shanks, MD. [**Hypothyroidism-Part One: Just the Smoke.**](#) 2017.

Karyn Shanks, MD. [**Hypothyroidism-Part Two: How to Diagnose Hypothyroid-Autoimmune Syndrome.**](#) 2017.

Karyn Shanks, MD. [**The Gut-Immune Restoration Intensive Nutrition \(GRIN\) Food Plan.**](#) 2016.

Robertas Bunevicius, MD, et al. [**Effects of Thyroxine \(T4\) as Compared with Thyroxine plus Triiodothyronine \(T3\) in Patients With Hypothyroidism.**](#) N Engl J Med 1999; 340:424-429.

Angela Leung, MD. [**Desiccated thyroid extract vs Levothyroxine in the treatment of hypothyroidism.**](#) Clinical Thyroidology for Patients.

Gary M. Pepper and Paul Y. Casanova-Romero. [**Conversion to Armour Thyroid from Levothyroxine Improved Patient Satisfaction in the Treatment of Hypothyroidism.**](#) Journal of Endocrinology, Diabetes, and Obesity. 2014.

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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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