



#564 Dangers of Antibiotic Overuse in Kids + How They Damage The Gut and Mental Health with Dr. Elisa Song

Dr. Wendy Myers

Hello everyone. I'm Dr. Wendy Myers. Welcome to the Myers Detox Podcast. On this show, I talk about everything related to heavy metal and chemical detox, health issues caused by toxins, anti-aging, and bioenergetics. Those are all my passions, but we talk about all kinds of other things too. Today I have Dr. Elisa Song on the show and she's going to be talking about antibiotics and what every parent needs to know. We're going to be talking about all the health issues related to having a disrupted microbiome, a lot of the symptoms that are in children that people wouldn't think are related to disrupted gut microbiome, and the questions you should be asking your doctor before giving your child antibiotics.

Dr. Elisa Song has a new book out called Healthy Kids, Happy Kids. She has got a whole list of the most common health issues and what you can do instead of antibiotics, why antibiotics are prescribed as the first thing when you go to the doctor and what kind of questions you should be asking your doctor instead. We've got really a lot of great solutions today in the podcast. We'll also be talking about probiotics and how to approach that with your kids, what type of probiotics work, maybe the probiotic gummy isn't really what they are or what you bargained for and lots of really interesting things we're talking about on the show today, lots of great tips. Got to tune in if you're a parent.

Our guest today, Dr. Elisa Song, is a Stanford NYU and UCSF-trained integrated pediatrician. She's a pediatric functional medicine expert and a mom to two thriving children. She's on a mission to revolutionize the future of children's health. Dr. Song is the best-selling author of the Healthy Kids, Happy Kids: An Integrative Pediatricians Guide to Whole Child Resilience. Dr. Song created her website, Healthy Kids, Happy Kids, as an online holistic pediatric resource to help practitioners and parents bridge the gap between conventional and integrated pediatrics. In her integrative pediatric practice, she's helped thousands of kids get to the root cause of their health concerns and empowered parents to help their children thrive by integrating conventional pediatrics with functional medicine, homeopathy, acupuncture, herbal medicine, and essential oils. Dr. Song is the chair of A4M's Pediatric Education and has lectured around the world at leading integrative and functional medicine conferences and premier parenting events. She's also been featured in hundreds of top podcasts, print, and online media, including Wellness Mama, Bloom TV, Forbes, Health and Mind Body Green, National Geographic, Parade, and the New York Post. Elisa, thank you so much for coming on the show.

Elisa Song

Oh, thanks so much, Wendy. It's an honor to speak with you. I love chatting with you.

Dr. Wendy Myers

Yes. So, why don't you tell us a little bit about yourself, your practice? You have a new book coming out that we're going to talk about.

Elisa Song

Actually, the book is out.

Dr. Wendy Myers

Yeah, I wanted to talk to you about this because our kids are in trouble. The statistics are just scary as far as longevity, their health, chronic illness and whatnot. I want you to shed some light on that, on what is going on.

Elisa Song

Well, I'm an integrated pediatrician. I have a practice in the San Francisco Bay Area, but most of my work now is online because as a solo practitioner, I just couldn't see all the patients. For parents who were calling and needing to be seen, I brought a lot of the education online for parents and for practitioners to really learn how to take a more integrated functional medicine approach to their kids' care. We need this so much. Just like you were saying, our kids really are in crisis from a physical health standpoint, immune standpoint, mental health standpoint. It's all not the way we want it to be. They're starting freshman year in high school and especially for our teenage girls, the outlook from a mental health standpoint is pretty bleak. So, we as parents and practitioners need to be able to understand where we can intervene, what's going to move the needle for their health, what things we can do to proactively and preventatively help support their overall health and their hormone health, metabolic health and then also teach our kids. That is so important. That's what I do because it's not just enough for us to do it for them. We need to teach them as we're thinking ahead towards having them out after high school and college and beyond that they can understand how to make these informed decisions for themselves and for their own children and our grandchildren.

Dr. Wendy Myers

Yeah. I'm just not eating fast food all the time, but they get unleashed on their own and move out. What are some of the most significant factors in this new normal that we're seeing in the population of children with so many kids on antidepressants and on different medications, ADHD medications and gut health issues? What is going on?

Elisa Song

There are so many factors and when we say this new normal, it really has become the new normal because the most recent numbers we have, which are actually kind of old numbers, are from seven years ago, that at least 40 percent of kids, almost one in two kids, has a chronic health condition. That number often doesn't include the kids who are at risk for developmental concerns. The rise in metabolic health concerns is one in three kids. Actually, one in three to five kids has eczema. One in 10 kids has asthma. You mentioned 10 kids with ADHD. By the time kids are teenagers, one in two kids is likely to have a mental health diagnosis. Our teenage girls, they're

really at risk for depression and even suicidal ideation and the rates of autoimmunity. Our teenagers are 12 to 19 year olds. That's the age group with the fastest rising rates of autoimmunity. A lot of these conditions are kind of simmering underneath for years, sometimes decades before they present as adults. So, it's really in childhood that we can intervene. And so, we have so many factors. We can think about the ultra-processed foods and the added sugars, environmental toxins, psychological stress, which is a toxin, the hygiene hypothesis, our immune systems are not getting trained, all the medications that we're exposed to, whether we're actually taking them or even in our food sources, even from the animals that we're eating.

For me, the underlying factor really resides in the microbiome disruption that has occurred because of all of these influences. When you look at how our parents nowadays are really savvy about these forever chemicals and your environment and disruptors all found to be microbiome disruptors. In one article that I was reading, the authors note that we really should call them microbiome disrupting chemicals because they go so far beyond disrupting hormonal access. It disrupts the gut hormone access, the gut brain connection, and the gut immune system connection. The ripple effect that the microbiome has on every single organ system in our children and our teenagers and our adults is really the foundation for why we're seeing so many different chronic diseases showing up in our kids.

Dr. Wendy Myers

Yeah, and that's why in my household we're very strict about being organic because when you have the glyphosate and the pesticides that are, the glyphosate was created to be an antibiotic, you're eating antibiotics and destroying your gut microbiome if you're not eating organic and it's just a sad state of affairs today.

Elisa Song

As you said, with glyphosate, a lot of people don't realize that it's an herbicide, but it was designed to be initially an antimicrobial. So that means it kills bacteria, it kills fungi. Now the problem with that is when you take a look at some of the human studies, they found that glyphosate can preferentially kill the good stuff, our probiotics, lactobacillus, and bifidobacterium, and preserve the not such great

bacteria like Clostridia that we don't want too much of. And then what also happens as you're digging and you're like, wow, the unintended ripple effects are in a negative way when you kill the bacteria and the fungi in the soil that these plants are growing in. Well, guess what? Those are the microorganisms that provide the nutrients for the plants to take up to make those foods more nutrient dense. So, we have a situation where we're depleting the soil of nutrients for these plants. Our food is getting less nutrient dense and it's getting laden with these antimicrobials that then further disrupt our microbiomes.

Like you said, we want to know what we can do about it. It's not enough to just say, oh my gosh, this world is full of toxins. All the work you're doing is really meant to empower us to know, all right, it's not just that, we have to open our eyes, be aware, understand and be vigilant about these sources, but then we can't just kind of crumble in fear. We have to say, look, we can't live in a bubble. This is what we can do to reduce our load and also on a daily basis, keep our bodies as clean as possible, and detoxify in a really healthy way. I always talk about making detox a lifestyle for kids because let's face it, they're exposed to toxins from the moment you conceive. So, basically from the moment they come into existence all the way to the end of their life. Never in our lives have we been exposed to such a toxic burden for our entire lifespan. And so, it's learning how to live in this world and still be able to thrive.

Dr. Wendy Myers

Yeah, and there's so much working against our gut. When you're taking a shower, it's in chlorinated water typically unless you have a whole house water filter, which almost nobody does. Chlorine is antimicrobial and there are a lot of natural products people are taking. They'll take silver oregano other things which are great but can be abused and there's antibiotics as well.

Elisa Song

Oh gosh.

Dr. Wendy Myers

Yeah, which you know a lot of parents take their kids to the doctor and that's like, let's take this antibiotic and just see if that helps without really knowing if they actually need that or not. So, let's talk about antibiotics and the problem there

Elisa Song

Yeah, well, that's so important that I wrote an entire chapter in my book. It's chapter 10. It's called, What Every Parent and Practitioner Should Know About Antibiotics, because here's the thing, we know that antibiotics can be lifesaving and they're considered one of the most important public health inventions of the 20th century. We are, though, in the 21st century, where in less than 26 years, so about 25 years, the World Health Organization is predicting that by 2050, antibiotic resistance could become a leading cause of death. Now imagine that a simple ear infection or a skin infection or a pneumonia that should be entirely treatable may now not be treatable because we're in a place where we have overused antibiotics and inappropriately used antibiotics. So now these organisms, these bacteria are becoming these superbugs. We have that from a public health standpoint which we have to worry about. But then for me, I have this child in front of me. There's this individual health that is personalized health that we have to think about. I have my own children where we're grappling to know if they need antibiotics or not.

As you said many times, antibiotics are not appropriately used. In some studies, up to 70 percent of antibiotics prescriptions written for kids were inappropriately prescribed. Meaning either, stronger than what was needed or very commonly written for viral infections, like a common cold or even many ear infections, which are viral where the antibiotics aren't going to do a thing. I get it as a doctor in the office and you see this kid who's wailing and sick and not feeling well, you want to feel like you can do something and parents want to feel like they can do something. But I would say, one of the best things that you can do in that situation is understand how to use some natural medicines, homeopathy, essential oils, herbal medicines that aren't going to interfere with your kid's microbiome. They aren't going to create antibiotic resistance. And by the way, they can also support your child, whether they have a virus or bacteria, because most illnesses that kids come down with are viral and antibiotics aren't going to do a thing to get them better faster. They can have many unintended consequences down the road. One of the things I point to in the

research, which we've known for decades now, but one research paper that followed was a million births, mother infant pairs in Finland found that any antibiotic exposure in infancy and toddlerhood, especially antibiotics that were given in utero, counts too as exposure. So, if you as a mom had a sinus infection or UTI and you're pregnant and receive antibiotics or the baby received antibiotics, especially in the first six months of life, that significantly increased the risk that your child or teenager was going to develop a mental health concern by up to 50%.

Another really large study, we're coming on almost 10 years for this study, found that antibiotics given in the first six months of life significantly increased, sometimes double the risk of every single allergic disease. By that time the kid was four years old. And think about the shocking rise of anaphylactic food allergies requiring EpiPens and of course eczema and asthma and hay fever has been on the rise for quite a while. It's not to say don't use antibiotics if they're necessary. One, we have to understand, is it really necessary? And then two, if it is really necessary, how do we restore your child's immune system in their microbiome so they don't have these unintended effects of microbiome disruption?

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For anyone listening that really wants to detox their body, go to heavymetalsquiz.com. I created a quiz for you. It only takes a couple of seconds and it's based on some lifestyle questions. You can get your toxicity score and get a free video series that answers all of your frequently asked questions about how to detox your body. Check it out at heavymetalsquiz.com.

Dr. Wendy Myers

The antibiotic resistance is really scary because I've had to use antibiotics. Sometimes we try everything. I throw everything at it and it doesn't work. What do you do? You have to go that route. I have very sophisticated bioenergetic equipment now. I can kill any infection with my spooky rife

Elisa Song

Oh my gosh, that's awesome.

Dr. Wendy Myers

It's amazing. That's what I'm going to do now. But before I had that, I had to do the antibiotics if nothing else worked and that's the reality for the majority of people, but you have to think about those long-term consequences after decades of doing that or going to the antibiotics for the very first thing that you reach for or get prescribed. You have to think about those long-term consequences that we are developing. A lot of people, even today, are dying of antibiotic-resistant infections.

Elisa Song

Yeah, absolutely. And you know, it will be a crisis if we're not aware of how to judiciously use those antibiotics. And like you said, sometimes they are absolutely necessary. I don't want parents to think that if their kid needs antibiotics, it's somehow a failure on their part or that something is really wrong with their kids. Sometimes it happens. That's why we have antibiotics. They're there for a reason, and it's not a failure on the part of natural medicine or on your job as a mom. If you can't avoid those antibiotics, sometimes they are really needed. I would say then just empowering parents and kids to know, look, if they are really needed, you've tried everything else, okay, now they're needed. Let's take it, take the whole course, just wipe out whatever you need to wipe out. But then, make sure that you're restoring your child's microbiome so that their microbiome can bounce right back and they don't have issues. We know even in adults after antibiotics, there is an increased risk of depression and anxiety right after the antibiotic course. So, let's get their gut brain connection back in order. Let's make sure that their microbiome can return to a more resilient state as quickly as possible.

Dr. Wendy Myers

So, what's happening after you take an antibiotic? I've read, say with Cipro that it can decimate half of your gut microbiome, half of your gut bugs, roughly. That's really significant. Do you have any other information surrounding that? What happens?

Elisa Song

What we want to recognize is that for antibiotics, they're not specific that they can kill the good bugs, bacteria, right along with the bad bacteria. Like glyphosate, some of these antibiotics have actually been found to preferentially kill bacteria, kill off the

lactobacillus and bifidobacteria, so the beneficial microbes, how much of that is wiped out? It's hard to say because we know all organisms love to live in biofilms, even our good bacteria. Those biofilms can protect themselves from antibiotics, for better or for worse. The good bugs, sure, you want them to live in biofilm and be shielded. But then that also means that a lot of the not so great bacteria that are maybe filling up your sinuses or lining your gut wall are also a little bit more protected from those antibiotics too. But it can wipe out a significant amount of your bacteria and antibiotics. They aren't going to kill off any yeast in your gut or any parasites in your gut. There are viruses in our gut too. We have phages that are viruses that are there evolutionarily to protect us against abnormal, you know, pathogenic bacteria. It's fascinating. We have these archaea. We have all of these. We think of our microbiome as just the bacteria, but it's this whole slew of a wide variety of different microorganisms.

What happens when we kill off the beneficial and the not so beneficial bacteria in our gut, we can be left with a lot of yeast that's hanging out, depending on how much yeast you had to start with. That's where a lot of women experience, oh my gosh, I have a raging yeast infection now, like a vaginal yeast infection. Well, that's because your yeast had a heyday, no competition in your gut. So imagine your gut lining. It's very long. They say it's the size of a football field or two football fields, if you stretch it end to end, but there's only so much space. One of the jobs of the probiotics is to crowd out the not such beneficial microorganisms. Now all of a sudden there's like a wide open field that disease can take over or parasites can take over or viruses can take over. We don't have a lot of great ways to measure our virome or micro, but that's where then a lot of people after antibiotics will have, sure, maybe your bacterial pneumonia is better, but now all of a sudden you have all of these other symptoms.

Now a vaginal yeast infection with itching and discharge, that's obvious. But what about, the ticks that all of a sudden your child develops and that's the parasites. Maybe that's the blastocystis that now has a heyday in your child's gut um, or the yeast in a boy or a girl, little boy. Little girls may not present as classic. Obviously, a boy's not gonna get a vaginal yeast infection, but even little girls or even older girls don't necessarily get that classic symptom, but they may have the behavioral yeast,

where the yeast are now fermenting the sugars that you're eating into these alcohol byproducts. And so, your kids are acting spacey, totally ADD, can't concentrate, or like super anxious and down and weepy and depressed or aggressive and having major tantrums like, what is going on? So, we want to be aware of some of the other symptoms when our microbiome gets taken over by either abnormal bacteria or all of these other microorganisms that shouldn't be there. We want to make sure that those good guys get back in as quickly as possible.

Dr. Wendy Myers

Yeah, that's one of my biggest pet peeves about antibiotic prescriptions as a female and I had to figure this out on my own. The hard way is that every time I had to take antibiotics, I always got a yeast infection. I'm like, why is it the doctor just giving me a diflucan after controlling that? Yeah, I just never understood it. I'd always have to ask the doctor and I would ask him, why aren't you just making this mandatory right afterwards because we know what's going to happen? So, if you have a teenage daughter and they don't know anything about this, that's something to be aware of, but also with the diflucan, you can have the same thing. You can have yeast-resistant infections or but the diflucan, you're going to have that medication that's killing the yeast. You can get resistance with that as well, just like with antibiotics. Let's talk a little bit about What people can do. As a parent, what can you do to help inoculate your child's gut post antibiotics?

Elisa Song

This is really important. I also want to point out for parents listening, it's not just the 10 to 14 day course of antibiotics for an ear infection or a sinus infection. We also want to think about our teens, our teenagers, boys and girls who are on low dose doxycycline for their acne. That still counts. That still is an antibiotic that's disrupting your child's guts. We want to educate them. There are in the literature a lot of other medications that have been found to disrupt the gut microbiome just as much as antibiotics that a lot of parents, if they're, many parents may be aware, okay, antibiotics kill off the bad stuff, so we're going to take probiotics afterwards. Well, it's also ibuprofen, like your Aleve or Excedrin that you take for migraines or really bad PMS and cramps or your teenage athletes who are really athletic and they have muscle aches. Also antihistamines if you're taking anything for alert allergies. I'd lived on those as a teenager. We're not thinking with allergy medicines about the

microbiome effect. Many of them have anticholinergic properties, which we also know can affect your brain. And later on, as an adult, that can be a potential concern for cognitive decline.

There's also SSRI medications, like your Prozac, Lexapro, and Zoloft. When I have a teenager come in who's really anxious, she's got PCOS, a face full of acne, she's just not feeling great, she's on Doxycycline for her acne, she's on the birth control pill to try to control her PCOS, she's on Lexapro for anxiety and depression and none of it is really helping that much, I'm like, all right, let's take a breath. Let's go back to the gut and see. We're not going to take you off those medications right now. That's the job of the prescribing doctor. But if we can support your microbiome, that can help get all those other things into place. So, a lot of people have this idea and so did I for a long time that after you take antibiotics, it's enough to then just take like billions or trillions of colonies of all the different kinds of probiotic strains you can find and just kind of throw them in and take them. And yes, that is a piece of it. You do want to take probiotics as varied as strains as possible. There are certain strains that have been found to help better colonize the gut after antibiotics. But we want to really do as many strains as possible because of the trillions of bacteria in your gut.

It doesn't make sense to just take one strain or two strains. Ideally, you would start when you start your antibiotic course. So, you just want to make sure you take those probiotics at least an hour or two away from your antibiotic dose because remember those antibiotics could also kill those probiotics. I've heard that there are some myths out there that parents are hearing sometimes from some ER docs. Now, there's some ER docs or urgent care docs who are recommending probiotics, which is awesome. It's becoming more and more mainstream, although they're not necessarily saying take it away from your antibiotic dose. But I've heard some docs tell patients, don't take the probiotics while you're taking antibiotics because it's going to make the antibiotics less effective. It doesn't work that way. You want to take it at the same time. I mean, concurrently, but then just away in time from your antibiotic dose. But it's not so much. When we think about throwing in probiotics, I tell kids, it's not magic. These probiotics are not like Jack's Magic Beans. You can't just throw them in there and expect all of us in this huge colony of probiotics to want to stick around in your gut.

What we have to do is really nourish your gut, create a terrain, create an environment, um, a neighborhood where those friendly bugs. Decide, hey, I actually want to stay here. I don't want to just pass through and come out in your poop. I want to stay here and plant my picket fence here and this is my home. When the good guys start making your gut microbiome their home, they start calling in all of their friendly neighbors and create this positive community that crowds out sort of the seedy, less than desirable neighbors that you don't want in your gut or your child's gut. So, that's exactly why I wrote the book to really talk about what are these foundations that create that ecosystem in your gut, create that terrain that is going to support your microbiome resilience. And now, ideally, you would do this before your child ever needed antibiotics, because if you have that great terrain in there, your microbiome wants to bounce back to the state it was in before the antibiotics. It will move towards that. If your child's microbiome wasn't so healthy beforehand, that's okay.

In the book, I talk about the five things that we do every single day that create microbiome magic and how we learn how to do those five things in a really knowledgeable way. I talk to kids about living like these gut heroes. We have to make it fun and memorable, then they can make decisions every day that support their gut microbiome. Those five things we have to eat every day, we have to sleep, move, hydrate, and breathe. Now breathing is really how we engage our vagus nerve every day. Each of those factors, the way we do it, what we're doing or not doing can impact our microbiome for better or worse. What we think about, the fact that our microbiome, those trillions of tiny friends in our tummies, their job really inside us is to keep us healthy and happy. So if we learn how to live and eat and breathe and think in a way that keeps our microbiome healthy and happy, they will do their job and keep us healthy and happy. They all make a difference, but I think the two things that kids need to take with them as they become adults are thinking about how to nourish their gut microbiome with what you want to get in and also what you want to keep out, and how they engage their vagus nerve. The nervous system regulation is so important for your microbiome.

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I just want to take a minute to give a shout out to one of our sponsors TruEnergy Skin Care. I absolutely love [TruEnergy Skin Care](#). I've been using it for a couple of years and I've noticed a dramatic improvement in my skin texture and my skin is so soft and supple. It's super healthy. This is one of my secret weapons because not only are you getting lots of healthy natural ingredients moisturizing hydration in the true energy skincare, but the adventure of this Cathy Goldstein also infuses thousands of frequencies into the skin care to dramatically improve collagen production and so many other benefits in regards to all these different frequencies that are infused into the skin care.

Dr. Wendy Myers

I love it that my daughter is going to bed really early. She's going to bed at like 8pm on her own. I love it. That sleep is because I had a whole conversation with her about that in the studies about how long girls, teenage girls need to sleep. We looked it up on Google and that plays a huge role in regulating your nervous system. There are lots of things you can do to tone your vagus nerve and what does. Is there a chapter about probiotic gummies? You're putting it on because I know that's the first thing that a lot of parents will reach for and most likely they're full of sugar

Elisa Song

I just want to talk about sleep though, because even the sleep or the exercise, it's fascinating that the vagus nerve work, each of these things has been found to help support a healthier microbiome balance independent of diet. So, I want to tell parents that because for some parents, they're like, oh my gosh, my kids are so addicted to ultra processed foods. I don't know how I'm going to change that right now. That's okay. You have to keep working on it. You have to keep educating your kids and helping them understand the choices that they're making. But, if they love to move and play sports or just exercise or if they love going to bed early, hydration, all of that will help support your child's microbiome, even if their diet isn't the cleanest just yet. The fascinating thing about our microbiome is that our microbiome has its own circadian rhythm, just like we have our own circadian rhythm, but it tends to be a little flipped. There are some microorganisms that are actually way more active while we're asleep and that help do the mop up and the cleanup, just like I know you talk about the brain and the lymphatic system.

Our brain is actually more metabolically active in our sleep in terms of learning and memory and clearing out the toxins. If we're not getting enough sleep, if our daughter gets asleep, then our brain's glymphatic toxin clearance system and our microbiome circadian rhythm and clearance systems are not going to have enough time to do the job that they need to do for us. I love that your daughter gets to sleep at eight. My kids are way earlier than most of their friends, but we're probably like nine ish. For me, I would love to be asleep by eight 30, but I have this thing. The silly thing is I want to stay up until they're asleep. So, they've been actually kissing me goodnight in bed because I'm usually asleep if I'm in bed before them. So probiotics, what to take. It's not just about probiotics, it's about how you nourish the terrain and when you're taking antibiotics, there are also some other supplements that can be helpful. Now I'm going to talk about some of the supplements to help support a healthy gut lining because some of these antibiotics have also been found to trigger leaky gut. We want to make sure that when we're taking antibiotics, either we have foods that are rich in these nutrients, or maybe take an extra supplement that's going to keep your gut healthy and keep your child's gut or your gut from getting too leaky. And so that's gonna be zinc. It's really important. There are lots of food sources of zinc, but sometimes an extra zinc is really helpful. I love quercetin. Quercetin is a natural antihistamine, antioxidant, but also really great for the gut lining.

Quercetin can kick out some not so good bacteria as well and support microbial balance. It's important for your epigenetics and so many helpful things. As a mast cell stabilizer, a natural antihistamine, I do think it helps support your immune response. So many people after allergies will say, now I'm getting hives, not from the antibiotic, but from a food that they've eaten up all their life. They're reacting to it. With histamine, an overload can happen. So, quercetin, zinc, glutamine, omega-3s, your fish oils, all of those help support your gut lining from getting leaky. And then of course, there's the probiotics. Now, again, the probiotics, you want to make sure that you're getting varied strains. Most probiotic gummies out there, they're just not going to have as many strains as you need. They're like maybe two, three strains. Some of them have spores in them. There actually aren't a lot of great studies on spore-based probiotics in children. I keep waiting to see. There are some out of India that in particular spores that I haven't really seen commercially available in the States, but it's promising.

Now, gummies and gummy vitamins are a whole other story. We had a line of gummy vitamins that I loved because each serving only had 0.5 grams of sugar in it, which is still 0.5 grams, 4.2 grams is one teaspoon. Okay, just so people have that in mind. Now, some of the gummies out there, because I have parents who are taking, I'll call out like Ollie's or smarty pants. They're really popular. The ingredients in them, in terms of the vitamins and minerals, and even like, maybe some of their probiotic strains that they're choosing. They're not bad. Some of them are actually totally fine, except then you look at the added sugars and each serving is going to have, some of them have like four to five grams of added sugar per serving that you're giving your kid. So, that's about a teaspoon right there. Then you have your gummy probiotic, gummy multivitamin, gummy vitamin D, and gummy vitamin C. Like literally this could be something that you're handing your kids a little bit of gummy vitamins heading off to school. Well, right there, you might have been giving them, yes, they're getting the nutrients, but like four or five teaspoons of white sugar.

If you think about it that way, there's no way a parent would say, oh, yeah, I'm going to send my kid off to school with five teaspoons of sugar before they try to focus in class and get along with their friends. I would say if you can really have supplements that don't have the added sugars, it's so important. These added sugars wreak havoc on your child's brain and their microbiomes. They wreak havoc on our cortisol stress response and our ability to manage any stress that comes our way. The average American kid and honestly other countries are, it's very sad to see it's not, it's really not just an American thing, but the average U.S. adult right now has about maybe 19 teaspoons of added sugar in a day. Children under two should have zero teaspoons of added sugar in a day. Like there's no recognized nutritional benefit for toddlers to get added sugar. Get your natural sugars from your fruit and roasted vegetables. Our teenagers say so, and then two to 18 year old year olds should have no more than about 25 grams or about six teaspoons of added sugar in a day. A lot of parents and kids are like, I don't have six teaspoons of white sugar. Well guess what? The average US teenager has 34 teaspoons of added sugar in a day. It adds up quickly. Like that one strawberry jasmine boba tea could have upwards of 11, 12, 13 teaspoons of added sugar and forget the Starbucks mocha, mint, frappuccino, whatever concoction. And so, it's really being aware of this huge sugar crisis that I think is really fueling a lot of

the hormonal dysregulation our teenage girls have and our boys, the immune dysregulation and chronic inflammation, the brain inflammation and the attention and focus and mental health concerns.

I think one most powerful thing that we can do as practitioners and parents is to educate ourselves and our kids about how to be very savvy about the food they're eating, looking at the labels. First of all, recognizing eyes open, how much added sugar am I really having in a day? I've had parents read my book and say, I thought we were making really good, clean, healthy choices shopping whole foods and doing all the things. But once they started reading the labels, they're like, oh my gosh, I had no idea that this vanilla Greek yogurt had like four teaspoons of sugar in it per serving. So, it's just being aware and then knowing how to make those swaps so that you're choosing those foods that are going to help your kid's brain and, and their immune systems and their hormones and their skin and whatever else is important to them.

Dr. Wendy Myers

Yeah, it's so important. I love that you are talking about helping your child read food labels. I'm going to start doing that with my daughter. She had a great project in school where they had to pick apart some ingredient labels and whatnot. But that it's really a whole education when I first started reading labels. It was like, wow, there are so many crazy ingredients in our food that are hiding. And now they have the bioengineered ingredients and oh my God. Even at whole foods, it's really just like a minefield that you have to navigate these days, unfortunately. That's such an important skill to teach your child.

Elisa Song

When we think about nourishing your child's microbiome, I split it up into two parts. Part one is what do you want to try to get in? But really importantly, what do you want to keep out? In our daily lives, there are some families who can home cook every single thing and not live out of packages, but the reality is for many moms and kids, they're buying a package of something or other, whether it's your package spaghetti sauce for your lasagna or packaged salad dressing. Even an organic salad dressing, you want to read every single label and learn what are the ingredients that are

significant inflammatory factors and also microbiome disrupting factors. In the book, I teach kids how to read food labels like a gut hero and have a list of the ingredients that you don't have to memorize. But once you have that visual memory of, oh, if it says mono something, like, mono and diglycerides, we're going to put that back. Now, once you start thinking of mono diglycerides and you start looking at, wow, it's a lot like ice creams, protein bars, salad dressings. It's what's called an emulsifier. Like xanthan gum, which a lot of people are aware of that keeps the product together and keeps it from becoming a goopy mess. Many emulsifiers have been found to directly trigger leaky gut and disrupt the microbiome. That's one of the most important things to keep out of our packaged foods. Then of course learning how to read and find where the added sugars are and recognizing that 16 ounce green tea, iced tea that you're drinking, that organic one that let's say, it's got like 24 grams of added sugar per serving. And then in that 16 ounce can, that's two servings. So, then you have to think, okay, it's not just 25 grams right there. That's 50 grams right there. Do I really want to make this decision right now?

Some of our teens and our kids are going to say, yes, they're going to do that. Oh, yes. That decision's very easy. They can do that, but at least you're making that informed decision. And then realizing what my sugar bucket for the day, I've totally dipped in. Like I've had more sugar than I should have on a daily basis. So now, maybe for dinner I'm gonna choose to really cushion that with lots of great, a variety of colorful fruits and vegetables, healthy proteins, healthy fats so that my microbiome has a little cushion. My brain has a little cushion from that. So, it's not about seeing never ever, because that's going to backfire. They're going to be off on their own at some point, and it is our job as parents, I think, to help our kids and teenagers recognize what a balanced decision is. When they make a decision that we're kind of cringing at, just recognize, like, pay attention to how their body and their brain feel afterwards so that they can connect that dot, and then also know how to bounce back from that decision.

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I want to take a minute to thank one of our sponsors. Therasage Saunas are what I highly recommend to all of my patients for the dozens and dozens of benefits imparted by infrared saunas. But what I love about Therasage Saunas is that they

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Dr. Wendy Myers

One other thing I wanted to touch on is, what are some other options for antibiotics? What are some other options other than antibiotics that parents can look at? One distinction that can be made is that, rather than taking a systemic antibiotic, parents may look at doing something topically if it's for the eye or for the ear or for a skin infection. Many times they can take something that's just a local antibiotic rather than just bombing the gut with a systemic antibiotic.

Elisa Song

Yeah, for sure. In part four of my book, I actually go through the top 25 most common pediatric conditions. I write down exactly as if you were a patient of mine, what I would tell you in the office, or if you gave me a phone call, let's try these natural remedies. I go through what I found over the years has worked well with homeopathy, essential oils. I teach you acupuncture points, herbal medicines, and provide a list of what things to consider trying first. There's also a little section on when antibiotics might be necessary, but there's so many things we can try at first. With ear infections, one of the things that can work amazingly well, and there are studies to show that it can work well, are ear drops with garlic and mullein, St. John's wort, a variety of different herbal herbs and these herbs have broad antimicrobial properties. Most ear infections have a mixed component, there's some virus in there, there's some bacteria, there even can be some yeast or fungi in there. Garlic can get all of that and it can diffuse through the eardrum and then kill whatever organisms are there. It works amazingly well.

Sometimes kids will need antibiotics, but I would always do the garlic. I would consider doing the garlic first, unless your child has a ruptured eardrum, like if their eardrum bursts and but otherwise, it's so effective and it's going to kill pretty much any organism that comes could be behind your child's ear causing their middle ear

infection. Also, homeopathy. There are some studies on homeopathy and ear infections in kids. I try to give more evidence-based guidelines knowing that, okay, I always tell parents, let's think about what evidence-based medicine is.

Evidence-based medicine is a three-legged stool. It's what is in the literature or research. And let's face this, natural remedies are not often researched right very well because they don't have the big pharma money behind them, but what's in there. It's what's in the research, clinical experience, patient preferences and experiences. I've been doing this for 20 years. I give the evidence based on my clinical experience on what works well.

So, for ear infections, the garlic ear drops. There's a homeopathic medicine called Ferrum phosphoricum, which is great even for things like sinus infections. I use a combination of quercetin and bromelain, which is an enzyme that can help break up mucus and phlegm anywhere. Brewing thyme tea, like the herb that you put in your spaghetti sauce, with honey, you can even throw some dry or fresh thyme, crush it in a tea ball, put it into your kid's bath, and then they can get the thyme that way. There are many different things that we can do as a first step that can get your kids better and faster without suppressing their symptoms and without disrupting their gut microbiomes.

Dr. Wendy Myers

Yeah, fantastic. Why don't you tell us a little bit more about your book, Healthy Kids, Happy Kids. You have a wealth of information, um, in your books. Tell us kind of a little bit more about what we could find there and where you can get it.

Elisa Song

My book is called Healthy Kids, Happy Kids: An Integrated Pediatricians Guide to Whole Child Resilience. You can see it's a yellow book and back, you could. Really bright. You can get it pretty much anywhere books are sold. I'm having parents calling me saying that they're finding it and even they're like little local indie bookstores, which I love supporting. But of course, Amazon, walmart.com, Barnes and Noble, in store and online, Target, pretty much anywhere you buy a million books. It's easily available. The book is in four different sections. Part one really goes through what as a parent or practitioner we should understand about your baby's, your

child's, your teenager's microbiome, and their developing immune system, their nervous system and brain development, their epigenetic potentials and what happens when the microbiome becomes disrupted? So, for pediatric populations specifically, what does it mean if they have a leaky gut or gut dysbiosis? That paints kind of the background of what we need to understand. I've had functional medicine docs come to me and say, oh my gosh, I thought I knew so much about gut health, but there's so much more specifics on pediatrics and what we need to know because kids' microbiomes are not little adult microbiomes, just like kids brains and immune systems are developing. Even as teenagers, they're not fully adult like yet. Your child's microbiome changes at each stage of life from infancy to toddlerhood to pre puberty and then after puberty. And so, we need to understand that in the context of their health. So, that's part one.

Part two goes over the five things for microbiome magic. Fun worksheets, fun exercises on how we think about getting in our microbiome champions. Those are our fiber, fermented foods, phytonutrients. How do we think about keeping out our microbiome mischief makers? So really with nitrous, how do we learn how to read food labels? Be a gut hero, a food label detective. Part three goes into, what if your child's microbiome is disrupted already? What if they have something chronic going on a little eczema or some ADHD or anxiety or maybe they have an autoimmune condition. I call it the gut reset. How do we reset your child's gut microbiome so that they can recover from whatever chronic condition is going on hopefully. And then part four is what I mentioned is the top 25 acute conditions from fevers to colds to earaches and sore throats to anxiety and eczema and constipation, sleep problems, and my integrative holistic pediatric tools that I start with in my practice, when antibiotics might be necessary, medications might be necessary, and a gut reset after antibiotics. So it's like a tome. It's like four different books in one, but some parents have literally read through it all at once. It's there to be a resource and a reference for whenever parents need it.

Dr. Wendy Myers

It is so important to have a resource like this as a parent, especially if you're just getting into the health game and just trying to figure out how to approach your health in a more natural way. Maybe you've been tired of getting the same results,

doing the same thing with conventional medicine and not liking the results you're seeing. A lot of parents are going to conventional medical doctors. They don't have a functional medical doctor with their insurance, or they can't afford to go to a functional medical doctor. You're kind of on your own. Like you kind of have to navigate this and you need a resource like this in order to know what to do naturally before doing the more Defcon one, just dropping the bomb with the antibiotics or a medication when there's a lot of other things you can do before that. You need a resource like yours to make those decisions if you don't have a lot of experience.

Elisa Song

Yeah, absolutely. Thank you so much.

Dr. Wendy Myers

Yeah, as well. Elisa, thanks so much for coming on the show. Why don't you tell us what your website is and how to dig it more into your work.

Elisa Song

You can find me at healthykidshappykids.com. That's my website. The easiest way to find me is on social media, on Instagram, @healthy kids_ happy kids. I always post really informative posts for me as a mom. I don't want you sitting there, doom scrolling. I want you to be able to stop, read, learn something of value and inspiration and then move on. I only post what I would love to read myself.

Dr. Wendy Myers

Okay, great. You have a fantastic website. So many good articles, just a wealth of information. Elisa, thanks so much for coming on the show and everyone definitely go get Elisa's book, Healthy Kids, Happy Kids. Thanks for tuning into the Myers Detox Podcast. I'm Dr. Wendy Myers and just love bringing experts. I'm going to be talking to experts from around the world to talk about detoxification, anti-aging and bioenergetics, which I think are just so important, in navigating your health and making good choices. So, thanks for tuning into the podcast.

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