



EPISODE 788

Science-Backed Secrets to Raising Healthier, Happier Kids

With Guest Dr. Elisa Song

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SHAWN STEVENSON: Welcome to the Model Health Show. This is fitness and nutrition expert, Shawn Stevenson. And I'm so grateful for you tuning in with me today. This episode is dedicated to the health of our children. Childhood health concerns have exploded in recent years, but there are solutions. Currently, at least one in five kids has eczema, one in 10 has asthma. ADHD or anxiety and sometimes kids have all of the above. According to the latest statistics nearly one in two kids has at least one persistent health concern this new normal is not normal. And on this episode We're gonna really get to the heart of this issue and talk about real solutions and they're often rooted in one thing. And our special guest is an absolute wealth of knowledge with decades of experience working as a pediatrician.

And she's put all of her experience together in some valuable resources for us. And again, today we're going to unpack what's at the heart of this exploding issue of childhood health concerns, including childhood diabetes, obesity, Autoimmune conditions, eczema, allergies, the list goes on and on. Mental health challenges are at an all time high. And again, we're going to be able to unpack what's going on behind the scenes with these issues. and point towards what are some real world solutions for these things. And to be able to offer a real world guide when we're experiencing acute issues, where do you turn? How do you get real solutions? What are the questions to ask?

So again, this is an incredibly valuable and important episode. And make sure to listen with your heart and your ears. Your ears and your inner ears, because this is truly important for the health of our children and our future. Now, being that our special guest is a mom of two herself, I wanted to provide a couple of great resources myself and whenever my guests come in, I want to provide them with some gifts. And oftentimes my wife helps actually to put a little gift bag together. But one of the gifts that I gave my special guest was Organifi Red Juice. And as soon as she saw it, I've been wanting to try this. And so if you've been wanting to try Organifi Red Juice, it's all organic. And it's an amazing super blend of the most potent super fruits that you're going to find included in this blend is acai, which has an ORAC value of 103,000.

This means that it has about 10 times more antioxidants than most fruits that you'll see on the produce aisle. And a study published in the Journal of Agriculture and Food Chemistry found that acai actually, factually, does raise participants' antioxidant levels, demonstrating how it resonates with human cells, and in particular gut health, which again, we're going to really be diving in deep and looking at in this video. The intersection between our gut health and our overall health today.

But in addition also there's blueberry in this blend and researchers at the University of Michigan published data finding that blueberry intake can potentially affect genes related to fat burning pomegranates in this blend as well. A meta-analysis of eight randomized controlled trials published in the journal pharmacological research detailed how pomegranates have antioxidant antihypertensive and anti inflammatory effects. All these super fruits and more. Again, all organic, no ultra processed high glycemic sweeteners. This is the huge upgrade to the old paradigm of Kool Aid.

All right, knowing that she has kids and knowing how many kids out there are growing up like I did with these Capri suns and these kool aid jammers All right, and just the old packets of kool aid and tang and all that stuff. We're moving away from that stuff. But again, this is speaking in that same language that we're familiar with by having an upgrade to products like those utilizing real superfruit concentrates. So head over there to check them out. It's organifi.com/model. Check out their organifi red juice blend and you're gonna get 20 % off. That's [o r g a n i f i . c o m / m o d e l](https://organifi.com/model) for 20 % off their red juice blend and you're going to get 20 % off store wide so definitely check them out [organifi. com](https://organifi.com) forward slash model and now let's get to the apple podcast review of the week.

ITUNES REVIEW: Another five star review titled "My North Star of Health" by mallmall27. Shawn Stevenson is my North Star of Health. I've been listening to this podcast for about seven to eight years now. Shawn delivers on his promise of providing great content with experts unpacking critical topics and how to put into practice. I know that I can trust Shawn's message. He has a clear vision, backed by authenticity and bravery, sharing his adversity of what he has overcome with the world. The show is truly a gift and his voice is comfort to my ears.

SHAWN STEVENSON: Oh man, that's amazing. Thank you so much for sharing that. Seven or eight years, we're family. We're family. And I appreciate you so much for making me a part of your amazing universe. Listen, we've got so much more in store for you, and we're going to kick that off with today's special guest, Dr. Elisa Song. Elisa Song, MD, is a Stanford, NYU, UCSF trained integrative pediatrician and pediatric functional medicine expert, and most importantly, a mother of two amazing children. She's dedicated her career to helping parents and practitioners bridge the gap between conventional and Holistic Pediatrics with an evidence based, pediatrician backed, parent approved approach. Dr. Song has lectured around the world at leading integrative and functional medicine conferences and premier parenting events. She's also been featured in hundreds of media outlets, including Forbes, MindBodyGreen, National Geographics, the New York Post, and others. Parents, and many others. And on this episode, we're going to be talking about an integrative pediatrician's guide to whole child resilience.

Let's dive into this conversation with Dr. Elisa Song. All right, Dr. Elisa Song. So good to see you.

DR. ELISA SONG: Oh, thank you. It's, I'm so happy to be here and be with you and meet you and chat with you.

SHAWN STEVENSON: I'm gonna put this book healthy kids happy kids in my top 10 books of the year already.

DR. ELISA SONG: Oh my gosh.

SHAWN STEVENSON: This is such a valuable resource for parents. Not only is the information just so incredible but In the back of the book you put a bunch of resources like if we're ever dealing with acute situations.

DR. ELISA SONG: Yeah.

SHAWN STEVENSON: But you're really helping to lay out the foundation for health for our kids and we're gonna get into all that good stuff But I want to first talk about what got you interested in pediatrics. Like why did you choose that as your specialty?

DR. ELISA SONG: I mean, that's an easy one. I've always wanted to work with kids even from the moment when I mean thinking about colleges. I had in mind a couple of different routes, but they all involve kids. I thought maybe I'll be a teacher, right? I thought maybe I'll be a civil rights public health advocate lawyer. That was actually the first path I, I kind of went towards. Being a pediatrician was, I mean, the bottom of my list because I grew up with my mom who was an OBGYN, worked her tail off to really provide us the life that she didn't have growing up in Korea. And And, OBs are busy anyway, but all I saw was, oh my gosh, my mom is so busy all the time. And I didn't want to, I just didn't think I wanted to do that. And so when I was at college at Stanford, I was a public policy major with a political science major with a public policy minor, and I had some amazing professors. Jim Steyer, who's the founder of Common Sense Media, he was one of my professors, and I was just so gung ho, I wanted to be a lawyer, I'm gonna go on Capitol Hill, I'm gonna fight for kids rights, and I did, for two summers, I was at the Children's Defense Fund. Advocating for policies to raise the poverty level, at which families could qualify for benefits. Policies to reduce teenage pregnancy rates. And it was fascinating, but then at a certain point it clicked and I'm like, Alright, I might be doing some really good work for kids, but I'm not going to be working with them.

And so that, when I realized that, that's when I shifted. My last year at Stanford, I'm like, Okay. What can I do that will really enable me to feel like I'm doing good, but also work with kids? And so that's how I kind of veered off into pediatrics at that point.

SHAWN STEVENSON: And you really are a blend of all those things, teacher, and this is really clear in your book, the teacher aspect, one of your possible career choices that's embedded into what you do at a different level than the average physician. You really are working as a teacher. Empowering people, educating them about their bodies and obviously the advocacy part is a big part of your work as well. So it's so interesting how our life can create this like very unique space for us. And you know with that being said you are There, day in and day out. You've been working with kids for many years. I believe you've been in the field for over two decades now. And so you've seen some of everything I can, can't even imagine. But one of the things that you really highlight in the book is the state that we're in right now and the evolution, what's, or in a way, Devolution that's taking place in the last 20 years in particular. But you are there to firsthand see not just the statistics that we see where you highlighted this in the book. For example, we're at near one out of every two children has some form of a chronic or consistent health issue.

DR. ELISA SONG: Yeah.

SHAWN STEVENSON: Right now and it's incredibly abnormal So you've been able to see and if you can answer this question Has our children's health been degrading in the past couple of decades?

DR. ELISA SONG: Yes. And I mean, the reason why I wrote this book was because I saw these changes in my kids and the kids who were coming to me with more and more not just being diagnosed with, let's say, eczema or asthma. But being diagnosed with severe eczema, about to be placed on chemotherapy medications, or the rise in mental health concerns in our youth and our teenagers just exploding in the rates of, suicidal thinking kids with autoimmunity at younger and younger ages. I mean, I six month old baby diagnosed with Crohn's disease. And so when we see that, and we realize, you know what? Our kids are getting sicker at younger ages, they're getting sicker when they are diagnosed with anything. It's, in these past two decades that I've been an integrated pediatrician, things have really remarkably changed.

I would say maybe in the past 30 years or so dramatic change. And residency didn't completely prepare me for it. But I remember in 1999, it was my second year of my pediatrics residency at UCSF, and UCSF, I mean, we see the sickest of the sick kids, right? It's this tertiary, quaternary care system, and I was doing my developmental pediatrics rotation, and I

was told that if I saw a handful of kids with autism in my entire career, it would be a lot. I mean, that was 1999. Fast forward to 2004, I opened up my practice, flooded. With kids. With not just autism, but sensory processing disorders, which wasn't even a diagnosis when I was in medical school. With behavioral concerns, with attention and focus concerns. With parents desperate for help, wondering, is there anything I can do for my child?

Because there's not a whole lot to do in conventional medicine. Where are some of the root causes? And but I wrote this book not just to paint this doom and gloom. It's you know what? We have this. We need the knowledge. We need to open our eyes that what's going on with our kids right now is not okay, and that our modern world has a large part in that. And what can we as families do to change that tide? And on a larger scale, what can we as communities do? What can we as educators in our school systems do? What can we as policyholders and policy makers really do because it's got to, really change on that larger level, but you know I love how you talk about really changing the culture of the family. It starts at home, right? It starts at home and it starts with the kids when you educate the kids. It is Amazing how much they can advocate for themselves?

SHAWN STEVENSON: Yeah. Yeah, you said it, and I love that It's putting the power back into the hands of the family. And also understanding again, we're seeing this situation with our kids and Some of this stuff, you've seen it far closer than the average person, so much more. It can be heartbreaking, when your kid is dealing with something that, that's, very detrimental to, not just their physical health, but their mental health as well. And not seeing solutions a lot of times with kids, going through a conventional method unfortunately, and you adjusting your approach to really looking at the whole child. And that includes the environment, that includes the family structure. There are all these inputs that make up a person's life and the way that our system is structured right now, unfortunately, is just this kind of factory system, you've got 10 to 15 minutes of, you cannot possibly understand what's going on with that child, let alone an adult as well, in that short amount of time and healing really, starts with empowerment.

DR. ELISA SONG: Yeah.

SHAWN STEVENSON: And as you're sharing again in the book as well, you're really looking at, okay, yes, we have these bad things that are going on, but there are solutions. And I want to talk about this because, we live in a universe of causality. We didn't get to this state on accident. And one of the things you start off the book talking about are some of the things that you wish you were taught in medical school. So let's talk about a couple of those, and one of them has to do with antibiotics.

DR. ELISA SONG: Yeah. Well, and this is also to say, You know for my fellow practitioners and pediatric providers there comes a point where if you're entering into this integrative space or functional medicine space you realize. Oh my gosh Wow, I didn't know that I wish I had and you go through like I did the list of patients from like I wish I had known because I would have done things a little bit differently. And so I mean, it's just as a mom, right, you know realizing, you know Learning some of these things and you're like, oh my gosh, I did that, you know when my kid was little it's okay Right, we can't undo that. But what we can do is realize okay, we have this knowledge moving forward. And so I mean with antibiotics, I mean, so many different things, issues there. And as an integrated pediatrician, I do write prescriptions for antibiotics. It's not that it's never ever. It's just that we know in some studies for children, up to 70% of antibiotics are inappropriately prescribed oftentimes for things like viruses that of course, antibiotics don't do a thing for.

And we are now heading to the point where if we are not good antibiotic stewards as parents, as adults, as physicians, as public health professionals. We are, in 2050, possibly headed to a point where antibiotic resistance is going to become a leading cause of death worldwide. I mean, that is frightening, where none of the existing antibiotics will be able to help. And that's on a broader public health level. On an individual level, because as a pediatrician I look at this little child in front of me, or this teenager in front of me, we know that antibiotics are the single biggest acute disruptor, this immediate disruption to their developing microbiome. And our infants microbiomes and our teenagers microbiomes are rapidly changing and affecting how their immune system is developing, how their brains are developing.

So with antibiotics Yes, we want to use them appropriately. Although some of the statistics when you look at, and I always back up here and say, as a mom and as a pediatrician, both of my children received antibiotics when they were babies. I mean, my daughter, she was two to three weeks old and she had a urinary tract infection. My son at five weeks of age had strep. In fact, he had this really strep discharge coming from his ear. I'm not going to mess with that. Those were necessary antibiotics. And yet we know for infants who are, who receive antibiotics within the first six months of life, they are at an increased risk for almost every single allergic disorder, including eczema, asthma, hay fever, anaphylactic food allergies, by the time they're four.

SHAWN STEVENSON: You shared, I think, two to four times higher incidence of developing these issues.

DR. ELISA SONG: That's right. And then, we look at the gut brain connection, and we see antibiotics at any point in life.

But especially in infancy, in that first six months of life can increase and almost double the risk of mental health concerns by the time your child is an older kid or a teenager. And the more rounds of antibiotics, the higher the risk. And when we understand that A, we need to understand how to when to use antibiotics appropriately, and then B, when we do use appropriate antibiotics or inappropriate, we need to understand the disruption to the microbiome and do what we know how to do to restore their microbiome so that it doesn't have this ripple effect on their immune system or their metabolic system or their nervous system either in the immediate or later on in life. I mean even when they're adults, this can have that ripple effect.

SHAWN STEVENSON: I love that you said this again, the, it's such a valuable asset that we have when we have the use of antibiotics, life saving in certain contexts, it's just the overuse. Yep. And, unfortunately we have a system to where also we might be as patients coming in, just want to get our kids something.

DR. ELISA SONG: Yes.

SHAWN STEVENSON: And, as you just mentioned, having the overuse of this could lead to a situation in what's already. Trending towards that where anti antibiotic resistant infections are going to be a leading cause of death. We don't want to get that far. We've got to make a change right now. And we've got to be more judicious in our use of antibiotics. Ask questions, I think would be helpful. I know, again, I had so many rounds of antibiotics in my life. Even from, in childhood and as an adult. But not knowing the connection there. Very, and I love this as well. You cited so many studies in the book. This data has been there for a long time.

DR. ELISA SONG: A long time, yeah.

SHAWN STEVENSON: And looking at the chronic asthma that I had, hospitalized every year, my little brother hospitalized, every quarter really at least. And my little sister, the worst eczema that you could see, on this little girl and constantly taking medication. And one of the situations that I even seen this when I opened up my practice working as a nutritionist, I remember this guy came in. He was in his. 50s or 60s and he'd been on low dose antibiotics for years. Yeah for you. I couldn't believe it. I couldn't believe that was a thing because he said his skin would break out. Yeah, he would get this kind of, rosacea response in his skin. And you know at the time again, we made some dietary changes looking at his entire his whole lifestyle though It wasn't just the nutrition part, but you know a sleep quality his work You Experience, you know his sense of purpose, his relationships, all this stuff. And I remember it's one of my favorite stories You know just seeing because I also was working as strength

conditioning coach at the gym still. And he came to see me at the gym and he'd been antibiotic free for about a month at that point.

He was just like Shawn at this point I would be breaking out in these rashes and I would be in so much pain and suffering. He's just like I can't believe that this is my life. Like i'm free of that But he just didn't know and his practitioner didn't know as well they were just trying to help to keep the symptom at bay and that's what I want to ask you about because you talked about your training in basically coming in to offensive taking an offensive approach and attacking if somebody's experiencing a symptom or condition and not necessarily understanding downstream. We might even hide the fire, Number one, the fire still might be brewing and also potentially causing issues elsewhere in the body. That's right. And that's really the thing I want to ask you about is looking at, again, the whole person, because we might not think that antibiotic use might be connected to some mental health issues later on down the line.

DR. ELISA SONG: Yeah, well, and what you said is so right on, we're often in conventional medicine. We start a medication for a symptom. Right. And then another symptom arises, so we start another medicine. And then another side effect arises, and we start another medicine. And eventually you have kids and adults who are on this kind of polypharmacy of medications. And at that point then we can't separate out is it that their condition isn't getting better and they need a new medicine? Or is it that they're having all of these side effects that may be either additive or sometimes even synergistic, and they can, really interfere. I see this with our teenagers where if we are not aware of all the factors that can contribute to microbiome disruption, we may be inadvertently, as you've said, Kind of fanning the fires of inflammation and disease without Recognizing what we're doing. And so it's time to step back and realize you're your teenage girl Who maybe gets put on the birth control pill because she has horrible period cramps, right? Takes ibuprofen for this horrible period cramps has a little anxiety brewing. So she's put on an SSRI medication Right, maybe has a history of eczema.

So she's lathering on steroid creams, right? And maybe has some reflux, right? So it's on antacid medications or allergies and is on Zyrtec. All of those medications in combination. Oh, and let's not forget the low dose antibiotics for acne, right? All of those medications can disrupt the gut microbiome, and some of those, we don't think about other non antibiotic medications often as disrupting the gut microbiome. But some of them, like ibuprofen, can disrupt the microbiome as much as an antibiotic. So we have to be aware of all these things that we're doing to try to support this child in front of us in the best way we think we're doing. And yet, if we could step back and say, look, Okay, if they need to be on an SSRI at the moment, okay let's do that and recognize that we don't support her gut brain connection.

First, she's not really ever going to probably get off of that medication. Second, we're not getting to that root where we're saying, look, let's heal from the inside out. Let's nourish her nerve neurotransmitters, how her brain is thinking and feeling and acting and all of that. Same thing goes for little kids, right? And we have little kids who, infants who are fussy, maybe they're spitting up and that happens to coincide at the same time. Recognizing that all babies have some amount of reflux, they don't all have reflux disease, but once Zantac became approved for infants. This was back in the early 2000s, all of a sudden every baby's being diagnosed with reflux disease and putting, being put on Zantac, in the first six weeks of life, eight weeks of life, instead of saying, Hey, look, we know that the microbiomes of really fussy infants look different.

They have higher inflammatory markers. There's a difference in their microbiota. So how about restoring a healthier microbial balance in their gut so that they don't have the fussiness and don't have the antacid medication that then can disrupt long term. Increase the risk for, we know disruption in those early stages can increase the risk for obesity, diabetes, metabolic syndrome, heart disease, all the things that now on the other end of life, we're trying to combat and counter.

SHAWN STEVENSON: Yeah. Before we get into the microbiome deeper, let's start more upstream with the tonsils because you had a really great insight. About this in the book and this connection between the tonsils and the immune system and also the tonsils in a similarity with the gastrointestinal tract in our gut. Can you talk a little bit about the role of the tonsils and the connection with the immune system?

DR. ELISA SONG: Yeah you know a lot of people think oh the tonsils are just especially when I was growing up everyone had them removed, right? It was like the Brady Bunch, right? Everyone had their tonsils removed and they're this kind of extra thing that we don't need anymore. But when we think about our tonsils, they are lymph tissue. And as part of our lymphatic system, they're a really essential part of sensing our outside world, communicating with our immune cells, what's friend or foe, how am I going to react? And they're sort of the, and when we think about it, they're the start. of our GI tract. We are one long hollow tube, from the mouth all the way down at the bottom where the poop comes out.

And these tonsils, we have these similar tonsil like patches called gut associated lymphoid tissue lining our entire GI tract. And that makes up like 80 % of our immune system. And some people have heard the saying that our skin is our largest organ. Well, our intestines. Our GI tract is our largest interface with our outside world, because again, we're hollow, right? So any food we're ingesting, any microbe that we're encountering, any environmental toxin has to pass through our GI tract. And the way our tonsils and our gut, our gut associated

lymphoid tissue interacts with those things will tell our immune system. Hey, that's okay. We'll just let it pass or, that's, a broken down amino acid.

We're fine with that, right? Or it might say, oh, okay, there's a virus going through that, that, or a bacteria that I don't really like. Our immune system, hey, immune system, kick in. Let's create a little bit of inflammation to kick it out. If, though, we get bombarded, our immune system continues to get bombarded inappropriately, eventually our gut immune system kind of crosstalk can happen inappropriately. And then sometimes we start attacking our own cells. And that's what happens with autoimmunity. So we can see just how important these are for our developing immune system. Now the tonsils. I mean, I write the story about my own son, right? I mean, he had huge tonsils. They're called kissing tonsils.

I mean, it sounds cute, but it's not right. I mean, they're literally kissing the back of your throat. And so when he was about three or four, his tonsils were just getting bigger and he had obstructive apnea from it right now, there are indications to remove tonsils. However, we have to think, all right, well, tonsils are part of our immune system. Why is my child's immune system acting up? What is the reason? Is it from environmental allergies? Is it from some chronic infections that are kind of trapped in your tonsils? Is it from food allergies or sensitivities? What's going on? Because if we can identify those and remove those sources of immune stress and inflammation, a lot of times the tonsils can shrink and the adenoids can shrink and we may be able to avoid removing them.

SHAWN STEVENSON: Now, this is such a huge insight right now that I got from you reading your book. All right, so we've got our tonsils as this kind of front line sensor for our immune system, and it can be hyperreactive. And of course, we're looking at it, this is just an obstruction, we'll just, you don't need it, just remove it. Instead of understanding it's responding, it's reacting to something, and not realizing that your gut lining has a similar reactive tissue. That you can't see though, not like the, not like tonsils, right? And so that inflammatory response is happening elsewhere in the body. You just can't see it and it might manifest as allergies. It might manifest as Crohn's disease. It might manifest as depression, right? Because one of the other things that you talked about, which a lot of parents would say, okay, My kid doesn't have any gut issues.

DR. ELISA SONG: That's right. Yeah.

SHAWN STEVENSON: Right? And you address that because if you don't have a blatant thing like Belly aches, you know some type of gastrointestinal disease. We might not realize that, as Hippocrates said, thousands of years ago, all disease begins in the gut, but also all health.

DR. ELISA SONG: That's right.

SHAWN STEVENSON: Begins in the gut as well. And so being proactive at, okay, I understand you might not have specific belly related symptoms that you're seeing, but you said with your patients you always start in the gut either way.

DR. ELISA SONG: Always start with the gut. And if kids are older, Or, parents are in the room and I start talking about, let's do some detective work. We got to think about what's happening in your gut because, all the effects it can have on the rest of your body. And a lot of times the answer, the refrain is, well, yeah, but there's nothing wrong with my gut. Poops are perfect logs, no tummy aches, no heartburn, no constipation or diarrhea. And then we have to step back and really talk about why the microbiome is so important for. As you said, if your microbiome is inflamed or there's an imbalance or disruption there, you might not have any, quote, tummy or digestive symptoms, but you may have some itchy skin, right? Or you may have really bad acne.

Right, or you may just not be able to focus as well on your school play lines. I mean, whatever it is I mean, they're all the things that kids may be Struggling with and have as their goals, right? We can tie virtually all of them back to hey Let's take a look at your microbiome those trillions and trillions of microscopic tiny little friends in your belly if they're not happy. You're not going to be happy. If they're not healthy, you're not going to be in optimal health. And that's why we always start with the gut, whether it's a poop test or not. I mean, I'd love to do poop tests, when I can, because I can't tell just by looking at you, what your, what's, going to grow inside your stool and what's going to be there. But we can also suspect, Hey, look, if there's something going on with your, from a mental health standpoint, from an immune standpoint, from an endocrine hormone standpoint, metabolic standpoint, we have to look at the gut first.

SHAWN STEVENSON: Yeah. You also brought up something that again, it's just kind of hiding in plain sight for us as parents. After you stopped changing their diapers and helping them out with that whole bathroom practice. You don't really know what's going on with their poop situation, right?

DR. ELISA SONG: Yeah, I mean.

SHAWN STEVENSON: Just like it was like an aha moment. Do you really know what's going on with your child's digestion?

DR. ELISA SONG: Yeah, I mean, that's right. I had this one kiddo where he was 12 at the time. And I had asked him to do a stool test because there were a lot of autoimmune issues going on. I said, look, we need to see what's going on inside your poop because we know with autoimmunity there are several abnormal bacteria in there that don't cause tummy aches or GI distress, but several bacteria that can trigger and predispose you to autoimmunity. And if they're there, we want to clear them out. So I mean, mom had no idea until she started helping him with the poop collection that his poops were like little rabbit pellets every five days. I mean, cause what do when I ask kids what do your poops look like? Well, I don't know.

Right, how often do you think you're pooping? Well, I don't know. Well, tell me more about your poops. Well, they're normal. So they don't know because they're also not paying attention, right? And that's another thing too. I mean, helping kids to pay more attention. I ask kids, I mean, even my own kids. I'm like, just look every once in a while. Tell me what it looks like, right? There's a nice chart that you can see. We want like number three. three or four. And if it's not, I mean, if it's a one off, like your poops are really hard. Okay, maybe you didn't drink enough water, get enough fiber in. But if it's a consistent, like for weeks, it's like this, or Like with diarrhea, I mean your poop should be nice kind of brown sausages or bananas that are easy to wipe right clean. And if you're having really messy mushy poops, okay, maybe it was something you ate or maybe it's a tummy bug. But if it's not passing if it's not going away It's a sign something's going on and we better take a look.

So it's just another way for kids and parents to be more in tune with some of the internal signals that are going on that, hey, that could be either tipping you over into something else or it's a sign that we need to pay attention because your eczema is flaring. Oh, and your poops are off? Maybe it's the poop that we want to look at first, not just steroids on the skin.

SHAWN STEVENSON: We've got a quick break coming up. We'll be right back. If you're anything like me, you grew up drinking Kool Aid, Flavor Aid, Gatorade, Powerade, all these different aids. No, that doesn't even sound right. But the truth is many of us have grown up in this culture of being inundated by these crazy sugar dense products. Some of these products can have 20, 30, 40 grams of sugar, and it is not necessarily per serving, but how much we would drink of it, because I know that I drink a lot of Kool Aid. I was actually the Kool Aid chef in the house. I would take different packets of that artificial goodness, combine them together with a cup and a half of sugar per pitcher, and make that up for my family, and that was normalized. And not only are we not getting any real nutrition along with this, we're getting a little bit of a party for the mouth, a little bit of a dance for our taste buds, but we're lacking in an opportunity to actually provide real nourishment. And today that is changing because now we can get access to truly nutrient dense juice products for our kids, for ourselves.

We're talking about powered by things like acai, pomegranate, and also adaptogens like cordyceps. And all this is combined together. In the Organifi red Juice blend. Now, why is acai one of the primary ingredients of this red juice blend? Well, it has an ORAC value of 103,000. That means it has about 10 times the amount of antioxidants that other fruits have that you'll find in your produce aisle. It is packed with antioxidants. This helps to reduce inflammation. It helps to nourish our friendly flora in our gut. It also helps to support our heart health, our cardiovascular system, our cognitive function and so much more. But the cool thing about the red juice blend is that it's backed by science. One of the other ingredients is organic beet juice and a study published in the Journal of Applied Physiology showed that having beet juice boosts stamina up to 16% during our exercise. So each of these ingredients has a purpose. And this blend is kid tested and parent approved. This is far different from the Kool Aids and Flavor Aids and all that stuff that we grew up with.

It has real nutrition and also no added sugar. And the cool thing is it still tastes amazing. Kids love it. Again, kid tested, parent approved, and you're going to love it as well. Get this for your kids. Get this for your family, for your household. This is something that is always on our cabinet shelves. Organifi Red Juice Blend. Go to Organifi.com/model. That's O R G A N I F I.com/model. And you're going to get 20% off their amazing organic red juice blend. And by the way, they're going to hook you up with 20% off store wide. So again, go to Organifi.com/model for 20% off, hook yourself up with their amazing red juice blend for your family. And now, back to the show.

Let's talk about the foundation of our child's gut health, really for their lifetime. Let's talk about the first 1,000 days.

DR. ELISA SONG: So the first 1,000 days are that moment from conception, all the way to about two and a half to three years of age. And in the preconception time, when you're pregnant with your babies, it's your vaginal and your gut microbiome that really are helping to shape how the baby's microbiome develops. Now there's controversy as to whether or not the womb is actually "sterile". Do they get some of your microbes through the placenta? Regardless, we know that the birthing method is really the first key event in "seeding" your baby's gut microbiome. And so if they're vaginally birthed, they get all of those beneficial bacteria through the vaginal canal, even through, I mean, I mean, it's right next to your rectum. They get exposed to your fecal microbiome. Hopefully it's a healthy one. Right? And so that starts to seed the infant microbiome. If they're born by C section, their gut microbiome starts to look very different even in those first few days of life and start looking more like Skin bacteria or some pathogenic bacteria that we don't necessarily want in the gut.

Now, why is that start so important? that initial inoculation of bacteria and then the growth of Particular species called bifidobacteria a lot of people, you know I mean, I would say everyone listening to your podcast knows about probiotics But the main and the main strains that people are familiar with are lactobacillus or bifidobacterium. Lots of different substrains within that and Babies should have almost all bifidobacteria, but in our modern world, that's been changing. And so bifidobacteria, which are fed by specific prebiotics found in human breast milk, set the stage for immune tolerance, saying, Hey, okay, this food that this breast milk or this food that I'm eating that is completely new and foreign to my ,system, I'm going to tolerate that. I'm not going to develop a peanut allergy or an egg allergy.

Right. That immune system development later on in life, even the loss of bifidobacteria for adults has been linked with an increased risk of chronic health diseases. I mean, through COVID, there was one study that found that lower levels of bifidobacteria in the gut microbiome could predict more severe COVID outcomes in adults. So bifido is so important. And and even, how our babies are fed, breast milk has a specific prebiotics called HMOs, which I just wish every baby, and even child, or even adult, could probably benefit from more HMOs, but these human milk oligosaccharides that feed bifidobacteria, only bifidobacteria can break them down and ferment them to all these beneficial HMOs compounds, these short chain fatty acids and other compounds that communicate with their brain and their immune system. Now what happens in those first two and a half to three years of age, those first thousand days informs several different things. It informs the path that your child's immune system might take.

So disruption early on can trigger more allergic diseases, right? There's an explosion of brain connections in the brain that's happening at that time. Those synapses, which as a parent, you can see, right? You're a toddler, you're like, Oh my gosh, you're a different kid today than they were yesterday. Their brain's just exploding. You can see their wheels turning. Well, what's driving more of that change is actually the gut microbiome change in diversity and function that then is driving the synapses that are being formed and kept. Those first thousand days lays a foundation even from an epigenetic standpoint. It's called our second epigenome in our microbiome. But our microbiota have over a hundred and, I've heard different estimates, anywhere from a hundred to three hundred times more transcripts genes than we humans have. And our microbiota, the way that they are not just interacting with their own genes to create certain compounds that are beneficial for us or not beneficial for us, but also interacting with our genes and affecting kind of imprinting our epigenetic potential in the future.

It's fascinating. I mean, it's all, I mean, when you look at that critical time. And I say that because, yes, it's a critical time, but also, you can change it, right?

If you parents are listening you're like, oh my gosh, my kids are, like, my kids 12 and 14, or they're in high school, or they're in college. We can restore, we can go back, we can't go back in time, but we can change and help replenish and rejuvenate your microbiome, no matter what stage it's at. But if you can do it in the first thousand days, it sets the stage for so much more thriving later on.

SHAWN STEVENSON: Yeah, this is why I want to make sure that folks that have young kids or if you know somebody that is pregnant or they're planning on having a kid or they have young kids, gift them this book. It's such a great resource, and you shared in the book how, yes, this stage is so influential in things going wrong, but also it's very influential.

DR. ELISA SONG: Yeah.

SHAWN STEVENSON: And permeable with things going right. There's a lot of opportunity for swift change and that's what's really empowering about it, too and I want to ask you about some of this because You mentioned the connection with the brain right the gut brain connection and obviously there's a lot of science on this now But you're highlighting how you know, so neurotransmitters associated with our cognitive function and our brain health are produced and stored in the gut. Serotonin, dopamine, dopamine is having a moment right now.

DR. ELISA SONG: That's right.

SHAWN STEVENSON: 50% is in the gut. And you're sharing this in the book as well. Melatonin, the list goes on and on, affecting whole body function, but it's really centered around the gut. What's happening in our belly.

DR. ELISA SONG: Yeah, well, and you know what's fascinating too now as we look at fermented foods, let's say, which are, the prebiotic with the probiotics. Prebiotic as the fiber, let's say cabbage, right? Sauerkraut. And a lot of people think that these fermented foods are mostly beneficial for us because of the probiotic content. But what we're recognizing now, it's probably more because of the postbiotic content. And that's where when we think about the power of these postbiotics, all of the microbes in your gut, your neurotransmitters, like as you mentioned, 80 to 90 % of our serotonin is made by our gut microbiota. And so that's a postbiotic. When our probiotics, the beneficial bugs in our belly get fiber and prebiotics to eat, digest, ferment. They spit stuff out on the other end, right? In a good way. And serotonin is one of them. So is B12. So is butyrate, which also a lot of people now know butyrate. I mean, they're taking butyrate supplements for cognitive functioning, for fitness, for their gut microbiome. Butyrate is one of our master regulators of health and it's a postbiotic. If we

have friendly bacteria in our gut, we're going to be chalk full of butyrate. It's just that now I mean, most of our microbiomes have been disrupted to some extent, some more than others, but we're not necessarily making enough of those postbiotics to support our brain and our immune system and our metabolic health.

SHAWN STEVENSON: Yeah. I love this. You've mentioned this several times to be more kind to ourselves because of some of the things we might've chosen to do, having kids. There are many things, of course, I would go back and want to do differently, but In a situation because c section rates have also gone up precipitously as well. You know, you could just schedule what day you want to have your baby, you know for some cases in other cases are for the safety and welfare of the child for the mother and they have a, It's wonderful that we have the opportunity and technology to do that now with that being said there are going to be many kids who are missing out on that experience, that initial inoculation. We have to be honest about this. This isn't something that you can just replicate taking a probiotic.

DR. ELISA SONG: Yeah.

SHAWN STEVENSON: So I know that there are some procedures right now and some of this stuff is in different countries where they're inoculating that the child might be born in c section and Getting some of the vaginal Bacteria and inoculating the baby with that.

DR. ELISA SONG: Yeah.

SHAWN STEVENSON: So obviously there's that can you talk about what are some things that moms can do if? They had or are going to have a c section To support the development of their baby's microbiome.

DR. ELISA SONG: Yeah. And as you said, yes, I mean sometimes c sections are absolutely necessary and they're life saving but you know in our country and in many western countries. There are many unnecessary, cesarean births. And so this is just you know as a parent same thing like when you're going to the doctor's office and your kids are sick I just want to, ask questions about, okay if I am, having, heading into the C section, what can I do to mitigate some of the unintended adverse consequences that we know can occur, like the fact that babies now are going to be initially inoculated with more of the skin bacteria, not your vaginal bacteria and your gut. And so what you mentioned, this seeding where a swab is placed in the mom's vaginal canal and after birth babies are literally swabbed. They're seeded, mouth, eyes, nose, anus to get to approximate that inoculation they would get as they're, coming out from mom's vaginal canal. And so there are small studies they have, they're really positive.

And so that's something that to have a conversation with your doctor about not all OB is maybe amenable to it, but definitely to have a conversation about that. Right now, apart from that, there's different things that we can do to help support a microbiome that we know is either at risk for disruption or maybe already disrupted. In those early infant stages, and as you said, I mean, taking probiotics just alone in supplement form. That is actually one of the biggest shifts I've had as a functional medicine integrated pediatrician. I used to say that I think everyone could benefit from a daily probiotic. And I don't say that anymore.

SHAWN STEVENSON: Say it. Say it.

DR. ELISA SONG: Right, it's not a matter of and I explain it to the kids because even you know from when I first started in the practice And I have parents who are coming in and saying oh, but you know, I shouldn't still be taking this. It's a shift, right? And I let them know, look, it's not like Jack's magic beans.. You can't just throw probiotics into your gut and expect this beautiful ecosystem and community of microbes to develop and form, you need to create an environment where all of those beneficial organisms, bacteria and beneficial viruses, even some yeast in there can live in harmony with themselves and with you, right? And not just, not just kind of expect that, that they're going to want to stay there. We want to create a home for them so they want to stay. Right? And so, yes, during those times, though, there, there is evidence that when mothers have gone through C sections and, infants have been exposed to antibiotics, even, older children, adults have been exposed to antibiotics if we take a probiotic supplement at that time, it can help restore the microbiome.

So there is a time for probiotic supplements. We have to be aware, though, of Well, why are we taking this probiotic? Is it to restore the gut microbiome that's been disrupted after antibiotics? Okay, then maybe we take a broader spectrum. Is it to restore their neurotransmitter production and gut brain connection? Well, then there are other probiotic strains that do that. I mean, there's thousands of strains that we're identifying, so it doesn't make sense that, oh, these 15 in here is gonna they're enough to do everything we want them to do, right? We have to be a little bit more savvy than that now for an infant.

Because I really think if we can, like you said, if we can set the foundations in those first thousand days, we would have a different future for our kids, right? For our grandkids, right? And in those first early days of life, months of life ideally babies would be breastfed because that human milk oligosaccharide, that pre specific prebiotic is going to foster bifidobacteria to grow bifidobacteria. Helps to support the growth of our butyrate producing microbes and so we can then develop this whole ecosystem. That's beneficial for the baby. Now if you're not breastfeeding, for whatever reason if there are challenges I've had moms who have had to abruptly stop nursing because of certain diagnoses.

Well, there are now commercially available Human milk oligosaccharide analogs, they're manufactured. They're close and the studies are really good with them, right? So even formula fed babies can have the benefit of adding some of these human milk oligosaccharides to the milk that the babies are getting. Infant formulas now, I mean that's a whole other topic of discussion because I mean we're not doing right by our babies with the formulas that are mostly on the market today, but a lot of them are adding these human milk oligosaccharides to their formulas. Which is great. I mean, that's a step in the right direction, right?

Now, once your kids are eating six months and beyond, toddlers, older kids, teenagers, if we want their gut microbiome to be in the healthiest state possible, that's where we have to go back to the foundations, right? We have to go back to what is going to nourish your child's microbiome, because again, they're not just like tomato seeds. You grow and you leave and come back in a month, you have these beautiful tomato plants. No, you need the right amount of water. You need the right amount of nutrients in the soil. You need the right amount of sunshine. You want to talk to them, give them the right amount of love. Right. And so we need to think about our microbiome in the same way.

And once we have those foundations, That is when we have true microbiome resilience. That is when even if your kids need an antibiotic later on in life, or even if they get exposed to whatever microbiome disruptor, their microbiomes can bounce right back because our microbiomes want to go back to the state they were in before the disruption. That's really important. So you get a good foundation. All right. They take a little hit. Fine. Get right backup and restore the foundation really easily.

SHAWN STEVENSON: Yeah. Resilience is one of the most important. Aspects of health, it's that bounce back factor. I love that so much and actually you talk about these creating microbiome magic With our kids and what they're doing every day. There's five specific things and this is again about that foundation and creating resilience. And You kick things off talking about the importance of nourishment, right the right nutrients You know the right environment the right soil that is going to create. And if you could, what are two or three things that we should be looking at to do for our kids for microbiome nourishment?

DR. ELISA SONG: And with nourishment, I put in, put into two parts. There's what we want to try to get in. But for some families, if, as you write in your book, right, if the culture hasn't been quite shifted just yet, and it's a harder sell to get in like a huge salad, at dinnertime, all right, sometimes the biggest shift can happen by knowing what to keep out. So there's sort of two parts and as a parent, right, I get we're all busy we're trying to do the best by our kids, you pick the thing that's easier. Right? I mean, we want this to be, we want the small wins and

as you get the small wins for you and your child and everyone starts to feel better, it gets so much easier.

And here's the thing, once you know what to take out of your diet, too it change, it can change your palate so that then it's more acceptable, more desirable to get in the things that we want. So what are the three things we want to get in? From a microbiome centric standpoint. I call them our microbiome champions, the three Fs. Our fiber, our phytonutrients, which I know is a pH, but it sounds like an F. Still got a, yeah, it's still got a and fermented foods. So those three things, if we can get in right, and we know, I mean, fiber, I mean, here's the thing. That and why, I love everything you write because. They may sound simple, but you know what? Simple is often the hardest thing to do. Right?

I mean, simple is not always easy, and yet simple and the foundations are what are going to get you the longest lasting health results. I mean, I want to make it so that no kid ever has to biohack in their 50s, right? It's you know what? Let's just make, healthy living a lifestyle, right? And so what do we get in? Well, fiber, we know that 95 % of Americans today don't have fiber. don't get the recommended fiber intake and the recommended fiber intake, varies on age and sex, but let's say it's about 25 grams of fiber for most kids. Well, the Hadza people down in Tanzania, which has, they're still a very traditional hunter gatherer society with the richest gut microbiome of virtually any population in the world.

They eat somewhere up to 100 to 150 grams of fiber in a day. So It doesn't seem like it should be that hard, except that our diets are so full of ultra processed junk that are, have zero fiber in them that it's not easy to see why most of our kids aren't getting enough fiber in their diets. And I make it really concrete. I give lists, like a cup of raspberries is gonna be about nine grams of fiber. All right, that's your like, that's your, a third of the way there to your daily fiber intake. Right? My kids could down I mean a whole tray of raspberries if I let them, right? And then a cup of lentils is gonna be maybe 16 grams of added fiber right there.

Just, trying to make it concrete, figuring it out, like where can we get a little fiber here and there. And then phytonutrients, that's the color, the phytonutrients, all of these phytochemicals, I prefer the term phytonutrients because phytochemicals just doesn't sound right, when we're talking about plants, but these phytonutrients, every single color has a different benefit for our eyes or our heart or our brain or for our immune system. And every single color also acts as a prebiotic and every single color also affects how our microbial genes express themselves and influence our epigenetics. And we know eight in 10 kids and adults have a phytonutrient gap in every single color. Right? And so if we think about eating that rainbow, it sounds so cliché, but, for kids, if they're not eating a whole rainbow, well then think about, I mean, broccoli.

A lot of kids like broccoli, right? Well, getting the green broccoli and the purple broccoli, that counts. Right? Same broccoli. It's not even the same broccoli. It tastes a little different. Bell peppers. You love them? Great. Get the red, orange, purple, green. I mean, all of those. Right? It's a different phytonutrient. So you can fill in their color gap even just like that. And then I always talk about fermented foods because that's probably the hardest sell for a lot of kids and grownups because they're thinking, the sour the sauerkraut. I mean, I grew up with kimchi, so it's like second nature to me. Right? But there's so many ways we can get fermented foods in and honestly, one of the best ways make it with your kids in my daughter's third, fourth grade combined class. There are these eight to 10 year olds, and I created the six week curriculum for them. It was honestly one of the most fun and rewarding things I've ever done in my entire life.

And, we talked all about their, the tiny friends in their tummies and how they help them, what they do and how do we nourish them, with food and lifestyle. And we made sauerkraut. We brewed kombucha, and we had the two ferment stages, so on the second stage the kids got to choose different flavors, and we seasoned them up, and we had a little kombucha tasting contest. We made fermented lemonade, which is one of the recipes I have in the book, because these are easy ways. to get fermented foods in and and have kids make them and want them. And I had parents calling me saying, Oh my gosh, I can't believe, Emily actually took a bite of sauerkraut. She's like the piggiest thing ever.

And she said, you know what? That wasn't too bad. She still don't want a huge bowl full, but you know, that's where we get kids. If they. First of all, understand, we have to give our kids way more credit than most of us do. They can understand why their microbiome is important to them at virtually any age, right? And we can empower them with the tools to know how to do it for themselves. I mean, then, I mean, that's our job as parents, right? Setting them up to be successful, not just, from an academic or career standpoint, but how do we help them be successful from a health standpoint, for long term.

SHAWN STEVENSON: I love the framing that you use in the book when talking with kids, because again, it's just speaking in a familiar language. A lot of kids, In schools today, we're educated about the environment and things to do to support the ecosystem around us. But you pointed to and sharing with the kids that it's your responsibility to take care of the ecosystem in your belly Yeah, right and here's what to do Here's some things to do to take care of this rainforest that you have to do The responsibility to care for, and it's just, it's so cool to see stuff like that.

DR. ELISA SONG: So when kids learn about the ecosystem and biodiversity, it's the same way we can frame the diversity of the plants we're eating and the diversity in our microbiome.

I mean, our world's diversity is shrinking from the crops that we're eating and, from, even from the animals that we're raising. And our micro, our microbiome is doing the same thing. And our food that we're eating is. It's kind of narrowing, narrowing. I mean, what is it? Something like, is it 7% of the world's caloric intake is from four crops? Right? Wheat, corn, sugarcane, and soy. And for many people, if you look around at what your kids are eating. It's true.

SHAWN STEVENSON: Yeah, this diversity is a huge issue and also, just talking about eating the rainbow. The closest thing I got to eating a rainbow was Lucky Charms real talk. That was it. I just didn't have that diversity input. There's a lot of beige in my diet.

DR. ELISA SONG: Yeah.

SHAWN STEVENSON: And it's just one of those cool things to see. Wow. In nature, it's telling us what these foods are good for, this goes back to the doctrine of signatures, but these colors are pigments that are rich in all these different nutrients that have these benefits. And even going back to what our kids are getting, through breast milk, right? Those inputs that the mom is having is helping to inoculate or helping to train the immune system and to respond more healthfully to these different food inputs. Like we're just starting to understand this stuff.

DR. ELISA SONG: Yeah.

SHAWN STEVENSON: Because when you talked earlier about the formula situation, which again, it's a blessing to have formulas in those situations where they're needed but the framing was, you know. These are all the vitamins and nutrients that your kid needs, essential fatty acids. They're good to go. We didn't understand the impact and the importance of breast milk on the microbiome formation and also being able to relate to certain foods. So we're not developing this explosion of food allergies that we're seeing. We didn't think breast milk had anything to do with that. Well, guess what? And helping to create a healthy foundation and with nourishment. And this is one of the cool parts about the book because it brought up a question that we sometimes ask ourselves as parents about, okay, so we know we need to get some more of these foods into our kids. And a lot of parents deal with "picky eaters."

I was definitely, I was. The president, kid president of that club, but how can I get my kid to eat more stuff when they are so picky? And so you talk about being able to like add in, blend in different foods into different meals. For example, mashed potatoes, mix in a little bit of cauliflower into that. Kids won't really notice a difference. And you ask the question though.

This is a specific section of the book. You say, should you "hide vegetables in your child's food"? And you had an interesting perspective about this. Talk about that.

DR. ELISA SONG: I mean, in general, we don't necessarily want to hide or deceive our kids in the moment, when you're trying to expand their palate, it might be necessary. Right. I mean, I love my immersion blender and I still, we'll blend in different vegetables into our soups. Right? So it can be a way to expose them to maybe a few, a little bit of a different flavor than what they're already getting and what they already like, but you don't necessarily want to lie about it, right? Because especially for some of your picky eaters, right? You're very selective eaters. If they only have a handful of foods that they like to eat and now you've just ruined one of them and they don't trust you about the other foods. Ah, that's even more stressful as a parent, right, because then you're like, oh my gosh, now what do my kids eat?

I would just, I do explain to kids, look, this is why, we explain the why, and then we can just try a little bit mixed in. There's something called flavor learning that you were just talking about, right, where if you have a little bit of I mean, I'll give an example with my friend. Her daughter didn't like sauerkraut, but she loved ketchup, right? I have a lot of conversations with my son about ketchup because he's like a ketchup fiend that to try to find ketchup with Zero added sugars. It's a little tough, right? But she just put in a tiny little bit of kraut juice into the ketchup and so that her daughter really couldn't notice it at first, but she would say, she said, look, I'm just going to do this, right?

And then over time, a little bit more, a little bit more. And then eventually her daughter's you know what? Actually sauerkraut isn't too bad, right? So there's that, it's called flavor learning. They've even done these experiments. I mean, they've done this with kids in school cafeterias and did a little bit of flavor learning where they put in, Let's say a vegetable with some preferred food and kids actually end up eating more vegetables, right? I mean you talk about the family meal and the family meal is so important and even just adding 10 minutes to the End of your family meal, right? So go. We got to go, right? Just 10 minutes can make, show that kids actually were more likely to eat the vegetables on the table and not necessarily have more of the desert or the bread or the mashed potatoes or whatever it is, right?

I mean, it's these 10, those 10 minutes, right, that we just carve out the time for. Yes, initially you may need to put in like into the smoothies have some different ingredients that then you let them know, Hey, did you enjoy that? Oh, Hey, did you know, I put a tiny little bit of cauliflower in there. Right. And then you just keep talking more and more about what else might we be able to add that would be okay right now.

SHAWN STEVENSON: Yeah. And this is true, it's the palate exposure and just learning. But the most important part I think for sustainability is your child associating something more positive with the flavor experience, you know with interacting with the food consciously. But also it depends on where your family culture is with food coming into it. Like so my youngest son was exposed to a lot of all this just it was just normal blending things into. You know, smoothies and popsicles and, his solids and different things like that. And him just, it was just a part of our family meals. But him, getting older, we could start to share like, Oh, this is what's in here. And he's just kind of used to this stuff. But also this doesn't mean that new experiences, he's just going to be open to, because we are not, we're naturally skeptical, especially when we're kids and it's just how we evolved.

It's a safety thing. And also when you mentioned the trust factor, I thought about when my mom I was eight or nine years old and she made these what she called beef sticks, right? And so she, it was basically looked like country fried steak, right? And there were strips. I tore them up, ketchup, I was probably 5 % of my blood was ketchup at the time. All right. And so I tore them up. And then afterwards she had this look on her face and she was like, And I'm just like, what's up? She was like, did you enjoy that deer meat? What the f*ck? Mom, are you serious? I never from that moment on I looked at her sideways just like I don't really trust you like what because I was very much against eating bambi in my mind. Like I don't I don't want to eat this deer meat, my grandfather Hunted and scented, that whole thing.

And she just thought it was hilarious. And I'm just over there, just Oh, I can't believe I ate that. Feeling it could because your mind, and also just feeling a little woo, a little nauseous, a little woozy, but being in on it, me, right, being able to have these healthy conversations and experiences, but also know your child. That's one of the biggest takeaways from your work is more than anybody, you are the one to know your child. And, a lot of times we have a culture that has kind of encouraged us to outsource so much of our child's development to other people. With our education system, with their health.

And so to be more empowered and so we could transfer that empowerment to our kids and utilize it. Respected teachers and physicians as great coaches and support systems, especially when you really need people. But in the day to day health management and the buildup of our child's immune system and their microbiome, this has to do with our family culture.

DR. ELISA SONG: Yeah, absolutely.

SHAWN STEVENSON: And nourish is one part and briefly, because people are just going to pick up the book and they're just going to get a chance to enjoy the rest. But the other five.

Pillars to having a magic microbiome health, nourishes one, breathe is another one. Talk a little bit about that one.

DR. ELISA SONG: So breathe is, I, what I tell people, if the two things that I think could really move the needle on our kids' health. Number one, if they learn what to keep out by learning how to be really savvy food label readers. Number two, if all kids and adults could learn how to regulate their nervous system. And that's what Breathe is all about, right? Breathe is, I, what I want to do with the five things from Microbiome Magic is to frame it in a way that these are five things that we are doing every single day, right? We have to eat every day. We have to breathe every day. We have to sleep, move our bodies. We have to hydrate every day. How can we do those in a way that are going to optimize our microbiome? How can we do those in a gut hero way? And I have a whole chapter devoted to breathe and to the vagus nerve because I think it's that important.

For many of us we put yoga, mindfulness, breath work, meditation is sort of, I'm going to do when I have the time and I want to put a way up there as this may be the most important prescription for life that you can get. Because we are so much in this sympathetic, overload, fight or flight state all the time. Stress, when we think about it, I also for teenagers, I really try to and middle school kids, try to reframe the word stress, right? And we in our society have come to view all stress as bad. I don't want any stress in my life. And as a parent, we also have now had this idea that, oh, I don't want my kids to be stressed at all, right?

I want them to be happy all the time. Well, guess what? Having no stress? is actually more stressful for your body, right? And I point out, there's a diagram that you can look up online, and I have one in my book. It's called the Stress Performance Curve, where we all know this, right? On one axis is, your your performance, right? Actually, your level of stress. So we're going up here, and on the other axis is your performance, right? On the side where we have no stress, life is handed to you, mommy and daddy do everything, right? You have no homework, no deadlines, right? That's low stress, really low productivity, right? And then that can lead to indifference, depression, apathy, just not feeling good, and it creates inflammation in our bodies.

As a stress increase. Oh, you have a homework deadline due. Oh, soccer game coming up. Okay. I'm feeling a little stressed about that. We have a little more stress, but our performance reaches that peak. And we've all had that. You have a little deadline and then you are on, you're in the zone. You're like, Oh my gosh, I'm so productive. Give me some more work. Right. But you are, I mean, you are in that peak, you're in a flow state, right? We've all experienced that. That's because stress at this level, it's good. It's propelling you to do things right. Stress is simply that sensation of like your heart being a little faster, your pupils dilated, you're getting ready to do something.

Well, now you're doing something productive. But then, you have the friend drama, the social media, you have, the family issues, the workload the soccer games, whatever, then it gets to be a little too much, right? So that's too much stress, lower performance, we get irritable, angry, burnt out, right? So when we ..

SHAWN STEVENSON: More inflammation.

DR. ELISA SONG: More inflammation, right? These both end. So we don't want stress free. We want stress proof, right? We want stress resilience. We won't be able to have that stress. It's just like never getting sick, right? During the pandemic, things kind of blew up in our faces the year that things opened up, where our kids' immune systems, our immune systems didn't have any exposures. And a lot of parents were like, this is so great. It's like the first year Johnny hasn't been sick all winter. And I'm like, maybe that's not such a good thing, right? Because what happened that first winter? Really bad RSV in all ages that shouldn't be getting RSV anymore. Influenza really severe, strep throat is really severe.

And so we had, we were kind of flooded. And immune systems, they lost their resilience. They lost their muscles. And When we think about this stress performance curve, if we realize, okay, manageable stress is a good thing, how do we manage that? We need to engage our vagus nerve, our parasympathetic, which doesn't get enough exercise throughout the day. What's the best way to do it? Well, you use it all day long, right? In how you're breathing. We're not breathing shallowly up here. We're just engaging, breathing with our belly, filling up our lungs fully, as our diaphragm is slowly, it. Expanding, inhaling, and then exhaling, we let the balloon deflate, but we're doing that every day, all day long.

And when kids get stressed, they just got a mean text or they saw something on social media. Instead of hyperventilating and doing something that they might regret, let's stop and regulate. Let's take 10 slow breaths. Now from a physiologic standpoint, what does that do? Those 10 slow breaths, if you can really learn how to belly breathe, engages our vagus nerve, improves something called heart rate variability, which a lot of people track on their Oura rings or their Apple watch or whatever.

Heart rate variability is one of the best predictors of current and future health. And, when whatever we do that improves our heart rate variability, improves the diversity of our gut microbiome and that happens independent of diet. So if your kids are not the most wide, don't have the widest palate just yet, All right, well then teach them how to belly breathe or work on other mindfulness, breathwork exercises. I don't necessarily call it breath work or mindfulness or meditation because a lot of kids, like my kids, have their socio emotional learning class in school and, they're like, They do the yoga in school and they kind of do the

eye roll because it's the class that everyone you know, doesn't necessarily enjoy being in, which I'm like, guys, that's your most important class, right? But if you call it vagus nerve work, it's really, it's vagus nerve work. It's, it's exercise for your vagus nerve. It's the thing that you have to do every single day, just like if you're working out, you're exercising your muscles. If you want to live from day to day in your healthiest, happiest selves, nourishing your microbiome, we need to do the vagus nerve work.

SHAWN STEVENSON: Yeah, you pointed to something so obvious that we don't think about though, it's hiding in plain sight again, that we feel so much of our emotions in our belly, whether it's butterflies in the stomach, whether it's, just feeling, anxious and nervous, we can feel it different parts of our bodies.

But, our stomach gives it that gut feeling, right, that feedback. And our thoughts are impacting our microbiome in a huge way. And we, again, There's so much data on this now and more is coming if we think about this. This is a top tier. Aspect of survival right breathing, right? Yeah, it's probably the most important thing, you know in our interaction with the world around us You know, it's not just the food that we're eating but we're breathing in this air, you know in our environment you know every minute and it's such a nourishing but also it can be constricted You If we're not doing this in a healthful way and often when we're not being mindful, we start to breathe more shallow We start to increase the inflammation in our bodies, we start to impact what's happening in our gut instantaneously.

Yeah. And we can do that for the better as well. And just a quick word on this. So we got nourish, breathe is another aspect that you give us training on. Movement, hydration, sleep you go into and how all these things. can help to create a healthy, robust, resilient microbiome for ourselves and for our children. Most importantly, we are giving them the tools to help to turn the situation around because right now we're not doing well and some of the worst outcomes are happening with our children and they haven't had a chance to even choose, and so helping to turn this around, this book, this project, Healthy Kids, Happy Kids. Incredible resource. I'm so grateful for you creating this. This is and also again When you go to the back of the book towards the back of the book if you're dealing with an acute situation, you've got all these recommendations for that as well. Can you tell people where they can pick up a copy? And also just where they can get more into your universe.

DR. ELISA SONG: Yeah, so you can find the book anywhere books are sold. Support your indie bookstores if you can and if you just go to healthykidshappykids.com/ book you can find all the information there and probably the best way to keep in touch and stay in touch. I'm most active on instagram and that's [healthykids_happykids](https://www.instagram.com/healthykids_happykids) and my website blog newsletter at healthykidshappykids.com

SHAWN STEVENSON: Awesome. This has been phenomenal. I really enjoyed reading this book. I really did. Top 10 list already this year. Very grateful for you. Thank you for coming to hang out with us today. has been amazing. Awesome. Dr. Elisa Song, everybody.

Thank you so much for tuning into this episode today. This is truly an important resource for all parents. Definitely check out healthy kids, happy kids. com/ book so that you can be one of the first people to get your copy of healthy kids, happy kids, and put this in your library. Keep it on hand for when you need it. But most importantly, get the education and empowerment to ensure that we're creating foundational functional health for our children from the ground up. And also she reiterated this point multiple times, no matter where. Our children are on their journey, no matter where they are in their age brackets. The cool thing is they're still kids and there's a lot of room for improvement There's room for improvement for us as adults as well, of course, but when we're children, we are so much more malleable. And yes, things can go wrong quickly, but they can go right quickly as well. And this is something to really take hold of to be empowered about and understand that there's so much influence that we can have right now to create a healthier culture, a healthier generation of kids. And also looking at the generations to come but we need to do something differently starting now. So again, check out healthy kids happy kids and Just tune into Dr. Song's work in general and I appreciate you so much for tuning into this episode.

We've got some powerful masterclasses and world class guests coming your way very soon. So make sure to stay tuned, take care, have an amazing day, and I'll talk with you soon. And for more after the show, make sure to head over to themodelhealthshow.com. That's where you can find all of the show notes. You can find transcriptions, videos for each episode. And if you've got a comment, you can leave me a comment there as well. And please make sure to head over to iTunes and leave us a rating to let everybody know that the show is awesome. And I appreciate that so much and take care. I promise to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.