

MERYL: Hey everyone, your Rebel Nutritionist here. And we are doing a follow-up today to last week's podcast with our client, Andrea, and we are going to be talking about all things thyroid, well, at least testing anyway, because there's huge misunderstandings, misconceptions about hypothyroidism or even the thyroid itself.

What it is, what it does. We want to blame it for everything that happens in the body, especially weight gain or inability to lose weight. And so let's start with clarifying a little bit about hypothyroidism and understanding at least the lab testing you need.

So after talking with Andrea, as she had mentioned, we got a detailed history.

We also know that stress and excessive stress can lead to thyroid symptoms and thyroid issues. Of course, for her, that was not the case. So when we went back and looked at her testing, of course, the only thing that was checked was something called TSH, thyroid stimulating hormone. She was told that that was in the normal range, even though it was in the upper end of the normal range.

And she was dismissed as not having a problem, but she knew intuitively. And as she had mentioned that there was something else going on. So when we tested her, we did the full array of labs. And let's talk about what that is, what that looks like and getting to the bottom of your thyroid issue and actually even identifying, do you have a thyroid issue?

The prevalence of thyroid problems

So not all hypothyroid symptoms turn out to be a problem with the thyroid or even the thyroid hormones. But we do know that statistically. Hypothyroid is a very underdiagnosed condition.

As a matter of fact, we know, and it's well documented that only about half of Americans with a thyroid problem actually know they have one and it's estimated that it can be nearly as many as 4 to 10% of Americans. Now, hypothyroidism is the most common thyroid disorder. And then there's Hashimoto's disease, which is an auto-immune form of hypothyroidism. And this is actually very, very common. Women are certainly more likely than men to have thyroid problems. And we even see this in our practice, but hypothyroidism can appear.

In both males and females it can appear at any time, but is especially common after childbirth. And we often see a hypothyroid state six months, or even sooner than that after childbirth. And sometimes it goes away. Sometimes it doesn't, but more prevalent especially in women in their forties and fifties.

Yet, there are so many doctors who are really reluctant to do an appropriate or proper thyroid workup. And perhaps this is because this is out of their scope of what they can treat or know how to treat. And so. What we really need to look at is what else is there to look at, because there's so much more complexity to thyroid testing.

Yet, there are so many women who are left feeling that their symptoms of fatigue or weakness or depression, or joint aches or weight gain. Is all in their head and it is not. So I am here to tell you that if you are being dismissed as this being the symptoms in your head or that they're symptoms of menopause and they may very well be, like I said, there's a lot of overlap oftentimes, but if you are being dismissed, do not accept that as the answer.

What is the thyroid?

So let's start a little bit back, further at the beginning, let's say and explain what is the thyroid, because if we're going to understand what hypothyroidism is, maybe we should talk about what the thyroid is and what it does. So for those of you that are unaware, **the thyroid is a butterfly shaped gland that sits at the front of your neck, and it is responsible for setting your entire metabolic rate.**

Therefore it controls your weight. So whether you feel sluggish or energetic or mentally sharp or foggy-brained, happy or sad, it is involved in the control of everything from hormones to cholesterol to brain fog. And when your thyroid is not functioning, optimally, you feel tired. You can feel constipated, you can feel dull or gain weight.

Your skin gets dry. Your hair can become dry. And sometimes it does fall out. And your muscles and joints might ache. Your periods can become irregular. If you are still a cycling female, there can be fertility problems, brain fog, and those ever present carb or sugar cravings. Why? **Because your body is desperate for energy.**

When the thyroid is **slightly under functioning, you can suffer from high cholesterol.** Even if you have a perfect diet. And there's many other symptoms, both big and small, that come along with thyroid dysregulation. **So what exactly is hypothyroidism? Well, that is what we use to describe a decreased metabolic rate or state that is due to inadequate amounts of functioning thyroid hormone.**

Now this can get complicated. So I'm going to try and break it down in as most simple terms as I possibly can, but essentially at least 95% of all of the cases of hypothyroidism are called

primary hypothyroidism. What does that mean? It means that the thyroid gland is acting sluggish or sometimes not even responding at all.

And this is. Due to a number of factors, it could be related to your gut. Yes. Your gut, your gastrointestinal system is completely linked to your thyroid as are auto-immune diseases. So everything in the body, as I always say, is intricately connected. And one thing, one imbalance affects another. The other thing is that **we can be producing thyroid hormones effectively, but can have thyroid hormone resistance similar to the way that we have insulin resistance.**

So what happens is that our cells are not picking up and using the active thyroid hormone. We are making. **We can also be making enough of the inactive form of thyroid, but not converting it to the active form.** And we'll discuss that in just a second, because what is inactive? What is active? I know it gets confusing.

Common symptoms of hypothyroidism

So as I mentioned, some of the symptoms of hypothyroidism are fatigue. It is known that there's an increased sensitivity to cold. You can have constipation, dry skin, unexplained weight gain, cravings, a puffy face, even muscle weakness, but elevated blood cholesterol, muscle aches and tenderness and swelling in your joints.

Can also be a sign of hypothyroidism as can heavier than normal periods, thinning hair, slowed heart rate depression, and that ever present brain fog. So again, because these symptoms are so common in so many people, especially women, it is often dismissed. And so let's talk about what tests we need to request, because if your physician is not running the gamut of testing, they may be missing the problem.

What tests can we use to check for thyroid problems?

So basically there are **six key tests** that can unlock the mystery of your thyroid. And so these are the ones you want to be looking at. Thyroid testing should be easy to obtain by the way, this is not something that is difficult. It is routine. It is not something that you have to jump through hoops for.

So make sure you are making a note and requesting because it is so important for you to be your own best advocate, and demand to know what your numbers are. So without further ado, let's talk about the first one **thyroid stimulating hormone**, T S H, thyroid stimulating hormone is produced in a part of your brain called the pituitary gland.

And this job of the TSH is to tell the thyroid gland that's sitting in your throat that it's time to get busy producing thyroid hormone. So **when the healthy thyroid gets this chemical message, it produces two hormones triiodothyronine, which is T3 and thyroxine, which is T4**. So the normal range for TSH is somewhat controversial.

Although we know in the functional realm, it is much tighter than in the conventional realm. So in conventional, it can go from 0.5 up to five or six, however, In functional testing, we like a much tighter range and this range is really what we call the functional range. And it is more like one to 2.5 or even three, but not much more above three.

This is based on the fact that when Americans, without any hypothyroid symptoms have this testing done, that is the most usual upper range. Again, the functional range. So, what does it mean if you have high TSH and I get this question all the time and in most cases, hypothyroidism occurs because the thyroid gland is sluggish, right?

It has a problem converting T3 from T4. So T4 makes the active form which is T3. And so this can be due to a whole variety of reasons ranging from nutritional deficiencies to auto-immunity. So what happens is TSH gets pumped out in higher amounts to try harder to stimulate the thyroid gland to get into action.

So this is where it gets confusing because people think the higher numbers, Oh, I should be hyperthyroid. No, it's an inverse correlation. The higher the TSH, the lower the thyroid is working or the less the thyroid is working. So think of it like this. I love this example from Aviva Romm. Who's an amazing physician who I follow and she's a huge women's advocate, but I really, I took this from her.

So I'm giving credit where credit is due. So think of it like this. Okay. You are TSH and your best friend's house is the thyroid gland. And when you go to visit your friend, you knock on her door. And if she doesn't answer, what are you doing? You knock louder and harder to get a response. So this is the same way that TSH works.

TSH, amps up it knocks louder, hoping to get an answer. And so that's why an under functioning thyroid shows up as high on lab testing. So **TSH can be normal in the presence of hypothyroidism and in some cases you can still have the symptoms of low thyroid when TSH is normal because of that poor conversion.**

And we need that conversion to happen. When stress is high and stress suppresses the pituitary gland, it can suppress it enough to interfere with producing TSH. And so that is really, really important to remember. Stress has far reaching effects in the body, all over the body. So now let's talk about T3 and T4. As I said, T3 and T4 are the hormones produced by your thyroid gland.

Remember, TSH is produced by the pituitary, T3 and T4 are produced by the thyroid gland. So T4 is produced in a larger amount and then converted to T3, which is the active form of the hormone. And this is needed for the regulation of metabolic functions in the body. T3 and T4 are sent out into your bloodstream where they are responsible for the thyroid's actual work of controlling your metabolism.

And something important to know is that free T3 and free T4 are called this because they are not bound to proteins in your blood. So oftentimes when we do lab work, most metabolic byproducts are bound and measured as bound to a protein. But what we really want to know is what is Unbound and what is available to our actual cells to use.

And that is why we measure free T3 and free T4, because these are really important because knowing what the numbers are of these allows us to know. How much work is actually getting done inside yourselves is your metabolism keeping up because it is getting enough of this T4 and T3. So **measuring free T3 and free T4 is important because they are indicators of thyroxine and triiodothyronine and that activity in the body.**

So for example, A high TSH and a low free T4 and low free T3 can indicate hypothyroidism a normal TSH, a normal T4, and a low T3 can indicate T4 to T3 conversion. Problems. And we can have all kinds of deviations and permutations. This is why we really need to know these numbers because your practitioner, if you are working with a practitioner who knows how to read these will be able to guide you in the right direction.

So the next thing we need to talk about are the thyroid antibodies testing the antibodies. And oftentimes I will tell you, these are just not done. Physicians, even endocrinologists are not

running antibody testing because a lot of them feel like, well, we can run antibodies and there isn't anything you can do about it.

And nothing could be further from the truth. So **thyroid antibody testing is ordered to diagnose auto-immune thyroid disease and distinguish it from other forms of thyroid dysfunction.** The two thyroid antibody tests that I order are something called **TPO, which is thyroid peroxidase, antibody and thyroglobulin antibody.**

And some people do have an autoimmune thyroid condition, but don't always test positive. And then there are people who have been told that they don't have a thyroid condition because all they've ever been tested for is TSH and low and behold, when we actually go back and test the antibodies. We see that they are elevated.

And in fact, there is a thyroid issue. So really important to know is that another one that we measure is reverse, T3 and reverse T3 is actually the third, most abundant form of the thyroid hormone. But again, not being measured frequently. So when your body wants to conserve, rather than burn energy, it will divert the active T3 into the inactive reserve form.

And this could happen when you are sick, when you are under stress or even when you are under nourished. And so being under nourished does not mean that you are thin and frail, under nourished could mean vitamin deficiencies. So if TSH and free T4 look okay, but free T3 is low. This could be because it is B being diverted into reverse T3, which will be elevated.

So it is worth looking at reverse T3. If there are obvious symptoms suggesting hypothyroidism, but your typical tests like TSH or even free T4 are not. Pinpointing that or pointing to that. So

there is a lot of controversy. I will tell you about this marker. A lot of conventional doctors don't want to test it.

I will tell you it is very telltale and it can also indicate other inflammatory conditions. So we definitely want to make sure we are getting reverse T3 testing, and other types of testing that we may want to look at. Especially if we come back and find that there is actually a hypothyroid, we always want to look at nutritional deficiencies because things like selenium, iron and zinc are crucial.

For thyroid health and iodine is crucial for thyroid health. And so they're also in the conventional realm, seems to be a fear about taking iodine and **using iodine as to support the thyroid**. We see great results with adding iodine. Again, it needs to be managed by a professional. You don't want to just be dosing iodine by yourself, but I will tell you.

It is very effective. So, we need to look at protein intake as well. Very important that we look at making sure that you are getting adequate sources of protein, especially animal forms of protein for the thyroid. The other thing that we look at is environmental factors that can interfere with iodine, which again is important and crucial for the thyroid.

So we know things like fluoride and bromide, which comes from water and flame retardant products, actually compete for absorption of iodine in the body. So if you are consuming products, especially baked goods that use bromide in them. That bromide is competing for absorption with iodine and oftentimes can cause an iodine deficiency.

The other thing that we also look at are things like gluten intolerance, because we know gluten directly affects the thyroid and can also have an impact on the auto-immunity or those

antibodies as can heavy metal exposure and other environmental triggers. One thing we often look at that is not commonly known is heavy metal exposure like mercury.

So if you guys are out there eating tuna fish more than once every few weeks, You are getting exposed to mercury. Mercury is a heavy metal, and it can interfere with the thyroid. You are actually talking to someone who had tuna fish, probably every day of her life in high school. And so I've had my mercury tested because high school was a long time ago for me.

But I will tell you if you. Are consuming tuna in any form. It does not matter if it is canned tuna. It does not matter if it is hamachi tuna or yellow tail or sushi or whatever, or the best grade tuna. Tuna is tuna and tuna is loaded with mercury. So really pay attention to your environment, to what you are eating, because it totally can impact your thyroid function.

So I think that at least goes through the testing. I know it gets confusing. Thyroid is a delicate dance for sure, but doing the testing and doing the right kind of testing and knowing your numbers is crucial to your treatment. And so if your medical provider is not running these tests. Then you may want to find someone who will run them.

You really want to make sure that you are having a respectful conversation and that your **healthcare provider is having a respectful conversation and paying attention to you and not just dismissing you.** And that is the work that we do here. You've got to really listen to not just the symptoms, but everything going on in someone's life.

So important to be your own best advocate. If you have questions, I would love to hear them. We are going to do a podcast in the near future that is going to address questions, whether it's around thyroid or anything else. So we welcome the questions and the comments and hope

that this has been helpful, at least in enlightening you about what to even look for and understand regarding your thyroid health, this is your rebel nutritionist signing off, and we look forward to having you next time. Thanks for joining us.