Important Thyroid Information

I found this lying on the floor in a Naturopaths office and felt like I won the lottery as it did such a good job explaining it all. Unfortunately I do not know the author.

The standard American diet is usually low in certain key nutrients that support a healthy thyroid. Optimal conversion of the inactive T4 thyroid hormone to the active T3 thyroid hormone requires a ferritin level of about 90–100 ng/mL. We measure iron stores by checking the ferritin level, and if the ferritin level is low, the thyroid function is usually sluggish or compromised. Low iron is a primary reason why premenopausal women lose their hair. A ferritin level of 40 ng/mL usually stops hair loss, and a level of 70 ng/mL starts regrowing hair. 25 About 90 percent of the patients I've checked are low in iodine. I switch them from table salt to sea salt or Himalayan salt, which contain iodine, and usually start an iodine supplement unless they have Hashimoto's thyroiditis. If they have Hashimoto's, I always start with selenium first and add iodine after two months; otherwise the iodine could worsen the Hashimoto's. If the patient has Hashimoto's, you can bet he or she is usually low in selenium. I place the patient on selenomethionine at 200 mcg per day. Also, optimizing vitamin D3 levels to 50–80 ng/mL helps prevent all autoimmune diseases, including Hashimoto's thyroiditis. Bromine in most white bread served in restaurants will compete with iodine

If you are over age forty, you should get an annual blood test to make sure your hormone levels are where you want them to be. When you do, ask that they test: • total testosterone • free testosterone • TSH • free T3 • TPO • reverse T3 (rT3) • estradiol • progesterone (for women) • follicle-stimulating hormone (FSH, for women)

The ranges vary, but 15–70 ng/dL is pretty common for testosterone levels with a woman her age. At 12 ng/dL she was virtually out of testosterone! My guess was that she had been running on empty for years! When we boosted her numbers up to 94 ng/dL, her tank was full, and that made all the difference. In short it looked like this: starting point: 12 ng/dL (incredibly low) normal range: 15–70 ng/dL (for most people) almost six months later: 94 ng/dL (optimized) (Note: People with osteoporosis and sarcopenia need slightly higher testosterone levels to reverse osteoporosis and sarcopenia.)

People who suffer from sarcopenia also often have other low hormone levels, including human growth hormone (HGH) and dehydroepiandrosterone (DHEA). 24 We included these with Elaine's hormone replacement therapy and optimized both levels. Thankfully, regardless of age, when we optimize hormone levels and add proper exercise with the necessary nutritional supplements, our bodies can recover! Even as devastating as sarcopenia is, it can be reversed.

I have them do a mammogram to screen for breast cancer. If the patient has the BRCA1 or BRCA2 gene mutation, she should not be on any estrogen.

DEALING WITH SYMPTOMS Doctors agree on what the thyroid does (regulates heartbeat, manages metabolism, warms you, helps grow hair/nails, restores cells, helps you sleep, and more). They disagree, however, on what to do when symptoms arise. As you know from experience, most doctors are looking

for a way to patch (bandage, medicate, comfort) your symptoms. There are unfortunately a lot fewer doctors who look for ways to fix (stop, cure, remove) the cause of your symptoms. These are the two main options, and because it is your body, you are the one who gets to choose. If you have hormone symptoms, do you want to patch or fix them? For the record, thyroid issues are not new. Back in the 1930s, before World War II, it was estimated that 40 percent of the entire population had thyroid issues! 3 And today? As many as 40 percent of Americans are still hypothyroid. 4 I would say that about 50 percent of the US adult population has suboptimal or low normal thyroid levels, but with all the endocrine disruptors today, it may be closer to 60 percent. You would think that after almost a century of medical advances we would have made some headway! What makes things worse is that we are just talking percentages for those who have thyroid problems. Include the other hormones and the percentage of people with hormone issues only goes higher. Personally, in my thirty-five years of practicing medicine, I would say that most patients who come in with a medical problem also have hormone issues in one way or another. Consider these facts: • Heart disease is usually a result of hypothyroidism. 5 • Most women with fertility problems also suffer from hypothyroidism. 6 • Type 2 diabetics usually suffer from hypothyroidism. 7 • Alcoholics are usually hypothyroid. 8 • Chronic infections are usually a sign of hypothyroidism. 9 • If you suffer from arthritis, you are probably hypothyroid, and your adrenals most likely also need help. 10 • Hypothyroidism makes every system in the body slow down. 11 • If you have low T3, then you probably have high cholesterol. 12 • Cold hands and cold feet are incredibly common, but they are usually a sign the thyroid is sluggish or low. The metabolism isn't functioning well, and weight gain is the natural result. 13 • Thirty percent of type 1 diabetic women are hypothyroid. 14 Clearly, patching a symptom does not cure anything. It usually eventually makes things worse, as things compound over time. Not long ago a patient came in who had Hashimoto's disease (the cause of most hypothyroid cases). She had suffered for years from brain fog, cold hands, cold feet, depression, anxiety, thinning eyebrows, and the inability to lose weight. Her doctor agreed that she had Hashimoto's but said her thyroid numbers were still fine and that he wanted to wait until things got really bad before he started any treatment. In the meantime, medicating the symptoms was the plan, which explained her numerous prescriptions and why her symptoms persisted. This is not the way to deal with the problem. Until you fix the root cause of the hormone issue, the symptoms will continue, and you will usually get sicker and sicker.

Hypothyroidism This is the underactive thyroid. Think of a garden slug moving slowly, not getting much done, but leaving a mess behind. Far more people, both men and women, have hypothyroidism. The symptoms include, but are not limited to: • acne as an adult • anxiety and panic attacks • brain fog • brittle nails • carpal tunnel syndrome • cognitive decline • cold hands and cold feet • cold intolerance • constipation • cracked heels • decreased sexual interest • depression • downturned mouth • drooping eyelids • dry skin, especially on hands, feet, elbows, and knees • dull facial expression • ear canal dry, scaly, and itchy • earwax buildup • fatigue • fat pads above clavicles • fluid retention • hair loss • heart disease • high blood pressure • high cholesterol • high cortisol levels • high insulin levels • hoarse, husky voice • inability to concentrate • infertility • insomnia • irritability • joint pain • low body temperature • menstrual irregularities • migraines • miscarriage • muscle and joint pain • muscle weakness • puffy face • ringing in the ears • swollen eyelids, legs, feet, hands, and belly • thinning eyebrows • weight gain 17 If you have one or two symptoms, then you probably don't have low thyroid. If you have several of these symptoms, you may want to get your thyroid numbers checked, especially your free T3 levels. When patients begin their symptom list with, "I feel bone tired" or "I have no stamina," they invariably nod their heads in agreement to a lot of other symptoms when I mention them. Thankfully all this is

fixable, not just patchable. TESTING YOUR THYROID LEVELS Before you schedule an appointment for your blood work, I suggest you test yourself at home with the basal body temperature test. Dr. Broda Barnes, one of the top thyroid specialists of all time, used this simple test on his patients with amazing accuracy. For several days measure your body temperature (thermometer under your arm) every morning before you get out of bed. A normal body temperature hovers around 97.8–98.2°F, so if your average from several mornings is less than 97.8°F, your body is cold. That means your metabolism is running slowly, which is a pretty clear sign of hypothyroidism or suboptimal thyroid function. When it comes to testing your blood, there are several tests that you should have, including: • T4 • free T3 • free T4 (optional) • TSH • reverse T3 (rT3) If your body is attacking your thyroid gland (autoimmunity), such as with Hashimoto's, you will have elevated antibodies, so I also recommend testing TPOAbs (thyroid peroxidase) and/or TgAbs (anti-thyroglobulin). IT'S A FACT If you have swelling under your skin in the face, jawline, eyelids, and side of your upper arms, test yourself: squeeze the skin on the side of your upper arm. If you pinch skin, great, but if the skin is thicker or puffy, you may have myxedema and have hypothyroidism. If your doctor won't run these tests for you, find a doctor who will. (See appendix F.) Why is getting the right test so important? Because the choice of lab tests and their erroneous normal ranges are the biggest culprit to keeping patients undiagnosed and undertreated! 18 IT'S A FACT According to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), part of the National Institutes of Health (NIH), 4.6 percent of the US population age twelve and older has hypothyroidism, although most cases are mild. 19 Low- to mid-range thyroid levels are usually going to be associated with a lot of the symptoms I listed earlier in this chapter, and for those symptoms you need a remedy, not a patch. That means if you have symptoms of low thyroid, keep pressing for answers until you get them. When you mention the need for thyroid testing, almost every doctor will run the thyroid-stimulating hormone (TSH) test. Some may test your free T4, but you need all five tests to get an accurate picture of your thyroid. The TSH test is considered to be the all-knowing gold standard of thyroid testing by endocrinologists and most doctors, but there are several details you must know about it. Fact: TSH measures your pituitary. The TSH test does indeed measure your thyroid-stimulating hormone, but that is technically a pituitary hormone. It has nothing to do with what is going on inside your cells, so it cannot accurately reflect what is happening in your body, but rather what is happening in your pituitary. The TSH test will indeed show that a small percentage of people have low thyroid, but for the vast majority, their results will usually show "normal." An antidepressant or other medication is then usually recommended. Doctor Mark Starr went so far as to say, "There is no scientific evidence to support the doctors' claim that the TSH test detects hypothyroidism on the vast majority of patients." 20 Fact: TSH lacks information. Sadly the TSH test does not provide you with enough information. You may be experiencing every symptom on the list, but if your numbers are still in range, the TSH test will usually not show you to be hypothyroid. I have no doubt this frustrates millions of people every year. According to LabCorp, the normal range for adults is 0.45–4.5 µIU/mL (micro–international units per milliliter), but I have found that if your TSH is over 1.0, odds are you have some suboptimal thyroid symptoms. Because of the lack of information, you can feel awful and suffer from countless symptoms but still be diagnosed as having a normal thyroid. Optimizing thyroid levels will usually reverse the symptoms, but your TSH score may go down to 0.1 µIU/L or lower. That in turn will trigger a red flag with virtually every endocrinologist, and you may be labeled in a "hyperthyroid" state, but that is false. This "below lab range" TSH score is routinely encountered when you are optimally treated with natural thyroid medication. 21 Optimizing thyroid levels will not make someone hyperthyroid. Most doctors looking at the TSH lab result will believe it does, but that proves the whole point. Optimized T3 levels (with natural desiccated thyroid) will almost always lower the TSH without making you hyperthyroid. One doctor

convinced a patient of mine to stop the optimizing treatment out of fear of atrial fibrillation, a stroke, a heart attack, or osteoporosis. She quit and promptly felt terrible again. “It will dissolve your bones” or “you will get fractures” or “you will have a heart attack or stroke” are outlived lies, but patients have to choose whether they want to feel great and beat their symptoms or feel mediocre and battle symptoms forever. Here is the answer: If your TSH numbers go lower than the normal range but you feel good, check your free T3 level. If those numbers are in range, that means you are not hyperthyroid, as many doctors and endocrinologists will assume. Now, if your free T3 numbers are really high and your pulse is over 100 or you are sweating profusely or have palpitations, then you should lower the dose. Very rarely does this happen. Usually the free T3 numbers are in range and your body feels incredible. Make sure your resting pulse stays less than 100, preferably less than 90. TOTAL VS FREE The thyroid hormones T3 and T4 each have two forms—free and total—and there are different tests to measure each one. In both cases, the test for free measures only the thyroid hormone in your body that is available and not bound by proteins, rendering it unable to be used. The test for total measures all of that hormone, whether free or protein bound (unusable). Measuring for free will give the best picture of your thyroid. Fact: TSH does not measure the active thyroid hormone. For a large number of people with thyroid issues, it is a case of their body not producing enough free T3 (the active thyroid hormone that does so much work in your cells). If your TSH score is high (meaning you have low thyroid function), most doctors will prescribe a synthetic thyroid hormone that consists entirely of T4 to normalize (lower) your TSH. I know it’s confusing, but if your TSH is high, it means your thyroid function is low. However, the real issue is not T4; it is free T3 because it is non–protein bound and can easily enter all the cells. Most people with hypothyroid symptoms cannot adequately convert T4 into T3, so dumping more T4 medication into the mix will usually not fix anything. For some more T4 medication will help, but for many people, the symptoms will only persist. The T4 medication will usually normalize the TSH lab value, but it usually does very little in correcting all the low thyroid symptoms. That is because TSH is a pituitary hormone and not a thyroid hormone. When the thyroid is diseased by Hashimoto’s thyroiditis or is low functioning and not producing enough thyroid hormones, TSH levels will usually rise. It’s like the pituitary is screaming at the thyroid, “MAKE MORE THYROID HORMONE!” The thyroid in turn makes more T4 (thyroxine). But the T4 is an inactive hormone and needs to be converted to T3 (the active thyroid hormone). T3 must be unbound from its protein to become free T3 so that it can enter all the cells. Most doctors rely on the TSH test (remember, the normal range for LabCorp is 0.45–4.5 µIU/mL), and if the TSH is over 4.5, the patient is low thyroid, and if the TSH is less than 0.45, the patient is hyperthyroid. Sadly there are millions of patients with low and suboptimal thyroid who are not treated as a result. Again, a much more accurate test is measuring the free T3 level, and then I recommend optimizing that level to 3.5–4.4 pg/mL and sometimes slightly higher. Free T3 is the active form of thyroid that resolves most symptoms of low thyroid when it is optimized. You could have a normal T4 (the inactive thyroid hormone) and very low free T3 and still have a “normal” TSH level. The TSH test misses many patients with low, sluggish, and suboptimal thyroid function. As you can see, it’s impossible for the TSH test to give a full diagnosis of your thyroid issues. So what does the TSH test tell you? It tests your pituitary hormone as part of the thyroid-pituitaryhypothalamic loop, so you will know if your pituitary gland is functioning well or not. Finding that out is helpful, but it is not going to address your other thyroid issues at all.

That is T4 to T3. The T4 is a storehouse—a mini storage unit, if you will— but filling your body with T4 will not usually fix you. Odds are, you need adequate active T3. In fact, your body requires a ratio of 4 to 1 (T3 to T4). Yes, T4 can help with some patients who are able to convert T4 to T3. However, most

patients cannot adequately or optimally convert T4 to T3 because of nutritional deficiencies, chronic stress, medications, diseases, diet, fluoride, age, hormone disruptors, chlorine, and so on.

SYNTHETIC ANSWERS ARE NOT WORKING After decades of synthetic T4 thyroid medication, patients are told their persistent symptoms are normal, as if there is nothing you can do to fix them. The T4-only approach to treating thyroid issues leaves quite a few symptoms behind. This list is incredible. Symptoms while on T4-only medications: • aching bones/muscles/joints • cold backside • cold hands and cold feet • constipation • cracked heels • depression • dry hair and skin • exhaustion • forgetfulness/fogginess • hair loss and breakage • hard, little, round stools • heavy-feeling arms after activity • heavy periods • high cholesterol • inability to concentrate • inability to get pregnant • irritability • lack of energy • lack of sex drive • lack of stamina • loss of appetite • need for naps • ridged fingernails • ringing in the ears • thinning eyebrows • thin skin • weight gain 26 Yes, you guessed it; not much has changed! What your body needs is adequate amounts of active T3. That will usually take care of most hypothyroid issues, including everything on this T4-only symptom list. One primary reason why the T4-only approach does not work well is because excessive T4 usually causes your body to make reverse T3 (rT3) from the active T3 hormones in an effort to get rid of the extra T4. 27 What this means is that your body dumps the excess T4 by wasting your good and active T3. Using the birdhouse analogy, rT3 locks the birdhouse closed. All you can do is throw it away at that point. The only good thing about rT3 is you are clearing out the house so you have room for more, but the bad news is that the birdhouses you throw out can never be used properly. Excessive T4 usually eventually means extra rT3, but your body requires approximately a 20-to-1 ratio of free T3 to rT3 or higher. When you get below that ratio, you usually start to develop symptoms on the T4-only list. Keep up the imbalance of free T3 to rT3 (less than a 20-to-1 ratio) and chronic illnesses usually set in. We are talking about fibromyalgia, chronic fatigue, obesity, type 2 diabetes, chronic pain syndromes, and more. Chronic conditions usually only make the imbalance all the more severe over time. High rT3 is nothing to mess with, yet the TSH test will give you a “normal range” lab result! That is why you need to test for rT3 as well as free T3. Knowing both, you can then calculate your ratio. To calculate your free T3- to-rT3 ratio, use an online calculator such as https://stopthethyroidmadness.com/rt3-ratio. Make sure you select the correct units of measurement for both free T3 and rT3. THE HORMONE HEALTH ZONE FOR THYROID HEALTH The hormone health zone for your thyroid is pretty well-defined. The goals are: • Maximize T4-to-T3 conversion. • Lower rT3 to maintain a 20-to-1 ratio of free T3 to rT3 or higher. When that is the case, all the symptoms of hypothyroidism usually stop, rewind, and fade away. When you optimize your thyroid levels, all these pieces come together. You have sufficient T4-to-T3 conversion, the ratio of T3 to rT3 is 20 to 1 or higher, and you have plenty of active T3 at work in your body. If you have thyroid symptoms, but they are not going away, you have not yet optimized your thyroid at one level or another. It’s as simple as that. For me, my sluggish thyroid meant brain fog, cold hands, cold feet, decreased energy, and afternoon naps. My TSH was normal at 1.0 µIU/mL even though I felt horrible with many of the symptoms listed above. But my symptoms were all cleared up when I raised my free T3 from 2.5 pg/mL to 4.0 pg/mL. The normal range is 2.0–4.4 pg/mL, and I was in the normal range all along, but the symptoms did not go away until I optimized my T3 levels specifically. Maximizing T4 to T3 for more active T3 I put my patients who need to increase their free T3 levels (by maximizing the T4-to-T3 conversion process) on natural desiccated thyroid and recheck their free T3 in two to four weeks. If their level is better, they usually feel better, feel warmer, look brighter, and are happier. We turn it up a bit, but not too fast. “Start low and go slow” is the best method. I have patients check their pulse daily as well as their auxiliary temperature morning and evening. If their pulse goes over 100, I will usually lower their dose of thyroid and continue

monitoring their free T3. Patients over sixty-five and anyone who has heart disease needs to start very low and go very slow on thyroid, or small to moderate doses of thyroid could stress their heart. One ninety-year-old patient had a free T3 of 1.2 and a normal TSH. I slowly raised her thyroid dose, and her free T3 was 2.2. When I tried to raise it further, her pulse went to 120, so I had to back it down, and she's doing great. A few weeks or months later, if there's not much change in symptoms, we then check the rT3. The rT3 may be blocking the T4-to-T3 conversion. The overall process of raising active free T3 is pretty simple, yet highly effective. Free T3 is active and plays such a vital role in your health, so when the numbers go up, you usually feel it! For more information, see appendix D, "How to Maximize Your T4-to-T3 Conversion." Lowering rT3 To lower your body's rT3, you need to only take liothyronine thyroid in the form of T3. You don't need any more T4, as you already have T4 in excess. Taking T3 only automatically starts lowering your T4 levels, which lowers rT3 as well. (Find a physician who is knowledgeable in this area from appendix F.) I recommend starting with 5 mcg (micrograms) of T3 (liothyronine) twice a day (if you are sensitive, you may need to start with 2.5 mcg) and increasing the dosage every three to four days slowly until you are at 25 mcg twice a day; then stay at that dose for about three months. Monitor your pulse two to three times each day along the way. Make sure your pulse does not go over 100 while resting or that you have no palpitations or irregular heartbeats. If you do, decrease your dose, and that usually corrects the problem. Remain under the care of a physician who knows how to lower rT3 by using this method. Take a multivitamin as well as the supplement selenium (100–200 mg once per day). Eating according to the Keto Zone diet (see appendix F) or an antiinflammatory, gluten-free diet is recommended. For more information, see appendix E, "How to Lower Your rT3 Levels," and appendix F to find a physician. YOUR OPTIMIZED THYROID LEVELS The recommended tests and the normal ranges are as follows: free T3: 2.0–4.4 pg/mL free T4: 0.8–1.8 ng/dL (optional) TSH: 0.45–4.5 µIU/L rT3: less than 15 ng/dL antibodies—TPOAbs or TgAbs: 10–20 IU/ml When your thyroid levels are optimized, your numbers will be closer to these: free T3: 3.5–4.4 pg/mL free T4: 1.2–1.8 ng/dL (optional) TSH: 0.1–1.0 µIU/L or lower rT3: less than 15 ng/dL (based on the 20-to-1 ratio) antibodies—TPOAbs or TgAbs: less than 10 IU/mL free T3-to-rT3 ratio: 20 to 1 or higher I believe the most important numbers to know, track, and manage with your thyroid are your free T3, rT3, and TPO levels. Therefore, testing for free T3 and rT3 is critical. Most doctors do not even test for those numbers, so be sure that you request them. Hypothyroidism or suboptimal thyroid levels affect many of us, which means you can probably identify with several of the symptoms listed earlier in this chapter. Thankfully you can fix this! The symptoms do not need to define you or your life.