

A sunburst graphic with numerous thin, light gray lines radiating from a central point behind the text.

# Healthy Moms Podcast

BY **Wellness Mama**<sup>®</sup>  
simple answers for healthier families

Episode 139: Understanding Generational Toxins  
and Epigenetic Changes with Dr. Mindy Pelz

Child: Welcome to my Mommy's podcast.

This podcast is brought to you by Vivos. This is something we recently invested in for our entire family and we are absolutely loving it and here is why. So, data shows that the nutrition we receive in utero determines our palate development and how narrow or open our airway and jaw structure are. So a narrow mouth, jaw and airway increase the chances of needing braces, of getting sleep apnea, breathing difficulties and much more. But it was pretty much assumed that your jaw structure was set in stone once you were born or for sure after the first couple of years of life. But Vivos has found that not only is this not true, but they created a non-invasive, non-surgical, easy way of widening the maxilla, the jaw and the airway. So for our kids, this means that they get to avoid the braces that my husband and I both had and for my husband, this means his sleep apnea has disappeared and he stopped snoring, which is a bonus for me. I'll be writing more about this soon but you can check them out, in the meantime, at [wellnessmama.com/go/vivos](http://wellnessmama.com/go/vivos)

This podcast is brought to you by Homebiotic. We all know about our microbiome and most of us know about our oral microbiome and even our skin microbiome. But it's easy to forget that we live in a microbial environment as well. And that our home environment influences our health too. The overuse of disinfectants and harsh cleansers has led to an overgrowth of less than optimal bacteria in many homes. Things like mold, pets, and the normal bacteria that comes with a household of kids running in and outside all day can cause odors and bacterial imbalance in our homes. Those of us with little kids have children sitting on the floor of our homes and interacting with that bacteria on a daily basis. So, my solution to this has been Homebiotic. This is a natural probiotic spray for the home that neutralizes odors, germs and even mold. You can check it out at [wellnessmama.com/go/home-biotic](http://wellnessmama.com/go/home-biotic)

Katie: Hello and welcome to "The Healthy Moms Podcast." I'm Katie from [wellnessmama.com](http://wellnessmama.com), and you are really gonna love this interview today because I am here with Dr. Mindy Pelz who has built one of the largest natural family wellness clinics in the San Francisco Bay Area.

She is the author of two bestselling books and she has lectured about nutrition to more than a hundred Silicon Valley corporations. Her approach is to look at all aspects of a person's health using everything from functional nutrition testing to gut repair, to heavy metal testing, ketogenic dieting, fasting, supplement cycling, corrective chiropractic care, and even mindfulness to help reset health from the ground up, and her unique approach has led her to work with, like I said, multiple Silicon Valley corporations including top CEOs. She's worked with Olympic athletes, professional athletes, academy award-winning actors, professional musicians, and most importantly, in her mind and I agree, every day, families like you and me, and I can't wait to delve into this conversation. So, Dr. Mindy, thanks for being here.

Mindy: Yeah. Thank you for having me.

Katie: And I'm excited because we're gonna jump into an area I know that is a topic of expertise for you and that I think is so important for moms in general, which is about generational health, and generational toxicants. And it's an area that not a lot of people I feel like actually fully understand. My audience is a little bit familiar with the idea of that, the microbiome being passed on, for instance, from a mother to a baby in utero, and especially, during birth. But from your research, it seems like there's a lot more to it than this. So, can you start from the ground up and just explain that concept?

Mindy: Yeah. And I agree, not enough people are talking about it. So, I really am grateful for the opportunity to educate people because I think if people can see the picture, the big picture, it helps put in all the other pieces we're trying to do for our kids in a more systematic way. And yeah, there are basically...the way that I explain it is that there are two things that get passed down through the generations. Your microbiome gets passed down from your mom and your toxic load gets passed down. And in many cases, it's getting passed down through four generations.

So, for example, things like lead. Lead can get passed down through four different generations and it's showing up in this generation causing this particular person a problem, but they don't realize that it came from a situation that happened with mom or with grandma. So the way I like to explain it to my patients is, think of your health like a bucket, like you're born with a certain size bucket. That's your genetic makeup. And within that bucket is a certain toxic load.

And so, you...like for example, Katie, let's say you were born with a bucket that was really big and you could handle a lot of toxins, and you were born with a very small toxic load. So, you can go and eat a bunch of junkie food or get exposed to a bunch of different chemicals and you won't necessarily exhibit any symptoms. But then I'm born with a very small bucket and with a very high toxic load, and I go and eat a piece of wheat, and all of a sudden, now, I'm like totally flared up and have an autoimmune condition. And what people aren't necessarily tapping into is that we come in with a certain load, we come in with a certain ability to handle these toxins, and there are a lot of strategies we can apply to help empty our bucket, to improve our ability to detoxify so we don't exhibit these symptoms.

Katie: Yeah. That makes perfect sense. And I think, like you said, it's such an important topic to raise awareness of. And I know this is very much where your heart is and mine as well. And I wanna say it before we go any further, too, we're talking about a lot of things that will affect, you know, child's health, especially, like in utero and then, throughout their childhood. And I know as a mom, having learned a lot about health after I had my first couple of children, I know that that can bring a lot of guilt.

So, I know both of us come from this place and I just wanna say it. But none of this is meant to bring mom guilt. The great news is all of it can be improved and there are things you can do no matter what and how your baby was born, or what that scenario was or what the bucket looked like. And I know you echo that. I just wanted to make sure that every mom there feels loved and heard, and not that any of us comes from a place of guilt or judgment ever.

Mindy: Yeah. And you know what? I absolutely agree with you because it's just information that we can now be unaware of. And you know, I have two teenage kids and, you know, I look at them and I go, "Okay, what can I do now to help detoxify some of these toxins that have been passed down?" Because none of this is our fault, but now that we...you know, it's that if you know better, you can do something about it. And so, I'm looking at my kids going, "How do I help them make sure that they don't pass it down? And it's, to me, a really refreshing approach. But yeah, absolutely no mom guilt, 100% agree.

Katie: Yeah. Awesome. So, to that note then, let's go a little deeper and can you walk us through some of the most common things that you're seeing in your practice and that are being like passed on generationally, and kind of what your approach is when you start evaluating those things?

Mindy: Okay. So, there's two generational things to look at. One is heavy metals. I think that's the biggest. And then, one is the microbiome. And those really require two different conversations. So let's start with heavy metals and let me kinda...I think the best way to understand this is how I discovered heavy metals, which was, I'm 48 right now. When I turned 40, I decided I wanted to be like in the best shape of my life. And so, I ate really well. I was exercising. I was getting chiropractic. And about 43 years old, I started getting really bad anxiety and depression, and I wasn't sleeping well, which was very unusual for me. I started getting hot flashes and I was like, "How can this be?" I mean, I'm eating...I'm doing everything that everybody said you should do. And so, that's when I discovered lead toxicity and how lead gets passed down through the years.

I know, Katie, you're gonna talk to Dr. Pompa or you already did. He's got some really cool stuff on detoxing lead. And I started to look at that and tested myself, and realized that my lead was really high. And once I started to detoxify it, then all of a sudden, my symptoms started to improve. But what I realized as I was understanding lead more is when I went back, I looked at like after I had my second child. I had a thyroid problem, and that's where lead can show up. And when I was a kid, I realized I had reading comprehension issues, and that's where lead shows up.

So, a good starting point is really understanding what your toxic load is, where you're at. And we do a urine challenge in our office, a provoked urine challenge. I think that's one of the best ways to test heavy metals. Have you had your heavy metals tested, Katie?

Katie: I have, yes.

Mindy: Yeah. And so, you know, I think it's important that everybody gets some version of a test so that they start with understanding where their heavy metals are at so that then they...you know, if you understand as a mom where your metals are at, you can turn around and start to understand maybe what your kids are exhibiting.

So, for me it was lead. That's what we're seeing. We've run hundreds of these tests in my office and we see lead is...everybody's had lead. Everybody has had varying degrees of lead. We also see a lot of mercury and that's coming from all the different kinds of sources, your mouth, fish, flu shots. I mean, mercury is kind of everywhere.

So, I think a really good starting point is understanding what your personal load is. And there's a lot of great ways to test it, but that's what I encourage moms to do when they come in to us, is to start there.

Katie: Yeah, for sure. And I know when I tested... I actually tested on the lower end for like lead and for mercury because I was at that good age where like I didn't get very many vaccines yet, because there weren't that many when I was a kid. But I never had any fillings or anything growing up, so I didn't have any mercury in my mouth. So, I like dodged those bullets. But I had cadmium and antimony, were the ones that showed up for me, which I thought was interesting. And that was kind of unexpected, and so it's interesting.

I think it's like anything. It's great to have data and to know because even like the day I was diagnosed officially, finally, with Hashimoto's, it was a great day in a sense because then, I finally could take action. Like once you...even though these may not be great things to hear, once you know, you can move forward. So, I think you're right. It's helpful to know.

Mindy: Yeah, absolutely. And you know what I see especially with women is that they stumble into their medical doctor's office and they get a diagnosis like Hashimoto's, and then they're told the solution is medication. Or I get a lot of women that come in that are told, you know, "Well, what if this is the best you're ever gonna be, like this is the healthiest you're ever gonna be?" And I think that is just not an acceptable prognosis. I think that there are so many things you can do. And when you understand things like heavy metals and you go, "Oh, this could be affecting my health. This could be maybe having an impact on my children's health. Awesome. Now, I know. Now, let's create a solution for fixing that." And it's empowering personally, I think.

Katie: Yeah, absolutely. And I think it also is a perfect segue into another thing I wanna make sure we define, which is epigenetics, because I think that's an important concept here and one that gives a lot of hope and, you know, optimism for the future when you understand that genes aren't necessarily set in stone. So, walk us through what epigenetics are and how they relate.

Mindy: Yeah. So, epigenetics are the turning on of genes in your body. So I think, really, there's two great studies that really express what epigenetics are. One was the agouti mouse study. Are you familiar with that one, Katie?

Katie: Yeah. But please like walk us through it.

Mindy: Yeah. Okay, cool. So, they did a study where they took two mice that had an obesity gene and they exposed one...they fed them the same amount of food. They gave them the same amount of exercise, and they fed one mouse...BPA plastic is what they exposed them to. And that mouse, that BPA plastic turned on the obesity gene and the mouse started to hold on to weight, and its hair started to turn a yellow color, and before you knew it, it was an obese mouse.

And then, when they took that mouse and they had that mouse reproduce, they noticed that their offspring was the same thing, that they were actually coming...the offspring would be obese even though that offspring wasn't exposed to the BPA plastic. So, the gene had been turned on. They did the same study with...at a Washington State University with DDT. They took a mouse and they found...they exposed it with the obesity gene, exposed it to DDT, and they found that for four generations, that mouse, the obesity gene was turned on and more obese mice were constantly being born because the gene had been turned on.

So, the moral of the story or the understanding that we can have from that is like, "Oh, we might have turn...our genes may have been turned on generations before." But there's some really cool things that we can do to start to turn those genes off. Detoxing is one of them. But we have so much more control over our genetics than we originally thought. And those two studies, to me, are landmark. They really show us that we can sit today in a health crisis that is really frustrating, that may have been a product of a generation before. And when you understand how to turn those genes off, it just becomes empowering. It's incredible.

Katie: Yeah, absolutely. And I know there's a fun line that I heard from one of the smartest people I've ever met, Naval Ravikant, and he said...

Mindy: Oh, yes.

Katie: Yeah. He said if...you know, his best health advice would be to choose your grandparents wisely. But

since you can't do that, obviously, like we have to be proactive, and I think that's why I love talking about topics like this because I feel...and the reason I blog and the reason that this is such a passion for me is because of our environment. In today's world, unlike our great grandparents and before that, like we don't have the luxury of just getting to like exist and interact with our world without being cognizant of these things. That's not a bad thing, but we do need to be proactive, especially when we're talking about our kids.

And I think understanding how...we understand we need to eat healthy when we're pregnant, so we pass nutrients on to our babies. But understanding the deeper level of that, that we truly are actually passing on like a genetic heritage, that that helps us to further just be cognizant and responsible of the choices we're making because you can still make great choices even in today's world, even with all the things we're facing. And I think that's, like, what you're so good about talking about and something I like to speak about as well.

Let's go a little deeper on microbiome, too, because you've mentioned like the heavy metals and that kind of stuff, and we know there's just some great research I've seen recently on the many ways the microbiome's passed on generationally as well. And so let's speak to that a little.

Mindy: Okay, yeah. And let me just make one more comment about what you said. I think it's really important that parents understand that our kids are growing up in a totally different world than we grew up in. And it's a toxic one, so we might not have had detox strategies when we were younger. It might have not been on our parents' radar. But that's because we didn't have as many chemicals in our environment as we have now. So, it's really important that as parents we think about the detox aspect of this, that I just wanted to excite what you said was brilliant.

So, yeah, the microbiome. Here's the thing about the microbiome, is that we inherit our microbiome from our mother. So, I'm sure you've talked about this, but when we come through the vaginal canal, we are meant to have the vaginal juices go in through our nose, the baby's nose, and go into the gut, and to fertilize the gut. So, that's the natural birth process. And then, once we come out, we're meant to...when a baby's being breastfed, the mom is actually passing her microbiome on to that baby. Skin touch, so touching the mom's skin, all of that is a grooming process for the microbiome and it takes about three years, it's the first three years that are the most crucial for the microbiome.

So, let's look at what's happening right now. C-section rates are really, really high. So, if you're born by C-section, you missed out on that. I hope breastfeeding movement is still really popular because it's such a great way to pass that microbiome off. If you have any young moms that are listening, like skin touch is so important, skin to skin touch that you'll get from your mother and even from your father. We are more bacterial cells than we are human cells. And so, if you have a healthy microbiome, you have this opportunity to really pass that on to your children. And instead, what's happening a lot is that, again, C-sections, but then we've got all the antibiotics. So, we've got the oral antibiotics. We've got the antibiotics in all the foods. We've got antibiotics everywhere and that is literally destroying the microbiome.

And when you put, you know, this...I love, there's a great book. If you have it and you should...if you haven't had this guy this in your podcast, he wrote, "Missing Microbes." Have you read that book?

Katie: I haven't yet, but I'm writing it on my list right now.

Mindy: Okay. Dr. Martin Blaser, and he calls it the generational handoff, that because we have lived in such an

antibiotic-obsessed world, and that's everything from C-sections to hand sanitizers to antibiotics in our food, that each generation is getting a little weaker handoff of a diverse microbiome. And so, you're getting a little bit weaker and a little bit weaker, and you mix that with toxins. And now, we look at our children and we go, "Okay. Well, that makes sense why we've got learning disabilities and we've got, you know, asthma. We've got chronic diseases."

And one thing I'm really passionate about because I have teenagers is how much anxiety that teens are experiencing. And there is a piece of all of this that can be helped once we go to repair the microbiome and we work on some detoxing. But I love that idea that it's like this, it's a handoff. It's like a cool little gift you get to give your kids if you're aware of it.

Katie: Yeah, for sure. I mean, back to the...just to again speak to the issue of mom guilt, that was one of those things for me because I was never the mom who thought I would have a C-section because I had had two babies naturally and it was perfectly fine, and then had placenta previa that they didn't catch, so got thrown into an emergency C-section and almost died. And my son, of course, didn't get the benefit of a vaginal birth and was in the NICU, and on steroids and antibiotic and all these things. And he actually did experience. He had eczema. He had some developmental delays early on. And even with him, we were able to move past all of that.

So, that's always my encouragement to moms, is like no matter what stage you're at, you can always do something and definitely, don't beat yourself up. But I love that you said that about the handoff. Because if you are pregnant, you still can prepare for that even if it's not something, and I would have done that in hindsight. And now, as a doula, like I don't do it often because I have so many kids myself. But it's one of my greatest honors, is to get to be present and help other women when they're giving birth. And that's one thing we always do if there's gonna be a hospital birth, is to pre-prepare like blankets that are kind of accustomed to the home microbiome environment and there's things you can do.

I did a podcast with a group called Microbirth and about, basically, culturing some sterile gauze with the mom's microbiota. And then, as soon as the baby's born, usually the mom's on C-section, you hand off the baby to dad, and then dad has this in his pocket and just wipes the baby's mouth and hands, and face, and so that's the first exposure. But even for a vaginal birth in the hospital, you can still bring blankets from home like little hospital blankets and have them already, like mom slept with them. They're like the natural bacteria of their home versus the hospital. And just make sure babies like, as much as possible, coming in contact with like the friendly family bacteria that they're gonna need to interact with their home environment when they get home versus the hospital ones.

So, I love that you brought that up, too, and that's just one of my, like, little things I love to share because I think it's something easy to do. And even if you're not planning a C-section, to just be prepared.

Mindy: And you know, I actually think building a good microbiome is not that hard. You just have to be aware of it. So, just like you said, that's incredible. I'd never heard of that in a birth like that, that level of detail is incredible. But like it doesn't...it can be as simple as once you hear this, you go, "Oh, okay. Well, I need to think about my child's microbiome. So what can I do?" You could start feeding your kids fermented foods. You can start making your own yogurts. You can look at...like we have a skin colonizer lotion that we have people put on their skin.

I don't know if you're familiar with the Restore product, but we have a lot of people use Restore Nasal Spray. It's a bacterial nasal spray. We have people change their toothpaste so that they can work on...the families can start to work on the microbiome of their mouth. So, it can actually be quite fun and you can look at it and go, "Oh, okay. My child missed out on that." Like you said, I totally agree, no mom guilt. But now, I can actually start to rebuild this microbiome, and I can do it in some really fun ways.

So, fermented foods is a fabulous way to get good bacteria in there. Prebiotic foods like chia seeds and hemp seeds, throw those in a smoothie and they feed the good bacteria. Polyphenol foods like Brussels sprouts and cloves, and nuts, raw nuts, and olives, you know, it's really not that hard. You just need to be aware of it.

Katie: Yeah, absolutely. In fact, I even...recently we've used a product called Homebiotic which is actually like you spray it in your home and it like allows your home environment to culture, it's supposed to actually help with dust bunnies and a lot of stuff, and as well as my skin care. It's product that I use has probiotics in it, so you're like culturing your skin as well, and I love that. I think, just like you said, just being cognizant of those things so we can do little things in daily life to address them.

Mindy: Yeah. You know, I even read a study this morning in PubMed that showed that families all share microbiome. So I have this kinda new idea that I think would be really fun is if you do it as a family, like, "Okay, everybody." It's like, you know, doing all these extra steps to repair their microbiome and they're synergistically helping each other. I even heard...and in the study was that they have measured your dog's microbiome and they find that your dog's microbiome is very similar to your microbiome, that we're all and we're living in a household we're all sharing a microbiome, which is super cool and can be, I don't know, I kinda have...I have teenagers. So, you know, I don't know if they'll think it's super cool, but I'm thinking, "Oh, we're gonna do like a family activity around repairing our microbiomes and improving our bacteria from all different angles."

Katie: Yeah. It's fascinating. And realizing because of that, like there's got to be an environmental connection there as well, like you're obviously microbiotically interacting with your environment. So, things like just trying not to overuse harsh cleansers and the disinfectants, and antibacterial stuff unless they're truly needed. I think that's...there's been some research that came out about that recently, like all these anti-bacterial soaps and face washes and body washes, and all these. They actually have unintended consequences down the road because we're meant to interact with bacteria and that's an easy step. Just switch your soap. So, those little things aren't hard to do.

Mindy: And you know, your skin microbiome communicates with your gut microbiome. And so, when you're putting the antibacterial soaps on your hands, like you're...it's not just having an effect on your skin, it's also affecting your gut. So, all of those ecosystems, they believe every organ has a microbiome and that they're all a little bit different but that they all communicate with each other, which is just fascinating.

Katie: Yeah. So cool. And back to birth for a second, that's the reason I've always refused the antibiotic eye drops with my babies, too, is because you're putting antibiotics on their face. But they're rubbing their face and they're putting their hand in their mouth, and it's getting in their gut, too, so just another little easy switch to make. I wanna go a little deeper on the detoxing thing though because I think that you're so right, like we need to support our bodies and then there are times when we actually need to like act proactively do things, to detoxify. And I know that every time I mention this, I get about a million questions from people who's like, "What about kids? What about pregnancy? What about nursing? What about this?" So, let's do that. How do

you do it with kids in a family?

Mindy: Okay. So, let's start with...yeah. Here's something that I think is really important that everybody understand is that the blood-brain barrier which is the protective layer of the brain doesn't fully form until your child's seven. So, every toxin that they're exposed to prior to seven is probably the most harmful. It's also a really cool time to start to detox them if you're aware of it. So, you know, let's start with food because I like to try to give food solutions first, and then I'll explain what we're doing in our office with our...the families that come in.

Great foods that are high in glutathione are cruciferous foods like the Brussels sprouts and the cauliflower, and the broccoli. So, how do you get those into your kids as much as possible? Cilantro, even though it's kind of a weak detoxifier, has been known to hook on to heavy metal. So, you know, that's an option. So, looking at introducing detoxifying foods is really important.

Now, the second thing is that when you go to detoxify kids, I'm a big fan of low and slow. This is not like an adult detox. This should be something that is easy and effortless to do. So, we have a kid's detox that we use and it involves not only supporting and nourishing the brain, but it has binders in it that will actually...natural binders that will hook on to these toxins and get them out of children. One of which is CytoDetox. Are you familiar with CytoDetox?

Katie: Yeah, I am. It's the one we use in our house, too.

Mindy: Yeah. So, we put together three supplements. We put together CytoDetox and a brain supplement for kids. It's called Brainy Play. It's put out by Systemic Formulas. And then, we use MORS, liquid MORS, which is a supplement that helps to turn off any genes that might have been turned on. And they're all liquid, so they're easy. Like you could put them in a, you know...Cyto's really easy. You just put it under the tongue. But the other two, you could put in a smoothie and your child wouldn't even notice it.

So, I think those are gentle detoxifiers. As people get older, we definitely do a more thorough detoxing. You're familiar with True Cellular Detox?

Katie: Yeah. I am going to go through it in February actually, yup.

Mindy: Oh, awesome. You're gonna go through with the group? That's awesome.

Katie: Yeah.

Mindy: Yeah. So, we've had...we put, again, hundreds of people through the True Cellular Detox protocol and it's life-changing, and it really more for, you know, these people...in my opinion, it's for people that are like 20 and older. And we've seen everything from weight loss resistance go way to...the number one thing that I see is people who have trouble sleeping start to sleep again. Depression, anxiety improved. It is hands down the best way to detox heavy metals that I have seen in the 20 years I've been doing this.

And the way that they have it set up is really well done because the first month, you're just preparing your organs. You're getting nutrients to the liver and to the gut, and to the cell. So, I'll be curious in your experience, Katie, but that first month, most people just feel amazing and they feel good. And then the second

month is the body phase, and then you really start to work on pulling, you know, the mercury, the lead, all the heavy metals out of your gut and out of your liver. And then the third month is the brain.

And it's magical. It's really, really magical. And it's really appropriate for more adults, and I love the one we are using for kids. We haven't had any adverse reactions. It's, again, a low and slow kinda game and I have people get on it for a month and then get off of it for a couple of months, and then get back on it. And moms are really finding it easy to implement.

Katie: That's awesome. And it's good to know that there's an approach for kids.

This podcast is brought to you by Vivos. This is something we recently invested in for our entire family and we are absolutely loving it and here is why. So, data shows that the nutrition we receive in utero determines our palate development and how narrow or open our airway and jaw structure are. So a narrow mouth, jaw and airway increase the chances of needing braces, of getting sleep apnea, breathing difficulties and much more. But it was pretty much assumed that your jaw structure was set in stone once you were born or for sure after the first couple of years of life. But Vivos has found that not only is this not true, but they created a non-invasive, non-surgical, easy way of widening the maxilla, the jaw and the airway. So for our kids, this means that they get to avoid the braces that my husband and I both had and for my husband, this means his sleep apnea has disappeared and he stopped snoring, which is a bonus for me. I'll be writing more about this soon but you can check them out, in the meantime, at [wellnessmama.com/go/vivos](http://wellnessmama.com/go/vivos)

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Katie: Like how do parents know if they...I'm sure that there's testing you must be able to do on both bacterial diversity and generational toxins, but how can parents know that that might be something that would help their child, and are there symptoms as well that kind of are a good hint?

Mindy: Yes. So, the testing in general, I recommend moms get tested. Test your heavy metal load and you'll get an idea of what you may have passed down. So, that's kinda how we do it in our office. I'm a big believer in microbiome testing. Have you done Viome? Have you used Viome stuffs?

Katie: Yeah, definitely. That one's top of my list, too. I love Viome.

Mindy: Yeah. So, Viome's great. We use the one called Gut Zoomer. That's really great. And a microbiome stool test is really smart to do on your kids and on yourself. It'll give you a really interesting perspective of how diverse their microbiome is. Do they have any pathogens like candida or parasites, or really bad bacteria that they're dealing with? It'll tell you if they have like...I love this one. With Gut Zoomer, it'll tell you if it's got...if you're missing the right microbiome balance to break down wheat. So, for people that are more prone to

celiacs, it'll tell you if you have the right microbiome balance to keep your metabolism high. So, it's just really an awesome picture of your current microbiome, and I think...I have this dream again. I'm in Silicon Valley and I just have this dream that I'd love to go like house by house, by house and get everybody testing their microbiome because in that, they could see so many places that they could improve that would have such a drastic effect on not only their family's physical health health, but their mental health as well.

Katie: Yeah, absolutely. And I'll make sure I link to Viome in the show notes if anyone wants to find it. And also, I've written a post about it, but for me, I always, in the past, to kind of written off like the microbiome testing just like I was one of the blood test. They're like the more...I felt like those were more like "clinical." And I was amazed because when I did Viome, it matched up with the latest genetic stuff that they had, all the latest genetic reports I could run, and it matched up with all these other factors that I was getting tested. And it's so much easier. And especially on kids, you can test kids with the stool test way easier than you can blood test and all that. So, I love that those are options now for sure.

Mindy: Yeah, totally agree. And again, empowering, right? Were you excited when you get your Viome results? You're like, "Wow, this is..." There's something like, "Here's where my work is," like, "This is what I can do to improve it." And it fuels you for pulling your whole family forward.

Katie: Yeah, absolutely. So, there's a couple more topics I wanna jump into because I wanna make sure we have time. I know that you also use fasting in your protocols and the ketogenic diet. And these have been both research topic-type projects for me lately, and I've been experimenting with fasting, so I'd love for you to kinda give us a primer. Let's start with fasting because I hear from so many people all the time like, "Oh, I could never fast because I have little budget or I don't...it's not good to do without eating. You should eat three times a day." So, I'd love to hear about fasting.

Mindy: Okay. So, here's what I tell my families, that there are four different types of fasting. There is intermittent fasting where you go 13 to 15 hours without food, and you're doing that every day.

The second type of fasting is what I call dinner-to-dinner fast, where you're going 24 hours without food, so you would have dinner on Monday night and then you don't have...you won't eat all day the next day, and then you have dinner on Tuesday night, something like that. Then there's really interesting research out right now on fast mimicking diet. Valter Longo, if you haven't interviewed him, Katie, he's another really interesting scientist right now that's giving us some really insightful information around fasting, so you wanna check him out. And then there's water fast. Okay, yeah. Then there's a water fast. There's a four to five-day water fast, and they all have different benefits. So, intermittent fasting will improve your growth hormone. Growth hormone, it will help you burn fat. It slows the aging process. It will give you energy. It will build muscle. Like we all want growth hormone. And you stop getting growth hormone after the age of 30. So really important that you implement, in my opinion, bare minimum, you should be implementing some type of intermittent fasting.

Dinner-to-dinner fasting, what I love about that is that it's...I don't know if you've interviewed Jason Fung, but Dr. Jason Fung has really talked about insulin resistance and how these longer fasts, a little bit longer than an intermittent fast, will help yourselves repair so that you can actually kick yourself out of insulin resistance. So, he's got some great books out. He's got a great podcast that you can learn more about that.

Fast mimicking and block fasting are incredibly encouraging for things like cancer prevention. What we're

seeing with those types of fasting is that you get an incredible surge of stem cells. And stem cells are cells that can go to any part of your body and they can repair. So, Valter Longo's original studies were done on chemo, patients that were going through chemo and that had cancer. And one of the challenges we have about chemo is it destroys the whole immune system. And so, even after somebody's had chemo, they come out of that and then have their immune system just wiped. So, if any new cancer cells re-appear, they don't have an immune system that can fight it.

So, what Valter Longo found is that if he put them through a four-day fast, block fast, while they were going through chemo that they got this surge of stem cell production and it actually rebooted the whole immune system. So, yeah, in my community, in my office, we are all implementing all four of those strategies, and I think they all have great merit for our health.

Katie: Yeah. That's awesome, and something I've experimented with, too, ever since delving into Dr. Pompa's work and meeting people like you who use it, and so I started off with like a three-day fast last year, and then I did like a five-day fast, and then my most recent was a seven-day fast, and I truly felt like the best I've ever felt coming off of it. Just like you're so clear, your brain is so clear. I was like probably 4x my normal production on things. So, it's one of those things like it sounds daunting like, "Why would you ever not eat for seven days?" But it truly is amazing and the research is astounding, like the cancer statistics that were coming out of just fasting.

But I felt it's intuitive if you, like, entertain the thought for a second. It's what animals do. It's what people do when they're sick if they're actually allowed to. So, I love that it's kind of coming to the forefront. And I know people pair that often with a ketogenic diet or versions of a ketogenic diet. And I have a feeling we're gonna be in alignment on this as well, but I'd love to hear how you use the ketogenic diet and what a ketogenic diet actually looks like in your book.

Mindy: Okay, yeah. So, what I always teach my patients is your body's a miracle, like you were born in this incredible self-healing, self-repairing, energized body and it was meant to live to 120. It was not meant to break down at 40. So, what things like fasting and the ketogenic diet are doing is they're tapping into your own body's healing mechanism. So, for us and my community, what we recommend for the ketogenic diet is that you really lower your carbs and the recommendation I make is keep your carbohydrate load under 50 grams. You up your good fat, not your bad fat, Atkins was more of the bad fat. This is like good fat. You up your good fat above 60% and then I really encourage people to keep their protein limit at about 50 grams a day. So, it's low carb, moderate protein, high good fat.

And a really good way to track it is Carb Manager. It's an app that you can get on your phone and you just plug in whatever your day was. And you know, I always start with telling patients like, "Just plug it in and see what today is." And before they even go on the ketogenic, and people are astounded, people are like amazed at, you know, how much protein they're eating and how many carbs they're eating.

So, the ketogenic is having you change those ratios. And then, we implement intermittent fasting with that, and the idea behind doing those four strategies is that you take yourself from a sugar burner and you turn yourself into fat burner. And that's super exciting if you wanna lose weight and I think it's the greatest way to kick yourself out of any kind of weight loss resistance. It's just profound and it really can have a long-term benefit for preventing disease.

I don't know if you've interviewed Dr. Ron Rosedale, but he has a statement that I love which is that, "Every disease known to man occurred in a sugar-burning body." So, we have...in order for us to prevent things like cancer and to prevent disease, it would benefit us all to move over to this fat-burning place because this is where the human body thrives, and that's why when you're like... I loved it when you said, "I went on this fast and I had all these energy," that's what we see. It's like you become like an Energizer bunny and your hunger goes away, and your mental clarity is like through the roof. And I just think it's one of the greatest gifts to us right now is applying all these principles that work naturally with the body.

Katie: Yeah. I absolutely agree and I'm excited for all the research that's coming forward and...I mean, I've certainly noticed benefits just in my life already, but it's something that now, having seen the research, I'm gonna keep implementing, you know, throughout the year just occasionally doing fast or different types just because I know the cancer history of my family on both sides and I know what we're up against environmentally. So, I think it's just an easy tool.

And I know we're gonna get questions from...since most of the listeners are moms, related to, can you do fasting while you're nursing a baby, while you're pregnant? Can kids do fasting? So, what are the parameters that you typically set for that?

Mindy: Yeah, yeah. I'm super happy you asked me that because I think it's important to talk about. Okay, so let's talk about fasting. For, obviously, pregnant moms, I'd say no. You know, that's not the time to fast. And nursing moms, I definitely wouldn't do long block fasts. I do have a patient who's nursing her 18-month old and she just did dinner-to-dinner fast, and is doing great with that. So, the intermittent and the dinner-to-dinner, that in my book is fine for the nursing mom.

Kids fasting, I get a lot of questions about that. I think we really wanna lead our kids to have a very intuitive sense about health, I don't think it benefits our children to have...to be really rigid about don't eat this, don't eat that. Like we wanna educate them and I would...with my kids, I don't impart my fasting ways on them, but I model it for them. So, my daughter is gonna turn 18 next month and she is now an intermittent faster, and I never told her to do it. She just saw me doing it. She saw my husband doing it. So now, it's just like, "Oh, this is how our family does health. This is just the way that it is." So, I wouldn't encourage you to suggest that your kids fast, but I would encourage you to teach them why fasting is really beneficial, and that someday they'll wanna do it.

And as far as the ketogenic diet goes, yeah, I mean, we need to get more good fat into our children. We need to lower the carbohydrate load down. Like all of that is fabulous for our kids. The brain, the brain needs fat. These developing brains, yeah, get all that good fat in them. They will thrive with that. But make it playful. Make it light, you know. Talk about it. In my family, we talk about health all the time. I share what I'm doing, why I'm doing it. I share studies. I share podcasts that I've listened to, like I just...I wanna show up for my kids in a way where I am modeling for them what a healthy lifestyle looks like. And in that, they will follow you.

Katie: Yeah, exactly. And I know like it's...so from...a little bit advice that I could offer, too, is with the keto diet, I think I always wanna make the distinction between that and like Atkins or just low carb because when you...because I've used Carb Manager, too, and when you are plugging it in, you can eat an insane amount of green vegetables or fermented vegetables and that kind of stuff, and still be very low carb. This is not about restricting food necessarily and especially with kids. It's just about actually, for most people, just getting rid of the processed food and increasing good fats, like you said.

So, I think that's always a point. This is not a no-vegetable diet. In fact, when I'm eating the most in ketosis, it's like 75% of my plate is green vegetables because it keeps you in ketosis, and that's great for binding things and getting them out of your body and like binding the estrogens. There are so many benefits there. But when it comes to kids, I think you're exactly right. Like I would never ever, ever withhold food from a child to try to get them to fast unless you have like a child with epilepsy and you're in a medical setting. That's a different scenario. What we do at our house is, kind of what's worked for us is I look at it that I am responsible for providing nourishment like cooking the food and providing it to my kids and they're responsible for deciding to eat it or not. And it doesn't have to be a struggle. I'm not gonna force them to eat food if they're not hungry. And if they don't like something, they can choose to skip it. So, they're kind of...they all have like one thing they don't love. So, they'll inadvertently fast once every few weeks when we eat that.

And also, if you like, let kids be kids. If they get sick...I've noticed my kids pretty much fast on just water when they're sick unless you are forcing something down their throat. So that's the time when mom's gonna be like, "Hey, maybe their body knows what it's doing." And if they ask for something, give them food, certainly. But don't feel like you have to like shovel the crackers down their throat just because they're sick. So that's kind of my two cents when it comes to kids and fasting. But 100% agree I would never, never force that on a child ever.

Mindy: Yeah. And I think that's really important, is you know, if my kids don't wanna eat a meal, yeah, then don't eat a meal. Like you know, I'm not...we are not a three-meal a day, six-meal a day family. And if my son walks out the door without eating anything, I'm not worried about it. I know he's gonna eat at lunch. So, letting them learn how to trust their body is really important.

And then, again, I'm such a fan of verbalizing it. Like you serve them a plate of...you know, if you serve them some Brussels sprouts, you know, have the conversation like, "You know what I just learned today? That these Brussels sprouts actually help your body detoxify," and just leave it there, you know, like you just are training them on how to eat. And the more rigid and forceful you become, the more they're gonna wanna go the other way. You can really have fun. There's so much great...so many great tools right now that we have on healthy living. Just have fun with it and be playful, and then your kids are gonna wanna be attracted to it.

Katie: Yeah, absolutely. And I'm gonna make sure in the show notes which are at [wellnessmama.fm](http://wellnessmama.fm), for anyone who's listening, we'll have links to your website because you have, I know, so many good resources there. But I would love if we could, as we get close to the end, if you could kind of give the top three pieces of advice that you would give to a mom who maybe is overwhelmed hearing all this and realizing there may be some places where there's work to do. What would be the top three where you'd have them start?

Mindy: Yeah. I think the first thing is I really am a big fan of stepping stuff out. So, if you're listening to this and you're like, "Okay, I hadn't even thought about my microbiome," just pick one thing like maybe you're gonna get your microbiome tested, maybe you're gonna get your child's microbiome tested, or maybe it's as simple as you haven't been implementing fermented foods, so now you're gonna implement fermented foods. So, do that and do it for a month. Like get comfortable with it and get it engrained into your everyday life. And then when that feels really effortless, then implement something else. "Okay, now I'm gonna try fasting. So, maybe I'll try it for myself first." And you do that for a little while. And then, maybe the next month you decide, "Okay. Now, I'm ready to try looking at my heavy metals and I need to get those tested. I need to detox those."

But really, just taking it step by step by step is super important. I look at repairing your health and putting your health just back together really like a puzzle, you know. You start with the border, then you separate all the pieces out. You put all the one-colored pieces in one area and then another colored pieces in another area. And every day, you know, if you've had a thousand-piece puzzle at your kitchen table ever, you know, you work a little bit on it here and a little bit there. That's what you should do with your health, is just keep working these pieces and make sure that you're moving forward. So, that's my first thing, is just be light and focused about it and just take it piece by piece.

My second thing is that there's never a magic bullet. There's never a one-thing that's gonna cure everything. So, we do in my office a multi-therapeutic approach. I think it's really important that people...we gotta get off this one problem, one pill paradigm. It's really broken and it's really ruining our health, and I see a lot people, when they come over to the natural world, they do the same thing. They're like, "Oh, well, let me...I have a thyroid problem. Let me take this magic...natural supplement. Because it helped my friend, maybe it will help me." Yeah, it doesn't work like that. You usually need several things to put your health back together.

And then, honestly, my third thing and you are such a great example of this is get a community. Form a tribe. Talk about this with your friends. I have an online community called The Resetters, and they share recipes and ideas, and they cheer each other on, and it really makes health effortless if you're surrounding yourself with people that are like-minded, that are teaching or implementing these things. It just makes the journey fun and it really helps, because not only...you know, not everybody has a household that's willing to have the whole household do these techniques. So you really got to surround yourself with people that are positive and cheering you on.

Katie: I love that you said that and I think that's a tremendous advice for any aspect of life, health included. But I mean, when we look at the data, that is the biggest predictor of longevity and that reduced risk of all-cause mortality is having a good social network and community that's not like on social media, but your real-life social network and good relationships, and I think that, of all things, like that should be our top priority. So, I love that you said that.

And Dr. Mindy, I know people can find you if they're in the Bay Area in person, but let us know where we can find you online and in person for anyone who might wanna follow up.

Mindy: Yeah. My website's got a lot of articles on it, a lot of resources. I do Facebook Lives regularly on my Dr. Mindy Pelz Facebook page. I'm constantly educating people from there. And then, a really good place is my Resetter group. It's a closed group on Facebook, and I do a lot of, you know...you'll see examples of what I eat and we are constantly showing recipes, and I have an incredible community there.

So, yeah, Facebook's a great place to find me. My website is a great place to find me and, yeah, we work with people all over. We don't just work with people in the Bay Area, so whatever I can do to help. I'm here to support families because I think we live in a really exciting time, you know. We may live in the most toxic time, but we also live in a really exciting time where we can empower ourselves and we can really drive our own health and our family's health through things like your podcast and learning and just jumping into this material. So, thank you for what you're doing. It's life-saving for people.

Katie: And you, too, thank you so much. And I know this is a big passion for both of us. I appreciate your time

being here and all the work that you do for families. Thank you so much for your time today.

Mindy: Yeah. Thank you.

Katie: And thanks to all of you for listening, and I will see you next time on "The Healthy Moms Podcast."

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