Children With Lyme Disease: How To Manage Post-Antibiotic Treatment Transcript

(Transcripts are generated by AI and may contain errors)

Introduction and Guest Welcome

Hello everyone, and welcome to this episode of The Healing from Lyme Summit. As you can see, I've got host Dr. Tom Moorcroft and our special guest, Dr.

Elisa Song. Dr. Song is an integrated pediatrician. She's the founder of Healthy Kids, Happy Kids. And she's also a mom. So Dr. Song, thank you so much for joining us.

Thank you, guys. We've been chatting offline, guys, so I know Darin and Dr. Tom and Dr. Darin for I don't know how many years. This is such an honor. While let's not.

Date ourselves just yet. We're doing all the work, so we're here to share some good information. Well, you know, you're a pediatrician. You've got so much experience of, you know, dealing with all of the issues of kids, including Lyme disease.

But I think, you know, today we really want to kind of hone in on the gut and the microbiome. And for our little ones, of course, it's just so critically important for so many things.

So, you know, what do parents really need to know about their kids gut microbiome and why is it just so important? Well, and, you know, we were we were talking about how well, in my mind, as I was preparing for this talk, really thinking about for kids with Lyme, you know, what comes first, their gut microbiome disregulation or is it that the infection is perpetuating their gut dysregulation, that what parents really need to understand is in those early stages, in the 0 to 3 to 4 to 5 year age range, it is so key to lay down a healthy gut microbiome.

So if you have children who are still in that age, we want to start working on their gut microbiome. And why is that? You know, of the 70 trillion hundred trillion microbes in your gut, they they make up the largest interface with the outside world, all of the pathogens and toxins and foods that are passing through.

You, that that's the largest interface with the outside world and your immune system. You know, 70% of our immune system resides in our gut and that our gut microbiome plays a key role in communicating with our immune system to have a healthy response to whatever is passing through.

Right. Not too little. Not too much. And not the wrong things. And so when our kids gut microbiome becomes disrupted through any number of reasons, the biggest disruptor that really is the most sudden and acute are antibiotics, but also antacid medications, psychological stress.

The ultra processed foods or eating, whether that gut dysbiosis, that abnormal balance of bugs happen, that sets the stage then for training that developing child's immune system to have unhealthy responses.

So our immune system is really respond to our gut microbiome is responsible for telling our immune system how to respond to that thing passing through.

Right. Do we need to create inflammation? When do we turn off the inflammation? Are we going to have chronic inflammation or are we going to have the wrong targets of inflammation and have autoimmunity?

And this is where I was thinking, well, it is kind of a chicken neck thing because we know so many kids are born with disrupted gut microbiomes already because moms don't have a healthy gut microbiome. And when they develop chronic Lyme disease, tick borne diseases, autoimmunity, neuropsychiatric symptoms, they have the wrong response to that bug.

Is it because they were set up with a disparate gut microbiome to begin with? Right. Doesn't matter. It is what it is right now. If your child is suffering from chronic Lyme disease and really needing all of these different supports, including antimicrobials, we need to understand how to set that gut microbiome back on the right path so that your child's immune system can get back on the right path and get out of a perhaps an autoimmune state, get out of a hyperinflammatory state, get out of a chronic inflammatory state.

And it's not just that gut immune system connection that's so important. It's also the gut brain connection, the gut, especially for the baby with that developing brain, all the synaptic connections and the change in gut microbiome, they mirror each other.

And in fact the way that the gut microbiome is shaped, really.

Why the Gut Microbiome Matters for Kids

Forbes How the brain development is occurring and we know that antibiotics given within the first early years of toddlerhood, can increase that child's risk of anxiety, depression, mental health concerns by up to 50% when they're older.

And when we're talking about immune health, like eczema, asthma, allergies, atopic conditions that are so common, getting antibiotics or antacid medications in this first six months of life sets the stage for all of that immune dysregulation.

By the time they're four. So knowing that if we can do whatever we can to support a healthy gut microbiome, no matter what treatments our kids on, they're going to come out healthier in the long run.

And that's the point of treatments, right? I mean, like Tom, you were saying just before, we want to make sure that whatever we're doing for our kids in the acute crisis of their illness, that when they're, quote, healed, they're in the best way possible, like we are moving them towards that thriving state so that they're better than before.

Right. I think it's so critical, Elisa. And one of the things I think about is like always like especially with the recent pandemic, I'm like become the world's worst viral host, become the world's worst bacterial host.

And how do you do that? I mean, to me, you start with the microbiome. So what do we so a lot of our parents may be listening, going, hey, my kid either may have some patterns are pandas and maybe we can jump into patterns, pandas, Lyme and like what we should do in the process.

But what about if we have healthy kids relat or relatively healthy kids? But we do know that they had some ear infections. They got some antibiotic treatments when they're younger.

And our parents are like, oh, crap. Like, I thought I was listening for little Johnny because he has pants. But also now my my little girl and my little boy, I want to make sure that they're not a set up like maybe their sibling was or their friend was.

What are some of the things if your kid are in because I don't want parents to start to feel bad. I mean, if your kid needed an antibiotic, you got to use it.

But in that kind of six month to four year range or even even a little earlier, what are some of the things that we can be doing at home if someone's already been exposed to an antibiotic and we want to just make sure they're in really good shape?

Yeah. And to your point, it's so important for parents if your child has been on antibiotics. I mean, both of my kids were on antibiotics in the first 4 to 5 weeks of life.

And this is me, you know, as a holistic pediatrician, integrative pediatrician, who does everything I can to prevent needing unnecessary antibiotics. But they're necessary sometimes, right?

They can be lifesaving sometimes. And, you know, a four week old who has a UTI, but that was my daughter, a five week old, my son who had I mean, was exposed to strep in the family.

And he had I mean, he ruptured his eardrum had ear discharge that was growing out strep. Would I ever say don't do antibiotics? No, I would say you need those antibiotics.

However, let them take that sort of medicine integrative approach. Understand the unwanted complications from antibiotics on unintended adverse effects.

And it's so common. I mean, by the time there's one statistic I read and it was astonishing to me, but by the time kids are too, somewhere up to 70% of kids have had at least one antibiotic prescription.

Many have had multiple right. And unfortunately, about up to 70% of the time in the studies, those antibiotics are unnecessary. They're given for viral infections. Right.

They're going for cold. That it's not going to do anything for that if they're given for your infections, where we know that the the majority of them will clear on their own, even if they have a bacterial component.

So I say the first thing you know, as you have this child in front of you, maybe they have had antibiotics in the past, but let's see, what can we do to prevent unnecessary rest in the future?

And I would say talk to you about it. Talk to your doctor and you got to ask these questions. I have a list of questions that I get some parents want to ask to know whether or not the antibiotic is necessary because this this research paper was also astonishing.

Right. The more you dove into the research, more you're like, what? So this paper showed that doctors are are more likely to prescribe antibiotics when they believe that the patient expects or wants them, even if that doctor doesn't believe that there's a bacterial infection and doesn't believe it is going to be effective.

Right. So simply by you asking the questions, hey, doc, is this really necessary? Not in a combative way. Not enough. Just say, hey, I'm just wondering, is this really necessary?

What? What would happen if I waited? I taking the antibiotics right? Is there anything else I can do besides antibiotics? Just by opening that door, that physician, if they believe that the chances are this is a virus, they're more likely to step back and say, yeah, you know what, we can wait and watch and see.

Or if you have amazing doctors like Dr. Darin, or Dr. Tom or you have a holistic pediatrician, you you can try homeopathy or herbs or essential oils, acupuncture, these different tools right now when your kids have had antibiotics. So or they need an antibiotic, your doctor says, look, it's really necessary.

Then there are several things we can do to maintain a healthy and resilient microbiome. Part of it a little bit is about giving probiotics. Okay, that's the thing that a lot of people think, oh, I'm just going to throw, you know, 100 billion, 40, 50 billion, 900 billion colonies of probiotics at my intestine or my kid's intestines when I take or they take an antibiotic.

And yes, that is can be very helpful. But what's fascinating is, is when I looked at a cohort of people who had antibiotics and they separate them out, one group did nothing right.

They just kind of took the antibiotics and didn't wash and then saw what happened. Another group was given probiotics and the other group was given a fecal transplant.

The quickest recovery was in that group with the fecal transplant. But not everyone's going to get a poop transplant. It's the slowest microbiome recovery actually occurred in the group that received the probiotic supplement, that there were a lot of problems with the same.

There are a lot the mice were not given with probiotics. And, you know, there are other factors. I still think probiotic are an important part, but it just goes to show you it's not the only thing we should be doing.

And when you want to recover your child's gut microbiome, the best place to start, honestly, is with the healthy, resilient microbiome in the first place, because your gut wants to go back to that right.

Your gut always wants to go back to the place it was. So and yes, sometimes we start off with not such a healthy gut microbiome, but this is a time when your kids are going to lay those foundations and those foundations.

And this is not rocket science. None of this is rocket science. But, you know, starting with food as medicine and also understanding what food is really poison to your microbiome, getting in, you know, this is kind of cliche, but get those rainbow phytonutrients, get in your fiber.

We have a huge fiber deficit in our country. Right. I think, you know, if if all adults in America ate and one apple a day, that's like three grams of fiber a day, I think we would be saving like $80 billion of health care costs.

Right. Due to constipation and functional abdominal pain. Right. So it's just getting up that fiber and of course, fermented foods hardly anyone eats fermented foods.

So that's where we look at what can we get in?

Supporting Gut Health After Antibiotics

But we also in our ultra modern, ultra processed world, we have to understand all of those FDA approved food additives. They they can directly trigger leaky gut.

In fact, food emulsifiers. That's a those are the things that keep your ice cream from getting into a gooey mess. Right. They they keep your protein bars from from falling apart and turning into glue in the package.

So those emulsifiers in Japan have been the rise and the use of emulsifiers has been directly correlated with the rise in autoimmunity. And these emulsifiers have been found to increase directly, cause harm to the type junctions and increase Zombieland.

So increase leaky gut. And in fact, these emulsifiers are actually FDA approved in in quantities known to be unsafe in the ready to feed liquid infant formulas.

I mean, this is just it's horrendous, right. That that we are not aware of this. But now now you have the opportunity to become aware. So when we're looking at foods like any packaged foods, and I'm not saying never eat out of a package, but just understand we want packaged foods that are clean, that don't have all of these chemicals any means that don't have the food additives, clean ingredient packaged foods.

And you give the example I give, I don't I'm sure Tom, that you guys don't have talkies in your home. Right. Talia probably has never had never. Even heard of.

Yeah. Yeah. So, Darin, have you had talkies? I think I give this example because my son Ray, he's 11 and he's now old enough. He can go downtown, hang out with his friends, go to the store, and his friends love turkeys.

They're these rolled tortilla chips with red dye number 40 color surrounding them. This artificial chili lime flavor. Sounds like a bagel. It just makes like.

And I'm sorry, guys. You guys are eating, talking. That's okay. I bring this up because your kids can have talkies like foods that are healthier. Swaps like Trader Joe's has a version this roll quarter teaches that used to treat for the color the red color and doesn't have artificial flavoring.

Right. And better yet, there's a there's a company called Porky's that has similar that's even cleaner than the

Trader Joe's version. So just being savvy about what you're putting into your kid's body, because even if we can recover your child's, even when we recover your child's gut microbiome after antibiotics with different supplements that we can go into, if you guys like, you know, prebiotics probiotics, they still need to maintain that.

And the only way to maintain that is to, you know, getting a gut friendly diet in place. Also a gut friendly lifestyle. Right. We know that psychological stress can really harm the gut microbiome as much or maybe even worse than any food or inflammatory factor that you can put in.

And, you know, making sure that like sleep and hydration and movement, all of those affect your gut microbiome and vice versa. Gut microbiome improves your sleep and your movement and your psychological, mental state.

You know, I want to ask about probiotics specifically. I think this is really confusing for people because there's so many probiotics on the market, different strains.

You know, when I was a med student at Bastia, we did a little study, we took 20 probiotics. Some of them were professional, some other over the counter, some a refrigerated, some were not.

And we sent them off to a lab to have them evaluated or did it have the stuff on the label as that advertised and in the quantity that they advertised?

And out of the 20, can you imagine how many were actually had the amount and what was actually on the label at the 21? Cultural, by the way, cultural was the only one which is not highly, you know, research back in the world as far as I'm aware of.

But that was it. But that kind of, you know, feeds into this thing. It's like, you know, people are spending a lot of money on, you know, I mean, I think the thought is if it's got more colonies, it must be better, which isn't true at all.

So, you know, what are your thoughts on, you know, how do parents help pick a good probiotic for their kids? I think that varies, too. On age rate, it totally varies.

And this is where, you know, I have not found a probiotic supplement that I love, love, love, which is why I have a few different ones in my office, which is why it's my mission to create one for kids that is really going to be worthwhile.

But it does depend on age in the zero to 2 to 3 and half year age range, the first few, the first thousand days. Let's think about that first 0 to 3 bifidobacteria species are really the most important.

It's all of these butyrate producing species. And so you want to probiotic that is very, very high in different bifidobacteria strains. And here's the thing.

When we talk about probiotics, it's also really important to have ideally the specific strains of heavy strain, specific probiotics for the indication that you want.

There are some specific strains of bifidobacterium lactobacillus that have that the research has shown support gut microbiome recovery after antibiotics, even some of the spore based probiotics like some of the bacillus species.

But even then, there are specific strains. And it's hard to know sometimes because you pick up a you pick up a bottle and it might say, you know, Lactobacillus acidophilus.

Well, there are tons those like the CSM, whatever, zero nine. I mean, you see all these different ones. So you can ask the manufacturer, do they have those, you know, can they tell you what strains are in them?

But to be honest, I mean, with the imagine the hundreds trillion microbes in your gut and every single day it seems like there's another benefit of a particular strain being identified.

It's going to be nearly impossible to find the perfect probiotic, because it depends on what's going on with you. Now, that being said, I'm the reason why I'm cultural that you mentioned there.

Cultural is a specific lactobacillus rhamnosus that has as as Dr. Dan said, been really the most widely cited probiotic, especially for children. And in fact, that particular lactobacillus rhamnosus was found to be effective if moms took during the third trimester and for the duration of nursing, if they had a family history of eczema, asthma, hoping to significantly reduce their baby's risk to developing a topi and they took a cohort of babies 0 to 6 months of age, gave them lactobacillus rhamnosus this culture al and followed them out.

It was a small cohort, but they followed them out to their teen years and there was compared to a similar cohort of the population. None of those kids develop ADHD.

None of those kids felt autism, right? So but lactose rhamnosus g that particular strain is held really tightly. The patent by this company in Denmark, I believe Christian Hansen super quality controlled they culture out all of their lactobacillus and it'll be interesting to see now that the patent is lifted other companies have like it says if it's going to be the same effect.

Right. But that being said, you know, so for babies under three, you want more bifidobacteria. So lactobacillus. And then as they get older over 2 to 3 years of age, your child can take the same probiotic as an adult.

I mean, that takes on a very adult like pattern. So if all of the kids in your household over three, then you can all take the same probiotic. And given that there's not one that's ideal, what I look for is especially when to try to recover the gut microbiome, one that has as many different strains as possible.

So antibiotics, if you imagine they don't care what they kill, they don't care if they're killing strep or Lyme or your gut bugs, which is going to wipe out everything.

So all of those almost all of this good gut bugs. And what's interesting, though, some antibiotics like Cipro and and try to think in the studies what other antibiotics were looked at.

They seem to preferentially kill the beneficial flora and actually support growth of abnormal flora like in some of the custody of species we don't want.

And we know. I mean, that's why C diff can be common after antibiotic. Lots of antibiotics, but many, many species have tried to have a multi stream probiotic.

I do recommend probiotics for most, you know, for most kids, unless they have certain strains like Klebsiella or such a vector might be a little careful.

They now have human milk, oligosaccharides analogs these animals that are found in abundance in breast milk. The most common HMO in breast milk is two AFL.

There's another one called L and T and there are many, many of these human milk, all the supplies that now some formula manufacturers actually putting into their baby formula because the benefits of these HMO, these human milk and oligosaccharides to act as prebiotics, to support the growth of all the beneficial bacteria that we want babies to have is tremendous.

And even for adults and older kids, there have been benefits. And so I've been looking for probiotics that do have this to a fellow anti there's another couple of others they're not that easy to find but if you could find them that would be ideal for your kids under three and then for your kids over three.

Then looking for Inulin is one of the most commonly used prebiotics, but there are some that have really good size behind them, like exo ex exo s the xylitol oligosaccharides.

There's one called the microbiome x that the benefit of this prebiotic is that it supports the production of Butyrate.

And for a lot of people, they've heard of prebiotics, they've heard of probiotics, they're not so familiar with post biotics and post, but are the byproducts, you know, if you have this probiotic foods, little bacteria, and they're much in a way fermenting this fiber with these probiotics that they produce these byproducts like butyrate that have tremendous, tremendous metabolic and immune and brain benefits and some people think that's why fermented foods have such a benefit because of all the post biotics that are in this fermented foods.

So this microbiome x prebiotic supports butyrate production. You can take butyrate. I've seen some probiotics and that butyrate in them and then some supplement companies that have butyrate supplies for kids.

It is almost impossible to give them a butyrate supplement unless they can swallow pills because it is stinky and it does not taste very good. Right. But if you can get butyrate producing probiotic strains and also prebiotics support support butyrate, then even better.

Well, that's a great point. I think I'll just add, you know, like I said, not all probiotics are created equal and often you get what you pay for. I mean, I warned my patients about be careful with buying probiotics on Amazon in particular just because a lot of their warehouses aren't climate controlled.

I know I was talking with my friends in allergy research because I created some supplements for Lyme disease with them. And their agreement with Amazon is that the supplements have to withstand 180, 180 degree temperature because they have some warehouses are out in the middle of the desert.

I guess they're not climate controlled.

Choosing Probiotics and Prebiotics

And if that's a probiotic, that's probably not good considering a lot of these have to be refrigerated. So just be careful about where you're sourcing your probiotics, too.

Yeah. I mean, that's that's 100%. I mean, you know, because when you're looking on Amazon and I mean, Amazon's amazing, right? I have a friend who lives in Portugal and I said, What do you miss the most?

And she's like, Amazon, because it's I mean, during the pandemic, most of us and many of us, we we lived off of our Amazon shipments. But unless the manufacturer has their own online store.

Right, right. Like I might buy something from designs for health on their Amazon store because I know that there's more control over how the supplement is stored and shipped out and expiration dates are checked.

If you're buying from like Judy's health food store in there, I just I would really avoid that, right. Because you don't know, as Dr. Dan said, the storage and at suppertime I've had parents say that the expiration date looked like it was low, funny, like maybe maybe a little adulterated.

So you just have to be careful with that. So what about kids that are on herbals? You know, we kind of expect if you're on, you know, amoxicillin, augmentin and Doxy Cyclin, there's going to be some collateral damage to the gut bugs.

But, you know, a lot of our kids know we're using herbs to treat Lyme disease. You know, is it your feeling that, you know, people on herbs should still be on probiotics?

Yes. Now, I have seen kids who have been on multiple herbals, herbal antimicrobials that are used, have a significant amount of gut dysbiosis just from being on herbal antimicrobials.

Now, herbs, I think, though, I mean, when they work for infections and I use herbs to, you know, for for kids who have bronchitis or infections or whatever it is.

They have so many other benefits, though, right? I mean, they have I mean, the whole plant. And, you know, there

are going to be some phytonutrients in their antioxidants.

There's you know, there's a synergistic combination. So by far large, I mean, herbal antimicrobials, I think would be our preferred when you can use them as part of your treatment regimen.

That being said, they can still cause that dysbiosis, right? I mean, if you look at you know, I've been using a lot of time this winter for spring, the restaurant track, but it's a great antibacterial, antifungal antiviral.

Well, I mean, that's going to you know, it can it can help for bacterial ear infections. I've had it be helpful for kids with strep, but if it's going to kill bacteria, it's going to kill your gut.

Microbes, too, potentially. So you just have to be mindful of that. And the question I get, too, is, you know, when when you're taking probiotics. Now, of course, you know, for kids who have cancer patients or kids who have chronic Lyme or Tickborne infections, it's not just a ten day course in their diet.

Right? I mean, they're going to be on these regimens for a prolonged period of time. But let's say you have a kiddo who is on a seven day course for bronchitis or a ten day course for an ear infection.

I, I, I've had parents question like, oh, should I wait to take the probiotics until after they're done because it doesn't interfere with the antibiotics, right?

Doesn't it make the attacks less effective? I mean, I've had these questions and that's not true at all. In fact, when you look at the studies on recovery in the gut microbiome, the most effective way to restore your gut microbiome with probiotics is to take them concurrently, you know, during your antibiotic course.

And afterwards, it can take a month or two or longer to recover your gut microbiome to a healthier state. So start at the same time, but give them away from your antimicrobial at least an hour or two away and then continue for at least a month or two.

Now, if your kids are on antimicrobials for months and months and months of necessity, then I would just keep them on a probiotic and just make sure it's timing it so that it's away from whatever antimicrobial that you're using.

I think that at least it's a great point because so many of the people I see, they're, you know, they're they need to be on their antibiotic or their IRB and I'm like bare minimum three or four months.

And if you've been on six, eight, nine, 12 months, it's just like we're going to be we need to be doing a lot of stuff for your gut afterwards, you know?

And I mean, I guess one of the things that I see too is like and I am wondering what you're seeing in your population, but I feel like so many one of the things you mentioned earlier is to really stay focused on coming into illness, if you will, being as healthy as you can be because I actually see a lot of pretty non gut specific antibiotics fixing things like chronic diarrhea, fixing things like chronic constipation and I'm like, well, is it just that the microbiome is off or is it that we're actually addressing Tickborne like Lyme or Babesia Bartonella in the gut wall or even mycoplasma that's been found in the gut wall that well.

You know, and I would say, you know, that that points to the fact that so many of us have just biotic guts. I mean, despite living a healthy lifestyle, despite, you know, doing what we think we're, you know, is our best at maintaining our gut microbiome.

And, you know, that can have a lot to do with I mean, it's it's generations past to. Right. It's not just, you know, you're born with this clean slate, the sterile gut, microbiome and boom.

You've been getting all these good foods and breast feed and, you know, and have a healthy, you know, have a healthy diet and have a have an amazing gut microbiome.

It's still, you know, we carry that imprint of our mothers in our grandmothers and even our grandfathers gut microbiome. I mean, it's fascinating. You know, there was but I'm not going to get the study right.

But it was looking at great grandfather and, you know, having having psychological trauma in a psychological stress and in the in the mothers. Then it shifted their gut microbiome to be less responsive to a a microbiome supporting diet.

So even with the healthiest diet, it just it was harder to maintain a resilience gut microbiome. And this is the grandfather phase. And so so it's not it's not even just that, you know.

Yes, we know that that mom's gut microbiome, mom's vaginal microbiome impacts the way the babies are born, would impact how that baby's gut microbiome starts off in life.

And and in that first few weeks to two months, you know how that gets shaped. But we know I mean, it's not just that the sperm has nothing to do with the baby's gut microbiome.

It absolutely does. There's imprinting that has taken place. And so, you know, this is where in I want to point to the one of the biggest pieces I think is in disrupting our gut microbiomes and keeping our gut microbiomes in a resistant state.

Right. A resistant state to getting healthier is really that psychological stress piece. Right. We have forgotten how to really manage that. And that has to do that's the gut being connection.

That's the vagus nerve. It's why it's so important where you see kids, where their gut microbiome improves, their autoimmune condition goes into remission, they're better the second a psychological stressor hits their back to where they were.

Right. And so that's not really remission, right? They're not really healed or cured. They're just kind of waiting for the next shoe to drop. And and that requires really reconnecting that gut brain connection and optimizing the vagus nerve.

And that resilience piece is what then will make your gut microbiome resilient. And I don't think enough people really talk about that in relation to what's going on with the gut microbiome and how it's really impacting kids.

Future immune health and future brain health, the future of metabolic health. I think one of the things that, Elisa, that you remind me of so much and I want to talk about that beautiful painting in the background there in a second is one of the things that I'm always blown away about is somebody a bunch of years back coined the term psycho biotics.

And I kind of was diving into this. And one of the things I think people don't recognize is that if we take a mouse in a study and we like essentially eradicate and totally dysfunction, dysfunction, whatever they're there, their microbiome, we can make it so that they can't create new memories.

We can make it so they forget. So all of our you know, they can't focus. So we're looking at all of our childhood ADHD, you know, our cognitive challenges and struggles, potentially learning in school.

But also we can take a mouse that's kind of quote unquote normal and make it acutely anxious by disrupting its gut microbiome just through changing the gut and not directly impacting the brain.

But when everybody talks about the microbial, the gut brain connection, I hear this all the time. I'm like, we forgot an organ. If we look at the major areas in our body, we have three main automatic nervous systems that are autonomous from each other but work together, which is the brain, the gut.

And then to the point of the picture is the heart. And you're talking so much about the psychological stressors. And I know I talked to Dr. Elias earlier in the in the in the summit about opening your heart and how the heart is different.

But how does that play a role in children's health and kind of getting that gut, brain and heart reconnected? I mean, it's I think it's everything, right?

I think that that is one of the missing pieces for our children. And, you know, frankly, because we as adults, we've forgotten how to be heart centered and really manage our stress in a productive, healthy way.

What I've been showing kids and teenagers lately, because, of course, we're in this mental health emergency, this crisis for kids, there's something, you know, in in our world stress has become the next four letter word, right?

It's like stress is something you've got to get rid of.

Herbal Treatments, Timing, and Recovery

Stress. No, stress is good. I want to live stress free. And I'm like, that is probably one of the worst things you could do, right? Because we it's just like the word inflammation.

It is not a bad thing. It's only bad when it's too much or too little or wrong. Right. But our body needs inflammation to recover from an stressor and we need stress to get that immune response to mount an alert response in our brain and then to recover and get back into a state of higher resilience where our cells remember how to do that again the next time, the next stress, because of course, we're going to be stressed with life and stress.

So I was saying, I show this curve. It's called the optimum performance curve. Have you see that? It's great, right? It's this bell shaped curve, right.

And up on top, performance goes up. Okay, stress goes down to the right. How am I looking at the right way? Should I go like this. The other way? I think it's all good. You got it.

So performance levels up, stress levels higher to the right or this way. And so then we have this peak performance curve like this on this and it's very low stress, hardly any stress.

You're life is easy. You're doing everything for your kids. You don't need anything, right? They don't need to pick up after themselves. They're happy, you know, they're upset.

You make everything right for them right. In this area, it's low performance. You develop indifference, apathy, depression and anxiety. Right? And then we get a little bit more stress.

And what happens? You have a deadline. Do you have a project you're working on? You have things your mind and you go into that alert state and you start to perform better.

Right. You actually I mean, if we don't have deadlines, we never get anything done that makes you perform right to this optimal performance. And then you get to the point where it doesn't stop.

There's deadline after deadline after deadline or friend drama, social drama or whatever, parent drama, stress goes up and then you start being y, you don't perform required, anxious, irritable, angry, right?

So there's this sweet spot and we have to recognize that the stress is something that is teaching stress is purely a physiologic response to something that's happening.

And when we look at that way, we can say, all right, so this physiologic response, I don't need to avoid it. I what I need to do is figure out what what thing my body or brain is saying I have to get done and accomplish it and then get back down to a a an equilibrium.

When I'm managing that stress, what most kids and parents do right now and kids do this because they learn from us is avoid stress. I mean, avoidance is the number one way we have learned to manage stress and because we think we shouldn't have stress.

So I'm a little stressed. I must be anxious. Well, if I'm anxious, maybe I have anxiety, you know, maybe five anxiety. I might need some medications and my friends are on medication, so maybe I need that. Right.

So many teenagers now in high school because I know so many other kids on sold off or Prozac or whatever it is, they feel like they need a medicine because they are anxious and and stress.

And so that if we can help parents and kids understand that stress is something that is can be very supportive for ourselves, can actually promote higher resilience and a higher state of happiness and give them tools like breathwork and meditation and mindfulness exercises to get them out of that alarm state and into a cop state where they can assess what's going on and manage that stress.

Then their gut microbiome would be healthier, their immune systems would be healthier, they'd be sleeping better. I mean, all those trickle down effects.

And I think that that and it's doesn't cost any money to do that. Right. This is something free that everybody can do. And so, you know, that's where that is really for kids who get better, get worse, get better, get worse.

You've got to work on that piece of it, that heart, mind, body, stress connection. I think, you know, one of the things I think I struggled in my practice, you know, especially, you know, kids with Lyme disease, kids with chronic illness, you know, they're stressed.

They don't feel well, like, you know, I'm ten years old. I'm not doing all the things my friends are doing. But how much of this is really a family dynamic problem?

Because, like I said, you know, they're feeding off the parents stress. Of course, the parents are stressed because they got a sick kid. Yeah So how do we how do we help navigate?

You know, I mean, we're kind of treating the parents and the kids at the same time because, you know, that that symbiotic relationship, you know, and how the parents are connected with their children, it's so important that, you know, if parents aren't doing the work, the what they expect the kids to do, the work just doesn't seem to work out as well.

So it's almost like, you know, everyone kind of needs to be on board and helping, you know, deal with stress in a different way. Yeah, I mean, we are, you know, it's moms.

Moms and their kids are connected literally, you know, by we we each carry each other's selves. Right. And in our bodies forever and ever and ever. But even dads and their kids, if there's that energetic connection and it's a very real connection and, you know, it's just like when you have your newborn baby, right?

And they're they're a little cool. You don't know what temperature they are. Right. But your body automatically, if you're holding the skin to skin, your body will automatically heats up, your temperature will raise so that your baby's temperature gets to a normal, healthy temperature.

This is, you know, pop as AM and moms and grandparents, too. Right. How do we do that? Right. How are we that connected? But we are and and and all of us have felt this right.

If you you walk into a room and let's say your friend or your partner is next to you and you can if you're in that moment with them, you can know exactly what they're feeling without them saying a word.

You know, if they're stressed or sad or hissy or whatever it is, you know, they don't even have to say a words. Maybe they have a neutral expression on their face, but you can feel the energy vibrating.

Right. And same thing with your kids. I mean, they're going to pick up immediately. And if you believe that they're going to get better, that's another big thing, right?

If you have that fear that it's nothing's going to work and you are not taking care of yourself so that your brain is always, always going and you're up all night doing the research, searching Dr.

Google for an answer. If you're not eating well, you're you're just everything is for your kid that is not for your kids. That's not right. That's not serving your child's right.

So this is where a lot of times often have it's often the mom, right? I have to have the dad say, I don't care what you know, what your wife is researching right now at 10:00, take their phone, shut the computer down.

It's time to go to bed. Right. And just really I mean, because then you will be present to serve your child. And let's face it, we all share our microbiomes, right?

When you kissed your kid, when you drink out of the water, psychological stress can change your gut microbiome within 48 hours. Right. Just that's just luck.

It goes the other way. Right? We're talking about psycho biotics.

Stress, the Gut-Brain-Heart Connection

Change your gut microbiome can affect our mood, but just because it cuts an alarm state, your microbes are going to be healthy the next time you kiss your child, you might be sharing an imbalance microbiome.

And it's you know, we just want to how can we support the spore ecology at home so that your child can can get well and you can get well as a parent? I mean, oftentimes, parents also are suffering from their own chronic infections.

I think one of the really interesting pieces for me, raising a young human being at the moment is the world like you touched on. So much of the world wants to label normal experiences as abnormal.

Like to your point about stress. And it's frustrating because it's like we think that people who are posting about their experience on social media, whether it's positive or negative, that that's their whole life. Right?

And so I find that challenging and to your point, unlike the parents, I think, you know, Darin and I have gone to some trainings together. We worked with Michael Bernoff and a bunch of other people, like just people who kind of like are in your face.

And this is one of the things I think we want to do, Elisa, with our summit is be a little bit in people's faces and really challenge and understand that as a parent or as a spouse, your influence over your partner or your children, just your actual physical, not the epigenetics you've been talking about or the I kiss you and you get my microbiome.

But literally, just like the energetics of living in a field together, even if you're kids 13, 14 and giving you the bird and they are in the other room, they're there on the other side of the wall going like this.

They are listening to everything that. You say just like your partner is. So like they know and like you said, when you're full of crap and you're like, I just say, like, if I make a mistake, I apologize if I'm having a bad day.

It look like I'm in a crappy mood. You might want to ask me that question tomorrow, and I don't always succeed at it. But I think your point of like because the point of like the psycho Biotics can help your gut and change your mood and a bad mood or a bad attitude can change your gut.

A good mood can also change your gut. Yes, absolutely. And this is where you know what? Whenever I have this conversation, I can see for some of the kids and for some of the parents, a little bit of a tuning out, right?

Because unfortunately, we like even us here. Right. As a function of medicine, as conventionally trained practitioners, we've kind of trained parents and kids to expect that they need a medicine to get well, that they need

a vitamin to get well, that they need a lot.

A laundry list, a supplement list this long. And sometimes they do need that. Yes. Yet they also need this piece. Right. This energetic, mindful piece.

And that's a piece that that that really most practitioners are not emphasizing is the best medicine that we can give. It is up there maybe higher than any supplement we can recommend or any prescription that we can write.

And so I think getting this message out and getting, you know, for kids and for parents, the words that you use can impact how your body heals and how your medicine heals.

So instead of saying, you know, if you get better, we want to talk about when you get better, right. Just it makes a big difference. I mean, let's. Call yourself like a limey and a moldy or whatever.

God almighty. Yeah, it's it's hard because, you know, and this is where for for some kids who have been sick for a very, very long, long time, but adults who have been sick for a very prolonged period of time, it becomes your identity.

Right. And it becomes you don't know who you are outside of that illness or as a parent taking care of a child with a chronic concern, chronic illness.

You don't know who you are anymore outside of that caretaker giving all the supplements and going to all the appointments. So it's really important to step back and say, look, this is a part of our journey right now, but I am still a thriving person on the inside, even though I feel like crap.

Some days I'm still a woman and a friend and a wife and you know, not just this person whose sole mission right now is is everything about treating my child.

So having that that balance because, you know, then when we go down that rabbit hole of just trying to find find the next find the next thing that's going to make flip the switch.

You know, I see moms who really suffer through that and end up getting sick themselves. And when their kids are finally. Well, don't trust it. Right. This is the other thing, too, right?

What you are well with you're in a place where you feel great and you feel vibrant and you've gotten back your health. It's then learning how to trust that you can stay there, right?

Because because that I have parents who really wrap their kids in a little bubble because they're just so afraid that every little thing is going to make them regress, make make everything come pouring back in.

And I get that trauma that that you've got to. But that has to be worked through. And a really important piece of healing. And it also goes to like your comment about like, you know, turning off the computer and the research.

It's like so many people are 100% clear that Lyme is not curable. And I'm like, who told you that? Because, like, yes, Lyme may be difficult to cure if you're, you know, if for a lot of different reasons.

I think people should work with people who are experts and they trust. And if they don't trust their practitioner, maybe move on. But when we're trusting a Facebook group or a Google, you know, search more than the live human being in front of us that we're chatting with.

I mean, I just think it's something we have to just be aware of that this does not necessarily serve us when you're trying to know more than your actual doctor knows.

All I know is that I spent like 27 years in a row in school, and then after that, like we were talking before we started. How much effort you put into your book that's coming out, how much effort you put into the blog post you put out?

Like for anyone who doesn't know, like Alyssa, like there's a couple of different strategies online. One is to just send you a bunch of information here and there, all the time.

And then there's the Dr. Song approach, which is bang out like the world's greatest deep dove on a single topic, like at the beginning of COVID. Or what do I, you know, like when I get an email from you, I read it because it doesn't come a lot, but when it comes, it's full of this really, really deep dove.

And it's like work with people like you, you know, who are true experts and then just go, I am so blessed. I'm so grateful to be with an expert who is doing the research for me, because I know how many soccer games you probably missed in order to do the research to write the book well enough.

So that actually is your gift to the world so that moms and dads help their kids heal. And I think it's just so important to understand that, like, we know your kids are suffering, we know it's sucky, we know that you love them.

But you staying up and doing the job of of someone else is, like Dr. Sung said, not really helping your child because your child's insomnia may be because you're not sleeping.

And it should certainly be turn it everybody should be turn it off their wi fi at night if you have to use it. But again, it's like your kids are feeling it, your partner feels it.

So I just think I just want to really book and highlight what you just said. It just so critical in my experience, so healing. And also as a father of a daughter who's 13 has at this moment and has gone through different things, I it's really hard because I will say at one point in her life, she had a fever that was three weeks in duration.

She had been in and out of the doctor. Everybody's got their heads up their asses. And I'm not going to be nice about it anymore because we told them what was wrong.

They were like, Oh, no, no. And of course, then she passes out, ends up in the air with anemia and, you know, low oxygen. They're threatening blood transfusions, but no one can get an IV line because she's all clear with them and she had acute the be closest three we you know after a field trip but nobody won it they were like literally would do every workup except for Lyme.

So I get the pain and the suffering behind it because eventually I had to be the doctor who said no, it's actually this. I ordered the test and I was right, but I'm in a unique situation.

But after that I drove some of the treatment. But we also partnered with other doctors who were not supposed to be the acute pediatrician person. And I let them guide me because I can't be objective or as objective, even as a physician as I'd like with my own family, because I loved them so much.

And so I'm just saying, like, take a step back and one of the things you can do to love on your kids the most is to step back and actually just be their parent and hire someone to be, whether it's through your insurance or you got to pay for it.

Just go to someone who kicks ass at doing this because that will and let them guide the ship. And then just you make sure that they don't go astray, like too far away from your family philosophy.

But man, love on your kids by giving yourself a break and loving on yourself first so you can show up and actually be their mom or their dad. That's such a good point.

And I will say and I get it, I mean, if my kid were chronically ill, I'm sure I would be on online looking up as many things as I could. And yet, you know, as as Tom just said, it's really important that you have a guide and a champion.

And, you know, there's there's not one doctor that's going to have all the answers for your child, probably. Right. I mean, I work with a lot of different colleagues and I would never say that I have all the answers for every single kid.

That's just and if anybody tells you that, I would find another doctor. Right. Because not one person has all the there's so many different modalities that may be of benefit.

However, you do want someone who can be your guide and your and help to organize all of that care too. Because I have some families who they see multiple practitioners and I'm not made aware of a lot of what they're doing until a problem happens.

And I'm like, well, I don't I'm not sure exactly what happened here. Right. And in terms of, you know, DIY, your your treatment or your child's treatment, I get that some families don't have access to an integrative physician.

And and it is so easy to order a lot of these functional tests. Now on your own, I will say whether you're trying to piece it together yourself or working with the practitioner, it's really important when you have a plan that you stick with it for a good chunk of time before you say it's not working.

I mean, unless things are really unraveling, but really, you know, if you don't see any improvements in a week, that's not enough time, right? If you don't see improvement in two weeks, that's not enough time.

I mean, you got to give it a month to three to see. Okay, where are we? Let's start here. Let's look back at two or three months of where we were then and where we are now.

And and you might see, okay, we're in a better place right now, but just because something doesn't work instantly, I see too many families hopping from one thing to another without giving something a solid chance.

So that's where I would say, you know, it doesn't have to be me. It's not every one of us. We want you guys to find a practitioner that you trust that and can be with you through the ups and downs.

Because as we all know, sometimes you find the right treatment, but things get a little worse before they get better. And you want someone who can be there and say, it's okay.

All right, we're going to we're going to get through this worsening and we're going to come out the other end. But you got it. You got to be consistent.

Be patient. There's no quick fixes here. Yeah, I think we are all in agreement on that point. It's like it's just, you know, with kids, with adults, you know, especially with Lyme in these co-infections, you know, these are stubborn critters.

And, you know, we're not just dealing with the critter. We're dealing with this whole plethora of immune dysfunction and gut problems and and toxicity.

Family Healing, Guidance, and Closing Remarks

And so, you know, we're constantly, you know, trying to figure out for you, you know, what are the different layers of the onion we need to keep peeling back.

And, you know, everything we implement gives us more information. You know, your response, positive or negative, you know, gives us more information about whether on the right track whether we need to dig deeper, look at other possibilities.

And, you know, I know that we've had this conversation with so many speakers in the summit. You know, we never hang our hat that it's just Lyme. You know, there's it's almost never just Lyme.

There's all these other underlying issues that we need to address. But that's where the real healing begins. You know, when we are able to I said, look at the gut, the microbiome, the diet, all these other factors.

You know, that's that's the foundational stuff. And then from there, you know, all of our other protocols and our

treatment plans start to get tailored to you to really figure out what's going to help get your child better sooner.

I was just going to say, this has been such an amazing conversation and like, I'm sure you can go on forever, but, you know, it's one of these things that I think that like so much of the the reason we actually wanted to do this summit together and the Bring Dr.

Elisa Song in here with us is what we've covered here. And it's like to actually give you back the power to help not only your child but yourself to heal or if it's your all of the things that we've talked about today are totally applicable to adults who don't have children because we all have friends and family, we all have people are interacting with.

And all of these things really go to the you take care of yourself and you have to put yourself first. Now, as a parent, we know that sometimes putting yourself first means that your kids first the whole day.

But if we're not feeding ourselves and our own hearts and nourishing ourselves mentally, emotionally, spiritually and physically, how the heck can you show up as a 50%?

Well, you know, like if you're just so stressed out on that far end of that performance curve that Dr. Elisa talked about, and you're all burnout, how can you show up and actually model healing for your child?

How can you even be there to help them with the stress that they're feeling from their protocols? So this has just been such a an amazing and conversationalist and just so much gratitude for you being here and participating.

It's always an honor to chat with you. So and Dr. Darin, it sounds like you had a bunch of stuff to say as well to know. I said, this is I think this is such an important conversation, particularly for kids.

You know, this is the future generation. We want to take care of them the best we can. I think, you know, we're fighting against an environment that's just kind of getting worse every year.

So as much as we can do is help the health of our kids improve. You know, that just helps future generations. And at least I know so many people are going to want to connect with you after watching this.

And I know you got a new book coming out, too. So what's the best way for people to find you? So the best way is going to be on my healthykidshappykids.com blog site and also Instagram is healthykids_happykids as Tom mentioned.

I mean, I don't send out a lot of newsletters. I don't like fluff I don't like filling people's inboxes with fluff. So everything I write is very purposeful and intentional.

So that's another great way to keep up to date with some of the information that I share. And I'm so glad that you guys are putting on this summit. I'm so glad that we're having this conversation because it's not just for parents, is also for caretakers.

Your partner even is helping you. Right. We want to make sure. Yes, we are. We're in the business of your kid or you. Well, but we also want to make sure that if you're the caretaker, that you are well enough that you can run around and be happy and do all the fun things when your partner, your kids are well.

Right. So think about that, too. Right. We want to we want to hold this vision of where you as the patient and you as a caretaker want to be when the healing has taken place.

Because you guys come together. As a good friend of all of our said and one of the conversations I had because I think we all speak the same language, it's like the healing is in the living and I just remember, you know, we had a my father was quite ill before passing away and my mom caring for him actually did kind of the opposite of what you just said, Elisa.

And she focused solely on him. And we were actually about to have a family intervention to get her to take care of

herself because she was declining like literally, like really bad.

But afterwards, when when we were able when the the healing was able to occur, she was able to rebound, thankfully. But I just think what you're saying is so key.

I want you to I want everybody to live as if it had already happened. And so that's really what we're talking about in the summit. So I'm always bringing the love and the smiles and the amazing information to everyone.

Sent out a lot of love to Dr. Elisa Song. And the reason I wanted to dovetail little to that was healthy kids. Happy kids, right? It wasn't like you separated both of those those two words, knowing you, the two words are very purposeful.

So go check out healthykidshappykids.com We'll make sure we have if there's any new things from the timer recording to when this comes out, it'll all be on our summit resource page for everyone.

So Dr. Elisa Song, thank you for joining us. Thanks for having me, guys. It's been an honor and I'd love see you guys whenever I can. So this is my honor and everyone.

I'm Dr. Tom Moorcroft, and together with our co-host, Dr. Darin Ingels, we'd like to thank you for being here with this with us for this episode of The Healing from Lyme Disease Summit.

And until next time, just, you know, lead your life and love and lots of health and healing to all of you.