
## Episode 02: How to get a correct diagnosis for thyroid disease

Katie: Welcome Izabella, thanks so much for being here.

Izabella: Hey Katie, thanks so much for having me. I'm so glad to be here with you.

Katie: I'm so excited because you're obviously super qualified in thyroid health, but also I consider you a friend. I know when we first met we stayed up really late one night talking about thyroid health and just health in general and blogging and so many different things, and kind of got to know each other but the part that kind of struck me when we first met was your own story, which I think just was amazing. Hearing your own journey with thyroid health and all the things you discovered yourself. So for any listeners who maybe aren't familiar with you or who haven't read your blog or heard your story, can you kind of walk through your own journey with thyroid disease and what you learned?

Izabella: Yeah, absolutely and I just had so much fun hanging out and connecting with you as well-just want to throw that in there-but I basically-my thyroid symptoms probably started some time in my Freshman year in college. I used to be this bright-eyed and busy-tailed kid, and I always had a ton of energy. I was always

playing sports and working out and studying and working after school and doing all kinds of fun things in high school and then during my Freshman year in college I ended up with Mono which is a condition caused by the Epstein-Barr virus and after that I just never fully recovered.

I remember I was just so exhausted all the time that one day I actually slept through a final exam during my first year in undergrad. It was a chemistry final exam which was very very important for me to get make sure I got a really good grade in that so I could get into pharmacy school and, unfortunately, I slept through that exam and luckily the professor let me come in late and re-take it and whatnot, but it was just very very bizarre because I went from this very highly energetic person to somebody that just needed to sleep maybe 12 to 14 hours each night and as time went on, eventually it was discovered that I had Epstein-Barr virus but I had been recovering from it. I got a little bit better but I never quite recovered my previous amount of energy and so I would go to doctors every year and ask for a physical an say "I'm really really tired all the time. I have to sleep a lot." And they'd check me for anemia. They'd check my thyroid. They check all of these things and they'd just say everything was normal.

So fast-forward to when I actually graduated from pharmacy school and I kind of figured out that not all doctors were created equally and I learned that maybe there were some doctors that were going to be a bit more comprehensive and I started again kind of asking questions about my health. At that point my symptoms had also progressed so not only was I tired and sleeping for 12 hours each night but I also had acid reflux, irritable bowel syndrome, I had hair loss, I had joint pain in both arms. I was diagnosed with bilateral carpal tunnel which made it really tough for me to work because a lot of the things I had to do were on a computer and I also had really like debilitating anxiety. Like I started to have panic attacks, which I never used to have. You know me, I'm pretty laid back and just very mellow and that was something brand new to me.

So my husband would go out running and he'd tell me that he'd be back and if he wasn't back in 15 minutes I'd start pretty much calling around and making sure he was okay or wondering if he left me for another woman or something crazy must've happened because why was he gone for so long? I just had these very unrealistic intrusive thoughts that I never had before. I had all these symptoms

that I never had before and I was still in my mid-20's at the time before-and just felt like my whole body was falling apart.

At that point eventually I found a doctor that was willing to do some comprehensive testing and I was found to have Hashimoto's thyroiditis and so at first I was relieved that I had Hashimoto's which an auto-immune thyroid condition, because I thought "Finally, I can start taking medications." You know, I'm a pharmacist by training so I knew there were medications one could take to get that balanced but a part of me was also kind of scared because I thought "Okay, well I'm only in my 20's so why do I have an autoimmune condition? And why did I develop this condition that happens later on in life generally?"

And so that was kind of how I got on my journey of trying to figure out if there were any things that I had done to potentially trigger my condition, if there was anything I could do to reverse my condition or prevent the progression of the condition and that's kind of how I became a Hashimoto's expert/human guinea pig was just through looking at different research and trying out different things on myself in an effort to get myself better with the condition.

Katie: Yeah, your story sounds so much like my own. Especially, I feel like that moment of like you know something's wrong but the tests come back normal and you go to the doctor and they say you're fine or they tell you it's all in your head and I think a lot of people have had that experience and it's so frustrating because when you know something is not right in your own body but you can't find answers, that's a really really frustrating place to be.

So, obviously, fast-forward through your journey. You obviously had discovered some things that helped you and now you've actually written a book about it, which I highly recommend, it's a really comprehensive book. But I'd like to delve into some of those specifics that you talk about in the book and that, actually, some of my readers have questions that they wanted to get you to help them find answers for. So, one question that came up a lot and that you do talk about on your blog, I think, and also in your book is actually getting to that point of getting a correct diagnosis. So can you talk about maybe if someone has some of those same symptoms that you did or that I did and they suspect there's a problem, how do you go about starting to find answers or get a diagnosis for that?

Izabella: Yeah, absolutely, and Katie should we talk about some of the symptoms you had? Because everybody can kind of present a little bit differently.

Katie: Yeah, absolutely. So you mentioned yours being triggered by a virus and I feel like mine was triggered probably more by stress and I had several pretty intense life issues that happened in a short span of time and I wasn't sleeping and at that point in my life, in college, definitely wasn't eating very healthy either. And then I think, when I got pregnant with my first child after college, that kind of was the straw that broke the camel's back. And I think you hear about that a lot with like the hormonal aspect and, obviously with the endocrine system, all hormones are intertwined and so I think that was part of it for me.

But the symptoms I struggled with were, kind of some of the common thyroid symptoms of feeling cold all of the time, and I had some hair loss especially in my eyebrows in the beginning and my nails were very brittle, and just having trouble losing weight after baby. Which, again, that's one of those things that doctors say "Well that's pretty normal. Everyone has that, it's nothing to worry about." And digestive disturbances, not as severe as what I know you had, but just I felt like my digestion wasn't working correctly and I would have to take stuff to feel like to get things moving but then sometimes it would just be too much and so I just felt like I had this whole array of symptoms that doctors kept telling me were normal.

And it actually took me going through 8 doctors before I found one-actually who we both know, Dr. Christianson-who was able to even just look at me before he did blood tests and we was able to pretty much guess what it was and then blood tests confirmed it. But it was so frustrating that period because I knew something was wrong and I kept telling them something was wrong and they kept telling me "No, your normals are okay, they're a little low but they're pretty normal. Nothing to worry about, we'll just test you again in a couple years." So I know that frustration all too well.

Izabella: Absolutely, so a lot of times women will struggle with these symptoms for 5 years, 10 years, before they actually get diagnosed and we both know and love Dr. Christianson. I actually lived-I lived like 2 or 3 miles away from his clinic in Scottsdale, Arizona when I was starting to having thyroid symptoms and unfortunately I didn't know him then, otherwise I could have been diagnosed

much much sooner but when doctors first look at thyroid function in a person, when they first start to check thyroid function, they're going to run a screening test.

That test is known as the TSH or the thyroid stimulating hormone test and this test is really really great for picking up really advanced cases of hypothyroidism or even advanced cases of Hashimoto's when the thyroid is no longer working, that TSH number is going to be elevated, indicating there is very low amounts of thyroid hormone in the body. But that test is not ideal for probably people within the first 5 to 10 years of Hashimoto's because the test is-it can fluctuate so in the early stages of Hashimoto's, you may have a swing from having that number being a little bit too high, to a little bit too low, to then normal and this can happen just from a day-to-day basis where a person will have to be tested one day and there TSH will be normal. The next day, like you, the doctor will say "Oh, it's a little bit off but it's nothing to worry about."

And the other thing too is, when the scientists first determined the reference ranges for that test, they ended up pulling a bunch of people's blood and this blood, unfortunately, had people in there who actually had thyroid disease. So the reference range was pretty lax for that pool of blood where they were saying that numbers of TSH as high as 8 or even 10 were considered normal. Whereas most women feel best with a TSH somewhere between .5 and 2 and most healthy people without thyroid disease that are in their 20's and 30's should have a TSH somewhere around 1.

So, you know, like you, at one point I had a TSH of 4.5 and I was sleeping for 12 hours a night, losing my hair, sleeping under 2 blankets in Southern California, and my doctor told me that was normal. So 2 big problems with that test is often times it's going to be-reference range may not be strict enough depending on what lab your doctor is using. So anything above a 2.5 would be a red flag. I always tell people to get a copy of their own test results. And the other issue is in the early stages of Hashimoto's that TSH might actually look normal but you might still have a lot of the symptoms, especially some of the mood symptoms, fatigue, as well as problems with losing weight.

So the other tests I recommend are going to be thyroid peroxidase antibodies and these antibodies basically mean that your immune system has begun to

recognize the thyroid gland as a foreign invader, and is launching an immune attack on the thyroid gland. The 2 antibodies in Hashimoto's are thyroglobulin antibodies as well as thyroid peroxidase antibodies and different studies will say that about 80 to 90% of people with Hashimoto's will have them elevated, and a lot of times that is going to be the test that is going to figure out whether or not you have Hashimoto's. These antibodies can be elevated for up to a decade before you see a change in TSH.

Some people, they may have something called , so they may not have any thyroid antibodies but they might have the changes consistent with Hashimoto's on their thyroid gland and the way to test for that is actually with a thyroid Ultrasound. So, I know I've seen women who have said that they didn't think they had thyroid problems, they didn't think they had Hashimoto's, and once they got some more comprehensive testing they were able to uncover that really they did have the condition.

Katie: Yeah and that's, I think, what was so frustrating for me in my own journey is because most doctors are just trained, like you said, that they test TSH or if you have one who's maybe read some more, they'll test T3 or T4 or another variant but a lot of them don't test the antibodies unless they see something else that's a problem. So actually, in researching it, had read about how that test can be a lot more accurate for different types of thyroid Disease and had asked one of the doctors for it and he said "Well, unless your TSH is elevated there's no reason to test for that." And it's frustrating looking back because, knowing like what you just said, and what I've read in your book, that's actually not true at all.

And I remember being so frustrated and thinking "So, really, I just have to sit here and get worse and wait 'til my levels get to a bad enough place that they will show up on the regular test before a doctor's going to take me seriously." That was really frustrating but that's good to know for anyone listening that the antibody test can show it at an earlier stage. What about women though that have had all these tests and are still-they have all these symptoms but maybe the tests are still looking normal. Is it, at that point, an issue of the ranges or can someone have normal levels and still have the symptoms?

Izabella: Right, so, with the TSH that can be normal and the person may still have symptoms if they have thyroid antibodies so that's one option. And then the

thyroid Antibodies can actually come out normal and the person may still have Hashimoto's based on changes that are occurring in their thyroid Gland. So, Hashimoto's is kind of one of those things that-what is is basically white blood cell infiltration in the thyroid glands. So when immune cells start taking up residence in the thyroid Gland, they're not normally supposed to be there, that means that the thyroid Gland is under immune system attack and many times you'll be able to find that through antibody tests or through thyroid ultrasounds but sometimes a person may come out normal on all those things but when you do-it's called a fine needle aspiration-where you put a little needle in somebody's thyroid gland and take out some cells and look under them in a microscope, that will show changes consistent with Hashimoto's.

So definitely there's different types of diagnostic methods that can be explored. Obviously sticking a little needle into your thyroid gland is not the least invasive so a much less invasive method would be to do a blood test or an ultrasound. And so some doctors will diagnose a person based on symptoms but there may be other things that look like thyroid disease such as adrenal dysfunction or even some of the chronic infections like Lyme. People may present with thyroid symptoms when they actually have something else too.

Katie: Yeah, that's a really good point and that was really interesting to me because Dr. Christianson did order an ultrasound when I first started working with him and it turned out that there nodules on my thyroid and I was actually really surprised because the blood tests had always been normal even though I knew I was having symptoms. I didn't realize that there could already be nodules and changes in my thyroid at that point and thankfully those have now started to reverse through the treatment I've been doing with him but I was really-yeah I was really shocked to find that. So, if someone maybe is in the place where I was, and you were, for that time of trying to find a doctor who understands thyroid disease and can test them correctly, what would maybe be some interview questions someone would ask a doctor to determine if they're going to understand enough to be able to test correctly?

Izabella: Those are great questions. So asking, calling the doctor's office and asking them if they test for thyroid antibodies, what kind of thyroid medications they prescribe, those are 2 really good questions that will give you some insight into how the doctor-what comfort level they have with the thyroid because unfortunately

there's specific guidelines for thyroid that I learned about in pharmacy school that are just very very basic that talk about just using 1 type of medication and 1 type of test. But there's so much more beyond that and doctors like Dr. Christianson who specialize in this have a whole arsenal of tools to look at from different medications to use for people with thyroid disorders to looking at different lab testing as well as looking at different root causes.

Another thing I like to ask about is looking at whether or not the doctor has a root cause approach. So, I definitely recommend for diagnosis you can see pretty much any type of doctor that is willing to do the advanced testing but you also want to work with somebody who's trained in functional medicine to start looking at some of the root causes of the thyroid conditions and one trick, it's an old pharmacist trick, is basically to work with your compounding pharmacy, you know a lot of people have local ones in their area, and talk to the pharmacy staff there or pharmacists and ask them which are the best doctors for thyroid that they're aware of because usually those doctors will be familiar with a variety of different treatment options including compounded thyroid medications.

Katie: That's an excellent point too and, ironically, the next guest I'm going to have on the podcast for next month is a local pharmacist where I live, that's a big fan of yours, and she's found a doctor now that she's kept giving information to and he's gone to conferences and they've both learned a lot more in-depth about hormones and especially thyroid and so she's been an excellent resource for a lot of people here and that's a great point because I don't think everyone thinks to go to a pharmacist first. But sometimes they can point you in the right direction.

Izabella: Absolutely, sounds like a really great guest.

Katie: Yeah, I'm excited for her, so we've kind of mentioned in passing some of the different kinds of thyroid disease but can we go through and define those for people who may be trying to figure out what they might have or what their symptoms would look like for different-so obviously there's hypothyroid, hyperthyroid, and Hashimoto's which we've mentioned all 3 of those. Can you kind of walk us through the differences?

Izabella: Yeah, absolutely, so basically hypothyroid is a state of not having enough thyroid hormone. This is also known as an under active thyroid where the person does

not produce enough thyroid hormones and some of the common symptoms of that are going to be hair loss, fatigue, cold intolerance, eyebrow loss, difficulty losing weight, a lot of times depression, fatigue, that's kind of a big one for that and that is going to be kind of like an advanced form of Hashimoto's. Worldwide hypothyroidism, the primary cause of it is going to be iodine deficiency. So iodine is a nutrient that's required for the production of thyroid hormones and unfortunately, this is not longer the case in the rest of the world, or in the westernized world so in the westernized world iodine deficiency is no longer the primary cause of hypothyroidism because we started adding iodine to the salt supply with all of the public health measures. Now in the western world, Hashimoto's is actually the primary cause of hypothyroidism.

So Hashimoto's is an autoimmune condition that results in the breakdown of thyroid tissue to the point where the person can no longer produce thyroid hormone. And that's going to be responsible for anywhere form 90 to 97% of cases of hypothyroidism or a sluggish thyroid in the western world.

With hyperthyroidism, this a condition that is also known as an overactive thyroid where you have too much thyroid hormone being produced or supplied to the body and some of the symptoms that are commonly reported with that are going to be palpitations, excess sweating, excess anxiety, potentially tremors, excess weight gain, and I kind of like to think of it as a speeding up process where the person often times they're going to feel irritable, agitated, they're not going to be able to sleep. They're going to be sweating and they kind of feel like they're on amphetamines or something like that. And it can be very very distressful feeling. You also can have hair loss. You're definitely going to have either fatigue or just kind of agitation and some people may have a protrusion of the eyes. So if you've ever seen a person whose eyes seem to protrude a little bit more, that can be due to hyperthyroidism.

The primary cause of that is Graves disease. So this is also an autoimmune condition that happens to attack a different part of the thyroid gland and what it basically happens is the thyroid is no longer able to regulate it's thyroid hormone production. So that's going to be the primary cause. Other types of causes may be due to excess thyroid medications and those are pretty much most of the thyroid conditions that we deal with. I would say majority of people are going to present with hypothyroidism and that is caused by Hashimoto's.

Katie: Got you, so you say in the early stages of Hashimoto's, where even I've seen it in some other stages, you can kind of fluctuate between hyper and hypo, is that right?

Izabella: Yeah, absolutely, so this is known as Hashitoxicosis where in the initial stages what's happening is a person's immune system will be breaking down thyroid tissue and thyroid hormone will get rushed into the bloodstream causing swings of thyroid hormone going up and going down. So people might have transient hyperthyroidism and then the hormones get cleared out of the circulation and they'll have symptoms of hypothyroidism and unfortunately this can often get misdiagnosed as an anxiety disorder.

In my case I had, you know, the panic attacks. Some people have been misdiagnosed with bipolar disorder and I've, unfortunately, even seen some people who were misdiagnosed with psychotic disorders and hospitalized in the early stages of Hashimoto's because of this transient hyperthyroidism followed by hypothyroidism. It just definitely feels-the person can definitely feel like they're on a roller coaster and feel like they're losing their mind.

Katie: Yeah, wow. So you mentioned that, while it didn't use to be the case, Hashimoto's is currently the largest form of thyroid disease that we have in the western world. Why do you think we're seeing a rise in Hashimoto's whereas we used to see more just hypothyroidism?

Izabella: So that's a really great question and one of the reasons is because when public health officials realized that a lot of people were hypothyroid due to iodine deficiency, they began a salt iodonization program where they began to add iodine to the salt supplies in various countries. When the iodine was added to the salt supply, most people became iodine sufficient and thus people were no longer having these iodine deficiency hypothyroidism. So this is kind of the good part about it but what we, unfortunately, learned kind of the hard way, is that iodine seems to also be an environmental trigger for Hashimoto's. So it's a Goldilocks nutrient, it's got a narrow therapeutic index which means that dosages of it too low are going to be problematic for the thyroid leading to iodine deficiency hypothyroid and then dosages that are going to be too high are going to be problematic for the thyroid potentially leading to autoimmune thyroid disease.

The mechanism behind that is thought to be basically the iodine needs to be processed by the thyroid gland and whenever it's processed there's a chemical reaction that takes place that results in hydrogen peroxide production. The hydrogen peroxide-you know if you've ever poured it on a wound or poured on anywhere, you'll see how it kind of fizzes up and kind of starts to take up space. Well on wounds it's not as big of a deal but when you release that inside of a thyroid gland it doesn't really have anywhere to spread and go so the hydrogen peroxide can actually cause tissue damage.

It's known as a reactive oxygen species and basically when you have too much iodine conversion you end up with all of this excess hydrogen peroxide which can damage the thyroid gland and then cause immune cells to come into the thyroid gland to try to repair the damage and at some point-we're not quite sure how this happens-but at some point the immune system gets confused and it's in the thyroid, the immune cells are in the thyroid initially fixing it but eventually it starts becoming into a pattern of the immune system actually attacking the thyroid gland.

So that's kind of the thought behind the mechanism and things that exacerbate this hydrogen peroxide production are going to be selenium deficiency, which is also another environmental trigger for Hashimoto's. There's a lot of different things out there too so specifically, you know, looking at radiation or looking at different types of toxins in our environment. They've definitely been implicated in causing increased rates of thyroid damage and thyroid antibodies.

So I grew up about 7 hours away from Chernobyl, the nuclear disaster, and potentially some of my thyroid issues started when I was 3 years old and exposed to that nuclear disaster as children who were closer to the nuclear fallout would have higher rates of thyroid antibodies. So I know they measured one city that was 2 hours away and 20% of the kids had thyroid antibodies versus another city that was in a distant part of Russia ended up having just a small percentage of thyroid antibodies in the same kind of children group who were seemingly genetically similar and around the same age but just further away from the radiation and the nuclear fallout.

Katie: Wow, yeah that's amazing and I didn't even actually know that you had grown up there. So that could've been something that kind of was an underlying issue for you and then maybe the mono just really exacerbated it at that point in your life.

Izabella: Yeah, it's kind of a perfect storm of events that lines up to create autoimmune disease and a lot of times we'll see that people will have the genetic predisposition, then they'll have some sort of a trigger and then another part is going to be intestinal permeability. So somewhere along the way a person, perhaps from the diet that they're eating or from an infection they pickup, they may have the intestinal permeability, and that somehow leads to immune system dis-regulation and it's possible that I've had this my whole life and that just during college the mono actually exacerbated it.

So there's triggers and there's also exaggerators that can worsen the condition and definitely the Epstein-Barr virus has been found to worsen Hashimoto's. So in people who already had Hashi's and then got the Epstein-Barr virus or the Epstein-Barr virus reactivated you'd see a higher production of that antibodies.