Introduction to Whole Child Resilience

So parents and practitioners were used to thinking about resilience in terms of mental health. You know, you, you take, you know, you you have a stressor and then you have the resilience to overcome that stressor.

And most people, when they think of stress, they think of psychological stress. But when we think of of whole child resilience, we have to think from, from their immune standpoint, hormonal standpoint, brain standpoint, we are taking psychological, physical, immunologic hits every single day.

I mean, we're faced with constant stressors. And the idea around resilience is building that foundation of strength and resilience. Welcome to Doctor Talks, the podcast where every episode leads to a healthier you.

Join us as we navigate the world of optimal health, uncovering groundbreaking strategies to conquer chronic disease. In each episode, we'll bring you the latest insights from leading health experts, medical innovators, and wellness warriors.

If you're seeking to transform your health journey, or if you're looking for answers to burning questions, you've come to the right place. Get ready to unlock the secrets of lifelong health and vitality.

This is Doctor Talks real talk from real doctors. The issues that matter to you most. Hi, everybody. It's Doctor Nancy O'Hare again, and I am absolutely honored and thrilled to have Doctor Alyssa song with me today on the podcast.

She's a Stanford, NYU, UCS, UCSF trained integrative pediatrician, a real slacker, and a pediatric functional medicine expert, mom of two wonderful, thriving children and really on a mission to revolutionize the future of our children's health.

She just wrote an incredible book, a national bestseller, Healthy Kids, Happy Kids An Integrative Pediatricians Guide to Whole Child Resilience. And it really is a great book.

I highly recommend you get it. And, she's also, started an online holistic pediatric resource to help practitioners and parents bridge the gap between conventional and integrative pediatrics with evidence based, pediatrician backed, Mom approved approach.

And she's helped thousands of kids in her own practice get to the root causes of their health concerns and really empowering parents to help their children thrive by integrating conventional pediatrics with functional medicine, homeopathy, acupuncture, herbal medicines, essential oils, whatever works.

And she's also the chair of air for eight for EMS Pediatric Education, and has lectured around the world and been featured on lots of podcasts, and in print and online.

And Alyssa really is near and dear to my heart because she really looks at our whole child's health in the way that that I am trying to help our kids with pans and pandas.

And she is a dog on a bone getting all of this done. So Alyssa, thank you so much for joining me. Well, I'm honored to be, here with you and all the other moms and dads and, caretakers, grandparents listening.

I mean, you were one of my first inspirations when I was starting out in, in this world, learning about functional medicine and, really, starting out, how do we help our kids with neurodevelopmental neuropsychiatric concerns?

You were right there at the forefront when when we were training to be Dan doctors and which is no longer right.

But that was in the start. And so I just I thank you for really paving the way for so many of us who are, doing this much needed work.

Yeah. Well, you've taken and run with it and done so many amazing things. So just just tell our listeners.

Alyssa Songu2019s Path to Integrative Pediatrics

And by the way, we do have several practitioners that have been listening and have given us feedback and and just learning on this too. So, we're, we're trying to to talk to the parents and the families, but also the practitioners that are interested in revolutionary izing their own practices, because you and I both know that we getting to the root causes, getting to how we help our kids is, is really how, we can step outside our conventional medicine approach and really get our kids healthy.

Yeah. Yeah. Well, that is is I mean, I love that also, we're able to speak in this way to practitioners. It's so important. I mean, we all know that the health care system is broken, but we're not going to change anything by completely dismantling the health care system.

We need to arm and prepare those pediatricians, pediatric practitioners, or who are in the system and want to do better, want to know better and give them the tools to be able to do that.

It's it is that is a challenge, right? To really get there. But I mean, what keeps me going is there are there are so many practitioners who, once they get the taste, when their minds are open to what this thing called integrative and functional medicine is, they want that.

They want more and they need more pediatric training opportunities. Absolutely. So how did your journey really lead you to integrative pediatrics? Stepping out of that conventional box, to focus on holistic wellness for our kids?

Well, I think I was I guess, quote, lucky in the sense that I never had to step completely outside the conventional medicine box because I already started thinking I was going to be outside that box, because when I was an undergraduate at Stanford, not knowing what I want to do, I really didn't think I want to do medicine because my mom was an ObGyn and I just saw her working her bum off like day in, day out.

And I thought, I don't know that medicine is for me, but I really want to work with children. So, I thought I was going to be a children's rights advocate, a civil rights lawyer.

I mean, that was my track in college. And and then I stumbled across this flier as a junior walking around campus for this was in the late 1980s for this this conference for this, the academy knows the American Holistic Medical Association and which doesn't exist anymore.

But that term, holistic medicine. I'd never heard it before. And so my my curiosity was so piqued. So I as a junior, I drove myself down to the Santa Clara Convention Center, and I and I listened and I learned and my mind was blown by these people that were just starting to get known, like Andrew Wilde, Deepak Chopra, Joan Borisenko.

Yeah. And I thought, you know what? That's the kind of medicine I could do. And so that's informed everything that I've sought out in terms of, learning and doing and electives and even creating my own rotation through medical school and residency and, and again, I didn't know what functional medicine was in residency.

But I stumbled across another flier when I thought, okay, I'm kind of burnt out with medicine already as a resident, I didn't see anything I want to do.

I didn't want to be in the hospital. I didn't want to see, you know, 20 patients an hour. And, and so, again, this flier for this food as medicine conference and that I'm like, what is that?

We can use medicine, you know, food as medicine. And so I brought myself to Berkeley and I went to that conference again. Mind blown. I heard from this is now in the early I guess it would have been in the mid 90s, late

90s.

And and again, I've heard from a very young Mark Hyman, James and Jim Gordon on, you know, Mind-Body medicine and, and again, my mind was blown and that's, that's when I knew, okay, functional medicine is what I want to do.

Yeah. It's so funny that, I never realized we had those things in common. I was a junior in college and needed an internship for my neuro psychology. You know, major and I went to church one day and was talking to somebody, and there was a flier behind them, the holistic care of children with autism.

And I pulled that flier down the whole flier and first became a teacher of child with autism. It was a it was holistic in the term of educationally. Yes. Yeah.

And, you know, but just those little things, you never know what is going to change your path and inform where you go. And that's what we're trying to do for all these families.

Now, give them pearls to help their children be healthier. Yeah. And practitioners too, right? I mean, it's you know, you listen and I listen. I mean, I've been I started my practice in 2004.

So it's been 21 years and, and I still every podcast, every interview you listen to, there's some pearl that you can take away from. So I'm so glad you started this podcast because that that it is an endeavor.

Why the Gut Microbiome Matters

But it's it's so needed. Yeah. And, you know, your book A Healthy Kids, Happy Kids, really a gem. I am training a nurse practitioner now and I said, get this book, start there.

Because she's she's very new to functional medicine. But you talk about a concept. They are called whole child resilience. And and tell everybody what you mean by that.

So parents and practitioners were used to thinking about resilience in terms of mental health. You know, you, you take, you know, you you have a stressor and then you have the resilience to overcome that stressor, that.

And most people, when they think of stress, they think of psychological stress. But when we think of of whole child resilience, we have to think from, from their immune standpoint, hormonal standpoint, brain standpoint, we are taking psychological, physical, immunologic hits every single day.

I mean, we're faced with constant stressors. And the idea around resilience is building that foundation of strength and resilience from the inside out so that your kids can bounce back.

No matter what hit they take, because it's not we cannot keep our kids in a lonely little bubble that's hygienic. No stress, no demands, and in fact, having no stress and no demands is more stressful than having them having some stress and overcoming them.

So as we think for to, you know, what do we want, for our children as they become young adults and independent adults? How do we give them those foundations of diet, lifestyle, mindset, all the things that are going to help them remain resilient even if they have a big setback, a huge setback like Pans or Pandas or, some other chronic health concern that's going on.

If you have those foundations or you can build those foundations as they recover, we're not going to be in that holding our breath, waiting for the next shoe to drop, the next flare, the next whatever it is.

So so that's why I really wrote the book, is for parents who are, either, you know, their kids don't have concerns, or they just want to give their kids the best footing in life.

Or maybe there are health concerns in the family. A lot of autoimmunity or neurodevelopmental concerns. And they want to see, can we do something to prevent that?

Or for families who are already facing one of the many chronic health concerns like asthma, asthma, food allergies, autoimmunity, pans, pandas, ADHD, anxiety, and how do we build that foundation for for life?

Absolutely. And you know, you talked about diet and lifestyle, but we both know that the gut is at the center of everything. And and how what would you say to parents and practitioners about children's developing gut microbiomes and its influence on health and well-being?

Yeah, it is the cornerstone. And I actually as we speak, I'm in the middle of, a six week seminar, an elective that I created for my son's middle school, sixth through eighth graders, teaching them all about their microbiome, their gut brain connection, their gut immune system connection.

Now, for middle schoolers, what gets them their gut skin connection and their gut athletic, you know, muscle performance connection. And so just opening their eyes and also opening parents eyes to the foundation of that gut microbiome with the ripple effects that the gut microbiome has on virtually every single system in your body can help to, reframe how we're eating, how we're living, how we're going about our day to day.

Because our job as hosts of this internal ecosystem of trillions of microscopic organisms is to take care of them. That ecosystem within us, so that this ecosystem can take care of us.

And so when you frame it that way, I mean, these kids are amazing. They're going home and telling their parents about, you know, what they learned about, microbiome champions and, what did they I mean, really, learning about the fact that, 90% of their serotonin is made by their gut microbiome, and that really gets a lot of these pre-teen teenagers who are really now immune health is a little less of a concern.

They're not getting all the colds and the flus and the, you know, stomach bugs as you are in elementary. But now the mental health piece plays a huge role.

Right? And so then they're listening and thinking, oh my gosh, I can't sleep. I'm anxious, I can't, I get too worried before my tests or my soccer games.

So it is it's powerful. And that's what I want kids and parents to be empowered to know. When it comes to the microbiome, some things are harder to shift, but we have so much control over what and how, how we live and what we put into our bodies to shape our microbiome, which then can shape our current and future health.

Yeah, yeah. And what's so important and what you said two is, is how you're framing it. You know, you frame things differently when you're talking to an elementary school kid or a middle school kid or a parent that's never been down that road and framing it.

So they get it. It is so key, whether it be the skin so they don't get acne or or the serotonin to their not. They understand where their anxiety may be coming from.

And it's such a key. And it's key for practitioners. You know, I was talking to Doctor Scott Antoine earlier and and we were talking about the neuro linguistic training he's doing and the words that you use are so important in helping children, adults, parents, practitioners frame things in a way that the people get it because this is so important.

Well, and it makes it it makes it relevant and important for parents and for kids. And as we're thinking, I mean, we're right now as we're speaking, we're really the listeners, whether you're a practitioner or a caretaker, you have a child, likely with pans or pandas or you suspect you have a child with pans or pans.

And there are, you know, so many elements that, need to be balanced and repaired, including immune health and brain health, mitochondrial health and all of those.

What I tell parents and practitioners, no matter what, no matter what you're dealing with, if you start with the microbiome, it's going to have ripple effects.

And you and I know Doctor Alessio Fasano, who is amazing pediatric gastroenterologist in Boston who really brought to awareness the impact of gluten on all people, not just people with celiac disease.

And, and, and he's credited with saying what happens in the gut is the gut is not like Las Vegas. What happens in the gut does not stay in the gut. And it's so true.

And so when parents know when you have a child with pans or panels and there's this autoimmune, inflammatory component, what 80 to 90% of your immune system lies in your gut.

You have this neurotransmitter and brain imbalance, which is also inflammatory. And you realize that the vast majority of neurotransmitters, including serotonin and dopamine for attention and focus and acetylcholine for the processing.

How many of our kids all of a sudden they can't remember their math and they were math whizzes before, right?

Vagus Nerve Work and Nervous System Regulation

This the connecting connecting the dots or melatonin. You know, your gut makes 400 times the melatonin, more than than your brain. And so, bring it back to look, no matter what's going on, it might sound, on some level, for some people, it's it can sound almost too simplistic.

You start with the gut, but but it can make such a profound difference. Absolutely, absolutely. And you mentioned acetylcholine. You have an entire chapter in your book on the vagus nerve.

And we both know how vital that is. But but talk a little bit about optimizing the vagus nerve in optimizing the microbiome. Yeah. And this is where, as you said, the languaging and how we frame things is so important.

Yeah. The, the there are when I, when I talk to kids and to parents and even practitioners because I, I give I actually just did a masterclass two practitioners on using the elements in my book and teaching parents in that way, in kids in that way, to empower them.

So I talk about the five things from microbiome magic. And these are five things. Yeah, I mean, there are five things we do every single day. I'm not asking busy parents, you know, kids who feel like they would rather do anything else but that, you know, to do one more thing.

I'm just asking them to think about the five things you're already doing and do them in a way that nourishes or microbiome. Do them in a way that creates microbiome magic every day.

That's how we nourish our microbiome. We eat how we breathe. That's the vagus nerve and how we move, hydrate, and sleep. Now breathe. Or vagus nerve that deserved its very own chapter.

And in fact, it could deserve its very own book. I speak because it is so key to not just recovering and getting well, but staying well. And that's the piece that, you know, you and I know.

I mean, we can't it may be it it may be a longer journey for some than others, but we have the tools we can help kids get well, even, quote, recover. But it's that's what I see in parents and even for kids, just holding your breath for the next cold.

Are we going to have a flare, you know, for the next, you know, trip up to Tahoe and altitude and is, you know, how's that going to be? Because the altitude puts stress on your mitochondria.

And if we can know that engaging the vagus nerve and improving something called heart rate variability, which is a

marker of your vagus nerve functioning, that it's what's going to keep you well.

And so the vagus nerve for for listeners who aren't aware, is, is the longest wandering nerve in our body from our brain connects every single, internal organ that we have.

And one of the most important lines of communication, it's A22 way highway of communication from the gut to the brain. But what most people don't know is that 80 to 90% of the communication actually occurs from the gut to the brain.

And, you know, when we call our gut the second brain, it's kind of a I think a little bit of a should be the other way around. I agree. I mean, we say it's not the second brain.

That's the first brain who's really in charge here. But when we when we talk about engaging your vagus nerve, strengthening your vagus nerve, which then will also strengthen your immune response, your mitochondria, your repair mechanisms.

I don't call it mindfulness meditation. You know, any my body medicine any more. I call it vagus nerve work, just like we're doing immune work and, you know, mitochondrial work.

And, you know, we're we're doing vagus nerve work to optimize your vagus nerve because it needs to be put on that, as important a level and maybe even more important in the long run than any supplement that that you can give.

And so when we really engage our vagus nerve, we allow the healing process. You know, Doctor Navia, Robert Navarro talks about the cell danger response.

And, you know, all of our kids who have pans as they are stuck in the cell. Danger alarm. I'm under attack. I need to I need to, you know, put on all of my defenses and until the flight freeze.

That's right. And until their cells can move through that cell. Danger response back to healing. We're not going to get them completely well. And the that last piece that kicks in, that healing response is your vagus nerve.

And so, you know, learning how to do diaphragmatic breathing or any number of mindfulness exercises for kids with pans pandas I love tapping emotional freedom technique because it's a way that when kids cannot quiet their mind and they're too agitated to sit there and listen to a five minute meditation, or maybe their their brain, their acetylcholine, is is not present enough that they just can't, you know, connect those dots to do that.

If we do tapping where we're just, we're simply tapping certain acupressure points and we're repeating certain certain affirmations. And you can even do it for your child as a, as a caretaker.

It really comes in nervous system down right. And immediately get them out of fight or flight. And EFT or tapping has been shown to improve heart rate variability.

So I love that. I also love other, more passive ways of engaging the vagus nerve. Until kids can start implementing some of the tools on their own. I use some vagus nerve devices, like, you know, the, Apollo is one for kids that it actually is authorized or a, you know, appropriate for use in kids.

And there are some small study, but a good study looking at improvement in ADHD symptoms in children. And there are others that I use that, that don't say that they're indicated for children.

But as a practitioner, I feel comfortable, you know, guiding kids through that. But anything we can do, as you said, get them out of sight or freeze, get them into the healing parasympathetic stage, then no matter what you're doing, whether it's the IVIg or the supplements or trying a new dietary strategy, it's going to work better.

Absolutely. And there's such simple but powerful techniques. I mean, the diaphragmatic breathing or any of the

other breathing that that a lot of people have studied and found to be helpful.

The tapping, you know, all of these are are inexpensive to, you know, no money at all. Yeah. It's so powerful and and so essential for healing their microbiomes, but also their their brains, their mind.

Let's it's fascinating to what, you know, if your microbiome is in a healthy state that strengthens your vagus nerve, it improves your heart rate variability, but also in children, there was a study that showed if you improve your heart rate variability, not only do you feel better, feel uplifted, but that they're these kids microbiomes also improved in their diversity and function independent of diet.

So if you have a child and you're just it's so stressful on top of all the other stress that you go through to think about changing their diet right now, well, then don't work on that.

Work on the vagus nerve first, because that will shift your microbiome. By shifting your microbiome, you actually can start changing tastes, preferences and and cravings, which then can make it a little easier to shift the diet in the way that you would like to.

So it's fascinating. Yeah. And and you know, I think that's so important for people listening. You know, so many of the people listening or watching may already have a child with pans.

Pandas may already be in the throes of a flare. And and they're like, oh, God, here we go again, telling me how to change my diet. But these simple things, like you're saying, changing the way the vagus nerve reacts by breathing, by tapping, by acupressure points, by several simple things can actually change your child's ability to to let that microbiome heal.

And then maybe be able to advance their diet in ways that are more healthy. Yeah, yeah. And I, you know, and I tell kids, teenagers and parents when they're in the office and I'm talking about vagus nerve work, what I let them know is, you know, when you do the vagus nerve work, you actually will feel more calm, have more feelings of joy, feel more content, sleep better.

But I let them know that that is actually not the real reason why I want them to do the vagus nerve work. That to me is a really beneficial side effect, and I let them know.

The real reason is because when you engage your vagus nerve, you you reduce chronic inflammation, you regulate your immune system, you regulate your brain chemicals and neurotransmitters, you balance your blood sugar.

You balance all of your hormones that may be out of whack.

Building Microbiome-Friendly Nutrition Habits

So, so many other you improve your mitochondrial function and so, so many other really I would say the primary reasons. And then, oh by the way, you get to feel good while you're doing it, you know, so so reframing it that way too because it must be a priority.

A lot of us, and even practitioners will put the the vagus nerve work a little bit on that. Okay. I really want you to do this, but don't impart how important is because we as practitioners don't really understand how important it is.

Right? Right. And and it is important and it's important for parents to not just in modeling the behavior to their children, but in helping to to decrease their PTSD, to improve their ability to handle the flares, to handle all the stressors that come their way.

So I'll also put a plug in for, practitioners listening because, you know, it was really it was very, very sad to me when I was reading this article from, I, it was probably late last year, that came out as a survey of physicians and, you know, pediatricians were among the top five specialties with the highest rates of burnout.

And, and, you know, most likely to say that within three years they would be doing something different. And that's heartbreaking because we went into this field because we wanted to care for kids and nurture kids.

And and, you know, it's and then especially when you step outside of the conventional medicine box, which is, you know, it's a huge, frightening step in itself.

And then you're caring for really sick kids and, you know, and and it's so important to also take the time out for yourself and model that for your patients that that you are practicing self-care so that you can be available for your patients in the way that they need and your families that they need you.

So, absolutely. Yeah. So, you know, this microbiome magic and, and and you know, Elissa, you were so good at the at the catchphrases to the, the the ways.

Again, framing this in such a wonderful way. I absolutely adore it. But but you mentioned five things for microbiome and Jack. Do you want to talk about any others?

Yeah. Well, let's talk about the nourish piece because that I would say what I tell kids as they're, you know, and I start talking to kids about becoming, responsible, independent young adults from I mean, I might start talking about that in eighth grade, but as soon as they become freshmen, I say, look, we have four years that you are home with us, with your parents.

First of all, it's a golden opportunity to if there's any favorite foods that you like that your mom or dad prepare, or maybe grandma prepares, learn how to make them because you don't have any.

I mean, not that you don't have any other opportunities, but this is such. It is such an amazing time to do that. But I let them know the two skills that I.

If you leave, well, I mean, they keep coming to me even as young adults. But if you once, once you're off after high school, whatever that looks like, right?

The two most important skills I believe that I. I can teach you to become successful adults is to regulate your nervous system. Right. And number two, learn how to read food labels like I got here.

All right. Those two things. Because those two things as parents, once your kids are out of the house and this starts even when they're, you know, middle school going out with their friends to the movies and choosing whatever they're going to eat. Right.

If they learn how to read those food labels and choose in a way that serves themselves in their microbiomes, their life can look completely different.

And it's not to say that they're never, ever going to have the foods that kind of make Ukraine, or maybe even you're having yourself without even realizing that that they're disrupting your microbiome.

And I always let families know there I there's absolutely no judgment in where you're starting from because I if I look at where I started from, I mean, it's nowhere near where I am now, but I didn't know until I actually knew.

Right, right. You can't know what you don't know. And that's right. You know, none of this is should have, could have would, and and I hate that for our families.

Yeah. It's about what's one step now. That's right. And so when we think about nourishing our microbiome, I actually split it up into two parts. The first part is what we want to try to get in and that, when we think about, again, you know, as pediatricians and then as parents, you want to check and try to make it memorable and fun, right?

So I talk about what microbiome champions we want to get in, what feeds and nourishes your microbiome. And so those are the three FS fiber phytonutrients which I let them know.

That's actually a p-h. But it sounds like an F and fermented foods. And then you break that down okay. What what is fiber really. I mean, so many people know we should eat more fiber, but what is fiber?

While fiber is the part of the plant, it's all plant based foods. It's a part of the plant based food that we as humans don't use. But it's an essential part, because that part that we don't use is what probiotics are beneficial.

Back to you. And I got use to feed themselves. And so we can also call them prebiotics. It's a little simplistic because there are some prebiotics that aren't necessarily fibers, but but they're prebiotics that then feed our probiotics and we need that.

It's just like if you're growing a tomato plant, you know, the soil needs right nutrients. Otherwise you're not going to get the healthiest tomato plant to grow.

And so and then then you make it really concrete. And in the book I have a list of all the, you know, foods, top foods, certain natural, normal serving sizes and the amounts of fiber, with the goal that most kids are probably going to be about 25g of fiber.

But then you make a concrete, okay, a cup of raspberries, which many kids can easily consume in one sitting. I mean, my children could have two cups of raspberries even, like sitting, right?

One cup of raspberries actually is nine grams of fiber. So that's not I mean, that's easy to do, right? Relatively easy for most kids. And then going through all the different, different ways that we can get more fiber and, and remembering that legumes, nuts and seeds have really the most fiber per, per per bite, you know, per, per serving.

And then phytonutrients, that's color. So we talk about all the colors of, you know, our, our whole gut rainbow, but the colors aren't necessarily just fruits and vegetables.

You have to throw in there the nuts in the season, the legumes and also the spices. Right. Spices count. We were just talking before the interview about tumeric.

But yeah, turmeric has character humanoids. There's, EGCg from your your green tea. There's cinnamon that you can use. It has amazing benefits for your microbiome.

In fact, one city I was just reading found that an Indian curry blend of five spaces that included cardamom, coriander, and I can't remember the other three after just one meal, shifted the microbiome for the better.

Yeah, yeah. So so including your spices and just, you know, and I have this, this sheet that I give to parents and kids that, that, that on the top says make your meals pop.

So poppy with plants on purpose. So when we do that again it's little steps. If we now know plants are what feed our microbiome, then every meal or snack think, okay, how can I add one more plant if we if we just do that, we can.

So in your on your oatmeal, could you add a little cinnamon. Or you probably have maybe some pumpkin seeds or chopped pecans in the cupboard. Why not take that out and sprinkle it on your oatmeal.

Right. So we're just thinking what's one more thing. And if you just have one more thing, then by the end of the week, all of a sudden you're like, oh, I've actually my child actually had a lot of plants this week.

Yeah. So and then then the second part, the nourish part to this is I think as kids get older, really, really key. That's what we want to keep out. Right.

And that's where we look at what food additives, the added sugars that kids are getting, the emulsifiers. I think if kids really learned how to keep their added sugars down and not not substitute with the artificial acid, something potassium and saccharin, and sucralose, that is one of the most important steps we can take, actually, as a society

to improve our global public health.

I mean, everyone's talking about longevity. Well, one of the keys to that is understanding how to keep down the added sugars. And I actually had this that the the place it added sugars come in the most commonly for children in adults.

Now are these sugar sweetened beverages. Right. So Starbucks mocha Frappuccino there's what I mean that has 55g of added sugar and one serving. Even, you know, those boba tea, those bubble, you know, tapioca teas, you know, so I had a kiddo who she's a teenager.

She started a job working at, at a local coffee shop. And over the past month, her anxiety has been worsening. She's getting more, quote, hangry attacks where she just feels a little shaky, like she needs to eat a lot, and then she'll come home and just, you know, piling whatever's around and, and having more trouble sleeping.

And so we went through situations are more stress. Not really. I mean, she's a senior. She knows what's happening. It's not, you know, no more stress, than usual.

And, exercise has been about the same. The only difference was the coffee shop. So I went through and she's not having a mocha frappuccino thing every day, but she was having what she thought was the healthier option was a matcha latte with oat milk.

Right. So we sat down and we looked at oat milk with oat milk. Actually, a lot of oat milk has added sugar to it. And, and then we calculated how much added sugar was in her matcha latte because she said, well, it's just two pumps of that sirup.

Well, let's calculate it. It is better than the 55 gram mocha Frappuccino, but it still had 32g of added sugar. Wow. And she asked two pumps with two pumps and the oat milk.

Right. And our children, 2 to 18 years of age, should have no more than 25g of added sugar in one day. One day. So already with that, she was having over.

Now that doesn't sound like, four grams over your usual allotment, but we're not factoring into account. And then we just did kind of a little sugar inventory checklist of what she was eating, and we realized, okay, well, you know, the toast, the bread that she's getting actually has four grams of teaspoon per slice.

Can we swap that out? Let's look at bread alternatives. Right. The, the jam that she was having had more added sugar. Can we find a no sugar, you know, fruit preserve.

And so it's just looking and seeing because in on any given day when I did this for my kids as an I already was an integrated pediatrician and I was going through this exercise, I said I, you know, let me do this for myself.

And when I did it for myself and my kids, I realized, oh my gosh, my kids on any given day were having almost like 70 or 80g of added sugar because I was not reading every single label and realizing that the vanilla Greek yogurt that I thought was so healthy for them in the morning actually had 25g of added sugar and one serving right there.

Right? Right. And it's not that you have to read every single label every time. It's just when you start, you become aware of, okay, I'm not going to do the vanilla Greek yogurt.

We are going to get the plain Greek yogurt, add berries, and if we want a little extra sweetness, we can just add a little bit of honey or maple sauce.

So absolutely it's maple sirup.

Supporting Kids with Chronic and Mental Health Concerns

So it's making, it's becoming aware and then helping your kids make those shifts. Those swaps. What can they get at the grocery store? It's sad because it's not enough to say, don't eat.

You know, the the takis, fiery hot whatever. Chips don't get the, the prime, you know, bomb pop, artificial hydration drink that all your friends are drinking.

That's not going to work. It's it's okay. Let's not have this because let's look at the ingredients, see what you know, what impact it could have on you.

And let's go to the grocery store together and find what is equally acceptable is going to look just as, quote, cool. You know, when you're with your friends and you're going to enjoy and I'm going to and I as a parent and I'm going to feel good about.

Yeah. And that's so important. I mean, so many things here. I mean, I think that there are simple things, you know, when you were saying the cup of raspberries, I can hear the parent in the back of my mind, my kid's not going to eat raspberries.

But then you said, you know what, just adding a little bit of chia seeds or some other seeds into that oatmeal, adding that cinnamon, adding those spices.

And then, like you said, figuring out with your child what those things are, those added sugars, because we're all doing it. I mean, the other one I would say is fruit juices, you know.

Yes, they you know, we think we're giving something healthy, but instead we're we're giving 30, 35g of sugar in, in one serving of fruit juice. Yeah. And I tell parents because that actually thank you for pointing that.

That's a great it's really important for parents to know because, a lot of parents do mistakenly think, well, that's getting some fruit. And, but when we think about it's very different than making your own smoothie, you know, putting in the whole orange.

I mean, you can peel the orange or the whole apple inside the blender, because in the factories, when they're processing fruit for fruit juice, they are high heat, pulverizing it, extracting every single bit of fiber.

So you are only left with really the sugar from from the fruit juice. Now it's better than a soda. There, there it is good to have some, you know, vitamins and minerals, but without the fiber to lower that impact of sugar, it's basically pure sugar that your kids are getting.

And so just being aware of that, I mean, they're really apart from we put, you know, maybe a little splash of sugar in the smoothie that you're making much better to have the whole fruit or the smoothie.

And I do have I, you know, and absolutely, when our kids are in a flare, they may be restricting what they're eating. So we want to be mindful of that.

But I do have, you know, kids who, no matter how restrictive their eating will get there, they will still accept the smoothie that their parents make for them.

Right? And one of the tips is if you put in a little bit of frozen cauliflower or, you know, just a, a few garbanzo beans, right? The garbanzo beans actually add a creamy texture to the smoothie really doesn't alter the taste.

Cauliflower is if you once you've steamed it, frozen it, it's tasteless in the smoothie. So trying to add some things into the smoothie that are going to add a little bit more of those.

The fiber, the phytonutrients, you know, really getting in, you know, more of the, the gut microbiome nourishing nutrients that are that will help your child to heal faster.

Yeah. And those are the frozen fruits and vegetables like the frozen cauliflower. Even things you can add if a child won't take a smoothie to other drinks that don't necessarily change the flavor enough, yeah, that the child is going to reject it.

So think about that. Even if it's not in a smoothie, too. Yeah, absolutely. I mean, if they're doing soups, I mean just pureeing a little bit of cauliflower in is, is really it's it's an easy thing to do.

That doesn't like you said, doesn't alter the flavor. So. Right, right now, you know, you and I both know as, as do I think many of our listeners that we're almost in 1 in 2 kids that have a chronic medical condition and the, you know, the health of our country, the health of our children is just so suffering.

So how do you start? What are what are some proactive steps that we haven't talked about yet that you may help, families with children with these chronic conditions to try to do?

You know, the the foundations are going to be so key. I mean, we're always working on those five things for microbiome magic, no matter what's going on with their kids.

I mean, that is the foundation. But then, you know, when our kids are having health concerns, we mean, we do very often. I, I never want to say all the time because I mean, nothing is all the time, but almost all the time, we're going to be looking a little deeper into your child's gut microbiome, seeing what the imbalances are, because chances are there's going to be some element of dysbiosis or, an imbalance of the organisms microorganisms in your child's gut, which can mean not enough of the beneficial probiotic flora or too much of the non beneficial, you know, pathogenic organisms or maybe a combination of both.

And then once we have that healing down, then we can it can be much easier to then settle the autoimmune inflammatory response that's going on. Work on the mitochondria support detoxification.

Your microbiome, it's fascinating. I mean, probiotics have their very own cytochrome P450 detoxification system, which is which is very similar to our our liver's cytochrome P450 system, which is why so many environmental toxins, are the effects of that, including forever chemicals can be mitigated by having the right probiotic beneficial bacteria.

Because if we think about it, we're breathing in our toxins just as much as are coming through our skin. And the first pass is through our mitochondria, I mean, through our microbiome.

So if our probiotics with their own detoxification system can kind of bio transform and make them into less toxic compounds, even better, right. And then we know that for many neuropsychiatric conditions, including pans, pandas, there is of course, leaky gut, which many, many people of have heard of, but also endotoxin, Mia.

So there are these gram negative bacteria that can reside in your gut that are, that we don't really want. There, including Klebsiella or Citra. Back to E coli, certain kinds of E coli, and they have on their outer membranes something called LPs or lipo polysaccharides, which are very toxic and very inflammatory.

So when you have these organisms in your gut and you have a leaky gut, all of a sudden you have these organisms secreting all of this LPs that then slips into your child's bloodstream.

And wherever they end up, they can cause problems, whether it's joint problems or brain inflammation or we know that, this endotoxin Mia has been linked with.

I mean, not just pans pandas, but we've seen we can see it in the research in kids with ADHD, in kids with OCD and OD, and of course in adults. We see it in all manner of neuropsychiatric and autoimmune conditions.

So looking closer at the gut can make a huge difference. And I've had some kids. This kiddo, in fact, this family, it pans wasn't the issue, but it was autoimmunity.

And, that their the oldest daughter had Crohn's and rheumatoid arthritis. The middle son had rheumatoid arthritis. The youngest son was developing signs that he was developing rheumatoid arthritis and, and that the last piece of the puzzle that really pushed the kids over into remission was healing and eradicating the Klebsiella in their gut.

It was amazing. I mean, we did all of the dietary changes. We did the, you know, we had them on a lot of supplements. One of the things that was harder to do because they were teenagers is, was to get a poop sample, right?

So that so that took a little bit longer. And then when we finally saw that there was Klebsiella and we treated it all of a sudden inflammatory markers normalized and, you know, and they went into remission and they stayed there.

Yeah. Now talk about treating that because or anything like that, because, you know, we're always balancing the use of antibiotics versus the use of herbals.

And in that case or in general, what's your take on that? What's your approach? I'm so glad you asked that because, you know, there's not for you know, whether I mean, I will say, especially in the case of a child with autism, you know, for many, many kids on the spectrum, parents, you know, can have in mind, you know, many of these medical interventions that maybe led their kids down this path.

Right? And so then anything conventional, anything Western, you know, they don't want any part of and, and I and when I was first starting out, I was very similar in that regard.

Right, right. And then you go through and you, you learn your balance. Right. You know, I for the practitioners, the first instinct when you learn about this field of functional medicine, integrative medicine, the, the, the initial kind of thought is, oh my gosh, you have to throw out all the conventional medicine because that's that's what's keeping our kids sick.

And then, you know, it's really just set. In conventional medicine, many interventions and medications are just overused and misused. So if we judiciously and appropriate use them, they can play a very important role in healing.

So for these kiddos is family. I did use cepstra, which is an antibiotic prescription antibiotic because I just wanted to clear it. And then and then also because we had the tools and to rebuild their microbiomes.

Right. Which and so but then, you know, for things like, let's say parasites, I'll often use a prescription, parasite anti-parasitic medication, but then also follow up with an herbal regimen for a few months, because oftentimes I've just found one round is not enough.

And then, and, of course, you always also want to go with the parents desire. So then as parents, look, we have the option to do a prescription medication.

We can do herbals. Herbals probably take longer. But you know, there are also some some more synergistic benefits for the rebels. There's pros and cons to both.

But if there is a child who is fairly sick and I just want to clear and I know an antibiotic is going to work a prescription, my tendency is to go for that.

Right? Right. And I think we do that very similarly. It's it's partly where the parents are with their, you know, beliefs and, and understanding is and also how acute severe the situation is.

Often they need that antibiotic in the short term. And like you said, we can follow that up with more good gut health and herbals and things like that.

So yeah. Yeah. So so with you on that now, you know with pans and pandas, any post infectious syndromes but also just in general our children's our teens mental health is in a state of emergency.

So much anxiety, depression, OCD, tics, all of that. What's your, you know, way of thinking about that? What's your understanding of the state of that?

What's what do you do? I still start with the gut. Okay. We mentioned that we have to yeah. And you know, for but it is true. I mean, anxiety is at an all time high suicidal, you know, ideation, suicide attempts.

I mean, they're all just, you know, devastatingly high. And even in our younger kids, I mean, even eight year olds. And so we can't, you know, this is not just an adolescent problem.

And so, you know, when we're thinking about mental health concerns, really understanding that there is a physiologic basis to it, it's not just in your head, in your brain.

Oh, it's just, you know, too much stress. There is a physiologic component that, oftentimes does stem in a gut microbiome imbalance, which then subsequently leads to a neurotransmitter imbalance.

There are there is, a stool tests now that can look at, your microbiome and see, do you have enough of the Gaba producing species? And also how do you have too much of the species that break down?

Gaba. And Gaba is a very calming neurotransmitter. We need that. So it can be very helpful to know that because we could throw as practitioners all the calming, you know, herbs that we want to briefly know Gaba is low or, you know, you have a really, low levels of bifidobacteria which are responsible for producing serotonin and dopamine.

We're going to target that. And so, so I start with the gut to just have that foundation, but that's a little bit of a longer term, you know, takes a little while to rebalance and create a new, new equilibrium in the microbiome.

So it's not like all of a sudden you start taking probiotics, which which also listeners, please, it's not just about taking probiotics in terms of gut healing.

There's you know, gut healing is more than just sprinkling in, you know, or, these probiotic supplements and, but, but it starts with healing that gut also in anxiety, you know, we found that there's endotoxin, Mia.

And, you know, supporting the endotoxin, Mia is really important. And then there's this sort of this, synergy of healing the microbiome so that your microbiome, your child's microbiome, can make the neurotransmitters needed for your child's brain.

But then also, giving symptomatic support. So we know that there are things that can be very, very helpful, like l-theanine is very calming to the brain, can help support, healthy serotonin levels.

I use quite a bit of fast potato serine, which is a phospholipid. That's very important for brain, brain cell membranes and communication, but also can reduce excess levels of cortisol.

So help get our kids out of that fight or flight response. And this is across the board, whether they have ADHD or anxiety or pans, pandas or or are on the autism spectrum.

If you are in fight or flight, foster title steering can be really helpful. So Theanine Foster Syrian, of course, magnesium, you know, which is such a calming mineral.

So we look and then we look to see also is there an inflammatory component of course, with pants pants that is triggering. So we can't just stop there and say, well, it's just it's a, it's just anxiety.

Well, okay. Well, okay. Anxiety is a symptom. What's triggering it. Right. What what are some of the underlying factors. Is it a situational you know, horrible family, you know, situation, school situation, bullying, whatever it is maybe compounded by microbiome disruption, too many ultra processed foods that are that are inflaming the brain, you know, an autoimmune component, whatever it is.

Yeah. And it's it's very important to be that detective to, to figure out, you know, a lot of times we say, well, there's a lot of stressors at home. That's why they're so anxious.

Let's put this medication on it while you deal with those stressors at home. But but we're not getting at the root cause. How is that stressor changing our microbiome?

How is that stressor changing our vagal nerve response? And what can we do before we get to maybe the SSRI scenarios? What can we do to improve our microbiomes and give things like you're saying the Gaba, the theanine and things like that, that can help decrease that anxiety?

I will also say to, yes, we need to do the detective work because, from a conventional pediatric perspective, that detective work is is not likely not happening.

Right. On the other hand, too, it was a really great lesson for me, where this one child presented, you know, very much like in a cute hands, kiddo. And we're doing all the detective work and, just trying different supplements and and the thing with detective work is when you start looking, chances are you're going to find something, you know, that may be off.

That actually may not be the thing that's triggering the symptoms. Right. So, and then, you know, a year later, so. And the family was going through a lot of upheaval, really, you know, very sad divorce situation going back and forth to the house.

And so it became a little too stressful to follow up. And so after a year, they came back different child.

Sleep, Fermented Foods, and Practical Takeaways

No, no interventions. I mean, they couldn't really keep up with the supplements with all the different things, but it was because the family life situation had settled.

And so and so now this child felt safe. And those pants type symptoms. Yes, psychological stress can actually be a pants trigger. I mean, we need to understand that too.

But but it wasn't. There were no major infections or mycotoxins or things to really treat. It was, I should have, in retrospect, really kind of doubled down on the vagus nerve work. Right.

And on the, on the nervous system regulation piece. And not necessarily kind of hunted for so many things you need to do the hunting and the detective work to make sure something's not there.

That's actionable. But, but then, you know, sometimes there's not necessarily an actionable item in the sense of giving a medication or a supplement. It may be that it's it's the vagus nerve work that has to be, the priority.

Right, right. And I and I think no matter what the cause, whether you find another cause besides stress or not, dealing with the stress, giving them tools, whatever the, the underlying mechanism is so important.

Yes. The the breathing, the the the therapy, you know, it may be play therapy, it may be cognitive behavioral therapy. You know, it may be marital therapy.

But but you know, all of that is is necessary for these kids. Now I have the converse story, which is a kid that that, you know, had pans, pandas. And I thought we had treated everything fully.

But there is a lot of turmoil in the family. And the dad traveled a lot for work, and every time he would come home, the kid would get worse. And, you know, we were talking about the family dynamics and they were in family therapy, and we were working on their breath work and lots of different things we were doing.

And finally the dad got tested for strep and mycoplasma and was positive. And we needed the dad and the kid got

better. Yeah. And then all of those things that I was doing for months and months to help them deal with the stress, you know, when we finally treated the dad, everything else got better, too.

So, yes, you know. Yeah, it's it's being, it's not, I mean, this is where that's that's the art of medicine is not just stopping there, but thinking more broadly about, well, if things are not going according to the typical pattern that you've seen, let's think outside the box, even again, outside the box we're already thinking outside of right?

Right. And also we going back, you know, the kid comes back after a year and it isn't any better. All right. What is it that we missed you know. Yeah you did that before.

But now your home situation is better. Maybe the Gabba now or other things may work a little bit better. You know, my mentor was with Doctor Sydney Baker, who I say again and again.

He's one of the most brilliant man I have ever met. And and he always talked about, you know, have we done enough for this child? Yeah. And and going through a door rather than a window.

And I think sometimes when we get down this road, we, we don't necessarily reopen those doors that, that we may need to, you know, we tried gluten free before, but it didn't work.

Well, now you're in a place where it may be able to be done. That's right. Yeah. And and revisiting those is so important. Yeah. Yeah, I love that. And and, you know, in your book, Alice, you give so many practical pieces, recipes, practical ways that that families can really work on this together.

And I think that's so important. Any other of the practical aspects that you wanted to mention from your book in this microbiome management or the evidence based approach at all?

Yeah, yeah. You know, I, I will say, you know, sleep is probably the next security, right? Yeah. Because sleep, you know, and when you frame it in terms of the microbiome, sleep also can improve your microbiome again independent of diet.

But it takes just two days of sleep disruption to disrupt your microbiome and our microbiome our microbiota I should say all those probiotics. They have their own circadian rhythm that relies on our circadian rhythm.

And in fact, some of our microbes have the opposite circadian rhythm, so that when we are asleep, they're awake doing their job of helping us detoxify and absorb things or keep things out and balance our immune system so we're not getting our sleep, then we're not allowing our probiotics in our gut to get their sleep and get their awake, you know, a proper sleep wake cycle.

So I'm doing what we can and that's where, you know, the things, the things that we mentioned for calming, like the faster title serine and thinning can be very helpful.

Yeah. Yeah, absolutely. You're such a wealth of information. And I could talk to you for hours and hours. But first of all, where do people find your book?

That my book actually is, is going to be almost everywhere. Books are sold. I mean, of course, of course, please, you know, support your local indie bookstores.

I mean, that would be, you know, would would be great. But of course, it's available on Amazon, Barnes and Noble, Walmart online and, and target online.

So anywhere, anywhere really you can find that and and yeah, I, you know, I love giving lots of fun tips and the recipes in there, we didn't talk much about the fermented foods, but thinking outside the sauerkraut box to.

And I have a recipe for a fermented blackberry lemonade that you can make into popsicles turned into smoothies. And so, you know, because fermented foods have been found to probably, well, one study out of Stanford improve

microbiome diversity even better than fiber.

Where to Find the Book and Final Advice

And so, you know, really trying to get fermented foods and, can be very, very helpful. Yeah. And you have all kinds of quizzes, exercises, protocols, lots of of recipes.

The, the fermented food recipes, the, the gut friendly ones. I, I even learned a couple, you know, and I'm not a good cook. So it was it was great for me.

So so thank you I mean, it just really is a roadmap, for, for raising resilient kids. And if your kid isn't resilient right now for helping them move toward more resilience, I mean, it really is impactful.

And and how do they find you? So the best place to find me is, is, on my website, which is Healthy kids, Happy kids.com. And then also I'm most active on Instagram, which is healthy kids underscore happy kids.

Yeah, yeah. And any last words of wisdom, of hope, of anything that you want to give to our families, our children and our practitioners that may be listening or watching.

I will say for, well, this goes for parents and practitioners. Oftentimes we we look back and we think, oh, I wish I had known this. Why didn't I know this sooner?

You know, I wish I had known this when my kid was nine months old or as a as a practitioner. I wish I'd known this. You know, when I was starting out in practice.

And so I always tell parents and practitioners, it doesn't matter where you were before, it matters where you are now. And the only reason to look back is to see how far you've come.

And so I really, you know, the parents listening and the practitioners listening. You are here because you are aware of this thing called pans pandas, which is a huge step for many.

Right? And you're here today to get more knowledge. And that's really that's that's how we make a difference. Yeah. Such good words. And and please take them to heart.

Parents out there and practitioners you can't know what you don't know. And just listening just learning just reading that incredible book, you know, can get you to the next step.

And, and then you're going to make some missteps too. Yes. Okay. Just making the next step that you can. Yeah, absolutely. Oh, Alicia, thank you so much and look forward to seeing you soon in the future at all of our endeavors.

And, thanks everybody for listening today. Thank you for tuning in to Doctor Todd's. We hope today's episode has enlightened and inspired you on your path to optimal health.

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