## Introduction and Guest Background

Welcome to the Bio Optimized Summit, where we are exploring the next level of physical and mental health you can achieve through targeted and intentional optimization.

I am your host, Doctor Amy, and today I'm so excited to have with me my friend Doctor Alissa Song, and she and I met actually this last year was when I really met her and we shared the stage for our Future of Health talk at mindshare, and she of course did a fantastic job with her talk.

And she is a holistic pediatrician and pediatric functional medicine expert. But of course, her main title is Just Mama to two Crazy Fun Kids and in her integrative pediatric practice, which is Whole Family wellness, she's helped now thousands of kids get to the root causes of their health concerns and help their parents understand how to help their children really thrive in body, mind and spirit.

By integrating the conventional pediatrics with functional medicine, homeopathy, acupuncture, herbal medicine and essential oils. The. These health concerns, of course, range from frequent colds, ear infections, asthma, eczema, autism, ADHD, pandas, anxiety, depression, and even autoimmune illnesses.

And that's what we're going to be talking about, like the the epidemic of chronic disease in kids is rising. And she is at the forefront of this. Doctor.

This a song created healthy kids, happy kids to share her advice and adventures as a holistic pediatrician and mama. And then I also just want to share with you how cool this is.

So we're going to be attending our virtual mindshare conference this year, and I'm looking through the booklet that I got, Doctor Song and you are in here three times for awards.

So she's got the she's got the Health Influencer award and there she is. And then I flip over, I'm still in. My goodness, here she shows up again. She's got the Humanitarian Award.

And then not to mention that, which is one of the reasons why I have been most impressed with her. Are all of the Facebook lives and Instagram lives, and how she has this whole setup where she's able to do both at the same time and she's teaching us all this last year at the mind chatter table.

So she got the Social and Digital Media Award creator. So she's running up for that. So fantastic to have you on here. I feel so privileged to know you and to.

Yeah be have have our lives and our careers intersecting. And I thank you for taking the time today. Oh, well, I'm I'm so excited to be here with you.

And I'm in great company, you know, in terms of those nominations and honored to have been nominated. But, you know, the work that you're doing is so important.

And I'm just really honored to be a part of getting your information out. Now, we are going to be talking a lot about Covid today. And both of your kids got Covid this year.

Is that correct? That is correct. They both got Covid. So we went into quarantine. March 13th was Friday the 13th. I will never forget that day. Right.

And, and just about a week later, my daughter told the fever, high fever. She usually runs pretty hot, but she was 104. I on June 4th and a half. A little bit of a cough.

Fever lasted for about a week. And then she progressed on to developing this cough, shortness of breath as we were walking uphill and walking down the hallway.

But, you know, as a physician, I had a pulse oximeter and her oxygen saturations never went down below about 95, 94%. So I felt comfortable watching her.

I actually at that point, if you guys remember, I mean, this was only six months ago, but it seems like a lifetime ago, right? Covid testing is still not as accessible as it should be.

## Family COVID Experience and MIS-C

But if you remember, back in March, we couldn't get tests, right? As a private pediatrician, community pediatrician, I could not get swabs in my office, do testing.

I finally did tested Kenzie twice. She was negative. And then in the back of my mind, I think it was. She's been a week at a school. We haven't had reports of any Covid cases in our community.

So how on earth could she have gotten Covid? But I thought, okay, she doesn't have Covid. Two negative tests now we know how falsely inaccurate many of the testing.

As she kind of stepped through and I did my normal, you know, integrative functional medicine supplements and herbs and some acupuncture and she day ten recovered no problems.

It's like the light switch back on. And she was totally back to herself. But about a week later, into her illness, my son started getting sick with the fever.

And he just he had horrible abdominal pain and headaches. His primary symptom was gut low grade fever. And then the the the thing that freaked me out the most as a mom and as a pediatrician was he had hallucinations, right?

He started seeing in his room scary people walking around. He started hearing them say really awful things that he actually was kind of embarrassed to tell me that he heard them saying lots of cuss words.

I mean, he's eight. Yes, he's heard them, but we don't use them a lot. So, so he's sort of having this hallucinations, right? And at that point back in March, none of these symptoms were associated with Covid, remember? I mean, there was like, the hallucinations, cough and shortness of breath. Right.

And, and so I finally at that point, at the end of Cassie's illness, I did a third swab. I'm like, I just this is so bizarre. What a bizarre illness. The third swab came back positive for Covid, right?

And so then, Bodie, I saw him. He was negative, but we presumed, okay, he has to have had Covid. And in retrospect, he had all the symptoms of heading into possibly multisystem inflammatory syndrome in children.

Right. I am so thankful I didn't know what that was back then, because we did not have reports of these Kawasaki like illnesses back then, you know? Right.

If I had, I would have been even more freaked out. Right? But he the GI symptoms, he had the fever, he had the nervous system, symptoms with headaches and hallucinations.

He had pink eyes, right? He developed a weird rash on his body. All those would affect, into mIS-C. Now, he sailed through more or less. Right. Two days in the hospital for oxygen.

I was watching him, his oxygen level start to dip, and I brought him in because I had home oxygen for him. But it wasn't enough, and I needed the break. Right.

So. So I brought him in, to the hospital. And again, back then, we didn't know that children necessarily had better outcomes. Right. So that was one of the it probably was the single most frightening time of my life.

Right. Saying goodbye to my daughter and my son at the er door because they couldn't come in with us. Right. And just terrified and trying not to show Bodie how terrified I was that I wasn't sure what, when we were going to come out, if we were going to come out.

Right. I mean, just that fear. Like I never want any parent to have that. So I learned so many lessons from that experience. Yeah. In terms of the approach, supplements and nutritional supports to hopefully prevent serious complications from Covid and what to do if you get Covid.

And I've been help guide parents through this process for the past six months. And knock on wood, thankfully Kenzie and Bodie have zero complications.

No long term symptoms. It turns out I was able to check antibody levels for all four of us because people were like, how did you appear to not get it?

I mean, I was laying in bed with him, you know. All right. So, in July, I sent our blood off to. Get to labs. Came back positive for all four of us with antibodies.

So it looks like Peter and I did have it. And when I look back and do some contact tracing for us, the week before our lockdown, I saw a patient, a little boy who had a week of fever.

Four year old boy, week of fever, little low grade symptoms. He'd gone to the ER. They didn't find anything. He actually didn't tested for Covid at that point because we didn't know about Covid testing too much.

Right. Headache was not part of it. Right. So I saw him and I thought, well, maybe it could be a sinus infection. I gave him some herbs and I said, let's just watch.

Right? A week later I got an intense headache for four days. Sore throat. I actually swabbed myself for flu and strep because I'm like, what is it? I never feel like this right?

A week later was when Kenzie got sick. So we think that must have been it. And then this little boy, four weeks after he came to see me, was diagnosed with Kawasaki disease.

Oh my goodness. Yes. So he at that point, you know, when he presented to the hospital with Kawasaki, they did do Covid testing. They had the PCR swabs.

But that was four weeks after the initial Covid and illness. And we know that most children who develop mIS-C, it's 2 to 4 weeks after the initial illness.

So it's not surprising that his PCR swab was negative. Right. And I remember even at that time I spoke with the rheumatologist, I said, do you think this could be Covid related?

And he said, no, he had a negative swab. So now we know so much more. Yeah, we have so much more to learn. Right. And so I think, you know, I'm really trying to stay abreast of all the NAS I weekly meetings with my, with my Facebook group, to really keep everyone informed because knowledge really is power, right?

We don't we don't have to have the same panic that we had in March. And February. Right? We need to be aware, acknowledged. You know, this disease that, you know, could lead to many complications.

But also be empowered that we actually have tools in this integrative functional medicine world to, to support ourselves. So this like cytokine storm in this multisystem inflammatory reaction, we're really talking about what's happening on the cellular level and how our cells are responding to a virus or any other threat.

So talk to us a little bit about that. This cellular resistance, cellular resilience, all of these terms come to mind when it when we're talking and about these types of extreme reactions that happen in, in response to a threat like a viral infection.

That's right. That's right. So when we think about cellular resilience, you know, it's not just about in the beginning of the pandemic is all about immune support.

Now. It's about immune resilience, right. Because we know that, you know, preventing all illnesses and infections under the sun is not going to ever happen.

And it frankly really shouldn't. We don't want it to go right. I mean, we don't want to live in a bubble. We. Right. We need, our immune system to be educated, right.

To respond normally and healthily. That's really what cellular resilience is about. It's not never getting sick. It's the ability of our cells to take a hit.

And when I talk about hits, we can think about Doctor Navios work with the cell danger response. These hits can be infectious. They can be physiologic.

They can be, you know, musculoskeletal trauma. They can be environmental toxins like heavy metals or mycotoxins, mold toxins. And they can even be psychological toxins. Right.

Emotional trauma and stress, which is your specialty. Right. All of these toxic hits to our cells really create the same inflammatory response. This is where it's so important for people to understand.

It doesn't matter what the initial insult is, whether it's psychological, physiological, infectious or environmental toxin. It's the same cellular response.

And we need that cellular response to happen in an orchestrated way. And pass through all of what Doctor Navarro calls the phases of the cell danger response to get back to health and healing.

## Cell Danger Response and Cellular Resilience

And so cellular resilience is the ability of our cells to go through all of these stages of the cell danger response and bounce back quickly and even more fully and stronger for the next hit.

Okay, that's what it is all about. Yeah. When we talk about resilience, like that really is resilience on all levels, right? When we talk about any resilience through tough times or kids being resilient, like that's the idea that we have is that it's not that we're protecting them from tough times, it's that they have the capacity and the support and the resources to go through tough times and come back to a healthy place, not a damaged, broken place.

And so this is what's happening on the cellular level. And most of us as, as parents we think about emotional resilience. Right. How do we give kids that grit.

You know that kind of you know that that go through it. Yes. Right. But we need to really think about resilience, as you said, not just on that emotional front, but on that physical, physiologic, immunologic front.

Right. It's it's all tied together. And so when we think about cellular resilience, it doesn't come up as physical, immune and emotional resilience. They're all tied together in how we respond to infections like Covid 19.

I don't think that the cells really know a difference between, right, like necessarily what the insult is and the inflammatory reaction that happens. This cell danger response that happens, a threat is a threat to the cell, a danger is a danger, whatever, in whatever form.

And so it is it is all tied together and when you have something that's happening from a viral infection or a toxin or

something like that, it's going to affect the emotional resilience during that time as well.

And same thing. Right? The emotional resilience affects then your your biology and its ability to, to mount that response that it needs to come back to a healthy place.

Yeah. And, one thing you said is so important to highlight to listeners, our cells do not know the difference, between physical or psychological stress, the same amount of inflammatory cytokines.

If you know, by now the world has heard of cytokine storm, right. So when we think about inflammatory cytokines like IL six, interleukin six, TNF alpha, interleukin one, beta, those same amount of inflammatory cytokines are produced as a result of psychological stress as it is with infectious or, you know, physical stress, really.

And in some cases, there are more inflammatory cytokines released when we have psychological stress. And the problem with psychological stress is oftentimes for us in our society, right.

An infection can come and go, right? We can we can have the infection like a cold and then it goes away. Right. Sometimes. So psychological stress doesn't go away.

It's there simmering, simmering, simmering causing this chronic inflammation which leads to chronic disease. And that's really, you know, one of the epidemics that we are not addressing well in our society.

Right. Yeah. This epidemic of chronic inflammation caused by chronic psychological stress, and that's one of the most important things that we need to address for our children.

Yes. And I'm so glad you're bringing this up, because for me, this Covid, pandemic and everything that's happened along with that has just highlighted the amount of underlying psychological emotional distress and stress that that we are all under and seeing people and and their amount of fear, their reactions to that fear, lashing out in anger like it's it's just been, some, some severe extreme reactions and it's, it's just made it obvious, like how much of this stress is just a part of our life now.

We don't even realize that we're stressed. You know, you ask us for stress, and it's like, well, no more than usual, right? Yeah. So no, I'm not really stressed, but but it's just our society.

And this is affecting our kids because our kids are feeding off of our nervous system. Right. That regulation piece. And so whatever our nervous system is in like theirs is adjusting to that.

And so when we're always tend to be writing in the sympathetic in that stress zone, then that's where our kids also start to live on a daily basis and get used to that.

And then something like Covid happens, right? And that disrupts everything. And what a big disruption. And there's going to be long term consequences from a big stress like this on top of our chronic stress.

So let's talk about let's talk about some of the long term consequences that that we can expect in our kids in terms of chronic disease and even mental health.

Yeah. Well, you know, I want to just pause really quickly, though, because you've said so many important things that I think we want to highlight, too, as we think about, you know, how do we address this epidemic of chronic stress in children and adults?

Right. Because, you know, the the idea that we are constantly at a low grade, overdrive of our sympathetic nervous system, right? The fight, flight or freeze is very, very important, especially as it relates to the cell.

Dangerous spots that Doctor Navier describes, you know, and many, many of you listening have heard of the sympathetic and the parasympathetic nervous system, right to arms of the autonomic nervous system.

The sympathetic is fight, flight or freeze. Pupils dilated, heart racing, muscles contracted. Right. You're getting ready to run from that saber tooth Tiger or freeze and fight.

Right. So that's that's a state that we're always in. But but that like like we said that saber tooth tiger isn't always around. You know, we should go back to that baseline where what's really enhanced and working well is that parasympathetic nervous system response, which is the rest digest and heal state that restorative state.

Now, what's really important to understand in terms of Doctor Navarro's work with the cell danger response is as you move through the cell, dangerous sponson back into healing.

In this last stage of the cell, danger sponsors phase one, which contains the threat, the neutralizes the threat, and in doing so, it actually separates those cells that have been injured from the rest of your body because it's trying to protect us, their hosts.

Right. So those cells kind of are over here trying to fight whatever threat. Was there a little walled off, independent from the rest of our our body contained, contained if the threats neutralize, whether the infection is gone or maybe just walled off, you know, away from our immune system, hidden away, we move into cell in your response to that's when stem cells get recruited, when, when repair happens.

And that's where all this functional medicine tools like supporting the mitochondria, supporting, methylation, you know, vitamin D7, all of those are really important.

And then in phase three, race, the cell, the innocence, phase three, those cells that were separated either have to reconnect to the rest of their body or new cells replace those cells.

Right. And all of that happens through the vagus nerve. This is so key because the vagus nerve is if our vagus nerve, which rules our parasympathetic nervous system, if our vagus nerve is not working appropriately, we cannot move beyond and through cell danger response three back into health and healing.

And what Doctor Navarro has described is a lot of actually any chronic condition that we can think of can be considered a condition of being stuck in one of the three phases of cell dangerous spots, and the vast majority are conditions of being stuck in phase three, where the vagus nerve is not working optimally, or something like a heart rate variability is not optimized.

And those are things like chronic fatigue syndrome. You know, fibromyalgia, autism, post-traumatic stress disorder, dysautonomia or Pots, right. Those are all examples of being stuck in phase three.

Now, why is that important? Because what we're seeing with the long haulers, right?

## Vagus Nerve, Long COVID, and Recovery Tools

Children and adults with post-Covid complications is I really think we can envision that and really think of that as being stuck in that phase three, where the vagus nerve is not engaged, where they're in this state of abnormal heart rate variability, abnormal autonomic nervous system functioning, because when we think of patients with post-Covid syndrome and they're calling themselves the long haulers, they have features of fibromyalgia, chronic fatigue syndrome, their features of muscle activation syndrome, their features of disorder, Noumea or Pots.

They have features of mitochondrial dysfunction. Right. So all of these really important to think about that in the context, because we can throw all the supplements we want at patients, we can throw all the data life stuff, we can throw all the medications we want at these patients.

But and that will help. But they need mitochondrial support. They need support for their autonomic nervous system in terms of, you know, fluids and electrolytes, if they're having to start a new, they need, you know, mast cell stabilizers if they're having muscle activation.

But that one piece that vagus nerve piece is what many people don't think about and don't start working on, and I would say is one of the most important pieces in terms of getting patients who have long haul symptoms, back into healing.

And, and now the reports are I mean, we were talking a little offline before, but, the mortality rate from Covid 19 is declining, which is terrific. I mean, so much we're in so much of a better place in terms of mortality than we were in February.

You know, when we were just starting to see, Covid in the United States. The problem, though, is reports are now that 90% of people who have survived Covid 19 are post-Covid syndromes.

Yeah. Having three or more symptoms that are persisting for months and months, and especially the fatigue, muscle aches, fibromyalgia, type of symptoms. Yes.

And so, you know, if we understand, you know, how to support that long haul. And I would say in the moment when you're sick with Covid, I think the two I mean, there are many things that are so important, but the two things that I think have made the most difference and the families that I've supported going through Covid and my nanny, who's gone through Covid, her extended family, you know, with, with families who have gone through Covid, and now none of the families I've helped go through or do any of the adults have post-Covid complications.

They're not long haulers. And these are patients, people who have had Covid back even in March, April, May. And so mitochondrial support is key when you're going through an infectious process, right, supporting the cellular powerhouses in our cell.

And are those energy powerhouses in themselves, so that we have the energy to repair and to recover. Right. That's the resilience piece to bounce back.

And those can those mitochondria supports most importantly include CoQ10 but might include other cocktail mitochondrial cocktails like your B vitamins and, antioxidants, phospholipids.

And then there's also something called specialized pro resolving mediators, which, you know, these are the mediators that, our body naturally produces, but oftentimes not in high enough amounts, to help normalize, resolve inflammation in a healthy way.

Right. This is not suppressing inflammation. Right? There's a difference because when we have inflammation, inflammation is not always a bad word. Right.

When we have an infection we should have some fever. We should have some inflammatory cytokines to try to mop up. You know, all of those infectious processes that are going on.

But when inflammation is done its job, we need a way for this pro resolving part of our immune system. So hey, you've done your job. Let's go back down and get back into balance for the next time.

Right. What's happening for some people with Covid is the inflammation is going down. The resolving piece isn't working enough. And so we have this information that's either stays chronic with these, you know, these long haulers or overshoots so much that they develop cytokine storm and sepsis and acute respiratory distress syndrome.

And so these specialized pro resolving mediators that can be found in fissures. But there are a couple of steps a supply manufacturers that have been able to purify out specific PMS or specialized pro resolving mediators.

So I think those two things are so important in terms of long haul, you know, preventing long haul syndrome if you already are a long hauler. I think the vagus nerve work is really important.

Yes. And I wanted to, I wanted to address more of the vagus nerve, because as you're talking and as you're

describing, especially that stage three of the cell danger response, what's coming to mind is all of like the trauma therapy trainings that I've done.

And I think it's time to bring that into medicine, because the correlations are right there. And I think that the what's happening in the nervous system with the vagus nerve is, is very much reflective of what's happening in terms of the survival states.

And with the vagus nerve, we know from Steven Porges work that there's this freeze response that you mentioned. And so when we go sympathetic, we're very active.

It's a very active response to danger. But then when the system gets overwhelmed, it goes into the dorsal vagal response. And that's the freeze response.

And it's it's this shutting down of the system. It's we're going to conserve energy in order to try to survive because fighting or, you know, running away that takes too much of our energy and we need to conserve energy.

And so it's it's shutting things down. And it sounds very similar to the stage three cell danger response, because those are the types of symptoms that people have when they've also been in a chronic freeze state in their life TSD, fibromyalgia, fatigue, depression those are all the characteristics of someone who has been in a chronic free state from imbalances and their nervous system, and whether that's from previous emotional trauma, psychological trauma, or just their body and their biology and it being too much and they don't have that resilience.

And so then something hits them, whether it be a Covid and or a viral infection or someone dies in their family and it's more of an emotional or psychological trauma, but then it's just too much for their system and they shut down and they're going to go into they're going to get stuck in this stage.

Three cell danger response. It's part of the the dorsal vagal. And we need to be able to shift that into the ventral vagal and the parasympathetic where that healing process can happen.

So important. You know, just to really put this into a doable context for people to, you know, when we think about how do we, you know, get back into that parasympathetic state, get out of that free state, you know, whether it's from chronic trauma or whether it's it's from Covid 19 and you're in sepsis there.

There's that one variable that I mentioned before for heart rate variability. And we can measure that in actually the different stages of the cell. Dangerous spots to see where we're at and when we're in a constantly stressed state, in a perpetual sympathetic state, which is what sepsis is.

Right. You know, we are we lose that normal heart rate variability. And when we have optimal heart rate variability, we have something called normal respiratory sinus arrhythmia.

And this is something that you could do just sitting right at home. You can feel your pulse either at your neck or at your wrist. And as you take a deep breath in.

Your heart rate be change up. And then as you exhale, slowly. Your heart rate should slow down. And for children that respiratory it's a breathing sinus meaning your heart's arrhythmia.

So the the variation in your heart rate rhythm as you're breathing in and breathing out can be very market. Right. But we all you know, that's a, that's a sign of optimal health.

And so some of these tools that measure heart rate variability, can actually help us to get back into a state of good, you know, parasympathetic response.

In fact, before Covid started, there was a study that was, ongoing on looking at vagus nerve stimulation and heart rate variability in patients with sepsis.

Right. And so what what they were looking at is, there's been studies showing that heart rate variability is a better predictor of septic shock. Then, there's a couple of different scores for sepsis and also clinical judgment of the ICU doctors.

Right. And so and and transcutaneous auricular. So your vagus nerve stimulation can get you back into a state of good heart rate variability. Now not everyone I actually have a unit that I've been starting to use with some patients, with autism or pains and panics and autoimmune issues to really see how can we more, more passively engage the vagus nerve to get back into a healthy state?

Because, you know, there are there are ways to engage the vagus nerve, but but it takes a little bit of effort on our part as parents and our children's part 100% worth it.

It that's the one thing that I think if you can instill in your children different practices to engage their vagus nerve, they will be healthier for their lifetime and and I saw this kind of first hand and body was in the hospital, how important it was to engage that vagus nerve, because when he was in the hospital and he was on a, you know, 24, seven oxygen monitor, and I could see his oxygen up on the screen, and there would be times when his oxygen levels start to drop.

Right. And and he was on he was on two liters of oxygen. And so when his oxygen levels were start to drop and in my mind I'm thinking, oh my gosh, is this the Covid crash that people are talking about?

Right. And so I would start to get anxious and I would tell buddy, okay, let's sit up and, you know, start to breathe and you know, you're feeling okay.

And he would he would his oxygen levels would continue to drop and he'd say, mommy, stop.

## Childhood Chronic Disease and Prevention

You're scaring me. Right. So then I would have to do everything I could to just calm myself down. And then we would sit and I would pull out my phone with, there's a children's app called stop, breathe, think.

And we would do what's called square breathing. And I would we would slow down. We would practice the belly diaphragmatic breathing with the square breathing.

And then we would stand up and just positively shout out our healing mantras. You know, my body's strong, my lungs are strong. I'm getting stronger and stronger every day.

And I mean, that would take two minutes. Three minutes. In those two minutes, his oxygen levels would bounce right back up and sometimes much higher than he was at is a typical baseline when he's in the hospital.

So, really so important when you're sick. But imagine I mean, he had those tools with the breath work before we came in. Right. So if you can access those tools when you're sick, you can get out.

You can help your vagus nerve, you know, kickstart and get out of that last phase of the cell danger response and then get back into your healing state so that we, can hope, fully prevent that long haul syndrome and, and help get patients out of the long haul syndrome if you're already there.

Yeah. The healthier that you can go into something like this the better you're going to be able to go through all the stages and get back to health. And so the vagus nerve work breath work mitochondria optimization like the more you can optimize.

And I think that that really is the focus for all chronic disease, especially with our kids. Right. Like optimize them as young as possible. Optimize them now so that whatever it is that they go through, they're going to be able to go through it in a healthy way.

Have the responses that their body needs to have to come back to a place of health and not get stuck in the disease process. That's right. Absolutely.

I mean, that's what we want for all of our children, right? You know, to be able to bounce back. And, you know, we didn't talk about some of this alarming statistics about chronic disease in childhood.

But, it is it's very alarming, you know, as a pediatrician, this is a it's it Covid 19, if anything, has been a wake up call to the importance of prevention and, you know, lifestyle medicine.

But, you know, it's it's we need to start acting now for our kids, you know, because at the moment we have just a little over one and two children. I mean, this is this is old data that's from 2015.

But at that point, 55% of all children were diagnosed with some sort of chronic condition by 2025, which is just five years from now. That number is expected to be at least 80% if we're going along this trajectory.

So 8 in 10 children with some sort of a chronic condition which may be as, quote, mild as excellent asthma, although as excellent as are now considered autoimmune phenomena.

And we are seeing quite severe eczema nowadays. And asthma to anxiety, depression, autism, ADHD pans and pandas and, you know, this, this epidemic of autoimmunity is very startling.

And I'm seeing children at younger and younger ages, you know, an 18 month old with ulcerative colitis, you know, six month old, but yes, a six month old with Crohn's disease.

Right. Who is now doing great, I mean, beautifully. Well, but we shouldn't have that. You know, these children should not. You know, I had a family of three children, all diagnosed as children, all diagnosed with juvenile rheumatoid arthritis, and one of them had great and Crohn's disease.

I mean, what is going on here? Right? So we can teach these two of these foundations of health. And one of the foundations that I think is going to be the most important for cellular resilience is as foundations of mindfulness meditation, gratitude, you know, all of those things that engage the vagus nerve on a consistent basis so that when we do encounter a major psychological or infectious or physical threat, our cells remember, our cells know, okay, I know how to engage my vagus nerve.

I know how to get out of this. Yeah, that's that's the key to the cellular resilience is the vagus nerve. And so looking at the trends for the chronic diseases in children, that is scary stuff like those are those are numbers that are unprecedented.

This has never happened before. And yeah, it's hopefully this can be a wake up call for people to really start looking at their health differently, looking at their children's health differently, and figuring out what they can do in order to get off of that trajectory.

And if they are on it, what can they do to optimize? Because it's not it's not a life sentence. There are so many things that they can do to bring health into a system that's gotten stuck and, and that's, you know, through all the functional medicine principles, through the vagus nerve work, there's so much that can be done.

So there's there's a lot of hope. And it sounds like you've been able to work with a lot of families and bring them hope, even when they've had some diagnoses very, very young.

Well that, you know, I really appreciate what you said and want parents to hear, you know, it's not a life sentence to have a diagnosis. Right. Your child is not their diagnosis.

You are not your diagnosis. Right. You know it is never too late to make changes. And you know, just by listening to this summit as a parent, you're already taking that first step to educate and empower yourself with the information on, how to help your kids moving forward.

Right?

## Closing Remarks and Resources

So we just we we keep moving forward as a, as moms, you know, there's, so much back there to feel guilty about, right? So we can't go back and change time.

So we just have to keep moving forward. You know, start with where you're at. Also where can people find you a doctor song. So the best places to go to my online educational site, my blog Healthy kids Happy kids.

And that's healthy kids, Happy kids.com. I'm also pretty active on Facebook and also Instagram. If you just look up healthy kids happy because you'll find me, I try to post a lot of relevant up to date information and sprinkles, you know, stuff in about my kids here and there because, I learn from my kids.

And so whatever, whatever, I learn something from them. I'd love to share with you guys as well. So those are gonna be the best places. Awesome. Well, and I really want to just.

Thank you. I'm very much in gratitude for you sharing your experience, your knowledge, having had to go through that experience with your kids, having Covid, and it sounds like even more friends and family members and being able to come out the other side and say, hey, this is what we can do about it.

And this is what happens if we don't, understand the biology and how to support it. And this is how to avoid all of that. So thank you so much. This is such important information right now.

Oh you're welcome. Thanks for having me on. And thank you for joining us today. I'm your host for this Bio Optimize Summit Doctor Amy. And make sure you get the discount prices for the recordings and the content while it lasts.

Once the discount prices are gone, those are gone forever. And I would just love to see you inside. Be able to connect with you. Get to know you better together.

Let's find that next level of health and aliveness.