



Episode 29: How To Optimize Your Thyroid to Beat Fatigue

Evan H. Hirsch, MD 0:00

Hello and welcome to the fix your fatigue podcast. Whether you can't get out of bed in the morning, your energy crashes throughout the day, or you're a bio hacker looking to optimize your energy, productivity and focus. This podcast is for you. I am Dr. Evan Hirsch. And I will be your host on your journey to resolving fatigue and optimizing your energy. And we'll be interviewing some of the top leaders in the world on the team resolution. Welcome. Hey, everybody, welcome to another episode of the fix your fatigue podcast. I'm so excited that you're here with me today because I'm going to be speaking with my friend, Dr. Amy all about thyroid. So let's learn about Dr. Amy and who she is. So Dr. Amy horniman is a leading certified functional medicine expert on a mission to optimize thyroid patients around the world and give them their lives back using scientific elements of nutrition and functional medicine. After her all her own experience of insufferable symptoms, misdiagnosis and improper treatment, Amy set out to help others who she knew. Were also going through the same set of frustrations and who are on the same medical roller coaster. She consults people around the world via telehealth virtual appointments beginning with an in depth 90 minute consultation addressing everything from lab values to nutrition to lifestyle. She specializes in clinically investigating underlying factors of chronic disease and customizing health programs for thyroid issues, autoimmune conditions, hormonal dysfunctions, digestive disorders, and brain problems. with a focus on optimizing thyroid function and thus optimizing progress her patients, Amy looks at each person as a unique individual and not just a lab value. So important. She examines all factors that tie into thyroid dysfunction and thyroid symptoms and treats the person from top to bottom to give them their lives back. Dr. Amy, thanks so much for being on the show today.

Amie Hornaman, DCN, MsN, CFMP 2:07

You're welcome. And thank you for having me. I'm excited to be here.

Evan H. Hirsch, MD 2:10

So let's start off by talking about your story of thyroid and no doubt fatigue, please share with us.

Amie Hornaman, DCN, MsN, CFMP 2:19

Yeah, for sure. So I think we all come into this space with a pain to purpose story where we went through something and then we learned from it and then want to pass it on to others so that they don't suffer like we did. So my story goes back 2025 years, I was competing in fitness and figure competitions and doing fitness modeling. So for each event or photoshoot, I would die it down. Because I don't have a naturally thin lean family, we have diabetes in my family the whole deal. And I would really have to work my butt off to get down to that size to stand on the stage in a bikini or to get in front of the camera. I had done it multiple times. I knew how to do it. I knew what worked for my body. So this was like time number, I don't know 15. And all of a sudden I'm gaining weight instead of losing. So here I am on this really strict diet. I'm going to the gym twice a day. And I'm like something's not right. And then the fatigue comes on. I can't even get through workout can't get I can't run much less two workouts a day. I can't get through one. I'm not I'm not working well. My brain fog is horrendous. I'm losing hair. So I go on my doctor search like all of us do. And we think I'm just gonna go and get tested. They're gonna tell me what's wrong with me. So I go to six different doctors, they all told me to eat less and exercise more. Mind you I'm eating broccoli and asparagus and fish and chicken. Like I can't eat less, and I can't exercise more. And what is wrong with me? Can someone please just give me an answer. So the Seventh Doctor finally diagnosed me with hypothyroidism belt my throat told me to swallow. So you have goiters and you have hypo. So I'm like, Yes, I get a pill that's gonna fix this. And you know, I wasn't in the functional medicine space at the time. So I'm thinking this is the answer. So I'm going to feel better five months later, no change, no change in fatigue, no change in my weight, not one pound. So now I go back to my doctor. I do some research on Dr. Google, right here's here's some proper treatments. Here's what I should be doing. As soon as I don't do that. I said I'm going to find someone who does. So that led me to a functional medicine practitioner gave me all the answers the proper testing, the proper treatment, nutritional changes, lifestyle changes, testing, everything else, all those other factors that come into play with hypothyroidism and literally gave me my life back. He became my mentor and now really led me down this career path because I wanted to do what he did. I wanted to fix people.

Evan H. Hirsch, MD 4:51

Brilliant, and that's such a common story. It's It's shocking to me I the people that I see with fatigue is Pretty much everybody. I would say nine times out of 10. They have a thyroid disorder, and nine and a half times out of 10. It's not optimized. It's not being treated appropriately. So why do you think that's the case?

Amie Hornaman, DCN, MsN, CFMP 5:14

Gosh, I wish I knew because I go into this so much. When I talk to patients, and they asked me that, too, why has no one ever told me this before when I tell them what I'm seeing. And I think it comes back to what they learned in med school, test the TSH treat with T four. And that's it. And it was interesting. I had heard an interview with Dr. Brownstein. And he stated that in med school, his one professor, and we need more professors like this in med school, one professor told them that 50% of what they learn will be outdated, null and void in five years, or 50% of what they learned in med school. And I think that's the problem is that doctors get into their practice. And they don't go

deeper. They don't review what they learned in med school. I mean, that's my only guess. So they, they, they stick with what they were taught. And that's it. And really, that's where we come in, right? Going deeper, looking for the root cause testing more test, don't guess, realizing that there's more treatment options available for people out there than just t four, here's some libo go have a great day, you know, so I think there's more options that conventional Doc's if they don't think outside the box, or if they haven't gone through a problem of their own or with a family member, then they're just stuck in their conventional medicine box. And that's it.

Evan H. Hirsch, MD 6:33

Yeah, I would definitely agree with that. When I went through medical school, they told us the same thing. And actually, the suffix on that was, you know, 50% of everything we teach you now is going to be is wrong and outdated in 510 years. And we don't know which 50% that is, that is right. And so that that is definitely the challenge. And it seems like for a lot of practitioners, a lot of conventional Doc's, the lack of curiosity, I think comes from, hey, this was good enough for my mentor, and my mentor taught me, and I love my mentor, or loved my residency, or whatever it was. And so this is kind of what I'm going to continue on. Plus, also, if you're looking in conventional journals, that's what you're going to, it's just going to reinforce, you have to kind of get out of that paradigm. And a lot of people, they're never expected. Some of them are never even exposed to integrative functional, more natural medicine sort of stuff. So I definitely agree with what you're saying. So you talked about TSH, and you talked about t four. Let's talk about laboratory tests. So what do you like to what's being used conventionally? And then what do you like to use?

Amie Hornaman, DCN, MsN, CFMP 7:35

Right? So if you go into your family, Doc, conventional Doc, even your endocrinologist, and you get sent to a specialist, they will test TSH and maybe free t four if you're lucky. But that doesn't leave you very lucky because you're missing out on free t three, reverse t three and the thyroid antibodies TPO and TGA antibodies. Now there's other tests too, there's total t four, there's total t three, there's t three uptakes. Those are kind of bonus tests. But the core that I like to see TSH free t three free T for reverse t three and the two thyroid antibodies, sometimes people will only come with one tested, they'll only come with TPO. like dogs forget that there's that second one, there's that TGA antibody. So we have to test that to just to check for hashimotos and Nat gives us the full picture of your thyroid health.

Evan H. Hirsch, MD 8:24

Okay, that's great. And so in terms of talking about those in the context of physiology, like what are they actually measuring in the in the different those different steps?

Amie Hornaman, DCN, MsN, CFMP 8:38

Right, so here's the fail and only testing TSH, TSH is the pituitary hormone it's released by our pituitary is thyroid stimulating hormone. So I like to give analogies when I teach my patients so you might hear me tell like analogies and stories but so TSH, I, I compare it to, like the pituitary is feeling like Hey, is there enough thyroid hormone in the body? Is there enough here? Man, there's not enough. Okay, hey, thyroid hormone, can you

wake up a little bit? Can you so it stimulates the thyroid gland to produce more of T four and T three the to thyroid hormones. So it's kind of poking it. And that's why I say TSH is one of the only lab values you'll see in blood work or high means low. The higher it goes, the more hypo and low your thyroid is the more low you are functioning, everything slows down. So that's good to take a look at and listen, if you're coming back and TSH is sky high. And pituitary is screaming at the thyroid. Guess what, you have a thyroid problem and that's probably when you'll actually need paid attention to by your doctor is if you are flagged high with TSH. Now, the downside of testing TSH is number one the range. So conventional medicine has this huge range, right we use the target on the side of the barn analogy. You have a barn and if I give you a ball and I tell you you'd hit the side of the barn, you're probably going to hit it for from 50 feet away, right probably gonna hit it. But if I put a bull's eye on the side of the barn, that's the functional medicine, optimal range. That's where we see you being your best. That's where you will feel your best and be optimal, not side of the barn range, but target on the side of the barn range. So TSH is is been debated for years. It's narrowed down, it's narrowed down now on most labs to for 4.5. In combat in functional medicine, we still say below two is optimal. Anything above a two we start to go, huh, yeah, if you've got symptoms, that might be hypo. So then let's go further. Now let's look at your free t three, make sure that's optimal. That's the most important one, t three is the active thyroid hormone. Without it, your your cells are not going to thrive, you're not going to have a metabolism, you're not going to have energy, not going to grow your hair not going to be in a good mood, you're going to be constipated. So really not testing free t three is like a crime, we need to see what your active thyroid hormone statuses. And if that's low, that's a problem. Again, low by functional standards is below 3.5. I like a 3.5 or above, some people even do better and the upper range like four or five, and then we go to reverse t three. So if we're thinking about free t three as the gas that's what runs the show, that's what gives you energy and gives you a metabolism, then we have to look at the brakes. And reverse t three is the brakes, if that's high, and again above a 12. So you might not even be flagged you can be riding around with the reverse the three of an 18 to 20. And no one will say a thing that's even if you can get it tested, no one will say a thing because it's not flagged, it's not read, you don't have the H next to it, they're not stopping and looking. But in functional medicine, if you're above a 12, we say hey, you won't have a conversion problem here. Too much of your T four is converting to the brakes, you got the brakes on you have no gas, you can't run this car, your brakes are on all the time you're trying to push this car down the road and the brakes are on. So that's the reverse t three why we look at that free t four is important. We glance on it, I look at it. You know each situation is different depending on the medication a person's on and how much and and where that goes. And whether they're converting or not converting or T three only, then we have to look at the antibodies, those antibodies again, a lab could have you normal ranges less than 20. But guess what, folks, if you're coming in with a 15 with your TPO antibodies, you have soldiers that are attacking your thyroid, you have auto immune, it's just not flagged yet on your labs, but it eventually will be why not catch it before it gets flagged and say hey, there's the presence of auto immune here, there's the presence of hashimotos Let's stop your body from actually attacking your own thyroid. So that's what each of those labs mean and that's why it's so vitally important to look at all of them to get that full picture.

Evan H. Hirsch, MD 13:05

Yeah, that's great. And so then what what do you like to see for free tea?

Amie Hornaman, DCN, MsN, CFMP 13:09

So free tea for it's funny I say 1.5 or above but right so if you're a tea only candidate like myself I do not convert you give me t for medication, I get worse I go hypo, my reverse t three goes up, I go hypo. So my free t three or my free t four rather is low. It's flagged low but that's okay because of the scenario because of my individual situation the medication I'm on my free t three is good. My reverses down. My my TSH is below two. In fact, it's kind of suppressed. So and and since you're more than a lab value, we go How do you feel them? I can answer my feel great. I'm optimized, I'm fine. My energy is great. Now I lost the weight. I am optimized. So I don't really care about the free T for now someone else comes to me and let's say they are not diagnosed yet or they're on T for only or they're just not feeling right. Then we do look at that free T for we want to get that whole picture and see like, Okay, listen, if you're free t four is a point eight, and you're free, t three is coming in at 2.5. But you're normal. Everybody's telling you your labs are normal, they're fine. They're within normal limits. That's still a red flag for me. Now you have low to low thyroid hormones. So we have to look deeper. What is causing that? Is it the destruction of your thyroid from hashimotos? Is it an underlying infection that's just changing your thought? Are you taking a medication that's tanking your thyroid? So many different factors that are dropping both of the thyroid hormones from being produced in proper amounts?

Evan H. Hirsch, MD 14:49

Yeah, a lot of really great things you've just said there. I think what's, you know, one of the most important ones is to pay attention to the symptoms. How do you feel Right, because because as you mentioned, sometimes the the labs don't look, they don't correlate with how somebody feels. So we always want to use them as data. But we want to go with the subjective experience at all times, you know, that really is the most important thing. So thank you for bringing that up. The other thing, or the question that I have for you, my ranges are just a little bit, I think, tighter than yours. And I like, which is great, you know, we can have a conversation about it. I think, you know, TSH, I like it to be between point five and 1.5, the free t three I like it to be above 3.0, the free T for like it's below 1.2. So I guess my question to you around the reverse t three is that I understand that? Well, I guess the question is, why does reverse t three get elevated? Let's start there.

Amie Hornaman, DCN, MsN, CFMP 15:52

A really good one. Okay, so many causes can elevate reverse t three. So let's say you land in the ICU. And this is a an answer to your previous question of why doctors don't test, you'll often hear if you ask for a reverse t three, we only test that in the emergency room or in the hospital, you don't need that tested, will you do it? Yes, you do need that tested outside of the ER the ICU, your body will naturally elevate that it's a survival mechanism. So your body's going to elevate your reverse t three to slow down your metabolism if it needs you to survive. And that is a natural occurrence that we see. But what if you're not in an emergency situation? Then we have to say, Why is your reverse d3 going up? Right? Is it that you are on too much t four, and you're not converting

properly, your doctor just keeps pumping up your T four dose and now you're taking, you know, 180 200 micrograms, and T four but you're converting all of that to reverse t three, that's a possibility. You can be anemic, you could have high insulin, you could have low iodine, low selenium, low magnesium, all those conversion factors that are so important. You could have just generalized inflammation, epstein barr virus, Lyme disease, all the things that you talk about, and it could be those coinfections running underneath the surface that's pushing that reverse t three up and putting your brakes on.

Evan H. Hirsch, MD 17:17

Gotcha. So then that reverse t three is giving you a warning sign that, hey, there's one of these things going on that's causing this thyroid dysfunction.

Amie Hornaman, DCN, MsN, CFMP 17:27

Mm hmm. Definitely and causing that conversion issue. So that's where we can come in and help a person who is I like to say, like stuck in the Synthroid box, because I see so many thyroid patients like that, that are just on T four, and their doctor won't change it and they don't like armour, they don't want to use t three, Well, then let's help that conversion, then let's address all of those factors that are that could be pushing that reverse t three up so that we can get that down, take the brake off so your gas can start and that conversion can happen more fluidly.

Evan H. Hirsch, MD 18:01

How did I get in this Synthroid box? Right? I know, that's what we've been taught in med school, right? Yeah, that's really good. I really like that analogy. So then in terms of the antibodies, so we know that 90% or so of all low thyroid is autoimmune. Would you agree with that statement? 100%. Yep. And so then checking the antibodies? If we know that, then what sort of additional data is the antibodies checking the antibodies gonna give you?

Amie Hornaman, DCN, MsN, CFMP 18:30

So you know, antibodies can fluctuate, I try to not have my patients hyper focus on the antibodies, because some do, they'll be like, Well, I was, you know, 700. Last time we tested and now I'm 1200. Okay, well, maybe you're under stress, maybe Did you eat some gluten last week, you know, because that can boost your antibodies up. So they're, I don't want to base a person's success on the presence or non presence of antibodies. And a lot of people talk about pushing hashimotos into remission. Yeah, we can, we can kind of do that. But you can be in remission. You can be feeling good. Like you could test me now. If my antibodies are 5000. You know what, I don't care, because I feel good. It goes back to how you feel. I am fine. I am optimized, and maybe not 5000. But you know what? I mean, if they came back at like, 900, I wouldn't be I wouldn't panic and think that I have to do this major overhaul, because I know they're fluctuating. Maybe it's because I'm working too much. Maybe I didn't get enough sleep. Maybe I did let you know, eat that bond with my burger that I probably shouldn't have. So it still has to tie back to how you feel but that the, I guess data that those antibodies provide us is is someone in the state of Washington or are they are they in an autoimmune flare? And does that correlate to why they feel like absolute garbage? And then if they're not doing

what they're supposed to be doing, if we see those antibodies continuing to climb, that's when we do have to look for Okay, is that Which we should probably look for earlier. Is there the presence of an underlying infection? Is something else driving those antibodies up? Are you bingeing on gluten or something? Because this isn't right. And then we look a little bit deeper into behavior of the patient. Mm hmm.

Evan H. Hirsch, MD 20:14

That makes a lot of sense. Because Yeah, you could be feeling great, and still have elevated antibodies, which means there's still something that's triggering that. And there's still some work that needs to be done to make sure that you don't get this progression of just the thyroid being destroyed over time. Right. Right, right. Yep. Exactly. Because that's kind of what's happening. Right? What's that natural progression of hashimotos? If it's not treated?

Amie Hornaman, DCN, MsN, CFMP 20:37

Yeah, I mean, there's five stages, six stages, five stages. Five, I think. So you start with it varies from what you see online, but you start with that natural inclination, the genetic predisposition to have autoimmune. So look back on your family, I just met with a patient today, she's never been diagnosed with hashimotos. But her mom has graves, her gram has type one diabetes, and somewhere in the lineage, there's like, Ms. I'm like, Okay, then it's probably Hachi. Because if we deduce that 95% of 90 to 95% of hyperthyroidism is hashimotos. And she was diagnosed at like the age of 15. Like, you know, I really don't think that you did anything to destroy your thyroid. So where it's just hypothyroidism, like we see with extreme dieting, over exercising certain medications, radiation, chemotherapy, none of that's going to occur before the age of 15. If you're getting a 15, it's hashimotos. So you have that genetic predisposition stage, then you move into where you might have antibodies, but your thyroid labs still are all good, I'll use the term normal with air quotes, normal. And then stage three, we start to see those numbers change. So now your TSH goes up. Three, t three and three, t four go down, we actually start to now you could have symptoms in stage one and two, but by three, you might actually be diagnosed. And by the time you reach stages four and five, now you're progressing into those other autoimmune conditions. Because where we see one we see more than one. So you're right. I mean, the goal is to stop it in its early stages. So your your soldiers that are part of your auto immune system, like those confused soldiers, like I say, aren't going out and beating up your thyroid, because once they're done, they'll find something else. Maybe they'll choose your joints and you get Ra. Maybe they'll choose your small intestine if they haven't already, and you got celiac. So if we see this progression of autoimmune conditions.

Evan H. Hirsch, MD 22:40

Yeah, I'm glad you mentioned that that's such an important point. Like when you have autoimmunity, it's never just to one organ. No, if you're having joint pain as well, then it's very possible that the auto immunity, the immune system is attacking that in addition to the thyroid. So then we've talked about how thyroid or low thyroid is kind of this two part where you've got low thyroid hormone, and then you also have the autoimmunity. So which one do you go after first?

Amie Hornaman, DCN, MsN, CFMP 23:12

Both. And so we, we want to start since the thyroid, the master gland, you know, and we want to give you a quick win, right? So we want to make sure that you're on the right medication, that you're doing everything to support thyroid function, all your micronutrients, all that is great. And then at the same time, we want to make sure that you're not running around with high blood sugar and high insulin, because that's just going to negate all of our progress. Anything that we tried to do medically, will be negated if you're pumping up your blood sugar and your insulin, which is going to increase inflammation, which is going to make the thyroid not work well anyways, whether you're in hypo or hase state, you're done. If you're walking around with inflammation, so lower the insulin, lower the blood sugar, address that issue test for it, look for it, treat for it naturally berberine. Love that, and then move down the road to the dietary and lifestyle changes. Because if someone's stressed out all the time, they're pumping out cortisol, that high cortisol will raise blood sugar and insulin that will create inflammation. And cortisol in and of itself being high will interfere with T 43 conversion. So as we're trying to help your thyroid over here, you're in and around all stressed out and pumping out cortisol left and right. Again, it's not going to work. So it's kind of the both and we have to address everything at the same time.

Evan H. Hirsch, MD 24:34

Yeah, that makes a lot of sense. So one of the things that I do first and my programs for some of the similar reasons that you mentioned about getting a quick win and you know, everything works better when the thyroid is optimized, is I optimize the big three like the adrenals the mitochondria and the thyroid. Would you speak quickly to that relationship with what you've seen that that looks like?

Amie Hornaman, DCN, MsN, CFMP 24:56

Yeah, so adrenals we can see higher low and And with adrenals, you know, people, my patients usually come in and they just say, my adrenals are blown out, like I've they're shot or adrenal fatigue. And that might be the case. But we don't know until we test and we have to test those points of cortisol because we are supposed to have higher cortisol in the morning to wake us up. And then it's supposed to go down throughout the day, and then be lower in the evening to just make us chill out and relax. Now, I'm sure you've seen, I've seen everything from flatline low, where people literally are not even putting out enough cortisol to survive, we need cortisol, we don't want to suppress our cortisol. Well, I don't know, of course, all we're dead. So we need some, we just need it in the right amounts in the right pattern. So sometimes people will have flatline low sometimes people will be flatlined high, pumping the cortisol all day, your adrenals are literally overworked. And that's going to interfere with the thyroid as well and create a ton of inflammation. So in the flatline, low, you're going to be tired, you're not even going to want to get out of bed, you're going to be shot and then you have the thyroid over here not working properly. You mentioned mitochondria, all functions go down, mitochondria go down goes down, ATP production goes down on the cell, you have no energy in that state whatsoever. You're done. Now you say okay, well, what about the high cortisol over here? Yeah, but that can only last for so long. Our adrenals can only over pump cortisol for so long, you're eventually going to crash. So you might crash down the flatline low. Now again, tie back to thyroid, mitochondria, everything boom,

down, no energy production whatsoever. or worst case scenario that again, I just saw today, a reverse curve. So now you're low in the morning and you go high at night. So now you can't get out of bed in the morning. Nothing's working. No ATP production, thyroids low, cortisol is low, but then you get adrenalized at night, right before bed. And these are the people in the gate that second when, and they get the rush, and they get the tight chest and they feel like they're having a panic attack at 10 o'clock at night when they lay down to go to sleep. So they're on that reverse curve. Yeah, it's all tied together. It's just it's amazing when you look at that whole picture, and everything is tied together. But at the cell level. Listen, you have to have that decrease if the cells inflamed. Nothing's working. Right? Yeah. I mean, you're, you're you're alive. You're alive. You might be dragging yourself through the day. But the whole Krebs cycle, ATP production, it just goes down everything. fibroid, low, low, low, everything is low. your metabolism is low, your energy's low. Everything's low at the cell level, your browser low. That's why you're constipated. You're losing hair, because your hair growth cycle has now slowed down. Everything is low.

Evan H. Hirsch, MD 27:51

Mm hmm. Yeah, that's brilliant. It's such a, it's so important to remember that it's not you can't just fix it with Synthroid. Right. Yeah, right. So then, in terms of thyroids relationship with fatigue, like, how does the thyroid make energy? You kind of talked a little bit about, I guess, but how does it make energy that ends up? Or how does it when it's not working? How does it cause fatigue?

Amie Hornaman, DCN, MsN, CFMP 28:21

So we we talked in the beginning about t three being that active thyroid hormone. So if we go back to the cell, every single cell in your body cells in your brain cells on your heart, every single cell in your body has a receptor site on it 43, the active thyroid hormone, so that makes it interesting, when we think we're giving people t four and T four is totally inactive. It's the storage, it's like the gas that's in the at the gas station in the pump, like you gotta it's not run in your car yet. So it's just in storage, we don't have receptor sites on ourselves for T for only t three. So we have to have that proper conversion of T four to T three. And listen, our natural thyroid in a in a non second a euthyroid. State, you're making roughly about 80 to 90% T for and around 10 to 20% of T three, naturally, because the body knows that most of the time, people will convert t 43. But even even the body is so smart to say, but we're still going to give a little bit of T three to this person, even 10 20%. You know, just to keep them going to skip that middleman, skip the conversion factor because a lot can go wrong. And just give some of the cells a little bit of what it wants a little bit of that T three. In a non sick person. That's enough. In a sick person, we see a total decrease in the production of T four and T three, we see that T four t three conversion issue. Now all your cells are starving for t three. They're not getting it. And that's why we have the brain find people forget that There is t three receptor sites on brain cells. And they wonder I mean, I have people I don't know about you haven't I'm sure you do. But I have people say maybe I'm in like early stage dementia, I don't know. It's just your thyroid, I mean, your brain is not functioning, nothing is functioning, unless you have that proper amount of T three. And then we can go deeper and say these poor people that have total thyroidectomy is we take their thyroid out that one's produced t four and T three, and we give them T for how does that

make sense? We're not even replicating what the thyroid did naturally when it was in their body functioning. So we rip it out and only give them one hormone. I mean, yeah, they're gonna feel like garbage, of course.

Evan H. Hirsch, MD 30:42

So then, what do you like to use to convert T4 to T3.

Amie Hornaman, DCN, MsN, CFMP 30:49

So definitely, magnesium. We're all low in mag raw mag, I love mag, selenium, and the proper amount. I see too many people reading like thyroid blogs and in groups and they they pump out, you know, 200 micrograms Selenium every day, and then they're Selenium is too high, that can be a problem with conversion, I want to make sure that their ferritin levels are proper. So we test don't guess on that, we want to make sure you're not anemic, we definitely want to check that ferritin to make sure that that's in an optimal range. So we can use things like you know, fair, chill, iron, vitamin C, all that to raise that zinc levels are vital for t 43 conversion, also vital for your hair. So if you're losing hair, you're going to want really good zinc levels. And you're going to want that for the T 43. Conversion as well. I died. I am in the middle right now. But I am intrigued. Let me say, I do believe we need iodine. I do believe we need some. I think it is the Goldilocks kind of element that we have to fall right in the middle. Because the truth is our thyroid needs it. The truth is it binds to bromide and chlorine and excretes that out of the body. I don't know I i want to talk to Brownstein, about going the high dose iodine route. I'm not sure what your take is on that yet. But I am super intrigued with it. But I do believe we need some in order for that proper conversion to take place. And then again, again, supporting the immune system with vitamin D, looking for underlying infections and treating those especially if you're an active EBV that's gonna be a problem, you're just a ball of inflammation, that's an issue. And then insulin, insulin is a huge one I see so much insulin resistance with hyperthyroidism, probably I would say 90 to 95% of my hypo and hosue patients have insulin resistance. And they don't know it because no one tested their fasting insulin to see if it was above a six. And everyone's telling that they're a one see if 5.7 is just fine. And then they're okay walking around with a fasting glucose of 105 because we're not flagged. But that high insulin is just going to create a ton of inflammation. And that's going to affect that conversion, too. So there's so many factors, I always say converting t 43 is like running a marathon, but with some hurdles in there. Like you have to run 26 miles and you gotta jump over hurdles in the meantime, it's really hard to do. It's hard.

Evan H. Hirsch, MD 33:15

Yeah, I'm glad you brought up iodine, because that's one that I arm wrestle with myself quite a bit. And I think you're you're right on target with finding that Goldilocks dose? Because I've seen autoimmunity triggered by high dose iodine, right, you know, or made worse. And yet, there are some people who need it. So I'm kind of with you where everybody needs a trial. But the question is how much you know, most supplements are going to give you 150 micrograms, which might be fine. But for other people, you know, they need more. And I think some of it also depends on where you are in the world like Brownstein is in Michigan, which is in the goiter belt, right? Where they don't have any

iodine in the soil or very low amounts, right, versus other parts of the country. Right, exactly. Do you agree with that?

Amie Hornaman, DCN, MsN, CFMP 34:06

I totally agree with that. Yeah, I mean, I like 150 for a minimum. And then sometimes we go hire and assess tolerance and do the salt loading on a daily basis, even for support of the adrenals. And do a couple times of remingtons Real Salt and warm water and slug that down Kaisa with 12 ounces of water. And that's, that's a great way to kind of support the iodine effect when you're using it. Even if you're going up in your iodine dose that's really good to to implement, and then it It helps support your adrenals too. I've seen too many people with low sodium and and adrenal dysfunction at the same time. And I'm like, are you using salt? I mean, your sodium is 134. I mean, come on, we got to get that up. So and that's gonna play a role with fatigue too. We can all we can always tie it back. We can always tie everything together. So if your sodium is low, and you're not getting enough salt that's going to make you fatigue. It's also going to hurt your adrenal that's going to make you fatigued. If you're using iodine, you're not using salt that's going to just make you feel like you're detoxing.

Evan H. Hirsch, MD 35:07

So yeah, that's a good point. So let's get just a couple more questions left. This has been amazing. So let's talk about medications versus supplements or glandulars. You know, Synthroid versus generic t four versus armour versus liath. irony, or USP, t three, like, what do you think is and then and then a glandular? Like, what are your favorites? What do you think doesn't work at all? What are your thoughts on that?

Amie Hornaman, DCN, MsN, CFMP 35:39

Right, so Okay, I'll start with a question I got the other day on Facebook. Dr. Amy, what's your favorite thyroid medication? Again, the one that's gonna make you optimized, which is like the one that's gonna make you optimize? Um, you know, I mean, I've heard other people talk about, well, if you're hashimotos, you have to be on like MDT natural, desiccated thyroid armor and pay all that. I don't find that's the case. I think it's different for each and every individual. And even in the MDT category. I've had patients that do well on armor, not on nature, thyroid, some that do well on nature, thyroid, not on armor, though I go armor is horrible, not for everybody. So it really is about finding that happy, medication type, and then dose. So then well, let's talk about the the synthetic. So we have liva, which is generic Synthroid brand and then Tierra scent is kind of like the mack daddy of tea for because it's the most pure, the least amount of fillers. So when we look at lipo and Synthroid, some people will react to that and feel worse, but it's more because of the fillers that are in them. And now I have heard that it's I want to say it's leivo 50 microgram tablets do not have dyes, even though the tablets look white, some of them still can have red and blue dye. And people will react to that if they're very sensitive. So I want to say that 50 micrograms out but I don't have that confirm that was told to me by another doc. And I've never looked that up. But I mean, just in general, we we go by I like the brands, I like tiersen, because it's most pure if we're going synthetic, let's do tiersen and Leo siren and recite Amal and find that happy dough. So the nice thing about the synthetics is that we can change the ratio. So if you're not really good at converting, if you have the gaiwan do two genetic

mutation, that means that you don't convert very well, then we might do just a little bit of T foreign raise your T three. Now we can do that with the N DTS as well. So if you're on an arm or nature, thyroid, we can still add in T three with your armor. It doesn't there's not a rule that says if you're on natural diskaid, thyroid, you can't use a synthetic to. So we can use a little bit of T three to change that ratio. And then we move into the glandulars. And you know what my my opinion on the glandulars is changing recently, because I have seen people optimize on them. And I'm like, Well, yeah, I mean, listen, it's working. If it's working, let's not let's let's not fix it, right. So I have seen people optimize on glandulars. And I want to tell you, I'm looking deeper into T two, I think that this is kind of a hidden gem, it's three, five, di o l tyrosine. Or Elvira Nene? Well, there's two of them, there's three, five, the ayato l tyrosine. And there's three, five, the auto fire name, and we kind of forget about T one and T two. In the thyroid hormone, we always talk about t three t four. But there is T one and T two. And that has some promise in the in the supplement world of being like a T four because it's not inactive. It's not like a TV or like a T three, I'm sorry, it's not inactive, like a T four, it's closer in relationship to T three, just a lesser strength. So for people that can't tolerate t three can't get their doctor to change, we might be able to use T two to really make some significant changes in their their thyroid health. So that's kind of uh, I'll get back to you on that. I'm diving more into the research.

Evan H. Hirsch, MD 39:21

That's very cool. And so by that rationale also with the the natural or the glandulars. You know, where it's a whole component or even the desiccated where it's ground up. I mean, oftentimes, you know, because they're USP. They're really more they're not entirely non synthetic, but, but that you have more of a chance of getting the one in the two if you are in something that's more natural.

Amie Hornaman, DCN, MsN, CFMP 39:43

Yep, exactly. Yes, we do see T one and T two in the glandulars and mdts. Yep.

Evan H. Hirsch, MD 39:50

And I've seen that sometimes people who are more sensitive, do better on synthetics because they're reacting to things in nature. Anyway, sometimes reacting to foods or they're reacting to inhalants and then they react more to natural, desiccated or whatever. Have you seen that as well?

Amie Hornaman, DCN, MsN, CFMP 40:08

A little bit? Yeah, I mean, that's where it comes down to that individual case where you have somebody I mean, usually by the time they get to me, they've either been stuck on tea for or they've tried a bunch of different glands. glandulars are en DTS, and they just can't find their their ratio. And you're right, it really does come down to Okay, you've been on me though, let's move to tear sent more pure. Now let's add in some t three, because if you didn't do well, on x, y, z over here, let's just try something different. So yeah, I have seen that it's in some cases.

Evan H. Hirsch, MD 40:42

Excellent. So you are giving our listeners a free gift. And this is the thyroid lab checklist. Can you tell us a little bit about that?

Amie Hornaman, DCN, MsN, CFMP 40:52

Yeah, so it is going to give you labs and symptoms number one huge list of symptoms that I'm going to tell you, they're eye opening, because when we talk about thyroid, we don't have time to list all the symptoms here. We talk about the big ones, the weight gain, the inability to lose weight, the hair loss, the fatigue, the brain fog, the depression, constipation, those are the biggies. But then we forget about the ones like increased sensitivity to allergies, hives, frozen shoulder, muscle pain, joint pain, migraines, I mean, it just goes down down the list. So some of our men, I've had people call me and be like, yeah, I've checked 35 of those boxes. So it's kind of eye opening, and then I give you the labs to get as well as the functional optimal values that we want. So I know you have your labs in front of you. And you if you were lucky, you got all of them done. And then you say, Well, my doctor told me I was normal. Okay, compare it with those lab and symptom checklist compare with the optimal lab values, and make sure that they are in the optimal range, not just normal. We don't want to just normal.

Evan H. Hirsch, MD 42:00

Awesome. Yeah. Thank you so much for sharing that with our listeners. And then where's where can people learn more about the wonderful work that you're doing?

Amie Hornaman, DCN, MsN, CFMP 42:08

Yeah, absolutely. Thank you for asking. So you can go to my website at Dr. Amy horniman.com. You can listen to me on my podcast, the thyroid fixer podcast, which you were a guest on. So yeah, that was fun. That was so much fun. I love talking to him. And we can do this anytime. Absolutely. If you're interested in discovery call, you can go to my Dr. Amy horniman comm page and click book a call and we can chat and make sure that we are a right fit for each other and that I can help you but you can do that as well if you're interested in my services.

Evan H. Hirsch, MD 42:39

Awesome. Dr. Amy, thanks so much for hanging out with me today.

Amie Hornaman, DCN, MsN, CFMP 42:43

My pleasure anytime. This is fun.

Evan H. Hirsch, MD 42:47

I hope you learned something on today's podcast. If you did, please share it with your friends and family and leave us a five star review on iTunes. It's really helpful for getting this information out to more fatigue people desperately needed. Sharing all the experts I know in love, and the powerful tips I have on fatigue is one of my absolute favorite things to do. If you'd like more information, please sign up for my newsletter, where I share all important facts and information about fatigue from the foods and supplements to the programs and products that I use personally and recommend to others so that they can live their best lives. Just go to fix your fatigue.com forward slash newsletter to

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