



## Balancing your hormones for better energy

**Guest: Dr. Justin Marchegiani**

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**Alex Howard - [00:00:15]**

Welcome, everyone, to this interview where I'm super excited to be talking with Dr. Justin Marchegiani. Firstly, Dr. Justin, welcome and thank you for joining me.

**Dr. Justin Marchegiani**

Thank you so much, Alex, for having me. I'm really excited to be part of the summit.

**Alex Howard**

So I think this is going to be an important interview. We're going to be talking about the relationship between hormones and fatigue. We're also going to bring some of the places that digestion is important into that as well.

Just to give people Dr. Justin's background, Dr. Justin Marchegiani is a graduate of the University of Massachusetts, with a degree in kinesiology and premedical studies. Dr. Justin has completed his doctorate degree in chiropractic from Life West University and is a licensed doctor of chiropractic in the state of Texas. He has completed postgraduate study in the area of clinical nutrition, rehabilitative exercise and functional medicine so he can offer the most cutting edge techniques to help address his patients' growing health care needs.

Dr. Justin works with a wide variety of patients all the way from athletes trying to increase performance and heal from injuries, to the everyday person with chronic health challenges. Using a holistic approach, Dr. Justin addresses core underlying barriers to health, which allows his patients to heal faster and feel better

So, Justin, I'd love to start a little bit with some of the story that brought you to this point. Because some of what we're going to be talking about today, I know was also important in your own health journey. So just tell us a little bit about that to set some of the frame.

**Dr. Justin Marchegiani**

Excellent question. It's always good to understand the healer's journey. Almost everyone in the health space has some kind of story like that. And it's good to connect. So in general, myself, I had a lot of chronic fatigue growing up and little did I know it, I had some chronic adrenal issues as well as Hashimoto's thyroid condition. And so I had some brewing autoimmune stuff, some brewing adrenal issues. And I was more conventionally minded, I had a mother who was an operating nurse for a very long time, 40 plus years. So I was a little bit more conventionally minded out of the gate

So I worked in the surgery center and I would help the doctor position patients during and before surgery. And I was the person that would go into the surgery and hold the limbs of patients like diabetics for instance, where they'd have a gangrenous limb and they'd have to have that cut off. And I was that person that was there to hold that leg and wrap it up and bring it down to the morgue. And

it was quite visceral. When you're holding someone's limb and you're having to bring that down to the morgue to dispose of it, you kind of think, well, how can we get ahead of this thing? How can we get on top of it, how can we prevent it?

I had conversations with many of the surgeons. They really weren't that interested. They just kind of saw that they had this pathology and condition and they were just looking at cutting it up and cutting it out and fixing what was in front of them. They really weren't looking at going upstream and trying to understand and fix the physiology and how it got to this point. And so, I just started asking questions and looking deeper and trying to go upstream, above below, inside out, trying to get to the root cause, upstream. And that's kind of where functional medicine and nutrition and all these other modalities really revealed themselves to me over time, as I was seeking for more truth and understanding to really go above.

### **Alex Howard - [00:03:32]**

That really is the cold face of medicine. I mean, that's something. And it would be hard not to be asking those questions that you were asking. And yet a lot of people don't. A lot of people just accept, well, you're going to lose a limb, that's really crap. But actually, there are reasons behind these things that we experience.

And I sort of wonder, how much that interest and that curiosity was catalyzed by the fact that you, were you still at this point struggling with your own health or had you turned those pieces around for yourself at this point?

### **Dr. Justin Marchegiani**

I had some health issues going on. I mean, I was making a lot of changes because I was very health conscious. But I was following the food pyramid. I was doing a lot of things like avoiding fat and trying to consume 8 to 11 servings of whole grains a day. I was eating my steel cut oatmeal every day. I was doing a lot of things that were more conventionally, kind of base level thinking, and really wasn't on that cutting edge.

So as I learned and understood and just kind of studied different diets and nutrition and the history of health over many millennia, how we got here, how we've evolved from a nutrition standpoint, food, kind of learning more about paleo and keto and autoimmune conditions. And obviously studying functional medicine because nutrition and diet and lifestyle is the foundation of any good functional medicine practitioner. That's kind of how I got in there out of the gates.

Now, also, one question I always like to kind of lead in, I don't think it's some grand conspiracy why conventional medicine isn't really educated. I think it just comes down to, you have these educational tracks that people are on. People go into medical school, and they come out thinking that if it was important, they would have taught it to them. So there's this kind of degree of hubris or arrogance where, if I wasn't taught it, it's not that important, number one.

Number two, you know, you're in school 10 to 12 years, you're ready to work, you're ready to make money, you have massive debts and you're on this track to make this amount of money if you just put your head down and follow the standard of care insurance model. So you have doctors that are in a lot of debt, they put a lot of time in, they're ready to start their life. They've delayed their families and their careers. They are starting their life and they're in their early to mid 30s and they're putting their head down and they're going. And I think that's what a lot of what conventional medicine is. You have people on this kind of conveyor belt and they don't really have the freedom to think above and beyond because it's a lot more risk. You can be ostracized, you're not part of the team.

And so for me, those things weren't as important and I was able to kind of push in a different direction.

### **Alex Howard**

I remember one of my teachers once said to me, this is not a perfect metaphor but it's sort of what

comes to mind, is that if you go to a butcher and you say, what should I have for dinner tonight? Whatever you have for dinner, it's going to have meat in it. If you go to a fishmonger and you say, what should I have for dinner tonight? Whatever you eat, it's going to have fish in it.

And there's something about, people do the thing that they do and they believe in it because there's a sort of confirmation bias that the deeper we go into something, the more we focus on what works about it. The problem is that often we don't look for the limitations.

And I think many of the people coming into an online event like this, are the people that are living with those limitations. And that's the reason why they're looking for answers. And it sounds like that that personal journey was important for you in helping drive that interest.

### **Dr. Justin Marchegiani - [00:06:40]**

One hundred percent. And conventional medicine doesn't really need to look at the root cause in general, because when you're doing allopathic medicine, it's excellent for acute care, traumatic care, because the root cause is an isolated one off. You got in a car accident, you fell down, you busted your knee, you bumped your head. Right? It's a one off situation. It happened once. It's not something that's repeating itself over and over again.

Now with chronic health issues like fatigue, like thyroid, like adrenal issues, it's not a one off situation. You're having repeated micro traumas every day from the food, from the stress, from your diet, from your lifestyle. So when you go see that conventional medical person, they're more than likely not going to be able to help you because their treatments are going to be palliative or just fixing symptoms. But they're not fixing the root cause because there is a perpetual cause that's not being fixed, unlike the car accident, unlike the fall and bumping your head situation.

### **Alex Howard**

So let's start to come into that. A lot of people that are experiencing fatigue in its many different forms, one of the areas of that is what's happening with their hormones. And so I think it'd be helpful just to explore a bit things like thyroid hormones, adrenal hormones, what are they and why are they important in this conversation?

### **Dr. Justin Marchegiani**

Yes, excellent. So I'm going to dovetail from what I was just saying a little bit earlier, you have all these different potential causes. Functional medicine makes these same mistakes too, right? You have the adrenal doctor or the thyroid doctor that thinks all your fatigue is adrenal based, or all your fatigue is thyroid based. And that's a mistake too.

Now, doctors may market that way, but a good functional medicine doctor is going to cross their T's and dot their I's, so to speak. OK, is there an adrenal issue? We're going to run a functional cortisol rhythm test. We're going to look at your cortisol levels. We're going to assess your HPA axis, how your brain is communicating downstream to your hormones, to your adrenals. We're going to look at your female hormones. Is there estrogen dominance, is there low levels of progesterone. We're going to look at, is there diet and lifestyle issues? How's your diet? Are you able to sleep throughout the night? Are you able to digest and break down your foods? Is there a chronic gut issue? All the nutrients we need from our diet and supplementation, we have to break it down, digest, absorb and assimilate. If we can't get it into our bloodstream, we're not going to be able to utilize it for energy. Is there leaky gut or some kind of autoimmune pathology that's affecting our adrenals or our thyroid? Do we have low thyroid hormone? Do we have deficits in mitochondrial nutrients that are affecting our Krebs cycle and beta oxidation from running properly? These are all questions you have to ask yourself.

And so, even in the functional medicine realm, you still want to make sure that if you're seeing someone, they're not just all about the adrenals, they may look at that, but they have more tools in their tool belt and they can look at the whole gamut of issues that could be happening.

### **Alex Howard - [00:09:16]**

And I think that's one of the things that I'm excited to get into here, is the fact that we've got different pieces of this jigsaw. And as you say, focusing on one of those pieces without looking at the whole picture is clearly missing something. But just to drill a bit more into this piece of the jigsaw, what do our hormones do and how does that then relate to our energy? So, for example, our thyroid hormones, our adrenal hormones, what's their actual function in the body and how do those imbalances, how do they then result in the feeling of fatigue?

### **Dr. Justin Marchegiani**

So with thyroid, it plays a major role in just cellular metabolism. And so one of the big things you see with metabolism is energy. Energy, heat coming from the body. So if we have low thyroid hormone that may manifest in fatigue, it may manifest in lower metabolism, a.k.a. weight gain, it may express itself as a lack of hair growth because our hair follicles need thyroid hormone so they can metabolically grow. Peristalsis, low thyroid hormone can cause constipation issues. So we can see slow digestive motility, we can see anxiety and mood issues because our cells need some level of stimulation, metabolically. And thyroid hormone is kind of the fuel that does provide that. So low thyroid hormone can manifest in all those different issues: mood, energy, sleep, hair loss, cold hands, cold feet, weight gain, overall feelings of well-being. Some chronic constipation issues can easily be connected to low thyroid as well. So all of those are intimately connected.

### **Alex Howard**

So then let's have a similar exploration around adrenal hormones. So let's say a little bit about what they do, and again, if they're out of balance, what are some of the signs of that?

### **Dr. Justin Marchegiani**

There's a big overlap, right? So energy, mood, weight gain. I mean, the big thing that you tend to see more with thyroid, you tend to see more cold hands, more cold feet, more hair loss, more eyebrow thinning, you tend to see more of that. Now, I see some patients, their thyroid isn't that bad. Their adrenals are really in the tank. So every now and then, you get surprised and you kind of make your guess based on the symptom presentation. But that's why I'm always looking at both paths. I'm always looking at cortisol levels, free in total. I'm also looking at cortisol rhythm. How's that cortisol fluctuating throughout the day?

Because some people, they're really good with their adrenals at certain times and not others. And so if you go to your conventional medicine doctor and you just take a single snapshot of cortisol, you can easily get a false reading. So you really want to look at it throughout the day, as well as free and total numbers.

So in general, there's a big overlap. But as I say, the big distinguishing symptoms are going to be more on the hair loss, cold hands, cold feet, side of the fence. But even those can sometimes, you can get a curveball.

### **Alex Howard**

Yeah. So in a sense, if there are energy issues that are going on, then there may well be issues happening on either thyroid or adrenals. But those additional areas, like the temperature, like the hair loss, they're the signs that particularly, it may well be the thyroid that's one to go deeper into.

### **Dr. Justin Marchegiani**

Correct. And we can also do, so obviously testing is the ideal, objective testing. You can always do some objective testing at home that's going to be less valid, but still helpful. You can run what's called a basal metabolic temperature test and see how your temperatures look. Now, typically 97.8°F - 98.2°F for armpit temperature and 98.2°F - 98.6°F for an oral mouth temperature.

Now if we're chronically low and steady low, that usually is thyroid. If it's adrenal, a lot of times we're going to see bumping up and down of the temperatures, point three degrees or more in one direction or the other. That can be a sign of adrenal issues. If we're low and bouncing around, that could be both thyroid and adrenal. And again, it's not a perfect test, it's not a be all or end all. But if someone's at home and they want to see, if you just have a chronic low temperature and it's steady in staying low, it's probably more of a thyroid issue than an adrenal issue.

If your temperatures are reasonable, but you still have issues, it's probably more of an adrenal problem. But that's why we always want to still do testing to confirm. I would never just say that's enough to dictate what direction to go in.

### **Alex Howard - [00:13:23]**

And what are your, this may be a question a bit more practitioner-focused, but what are your preferences in terms of testing? For example, on adrenal testing, are you a fan of adrenal stress index testing, so saliva testing? Or, you know, that's been a bit of a raging debate in some areas of the functional medicine community in recent years, but, yeah, what are your preferences in terms of lab based testing?

### **Dr. Justin Marchegiani**

I've moved more to the urine based testing for the adrenals. Here's why, I like looking at cortisol rhythm, saliva's always been able to do great at that for for a long time. I like looking at DHEA sulfate, which is great, you can do that via saliva too. The big differentiating factor between saliva and the urine, if we're looking at the precision analytics DUTCH testing, or something like that, is that you have the ability to look at free cortisol, which you can do on saliva, but also total cortisol. And you cannot do that on the saliva. You can only do that via blood or urine.

So free cortisol is the two to five percent of cortisol that's functionally bioavailable. You get that in saliva and urine. On the total cortisol, you get to look at everything. So the ninety five to ninety eight percent protein bound cortisol, as well as the two to five percent of free. Now the benefit of that is a common thyroid pattern that you see on the adrenal testing. When you have high amounts of free cortisol and low amounts of total cortisol, that's a thyroid pattern. It can also be a low iron pattern. So what happens is the metabolism is so low, it doesn't have the ability to metabolize and burn up the high levels of cortisol. So that high level of free cortisol accumulates, but the overall total output of the gland is low. So low total cortisol, high amounts of free cortisol, that's a common thyroid pattern.

Now, if you are just doing a saliva test, you would just say, hey, this person has high cortisol and that would be it. You wouldn't be able to see that differentiator between total and free. And that's part of the reason why I like it. You can still get great indications from that, like if you did an adrenal test and you just did saliva, you just would want to follow up with a full thyroid panel as well.

### **Alex Howard**

And I think that's often where clinical experience and looking at the bigger clinical picture is also important as well. Because I think one of the dangers can be if people are too, "oh that lab test says that, therefore I'm going to do that" and aren't taking that step back and going, "but hang on, why is it saying that? And is that related to that? And how do I ask this bigger question?" That's where I think that real clinical experience is so important.

### **Dr. Justin Marchegiani**

Yeah, a lot of people, they look at it like a religion. Like, this test is the best! And it's like, well, why? So I'm going to be really specific. It's really the total and free cortisol for me that make a big difference, and being able to distinguish that thyroid pattern that you can see with the high amount of free cortisol and the low amount of total cortisol.

## **Alex Howard - [00:16:09]**

Very interesting. How about thyroid testing, specifically? Particularly, people will come in with mainstream thyroid testing and have narratives that have been built around that. Where do you sit on that one?

## **Dr. Justin Marchegiani**

So I keep it really simple out of the gates, you could be a little bit more complex, but I'll look at TSH, which is your brain signaling hormone. I'll look at T4 free, at T3 free, and then thyroid antibodies, TPO and thyroid globulin antibodies.

Now you could add in reverse T3. I typically don't because if I see low levels of free T3 out of the gates, then typically on a follow up test, I may look at reverse T3. So it just depends on what the pattern is. Reverse T3 can be a little bit more expensive. So I come out of the gates with my abridged panel, and if you want to be more complete, you can do that. It's not a problem.

You can look at T4 total and T4 free. You can look at T3 total and T3 free and you can add the reverse T3 in there as well. And of course uptake is usually in there too. But usually if you have low levels of free T3, you're going to have low levels of T3 uptake.

I've run these tests thousands and thousands of times. It's very rare that you see someone with great levels of total T3 and in the tank of free T3. It doesn't happen. They kind of go lockstep in stride. And so to keep it more budget friendly, I just do my abridged panel unless someone asks or unless the case is a little bit more complex and we want more data.

## **Alex Howard**

That's awesome. I want to come back in a little bit to some of the things that we can do to address these issues. But I really like what you said at the start around, we can't just look at hormones in isolation. And I'd love to backtrack a little bit and also look at the relationship which you very briefly mentioned earlier, between what's happening in our digestion and what's happening with our hormones. Because I think that's often an under recognized relationship. People can be very quick, I think, to want to fix what's happening hormonally without understanding that one of the reasons why our hormones can go out of balance is what's happening with digestion.

## **Dr. Justin Marchegiani**

Yeah, absolutely. And I have a whole chapter on this in my book called The Thyroid Reset. If you go to [justinhealth.com](http://justinhealth.com), you can get the first three chapters where some of this is talked about there. But I'll kind of zoom out and zoom back in for you on each of these issues.

So with the gut, for instance, number one, most thyroid issues are autoimmune. So if you have an autoimmune issue where your immune system is attacking your thyroid, gut permeability or leaky gut is going to be at play. And so basically, the tight junctions in your small intestine open up a little bit. Undigested food particles, especially gluten and casein and dairy, can really increase that gut permeability. These proteins, floating around in your bloodstream unbroken down, can cause your immune system to hyper respond. The surface proteins on those foods are very similar to the thyroid. So it's like someone calling out an APB for a black Honda Civic and you just happen to be driving a very common color and very common car style. You're more likely to get picked up by the police, incidentally, right? That wasn't you robbing the bank, but your description fits the mole. Well, same thing with some of these foods in your bloodstream.

Also the fact that if you don't have good digestion, you may not be breaking down the zinc and the magnesium and the copper and the selenium to actually help convert and make your thyroid hormone. You may not be getting enough iodine. We don't want too much, but you're not getting enough, that's a problem, too. If you are anemic and don't have enough iron, that's a problem. If you're not getting enough CoQ10 in fat soluble vitamins, that's a problem. So you need certain building blocks to make thyroid hormone. You need certain building blocks to convert thyroid hormones. So to

make it, you need tyrosine and iodine and amino acids to make it. Iron is a very important component, too. And you also need magnesium and zinc and copper to help convert it. Vitamin A plays a big role too.

So if you don't have those nutrients, you're going to have problems bottlenecked on the thyroid side.

### **Alex Howard - [00:19:54]**

And of course if we come to the adrenal side and we look at the B vitamins, we have a similar story right?

### **Dr. Justin Marchegiani**

B5, B6. Your B complex, you need B vitamins, vitamin C to help with adrenals. And if we have deficits there, we know we need healthy cortisol levels to convert thyroid hormone. Too high on the cortisol side, you can have conversion issues, you can have high levels of TSH from all that stress. Too low on the cortisol side, you could have conversion issues and maybe excess inflammation as well because you don't have that natural anti-inflammatory there.

And then, of course, if we want to go on the female hormone side, progesterone is very important for making thyroid hormone as well. And if we have a lot of adrenal stress, we can pull that progesterone downstream to turn it into cortisol. Progesterone can easily be made to convert into stress hormone. So women that are chronically stressed, they're put in a position to have lower progesterone that drives more estrogen dominance, that drives more PMS, fibroids, endometriosis, breast tenderness, cramping, excessive bleeding, all that stuff, infertility..

And so we can easily have a thyroid issue from a gut issue, from an adrenal issue, from a female hormone issue. And, of course, men, the same thing. Testosterone is going to create problems. And a lot of times that's from the adrenals creating a lot of stress. And you're prioritizing more of your anti-inflammatory stress hormone over your healing, building, muscle growth, anabolic androgens on one side.

### **Alex Howard**

I think that's also a really important point to make, actually. That in a sense, the body will triage what it thinks is most important. So if we're under stress and the body's got a lot of inflammation, as you just said, it will prioritize reducing the inflammation over, for example, things like sex drive, which is perhaps not so important, for kind of biological survival in that moment.

And so when people get stressed, it may be that certain areas are going out of balance and others aren't because the body's prioritizing what's necessary for survival.

### **Dr. Justin Marchegiani**

That's correct. There was a concept many years ago called pregnenolone steal and pregnenolone is this building block at the top of the hormone cascade and it can go in a couple directions. It can go to your mineral corticoid for minerals. It can go downstream to progesterone, it can go to DHEA and estrogen, and it can go to cortisol. So the idea was that you can steal your pregnenolone to go more towards the cortisol side and then you have less building blocks over here for the sex hormones.

Now, that may be a little bit more of an antiquated way of thinking. I just look at it as this, you have sympathetic nervous system stimulation, which is breakdown, fight or flight stress, stress, stress. And you have parasympathetic, which is sex hormone, healing, regeneration, fertility, digestion, recovering, building up.

And so, the more your sympathetics are stimulated, the more you pull away from healing and recovery. The more your parasympathetics are stimulated, the more you can recover and heal. So the more you're stressed and inflamed, the more you're pulling away from the healing and recovery side and trying to basically allocate resources to deal with stress and inflammation.

## **Alex Howard - [00:22:51]**

I think that's super important and I think also, maybe it's worth just touching on here, the role of blood sugar and the role of diet. So maybe just open this piece up as well?

## **Dr. Justin Marchegiani**

Yeah. If you're not keto adapted, now this doesn't necessarily mean that you're following a ketogenic diet per say, but if you're consuming too much carbohydrate for what your metabolic needs are. Now, some people are very insulin resistant, they really need to be only consuming vegetables and maybe a tiny bit of fruit as their main source of carbs. Others are more active, they're more of an ectomorph body type. They can get away with more starch throughout the day and it's not a problem. But whatever that fuel mixture is for you, and it's a little bit different, people get very emotional about this because if you are the person that needs to be 100 percent low carb, you're like, this is how everyone has to do it, right? So everyone's a little different, so we kind of have to individualize that. And we could talk about how someone may do that later on.

But we have to make sure they're in a position where their carbs are not too much and they're having enough protein and fat for them, where they're more fat burning. And fat burning really allows your blood sugar to snake along throughout the day. The more you cause your blood sugar to go on a roller coaster ride, like this, you're surging a whole bunch of insulin at the top of the roller coaster and you're making a whole bunch of adrenaline and cortisol at the bottom to bring it back up. And so most people are literally on these insulin, cortisol, adrenaline ride all day long because of too much processed carbohydrates, acellular carbohydrates. That just means more simple sugars, more grains, more inflammatory foods.

So if you're on this roller coaster ride, you're whipping your pancreas, you're whipping your adrenals nonstop, all the time. So the more you can snake that blood sugar along, now the food is balancing out the blood sugar and you don't need your adrenals and your pancreas to be balancing out from the high and lows.

## **Alex Howard**

And of course, the body should be able to burn its own fat as a fuel source as well. And that process is not happening effectively. Again, that impacts on blood sugar and that then impacts on hormones.

## **Dr. Justin Marchegiani**

Yeah. So the more you're surging insulin, when insulin is high, it's very hard, free fatty acid synthesis or free fatty acid metabolism. Lipolysis, that's fat breaking down, goes down. So the more you're surging insulin, you can't tap into fuel source. Now what surges insulin? Lots of carbohydrate. Now, you could get away with it if you're really active and you're Michael Phelps and you're doing all the stuff like that, really active. You can see his ten thousand calories a day diet, all this crap, well, you can do it when you're that active, right? So people that are more active can get away with it because the exercise is what's balancing the blood sugar, right? But if you're not as active, you really have to balance that out.

And when you're surging insulin, you get tired because fatty acid synthesis, lipogenesis, making fat is very energy depleting. And then when your blood sugar drops, the cortisol spike and the adrenaline spike can create anxiety, mood issues, heart palpitations, energy drops. So when you're on this blood sugar ride, you're feeling it emotionally. And so the more your blood sugar snakes along, the more you're stable and you're emotionally balanced and you can deal with stress. And your hormones aren't having to smooth things out.

Now, if you're a woman listening, this is important because when you're making adrenaline and cortisol, guess what's happening? You're burning up dopamine and you're burning up progesterone. You're creating more stress with dopamine and progesterone. If you have dopamine and progesterone issues, you're more likely to start moving into a place of estrogen dominance, more PMS, more female hormone issues as well.



## **Alex Howard - [00:26:29]**

I'm mindful that people are probably listening along and going, this makes so much sense but what I do about it? We talked a bit about some of the testing, and I think one of the things that you're saying that's really important as well, is that you can't go into this just going, oh, I have a deficiency in, I don't know, T-3, so I'm just going to take T3, or I have a deficiency in my adrenals so I'm just going to take some cortisol, but this is a more complicated picture.

Maybe say a little bit about, when you look at a new case clinically and you've got test results, you've got some clarity on the picture of what's happening, how do you then approach that pathway of putting together a treatment plan?

## **Dr. Justin Marchegiani**

So I've seen so many thousands of patients in my career, I kind of have an algorithm that I go by. One, you know it's like, if you're building a home, you don't go and worry about the third floor master bedroom. You're like, all right, well, we're going to just start with the foundation. We're going to dig that hole, put cement in. You're focused on the very simple things, and then you go up. You're not worried about what's happening upstream.

So it's the same thing with me. I don't get overwhelmed because I have my checklist. And if I check all the boxes, I'm not going to miss anything. So the first thing is, we're making sure we're eating a really healthy diet. Now, what does that mean? That could be a little bit different, depending on where you're at. It could range from a paleo template, healthy protein, fats, carbohydrates, avoiding grains, legumes, dairy. It could be being an autoimmune paleo template, no nuts, seeds, nitrates, eggs. It could be being more low fodmap, or even SCD. So it depends on that.

But let's just say a whole food diet with healthy proteins, healthy fats and dialing in the macronutrients for you, making sure we can break those foods down. A healthy diet, if you can't digest and break those foods down, it doesn't matter. You're bloated. You're not absorbing those nutrients. Maybe you're constipated. So we have to make sure we're also digesting those nutrients. We have to make sure we have good hydration of clean, filtered water with minerals, throughout the day. We have to make sure we're getting some movement, whatever that is for you. It could be just walking a little bit, it could be lifting weights, whatever that is for you. The key is you have to feel better afterwards, not worse. And then getting enough sleep. So sleep is going to be essential.

Now, if you're not sleeping, even with all those things, that's where looking at the thyroid and the adrenals and the hormones play a major role, because that could be holding you back. So that's kind of foundation, out of the gates. So then from there, supplement wise, we're working on digestion, we're working on other things that could be at play.

We're going to do functional tests to now see what's going on with the body system one, ATF, adrenals, thyroid, female or male hormones. Body system two, digestive immune. There could be an infection, there could be issues with digestion, there could be stuff going on with gut permeability, immune. And then of course, body system three, we may look at organic acid testing or intracellular nutrient testing to figure out nutrient deficiencies, detoxification problems, mitochondrial problems. So detox, nutrients, mitochondria, body system three.

And so we get the testing going, and I'm dealing with system one first, for the first month or two. And then we're keeping that going while we go into system two where we deal with digestion and infections. And then we address that and then go into system three. And again, what those test results may come back at is different for each person. So, I mean, I could give you examples, but in general, depending on what comes back, then that adjusts it.

But the key thing for people listening, is the foundational stuff. That's really where you want to be. Now if that overwhelms you, out of the gates, you'll want to work with a practitioner. But at least start there. And then you can always dive in deeper with the testing, so you can really get dialed in. And you really want to work with someone when you're doing testing. I look at people that start doing their own testing like that, it's like you going to court and trying to be your own attorney. Well, that

may be OK if you're going for a simple parking ticket. But in general, if you're going to court, on average, you probably don't want to be defending yourself. And that's where you look at functional medicine, diving in deeper, especially the more chronic your health issues are.

**Alex Howard - [00:30:31]**

One of the things that I'm really hearing you say, and I think it's very kind of implicit and explicit in the methodology you're using, is that often issues with our hormones are a symptom or a consequence of something else, not necessarily the cause of what's happening. Am I overstating that or would you say that?

**Dr. Justin Marchegiani**

Correct. And I listed off a bunch of things, I missed one thing, the emotional stress. So the big stressors that we're looking at, that we make sure we're addressing in the foundation, is we look at emotional, physical and chemical stressors. Emotional as family, friends, relationship, money, trauma in the past that's unresolved. Physical stress could just be chronic pain or overexercise or just unresolved bad posture, things that are inflammatory in your body structure. And then the chemical stressors are the things we probably already mentioned, gluten, food, digestion, infections, hormone imbalances. And so you got to look at all of those and then the body systems come next. And that's where we look at system one, system two, system three. And then downstream, at the very end, is where symptoms manifest, back pain, mood, depression, weight gain.

And conventional medicine just treats these with drugs. We go upstream to the to the underlying stressors that manifested it. And then we look at the systems that broke down, that caused a lot of these symptoms. So I call it the SSS approach, underlying Stressors that caused the body's Systems to breakdown and then the Symptoms manifest way downstream.

**Alex Howard**

One of the things you mentioned earlier, which can be a block to healing, is sleep. People can get in these cycles where their hormones get so dysregulated that they're wide awake at night, then they're exhausted during the day. And if they're not getting that quality sleep, it's quite hard for the actual healing process to happen. What do you do in those instances?

**Dr. Justin Marchegiani**

It depends why someone's not sleeping. So there's a lot of different causes. Low hanging fruit, too much TV, too much stimulation, too much blue light before bed. So simple strategies, get a dimming light switch, get that light down 80, 90 percent, get some blue blocking glasses, give yourself an hour buffer before bed to calm your nervous system down from like, I don't know, watching The Walking Dead or something, whatever that stimulating show is.

**Alex Howard**

Funnily enough, I'm a fan of that show, but it's not a good one to watch before you go to sleep!

**Dr. Justin Marchegiani**

I know. And you could do prayer, you could do meditation, you could just listen to something more relaxing or more spiritual. That's cool as well. I'm able, typically, to turn off the TV and in 10 minutes, go right to bed. My nervous system can shift really fast, but some people's can't. So you have to recognize if that's you or not and just do what's according. You can also do a cold shower. You can do blue blocking glasses, get a dimmer light switch. So if you need light in the room, you can at least only keep 10 percent of it on. You can also get low blue light night lights. So my night lights in my bedrooms are all low blue lights. If I need it, it's a nice, gentle light amber color. So if I have to see, or if I have to wash my face before bed, I can just put that light on. I can get some light but it's not stimulating at all. And again, red light is better, blue lights basically lower your melatonin levels and

you need melatonin to sleep. So light and hygiene. Sleep hygiene is very important.

Now, from there, afterwards, if we have high levels of cortisol, we can do things to bring cortisol down. If we have low melatonin or serotonin or B6 issues, we can address 5HTP or B6 or we can do GABA supporting nutrients like GABA itself, like L-theanine, like maybe progesterone. As a female, low progesterone can create inability to relax at night. So everyone's a little bit different in regards to what that cause can be. I'm just kind of giving you the range and then you've got to figure out with your practitioner what's going on for you.

### **Alex Howard - [00:34:12]**

And I think that's one of the really important points that you're making, is that as much as one can put fundamentals in place by themselves, there is a level of personalization that's required in these journeys. And I'm mindful that where I want to go now, I don't want to de-emphasize what you've just been saying about the importance of dealing with the fundamentals and going through this in a methodical way, which I think is really important.

But also for those people where they've done those pieces and yet they're still not finding that their hormones are coming back into balance, where do you sit on the debate between glandulars vs synthetic hormones vs herbal approaches? When people need that more direct support towards, for example, their adrenals or their thyroid, what are your thoughts on that?

### **Dr. Justin Marchegiani**

It depends on how low. So obviously, let's just start with female hormones. If someone's menopausal and they literally have very, very low hormone levels, too low. Well, the adrenals are supposed to kick in and help support and buffer some of the hormones that now are no longer being produced by the ovaries, due to the follicles being used up. And if the adrenals are weaker and lower, we'll come in there and support the adrenals. But we may need to come in there with a little bit of bio-identical progesterone or maybe at least estriol which is very safe estrogen.

And again, my philosophy with hormonal support, if we're doing HRT is one, it's bio-identical. Two, we're also supporting the adrenals. I think a big mistake of a lot of medical doctors, they just treat the end stage hormone and not the adrenals themselves. Because that's an important building block, the backup battery for a lot of these hormones. And I try to use the lowest amount possible, number two. And then I do like using a lot of herbs as well, like maca or various herbs that help with female hormone support, or adrenal support. Because, one, they do help with the feedback loop from the brain to the ovaries or the gonads if there's still hormone production. Or they also help with, if you're just menopausal, they can help with the receptor sites and they can kind of tone up or tone down the volume of how that hormone binds to that receptor site. So it can allow that hormone to do more with less, so to speak.

### **Alex Howard**

Because I think one of the things that sometimes happens is, people can get a little bit like they can about diets, they can get quite religious around this idea of, you know, you should only ever use herbs or the only thing that ever works is using bio-identical hormones. And what I like in what I'm hearing you say is that, again, it's patient centered and different things are necessary for different people at different stages of effects.

### **Dr. Justin Marchegiani**

Exactly. And with thyroid, it's a little bit different because if you have a chronic autoimmune condition, where that gland has been attacked by your immune system for a long time, that functional tissue that normally produces and houses thyroid hormone may no longer be there. It may be infiltrated with fibrotic scar tissue. And that's a problem because now you can't produce the hormone. So just to say that, oh, you don't need hormone there, well, that tissue has been forever altered, right? We have limitations of matter. So it just depends. Not everyone's in that place.

Some, if we just get their nutrients and their cortisol and their HPA or HPT axis back on track, that can help it. But my kind of goal in the meantime is, all right, let's just fill the gap of what's missing, just the tiniest bit and then work on all the other factors, give it some time to kind of jump start and then gently pull back over time as we have more stability.

### **Alex Howard - [00:37:24]**

That's awesome. For someone that is watching this, that feels like it's really resonating and there's a sense of, oh, my God, this is a really important piece of my fatigue jigsaw. But they might be feeling a bit, oh, my gosh, there's a lot here. Now obviously some things that people can do, I recommend people get your book. They can go on your website, get the first three chapters. You know, ideally, they're working with someone clinically that's got experience. But what are a few simple ways that we can give people to get started?

### **Dr. Justin Marchegiani**

Start getting more keto or fat adapted in regards to your diet, and again, it doesn't mean going full on ketogenic. I'm a bigger fan of keto paleo, because you can be keto and still eat a whole bunch of soy and aspartame and cheese, and that may be a problem. So kind of a keto paleo template, or somewhere in between where you adjust your macronutrients for you and your metabolic needs, number one.

Make sure you're able to digest and break down your food. So maybe adding in some HCL or some enzymes. Maybe working on sleep, working on movement, working on hydration out of the gates, I think is great. See how much the low hanging fruit can take you. You know, listen to some like yours, Alex, or my podcast over at JustinHealth.com or you can just get more information that may be more applicable to you, because everyone's a little bit different.

But work on the foundation, always work on the foundation and then go up from there. Don't get lulled into doing this sexy protocol or that, without the foundation being set. If you want to get more nuanced, it's fine, but do it on top of a solid foundation.

### **Alex Howard**

And someone that's watching this, who's thinking, I've tried everything. Perhaps they've been living with known adrenal or thyroid issues for many years and they feel like they've tried all the things that are out there. As someone that's worked with so many people with these issues, what would you say to give them some hope?

### **Dr. Justin Marchegiani**

Well, number one, we want to make sure there's no other major hidden stressors. So I'd really want to look at and evaluate mold in your home or mold in your body. That's a big one. Maybe some potential heavy metal issues that are affecting your mitochondria. Mitochondria plays a big role in generating energy, as you know. You may want to look at chronic gut infections that are being missed. Maybe there's a chronic infection that's overstimulating your immune system. Your immune system sucks a lot of energy and resources. So maybe looking at your organic acids, mitochondria, chronic gut issues, maybe there's some underlying kind of lyme co-infection, Babesia, Bartonella or Lyme issues.

So I'd want to look a little bit deeper at some of those more uncommon issues that could be there. So if you haven't crossed those items off your list, those would be things I'd want to dive in deeper with, just to make sure they aren't a factor.

But I see a lot of people that are into all the lyme in the mold stuff. And then I test their gut and they've got a simple gut infection. Or their adrenals are still beaten up, or they're still eating gluten. So I'm amazed how many people go into the more uncommon stuff and then the common stuff isn't even addressed. So just don't make that mistake.

**Alex Howard - [00:40:19]**

I'm really glad you said that. We see the same thing as well, that sometimes, for want of a better word, the sexier things like mold or lyme, that particularly in recent years have got a lot of attention, people can go on these really intense and really difficult protocols. And as you say, there's lower hanging fruit, that may on its own be enough. Or, if not dealing with those more fundamental things, the body's then not resilient enough to be able to manage those more invasive, more intensive protocols anyway.

**Dr. Justin Marchegiani**

One hundred percent. And you see it with patients with Lyme and they're on these chronic long term antibiotic protocols that just destroy their microbiome, too. And so you want to make sure you just don't get caught into that trap there.

**Alex Howard**

Justin, for people that want to find out more about you and your work, what's the best way to do that?

**Dr. Justin Marchegiani**

I'm available at [JustinHealth.com](http://JustinHealth.com)

When you're there, you can subscribe to my YouTube channel or my podcast, click the buttons. And we have basically deeper, long term conversations on these topics. I do live Q&A's all the time. And on the search there, everything's transcribed so you can search all the podcasts. And my book is there as well, which is coming out soon. But you can get the first three chapters for free.

And I'm available worldwide for consult support on the functional medicine side. I see patients via Zoom, FaceTime, Skype all over the world. So if you need more support, you have a lot of free content and also specific support with myself and colleagues there as well.

**Alex Howard**

That's awesome. Dr. Justin, thank you so much for your time and this interview, I really appreciate it.

**Dr. Justin Marchegiani**

Thanks so much, Alex. Really appreciate being a part of it. Thank you.