Menopause and Genetics: Why Your DNA Test Might Be Missing the Real Story Transcript

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Introduction to menopause genetics

Welcome back to Menopause Mastery. I want you to picture, you know, maybe you in your 40s or maybe another woman in her 40s. And on paper, everything looks absolutely correct. Everything's right.

She's eating a whole food. She's eating a clean diet. She's lifting weights three days a week, prioritizing her sleep, and tracking her recovery. But over the last 18 months, her body feels like it's operating under a completely different plan. and she's going through all of the pmenopause and menopausal symptoms. And when she goes to her doctor, everybody says, "Hey, you know, you look completely normal." It's part of the transitional myth. And for years, when women have wanted to dig deeper, they turn to a lot of different kind of testing. And many of them turned to generic direct to consumer DNA testing.

And maybe you've done one. Maybe you're like me and you've done a bunch and you spit in a tube, you send it off and you get it back and you get either a 50-page report with single genes and single answers and it all looks like a bunch of gobbledygook and it doesn't actually get you closer to what your understanding is of your body. Or you pay exorbitant fees for 10 genetic snips that doesn't really give you a lot of answers and is so so narrow in its focus that it's actually missing the point. And so what I'm here to talk about today with Dr. a Tracy study of the DNA company is how to look at your genetics and how to have a genetics test that actually makes a difference. The DNA company created a test that actually has what we call a polygenic score, which is these genes in action in a group and in combination.

And Dr. Steady is an expert in this arena and functional genomics. She's also an expert in acupuncture and Chinese medicine with over two decades of experience helping women navigate pmenopause and menopause using those techniques along with functional genomics to be able to personalize their diet lifestyle nutrition plans. And so today, we're going to get rid of some of those myths about estrogen detoxification, even the MTHFR gene, and how to actually look at a polygenic MTHFR gene, and how to dig through this information and understand how these different genetic areas like cardiovascular risk, mood, exercise, and recovery, detoxification, all go together so you can make better decisions. So, join me today on Menopause Mastery.

Dr. steady. You know, genetics has been really popular for quite a while. I would say probably 15 years, you know, 15 16 years ago was the first time like genetics became commercially available.

You know, whether it's 23 and me and you know, all the multitude of different companies. I think I started doing genetics when like pathway genomics came out or whoever it was. I think the first one. What brought you to genetics? You know, from your background, I have always found it a little bit interesting. I remember the first time I heard about dopamine receptors and DRD2 was in grad school. So I was looking back through my notes and I think that was 2005 or something like that that I was like, "Wow, you can tell so much about genes." But what what brought me to it this round was that there was something going on with my immune system and I couldn't figure it out. And I couldn't figure out if there was a hormonal component because of my time of life or if it was just chronic Lyme disease or what was going on that I just couldn't seem to fully heal. So, I decided to do the testing and I thought the information was so interesting and cool that then I became a certified functional genomics practitioner.

Oh, that's awesome. That's awesome. Yeah, I think it's um you know, I was always very interested in it all the way back multiple times in school, you know, and I I think early on when they started the human genome project, I was hoping that it would be very deter like anybody else, you're like, "Oh, we're going to find all the light switches and you know, each one's going to have an individual thing. So, we're going to find the answer to human life, right?

And all the things that go wrong with us. And I and I think that, you know, once we got deeper into the data and it was like, wait, we don't really have that many genes and they aren't single in nature and that it's these all these

pathways. And so, to some degree, it's by far more complicated and also not at the same time because most of our genetics are shared, you You know, so if you look at the span of humans, like 99% of our entire genome is the same. And you know, we share about 95% of that with a frog, right? You know, it's like, wait, you know, but but I think I think, you know, the first thing that I'd love to get out of the way is, you know, the idea of genetics testing because there's so many companies out there and there's, you know, I think a lot of subtifuge out there.

Why polygenic testing beats single-gene reports

I think there's a lot of primarily just because there's a lot of people just selling these very very limited sort of you know gene kits that have like 10 genes are like this is the only thing you need right this is it this is all it answers all the questions and you know h how do you look at that genetics kind of environment and especially kind of talking specifically about the DNA 360 and how that is very very different than most of the available tests that people probably have already done.

What I really love about it is it's polygenic. So, we're not just taking one snip or one gene into consideration when we're making an assessment of someone's tendencies, right? And also, we're looking at at the whole pathway. So, for so, let's say methylation is my favorite example because a lot of people will just say something about MTHFR, right?

And that's it. And that's as far as the story goes. And then they're shoving methylated vitamins down people's throats like their candy and it's a B vitamin so it's water soluble. You'll feel fine. And then you have some people who are not feeling so great as a result of that because the rest of their methylation cycle can't support the level of methylation that someone is doing. And so, you know, we're really trying to look at the whole person and we're doing it by looking at how the genes interact with one another and really more like a a family or a recipe.

here's how all of these spices work together to create this flavor. And that's what the assessments are more. It's not deterministic. It's not saying we're assessing that you will end up here. It's more like here's the flavor of your genes and here's how you can change that flavor. Add some lemon juice, right? Like if you put too much salt in it. So that's really that's one of my favorite things about it. It's 170 different data points that we're looking at, but it's really how they're put together that's so special.

>> Yeah. And I think I think that's so very important. Like you brought up MTHFR and I and I literally know a gentleman. His name's Teodoro Botaglier and he just got another new role, but he was at at the Baylor system for a very long time here in Dallas. And he was one of the first researchers actually isolating MTHFR 30 years ago, like 30 years ago. And and looking at it, whether it was reproductive health or everything else.

And you know and and the idea that a singular gene acts in its in its exclusion to everything else is number one never could be possibly how the body works. But I think it you know in many cases brings on adverse events. And I think the methylation gene is the perfect example of that that you know one one person with a particular polygenic score can't even handle methylated folate more or less methylated cabalamin despite possibly having genetic mutations there because of the other ones in the in the family further either further up the pathway or further down and you know and I think that in today's far you know basically pharmarmacological dosing of vitamins especially you know I run into people and they're like, "Well, my, you know, my practitioner told me I needed, you know, 15 milligrams of methylolate." And I'm like, "Never possibly in human existence could we possibly consume that much folate.

That's tens of thousands more than what somebody needs." And it's it is scary because I think people are taking these super physiological doses based on a single gene or you know one or two things that they picked up about genetics assuming that it's going to be great when they're kind of overstepping what could possibly happen in nature.

Yeah. The the other place that I see this happening is with DIM, >> which is that a lot of people if they hear that they have more of a tendency to metabolize estrogen in a certain way, they might be taking 250 to 500 milligrams of DIM a day while they're doing BHRT and they're wondering why their symptoms aren't resolving. And it's it's it's that's not the whole picture. Even if someone does have a tendency in that direction, and even if maybe a little bit

of DIM isn't a terrible idea, dim might be too strong, you may be better off eating broccoli sprouts or doing sulforophane or any number of other things, right? It's it's not there isn't a one gene, one answer thing out there in the way that we're working with functional genomics. So, this is different than um if it's a chromosomeal thing or or something like that. Obviously, there are genetics that it is deterministic, right? But that's not what we're talking about when we're talking about functional genomics and there there just isn't that onetoone correlation of thing.

>> Yeah. You know what? We should probably back up because I know a lot of my listeners are probably very familiar with genetics, but we might have some new miss listeners. So, let's talk a little bit about what's the difference between, you know, like chromosomeal errors, genetic genetic diseases, genetic cancers, and then what we're talking about when we're talking about functional genomics. So certain things, you know, I don't want to get into a whole genetics lesson, but some things.

>> So if obviously if someone has a chromosomeal thing happening, that's at at a different scale than a SIP and that is and and they are going to um have certain characteristics and certain things that are associated with a change in their in their DNA like that, right?

And there's if you test for that, that's how it's going to show up. And granted, there can be differences in presentation there, but it's it's it there it's going to happen, right? And with um with some of the testings for cancer, it's it's it's about likelihood. You have this percentage higher risk of this type of cancer if you carry this type of gene mutation. And even that some people who for instance who carry the BA gene don't end up with breast cancer and some people who don't end up with breast cancer. So once again, that there's a little bit more wiggle room, but it's important testing because people want to know how to take care of themselves and how to screen and how frequently, right?

So it it changes how we go about taking charge of our health, right? And then there's functional genomics and that's basically the premise that these are your tendencies and here are the lifestyle levers that you can pull in order to make your tendencies work for you instead of against you. because we're living in a world that is so different from what our ancestors were dealing with, right? So, all of these things were really important back when they developed and were passed on. Uh but we're we're living in a different time. And so, some of the useful things are we don't know what they were because we're not living in that time anymore.

and some of the other things that have come into existence since then like air pollution and water pollution and pesticides and all of these things. Plastics weren't really a part of of the picture back then. So, our bodies have to be treated differently.

MTHFR, methylation, and supplement overuse

And knowing what our bodies tend to do lets us know which levers are most important to pull, how to pull them properly, and how not to make, I don't want to say errors, but how how not to make the decision about, you know, taking 15 g of folate when that's not what your body wants because we also have this opportunity to use supplements and and lifestyle to to help ourselves. So, we want to make sure we're walking in the direction that is going to help our body the most.

>> Yeah. I think it's, you know, because a lot of times people perceive these any kind of mutation, right? And there's not a single human on the planet that doesn't have some, right? Just period.

They think of it as I got the bad gene. I'm going to air quote bad gene. But we have to remember our ancestors, whether we're from the Philippines or we're from northern, you know, Europe or we're from subsahara Africa, our environments, our foods, our environments, our weather experience, all of those things were radically different. Our exposure to sunlight, the only reason why people have lighter skin is they had shorter times of period exposure to sunlight.

So, our melanin production was actually less. Period. Full stop. But because of that, you know, somebody that has darker skin has the ability to make vitamin D and synthesize it at a much different level, different vitamin D receptor activity. All of those things that our ancestors needed in order to make it here and it was good until our environment

became what it is today, you know, in many many cases. And I think that's so so important because it's it's not the harbinger of doom. It's just, hey, don't live your life like you're Keith Richards when you're not and you don't have those genes. He's the guy I pick on. I swear to God, somebody introduced me to Keith Richards because I'm always like, he must have the most amazing genetics, >> right, >> for partying. Like, he's got to have like every liver pathway just is like rock solid, >> you know? Absolutely. Partied harder than most people could ever imagine is still rocking and rolling. I'm like, I pray that I might be that way, but I I already don't have the tolerance for it, so I know that's not true.

>> Yeah. You and me both, sister. I'm no Keith Richards either. [laughter] So, >> yes, >> but but if you know that you're not, then you don't live like you are and then have regrets about that later, right? If if you know, that's one of the things. If you know certain detox pathways are not super strong, you can you can take care of yourself better.

You know, if you know that you're going to you are more likely genetically speaking to develop a an adverse effect from a statin, then you may there may be some other kind of medication and you can talk to your physician about that if you're suffering from high cholesterol.

And you know, some of the genes in our in the cardiovascular panel are really helpful in that way. Lipoprotein A genes, someone who is suboptimal in those, it it doesn't mean that that anything terrible is going to happen to them. which just means you might want to get screened a little bit younger for certain cardiovascular things. Get your lipoprotein A tested, maybe do a calcium cardiac score a little earlier than someone else, especially if you have a history in your family of cardiovascular events. Right. So, it's empowering. It's like what what can I do with the information about myself?

>> Right. Right. Yeah. Like I I mean I was very fascinated I would say on the other side of that because I'm adopted. I have no ability to look into my family because they're not genetically the same and say what is my overall risk pattern going to look like, you know, and you know, and so that that's what drove my interest because I was like, I have no idea so I can at least find out and make those changes. But I I would say even more so if you have heart attack or stroke history in your family, it's time to d buckle down and understand your genetics potentially for cardiovascular disease for sure. Like that's a that's one that you have a lot of agency. I mean there's many, but you have a lot of agency over it as long as you understand it and know what to do. And I think a lot of people either take one view where they're like, "Forget it. I don't want to know." Or I I'm I'm going to have this cuz my family had it. And that's not true either. And I think that's where people need to understand the power of yes, you might have it in your history, but was was it because your family smoked? Like my dad was a smoker.

he was going to have cardiovascular disease, you know, because when you smoke like that, it's like breathing car exhaust like all day every day. You're going to destroy your arteries. But, you know, now that we've had like a large amount of population that aren't doing some of those things that we know are fully damaging, we're starting to see where those genetics are probably playing out in a much greater way than when everybody smoked, including your doctor. Well, and that's where make linking up some of the things about the genes because when people talk about APOE, a lot of times I think they see that more like a sentence of some kind for something and instead looking at the interplay, how does it how does it interact with your inflammatory tone?

How does it interact with your cardiovascular profile with things like lipoprotein A, with how you respond to inflammation, with what you're likely to respond in terms of nitric oxide production and hypertension and all of those things together and blood sugar regulation. I mean, we have the metabolic panel and the insul insulin resistance panel. That's that's once again really important information. I I knew from experience that I didn't do great with starches. Sure enough, I've got all the worst genes for carbohydrates that you can have and saturated fat. So, lucky me. You too.

I'm double on all of those. And I I remember I remember years ago when I first did my DNA co and I was laughing. I said, I've always said that I needed to eat air because I was like, if it's carbs, straight to my ass. If it's if it's if it's that straight to my I was just like, no matter what I do. But you know what it is? I look at that. You want to know why that allowed me to survive some really cold winters in my family, my ancestors in Ireland.

Chromosomal disorders vs functional genomics

Probably made it through the potato famine just fine because we could hold on to some extra body fat. You know, there's a reason, right? Absolutely. Absolutely. And now we don't we don't need that. So, we just have to, you know, live a little bit differently in order to not have our bodies think that we're suffering again from something.

Because that's the other thing that I see with people is that then they might overcompensate and not eat enough of anything or nothing with fiber or you know there are all of these things that people are doing that I think really I was you know so I was doing keto for a while when I was for first in perry menopause and then I got my gene report and I was like oops maybe with my cardiovascular report doing keto isn't such a good idea and it's also more likely to make me gain weight. So that was just an interesting thing for me to note during that time which was such a turbulent time. Early pmenopause for me was really really rocky.

>> Yeah. Mine is >> Yeah. And so I was just looking for any kind of answers that I could get. And learning how my body metabolized estrogen, learning how my body wanted to eat. These were big big things for me at that particular time because >> I was just trying all the fad things even though I'm a practitioner. You get desperate. You're like >> I am out of control. I need to take charge of this. I'm going to try anything at this point. And really I just wish I had done the genetics test sooner.

>> You said that because you know a number one I think there's a prevailing wisdom that if somebody's a practitioner nothing ever happens to them. I'm like wait wait wait the reason why we are one is because we needed to work on something. But number two, I think, you know, and I I would say this is true of all people, right? We all have whatever level of education around health and nutrition and other stuff. And when everything's working, okay, we're like, okay, my working knowledge of what I know is working right. And then if you add somebody like yourself or me, we've got a ton more schooling, probably more than we ever needed about what this subject matter. And when the wheels go off the bus, we are not immune to the latest Tik Tok craze, the latest dietary craze, the latest because it's always based in a little bit of science. Yes, there is even a diet that made it into a publication about eating ice cream as a dietary food, right? There is plenty of subtifuge in in medical research. But when you when you're in that state, and I would say most women in pmenopause, a lot of women, we get to this point, it's like the wheels are off the bus. My my body is gaining weight. Like I will do anything at this point to feel like I have some control because what I thought was real is no longer real. And so you and I are not immune to that. I did keto. I was just like, well, let me see what happens with hardcore keto, you know? And I I gained probably 10 lbs and my cholesterol went from like 205 to 320, right? All the markers went nuts just in a matter of like 2 months. And and it's because of that APO A2 and and its interplay with APOE. I have a 24 so I'm 2% of the population, you know, you know what I mean? But there was all this, you know, my inflammatory tone, all that other stuff was triggered. And you know, and I think, you know, too many of us are sort of just grasping at straws trying to figure out and so we're we're easily subject to the latest ad on social media in particular because they're all designed to sort of pull at those strings for everybody. So, I think for any woman that might be listening that's like, I just feel like I'm, you know, playing whack-a-ole. Maybe part of the big whack-a-mole is you don't know how you were wired to begin with and what was really protective to your ancestors that isn't being triggered properly now.

>> Yeah. And I think that one of the things genetics does is to help us ask better questions, right? How are hormones being produced and activated? Can they communicate with the cells? You know, what what's the receptor like? Can they be metabolized and and eliminated efficiently? What are they binding to and how strongly? And and then there's the rest of the environment that this is happening in. And I think that pmenopause and menopause time of life is when a lot of other things shift.

Thyroid can shift. Metabolism can shift not only because of the hormones, but just because sometimes that can happen for people where they're they're aging a little bit. Maybe their mitochondria has gotten to a point where it's a little tired and their the detoxing that they've been doing up until this point that may not be as strong as they'd like it to be, it catches up with them, right? And so it's sort of this this sweet special spot that we can get ourselves into where sorting all of that out becomes a lot easier with more information and different kinds of questions.

>> Absolutely. You know, one of the things that I wanted to dig in a little bit was, you know, talking about polygenic scoring. So for everybody listening, you know, we have mutations that we can get either your wild type, more common or less, right? Which is the mutation. And then the polygenic score is these these combination of genes together and how they influence kind of whether we're going north, south, east or west, whatever direction. But

particularly I'm interested in having a conversation around kind of the polygenic activity between our hormone metabolism and also where it interplays with the things we think about with brain chemistry, right?

Your neurotransmitters because there's an incredible overlap both at receptor sites but detoxification. The entire pathways overlap.

How genetics shapes cardiovascular and metabolic risk

You know testosterone and and dopamine go through similar pathways along with estrogen. And so, you know, I because a lot of times women will feel, especially in pmenopause and menopause, I'm anxious, I'm irritable, I'm depressed, and they kind of latch on to it's, oh, it's the serotonin. And it's the medical industry has done that.

You know, they're like, oh, well, you just need an anti-depressant, then you need a sleep medication, then you need an anti-anxiety pill because you're getting anxious. When it is this incredible overlap. So what do you see at the DNA company that is is some of the kind of leading patterns that happen here that may explain a lot of the mood and neurological symptoms that are usually the first harbingers of pmenopause. So because of the pathway overlap when something goes out of balance it's going to affect everything else. So for instance in pmenopause a lot of times and there are always exceptions to everything progesterone goes down first and estrogen does this fun little thing where it will spike and trough in a different kind of rhythm than it did when people were ovulating regularly and having more rhythmic cycles. So instead of it spiking just before LH and FSH um and triggering ovulation cuz it has to get to a certain threshold before that happens and then going down nicely like a well-behaved estrogen and having progesterone rise after ovulation. You can have estrogen spikes at any point in the cycle. You can have troughs at any point in the cycle. So when you have those spikes, some of the same detoxification needs to happen to that estrogen that h that happens with uh things like norepinephrine um and that happens with dopamine, right? So the and especially if you have slower comp, which is just just one gene, but but it's sort of important for for this particular thing because it's important for all of those things. And so the poor little comp can sometimes get a little bogged down by estrogen and then you could be stuck in fight or flight for longer uh when when you're in this norepinephrine situation or you your maybe dopamine is is clearing differently than it was in the past. So there that's one of the places that I see this and and the same is true for testosterone which then also can stay higher rel you know sometimes it's the last soldier right and so uh so relative to other things it can be higher and you can run into the same sorts of things so it that's why knowing the genetics you you then don't want to be putting other things that further slow down the the metabolism of these substances into your body at the same time. So, you know, there are a lot of longevity supplements that have a ton of queretin in them and that also slow can slow down comp and kind of bog it down. It gives it more to to work on. So, someone is trying to do this wonderful thing for themselves.

They're like, I'm going to do this 5 days out of the month. And I'm not saying that that's going to necessarily harm them, but they may notice that the result of that is more of a mood issue than would be expected if they weren't doing that. So, it's it's all about timing of of your interventions and looking at who you are and where you are in your life and what's happening. Okay.

So, I'm going to defend the slow comped people. They call it the executive gene. There's a lot of us, just so we're clear. >> Slow comped, >> right? You're Yeah, you're like squirrel and I have to do three things at once.

But but often those are the people that are are playing roles in in executive environments because they have to keep multiple plates spinning. But you know, here's something that I've found anecdotally and I'd be interested to see if you see the same thing that the slow comped people get very used to their chemistry, right? Because it's kind of like getting a little bit of crack all day long. And when things are volatile behind that, and most of this is going to be estr estrogen's volatility behind that, what they often feel despite the fact that they're sort of in this, you know, kind of exacerbated stress response, they don't get the buzz off of it anymore.

And so then what do they reach for? Stuff that makes it worse. They're like, I need some tyrrosine. I need something to help my dopamine. I'm not feeling.

And then Kathy, they they'll hit it from all sides and they truly honestly make it worse because they're looking for

that that balance that they felt, right?

Because some of the bigger movers are probably fluctuating behind the scenes, which is like testosterone and estrogen. And I think it's interesting because most people go, "Oh, no, no, no. They feel they feel ramped up. They're going to want something." I'm like, "No, no, no, no, no. The ramped up people like feeling that way. They're used to it.

And it's how they've gotten it's their winning formula. It's how they got here, right? That's how they got stuff done. But when it starts getting wonky, if you're one of those people and you're like, "Somebody just unplugged my jets." You are probably a slow comp and you you need to hit it from multiple directions so you don't feel like somebody bottomed you out while you restore balance, you know. Yeah, that's so interesting because then sometimes the estrogen result can make you feel really brain foggy, right? And and kind of cranky and stuff like that. And so there's this edgginess. But I am also homozygous slow comp. So I I did recognize a little bit of myself in [laughter] what you were saying. You you know >> totally me.

>> If you use if you use your stress in a proactive way and you can feel like super human because of it, then when you don't feel like that anymore, it can feel like a loss. So So that's that's a very interesting thing to uh to think about. For sure.

>> Yeah.

Hormone metabolism, detox pathways, and mood

But I think I think for anybody that's kind of in that zone because somebody else that might be a fast comp, they just often can get overwhelmed by things because their their feel-good stuff doesn't stick around very long and you know and and so you know I think you know it goes both ways but that that certain behavior type of that slow comped person like I can pretty much put money on it every time. I'm like, I got a thousand bucks. [laughter] I mean, I'm so pumped. I can feel it cuz I'm that way. I am that person, you know? I'm like, do not make me feel like I'm unplugging my jets because that is a really uncomfortable feeling. Now, I work very hard on the other side to balance that out with, you know, stuff that drives kind of calming of the parasympathetic drive. But I will not allow for that to happen by choice because it makes me feel just really terrible.

Yeah. Yeah. Yeah, that's so interesting. >> You're not going to see me downing a bunch of queretin, right? I'm not going to do anything. I don't care if it helps my longevity and and helps gets rid of scinesscent cells. I'm not doing it, >> right?

>> Unless I'm vacationing. And what a vacation you'll have. >> Exactly. [laughter] I'll just be laying out somewhere on a mattress like, "Oh my god, what am I doing in a pool?" That's hilarious.

That's so true. But I but I you know I think the take-home message for everybody that's kind of listening to us, it's the way we feel, the way we go about our lives, the way we even live within our environment is very much a combination of our genetics. And when you feel like a canary, that's a sign that you have some unique genetic pathways. They're not in concert with how you're living.

Not necessarily. Sometimes it's things you can fix. Sometimes it's things you can't fix, you know. So, you know, sometimes we can't change where we're living and how we're living and things like that, but it's it's something isn't congruent with your environment or food and other stuff that that your body is not necessarily wired to be optimized in. And I think that's the important part.

>> Yeah. And some things really do point to more testing. Dio2 makes you, you know, if if you're sub-optimal there, maybe getting a a test to see if you're converting T4 to T3 quickly enough is a really good idea. you know, there there are very practical applications to a lot of these things. And so when people aren't feeling quite right, I mean, personally, I think that everyone should should get this test done when they're infants so that their parents know how to take care of them best. If my parents had had been able to do that for me, I would have not had as many ear infections as a child because gluten and dairy are not my friends and I was eating a lot of that my entire

childhood and just having these very chronic things happening. But it doesn't matter.

You can be 70 years old and it's still a good time because then it gives information about bone health and about what kind of exercise your body likes in what proportions and just a ton of information that can really a I think that when people feel seen when they look at our reports >> and they're like yeah that is me and and then they're like they there's self-acceptance there right and B if you're given a blueprint of how to take care of yourself. People are always saying things like that. You know, I wish that my kid came with an instruction manual. This a little bit is one, right? It's like, well, here here's here's a starting place for that. And it and no matter how old we are, having a little bit more information, I was able to change some things in my 40s. Now I'm 50 and I feel better than I did in my early 40s and even probably in for a significant portion of my 30s. And it's because because I'm living more the way that my body wants to.

Yeah. Could you imagine? Yeah. The all the behavioral and mood things that are that are that show up through your polygenic score, like how much you would change your parenting based on how your child was going to react to your attempt at control. Because let's face it, that's what parents want is control. And kids are going to act differently based on their genetic pathways.

Well, and even in my relationship, knowing that that the partner that I was with when I had the testing done had a completely different response to cortisol and uh noradrenaline norepinephrine than I did. So, because it took me longer to clear and because I was a little bit more reactive on my HPA access to cortisol and a little bit slower to put on the brake, he cleared really fast everything. So, you know, if if something happened, he'd be like, "Well, why are you still upset that that person almost, you know, drove us off the road or something like that?" And I'd be like, "Well," and then once I got my genetics done, I was like, "That's because it takes me longer to to clear to calm these chemicals down and to clear them out of my system." And for him, it was like that, right? And so, just knowing, >> right? So, >> I'm married to somebody who is not right, it's gonna stick for a long, long time. And he's always like, "How do how do you just get over that?" I don't know. I'm just done, you know. I was like, okay. I was like, I don't know, you know. But knowing that then then it helps it helps you have empathy and understanding for how somebody might act in a particular way or show up in the world.

>> Yeah. In either direction, right? It's like, how can that not still be bothering you, right? I didn't say that anymore. I was, you know, I didn't I no longer wondered. It was like, oh, okay.

It's just biology, right? this that's just how you were designed versus how I was designed. >> Exactly. Exactly. Now, let's dig in because I I we I talk about it quite a bit, but but we've kind of danced around it. Let's talk a little bit specifically about hormone metabolism and how you really look at it at the DNA co and how you sort of put those pieces together to help people understand how they're wired around their hormones.

>> Absolutely. So the first thing that we look at is hormone production and activation. So you know there are some genes that are around steroid hormone synthesis and then you know there's one SIP 19A1 which is around aromatase activity. So that's going to convert testosterone into estrogen. Some people do that much more quickly than other people. And so this is one of the reasons why people's responses to things can be really different. So someone who for instance is taking HRT and they decide to incorporate some testosterone, if they're a more of a fast converter of that testosterone, it can have a different effect from someone who is more of a slow converter. And and that's something that I think is really important when people are speaking to their doctors about dosage and things like that is that there's this there is a difference in how these things are produced and then then how they're bound. you know, we look at which is about androgen receptors and if the androgens are floating around but they're not really binding well, if that that sensitivity isn't there, people may have a harder time putting on muscle.

Um, and and then you have to also look at SHBG, you know, and then how tightly are these things bound? how much is actually available for tissue use versus being trapped by this this binding globbulin and just hanging out like a little bit like they're on a roller coaster that they can't get off of and they're not it's it's not making it to where where it's going to be as useful as you might want it to be. So, so knowing that hormones don't just need to be present, they have to be able to communicate and almost like be heard by the body in order to do what they're supposed to do. And then there's metabolism and elimination.

And so, you know, we have we we talk about estrogen toxicity. And people get a little freaked out by that term. And so, I just want to explain that that doesn't mean you're going to be toxic. It doesn't mean you shouldn't take HRT. It doesn't mean any of those things. It means that you you genetically have a tendency to instead of metabolizing down one pathway, metabolize down one or more of these other pathways where then it's a little bit harder for it to become water soluble and and leave the body. It doesn't mean it's impossible. It doesn't mean you're you're not doing it through the through the pathway that's easiest or anything like that. It just means watch out for these symptoms uh because you might need to do lifestyle things in order to mitigate this, right? And then there's the the rest of the metabolism and elimination through sulfation, glucaronidation, glutathione, and methylation. And fortunately, we have multiple ways that we can finish uh that we can do the phase 2 detoxification.

So, even if someone shows up on their report that they're not great at one of them, it doesn't mean that you're out of luck. And this is one of the I love the Dutch test, but one of the limitations of it is that it's only showing it's only showing this one way. And so, if someone gets a not great score there, they're thinking, "Oh, no. I'm building up all of these things." Right? And there are these other pathways that they can leave. And and it also doesn't take into consideration the gut, you know, and I know that you and I talk about this and about, you know, betagluconase and things like that and and about elimination, which is phase 3 detoxification. So knowing your microbiome tendencies is helpful there, but also getting testing done. So how I think about it is if we know that we have a genetic tendency, we can then do other testing to see what's actually happening. It's not a it's not a life sentence, but it's a tendency. It's okay. We need to pay attention to this, right? It's like a a signpost. It doesn't mean that that's your destination. It means you could go that way. If if you head down this highway long enough, eventually you're going to reach Arkansas.

Exercise, recovery, and stress response differences

I don't know why I picked Arkansas, but if you make another turn, you're not going to get there. You're going to end up in Saskatchewan. I don't know what kind of a turn you would have to make in order for that to happen, but but that's how drastic it is, right? that that you have you have options in terms of how things turn out and and it doesn't need to be something that's really concerning. But we do we look at all of those things and then we look at how inflammation is playing into this and you know glutathione creation versus utilization and how the mitochondria are functioning and all of these things are really important for pmenopause and menopause and hormonal health in general as well as sleep. I mean, sleep can be affected by hormones, but it also affects hormones and stress and hormone health isn't about avoiding stress certainly, but knowing how you recover or don't from stress as easily. I mean, all of us recover from it eventually, but if it's taking you a little longer than knowing how to how to manage that and how to prioritize it as something to look at because in during times of hormonal fluctuation, those types of things can seem really big. It can seem like there's a magnifying glass being shown on how people process their cortisol. It likewise with thyroid. You know, these are it's like a spotlight being shown there. And so, if you know these things ahead of time, you can you can tell what to focus on. Same thing with blood sugar and and some of the cardiovascular things. And all of these are connected.

It's almost like it's all part of one body. >> Yeah. Imagine that. No, I think that's really important because you know because again medicine has been siloed.

You know you have a gastronurologist, you have a cardiologist, gynecologist. Nar do they meet and never will they ever talk about the same thing. But I'm like okay a woman has hormones so therefore that means that their hormones affect every body system including cardiovascular all these other things and you can't separate them. You know, I I mean, I can tell you betaglucaronidase research and the ability to excrete estrogen through glucaronidation and sulfation, especially sulfation, has associations with inflammatory pathways and backwards all the way back to like Alzheimer's risk. It's loose, it's loose, there's like signals there, right? and it's because we don't have enough research. But like there's combinations there that are that are big that cross all these other barriers, but we just don't have the data particularly in women's health yet because we just haven't funded it. But you know, like I look at it and I go, okay, I have I just did not win the genetic lot. I do not have Keith Richards. You know, I have pretty rough kind of, you know, cardiovascular genetics. I have six copies of 9P21. It's like, oh, okay.

Like I never knew that. I did triathlons and I wondered why I felt terrible doing them. I'm like, "No wonder." I still cycle, but I don't do it very often. You know what I mean? Like there, but you know, but now, you know, and it's and

it's made worse when you're inflammatory and you've got all these other cascades going on in pmenopause and menopause.

>> Absolutely. Yeah. I couldn't do really big exercise things suddenly. And that's my my for me it's it's 9P21 and my mitochondrial report, you know, is is not ideal. So, I can build up to things, but I can't just bike straight up a hill or I'm going to get a migraine and have to, you know, go to bed and feel really sick and awful. And I think it's it's because of of some of my detox and inflammation and mitochondrial things and but it's okay. I still consider myself athletic, right? I just have to do things my way.

>> Yeah. Like I'm an explosive like I'm an explosive athlete, right? So, I can I can attack on a bike pretty much any given time. Just don't ask me to go all out for a really long period of time, you know, because I don't have I don't have any endurance genes whatsoever, right? And so, you know, but again, I would have liked to have known that. I would not have put myself through a year and a half of Olympic distance triathlon training. Like, got that t-shirt done.

Don't need to do that again. I should have not done it in the first place. >> Right. Well, and some of the social bonding stuff too, like some of the genes that are in some of the reports are about does socialization help you to alleviate stress or maybe it's going to end up causing a little it's maybe it's not that beneficial to you, right? So, and sometimes people then overuse that where >> the bonding feels so good that then they want to kind of solve other people's problems rather than all day long rather than trying, you know, kind of managing their feelings, right? That becomes their stress relief. Um, and they can we can overuse a good thing at [clears throat] any point. All of us have these really strong parts of our ourselves, but sometimes there's a little bit of balance that's needed. And if we can see that uh then we can we can better we can better do the balancing act. Right.

>> Right. Right. Well, and chances are you're probably in a partnership with somebody that has a different social bonding tendency. I don't know why that is, but that's how we end up connecting.

Probably because we'd kill each other for exactly the same, you know, right? I know if I was around somebody who's just like me, we'd probably wear each other out for sure [laughter] because my like from a socialization standpoint, I I need people. I don't have to be interacting directly, but I need to be in the vicinity of people on a regular basis. I can definitely do isolation and time alone, but my husband's like pretty much a nine on the introvert, and you know, one is good.

That's all I really need, you know, and so we have we have at this point in our life a lot of separate social things. I go do stuff and leave him at home, you know, because it's better for both of us.

>> Absolutely. Absolutely. And I think that that one of the other benefits in terms of hormone stuff is that certain people are going to be more responsive andor sensitive to certain ways that things are administered because of liver stuff or skin stuff or gut stuff or whatever the thing is. how they receive their hormones is can also be impacted by genetics. And so for practitioners to be able to understand some of those things is really helpful in terms of the individuality.

>> You know, I know that you guys really look at people as individuals when you're you're doing hormones and and so do we at the DNA company because otherwise like the the rule of this well it works for 80% of my patients like what about that 20%. I swear they're all coming to us.

>> I know. I'm like no no no we have the outliers.

How the DNA company test works and where to get it

We are the we take care of the outliers because yeah, you know, well, you know, well, because the people that don't seem to have symptoms don't know to look for individualization because they're not necessarily triggered by something, you know, and it's the unfortunate truth because if they feel well, they might be able to feel even better. Or maybe not. We don't really know. But we know the people that are like, I tried that and that doesn't work come seeking, right? So they come to DNA company, they come to Manurva, they come to Living Well Dallas, you know,

because they're like, "What I've been told to do is not working for me, you know." Absolutely. It would be sort of like, you know, two people working at a perfume counter and one of them comes in and they're just like crying and their nose is congested and they're they can't breathe because of of all of the smell of perfume and another person is totally fine, right? And that right there is that that's real. that happens to people and it's not that one person is pretending to be sensitive to like get more breaks or something. It's it's that that's how their body is responding and it's it's genetic and it's not their fault.

>> Absolutely. Absolutely. So, if somebody was listening and they're like, "Oh my gosh, you know, I think I need this." Let's talk a little bit about how the test is ordered. What do they have to do? So, so tell us a little bit about that because you have the new new version which has more genes, more polygenic scores. So, so if somebody had their test done three years ago, they need to do the new one, you know, I mean, if they want more information, yes. You know, so we still sell, we call it the DNA 180, um, because it has about half as many genes that are looked at as as the new test, and it still is a really good entry point for someone who, you know, doesn't want to feel overwhelmed by the number of genes, but it's not as complete. It's it's a more clearer picture with more connections made. So it's more specific to the person the more genes are looked at, right? It's just a the analogy we give is that it's like rabbit ears on a TV as I date myself. Uh versus a satellite versus cable, you know, it it things get more and more clear as as things go on.

And so both tests are saliva based and you it's just a cheek swab. It gets ordered either through the company website, the DNA company.com, or from any of our many participating providers, one of which, you know, Dr. Dr. Murray is one of our very preferred providers.

You do the cheek swab, you mail it back in, and then in 7 to 10 days, lab days, which you know, it's 6 days a week that the lab runs, you you have these answers, and that comes up in our portal, and then all of the reports are there. So, you don't need to be a medical professional in order to get something out of being tested, right?

It's not like you're just given this raw piece of, you know, just letters and that don't mean anything to you. The interpretation is done for you of the of the report and the assessments. You know, this is you have a a higher risk of, you know, cardiac risk or you have a a lower risk of being celiac. you know, we we have all of these different assessments that are done and you don't need to worry about which genes are involved in it, although we do tell you, but you you don't need to be able to to know anything about them in order to benefit from the testing. And I do encourage people to to get it done for their kids and grandkids and siblings, and you can compare notes and say, "It's no fair.

You can digest gluten better than I can." You know, fun conversations like that. >> Absolutely. Yeah. And and like we've been saying, you know, it's just another way to understand kind of how you're wired so you can make better choices because we're all trying to live a longer health span. And this is a good way to sort of narrow that down so you also know your big ticket items that you want to go look at. You can go run tests on everything, but let's figure out the big things, the big ones that we probably need to watch first.

>> Absolutely. Prioritizing uh prioritizing what to do and when. And we also do a lot of education. You know, we have we have Dr. Murray on all the time. We have a a master class with Dr. Murray and Dr.

Hornman coming up in in May. Dr. Murray was just on our she summit which was an all day Saturday event. Um and we have three free webinars every week um where all we're talking about is different things about genes, how it interacts with this, what it has to do with inflammation and autoimmune disease and menopause and all of the things. So, you know, if you want to know more, that's a really great way to to see what we're up to and what we're doing. Absolutely.

Well, Dr. Steady, this has been fantastic. You and I, God knows we've spent so many hours on [laughter] live webinars. Yes, we have. We've spent a lot of time together. It's been great. And I'm I'm so happy that we got a chance to talk about this and and so we will make sure to put information in the show notes and say the website so everybody knows exactly where to go in case they can't get the show notes.

www.thednaccomp.com. the DNA company.com spelled out th hhe dna and then alloftheword company.com. >>

Perfect. Perfect. And then we will have that in the show notes and that's where you can go and get your lab test and get started and and get some answers if you haven't had them before. And if you have done a DNA test, I can pretty much guarantee because for a while there we I would do a lot of people's just to kind of compare and see even where they made like I was like that's actually not the way the genetics work in that pathway because they can make mistakes on interpretation. But even if you had one you're like it doesn't seem complete or it doesn't seem leg you know to kind of answer all the questions you want. It may be because they're looking at genes individually and that has always frustrated me. You know, I' say take B12, don't take B12, take methylated B12, take hydroxy B12, take Cabalamin, like all of these like, okay, which one am I supposed to like judge, >> right? Yes. Yeah. you then have to do the interpretation yourself, which is why having us do the interpretation for you, we can look at the entire methylation pathway and make a recommendation about that based on everything, not just one gene that then is contradicted by the next gene. So, >> yes, absolutely. Well, Dr. Steady, thank you so much.

>> Thank you for having me. You're welcome. You're welcome. Okay, everybody. If you are listening online on your favorite podcast platform, don't forget to leave some five-star reviews. And if you happen to be watching us on YouTube, please subscribe so you don't miss the next episode. And leave us a comment.

And if you'd like to see certain information being covered on Menopause Mastery, leave it in the comments there and I will add it to recording schedule.

And we'll see you next week.