Personalized Nutrition For Your Thyroid: The Nutrigenomics Advantage Transcript

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Introduction and Speaker Background

Hello everyone. Welcome back to Reversing Hashimoto's and Thyroid Disorders Summit. I am your show host, Doctor Anshul Gupta, and I have a very wonderful speaker today and very excited towards our discussion, especially how neutral genomics or how your genes can affect your thyroid and what you should be looking forward to.

But let me introduce my speaker first and then we will delve into all this great discussion. So Doctor Mandy Patterson is a founder of two online wellness consulting businesses, including mandypatterson.com and positivefertility.com that empowers high performing women struggling with hormonal challenges and infertility to find optimal health as a natural robotic doctor, functional medicine practitioner, certified holistic health coach, fertility specialist and mom of six, she knows women that they can have lasting, vibrant health.

Using a lifetime of personal and professional experiences, she bridges a division between conventional and alternative medicines, creating a simple, holistic health plan that shows women that achieving wellness can be invigorating and fun.

Mani offers personalized 1 to 1 coaching and group programs options in person and online to equip women and couples with the tools to be healthiest version of themselves.

She has advance expertise and interests in fertility, hormones and nutritional makes. Doctor Mandy, welcome over here. Hi, doctor Gupta, thanks for having me today.

Absolutely. And as you are having the discussion, you know, like you are sharing that you have your own health struggles, that propel you into this field.

And you also have some genetic snips which kind of, you know, increases your chances of having thyroid disorders, especially because of your family history.

So if you don't mind sharing your health, you know, struggles first and how you are able to overcome. And I think that will be very, very helpful for people around here.

Yeah, absolutely. So, so when I was pregnant 22 years ago, so I do have six kids, like I said, like I said in the bio, from 22 down to 11. So I actually initially before I became a natural path, like doctor was an occupational therapist and I was on my clinicals, and ended up, developing severe pre-eclampsia, which for the listeners is pregnancy induced hypertension.

And I went in to help syndrome, which was kidney and liver failure. So, when I walked into the hospital, they basically told me, you need to get your things in order.

We don't think you're going to survive this. Your baby probably won't survive this either. And so it was a bit of a blow for me being a pretty healthy 22 year old.

I'd always been an athlete. I grew up playing multiple sports and fitness, and, you know, was a real passion of mine. And so, you know, luckily, God willing, I came through that.

Okay. I was in a, drug induced coma for, approximately three days.

Personal Health Struggles and Recovery

And it was a lot of touch and go, so quite serious situation. But so my son ended up being born a pound and 14oz.

And we spent about five months in the NICU navigating all the things that come with premature babies.

So, you know, very early on, I learned, to become an advocate, for myself and, really kind of push the boundaries in asking, you know, the doctors that were on his case, the researchers, you know, let's talk more about this.

And I want to have informed consent. Right. I want to know what, you know, treatments are there and how we can maximize our outcomes. So that set the stage early on for me as a health care professional.

So I've worked in conventional medicine for over 22 years. Worked all sectors of health care, from acute care to, assisted living. Nikki, you I've really done it all.

And, like, you know, with our situation, I had, I was kind of thrust into becoming a real advocate, because my son had a lot of gut issues. He, ended up with an ileostomy, for a period of time because he had, an infection called necrotizing and or colitis, where they had to go out, go in and take out part of a small and large intestine.

So I learned very quickly that the gut microbiome is really, like, so important. And that was many years ago before we even had data or even really knew about the microbiome, which I feel like has, you know, become a forefront conversation of recent in the past 5 to 10 years.

So, so yeah, so I when I came through that, I was pretty much told, you know, you won't have any more children because of your genetics. And being the, you know, assertive person that pushes the boundaries, I was like, that's not going to be my reality if it's up to me.

So very quickly started researching and and my master's degree was actually in research. So I was looking at data, looking at genetics back then, which was very early on, like, you know, 2003 is when, the human genome Project came out and we started understanding the complexities of genetics, but actually was able to kind of, hack my own genes and went on to have five more healthy pregnancies with no complications.

So that's my ceiling. That is huge. You know, that gives hope to a lot of people because, you know, a lot of people have been struggling with infertility issues or hormonal issues, you know, with thyroid problems.

And, they are going with treatments after treatments. You know, sometimes they even go to IVF several cycles and still do not get pregnant. So that is a very hopeful situation that, you know, even meeting your genes is a possibility.

So I would like to go ahead and just kind of delve into this whole world of Nutri genomics. First of all, let's tell people like what exactly this means, because a lot of people might not have heard this term of what is exactly new to genomics.

Yeah, that's a great question. And so neutral genomics is essentially the study of how, individual genetic variations, affect the way our bodies respond to nutrients, and foods and dietary patterns.

So, this field of research that has kind of been, you know, coming to the forefront, combines nutrition, genetics and molecular biology, to understand how our individual unique genetics, make up, and influence nutrient metabolism, dietary needs and susceptibility to like, certain health conditions.

So pretty complex situation. So basically like, you know, it's an individualized approach, you know, of looking at a course of a person's, you know, particular genetic pool.

And then, let's say, what is the best diet for them? What are the best supplements for them? Or like, how they can get better is that kind of, you know, a in it and easier way of putting it together?

Yes, absolutely. And his ties in so intimately with the thyroid. You know, the thyroid is you know, that gland that's located in our neck that plays a crucial role in regulating, our metabolism, energy levels and overall health.

So as we kind of talk through, like, thyroid conditions, you know, a lot of times that we know, you know, probably

80% of, hypothyroidism is has autoimmune roots.

So, so we can really go in kind of with a, you know, a magnifying glass and see, okay, what is our unique genetics that, you know, we're able to turn on and turn off our genes based upon the environment that we're living in and the diet that we're consuming?

So it really gets down to root cause medicine, you know? So that's great. So even so, I mean, obviously a lot of people have this question, what is the best diet, right?

You know, some people propagate, you know, an ape diet, some people propagate a paleo diet. Some people are not going towards carnivore diet. And, I find it very difficult to answer that question because I think it's different for different people. Right.

And I think the example of neutral genomics can further narrow down the diet for that particular thyroid patients. Is that correct? Yeah, that's absolutely correct.

And even in my own unique, situation, which I'll use myself, you know, I have always struggled with my weight.

What Nutrigenomics Means

And obviously like, like I said, like I have always been so much about exercise, you know, stress management strategies, all of those things. But knowing the roots of even my own genetics, for instance, you and I were talking about this before the interview, but my mom actually had, autoimmune Hashimoto's hypothyroidism as when I was a kid and she was diagnosed with so many autoimmune situations.

Including, sarcoid. So for the listener, sarcoid is like where your, immune system ends up kind of attacking your lung tissue. And then she also had IBS.

So irritable bowel syndrome, was also, ended up with, a condition like, from a skin standpoint where, she loses the pigment in her skin. And so, like, she and we do know that, that when people have autoimmune propensities or diagnosis, they are much more prone to go on to develop other autoimmune conditions.

Because, the immune system is dysregulated. So absolutely. Yes, that is true. True that, you know, I always tell my patients too, that, you know, once you get 1 or 2 matrices like Hashimoto's, if you don't do anything to address those root causes, you're looking for more autoimmune disease in the future, whether it is the lupus, the sarcoid, you know, rheumatoid arthritis, you know, or delay or any of those things.

So absolutely. So then tell us about like, you know, we talking about this new to genomics and these genes and stuff. So are there certain common snips, you know as we call them, or genetic variations that you see, you know, which are associated with thyroid patients.

Yeah. And so I think let's make the distinction here because I think when we talk about genetics, people think about genetics that they might run like whenever, maybe a couple looking to get pregnant, maybe they've had a lot of miscarriages, or, you know, recurrent, recurrent losses.

And so like this is different than the genetics of, like, looking at, you know, actual genetic defects, in the human biology. And that would be like, for instance, like a situation like cystic fibrosis.

So neutral genomics is different than that because from a neutral genomic side of things, we know, that like, I said, you can turn on and turn off genes based upon the inputs into the body.

So the body is very, very wise, in knowing what it needs to do. And so our body is always looking, to establish balance. What becomes a challenge is, is all of the things that are in our environment, from the standard American diet to stress to toxins and toxins are so ubiquitous, that those things over time can really impact and skew the immune system.

So I like to look at the immune system as, you know, if we if we have a straight line like in the middle is where we've actually got balance established.

How Genetics Affect Thyroid Health

And if we go one way, we can end up with infection, which means that, like our immune system is a bit sweet asleep at the wheel, like it's not able to fight things actively all the way to the other spectrum of where we've got autoimmunity, where our body's kind of turning on itself.

And it varies from person to first person genetically, based upon, their unique genetics. Right. So one person might manifest autoimmunity in their thyroid, whereas someone else it might manifest, like you said, from a neurological side of things with like in that case, or even like rheumatoid arthritis.

And so, you know, when we can figure that out, like what's going on with those, imbalances, then, you know, we can go in and make suggestions from a dietary side of things, you know, to help improve outcomes.

And that can make genes, express, more balanced, which is what we want them to express, you know? Absolutely. So that's great. You know, so it basically affects a whole bunch of things because, you know, and as a functional medicine provider, we are also working at different levels of people.

You know, we are working on the diet. We are working on mitochondria, we're working on detoxification, you know, working on inflammation levels. So it looks like Nutri genomics could be a very important tool in kind of, you know, fine tuning each of these aspects.

Is that correct? Yeah, absolutely. And so here's like an example for you. So like with the thyroid hormone production regulation, genes like the TSH air, it's a thyroid stimulating hormone receptor.

That influences how the thyroid gland responds to TSH, which is a hormone produced by the pituitary gland that stimulates the thyroid to produce T4 into three.

So I know a lot of your listeners are probably savvy and like, at least understanding, you know, TSH, is a fantastic level and most all physicians will run a TSH, you know, at an annual review, but we do know that TSH obviously, like, is, you know, it's actually a pituitary hormone.

So an indirect level of thyroid, metabolism. So whenever someone has like a snip, which means, again, it's just a subtle, how do I want to say it? Variation. Right.

That actually over time, like, our bodies have adapted to our environment. And so these snips are just subtle variations, but it can really impact, like how, how optimal our thyroid is running.

So like, that would be like a specific genetic snip that relates back to the thyroid that is is good to know, right? Absolutely. Yeah. No. Absolutely.

Like it's good to know like how your thyroid is functioning and how that can impact it. So I think you like, you know, point out an important point over here is that, you know, differentiating between what a snip is, right?

Because a lot of people think that those are absolute terminology that okay, well, if I have this genetic problem, my body will not produce thyroid hormone at all.

That's not what we're talking about. Let's say if your body produces like 100% of thyroid hormones, if you have that snip, maybe you might be producing 70 or 80%.

But if you do certain things in the right manner, you can take that 70%, 200% kind of. Is that the way it works? Right? Absolutely. And to like so like if we think about this, like even going back to foods and I think you and I are very much in alignment because we've had other conversations around this.

But when we know someone has more of a propensity to, to autoimmunity with the thyroid, for instance, we know, like gluten can be an inflammatory food.

And the reason for that is, is because, you know, are wheat in the United States is heavily sprayed, with glyphosate. And, you know, glyphosate is really roundup.

And so, when we're adding on those toxins in those pesticides, then that can even further challenge the thyroid and, like you said, maybe down regulate it to maybe 70 to 80% of the optimal function versus the 100%.

Absolutely. So, I mean, I believe the toxins play a huge, huge role, right? You know, especially more toxins and heavy metals, you know, in thyroid disorders.

And, we have worked a lot of people on the detox profile. But again, detox channels are also affected with these like snips. So shed more light on that.

Yeah. So so the detox snips are a whole nother area where we know that certain people aren't as, able to get rid of toxins as efficiently. And again, going back to remembering, like, the body is not defective.

We have just evolved over time to respond to our environment. And so the signs and signals that we get from our body are it telling us what we need more of or less of.

So, certain people that might have say, for instance, like the MT FA, that's one that's talked about a lot, but I think it's gotten a lot of press. And unfortunately, most people will just kind of like zero in on the MT for.

But it is important to know, because people that do have in for the heterozygous or the homozygous, and there's a couple of different snips in there. They need more like folate, in their diet.

And unfortunately, you know, for people that are like, especially women that are pregnant that are being given folic acid, that can be a real challenge.

Detox, Nutrients, and Supplement Needs

And that was something that I found out was a challenge for me back in the day. Because, you know, folic acid has been, kind of, you know, the most frequently prescribed, option as far as that.

So, and when we don't have optimal nutrients, in our system B that our B vitamins, B12, you know, folate, magnesium, those cofactors then our detoxification systems can run more sluggish.

And I really do feel like in my individual case, whenever I was pregnant with my first pregnancy, I think that was one of the challenges that really kind of set me up.

Do you have, such a, you know, large health event? You know, that could have been life threatening. So, yeah. So there's there's many factors there, but from a neutral genomic side of things, we can go back and see, you know, some people, need more magnesium than the average.

Some people need more vitamin D, and I really firmly believe, when we look at root cause medicine, we go back to the minerals, which are the building blocks of the body.

So calcium, magnesium, sodium, and potassium are in, you know, essential macro nutrients. And we can see people are really depleted, because of the stress that we're under, the toxins that our body's having to process.

And, you know, just the food, is not always the best. So, like, you know, a lot of thyroid patients, you know, we feel that they should be using iodine or selenium or zinc, you know, and all those nutrients in there.

So does what what are you what you're proposing is that maybe there are some people who need a higher dosage

of those supplements as compared to the others.

Is that correct? Yes, that's absolutely correct. You know, and neutral genomics can really help to identify those genetic variants, or snaps that relate back to individual processes, of those nutrients that are so crucial for thyroid health.

And, you know, iodine is one of those and you'll know this as well. There's different camps on if people need iodine supplementation or if iodine, you know, we do know iodine is in a lot of our products, our body care products.

And so really kind of going in and assessing if, you know, if people are deficient. Iodine. I have seen iodine be miraculous for some people, because of their unique genetics.

And in the same with selenium, you know, selenium is, you know, an antioxidant. And everybody, has different needs. So that's where, you and I both use, you know, testing lab, lab work and, you know, different modalities to kind of get to the root of, you know, are there deficiencies here?

And so, you know, organic acids testing is really valuable. I, in fact, use hair tissue mineral analysis in my practice. I can really get great results.

We simply looking at the hair. And for the listeners, hair tissue mineral analysis is essentially taking samples of your hair. And, you know, hair is dead. Cells.

So we're able to look at, like, what has been going on at a molecular level, over a 3 or 4 month time frame. And it can give us such valuable feedback.

Absolutely. I think, you know, like testing is a very powerful tool. And the good part is that, you know, with these new different tests of functional medicine, we can actually get to the cellular level of what is happening over there.

Right? Because sometimes when we do these traditional lab testing, which just most of these nutrients in your, you know, in your blood or red blood cells, we do not get that cellular level of what is happening inside of your body.

So absolutely, the hair minerals is organic acids and a whole bunch of other things which we can do to know these cellular level information. I think that's huge. Yeah.

So now let's delve into this energy and metabolism piece of it, because that's another problem that, you know, happens with most of the thyroid in Hashimoto's patients that their metabolism is poor.

You know, they get you know, these issues with not able to lose weight. Plus you know they have this low energy. So how does a neutral genomics, you know, play a role in that.

Yeah. Great question. So you know we do know obviously like more people, many more people tend to struggle with hypothyroidism. And and you know, I really do believe, you know, the crux of that is, like I said, it's the standard American diet.

It's stress and toxins if we go back. So like, really simplify it for people. Another thing that's really interesting, if you dive into the research of even here tissue mineral analysis testing, is 50 years ago like it was pretty much split down the middle with the population, 50% were under methylated.

And then there was a 50% that were actually fast metabolisms or oxidizers. And so over time, we've really seen the shift, with metabolism with people.

And I do feel like it goes back to those things. So, you know, I think getting to the root cause for that individual is so important. And if we come from it, from the angle of just stress simply alone, we do know that a stressed out state really burns through those minerals.

And those nutrients. I mean, we have much higher needs. And another piece of it is to we know from an agricultural side of things are, you know, our crops are not the seen that they were 50 years ago from a nutrient density standpoint.

So I find in my practice, a lot of times people do need, you know, extra supplementation to actually meet their needs. And, you know, for instance, say like magnesium, we know magnesium is like, you know, needed for over 300 cellular reactions in the body.

And that is a mineral that very quickly gets depleted in a stressed state. So, you know, if we go in and look at like the balance of these, you know, nutrients and what's going on with the body systems, then, you know, for instance, like, you know, people need more B vitamins generally, when they're under stress, and B vitamins are like such a building block and needed, for metabolism.

And so when we know that, then we can do better with the diet, we can make more recommendations around optimizing supplementation.

Metabolism, Energy, and Vitamin D

And, you know, another another key point here is to vitamin D that is come on the stage in the last probably five years, 4 to 5 years with the Covid crisis and all of that.

And we know that people tend to fare better when they have optimized vitamin D levels. And from a functional medicine lens in a conventional lens, they're they're different, right?

On how much vitamin D we need. But, you know, I think and this is such a simple thing for people, you know, actually just getting out in the sunshine 20, 20 minutes a day, soaking up the sun.

You know, the challenge is, is when we live in more, you know, cold climates, you know, it's hard to get out in the sunshine when it's freezing cold outside. Right?

But there are some different ways we can really work on optimizing the diet, using and leveraging sunshine and stress management strategies. And then also, from a mineral standpoint, if your mineral balance is out of whack.

So like those four main macro minerals, we were talking about magnesium, you know, sodium potassium and calcium, then our body's not going to have the building blocks it needs to actually support optimal vitamin D.

So that's another like, you know, weight. As far as when we look at neutral genomics, and even in my case, I have much higher need for vitamin D than the average person.

So that's where we go in from a personalized lifestyle medicine standpoint to really help people achieve optimization. Yeah. I mean, you know, that's very interesting about vitamin D, because a lot of people, you know, like, that come to work with us.

You know, we see everybody goes on vitamin D, but typically, you know, like we'll put them in five, 5000 units a day and they will do really good. You know, the levels we will reach, you know, between 60 to 70.

That's what you know is good optimal level. But there are like, you know, few others. Even after putting them in 10,000, they will not budge beyond 50.

You know on that right. Has levels. And I would like what's going on with those people. So now it makes absolute sense that they have this genetics that, you know, their body either cannot absorb, cannot utilize it, or they have a higher need.

A vitamin D. Yeah, absolutely. And then to maybe the structural components of the house are off. So like comparing the body to like a house, you know whenever we're building a house we want to lay a really firm

foundation.

Right. So that house is safe. And so that's where these nutrients from a bio individuality side of things are so important, to making sure we have those macro minerals and then, you know, you and I have had many conversations around the antioxidants and the phytonutrients that are so valuable, for really working on, lowering inflammation, oxidative stress in those free radicals.

Yeah. So let's talk a little bit more about that because, you know, like initially when we talk about various snips, you, you said that, you know, like there can be various snips, which increases the propensity of a person having autoimmune diseases, which is essentially means also having higher chances of inflammation.

So let's say, you know, like you found those snips that for a person, you know, has increased chances of autoimmune diseases, then what are the few tips that you will have for those people to do.

Yeah. So, you know, interestingly enough, you know, we know that people, that have celiac disease. So celiac is an autoimmune disease. Those people are four times more likely to have hypothyroid dynamics.

And so like when we know that like in that's genes like, and this is going to sound like foreign, you know, information for people. But like so for instance, the hla drb one, is one of those, that makes them more at risk for autoimmunity.

When we know that, then there's again, things that we can put in place. And what we know is from an autoimmunity side of things is we're more sensitive, to certain foods.

And we could dive in and do a whole, hour long on the gut microbiome. But, you know, the gut microbiome is, you know, our second brain, which I honestly kind of feel like it's our first brain.

And, you know, our immune system, a massive portion of our immune system is in our gut. So we've got to go back to what foods are we putting into our bodies?

And, we know from a functional lens that there are foods that are higher inflammatory than others. And I don't like to villainize food because as a natural path, I really firmly believe that all food was created to nourish our bodies.

But unfortunately, we have to go back to, you know, like it wasn't natural to have the amount of stress that we have, the amount of toxins, all these things that are manmade.

Right. So, when we start to think through that, you know, we do know that gluten is, like I said, highly inflammatory.

Autoimmunity, Gut Health, and Elimination Diets

So we do know with a lot of people that struggle with autoimmune dynamics, taking out gluten can really like lower that threshold. And can kind of allow the immune system to reset.

So a lot of times, when we talk about an elimination diet, that is one of the foods that we pull. Another one is dairy. So conventional dairy has a lot of problems because of the amount of antibiotics that are actually, used with the animals.

And then it's highly processed and we remove those enzymes that are so important, for, you know, breaking down our nutrients. So, you know, I find in my own practice, dairy a lot of times needs to be pulled for a period of time.

Doesn't mean that it's forever. However, with people that are celiac, we do know that in order for them to achieve health, they are going to have to remove gluten for, you know, forever.

Unfortunately. And then dairy too. Thinking about dairy, you know, can be a challenge for many people, even with gut dysfunction. And then to, from an elimination side of things, you know, there's a small list of other foods that we

remove for a period of time, which can be eggs, which eggs are a great food.

It's just our immune system that lives in our gut, is constantly bombarded by so many things, and we start to kind of a road that gut lining that is, you know, the seed of our immune system.

And so our body just starts to react to that. So, you know, that's kind of the start on where, you know, land and getting people to, just reset things in lower inflammation in the body and just give the body some time to heal.

Absolutely. I think those are all great tips. One thing actually, you know, like a lot of people might have this question over here. Is that okay? Well, you're talking about this neutral genomic testing, but where should I get this testing.

Is it should I go to my PCP and talk about this testing. Or can I go online and order it. So tell a little bit about that too. Yeah that's a great question.

And so you know, many people here might have heard 23 in me that's been in the news. And like, you know, people have heard that they can run their DNA through that.

The challenge with like 23 and me, for instance, is that we know that maybe it's about 50% accurate. So it's really important to find a good company, that can walk you through that.

I work with a couple companies myself, which is three by four genetics and also intelex DNA. Intelex. I love Intelex because they come at it from a real functional medicine lens, where there's this intersection between you and I both can agree on this.

I believe that, you know, modern day medicine is so valuable. Like, there's so much that we can use in our toolbox with modern day medicine that can really help people get back on track.

And really help them restore, health and balance in their bodies. So but I do even know, like, with Intelex DNA, you know, you're looking at 98 to 99% accuracy in the interpretation of your genes.

Okay. So tell us a little bit more about, you know, like this Intel, DNA testing that you're talking about. Yeah. So, so it is important to know who you are getting your DNA test through, right.

And to, you know, important question to ask is, how do they store the DNA? Like, what is that process look like? Because you want to make sure that your information is protected.

Testing Options and Working with Dr. Mandy

And so that has been a challenge with, say, 23 and me, is that, you know, it's not protected. So, so those are some questions to ask when you're looking at different DNA companies because they're kind of popping up all over.

And so asking questions around, like the accuracy of, the information that they're using. And so like in Intelex case, you know, they actually look at snips that are in, say, less than 20% of the population in that how that may influence your own, you know, genetics from the standpoint of optimizing.

Absolutely. Thanks for sharing that information. You know, I think we can keep going and on and on, because this is such a great topic and very in-depth, you know, like conversations can be happening.

So I think we just scratched the surface so people are aware of new to genomics. And then so that you can start looking into it. But tell people a little bit more about, you know, where they can find you and how they can work with you.

Yeah, absolutely. So, so my website, like you would read in my bio is mandypatterson.com. So that's a great way to reach out to me. Inquiries at mandypatterson.com.

And so like you had said, I do one on one coaching and then I also, work with women and couples and group coaching format. So I have some different programs, with positivity, fertility for couples that are struggling with infertility.

And then also for women that are just really working through hormonal challenges, neutral genomics, like I use, a program called hormone Harmony, to really help, women optimize their health, their hormones, their thyroid.

And I'm also out there on social media, Instagram doctor Mandy Patterson, and then Facebook, Mandy Patterson functional medicine practitioner. Awesome, great.

We'll have all these links in the description. So please look into that. Follow her great wealth of information. And then kind of, you know look at all this information about neutral genomics.

So Doctor Mandy, thank you so much for coming over here and sharing this great information today. Thank you for having me, Doctor Gupta. It's been an honor.

Absolute pleasure. Pleasure talking about this topic today. Thank you so much. This is it for guys today. Thank you so much for joining us. Bye bye.