



## The functional nutrition matrix

**Guest: Andrea Nakayama**

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

Welcome, everyone, to this session where I'm super excited to be talking with Andrea Nakayama. Firstly, Andrea, welcome and thank you for joining me.

**Andrea Nakayama**

Thank you so much for having me, Alex.

**Alex Howard**

We're going to get into some fascinating stuff here around the functional nutritional matrix, which is a super helpful way of making sense of complex cases and all of the different things that could be going on with fatigue.

Before we come into that. Let me just give people a bit of Andrea's background. Andrea Nakayama is an internationally known functional medicine nutritionist, educator and speaker who is leading a movement to transform the health industry into a system that works, empowering patients and practitioners alike with the systems and tools of functional nutrition. Andrea is celebrated as a leader in the field of functional nutrition because of her unique ability to teach and inspire practitioners and patients alike. Andrea synthesizes art and science, empathy and physiology, intuition and problem-solving into a system that truly helps people to get to the root cause of that illness, creates a path towards wellness and find their way back to life.

Andrea, I think the best place to start is a little bit of your story because you found your way to functional nutrition through some of the quite difficult experiences in your own life. Tell us a little bit about that.

**Andrea Nakayama**

Yeah, thanks for the intro, Alex. And I hear you say those words. And it's so interesting when we break down those words and hopefully we'll get to do that a bit today.

So my journey to becoming a health care practitioner really began when my husband, Isamu, was diagnosed with a very aggressive brain tumor called a glioblastoma multiforme when I was just seven weeks pregnant back in April of 2000. And I was already kind of a health nut. Like many people here, I had experienced some of my own, actually fairly minor at that point, health challenges. But I had the awareness and I loved food and I love to take care of myself. And so I was sort of a health nut but that transformed everything being faced with such a grave diagnosis during such a pivotal time in our lives. We were just in our early 30s. So we did a lot to change our diet and lifestyle. Isamu lived past his prognosis. He was given at that time only six months to live. He ended up living about two and a half years. So he did have a solid year and a half with our son. And then years later, I was diagnosed with my own autoimmune condition. Hashimoto's, not surprisingly, as we understand, some of the root causes and the presence of stress as a triggering factor in autoimmune conditions. That all led

me to really dive deeper, put myself back through school, really bring, I'm going to say a different approach to health care because I was coming in as an outsider. I hadn't been trained in the health care sciences. And so I was able to bring a different kind of thinking, storytelling and systems thinking to what we do in health care. And now I am fortunate to be able to help thousands of patients. But even more so, I get to train about 1500 practitioners a year around the globe who are then helping the people they serve.

### **Alex Howard - [00:03:52]**

And you mentioned your experience with Hashimoto's, talk a little bit about also, I know you've experienced fatigue yourself and it can be such an isolating, debilitating experience. Say a little bit about your personal experience there.

### **Andrea Nakayama**

Yeah, interestingly, fatigue wasn't one of the symptoms I was experiencing as part of my diagnosis. It's a symptom I experienced as part of the healing journey. And this is, I think really important for us to recognize. And I know we're going to talk about autoimmunity and fatigue and how prevalent that was. I tend to run high energy, maybe no surprise there, but I tend to run on the upside of cortisol production. And so when I was first feeling some symptoms that were related to the Hashimoto's and couldn't figure it out, I was seeking help. And I would say the diagnosis du jour at that point was adrenal fatigue. And so I was given supplementation, natural interventions for what would be considered phase two adrenal fatigue when the cortisol is running higher.

And that flattened me like I couldn't get out of bed. And at this point, I'm working a full time job. I'm a single parent and I'm back in school. And so that struggle really led me to dive deeper and say, like, I don't think this is the healing reaction my body's supposed to have, maybe we don't actually have the right cause and I can't survive like this. And I think that is what so many people with fatigue struggle with. Like, this is, I can't function like this. I can't get what I need to get done. And that becomes an endless cycle in and of itself.

### **Alex Howard**

Yes. As you say, fatigue is often a side effect of autoimmune disease. Why is that? How do autoimmune conditions trigger the symptom of fatigue?

### **Andrea Nakayama**

Yeah, this is so interesting because it's complex and multifaceted and both situations are complex and multifaceted. So, autoimmunity is complex and multifaceted and fatigue is complex and multifaceted. So, there's never any one reason why somebody with autoimmunity is going to experience fatigue. But just for some context, we're talking about 20 million people that have known autoimmune conditions in the U.S. And I actually don't know the global number, but that's just known. And there are over 100 conditions that we now know are considered to be autoimmune. So this is a lot of people because the most prevalent symptom that people note is fatigue. So we have to then think why? And in order to consider why, I'm going to bring us back to what I consider to be the three roots of an autoimmune condition and how those would be related to fatigue.

So I consider the three routes to be the genes. So the genetic predisposition, digestion and inflammation. So those are our three routes. We're always going back to those three routes from a functional nutrition perspective. And in fact, we're not just looking at the routes, we're looking at the soil those routes live in. I like to think of that as our circle of influence. And this is where we as patients can feel empowered.

So I'm going to skip over genes for a second. We can get back there. But digestion alone, there's so many reasons that can contribute to fatigue with autoimmunity. We could have malabsorption issues. So even if we're eating the right diet, we're not utilizing our nutrients appropriately. We could have gut hyperpermeability, meaning that there's inflammation in, systemically in the body, but particularly in

the gut and the brain. This can lead to systemic issues that cause fatigue. There could be inflammation when we go there. Neuroinflammation is a huge cause of fatigue and there's a tremendous amount of neuroinflammation happening with people with autoimmunity because the immune system is on overdrive in many ways, ultimately impacting the microglia and the neurons in the brain, the HPA axis, so the hypothalamus pituitary adrenal axis could be impacted by inflammation. So many different reasons in digestion and inflammation alone that could be contributing to fatigue. Then, you have any questions there? Should I move over to genes?

**Alex Howard - [00:08:40]**

What are some of the factors that cause that inflammation? If we were to break down some of the examples of how that triggered, what might they be?

**Andrea Nakayama**

Yeah, that's a great question. So when we think about the circle of inflammation, circle of influence for inflammation, I like to think of it as clear, calm, enhance and modulate. And when we look at that realm of clear, there's so many things that might need to be cleared. It might be an environmental toxin. It might be mold, it might be a food allergy. It might be a relationship that's causing tremendous amount of stress, keeping you in that hyper sympathetic state that I know you speak so beautifully about. It could be an infection of some sort, like an Epstein-Barr virus or some kind of bacteria or fungus. Like there's so many things we have to think about clearing. Ultimately, the whole system needs to be calmed down at the nervous system level, but also at the immune level.

When we have an autoimmune condition, our whole system is on overdrive and we need to bring that back as we then start to understand how to enhance the immune system ability to do what it needs to do and modulate is key. There are some factors unique to each of us that turn on what's supposed to be turned on and turn off what needs to be turned off, to bring and really help the body come into that calmed state. So, so many factors, and this is where it could be so incredibly confusing, especially when we feel like we're doing everything right.

**Alex Howard**

Yes. Yes, indeed. And I think also, that sort of irritated and inflamed immune system, as you sort of spoke to, becomes very tiring because the immune system is constantly working. And that's stealing resources from other bodily functions.

**Andrea Nakayama**

Absolutely. We can think of this as energy expenditure. And this is another reason for fatigue, where we're expending more than we need to in order to get the normal things done. And that in itself becomes a cognitive fatigue factor because we can't really do what we feel like we're supposed to do, even if it's walking up the stairs. And we've seen a lot of this with COVID, where the respiratory system is inflamed and the effort it takes just to walk around the house, walk up and down the stairs is tremendous. So that's causing fatigue. But then that's a cycle that actually implicates more fatigue just because of the effort taken.

**Alex Howard**

One of the ways, one of the things I think is often the case is, people see their symptoms as the enemy. There's something to be gotten rid of and something that, sort of a source of misery and distress. One of the things I really like is, you talk about symptoms as being messengers, and it's a really helpful, I think, reframe of what's happening. Say a bit about why you think that's important and how that frame works.

**Andrea Nakayama**

Yeah, I love framing this as nonviolent communication with yourself because we often have heard

about nonviolent communication as a therapeutic form of working with a partner where, maybe in therapy we're listening to what they have to say. We're taking it in before we respond. And what we tend to do with our bodies is override the symptoms as annoying. We're not really listening. What is this trying to tell me? We're not in a nonviolent communication relationship with our own bodies, and this is really the premise of the work we do or that we aim to do in functional nutrition. It's getting to the roots, but it's really amplifying that awareness of what is happening in your body so that you can pivot, so that you know what we call in functional medicine, you know your mediators.

And oftentimes what I see is we get annoyed with the symptoms or especially women, we override them. We say, oh, I'm just tired, but I still have X, Y and Z to do. I'm going to keep doing that. And what I ultimately see and hear women do is, I can't believe I wasn't listening to those signals like, oh my gosh, what was happening, that I was overriding that? And that's sort of culturally what we're trained to do.

So, you know, we don't always have the ability to stop and just listen. But I think it's important to track and tune in, see what helps us feel better, what helps us feel worse, ask the right questions and seek the partners who are going to listen to that information and support us in finding more of those roots.

### **Alex Howard - [00:13:37]**

I think, I was just looking back at your bio, and it says Andrea, synthesizes art and science. And I think this is the art of the healing journey, isn't it? It's the sort of, it's the decoding and the making sense of the different messages from the body. Like, why do I always feel drained at that point in the day? Like what's happening? What's the sequence of events? And then it might take a series of mini investigations and kind of curiosities to go, oh hang on actually what's happening is at that point in the day, an hour earlier, I'm eating that or I'm not eating that, for example.

### **Andrea Nakayama**

Exactly.

### **Alex Howard**

That takes a certain mindset, I think, of really being willing to listen and seeing those symptoms, as you say, as messages.

### **Andrea Nakayama**

Yeah. I mean, I love how you put that in the examples you put in place, Alex. And I like to think of the art of the practice as practitioners, but also our own practice in our daily life as, assess, recommend and track. And that's cyclical. We are constantly assessing, recommending and tracking. Not to the point where we're narcissistically navel-gazing, but to the point where we are in tune. And it's kind of amazing to me. Two things that are amazing in relation to this art. One is we're willing to do it in other aspects of our life. We love individualisation. We love our Spotify playlists that are recommended to us daily, half size bras, beds that are fit to our bodies, jeans that come in specific sizes. We love this personalization. But when it comes to our health, we still want the quick fix and the one size fits all instead of the investigative process.

The other thing is that when I think about health care as, again a practitioner or as a patient, we have to front load that assess time. In fact, what we often do in health care is truncate the assessed time and spend most time in the recommendation area or the prescriptive area. Here's what you should do. Here's your dietary plan. I always like to say dietary change, lifestyle change is not a handout. It takes work to see does this work? Does this not work? Is this true for me? And that's part of that circular relationship with the art. The assess, recommend and track. And we're constantly reassessing. It's like a scientific method, like the scientific method that we're really engaging in with our own lives. So, yes, it is a journey, like you were saying.

**Alex Howard - [00:16:18]**

And it takes, I think, a level of humility to as a practitioner to keep on taking that feedback and realizing that it's you know, there isn't, here's the plan, go and get on with it. And then it's a miracle. There's an ongoing relationship and process in that.

**Andrea Nakayama**

Yes, absolutely.

**Alex Howard**

Coming to some of the practical pieces I think we can assume, and it's something we've talked about in many other interviews here that good nutrition and good sleep, for example, are important. What else is important on the sort of recovery from fatigue journey? What are the other sort of key fundamentals that you see?

**Andrea Nakayama**

Yeah, well, I like to break things down. Obviously I have lots of threes and acronyms that we use and one of my favorite threes is what I call the three tiers to nutrition or epigenetic mastery. And tier number one is the non-negotiables. What are our non-negotiables? And if we don't know where to start, the place I like to start is with what I call the non-negotiable trifecta, that's sleep, poop and blood sugar balance. And that is going to be unique for each and every one of us. So we can't overlook that unique nature of getting to those results. So sometimes people might think I'm already doing, I'm already taking care of my diet and I'm optimizing my sleep.

But the question becomes, are they optimized for you? And we have to remember the work that we can do for ourselves versus the work that we need help doing and help uncovering. And I think this can be done on an individual level. It does take that mindfulness and tracking. When we say I'm optimizing my sleep, what does that mean? And are we getting what we need to go into recovery? But again, it's a multifaceted approach. We do have to think about those three roots, genes, digestion and inflammation. So I'm always thinking through, are we first and foremost, when it comes to diet, optimizing digestion? Because people can be eating the best diet, and I see this all the time, but they're not able to utilize their nutrients. There could be significant nutrient deficiencies, that I can share in a client case too, that can be related to digestion, but also genetic polymorphisms that impact your ability to utilize iron, which is going to cause fatigue, or utilize your B vitamins, which is also going to cause fatigue.

Does that mean if we have fatigue, we all run out and take iron or B or even methylated B complexes? No, because we are individual. But we have to optimize digestion when we're talking about food, not just optimize the diet, that's external, but optimize where the diet and the food meets physiology. So for me, that's number one. While looking at those epigenetic factors, which we can get into more as well.

**Alex Howard**

I know we're going to cover some case studies in a bit but what are some of those key principles in terms of optimizing digestion? If you were to sort of, here are some of the key bullet points there, what should folks be looking for?

**Andrea Nakayama**

Yeah, so again, each of those routes for me has a circle of influence. So the circle of influence around digestion is the mechanical, the chemical, the structural and the microbial. So to begin with, what we all need to do is slow down. Chew our food, make sure we're chewing our food and we're able to process it. Poop is a great diagnostic tool. And I don't mean in a functional test. I mean in the toilet like we can just be looking how am I doing? How am I doing here? And there's Bristol stool charts that just help us to look at that, to see what the relationship is, not just between our food and our poop, but

our food, our digestion and our poop. So chewing is really, really important. And it's rushed past these days and those chemical factors that we have to get going for digestion to really function. Right. This is what functional is, right. We get the body into its most functional state, are activated by the brain. So they're activated when we smell food, when we cook food, when we take the time to pray over our food. These things seem basic, but they actually have a physiological purpose that we're bypassing.

Some of those simple things are so overlooked. We see patients in our clinic that are seeing the top functional doctors around the world. And some of these things are not addressed and we have to slow it down for the body to even come in to and receive food, let alone treatment. Right. So the circle of influence is something to think about, how do I optimize mechanical, structural or mechanical, chemical, structural, which brings us to those Leaky Gut issues or other issues that could be happening in the digestive system?

And then, of course, microbial, which gets a lot of attention these days, but working appropriately with microbial treatments or recommendations, which may take some handholding for each individual.

### **Alex Howard - [00:21:49]**

I want to back up on something you just said that I think is really important is that people can get tempted by doing the sort of sexy or the sort of sophisticated new stuff and miss the fundamentals and just, perhaps just really reiterate why that's a problem.

### **Andrea Nakayama**

Yeah, I think that, again, we're looking for the quick fix. A lot of people now in functional medicine are looking for the root. So they think that if they do some fancy testing and it tells them that they have some dysbiosis or some imbalance, that if they address that, that's what's going to fix everything. They just need to find it and fix it and all will be better. And in fact, that imbalance happened for a reason that, if not addressed, will continue to lead to other imbalances. And this is what we see time and time again, and which even with the students I teach, it takes like constant reminding. When our student practitioners come through our clinic, they're like, oh, you really focus on the core basics. And we're like, yeah, really. Like, there's a lot of work to do in sleep and relaxation alone to make sure that it is optimized.

And the reason why I'm kind of double clicking here, Alex, is because this is the work we can all do for ourselves. This is where we don't necessarily need to run out and find every next test or practitioner. We can do it by tuning in that mindful listening like we were talking about. Tracking, listening, pivoting, recognizing that ketogenic diet may not work for your body right now for multiple reasons. You might have hormonal factors. There's so many different reasons why we are each unique and deserve the allowance, the permission to personally tune in.

### **Alex Howard**

Yes, one of the key maps that you use in the work that you do is the Functional Nutrition Matrix. And I think it's an incredibly helpful way of organizing all of these different pieces of information, because I think the danger is otherwise one goes into a consultation and it can become completely paralyzed by the amount of information one can be looking at. So maybe just explain a bit, what the Functional Nutrition Matrix is and how you use it?

### **Andrea Nakayama**

Yeah, thank you. My favorite tool, I think it is the most important tool. And if anybody wants to look at Functional Nutrition Matrix, and it may be overwhelming, but you can always find one at [fxnutrition.com/matrix](https://fxnutrition.com/matrix). And when I first saw the Institute for Functional Medicine's matrix, I thought that captures everything. And yet I found it hard to read and hard to share with people. So I reworked the functional matrix to create the Functional Nutrition Matrix, which I think is a bit more user friendly.

The Institute for Functional Medicine is aware that I have this matrix, but it helps us to classify information into three different categories. And for ease I like to call those categories the story, the soup and the skill. And the story is our history. And again, this can be so overlooked in assessments and in what we're looking for. So that story in functional medicine is our antecedents. Those are our genes, our genetic predispositions, what our mother and father and grandparents experienced, how we were born, whether we were breast fed or not. Those are our antecedents. What kind of set us up on the path that we're on.

Our triggers are the things in our lives that were very triggering for our body, our mind, our life. For instance, what I experienced with my husband's diagnosis while I was pregnant, already intensely stressful time for any individual because of the hormonal changes. And often a trigger for autoimmunity in and of itself was overlaid with a tremendous amount of additional stress. So pregnancy, deaths in the family, big stressors with relationships or finances or graduate school. These are triggers that we can experience. Anything like food poisoning or any other illness, COVID is a trigger in multiple ways for all of us now. Whether we've experienced an emotional trigger or a physiological trigger, it is a trigger. Even things like the vaccine will be a trigger. We just don't know. And I'm not saying pro or no. I'm just saying that these are triggers that we actually track in our lives. And then our mediators... oh go ahead.

### **Alex Howard - [00:26:48]**

The challenge with those triggers as we normalize right? So, for example, with COVID, I think a lot of people don't realize the enormous impact it's had on them psychologically and emotionally because it's just sort of, you know, death by a thousand cuts. It's just lots of tiny things that happen. And it's often only on the other side that we look back and we go, oh, my God. What did we just live through? And that's often the way with the things that have really shaped our lives that at the time we just had to survive. We didn't really realize how they were shaping us.

### **Andrea Nakayama**

Yeah, and this brings us back to that deep assessment. So before we complete a matrix in the clinic and what I teach students, we do a very detailed timeline that involves not just an intake, but an hour long motivational interviewing session. So we are filling in the blanks in somebody's life. So if they're saying during this period I started to feel fatigue, because we're always asking when did it start? We can ask what else was happening in your life, what was happening before that? And in doing that process people have the epiphany of, oh, my gosh, those things were related. I would never have thought of those as related. But we start to craft the story that I like to say takes us from the why me? Why is this happening to me? To the oh, me, that makes sense.

And there's then a softening and an acceptance that can occur in the journey because we're putting the pieces together instead of thinking this just came out of the blue. Why me? So those triggers are, like you said, they get normalized, we bypass them. But when we can slow down and really kind of write our story, capture in a graphical representation what has occurred throughout our lives, keep in that slowed pause of the process. That's when it starts to kind of click together.

And then I have to just mention the mediators, because they are my favorite, because I think when we know our mediators, we're back in control of our health. And those are the things like you are talking about, Alex, where we're like, I did eat that or I didn't eat that and I felt so... Simple one, my boyfriend's very physical. He works out really hard and he notices that if he stretches every night and every morning, he sleeps much better. And so that becomes a, stretching becomes a mediator for him. It's a positive mediator. Or if he doesn't stretch, it's a negative mediator. And knowing those things and understanding that risk reward is what allows us to take the best care of ourselves.

### **Alex Howard**

I think that's, it's such a great model. I'm also curious that you are sort of describing here more the diagnostic process, like figuring out where you start. But as you were saying a bit earlier, where you start may well not be where you end up, because there's a constant adapting to the feedback. So just

say a bit about how the matrix helps, not just at the beginning of the journey, but actually to map the journey along the way.

**Andrea Nakayama - [00:29:50]**

Yeah, we like to think of the matrix as a living document. So it is not a prescriptive document. It is capturing the moment in time that we are in. Like a lab test would. So a lot of people confuse the matrix with capturing what is and where they want to go. But we like to say it's for capturing what is, but what is changes. So that means it's a living document that we return to so that we can upgrade, update it. It's great conversationally because we can go, oh my God, I used to have constipation every day and now I'm pooping three times a day, that's resolved. It's a good reminder because again, we normalize not just the insults in our lives, we normalize our healing, too. We forget very easily what we were experiencing before because we find the new thing to noodle on. So we like to think of it as a static in the moment document, but one that is living that we can continue to upgrade.

And when we are making recommendations after that capture, they are slow and steady. They are not, take these five supplements. You're deficient in this. And that we have to see really methodically. How does that change dietary nutrient intervention, lifestyle intervention? How does that work? Positive or negative? Track, bring it back and make recommendations based on that. And the things that feel like mistakes are often information as well, they help us with the assessment. They're like, oh, that didn't work. That methylated B complex didn't work. Why? What does that tell us? Does it mean that doesn't work for me? I don't need B vitamins. No, we all need B vitamins. What does it tell us and where can we pivot from there?

**Alex Howard**

I often think things, I'm sort of echoing what you just said, but things not working sometimes tells us even more than things working, right?

**Andrea Nakayama**

Absolutely. Yeah. Yeah. And I think that process tells us more than some of the testing.

**Alex Howard**

Yeah. And I think sometimes patients come in and they think, oh my God, I've let you down, I'm going to disappoint you, I failed you, whereas as practitioners we're like yes! Information! Like this is going to help.

**Andrea Nakayama**

Yeah exactly. Yeah.

**Alex Howard**

I imagine also one of the things that, we don't use the matrix exactly the way you're using it, but I think there are some similarities in some of the ways that we work. One of the things that I observe is that particularly for patients that have a lot of anxiety as a result of years of suffering and not really understanding why and what and how, there's something that can be very calming about being placed in a system that tracks and makes sense. Is that something that you observe as well?

**Andrea Nakayama**

Yeah, and also the hearing and holding. So for patients who are suffering and not getting better, there is a process of constantly chasing and to know that somebody is listening, making connections and capturing all that information, it's such a relief in and of itself. Like you're talking about, somebody's got it with you and there's the picture. So again, it's that, oh, that's me. And there's a relief in that. Also, I think these are people who know there is no one quick fix. They may still be searching for it, but



deep down they recognize. Right. We all want it. Oh, it's just that supplement. But yeah, there's that recognition and that appreciation of it's going to take me time.

And this is what I think can become the kind of trap of diagnostics as well. Oftentimes people who are sick and not feeling better, are fatigued and not feeling better. They're looking for the one diagnosis. And when that diagnosis is received, it feels like that's the Holy Grail, because now we'll know the protocol. And then the truth gets revealed again that there's no one protocol for one diagnostic, and that's where we have to get back into that work. What is that diagnosis mean for you? What is chronic fatigue syndrome mean for you? Just because it manifests as a tipping point doesn't mean it's the same for you and I.

#### **Alex Howard - [00:34:14]**

I think that's a great place to get into some practical examples. I believe you have a couple of case studies that will help bring some of this to life. So over to you on that.

#### **Andrea Nakayama**

Yeah, so just thinking about fatigue and the different reasons why. And again, there's no quick fix in these and they're always so complicated. So in me telling a patient's story, it often feels like it's a novel in and of itself. But to truncate it down, I can think about Melanie, who had some major hormonal imbalances due to cysts on her ovaries, and she didn't know those cysts were there, but her cycles were very extreme. Sometimes every two weeks, a lot of blood loss. And as a result, she had major anemia issues. A mom with two young children, was completely functional, not recognizing or not listening to how fatigued she was. Ultimately, those cysts resulted in surgeries where those cysts had to be removed. The ovaries actually had to be removed as well. But those were leading to major hormonal imbalances.

And our hormones again, the HPA axis the HPG axis, we need to be supporting how the body is functional. This is somebody who takes beautiful care of herself. She's an excellent practitioner. She's caring for others, her family, those around her, her clients. But this is what was happening to her and her body. So she had major anemia. That's going to be one of the causes leading to fatigue, a lot of blood loss. She had to do a tremendous amount of work with nutrients, diet, digestion and herbs to even get her iron levels and ferritin levels up to normal. And a genetic polymorphism that doesn't allow her to take a methylated B complex and use those B vitamins. So every time she took a methylated B vitamin, also a source, B vitamin deficiencies that can lead to fatigue, every time she took that...

#### **Alex Howard**

Can you just explain the difference between a methylated and a non-methylated B vitamin?

#### **Andrea Nakayama**

Right. So, again, if we think about, like, the sexy thing, right now we talk a lot about MTHFR and MTHFR polymorphisms. And the way to often address that is with a methylated B complex so that the nutrient has done the work for us. It doesn't have to go through the methylation process in the liver. Most methylation happens in the liver about 80 percent. So it's kind of a pre, that work has been done for us so we can utilize the nutrient. And oftentimes, again, it's not just about getting the nutrient, it's about utilizing the nutrient. And so with her genetic makeup, she actually has a different methylation issue that's not related to MTHFR, which meant that the methylated version of the B vitamins didn't work for her body.

That is super complicated. The thing to pay attention to there is, if you are taking a nutrient and it doesn't feel good, again Alex what we were saying, what does that tell us? We didn't actually need to know her genetics, ultimately we got her genetic results, but we didn't need to know that to know we had to back it up. Started a different angle. Something is happening here that's not allowing her to process that nutrient and utilize it appropriately.

So one example where there's a tremendous amount of fatigue, she was bypassing it with, I'm just tired. I'm doing a lot. It's stressful. It's COVID. I'm home schooling and I'm working. Right, fatigue. And then really finding out with an emergency, an acute situation one of the routes that was going on there, basically, she wasn't able to produce a lot of her hormones because of that structural abnormality occurring and the amount of inflammation that her body was dealing with. She tried to fight that abnormal factor growing in her body. So the course isn't simple. It's ongoing. It takes a lot of different modalities, but that's one example.

### **Alex Howard - [00:38:43]**

And I think part of what's really interesting about that example is there's actually, it was a structural issue in the body which was impacting it. And that's something that's not so commonly, I think, observed in the, certainly nutrition world.

### **Andrea Nakayama**

Yeah. Structural issue in her body with the cysts, hormonal issue because of what the cysts were causing. Inflammatory issue, she has digestion issues that don't allow her to absorb the iron that she was already eating. So she's having issues there. Again, it brings us back to how do those three roots help us to build what the body needs, even though what's happening is happening elsewhere? And structural is one of the nodes on the center of the Functional Nutrition Matrix. And it's always the one I joke about because we tend to overlook it. When we're talking about nutrition. We tend to not think about structural imbalances.

And I have a funny story about that with my son and his deviated septum where I did everything for his allergies, herbs and probiotics and dietary changes and no gluten and dairy. And then one day I'm sitting next to him and we're watching a movie and he's breathing. And I'm like, do you always breathe like that? He's like, yeah. I took him to the doctor and like, whoa, that's the most deviated septum I've ever seen. Right, so structural we don't want to overlook. Could there be something going on here that I'm bypassing? And again, this isn't to put fear in people. The process is one of inquiry, not a fearful diagnostics.

### **Alex Howard**

Yes. In this example, one of the things that is a sort of personal pet interest of mine is, is the how different practitioners sequence their interventions, like which order they do things. And so an example like that, there's different aspects that you've outlined. How did you decide where to start? Because obviously you do too many things at once that can have its own overload, both sort of psychologically, but also.

### **Andrea Nakayama**

Yeah. And every case is going to dictate something different in this case because there was an acute situation, her ovaries are then removed. We have an acute hormone issue that needs to be addressed because we have somebody in their 30s going into immediate menopause. Right. So that dictates some of where we need to focus. And this is what I call functional empathy. We don't say like, well, let's start with talking about hydration when we have an acute issue or somebody has cancer and they're coming out of surgery, we may not be focusing on their cancer, we have to focus on healing from surgery, right. So where do we start is dependent on where the individual is.

However, we do always need to build from the ground up. Is digestion optimized? Are you receiving the appropriate nutrients? How do we make sure those nutrients are received if you're under a tremendous amount of stress? There might be different ways for us to address iron that might be easier on the body to work towards something later on. This is again, like a good example of this is probiotic therapy. When we have to deal with the microbial terrain, it's at the core, it's at the center of everything. But not everybody can withstand the same type of probiotic treatment. Some people react very negatively to certain doses or somebody's like I don't feel it at all, and we have to not have a prescriptive nature there.

So with this client, we are dealing with the acute situation, making sure and tracking that she's getting on the appropriate hormone therapy with a provider who's doing that piece of the work. What we're doing in tandem is tracking, giving reflection, making sure that they, or we are in communication with that other provider, making the adaptations, giving it enough time while we're rebuilding the system. And a lot of that brings us to the right side of the matrix, that skills section that I call the core basics, sleep and relaxation, exercise and movement, nutrition and hydration, stress and resilience and relationships and networks. And we're building there as foundation, slowly but surely optimizing each area. Not too much at once.

**Alex Howard - [00:43:14]**

Very cool. Very cool. I'm mindful of time, but there's a second case study. We can't mention two case studies and not go into them, so talk us through the second one.

**Andrea Nakayama**

Yeah. So Carol was a client who had a history of Epstein-Barr virus and the EBV, the Epstein-Barr virus, wasn't active anymore and we could see that in her blood tests. But she did have additional environmental exposures that were triggering factors that felt like her EBV was being triggered. So it feels like we want to go right back to the diagnosis. But in fact, we had to use our matrix and do deeper dives to understand that there was a mold toxicity that she was exposed to and that it's not, mold is tricky, as I know a lot of people are talking about these days.

So it's not just that one size is going to impact everybody the same way, but with her history, that was all being triggered. And so we had to do a ton of work there to not only deal with the inflammation in the body caused by the mold, but also get her out of that situation. She actually had to move to a different environment, move to a drier climate just to get out of that cycle of fatigue that we were talking about that becomes cognitive fatigue as well where you can't overcome. So this is one of those areas where we're looking at inflammation. And one of the things that needs to be cleared is the environmental instigator. And so, again, completely different situation, both leading to fatigue. And that's where we have to really do the work to uncover why? Because this is a symptom. It's like, what I call a branch, not one of the roots. So why is that branch blossoming? What's happening there? And how do we go deeper?

**Alex Howard**

And what were the outcomes of the interventions?

**Andrea Nakayama**

We always see slow but steady people might get triggered again into their symptoms. Our goal is, it's going to happen, especially with autoimmunity. You're going to have what we call flares. Our goal is that they happen less often. So there's a wider time between when they do happen and if and when they do happen they happen for a shorter period of time. And each patient knows their mediators enough to help themselves get out of it. And one of our mediators may be working with a practitioner who knows us so well that can help us in that more immediate intervention when the flare is occurring. So we always see improvements. They're slow and steady, they're not a quick fix. And often times these are symptoms that we are living with, but hopefully living with in a new way where they're not consuming us. They do serve, when they come once in a while, as reminders.

**Alex Howard**

Yes, I always say to people, slow and steady is the way. People want the sort of miracle and they want the sort of overnight transformation, but it's the, you don't want your house to be knocked up overnight. You want them to dig a really big ditch and a really good foundation and spend a lot of time putting those foundations in place, because then when things do come above ground, they've got the foundation underneath them, right?

**Andrea Nakayama - [00:46:37]**

Yeah. I always like to say slow it down to speed it up.

**Alex Howard**

Yeah, that's great.

**Andrea Nakayama**

Same thing you're talking about.

**Alex Howard**

Yeah. Andrea, I'm mindful of time. For people that want to find out more about you and your work, say a little bit about where they can go and what they can find.

**Andrea Nakayama**

Yeah, absolutely. Thank you. You can always find us at [fxnutrition.com](https://fxnutrition.com). And if you're a practitioner, that page will lead you to our practitioner information blog, training, if you're a patient and you're interested in our clinic. Again, that page will lead you everywhere you need to go. And I do have a podcast. And you've been a repeat guest, Alex, and you can find our podcast...

**Alex Howard**

Always happy to be invited.

**Andrea Nakayama**

I love our podcast. It's based on The Matrix and there's a lot of fun information there and it's [15minutematrix.com](https://15minutematrix.com). You can find it wherever you listen to podcasts or at that website.

**Alex Howard**

I think it's really cool because it's, you can actually understand something in 15 minutes. I like how you've really focused on accessibility there. It's really awesome.

**Andrea Nakayama**

Thank you.

**Alex Howard**

Andrea, thank you so much for your time as always. It's always a pleasure. That's been a great interview. Thank you.

**Andrea Nakayama**

Thank you so much.