Introduction to Dr. Debbie Hamilton

Today I invite Doctor Debbie Hamilton, MD, MPH. She's a pediatrician with an experience in primary care integrative medicine. Lots of research, speaking and writing.

And it's a huge advocate for developmental disorders. She, Her kitchen includes an undergraduate degree from, Wesley University, followed by a medical degree from Chicago Medical School.

She's board certified in pediatrics, physician nutrition, integrative and holistic medicine, and, Institute for Functional Medicine, certified practitioner ship and has a master's degree in public health.

And, and she also has done a ton of research on clinical nutrition at the Hamilton founded, Holistic Pediatric Consulting in Colorado in 2005. And a practice really focuses on treating children and chronic diseases such as autism, ADHD, and, preconception counseling.

Based on her book Preventing Autism and ADHD Controlling Risk Factors before, during, and After Pregnancy. In 2017, Doctor Hamilton joined Research Nutritional, so she focused on clinical research, product development and mitigation of health care professionals.

She continues to see patients through the holistic pediatric consulting in Colorado through telemedicine consults. I can't wait to introduce her on to the summit.

We're gonna have a fabulous, fabulous discussion. One thing that I do want people to take note of is that the things that we're talking about today, used to be truly controversial, but now there's so much science behind it, and it's really exciting to, to offer this as well.

We'll also welcome to the forum. So happy to have you on. Well, thank you very much for inviting me in, including me. So, you know, you have such an interesting professional history as I just.

And what a journey to go on. From, you know, massive public health and nutrition education and doctor and all that stuff like that. So, but our topic today is mood and developmental disorders in children.

So, so happy to talk about that because I have three young daughters I want to make sure that they're okay. Right. Yeah. Yeah. So, how common, by the way, are mood and development disorders in children?

Unfortunately, very common. And Covid didn't do us any favors. In terms of mood disorders. It was about 20%. If you look at kind of, children, teenagers and then Covid, it actually doubled those rates.

If you think about depression, anxiety, and I've been seeing a lot of kids all ages who've really had a lot of issues in terms of developmental disorders.

Rising Rates of Mood and Developmental Disorders

Estimates were 1 in 5, 1 in 6 of children had some kind of learning or developmental issue. ADHD is like 10% of our kids. And it's, you know, a lot more in boys and girls.

This is kind of how I got in there. I've got a son that ADHD who who's now an adult. He's doing awesome. But we are turning our cells. Yeah. The autism.

When I started, probably, like 18, 20 years ago, just integrated medicine. It was like 1 in 150 kids with autism. And now it's like 130, one and 30 something.

And again, our boys are much more effective. So the rate of, you know, increases. Obviously it can't be genetic, right? It can't be just generations who are doing moving too quickly.

What is what is causing this increase? Because we're seeing the same thing reflecting adult populations, you know, worsening. Increased 60% increase in the diagnosis of Alzheimer's dementia in the last couple years, right.

So even in adult we're seeing the same thing bipolar disorder. There's a huge one. Schizophrenia has increased dramatically since the since the pandemic.

Right. Like what's going on here? You know. And then if you think about before, after pandemic. So I wrote a book because I had, you know, a show with autism and that families are what can we do if we don't have another child?

And so I look all the way back and preconception. So in terms of children we have to look at their moms. So the mom has inflammation. If she has infections if she has autoimmune disease.

She nutritional deficiencies all those play a role. And so I feel like these kids, especially with autism, it's like the ultimate. There's so many different hits.

Starting preconception. More likely to be borne by C-section. More likely to, you know, not be nursed. Although nursing, you know, a lot of women are really toxic.

So that's a whole other issue. There's definitely a dire nutritional impact. Look at all the stuffs in our food. If you look at the whole microbiome, we talked about the gut brain connection.

Right? You're born with C-section. You don't get that natural gut flora to start, and you're not nurse. You don't get it. And so that sets up your immune system.

That sets up if autoimmune disease neuroinflammation. And so our thinking about all the different toxicities we have from glyphosate, which I think is probably really underestimated.

You know, if you look at some of the rates and the use of glyphosate and pesticides that go up. There's definitely genetic susceptibility. Especially mood disorders, but also in autism, the one child with autism, especially a boy, you have another boy.

The rates are really high. Of that and ADHD. So I think it's a really a combination of so many different things that we're doing in our environment and our diet.

Like, and then not to mention Emfs. I mean, we I feel like we're doing so many things that we really don't know, long term impacts at all. Okay. So, you know, electromagnetic fields, are one of the things.

But what about, psychological emotional stress, especially decreased conception in utero? How how much is that affect? It's inborn. Yeah. Well, if you have the the mom has elevated cortisol.

It definitely affects the baby in terms of setting up the HPA axis. And you think about that a lot of these kids are in constant fight or flight. It's like they're born in fight or flight.

And so if our adrenals are stressed, a lot of times if adrenals are stressed, the thyroid stress, thyroid hormone plays a huge role in terms of development.

In terms of neurologic development. So I think that that, you know, and what are women doing to cope with that stress?

Prenatal, Environmental, and Stress Factors

You know, what about the medications they may be on right now? I mean, I think there's so many different factors.

Unfortunately. And and you talked about consolidation and I don't want people to to listen to this and say all cortisol is to blame.

It's just a marker. It's just a marker that we look at for chronic stress factors. Right, right. And in reality, you know, stress plays a huge important part into the the gene expression.

What genes are actually expressed on a daily basis. So it plays it plays a massive impact into developmental and mood disorders. Adult and kids alone, which it's kind of, you know, that kind of plays a role into our lifestyles in what we how we consume information in the modern age.

So there's a lot of social media and screen time and stuff like that. Let's, let's have you just comment really quickly. How does something like that like, you know, looking at screens and ideas coming in through social media, how does that really affecting development and mood?

I think it leads to a lot of like attention issues and ADHD issues because there's a constant flux of lights and sounds and people, and then they go in the classroom and they're supposed to listen to this without any of the visual.

And I think it contributes a lot to stress for these kids. It's like they're more connected online, but they think they're much more isolated. And then the bullying and you know, what they hear and the comparisons.

And I think it's really stressful for these kids. And I and I said I think they miss a lot of the other kind of development that kids are supposed to have.

And the creativity going around and individuals. Yeah, absolutely. And I always sort of give this example when it comes to attention. So, in 1990, when, The Real World came out on MTV, it was really the first show that dedicated, a specific filmography to sort of the eighth generation, which is what's called four second viral footages.

And I'm a history and videographer. So what it is is that you have you have a four second before you transition into every scene. Now, if we look at that back in the day versus now, it's not a huge deal because right now the average transition is 0.7 seconds.

That's crazy right? Attention span shorter. So videographers are actually, changing the style of media content. And now of course, is a huge explosion of shorts, short form video content on TikTok and Instagram Reels.

YouTube shorts and stuff like that. Right. And back in the day was fine. So you have this explosion of short form content that now allows the person to just scroll through.

They're actually making their own video footage to scroll through, and the more they scroll through, the more through that that ADV mindset kind of kicks in.

And so from a from a videography background, we know that based on marketing data that these show from content as well as a short video footage on 0.7 seconds allows the person to stay on that video for x number of seconds longer in a specific population, usually aged between 11 and 16.

So that's what that's what the data is based on right now, that's all. Making sure they're short form content. So that's concerning. And it's not it's not the marketing companies fault.

It's just that they're just reacting to what people's behaviors are. But that goes back to the brain you know. Right. Yeah. Goes back to the brain and goes back to to lifestyle.

So let's let's touch on nutrition for a little because I think this is huge. So let's kind of have you describe how does nutrition play this role into developmental and mood issues.

And how do we know. How do we know. I mean some of it is from research. There's studies that show even if a mom is low in vitamin D, that child has an increased risk of autism if she's low in iron.

It's a child as a risk. There's studies that look at certain levels of iron and zinc and omega threes, ferritin, like an iron level, like below 30. And when you, you know, supplement these children, they actually get better.

Attention gets better, the mood gets better. So research that helps if that makes sense. So I think it's other. Of course I don't yet. You just said something super important that that I see my practice as well.

You said often and below 30 is correlated with blood involvement, because right now, the average range on labs from a pediatric population is. It's below eight uncertain.

I don't know if you know this, but I know I'm really low. Yeah. So they're actually based on a standard deviation graph of most of the population. And so even then it says like, you know, 25 to 2 at risk on the 13, but on the labs.

And there's a lot of red. And honestly doctors don't really address that. Right. And so, unless they're like you and me, then we do address it a lot. But folks, and below 30 is a massive, population, massive portion of the population with that level of iron deficiency.

Right? Right.

Screen Time, Attention, and Social Media

And so it's and it's so important to, to to know, understand that. And so but that goes beyond nutrition because, you know, I think there's, there's other educational points with, especially with, with, with women and girls who are menstrual cycles that there's blood loss.

Right. Right. And that and heavy heavy metal cycles tend to, make people at risk for losing the iron and thus turn into, you know, A. D. D. and stuff like that.

And I can't tell you how many times we find really low irons, and we either do iron infusions or having something to iron, and that improves 80 like 80%.

I mean, just something as simple as well. I mean, can't pay attention to here at basically anemic or low at basically low iron stores. What about sleep?

Like sleep? Doctors want to like the ferritin about 50. So people don't think about even that. And you know, sleep is one of our restorative healing modalities.

And these kids aren't getting enough sleep anyway. Right. So it's kind of you kind of get into different parts of kind of health and nutrition. I mean, and then you think of our processed foods, have you seen some kids who what they eat?

I think the pesticides play a role. And, there are some studies on just food dyes itself and hyperactivity. You just take the food dyes out. And that was even recognized in the 70s like fangled first talked about it a long, long time ago.

But 50 years at this point, you know, thinking about what our kids are eating, the worst diet. One of the things I do in my practice is I take a diet record.

I, you know, parents write three days. And so my kids with autism, I mean, they're eating five foods. I had one child come in. He literally white bread and candy.

That was all he ate. You know, parents get so scared about what they're feeding that child or these child, you know, like this. Especially my child with autism have, you know, sensory issues and texture issues and all sorts of stuff.

But, you know, kids who when the parents say, oh, this is healthy. I'm like, well, right. You know, there's still a lot of

things missing here. Yeah, massive.

And I don't think there's enough dedication to the role of nutrition in in developmental disorders. There's just not a whole lot of attention on this as it should be.

You know, we have the ability right now to do a lot of and see different labs. And, and and diagnosis. So you know what my, my area is quantity of eggs.

So, you know, earlier we talked about how sleep is getting affected, which contributes to a lot of developmental disorders. And of course our brain regenerates during deep sleep.

And we need three cycles of deep sleep to get there. Each cycle is about two hours. So those people sleeping under six significant developmental disorders and, they almost behave like kind of their little drunken stupor.

But more importantly, I think that if you look at the, the EEG definition or EEG biomarker of, of, inattention or attention deficit and EEG, basically for those who are listening, is a device.

So just like an EKG measure, the electrical conduction of your heart EEG measures, multiple lots of conduction of your brain.

Nutrition, Iron, and Sleep

And so there's something called theta, the beta ratio, which is a biomarker of ADHD. Well, a theta to be a ratio that's high above one is impaired. What does that mean?

Well, it means that the brain is is existing on theta ways more than the beta waves. Theta is sleepy, beta is awake. So the EEG definition of attention disorder is technically it's a sleep disorder because you have more sleepy brain then you have awake.

And then when I speak to sleep neurologist about this is they're like, you know, it's like that's the neurological definition. So we really have to be like psychiatry in neurology together, right?

And so and so they started looking at drugs. That can improve the theta beta ratio like Adderall and Ritalin and stuff like that. But that doesn't necessarily get to the root cause.

Right? It's just like a bandaid that that gets there. Nothing wrong with the medications that you needed. But we still have to uncover the underlying things.

But besides this fancy EEG device, and what do you use to, to, to look at this for development disorders and the disorders like ADHD in terms of, I don't look at the EEGs.

I definitely have kids who come through the labs in terms of labs. Oh, in terms of labs, I mean, I have, I mean, I do basic blood labs and, you know, zinc ion, vitamin D, B12, I always look at thyroid panels.

Obviously the basic labs, depending on the history, I might look at, like food allergies and sensitivities. I usually do like an organic acid test. And people called the old test, because it looks like, you know, get the dysbiosis markers.

They have more GI issues. I might like a stool test, mitochondrial markers, you know, you don't get the energy in the cell. It's obviously hard to pay attention.

There's a lot of mitochondria dysfunction. So autism actually and depression too. And mood issues. Neurotransmitter metabolites, detoxification metabolites and some more nutritional markers.

So those two are kind of like a good starting point for me. And I get a lot of information. And so that's usually kind of where I start. I would start with diet, you know, that to make sure the guts of doing well, getting metabolic

mitochondria, and eventually depending on what's going on, then I look at more toxicity issues and things like that.

So that's kind of yeah. So that's that's how we approach adult medicine as well. Now, you know, people listening to this. Well that's a lot of information. Where do you start?

Well, you start with a good practitioner. That's where you start. Right? Yeah. That's able to guide you along the way. You know, you don't necessarily want to order things or stuff.

Some of these you can't order yourself anyway. Right. Yeah. Without a practitioner we got to get what people know, who know what they're doing. So, let's talk about, the second brain, or the gut microbiome, the gut bacteria.

And so there's more neurons in the gut microbiome than it is in the actual brain. So there's a huge gut brain axis that we have to, now we have to accommodate for whenever we're looking at these disorders.

So how does the gut brain microbiome axis play a role in the development of these disorders? Yeah. Well, I think of it I mean, there's the vagus nerve.

So kind of the there's a connection between the nerve there's connection between the circulation. I think of the microbiome, as also kind of like a key to your immune system.

You know, there's also a lot of neurotransmitters. You said there's kind of like there's a lot of neurologic issues that way, too. If the immune system is not balanced, it sets you up for kind of more inflammation, which kind of plays a role.

And, you know, brain health in terms of inflammation, like autism, there's and Alzheimer's is neuroinflammation. It sets you up, I said, for autoimmune disease, I think it kind of a lot of that.

I mean, there's definitely kind of a mood disorder issues, immune issues could get sick. Can I? Digestive issues. I don't know if that is. Can you think of anything else that that makes sense? Yeah.

So let me kind of piggyback on least, I think it's really important is that there's multiple factors, right. When people think that gut bacteria is is there and it does a sort of black box magical thing.

Is it actually there's a lot of connections there. Right. So, you know, you talked about vagus nerve first, which is my favorite topic of all times. The vagus nerve.

The vagus nerve, by the way, for those listening, is the nerve that comes from the bottom part of the brain called the brainstem and has multiple different branches.

And it behaves like a vagabond. That's why it's called vagus nerve. It wonders everywhere. The wandering nerve. That's technically what it means. And or it goes to or a lot of organs.

So the entire gut is controlled by the vagus nerve, and the gut microbiome feeds back to the vagus nerve. It's a two way street. And so as the nerve permeates through the gut, and then the microbiome actually has, things that it does actually communicate with the vagus nerve.

Well, what else does the vagus nerve connected? Well, it's your immune system. And the gut has a huge amount of immune immune cells in there called a gut associated lymphatic tissue, as well as the gut itself actually is an immune organ as well as the digestive organ, as well.

And so, now now we kind of gets back to the original question is, hey, why are people developing more disorders during Covid? And it's because, well, there's, there's there's a bi directional interchange.

So there's a perception of stress. Stress affects the microbiome. Microbiome feeds back to suppress the vagal, activation. So people are persistent fight or flight.

And so even that amount of stress is all dictated by the vagus nerve and the immune system.

Gut-Brain Axis and Inflammation

And that's a huge, huge, development or, construct in, you know, in my field is, is more, you know, Parkinson's dementia and Alzheimer's dementia and stuff like that in your field is more autism and ADHD.

But in reality, we're really talking about the same things between, you know. Right, right. You know, I, I, I jokingly said this on another part of the discussion, with someone else, but I kind of jokingly said it, but I was kind of, in truth, is that like pediatric ADHD is basically, you know, what I would consider, like mild cognitive impairment, in developmental Alzheimer's, it's same like spectrum and physiology.

Right. And so, so we really have to address this, you know, much, earlier on, you know, what do you think is going to move the needle the most in improvement in developmental disorders and mood disorders?

Do you think it's the diet? And do you think it's, trauma or relationships and connections people have? Do you think, it has to do with toxins? Like, what do you what do you think?

Like, moves and you the most when it comes to healing for me, I mean, unfortunately, I think all of us play a role. I mean, I as I said, I always think we have to get the moms healthy because the healthier the babies starts, the better they have chance.

You know, they start behind and they've already been exposed to toxin in utero and, you know, missing different nutrients. As I said, they're already kind of behind the eight ball.

So then they they come out and then their nutrition is or their immune development, their gut development. It kind of sets them up. It feels like the multiple hit, you know, there's only so many hits that they take before, as I said, they kind of, you know, regress.

So the kids, you know, who start even from very early on with it, but what about the moms who are listening now who maybe already have like 12, 13 year old diagnosed with ADHD?

Is it too late to do something about it? No, it's definitely not. I mean, that's always look at the diet, look at the nutrition. That's always a really good starting point.

Because I said there is definitely ways you can help them calm down and pay attention better. You know, it's interesting because the kids with autism have more of an like overt GI symptoms than ADHD as kids get.

It is like ADHD. Autism is a spectrum, just like you said, normal cognitive centers, which is interesting. I never kind of thought it thought of it like that.

But I always go, you can't get, you know, you can't go buy good nutrition, cleaning up the house in terms of toxins, you know, there's some broad basic things, you know, what do you, you know, how do you clean your house with products you use?

What are you spraying or spraying? Roundup on your garden, you know, what are you use in terms of products? Organic food. You know, you started I was like, oh, I don't know, organic food.

I'm like the more and more you can there's studies about how quickly, organic food can kind of clear out some of the pesticides. You know, I think you do need to make some life changes like that.

And that's a really good start. Kids need to get sleep. Is for teenagers, is supposed to get up really early and they're naturally go to bed at later.

So we're really kind of most a lot of teenagers are not doing well in terms of sleep. You got to get them to get them

vitamin D, get them exercise, you know, get them off the screens, get them away from their phones, right.

And limit those in some level. And these are huge because, you know, recently I talked to somebody, a parent, that was really concerned about their child.

And it's interesting because a child is 30 years old. It's relative. Yeah. These are relative. Right. And he's like, man, you spending a lot of time like on social media a lot of time, you know doing business development etc., etc.

on the computer screen. And one of the things that that we really that we, we talked about say, what else do you like instead of looking at your phone, looking at email first and you get up, take that time and do you do a ten minute walk?

And it's so powerful how the one change in, inhabit, you know, county's got down a slowly become less. It didn't eat any different. His building became less.

You know, he it's a lot more clear. And so it's not just about walking and exercise about the intention, what you do throughout the day as to changes over time.

As well, you know, for, for that performance. And so, you know, but yes, you're right, I think that the, the guts toxins, the, and, and the, our ability to actually eat clean food is extremely important.

The what, you know. No, I'm not I don't see children's. I don't know about autism as much as as most people like yourself. But what do you think is the difference?

You said earlier that, you know, attention, issues and mood issues or hear autism is here, but there's also a spectrum in between, right? Right. What do you think delineates that, that the spectrum is just a diagnostic criteria, or is it something that that's there?

I feel like, as I said, like sensory processing and, you know, there's like mood issues on that. And most with autism, there is some kind of mood anxiety issues and attention issues.

And as kids get it, you know, for them to get better, they have a lot of ADHD. So I think it's more hit. The kids with autism tend to have more severe digestive issues, more severe immune issues.

And if that makes sense, more autoimmune issues. Right. And the ADHD is like there's definitely like, you know, lead toxicity and nutritional component, but much less GI issues.

So I feel like there's a more inflammatory component to autism.

Treatment Approaches and Supplements

That that makes that mean they're sicker and something and that makes sense of why the statistics are getting worse and all the populations. Right. We're seeing more autism. We're seeing more.

And it seems like a standard, you know, 10% of the population, obviously, you know, I mean, maybe in a couple years it'll be 20% right. And so there's something about our environment that's really changing, that's creating, more of this.

And so people argue, well, maybe we're just diagnosing more. I just don't think so. I think we're still under diagnosing as well. I think that what's happening right now is that there is a huge shift in the way our lifestyles are.

Yeah. You know, back back in the, right after World War One is were all the sort of explosion of pesticides really came in. Right? The pesticides allowed the wheat crops to be much, much more Bountiful.

The waste be much less of it. They're shorter, but they have actually have more grains, which also, unfortunately,

increase the amount of gluten that's in them.

And then now the neurotoxicity is more like technology based. You know, you talked about M. S. a little bit earlier, which could be an issue. And then you also have, plastics. Right.

And then I'm in Texas. So we have petroleum byproducts within our soil. So every patient I touch has it in the urine. You know, I haven't seen one that's negative. Right.

And so I'm seeing a lot of the, the toxic, toxic world, you know, come into play. With these things. And so are there things that we can do to defend ourselves beyond like nutrition and, you know, beyond stress reduction or something like that?

For example, what are some supplements that that may be key to address this? I mean, if you're thinking of detoxification, things like if I own milk thistle, things that help kind of your liver detox because I've been exposed to so much, I feel like your body can only handle so much.

You know, we talked about things like vitamin D, your vitamin D higher, your immune system stronger, be less allergic, potentially less problems of blood sugar.

You know, if you have iron and zinc and then zinc in terms of I was taught no zinc, no think, you know, it's involved in so many different cognitive process.

And mood is great if you have low zinc. That's the rage behavior. Right. The 0 to 60. You know, you get upset so quickly for stress tolerance. I use some targeted B vitamins things that I look at some genetics to.

It didn't talk about that much more than me your far. But sometimes it's like, oh, I really need active B6. And I think most people are low on magnesium, which is a really calming kind of mineral.

Omega threes are mood stabilizing if you get them at high enough levels. That's here. You talk about the bipolar or like the kids who are just like up and down and everything else.

I've looked at hair tests. There's like low lithium, right. Nutritional lithium can make a difference in terms of stability. I think in that there are some supplements I use.

I use like some of the calming herbs, I use adaptogens, you know, talk about that cortisol stress response. People are like this and then they're burnt out.

You know, let's get to homeostasis like ashwagandha, right? Things like that. And it's so individualized. You know, I wish it could be super general, but it's so it's true.

It's again, it's it's things to work with, with practitioners on especially functional practitioners when it comes to from this topic and sometimes, you know, as parents, it can get kind of lost to and kind of overanalyze certain things as well.

And what's, you know, that's there's a reason for that, right? I you want to protect the child. And that's totally understandable. But sometimes the complexity can be the enemy of progress, as well.

So certainly for those of you who listen to this, please work with an actual practitioner, on this rather than do it yourself. You don't have to be alone.

When it comes to this. So do you, do you think what do you think is going to slow down? The diagnosis and development of the disorders in our future generations.

I am truly concerned about my kids. And I'm sure you are, too. Yeah. I mean, I'm at the point. My kids are in their 20s, so, you know, and a lot of kids that age like, oh, know, the world's in such bad shape.

I mean, you know, climate change and environment, everything else. And some of these kids are like, I don't want to have kids. I don't want grandkids in this world.

So, yeah, we really do need to. I mean, I think, like, there's got to be some kind of like, understanding of where we are, like some reality where we are.

Yeah. And I looking at what's in our environment, looking at the Emfs and going at 5G. What is that really impacting? You know, parents a lot of times need to get involved and what the kids are eating before they're exposed to, as I think and I mean, all the way up to, you know, things that you do in your home to all the way up to, like, climate change, more political things.

But there's of, I think there's got to be pre-conception testing. I think we need to really look at mom's health, because you don't get the mom healthy, because your kids are already starting around April, so I think there's got to be some recognition and some kind of, you know, kind of a way.

I mean, people need to be aware of how severe we are or the mental health of our kids is awful. And there's yeah, all of that. But the social isolation and Covid did just not any favors for, you know, it was a horrible time for many, many people.

And our kids really, I mean, as poor teenagers who are in high school and my kids were in college, you know, I mean, like so much of their development was just like literally cut short.

Yeah. And it sounds like awareness is is absolute key. And that's part of the reason we're doing doing these forms and these summits. Right. It's just awareness behind it. All right.

I think that as we go forward, the stigma of being diagnosed, with mental health issues and even brain health issues, it's got to go way too, right? I think recognized earlier.

Yeah. The sky has to be has to be the foundation of our of our language.

Preconception Health and Prevention

You know, we're in this era of cancel culture where, basically people are always put on, guilty before proven innocent, and especially when it comes to, like, social media and stuff like that.

And that's the world we live in right now, right? It's like there's always there's always. I mean, they say there's always going to be there's some things like that.

But as for as soon as, as soon as someone speaks about something or speaks, against or for something, this is there's a lot more, a lot more, ability for negativity to creep into their lives because of how connected we are on social media, as well.

Right. And not just social media, but all all of media, as well. Right. And so quickly, our world is completely changed, you know, I mean, even my kids generation, you know, in that 20 years how different things are, you know, things are happening so quickly.

We really don't know the ramifications of what we're doing. I don't think so. And so if we take just a random population of teenagers right in 2022, throw them back to 1986.

Okay. My gosh, what what difference? 40 that's made. Right? Yeah. Because they're, they're they're going to always kind of be looking for stimulation because there's no social media to reach for and phone and stuff like that. Right.

And and the televisions, it looks so boring because these viral footages are not under 0.7 seconds. Right. And so the stimulation is not not quite there.

And then the world looks so different at that time. And so we gotta be able to go backwards a little bit and think about, well, how do we how are we going to engineer our lives to be far more resilient? It's right.

Because technology isn't it? Because in the next ten years, you know, majority of our kids are going to be, are going to be immersed in the metaverse, right?

There's going to be virtual reality, augmented reality that, well, already exists. But now that's going to be the new standard. There's even more if there's even these platforms that are being developed within VR, like cognitive behavioral therapy and stuff like that.

And so we're we're really diving into that immersive mental unknown where consciousness, really goes, but but that means like right now we have the really the ability to kind of go back and ground our selves that our lives and like, you know, taking a walk outside right now is still the same as taking a walk 10,000 years ago.

You got to be doing things like around yourself, you know, 10,000 years ago, like, yeah. And so the, the ability, I think, for our society to really, self contribute, into the improvement of brain disorders is really just education, as you said earlier, pre pre conception, testing.

Right. It's so important. Now what, what do you test for in the present session. Same things like vitamin D and iron and stuff. Yeah. So much I mean nutritional stuff I think look they don't routinely test thyroid.

I can get mom even before pregnant, looking at toxicity, looking at her, cleaning up her diet. Definitely organic foods. Getting those levels, getting her iron levels.

You know, a good place to get her vitamin D levels before she even gets pregnant? Yeah, that makes sense. You know. Yeah, absolutely. Getting her getting a good, you know, getting her good.

And all those people have IBS, right? Or probably have some kind of dysbiosis. Getting that in better shape is that's setting up her child's immune system.

Yeah. Yeah. Absolutely. You know, so I think there's a lot we can do. And I think the earlier the better. But the general. Right. But the general physician population, you know it's not necessarily educated on what those levels should be.

You know, earlier we said that, you know, 13 below 30 is at risk for child developing these disorders. Right. And you know, my wife's low vision, this is not part of the guidelines for able to make a board of a very common cardiology line that these are not those guidelines.

Right. And so, and we we need it to be part of the guidelines because brain development is so important in the kids. Right. And these are really preventable things.

But I think it really takes conversations like me and you right now to kind of get this out into the wild and say, hey, you know what? There might be something better to do than just looking at normal lab values.

Optimal lab values right from a thyroid level is the same thing. Or vitamin D levels below 30 in most people and in rare medicine like 30. Oh my God. You know, somebody said that's normal.

You know that's not good. You know. Yeah. But you know what the the really cool part is very recently in the last few years, those doctors in high risk obstetrics and reproductive immunology are now recognizing that they have a new sort of foundation.

Those doctors and fertility are understanding this. Now. It's until very, very recent, even though we're talking about publications that are decades old, it's not till very recent that we're getting that direction.

So I feel pretty good about it. But I mean, a lot of this really needs to, needs to, to get out, you know, and I'm very

lucky to have young daughters that are pretty healthy.

You know, they're one six and eight. They're they're all very healthy, very young. Yeah. Yeah, they're very young. And so, and it's great because we have a lifetime opportunity to optimize them.

But, you know, but even if people are listening to this, really trying to find a solution for their child, if the child's diagnosed with autism, ADHD, bipolar disorder or schizophrenia, whichever one it is, we're still talking about the same fundamental principles of life, right?

And the last thing that we'll talk about before we we end this is genetics. Now, autism, there's a huge, thought process within the public that, okay, it's genetics, you know, we're screwed.

We can't do anything about it. Right? What enforcement of that is genetics and what goes through that is is something outside of genetics. Yeah. I think you have to define genetics.

Genetics, Sleep Apnea, and Closing Thoughts

I mean, it's only 5 to 10% that are, quote, genetic and genetic being like, something chromosomal like fragile X or like a 16 deletion. So that is a very small portion.

But if you think about genetic snips, which are I think of different enzymes that have different capabilities to something work faster or slower. And those need like certain nutrition, like certain nutrients to go with it.

So if you look at some of those, like some people can't detoxify as well, they have snips and they're going to die on for the whole, you know, methylation stuff, pathway like mTOR bar.

You need that to make DNA to work. Can you that to work to make neurotransmitters. So there's kind of how a lot of people think about genetics. And then there kind of we all have different genetic steps.

We all have differences, but there's certain ones that will set you up for more problems. So looking at like we might all be exposed a certain amount of lead, but if you can't detox it, then you might have a lot more problems from it than somebody else.

So I mean, I think there's different ways. I think there's more of that genetic snips as opposed to like, you know, down syndrome or fragile X or something like that.

If that makes sense, to like kids with down syndrome or high high risk of autism. There is, and and these kids also are very high rates of sleep disorders.

You know, sleep apnea, for example, is huge amongst the autism population. I think it's actually one of the most underdiagnosed, things because you need air to go to the brain.

It's those kids who sleep apnea. Oxygen goes down at nighttime. I mean, that's kind of vital to the brain healing process, as well. And we're seeing, on another part of the summit I actually had, that's a Felix Leon.

He's a he's a biological dentist that educates on airway and, brain developed disorders. Right. Okay. And so, yeah, we talked about how so much of the food, that is eaten these days are so, softer and processed that the the child does not have an ability to developed, adequate upper palate or upper and lower palate for adequate airway.

So that leads to sleep apnea, sleep issues, which is basically 1 in 4 of the human population at this point has some sort of sleep disorder. Right. That's crazy. And so I think we're known to a lot of these kids that have really low muscle tone.

And that's part of why they can't speak, because in muscle tone, even in their jaw, or they can't chew hard food, as you say, because they don't have enough strength to chew.

So that contributes that would contribute to sleep apnea, too. That's an interesting connection. There. Yeah. So the the act of chewing also stimulates different hormones in the brain.

Oxytocin in the brain is really required for the human process melatonin. These all require chewing processes. Right. And so and there's a lot of things that are there.

And sometimes I feel like, you know, parents, blame themselves so much. Oh, maybe I didn't feed him or her right next. But really, there's no need to blame real parents, and there's really no need to blame yourself.

We live in a world where it's kind of set up for for these things, so we just have to take it one step at a time. But anyways. But this is a fabulous conversation, a very enlightening one as well.

I really want to thank you for coming on and and talking about this. How can people find you and your work? Yeah. Oh, no, I said, I want to thank you very much for, you know, very interesting conversation.

So thank you. Thanks. Yeah. So how do people find, more about you and more about your book? My website, which is actually being updated, which is, holistic pediatric.com.

And the book is preventing autism and ADHD and that's on Amazon. That's amazing. Yeah, yeah, we've got to go get it now. Sounds good. Yeah. Well, thank you for coming on once again.

Thanks everyone for listening. I hope you got a lot of this. Appreciate you coming on. All right. Thank you. Take care, take care. Bye bye.