



Episode 392: Understanding Genetics vs Epigenetics: How Genes Work Like Dominos and What Yours Are Telling You With Dr. Lynch of StrateGene

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This podcast is brought to you by Wellnesse, my new personal care company that is based on the recipes I've been making at home in my kitchen for decades. Many "clean" products simply don't work and this is why I have spent the last decade researching and perfecting recipes for products that not only eliminate toxic chemicals but contain ingredients that work better than their conventional alternatives and that nourish your body from the outside in. I'm so excited to finally share these products with you and wanted to tell you about our brand new dry shampoo! It can be used various ways. You can sprinkle it in clean hair to add volume and to extend time between washes, sprinkle it in hair that has not been washed in a day or two to absorb oil or sweat and you can work it in to color treated hair to maintain color-treated hair by not having to wash as often. It contains oil-absorbing kaolin clay and volume-boosting tapioca which work together to refresh hair at the roots. Lavender oil and cactus flower help to balance scalp and strands' natural pH. We even added hibiscus for healthy hair growth. You can check it out and try it at wellnesse.com and my tip is to grab a bundle to save or subscribe and save as well!

Katie: Hello, and welcome to "The Wellness Mama Podcast." I'm Katie from wellnessmama.com and wellnesse.com. That's "wellness" with an E on the end. It's my new line of personal care products, like hair care and toothpaste. I highly encourage you to check it out. I am back today for round two with Dr. Ben Lynch. And we go deep on a lot of things related to genetics and epigenetics. And he gives some incredible, very practical tips on supporting your own genes, on supporting your children's genes. I really, really enjoyed this episode. If you're not already familiar with him, Dr. Ben Lynch received a degree in cell and molecular biology. And he also has a doctorate in naturopathic medicine. He is considered one of the foremost experts on nutrigenomics and methylation dysfunction. And he has developed a lot of products related to optimizing based on a genetic level, also understanding the epigenetic side.

And in this episode, like I mentioned, we go deep on his idea and concept that genes work much like dominoes, and that you don't want to try to treat one in isolation without understanding the whole picture. We talk about things like histamine, methylation, methionine, why genes are not your destiny, how phosphatidylcholine was life-changing for me and why choline can be a big key for a lot of people, how to support things like skin issues, especially in children, why sweating is important and all of the considerations related to that, and much, much more. So, like I said, very, very packed episode, lots of practical advice. All of the show notes are at wellnessmama.fm. We do talk about a lot, and all of those will be linked there. So, if you are currently driving or doing something else, make sure that you check those out to find all the things we talk about. And without further ado, let's jump in with Dr. Lynch. Dr. Lynch, welcome back.

Dr. Lynch: Awesome to be here, Katie.

Katie: I was so excited to have you back on because you were one of my favorite early guests. And I think there's so much more to talk about now. And I feel like in the field, especially of genes, there's just constantly emerging fascinating research. And you are one of my go-to sources for this and a wealth of knowledge. I wanna start off a little bit broad and then I definitely have some narrow questions to ask you toward the end. But as it gets much more widely available to test for different types of genes, I feel like we now have, not maybe a shortage of information in data, but there's not a ton of clarity sometimes on how to best use and interpret that data. So, I wanna start big. I know this is an important point for you and it's one that I've come around to very much as well of kind of the holistic approach to looking at genetics and what that means on a practical basis. So, to start broad, if someone is just getting their genetic report for the first time or maybe they had their genes tested before, and they have this data, what is the starting point from beginning to understand how that can actually be useful for us?

Dr. Lynch: Yeah, fantastic point. And, you know, genetics is an evolving field of medicine and preventative healthcare and optimization of life, in general, by both health professionals and the layman or layperson. And I've learned the hard way. You know, the first gene I ever learned about was MTHFR. And I was deer in the headlights, a whole website on one gene, right? So, you can't get any more focus than that on a particular gene. And yes, it's important. Yes, there's a lot of research. And yes, it's significant and people make a big difference when they start supporting that particular gene. But what people don't understand and I did not

understand is, if you support one particular gene, that means that gene is gonna perform better, right? I mean, in essence, it's gonna do its job better. So if it does its job better, than then what? Well, whatever that gene just did, another gene is gonna pick up what it just made. So, if MTHFR makes a particular gene or a particular end product like methyl folate, another gene takes it, and then other gene takes that information and then takes in. So the big picture that we understand is Domino's. If you set up, you know, a Domino's at your home and you put them in a line, I remember having a case or not for that game, maybe, let's say 26 of them, and you stack them all up, and that every single Domino is a separate gene.

If you push the one Domino, they all fall down if you got them lined up. Okay? And that's the big picture. That's what I want people to understand. If you support one particular gene, you are flicking the entire Domino downstream. And if you don't know what those other Domino's are, or how they're lined up, or even if they're in alignment, you might not get anywhere. That's actually the first time I've ever used that example. I'm thinking, "That's actually pretty good" because if the Domino's are not lined up and you push that first domino, say it's tentative, or you push it, but all the other Domino's are not in alignment, you support MTHFR, but all the other ones are still standing up. And let's say if you get that perfect, you know, Domino alignment, and they all fall down beautifully, and you watch the video of those and just amazed, that's kind of what you want for your genes to do. You want them to just work together in perfect harmony, like, you know, a series of Domino's just falling. And we are so focused on a singular Domino that we do not and we fail to look at the next ones in line.

Katie: I think that's a perfect analogy. And I think that's... I'm so glad we started with this point of realizing this is very much a cascade and we have to understand the whole picture. And while certainly, like it's great that we have now data on things like MTHFR and we know there are, for instance, fertility implications or, you know, in pregnancy, that there are special considerations, but it's not just simply, like, a start and stop there. Like you said, it affects everything else down the line, and I would think can cause to, like, overcompensating with one gene or over supporting something can probably also create a negative cascade down the road as well. Right?

Dr. Lynch: Hundred percent. Hundred percent. And, you know, the more I learn and I learn every day, probably except weekends. I am understanding that the body is just inherently amazing. And yeah, we all kind of know that. But when you study the biochemistry as deep as I do and you start putting things together, it answers so many questions, like, "Oh, that's why that happens or Oh, that's why this happens." And so if you are supporting... You know, there's a lot of talk about the terms overmethylation and undermethylation, and those are fingernails on a stinking chalkboard to me. I can't stand those terms. And there's a claim out there, that I am an undermethylator if my histamine levels are high and I'm an overmethylator if my histamine levels are low. And that is so reductionistic, and so oversimplified, and so vastly wrong, that it needs to stop.

And one of things that I focus on, Katie, is really trying to stop the misinformation spread on the internet. And, you know, no, I'm not fact-checking people. No, I'm not censoring people. That's a bit excessive. But all I wanna do is I wanna give people the right information. And sometimes I'm flat out wrong. But when it comes to, you know, saying that overmethylation and undermethylation are happening, and you can look at one lab marker like histamine, it's incorrect. And when I'm using this as an example, because a lot of people, you

know, say, "Oh, I'm undermethylated, I'm gonna take methylfolate to knock my histamine levels down." Well, downstream of that particular gene that you just supported to knock the histamine down is another gene, and then there's another gene. And if those genes are not supported, let's say you have the perfect methylation, your methylation is spot on, everything's great, it doesn't matter, if those two downstream genes are dirty and they're not functioning well, your histamine levels are gonna still remain high.

Katie: Okay. So let's go a little bit deeper on that. Because I think this is another area a lot of moms are doing research right now. There seems to be a histamine connection with certain conditions. And like you mentioned, there is at least a connection when it comes to methylation and there's something to understand there. So maybe give us a broad overview of what's going on with a histamine reaction, to begin with, and then how that can relate to some of these different genetic factors.

Dr. Lynch: Yeah, so, you know, first of all, we need to understand that histamine is a good thing, right? So a lot of us think that histamine is bad, but histamine increases our alertness. It's allowing you to focus and listen to Katie and I right now. And it keeps you awake. It helps support your immune system. It helps to support your blood flow. So it helps move your bowels so your digestive system, you know, your stool through your digestive system. It does a lot of things. So, histamine is good. But, like, everything, you know, there's a Goldilocks. You need to balance it. And there's some phenomenal research out there on histamine. And I wanna share with folks, Katie, and listen up on this, histamine levels are elevated in nearly every single pregnancy complication, every single one. And when I read a research paper that summed that up with preeclampsia, and placenta previa, and even, you know, excessive vomiting during pregnancy, that was so... It was kind of a lightbulb moment because it really simplified something that I didn't really simplify in my own head before. I just kept it too over the top. But every single complication during pregnancy seems to be associated with high histamine.

So, histamine metabolism, what you need to understand is, there's basically two major routes of histamine. There's histamine inside the cell. So basically, it's, you know, inside your particular cells in your brain, particular cells in your lungs, particular cells in your digestive system. And then there's histamine outside the cell, which comes from your food, from your drink, and from bacteria or infections. And there are certain bacteria like *blastocystis hominis*. So if you do a stool test and you see that there's elevated *blastocystis hominis*, that particular bacteria just skyrockets histamine.

And so, if you have a lot of extracellular outside the cell histamine coming in, say through drinking red wine, having some cheese, and some oranges, and some shrimp cocktail, you know, this could be a lovely evening for somebody, and now they are red flushed in the face. They've started becoming a slight headache. They start to become irritable. They start sniffing in the nose. And their evening started out nice and all fun, and now it's getting worse. And what happened is they're outside the cell histamine levels from the wine and those foods, and maybe they took a probiotic or had some kefir and some sauerkraut earlier in that day, now that histamine is inside their blood, which is now getting to their brain, and it's causing them to have headaches, and irritability, and so on. So, people need to understand that histamine levels have to be maintained in a certain particular optimal amount. And if it's not, it's gonna lead to symptoms. And a lot of it is dietary and a lot of it is bacterial.

Katie: Okay, so like with anything, there's definitely can be a genetic component that makes some of those factors more likely, but there's also, like with anything, when it seems like when it comes to genes, very much lifestyle factors, as well. If someone's having some of those symptoms and kind of resonating with those potential histamine reactions, are their starting points or, like, generalities they can know to begin with lifestyle adjustments to test it if that could be what's going on?

Dr. Lynch: Yeah, hundred percent. So, my wife, you know, she did her StrateGene report about a month ago. And I've got her results sitting right in front of me here. And her histamine pathway, not good. Not good. When I saw it for the first time, it was awesome because now I know why she has such a hell of a time when she drinks wine. Katie, she'll drink a sip of wine and literally 20 seconds later, she goes, "Oh, there go my legs." I'm like, "What? You just took a sip." She goes, "Yeah, my legs, they're gone." Wow. And she's been struggling with rheumatoid arthritis since she was 17 years old. You know, she's on no medications. She's generally a picture of health, takes, you know, some supplements, not crazy. A lot of what we do for her is lifestyle, and cleaning the environment, sauna and so on. So we do a lot of work, but her gut is still not quite right. And with probiotics, tricky with her. So what I found on her Strategene and report is she has two genes in the outside the cell histamine pathway. So, if she drinks wine, or eat histamine containing foods, or kefir, or any of those types of things, her ability to eliminate that histamine from those foods and drinks is extremely slow from this one gene called DAO. It's sluggish. And to add to that is this gene is also further slowed down, not just from her genetic variant that she has in that particular gene, but also that she has gut inflammation. And if you have gut inflammation, that particular gene slows down. Research supports that statement. So does alcohol. Alcohol slows it down. So does the acetaldehyde from yeast overgrowth. So does Metformin, which is a drug that is recommended everywhere for people. And a lot of people, maybe you listening are taking Metformin right now and have digestive issues.

Well, it's because this particular drug really slows down your DAO gene, which increases your intolerance to histamine containing foods and drinks. And now, the second gene in her histamine outside of the cell pathway is ALDH. And this particular gene works together. It's the second Domino in line for her outside the cell histamine. So DAO and ALDH are two Domino's. And both of those Domino's are slow. They're both slugs and they just don't work very well for her. So, what we have done, and ALDH has also further slowed down from increase oxidative stress, aspirin, and NSAIDs, oxidize fatty acids. And the older you get, the slower it gets as well. So, zinc supports this gene, niacin supports this gene, copper supports DAO. So all those things are important. But what we did is we also gave her a DAO enzyme. So you can give people DAO enzyme if their particular own DAO isn't working very well. And I don't like doing this, but when it's a dietary thing and you wanna have a good evening... Ben Greenfield talked about this book in his latest book called "Boundless," I think he calls it the wine stack. And it's like in that page 20 or so in his book. When he interviewed me and I shared some tips for drinking wine and he's always buying histamine block from me. And histamine block is DAO. So now when Nadia drinks wine, which is very rare, she takes a histamine block, which is a DAO, and her legs don't fall asleep anymore.

Katie: That is fascinating. And I'm definitely taking notes. I hear from a lot of people who have some sort of reaction to alcohol, whether it be flushing or numbness or tingling in the face or, like, losing feeling, and so those all can kind of tie into histamine.

Dr. Lynch: Hundred percent. Yeah, hundred percent. And then alcohol breaks down to aldehydes. And these aldehydes are extremely toxic. And that also slows your methylation down. And then methylation is also needed to get rid of histamine inside the cell. So, alcohol not only slows down outside the cell histamine processing, it also slows down inside the cell processing. So that is why you can get insomnia, irritability, headaches, migraines, flushed in the face, and possibly even breathing difficulties. And then there's sulfites in wines, which is another gene. And StrateGene doesn't have any... We haven't identified any genetic variations in this particular gene called SUOX, sulfite oxidase. But this gene is very environmentally sensitive to arsenic. And arsenic is pervasive in our drinking water. So you've got to be filtering your water. And then there's a mineral called molybdenum, M-O-L-Y-B-D-E-N-U-M. And molybdenum is really, really effective at removing sulfites. And sulfites are high in wine. So, I just experimented myself about four days ago because I rarely drink alcohol because I don't feel good from it, and so I just stopped. But I know a lot of people love their wine and so I'm trying to come up with ways to help support people to enjoy their wine. And so, I took about 250 micrograms of molybdenum, prior to drinking probably about an ounce of wine. And I usually don't feel good from drinking wine. It's just heavy feeling. It's not a headache. It's not hot. It's just slow and not clear in the head. And this time, I drank it after taking the molybdenum, and I still had my clarity my head. I got the relaxed feeling. And it was enjoyable. I was, like, "Wow, no wonder people like drinking wine because this is the first time I've actually drunk wine without feeling like this."

So, it was nice. And so when you understand biochemistry like this and you don't have to have genetic variations and genes for your genes not to work optimally, that's another big point. You know, I don't know if I have any genetic variations in my sulfite oxidase gene, and I don't think I do. They're very, very rare and they're very severe. And when you do have one, you're gonna identify it at birth and it's gonna be some significant issues. But sulfite sensitivity is a big, big issue for people and typically leads to exercise-induced asthma or asthma, in general, or breathing difficulties, or itchy skin, or headaches, or irritability as well, but the molybdenum will take care of it. So, again, the beauty of understanding your biochemistry and the beauty of looking at your StrateGene report helps identify these pain points.

Katie: That's such an important point. Okay. So, another one I'd love to touch on, at least briefly is the methionine pathway, and what that means, and what its implications are within this whole picture. Again, of course, taking into account, I love your Domino analogy of we're not spot trading here. This is a holistic thing. But for people who aren't familiar with it, can you explain what it is and what's going on in the body?

Dr. Lynch: Oh, boy, the methionine pathway is, if it's not working while you're dead. I mean, it's pretty important. So another term for the methionine pathway is the methylation pathway. And you've probably heard that term bouncing around the internet for a while in various different podcasts. And methylation is just another reaction in the human body. It's a very important one, but it's just another reaction. That's it. It's another Domino. And methionine is an amino acid which you get from protein. And another term for methionine is methyl homocysteine. And you may have heard homocysteine. And homocysteine is something

that has a lot of bad rap like histamine does. But homocysteine, you have to have in the optimal levels as well. You don't want it too low, but no lab in the world talks about too low of homocysteine. They just don't report it. They want it lower than 15 micromoles per liter. But that is not good. You know, I've seen people with low homocysteine and they're struggling. But homocysteine, if it's elevated, could lead to pregnancy issues. It could lead to neurological issues. It can lead to all sorts of oxidative stress and local methionine, which is a body's primary oxidative oxidant. It can lead to, you know, your inability to, you know, produce bile, you know, which then could lead to SIBO and your cell membrane production of phosphatidylcholine doesn't happen. Your muscles, maybe your child is, you know, slow to speak. They are slow to grow. Their head is small. Their muscle tone is not there. They're extremely weak. So all this has to do with the methionine pathway that Katie brought up.

And the methionine pathway supports... The primary thing is to make something. And it makes something called S-Adenosyl methionine. And this active form of methionine is called SAME. And it's a supplement you can find out there in the, you know, supplement companies. And, you know, so a lot of people say, "Oh, my methylation isn't good, I'm gonna run out and buy SAME." Well, just like we're talking about, that's just one particular Domino. And there's a lot of Domino's in the methionine pathway. But what I want you to understand is it's extremely energy demanding. So with this particular pathway, you are using a lot of your methylation to produce creatine and to produce phosphatidylcholine. About 70% of your methylation is done for just these two things. And you're like, "So what?" Well, creatine is really, really important for brain development and creatine is really, really important for muscle development and hydration as well. And so if you have a child who has slow developments, you know, speech delay, poor muscle tone, maybe they're not learning very well either, maybe they have some movement disorders, creatine is a big one. And what's happening is their methionine pathway is dirty and it's not functioning very well. And if it's not functioning very well, their ability to make creatine goes way down. And not only that, if that's happening and their creatine levels are not good, what's also happening is their phosphatidylcholine aren't good. And that phosphatidylcholine is the primary building block of every single cell membrane in your body, which you have trillions and trillions. Every single skin cell on your body is made from phosphatidylcholine. Every, particular cell in your digestive system, your digestive tract has got phosphatidylcholine in it. It's everywhere.

If you have gallbladder issues, you know, maybe fatty foods or if you have SIBO because SIBO is a gallbladder issue, which a lot of people understand, but if you don't have enough phosphatidylcholine in your gallbladder, you know, you need 10 parts of phosphatidylcholine to one part cholesterol. So if you're eating a lot of fat and you're not supporting a methionine pathway, you're gonna have a sluggish bile. It's gonna get stuck, and you're gonna get gall stones, and you're gonna go to the doctor, and they're gonna say, "Oh, you need to pull it out." So you pull out your gallbladder, but you still have liver issues. Why? Because you're not supporting a methionine pathway and your phosphatidylcholine levels are too low. So you need to support the production of phosphatidylcholine, which is done through the methionine pathway. There's a lot there. There's a lot there.

Katie: That's so fascinating. And I think that's such an important point. I love that you brought up things like SIBO being a gallbladder issue. And this whole thing, like, again, I love that you keep highlighting, obviously, none of this is in isolation. But if someone is having some of these problems, is phosphatidylcholine something that we should be supplementing with or do we need to support the body in making it naturally?

Dr. Lynch: Both. Both. In order to clean up your methionine pathway, it's a lot of work. And so, you know, you're sitting here and you're hearing all this information, and I've probably lost you in some areas. The good thing with StrateGene is you get these diagrams, these maps. So I'm a real big visual learner. So I'm with you. If I'm spouting all this stuff off, and you're like, "Well, you just lost me. I need to see this stuff on paper." And so at StrateGene, you get these pathways all written out, you see the words phosphatidylcholine, you see the methionines, you see the SAME, you see the homocysteine, you see how it's circular and what nutrients are needed, what things are affecting it, and so on. So you get this visual image on top of where your genetic variations are. But when it comes to low phosphatidylcholine levels, yes, you can supplement. The problem is that phosphatidylcholine is somewhat fatty. So, it's kind of a conundrum, right? So here you are needing to absorb phosphatidylcholine, but if your gallbladder isn't working very well because you're not secreting bile, and you need bile to absorb your fats, then phosphatidylcholine might not make you feel very good and you might get stomach upset or just feel nauseous. So you need to support your gallbladder. And I love visceral manipulation, Katie. I don't know if you've ever interviewed someone with visceral manipulation skills. But visceral manipulation is it's basically soft tissue work. Basically, think of him as a, you know, massage therapist, but only working on your organs and your viscera. And so, when I had my gallbladder worked on by a visceral manipulation specialist, Dr. Aron Choi, it was amazing. That heavy, right-sided under my rib cage heaviness went away after the treatment. It was phenomenal.

In my genes, I suck for my gallbladder. My gallbladder needs a lot of attention and focus. But yes, you can't stop them. And another one thing I wanna say too is your diet plays a huge role in supporting your phosphatidylcholine levels. And vegans, and vegetarians, they are not getting sufficient choline in their diet because choline is primarily from meat and fish. And that's fine. But you should be supplementing with phosphatidylcholine if you're a vegan or vegetarian, especially if you're pregnant or breastfeeding. And what's happening is, if you are a vegan or vegetarian, your body has to produce all that phosphatidylcholine, which is then going to deplete your SAME levels, which is then going to increase your histamine levels, which is gonna increase your dopamine levels, and you're gonna be irritable. You're gonna have, you know, skin issues. You're gonna have breathing issues and you're gonna have pregnancy issues. And so, by supplementing with phosphatidylcholine, you have gallbladder issues as well, which will lead to SIBO. So vegans or vegetarians, hundred percent must supplement with phosphatidylcholine.

Katie: That's really good to know. I'm not a vegetarian or vegan, but this was something that I found was one of my puzzle pieces. And realizing through research that getting enough choline from diet or just not getting enough choline at all, actually can put you at risk of liver damage or inhibit the function of your liver. And I don't tolerate eggs well, and so I don't eat any egg yolks. And I realized at one point that I was likely not getting anywhere near the amount of choline I needed, and supplementing that was relatively life-changing for me and as far as how I felt. And so I definitely wanna echo what you say. Are there other types of choline supplements that can be beneficial as well? I know that there are some that are used almost as nootropics or would you have people focus more on the phosphatidylcholine?

Dr. Lynch: Great point. And so, when you get your StrateGene report and you look at your methionine pathway, which we're talking about, we've added a whole new thing in there for choline. And you'll see the

different directions that choline can go. So choline can go towards supporting phosphatidylcholine, which is what we've talked about. Choline can also go towards producing acetylcholine, which is a neurotransmitter in the brain for concentration. So, the body will determine it. So if you just take straight-up choline bitartrate, which is a common choline supplement over the counter. That will go anywhere. And either your body will say up, "Oh, you need to make some phosphatidylcholine and that's where it goes." That's where it goes. And you're thinking, "Wow, I don't really have increased focus and attention from taking choline bitartrate." Well, it's because your body made a decision, and it used it to make phosphorylcholine because that's where you needed to focus. If you take CDP choline, that is a different type of choline. And I'm looking for my methylation pathway on my desk here, and I don't have it. Again, I'm a visual learner. So CDP choline, if you take that, that will be dedicated going towards straight-up phosphatidylcholine. And then there's another type of choline, which I'm forgetting, which is more of a nootropic, you know, for supporting brain health. And I've been giving that to my youngest son, Theo. And he does better with increased acetylcholine in his brain. And I've taught him to be tuning in to how he feels. So anytime, before I take a supplement or before I give a supplement to someone, I always have them check in with themselves. "How's your head? How are your muscles? How's your heart rate? How's your temperature? How's your vision? You know, how are you generally feeling?"

And then you take a supplement. Five minutes later, check-in again. "My head is a bit lighter. My focus is a bit better. My mood is more calm and focused," or "God, you know, I just took that I'm feeling kind of bit nauseous or, you know, off." So you gotta tune in to how you're feeling before you take a supplement. So Theo will tune in and he'll take the acetylcholine, precursor of choline, and he's like, "Yeah, thanks, dad. My focus is better now," and he'll just grind it as homework, which is pretty cool. Now a word for the warning, if you're taking acetylcholine or you're thinking, "Now God, I wanna try acetylcholine for my focus and attention" because it's kind of a calming attention. It's not a hyper-focus like tyrosine does. Tyrosine will help make your dopamine and norepinephrine. And that can be really... You can get aggressive from that stuff. As I share in my book, "Dirty Genes," my oldest son Tasmin was taking tyrosine for his focus issues, and that helped a lot. But then he started taking more, and he became just a jerk. And we started fighting more until I knocked his tyrosine levels down. But if your acetylcholine levels are too high, it can lead to depression. And if you're looking at your serotonin pathway on your Strategene, you might find out that you have a reduced ability to synthesize serotonin neurotransmitter or you have an increased ability to get rid of your serotonin. Those are both going to lead to lower serotonin levels. And if you're supplementing with, you know, acetylcholine type neurotropics, that can lead to depression. And research is showing that, well, inflammation is kind of the root of depression. You know, so inflammation, generally, it's not really a serotonin issue, it's an inflammation issue. But if your serotonin levels are lower than your acetylcholine levels, you're gonna get depressed from taking acetylcholine. So, keep an eye on that. So if you're taking choline supplements for focus, you start getting depressed, back off on the acetylcholine supplements and maybe consider some 5-HTP as well to boost your serotonin.

Katie: Good to know. I also have heard from a few people, and I'm curious, if someone has a deficiency in some of these things, like we talked about with methylation, or with methionine, or now with choline, if they start supplementing, is there a possibility that in the short-term someone could have almost like too much being processed at once and have, like, a negative reaction in the short-term while their body adjusts? I've heard from some people who seem to have, like, short-term skin issues when they start supplementing with certain things to support when they find out they have a deficiency.

Dr. Lynch: Yeah, absolutely. So if you start supplementing with something, your body is now... Look, it's really pretty simple. Genes have jobs to do and they need the tools in order to do it. So if you start taking a particular supplement, that supplement is gonna be absorbed by your body, hopefully, if it's a good one, and then your genes will utilize that and it will go to work. And so, a particular gene might not be working very well, at all. In fact, it could not be working at all. And then you start supplementing, and then that nutrients starts flowing through your blood, and it gets into your cells, and your tissues, and then it starts hitting the gene, and the gene wakes up, it's like, "Oh, hey, now I can start working again. And that gene starts working. And now, you know, the machinery starts going, that hasn't been going for a while. And, you know, if you started up your mower in the spring, and it's been sitting all winter, it can smoke more. And so, if you start up a particular gene that's been idle for a long time by supplementing a particular nutrient, you're probably gonna get some smoke. And what's really important is, again, all those downstream, other genes need to be happening and supported. So, if you push a new gene that hasn't been pushed in a while or a gene that hasn't been turned on in a while, smoke is gonna happen. And so, I really try to encourage people to support other genes, downline first and do the fundamentals, you know. And I harp on that for about 200 pages in the book, "Dirty Genes" over and over and over again. I don't want you supplementing until you do these things, do this first, do that first. Find your baseline, then supplement.

And if you do it that way, you're gonna have a lot less, "Herxheimer reactions" or not feeling good after taking a particular supplement. Look, I want you to feel good when you take a supplement. I don't want you feeling worse. I don't want you reacting in any negative way. If you do, something wasn't prepared quite right. And I know a lot of doctors will say, "Oh, just push through it. It's a detox reaction or just push through it, you'll end up tolerating it better." Well, it's like putting your hand on the stove when it's hot. Oh, damn, that hurts. And you keep your hand there and it's burning. And you keep holding your hand there and now your nerves are burned so now you don't feel any burn at all anymore. So, obviously, that sounds stupid. You wouldn't do that. But you want to prepare your body well, prior to supplementation. And a lot of people don't wanna put in the work. They don't wanna put in the effort. And I get it. I don't either. But if you do it that way, the results, you're gonna get are gonna be lasting. And it's going to lead to actually decreased amount of supplements that you need to take. And it's going to be saving you money. And ultimately, you're gonna be a lot healthier overall.

Katie: That makes complete sense. Another thing we've touched on in passing a little bit, the idea of skin issues, and especially how they can kind of spike with some of these scenarios. But I hear from a lot of parents who have kids with various types of skin issues, specifically things like eczema or even just food reactions that tend to exhibit in itchy skin or some type of skin, just skin reactions, in general. Are there any commonalities that tend to go back to genetics when it comes to this or in the work that you do, have you found anything that can be helpful for parents?

Dr. Lynch: Yeah, when you get your StrateGene report, you go right to the histamine pathway. And you look at that, and you study it, and you read about the genes that we have on there. It's histamine and it's also detoxification overload. And your liver is overwhelmed. Your liver is a major, major, major detoxification organ in your body. Your liver is massive and heavy. And kid's livers are not, you know, fully, fully developed, and

they're under constant bombardment as well, especially if they're not eating very well. And so, if they're not eating very well, their liver's gonna get bombarded. And if liver gets bombarded, what's gonna happen is the skin gets issues because your skin is actually your largest detoxification organ. A lot of people will say... If I ask people, what's your largest detoxification organ, they're gonna say, "Oh, it's my liver." No, it's actually your skin. So if you have skin issues of psoriasis and eczema, your liver is overworked and overwhelmed, and so now your skin is making up for it and trying to make up for it. And so what we do is we throw steroid creams on there, try to tell your skin to shut up. And now, what's happening is you're overloading your liver even more, which is gonna lead to hormone issues and now they're gonna have all sorts of problems. So you've got to support the liver in order to support the skin. So phosphatidylcholine would be a big one. You gotta eat clean. You gotta go to that Environmental Working Group, type in Dirty Dozen EWG, print it out. Do not eat those Dirty Dozen foods. You go to parties and they got apples, and grapes, and strawberries, and all these things kids munch on and parties all the time, they're in the Dirty Dozen. Our kids are chowing on them. And they're overwhelming the liver, which goes right to their skin. So you have to eat clean foods. And it is not easy in this day in age, especially with how busy we all are as parents as well.

Thankfully, my kids, I don't think they've ever had any eczema or psoriasis. But you know, we also eat pretty clean. We're not perfect by any means, but I also give them supplements every day. I rotate it. But so what do you do for parents, you know, trying to support their kids with eczema and psoriasis, A, clean up their food, buy organic, or if you're not gonna get those organic, don't buy them at all, you know, or start growing them in your own yard away from your neighbor who sprays their yard, which is an issue. My home has an issue there too. Another one, you want to read the DAO chapter in "Dirty Genes." And the book "Dirty Genes" actually comes when you order the StrateGene report. So if you wanna order your StrateGene genetic test, it will come with the book "Dirty Genes" because education first. It also comes with the Dirty Genes Course. So you're gonna wanna read the DAO chapter. You're gonna want to watch the food modules in the Dirty Genes Course as well. And, you know, other things. But for immediate support, I know parents are waiting, like, "What can I do right now?" It's gonna take time, A, B, stop it with the steroids. Get rid of them and you can use a probiotic from Seeking Health called ProBiota HistaminX. And so, ProBiota HistaminX is a... It's selected strains of bacteria that are shown to support histamine metabolism. And Katie, I tried to supplement for about five months before I sent it to market, before I made it available. And I was blown away by how effective it was. It was life-changing for me and my family. You said how choline was life-changing for you, this probiotic was life-changing for me. So, parents need to have their kids swallow the ProBiota HistaminX capsule. That's gonna be a big one.

Also, this is a cool little trick. Get a little spray bottle and, you know, you don't need a big one just to, you know, like I say, an eight-ounce spray bottle or so, you know, fill it just with a few ounces of filtered water, no chlorine, filtered water because chlorine kills bacteria. That's why it's added to drinking water. So filtered water, few ounces, maybe even just an ounce or two. And then having the cap open still in the spray bottle, take about three capsules of ProBiota HistaminX, dump them into the filtered water in your spray bottle, shake it around, put the spray bottle, you know, lid on, and spray the kid's skin, and watch what happens. It's crazy. And then keep the spray bottle in the fridge. So, again, that's why you wanna get a small spray bottle. You know, and so by taking the ProBiota HistaminX orally, you're helping to reduce histamine in the gut because histamine is associated heavily with eczema and psoriasis. But then when you add it topically, it's gonna just take the itch right out and it's gonna help a lot. Also, you can take our vitamin D drops and you add the Vitamin D, right to the eczema as well. Because low Vitamin D is also associated with worse, itching and

scratching from eczema and psoriasis. So you take our liquid vitamin D, which is 2,000 IU per drop of vitamin D3. And it's really strong, potent stuff. And you just drop a few drops of it right on their skin as well and it's gonna help a lot. But diet is first.

Katie: Yeah, absolutely. Diet is so fundamental there.

Today's episode is brought to you by Athletic Greens, the all-in-one daily drink to support better health and peak performance. Even with a balanced diet, it can be difficult to cover all of your nutritional bases and this is where Athletic Greens can help. Their daily drink is essentially nutritional insurance for your body and it's delivered straight to your door every month. It's developed from a complex blend of 75 minerals, vitamins, and whole-food ingredients. It's a greens powder that's engineered to fill the nutritional gaps in your diet. Their daily drink improves your everyday performance by addressing the four pillars of health, energy, recovery, gut health, and immune support. It's packed with adaptogens for recovery, probiotics and digestive enzymes for gut health, and vitamin C and zinc for immune support. It's basically an all-in-one solution to help your body meet its nutritional needs. And it's highly absorbable and diet-friendly, whether you are keto, vegan, paleo, dairy-free, gluten-free, etc. It has less than one gram of sugar and it tastes great. And here's how I used it and still use it. When I started losing weight, I was eating a lot more protein, and it became hard to get enough greens and vegetables in because it was hard to actually eat enough volume of food. I was full. So I was able to use Athletic Greens to meet my veggie and nutritional needs, even if I was full and just didn't feel like eating extra. It's basically like a multivitamin, but it's actually head and shoulders above a lot of multivitamins.

They don't use any GMOs or harmful chemicals. And it's NSF certified. So they really are careful about their sourcing and what goes into it. When you try Athletic Greens through my podcast, they're also gonna send you a year supply of their vitamin D3 and K2 for free. I've talked about vitamin D before. We know we get it from the sun, but it can also be important to supplement, especially in the winter months. And this is something I test my own blood levels of and supplement when necessary. And it combines these nutrients to help support the heart, immune system, and respiratory system, which is especially helpful at this time of year. So whether you're looking to boost energy levels, support your immune system, or address gut health, it's a great time to try Athletic Greens for yourself. Simply visit athleticgreens.com/wellnessmama to claim my special offer today. You'll get a free vitamin D3K2 wellness bundle with your first purchase. That's up to a one year supply of vitamin D as an added value for free when you try Athletic Greens. You'd be hard-pressed to find a more comprehensive nutritional bundle anywhere else.

This podcast is brought to you by Wellnesse, my new personal care company that is based on the recipes I've been making at home in my kitchen for decades. Many "clean" products simply don't work and this is why I have spent the last decade researching and perfecting recipes for products that not only eliminate toxic chemicals but contain ingredients that work better than their conventional alternatives and that nourish your body from the outside in. I'm so excited to finally share these products with you and wanted to tell you about our brand new dry shampoo! It can be used various ways. You can sprinkle it in clean hair to add volume and to extend time between washes, sprinkle it in hair that has not been washed in a day or two to absorb oil or sweat and you can work in to color treated hair to maintain color-treated hair by not having to wash as often.

It contains oil-absorbing kaolin clay and volume-boosting tapioca which work together to refresh hair at the roots. Lavender oil and cactus flower help to balance scalp and strands' natural pH. We even added hibiscus for healthy hair growth. You can check it out and try it at [wellnesse.com](https://www.wellnesse.com) and my tip is to grab a bundle to save or subscribe and save as well!

Before we move on, are there any other general ways that we can all make sure we're supporting our livers? I think things you've already mentioned, of course, like, avoiding the really big offenders are huge. But are there any other things that are just commonly missing in the modern diet or that we're depleted more naturally with our modern lifestyle that we can be cognizant of to support?

Dr. Lynch: I would say it's a lifestyle thing. If you look at Scandinavia and Russia, and, you know, some of the other countries like Turkey, you know, and Japan, a lot of countries focus on fading. They focus on steam. They focus on sweating. We don't. Our culture, we don't focus on that. But a lot of cultures focus on sweating. You know, the Native American Indians, you know, Native Americans, they use sweat lodges. And so, we have all these ancient techniques that are just ignored by us. And so we have to be bringing those things back. So, sweat. Now, you're gonna say, "All right, what type of sauna do I need? Do I need infrared? Do I need the rock? So I can just get those little personal ones? Which one do I need?" It doesn't matter. Just sweat, just sweat. And so a colleague of mine, Dr. Steven Jenis, a brilliant, environmental medical doctor, up in Canada, I think he's retired now. But he published a paper where he looked at the effectiveness of various types of sauna in sweating, in general, to remove chemicals from the blood. We call them toxins, but they're not toxins. So let's get the terminology right, and let's use chemicals because that's what they really are. You get toxins from fish. You get toxins, you know, from particular bacteria, but we're surrounded by chemicals. They're not really toxins. So we got to get rid of these chemicals and sweating is the best way to do it. And he in his research found it didn't matter how you sweat, just sweat. You can even put on a couple of sweatshirts on, and beanie, and gloves, and go for a walk, a brisk walk and start sweating. You know, so it doesn't matter, hot bath. It doesn't matter. Just sweat. And if you use a sauna, which is the best way because you sweat so profusely, you gotta make sure you hydrate. I have a sauna guide at Seeking Health somewhere, so, Katie, you can ask my team for that. And the sauna guide is very, very useful because you don't sauna right, you're gonna really deplete yourself and you're gonna hurt yourself. And the first time I ever saunad, I was in there for 30 seconds and I felt awful. Now I can be in a sauna for 30 minutes to an hour in one sitting. And I do really really well. But it took me a long time to get there.

Katie: I'm a big fan of sauna as well. And I've worked up over time. And to your point, I think that's really important to remember is when you look at the actual data and the studies, the beneficial aspect of saunas, in general, it's the heat and then the resulting sweat. So there's all this debate about what is the best type of sauna and does it need to be infrared? And I fully agree with you. The bottom line is that you need to get hot. And you need to sweat. Period.

Dr. Lynch: Yeah. And hot yoga. I mean, my wife loves or hot yoga and she says she just goes off in the hot yoga, and she feels great. So, you know, you could do that too. What I want to also urge people, when you do

sauna or you do hot yoga, is you put towels down on your sauna. You do not wanna get those chemicals impregnated into your wood because the next time you go in there, they're gonna be in there. And if you have friends coming over, they're gonna drip all their gunk in your wood and your sauna, and it's there to stay. So, get towels, lay the towels down on your benches. And you might even wanna be in a sauna with a t-shirt and some shorts or some underwear to help absorb that. And then you can contrast with some cold showers if you feel strong enough to do that or just rinse off, but you need to immediately rinse off, and then you should scrape your tongue. So use a stainless steel tongue scraper or a copper tongue scraper. You can get those on Amazon or somewhere. But scrape your tongue and then brush your teeth because when you're in a sauna, you are, you know, getting a lot of volatile organic compounds out of your body because the heating point goes up. So you can be breathing all sorts of chemicals out of your mouth, and so you need to make sure you have a lot of ventilation in your sauna. And good saunas do that already for you, but brush your teeth after and scrape your tongue.

Katie: That's a great tip and one that I don't feel like is often talked about. So I love that you brought that up. You also mentioned in passing supplements that you give to your kids. And, of course, there's gonna be a genetic component here. The link to Strategene and to your book will be in the show notes at wellnessmama.fm. I encourage everybody to do that research for themselves and for their kids. But I'm curious, I would love to hear if you're willing to share some of the supplements that you give to your kids, in general, or think that can be helpful for kids since so many parents are listening.

Dr. Lynch: Yeah, absolutely. So every night, the night ones are easier because they're pretty routine. So in the book "Dirty Genes," I talked about the Pulse Method. And the Pulse Method is basically tuning into how you're feeling And then understanding what's the mechanism or what you're trying to support with that particular supplement is what's the job of that particular supplement? understand what it's supposed to do. Understand if you need that supports and then you take it or you don't take it. So you need to understand what the supplement does And you need to understand how you're feeling prior to taking it. So, in the evening, I give my boys fish oil, a very, very clean fish oil, optimal fish oil. And this you've gotta make sure your fish oil is clean Because fish, in general, are toxic, the oceans are toxic. So our fish oil is IFOS certified. It's an international fish oil organization that tests fish oils for rancidity, and heavy metals, and so on. And our fish oil has that. So, you can look at optimal fish oil. And that's what we have there. And we also have optimal DHA. And I give the optimal DHA to Theo because, you know, he needs more the DHA because he's younger and he needs more cognitive support. But the rest of us take the optimal fish oil. We also take the ProBiotix HistaminX every night, one capsule. And the older boys and actually, we've been taking liver nutrients almost every single night as well because your liver works between around, you know, according to Chinese medicine, I don't know if it's true or not. But organs tend to have times in which they work, which makes sense because if you're eating all day, which we are, you know, throughout the day we're eating and our liver is busy processing the sugar, the carbs, and the fats, and the chemicals in our environment every day as well but it's busy processing hormones and neurotransmitters and all that stuff. So, it's busy. So in the evening, our livers are working on detoxification.

So I support my boys and myself with liver nutrients in the evening so they can detoxify while they're sleeping just because that's when the liver is detoxing. And their acne is way, way better when they're taking liver nutrients. You know, teenage boys don't typically run out and talk about supplements for acne. But my boys

now, you know, we're kind of the quarantine hub, and our boys will have friends come over and use the weight, room and the gym, and so on. And someone will have acne and my son, Tasman, will go and throw him a bottle of liver nutrients and, "Here, take this." And kids come back a few days later and the acne is way better. But those are the top three things we give. Another one I really like is Magnesium L-Threonate. Seeking Health does not have Magnesium L-Threonate but you can get Magnesium L-Threonate on Amazon, which is where we get ours. I forget the name of the company where we get ours. But just there's Magnesium L-Threonate is basically Magnesium L-Threonate. It really helps sleep. So, it just kind of takes the edge of little bit. So Magnesium L-Threonate is what I give them all as well. So that's evening, during the day, you know, I try to encourage my boys to tune in and take supplements as they need. I don't give them supplements. I always... I try to train them to tune in to how they're feeling, and teach them what supplements are what they're for, and then they take them. And they're not so good at it. I think my, my hope here is too strong. But, you know, during the day, they'll take a multivitamin if they feel they need energy and if they feel they need focus.

Otherwise, if they don't feel they need focus or increased energy, they don't take it. And I want you to do the same thing. So I don't take a multivitamin if you wake up in the morning and you feel energized, you're already good to go, if your mood is already good. If you take a multivitamin, it's gonna be too much. It'll push you over the edge. So take those multivitamins on those days where maybe you eat worse, or you have an afternoon crash, or your morning isn't so good, and your mood isn't so hot, you're a little bit kind of depressed or flat and your focus is crap. That's when you need to reach for a multivitamin.

Katie: Great tips. Okay. To deviate a little bit, I have a note that I would love to delve into with you because I think it's important. We've talked about obviously, genes don't work in isolation. I think it's also important to note that your genes are not your destiny. And we talked about this in our first podcast episode, which I would encourage you guys to listen to if you haven't. That link will be in the show notes. as well. I'd like to briefly touch on the idea of genetics versus epigenetics, which I know is a somewhat controversial word. But make sure that we highlight the fact that just because you have any type of genetic predisposition for some of these things, that does not mean that these things cannot be helped with we talked about a lot in a practical sense. But can you just kind of walk us through the idea of genetics versus epigenetics and what that means?

Dr. Lynch: Yeah. So genetics is basically having the car in your driveway. It's the gene. Now, what's inside your car, that's the epigenetics, you know? What you have in your glove box, Katie, is gonna be totally different than my glove box, which you have in your trunk, different than mine. And, you know, your car is probably different than my car. You know, your genes are different than my genes. But what's really important is what you have in the car and also is the oil fresh or old is the gas, you know, better quality or not? So, the epigenetics is what basically helps your genes turn on and turn off. And it's the epigenetics, which is the stuff around your genes, Epi stands for outside, you know, outside or above, forgive the exact meaning, but it's basically on the outer side of the genes. And it's what influences them to turn on or turn off. And Dr. Bruce Lipton was the first one who ever influenced me heavily in epigenetics. And it was his work, my first quarter, first-year med school year, where I watched his video on the old VHS tapes. And he was talking. And the video of "New Biology," which is what he called it now, the old name was "Biology of Belief." And he talked about how it was our perception of the environment is which turned our genes on or off. So, by our eyes, looking out into the world, it's what we perceive, then turns our genes on or off. So if my eyes are looking out and I see

beautiful nature right now, which I do, my genes are in a calm, collected state. If you're living in downtown Portland, which has had, you know, protests, i.e. riots for 100 plus days, and you look out, and you're in apartment building on the 10th floor, and you look down, and you see riots, your environment's different than mine, you're gonna be telling your genes to have fight or flight, a lot of norepinephrine, and a lot of dopamine made, so you can be alert and focused in and ready to defend yourself, or run away.

So your environment is really, really important. And that's epigenetics. So, look, most genetic reports focus on the genetics. And it's nice to know what kind of car you drive, but you wanna know the details. And when you order StrateGene, and you look at the pathways, yes, there's genes all over it. But on every single gene, there's epigenetic control points on every single one on the diagram itself. So, if you're looking at that DAO gene, which we talked about earlier, when I was sharing with you that there's acetaldehyde and alcohol, and metformin, and all these things dirty that particular DAO gene and slow it down even more, where did I get that? I just looked at the DAO gene on my StrateGene planner. Now, I also saw that my wife has a slower DAO gene. So her particular gene she was born with is slow for DAO. So, I see that genetically susceptible to having problems processing histamine from food and drink and from bacteria. I also see that the purple next to that the DAO gene is giving me insights, "Oh, yeah, she does have got inflammation. Yes, acetaldehyde could be from coming from yeast. Yes, Metformin could be an issue, not for her, but it could be an issue from other people." So it gives you epigenetic controls immediately right there and it also gives you the nutrients that you need to support that particular gene, right there on that on that bubble, too. So, it's a very handy reference. And there's a black line that goes right from DAO right next to the ALDH gene, which also shares, again, the genetic findings, plus the epigenetic controls. So, it's right there. So you get the beauty of both when you get StrateGene.

Katie: Like I said, I'll make sure that's linked in the show notes. If you guys are listening while you exercise or drive, those links are always at wellnessmama.fm. And I'm glad that you brought up the Biology of Belief and Bruce Lipton because another note I had was to talk to you about the mindset piece of this and how mind can affect genes because I think this part is not talked about. And it's absolutely fascinating. And it was a huge part of my own kind of huge transformation in the last couple of years was the mindset side. So, I know this could be its own podcast all in of itself. But give us a little bit of the broad strokes of how mindset can affect genetics.

Dr. Lynch: There's two pieces of art currently in our home, inspired by Gary Vay, Gary Vaynerchuk. So, there is a goldfish swimming with a shark fin strapped to its back on one of the pieces of artwork. And above that it says, "mindset is everything." And that is in the hub of my boys. So our boys, three bedrooms all come out to this common area. And they all see that mindset is everything every single day, multiple times a day. So, mindset is everything. if you believe something, that is going to influence your action. And that action is gonna, you know, lead to your next belief. And Tony Robbins talks about this a lot. If you believe that you are not gonna do well when you go on stage and present to people, you know, at your work or in school, or wherever you're gonna present, then you're gonna get on stage and you're not gonna perform very well which then leads to you get an email to come present again a month later, somewhere else. But now you've reinforced that bad belief that you suck on stage. You go again, you're like, "I'll try it again." You don't have belief in yourself. And maybe your brother, or your sister, or a friend jokes, "Oh, go break a leg. Don't suck as bad as you did last time," which doesn't help your mindset at all, but that's what happens. You get on stage,

and you start seeing people fade out, and then you're like, "Oh God, I do suck." And you just do even worse. You're invited to speak again somewhere and you're like, "No, I'm done. I'm not doing it again." So mindset is massively important. If your mindset was opposite, "I'm gonna go kick ass and go present," maybe you didn't kick quite in the ass, but you took some constructive feedback. And you said, "Okay, I'm gonna do better next time and you're gonna do better, and then you do better. And so you have incremental improvements. And so that's what happened to me. First time ever presented on stage, I was shaking so hard, Katie, that the glass of water in my hand spilled because my hand was shaking so hard.

But, you know, I still get nervous on stage, believe it or not.

But, you know, I can rein it in. So, mindset is massively important. Because what your mindset is your choice to believe in yourself for whatever the thing is going to turn on or off particular genes. If I'm gonna kick ass, I'm gonna get myself all pumped up like Tony Robbins, bouncing and hit himself in the chest, and throwing himself in cold plunges. He talks about state. He has to get himself in that state. Well, you know, he has a mental mindset for that. He also has a physical, you know, series of events that he goes through in order to get them even higher in that state. So when he does that, so he can perform and deliver his message, and serve people the best that he can. And so, prior to me getting on podcasts, I really try to focus now and I read the questions that are gonna be asked by the interviewer like you today. I get myself in that mainframe. And I tell myself that I'm gonna serve and support the audience that I'm listening to. And that is all I focus on. And so I get myself in that mindset. So mindset is massively important.

And if you're struggling with mindset, you have to look at people around you who are polluting your mindset. And if you have people around you who are not supporting you, I'm not talking about giving you a trophy for sucking or being in last place. I'm talking about people who can help guide you and support you in getting better and improving, overall. I'm giving you the belief that you need in order to succeed, and we do that at Seeking Health, our company. And you know, our CEO is actually a high-performance coach taught by Brendon Burchard. And he goes through and he supports all of our team members with high-performance training, and they go to high-performance conference with Brendan. So, you know, it's important. It's very important.

Katie: That's incredible. Yeah. And that the fact that your mindset, like you said, turn on and off genes, in a sense, is incredible to think about it and important to know that connection. And to have that and to realize it's not just biology, and genes are not your destiny, like we mentioned. And this hour has completely flown by. You're such a wealth of knowledge. I think we'll have to have you on for round 3 at some point. I know there's so much more we can talk about. But to respect your time, a couple of quick questions I love to ask at the end of interviews. The first being, if there is a book or a number of books that has dramatically impacted your life, if so, what they are and why?

Dr. Lynch: A number of books. You know, there's a number/ And I'm an avid reader. And, you know, granted, I haven't been reading as much as I should have lately because I've been so grinding on research. So, outside of medical research, which I read too much of is "Turning Pro." I believe it's Steven Pressfield. "Turning Pro" is a book that every single page is basically a lesson. It's not your typical chapter book, where they go on and on

and on about some particular thing. Every page is basically, you know, some type of something that you can put your hat on and implement in your life. And it is phenomenal. And he talks about either turn pro or you remain amateur. And when you are amateur, you are doing things that you remain in your comfortable state. You're doing things that don't really push you and they don't scare you. If something scares you, you recoil back and you go back to doing this amateur. So, for example, you could be checking emails all day long, but what you really should be doing is researching something about formulating a new prenatal vitamin. And so, some days I can lean into that fear because formulating something that people actually swallow and ingest, Katie, is actually really scary. So, you know, you're supporting people's pregnancies, you're supporting people's histamine, their swallowing bacteria, which you've designed. That's a big deal. And so, you know, sometimes I'll find myself checking email or being on social media more when I should be leaning into the fear and formulating, you know, and trusting my abilities, and researching, and testing, and all that.

And so days where I'm more confident, I definitely turn pro. The days where I'm not so confident. I'm more of an amateur. And so "Turning Pro" is a great one there. "Think and Grow Rich," I don't like the title of the book, but "Think and Grow Rich" is one of those books... It's the first personal growth, first kind of book ever on personal empowerment, personal growth. And he did a phenomenal knockout job. And it's a good one on audible. I really enjoyed it on audible. My 17-year-old son, Tasmin, read it. He liked it, but he wasn't, you know, that blown away by it. But he's reading "Turning Pro" right now, and he really likes it. How to influence people is really important because, you know, a lot of people get caught up in themselves. And influence is not about being selfish. It's about serving others. And, you know, God, what else? "Faithful Harvest" is a very important book that's probably not talked about very much. But "Faithful Harvest" is a true story about how the agricultural industry was polluted through fertilizers with heavy metals. So it gives you an insight into what's really going on in the environment. And it really pisses you off and it gives you an insight that you need to understand because you don't hear about these types of things. So definitely read "Faithful Harvest."

Katie: Awesome. Those links will be in the show notes as well. And based on everything you're currently researching or past research, any parting advice you would leave with the listeners today?

Dr. Lynch: So, right now, these days is information overload. So, you just heard this podcast, you probably gleaned a lot of good information. And you're kind of stressing out because God, there's so much to do and so little time. And you're so focused on your kids, and yourself, and your work, and your home, and maybe some stuff going on at work, you know, just focus on one thing. Just pick one thing that really, really resonated with you today and apply it. And it's just the mindset and your focus, and your own internal thoughts of how you're doubting yourself, just have your internal thoughts and start shifting that mindset to having something positive. But start with one thing, implement that one thing and just go with it. You don't have to do everything at once. You know, you got your whole life in front of you. But every choice you make, every decision you make leads to a decision. And that decision either does one of two things, it's going to clean your genes, which allows you to function better or it's gonna dirty them, which is gonna make you perform not so good. So try to make your decisions that you choose to do every single day to clean your genes. And if you make a decision that dirties your genes and reduces your performance, that's okay. Don't beat yourself up over it. Just enjoy whatever it is you're doing. Maybe you're staying up late watching a movie, maybe having two glasses of wine instead of one. It's all right, don't be pissed off at yourself, just, you know, look at the next day, and clean your genes, and, you know, be good to yourself.

Katie: We have the perfect place to wrap up. Like I said, you're a wealth of knowledge. This has been so much fun. We'll have to hopefully have another round sometime soon. But thank you so much for your continued research in this and for the supplements you've developed, for all the work that you're doing. I will make sure we link to all of the many resources we talked about in the show notes, but Dr. Lynch, thank you so much.

Dr. Lynch: Thank you, Katie.

Katie: And thank you as always for listening and for sharing your most valuable resource, your time, with both of us today, that we're so grateful that you did and I hope that you will join me again on the next episode of the "Wellness Mama Podcast."

If you're enjoying these interviews, would you please take two minutes to leave a rating or review on iTunes for me? Doing this helps more people to find the podcast, which means even more moms and families could benefit from the information. I really appreciate your time, and thanks as always for listening.