Unstress HEALTH

with Dr Ron Ehrlich

Podcast Transcript

Dr Ron Ehrlich *[00:00:00]* Hello and welcome to Unstressed. My name is Dr Ron Ehrlich. I'd like to acknowledge the traditional custodians of the land on which I am recording this podcast, The Gadigal people of the Eora Nation and pay my respects to their elders past, present and emerging. We have, as I say, almost every week so much to learn from our First Nations people about connection and respect for land, people, country and the planet. I mean, they're all inseparable.

Dr Ron Ehrlich *[00:00:37]* Well, today we are exploring children's health, but children are the canaries in the coal mine. And whether you have a child or not and let's face it, we were all children at one stage. We have so much to learn from children's health as well. My guest is Dr Elisa Song. She is a Stanford, New York University and University of California, San Francisco trained holistic and integrative paediatrician. Always good to explore. Remind ourselves of what those two words mean. Holistic and Integrative particularly in relation to human health, is something we explore in this episode. She founded the Whole Child Wellness Centre, an integrative paediatric practice in Belmont, California, one of the first and most highly regarded holistic integrative paediatric practices in the U.S.A. Elisa also created Healthy Kids, Happy Kids dedicated to empowering parents to take charge of their kids health naturally and advice, which is, if followed, ensures the whole family can actually thrive body, mind and spirit. Elisa is a holistic paediatrician integrating conventional paediatrics with functional medicine, holistic nutrition, homoeopathy, acupuncture, herbal medicine and essential oils. She also happens to be the parent of two teenage children, which gives her firsthand experience of paediatrics at the coalface. And she has lectured nationally and internationally, which is exactly how I was first introduced to her many years ago. She was a guest on the podcast many years ago. It's such a pleasure to have her back. She's truly inspiring as an individual and as a holistic health practitioner. I hope you enjoy this conversation I had with Dr Elisa Song. Welcome back, Elisa.

Dr Elisa Song *[00:02:40]* Thank you, Ron and I'm really honoured to be back here after... It's been a while so this is...

Dr Ron Ehrlich *[00:02:45]* It has been a while and a lot has happened in the world since we last spoke. And, you know, I always think of kids as the canaries in the coal mine. I mean, whatever's going on with their kids is invariably a sign of something not right for us as well as adults. Just to be clear, before we start, what ages do you... As a paediatrician, what ages do you deal with and what are you seeing currently as the state of children's health? Physically, mentally?

Dr Elisa Song *[00:03:14]* Yeah. So, you know, paediatricians in the United States are a bit different than paediatricians in Australia. And I actually had a chance to learn that when I came out to speak years ago. But paediatricians in America are really considered primary care. We are the GPs for children and so I see children from birth until typically 21 when they're finished with their college university education and so at that point, I let kids know, now it's time, you know, wherever you settle if you're going to grad school or working, we need to find a doctor or an adult doctor for you. So that spans I mean, I get to see children in all stages of life and, you know, really they keep me on my toes about some of the present and current issues that I need to be aware of, which makes me a better mother, you know, because my children are 12 and almost 14. And so to hear it straight from a high schooler's mouth, you know, what they encounter helps me to prepare myself for what my kids will encounter. So, you know, the state of children's physical and mental health, well, you know, wasn't great even before the pandemic. But, you know, as the pandemic has sort of rolled on and yes, we're out of the state of emergency, but we're really continuing to be in a state of emergency when it comes to children's physical health and mental health. And I don't know which is a bigger alarm cry. I think that in terms of mental health, the pandemic, certainly there was a lot of attention to children's mental health and the effects of isolation on children, especially teenagers, and the increasing rates of visits to the emergency room for suicide attempts and suicidal ideation. Unfortunately, things were just as tragic even before the pandemic. But I do think that the pandemic brought a brighter light to that, that we need to address because the American Academy of Paediatrics declared children's mental health a state of emergency during the pandemic. And, you know, I can tell you in terms of our teenagers, it's not just the teenagers, but there was a study that just came out last month showing that... Revealing that at least for our teenage

girls. 1 in 3 teenage girls had seriously thought of suicide so that's one-third of girls now and then what's even I think that is alarming and... Of these girls, 1 in 5 had actually come up with a plan and 1 in 10 have actually tried. And so these numbers should really be a huge alarm bell for us that we need to address children's mental health, not just when they're teenagers and already in crisis, but long before, you know when they're toddlers and when they're elementary school kids and middle school age kids.

Dr Elisa Song *[00:06:18]* In fact, another study just came out about the alarming number of children in the 8 to 10-year age group who had tried to commit suicide or died by suicide. And that number is it's not a huge number relative to the teenagers, but any number is too big. And that the reports even note that those numbers are probably undercounted because it's just not on physicians' radars right now to ask whether an eight-year-old who comes in with an injury actually tried to harm themselves. You know, was this because they tried to actually end their life? And so, you know, there's the mental health and then the physical health, you know, in the early days of the pandemic. And I know it was different in Australia where I think that that you couldn't even leave your neighbourhood, right? I mean, I think that you were very, very restricted in just the movement. We weren't quite as restrictive here. And so in the early days when schools were shut down and parents were at home not working, this includes my family. We took walks every day and it was a great opportunity to be out in nature and, you know, get some physical movement in. But as soon as Zoom schooling started, you know, as soon as remote learning and all of these telehealth visits for physicians and remote work for, you know, pretty much everyone sitting on your butt all day long, it became the norm. And for our children, an alarming increase in rates of overweight and obesity. And we're seeing type two diabetes really trending up, you know, high cholesterol, early signs of or not even just early signs, but non-alcoholic fatty liver disease in children. And so it's a physical health and the mental health and unfortunately, the health that our children have in their younger years and in their teenage years really sets the stage for that chronic disease later on. That is much harder to reverse than if we could really either impact them right now when they're showing these signs of chronic physical or mental health diseases already, or just try to prevent them in the first place.

Dr Ron Ehrlich *[00:08:35]* Yeah. Wow. So much to unpack there. I mean, this has been a period of global reflection, really, hasn't it? We were all put in a situation where we just had time literally, had time to reflect and be... I am reminded of what human contact is all about. So those statistics are just

quite frightening. Quite staggering, because I'm already pre-pandemic aware of some statistics about mental health, which were already, I mean 1 in 10 ADHD. The statistics for autism, these neurodegenerative diseases are pretty staggering in Australia, but even worse in America.

Dr Elisa Song *[00:09:17]* Even worse in America. And then we have all of these immune conditions too, which often go hand in hand with these neurodevelopmental conditions. But, you know, at least 1 in 5 children has eczema nowadays. And if I have to think back, you know, when I was a medical student and a paediatric resident and this is over 20 years now, over 25 years ago now, we just did not see, first of all, the number of children who present with eczema even. I mean, some parents will say they were born with their eczema, but as babies presenting with eczema. And then also the severity, the higher and higher and higher strengths of steroid topical creams that are being used once topical steroids fail when the... There's the antibiotics for staff and strep skin superinfection or impetigo. And then there are actually chemotherapeutic medications that are being used when there's no other choices. And so I just I wonder, how do we get to this place where so many kids have this immune dysregulation and this brain dysregulation, and it really is more the norm now that kids have something that's not quite right, even if they're not diagnosed with anything but something, you know, kids who just aren't comfortable in their skin and have some sensory concerns that maybe they don't have full-blown sensory processing disorder that meets a diagnosis. But, you know, they're they don't feel right. They don't feel good in their skin. Or kids who are, you know, just itchy from the inside out or always have a stuffy nose or, you know, are snoring all the time in their sleep. So they're not diagnosed with anything, and yet they're not thriving in the way that kids should.

Dr Ron Ehrlich *[00:11:10]* Hmm. Well, those kinds of symptoms lay the foundations that they... For all that follows. Yeah. I mean, the whole system seems to be geared towards treating the symptom. And I think this is one of the things that defines a holistic approach at the root cause. I think this is part of what defines a holistic approach. Well, actually, let me ask you because the word holistic is one that I've used for many years in my own practice. And invariably the question comes, well, what is a holistic practitioner?

What do you answer to that when someone says to you, what's a holistic paediatrician?

Dr Elisa Song *[00:11:52]* Yeah.

Dr Ron Ehrlich *[00:11:52]* Integrative. You know...

Dr Elisa Song *[00:11:54]* And it's interesting because I've... As you just said, I mean, I've moved more and more towards calling myself an integrative paediatrician because as we think about it, the word holistic just means taking a whole body, whole mind approach to this person in front of you as a little person, you know, or a big person and in reality all GP's, all paediatricians really should be holistic because you don't ever have an isolated child without anything else that's affecting their lives. You have to take that child's health in the context of their family situation, their socioeconomic status, their community situation, their school environments. I mean, so many different factors. And so when we don't look at a child from that holistic standpoint, what is their food access? What is or what is their parent's food, knowledge and diet and lifestyle knowledge? If we don't take that into account, we're not serving our children as well as we could. And so holistic is something that although, you know, for some holistic does get muddied into the realm of, quote, alternative medicine. And when I started out in as a holistic paediatrician, I started my practice back in 2004, and it wasn't called... It wasn't called integrative medicine. It wasn't called holistic medicine. There was an office at the NIH called the Office of Complementary and Alternative Medicine. So it was still putting conventional medicine as really placing it at the centre. And so you had this complementary it was kind of on the side or alternative, which doesn't really do it justice. So calling it integrative is really then taking the best of what we have of conventional medicine, which there are many, many benefits. We know that, you know, antibiotics can be life-saving and there are times when our medical interventions are absolutely necessary. I mean, when my mother was diagnosed with cancer, there's no way I would have said we're not doing anything conventional. There's a time and a place for everything. And yet we also now are at the stage in medicine, in not just functional medicine, but really truly in conventional medicine. We need to recognise the unintended consequences of some of these necessary and lifesaving

treatments and use our integrative tools, whether it's functional medicine or herbal medicine, acupuncture, ayurvedic, homoeopathy, whatever tools we have in our belt. Energy medicine, we have to learn how to mop up some of those unintended consequences. So, you know, I give the example to parents of antibiotics. I mean, absolutely, antibiotics can save lives.

Dr Elisa Song *[00:14:54]* However, we know in some paediatric studies, up to 70% of children in those studies have been prescribed antibiotics inappropriately. And we know that by the year... Is it 2025? Now 2050, just right around the corner to 2050. Some public health experts are really and truly concerned that antibiotic resistance is going to be a leading cause of death worldwide. I mean, a simple skin infection or a simple ear infection, I mean, that could become life-threatening. That puts us way back in the days before we had antibiotics. And so we need to I mean, that's very, very frightening. So, and we also know the impact of antibiotics or, you know, antacid medications on our gut microbiomes. But why is that so important for children? There are... There was a very large study looking at giving children who received antibiotics or antacid medications in the first six months of life and they had an increased risk, sometimes a double increased risk of virtually every single allergic disease by the time they were four. And then another study looked at antibiotics, just one round of antibiotics given to an infant, especially if they were under six months of age, could increase the risk of any mental health disorder by the time they were older kids and teenagers. And the more the rounds of antibiotics, the higher the risk. And so that's not to say that we should forget about all antibiotics, but we need to understand what is going on, what the gut microbiome is the foundation for your child's developing immune system and their developing brain and if we disrupt that gut microbiome, we need to make sure we know how to rebalance our gut microbiome so that we can optimise their gut-brain connection and their gut immune system connection. And I think that's a lot of what happened during the pandemic, too, is that disruption to their gut microbiome really for children and even for teenagers impacted the trajectory of their health, just made some things a little bit more likely to occur in that setting of isolation and baking cookies every week and, you know, not sleeping and not exercising.

Dr Ron Ehrlich *[00:17:17]* Yeah, I know. We did a program with a wonderful,

integrative gastroenterologist. Yes, believe it or not, an integrative gastroenterologist who, when I asked him, is, you know, it's said that the gut is the second brain. What is your reaction to that? And he said he disagreed. He thought it was the first brain. Because when you look back evolutionarily speaking, even before we had brains, we had guts. And that played a role in our immune function and mental health. It's interesting, too, isn't it? You mentioned antibiotics and I think also about antidepressants. 90... In Australia, 95% of antidepressants are prescribed by practitioners, general practitioners who have a ten-minute consultation sometimes at most. And similarly, I guess when someone presents with the problem reaching for the prescription pad and writing an antibiotic or an antidepressant is a pretty standard way of going. Well, what does a new... What is a comprehensive exam in your practice look like? How long are you seeing when you see a new patient? What is the protocol?

Dr Elisa Song *[00:18:27]* You know, so the challenge with the conventional medical system, the, you know, conventional insurance system and it sounds like it's very similar in the States as it is in Australia, is that, you know, for a primary care visit, you might be given 15 minutes to take a comprehensive history, a comprehensive quote, history, you know, trying to try to address any concerns a parent, a child may have, and then also providing some anticipatory guidance on, you know, preventive things that they could do for in the meantime between now and the next visit. I mean, that's a tall order for even half an hour. And to be able to do that in 10 to 15 minutes when if the chief complaint is anxiety, right? A teenager comes in and they're getting really anxious and they're having a hard time sleeping and, you know, whatever else it is, you need time to develop that rapport with that child in front of you. You need time to ask all the questions to figure out what are all the factors that are contributing to that child's anxiety. You know, is there something going on situationally at school? Is there bullying going on? What about at home? How are they eating? You know, are they all of a sudden going out with their friends every day and getting a sugary coffee drink? You know, are they have they stopped exercising? What's going on with social media? Maybe they're being cyberbullied. I mean, how much are they sleeping? Are they staying up till 2 or 3 in the morning chatting with their friends, Snapchatting with their

friends, or, you know, on Discord, playing video games with their friends? And so all of these pieces, if we don't have time to address them, we're left with the only thing we can do is write a prescription. And so it's the unfortunate way. And I truly don't believe that most physicians really enjoy practising in that way, because we know that, you know, SSRIs or antidepressant medications, they fail in the majority of cases. They may work temporarily, but in the long run, they do not continue to provide relief for that patient. And so, you know, really thinking about all the other things, in fact, you know, some studies have shown that exercise walking in nature provides more benefit for patients with depression than an antidepressant medication. And when we think about the gut microbiome and I mean, let's take, for instance, adolescents, we know that, you know, the gut microbiome is responsible for maybe 80 to 90% of all the serotonin produced in our body and serotonin, as many listeners know, that's the, quote, brain chemical. It's really a gut chemical that is responsible for feeling calm and relaxed and managing stress, helping with sleep. At least 50% of dopamine is made in our gut, which is responsible for focus and attention and may be implicated in things like ADHD and addictions and the melatonin. More melatonin is made by our gut than anywhere else in the body. And so when we have a disruption in our gut microbiome, that absolutely sets the stage for depression, anxiety, attention and focus concerns addiction. And so when we see a child in front of us with any mood concerns. One of the first things we need to do is take a look at what's going on in their gut microbiome.

Dr Elisa Song *[00:22:00]* In fact, there are probiotic strains that are considered they're called, quote, psycho biotics because they work to optimise serotonin and dopamine and other neurotransmitter levels. But when we look at a teenager, the other thing we have to think about, what else are they on? Yes, we know that ultra-processed foods could disrupt the gut, microbiome and sleep. Lack of sleep and lack of exercise also disrupt the gut microbiome. But what about medications they're on? So many of our teenage girls and boys are on antibiotics for their acne and they're really low dose, but doesn't matter. Low dose is still going to harm the gut microbiome. I mean, antibiotics don't really care how low, you know, the

doses or high the doses. It's going to kill the good bugs along with the not-such-good bugs. And many of our girls are on birth control pills because they have really bad menstrual cramps or they have PCOS or they have PMS. And in the end, as a perk of the birth control pill will clear up their skin. And we know that and antibiotics aren't the only disruptors of the gut microbiome. Antidepressant medications disrupt the gut microbiome. Birth control pills disrupt the gut microbiome and even something like ibuprofen and Nsaid medication. So then you have these girls who are taking ibuprofen or Naproxen for their menstrual cramps, or our teenage boys and girls are athletes who are taking ibuprofen because they just had a really hard workout and they're beat up at sports practice. And that one study found that ibuprofen disrupted the gut microbiome, possibly even more than antibiotics. And so we just you know, and it's not to say again, that we don't do this at all, but it's so that kids and their parents can really use these medications in a knowledgeable way and also seek out other options, as you mentioned. What's the root cause if a child is having really bad acne or teenage girls having really bad PMS? What's going on there? We have to look at the sources of inflammation. We have to look at, you know, all the diet and lifestyle factors that are contributing. But, of course, those are the hardest things to change. The easiest thing is to pop a pill. And yet if children or parents understood the long-stream consequences, the downstream consequences of some of these. Quick short-term fixes they may choose otherwise.

Dr Ron Ehrlich *[00:24:35]* Hmm. Yes. And I mean, the microbiome is a huge one. And you've mentioned, I guess, taking a history and looking clinically at skin and mood, etc... Is that how one comes to a diagnosis of gut microbiome dysfunction or dysbiosis?

Dr Elisa Song *[00:24:54]* Yeah. So and then, you know, just to back up a little bit too, I mean, my visits are typically, you know, 45 to 60 Minutes and a new patient visit is scheduled for 90 minutes just so that I can really dig into that child's past history all the way to back to their birth history and prenatal history and even, you know, mother and father's pre-conception history. So we go way back. And so, you know, because all of these things, even, you know, they found that grandmother's diet influences that child's risk of

things like diabetes later on. And so you need time for a very thorough history, a really good clinical physical exam. And then I also do a lab testing when possible. And because you can't tell what is going on in the gut unless you actually look, you can have clinical clues if your child actually has gut symptoms like constipation or they're gassy or they feel nauseous and they're having reflux symptoms, then I presume that there is an element of gut dysregulation, gut dysbiosis, an imbalance of, you know, the good and the not such good microorganisms in their gut and also something called leaky gut. So I can presume that, but I'm not going to know exactly how well they're absorbing their nutrients or not how much inflammation might be present in the gut or which organisms both beneficial and pathogenic are actually in the gut. Unless I do a stool test. And so I really I love doing stool tests. I think they're just they're so helpful, you know, to get a sense of what we need to do. And that's, you know, that is something that we can't tell by looking. And I also do blood testing when possible, too, because it can be surprising how deficient a child can be in certain nutrients, even if they're eating, you know, a fairly well-balanced diet. We know that there are some very common nutrient deficiencies. First of all, most kids I'm not going to say most kids, some kids don't have the most balanced, varied diet to get in all of the nutrients. And, you know, our food is just less... It's less nutrient-dense. You know, we also have a lot of factors that deplete essential nutrients faster, including psychological stress. And so, you know, getting a general nutritional snapshot with blood work can be very helpful.

Dr Ron Ehrlich *[00:27:28]* Mm hmm. You'll be pleased to know we've done a program called What Does Your Poo Say About You? So, you know, this is music to our ears. I mean, the... How does... How do we turn that around? I mean I guess obviously diet but you know, how do we do that and how long does it take to turn around the gut microbiome?

Dr Elisa Song *[00:27:52]* Yeah, not very long if you know the tool. So we know that you know, changing your diet can actually shift your gut microbiome within about 48 hours. For better or for worse. Right. You know, if you have an ultra-processed, high-sugar, high-fat diet, those changes happen really quickly. Lack of sleep, you know, shift workers or airline, you know, pilots or kids who are pulling all-nighters during finals week, exam week during school. It just takes 48 hours to cause changes

and disruption to the gut microbiome. Now, with adequate, optimal sleep, you can rebalance your gut microbiome, but it takes a little longer. It takes two weeks to restore and rebalance after with exercise we know that exercise can also enhance an optimal gut microbiome. With the caveat that those, you know, kind of ultra high-intensity triathlete, you know, marathon runners, they may actually temporarily when they are exercising, have an increase in inflammation, leaky gut, gut dysbiosis, which then recovers afterwards. But you know, regular optimal exercise, moderate exercise also enhances that gut microbiome and in a relatively short amount of time. So, you know, with these things, I mean, I talk about the five things that you can pick as a child or a parent to work on first. All of these five things are things that we do every day and if you do them in a mindful way, in a way that supports the gut microbiome you can see really good results. And so you can pick, which is I tell parents and kids pick the lowest hanging fruit. So we've already mentioned sleep and exercise. And so which what can we work on there? Another facet is mindfulness. You know, doing things to engage your vagus nerve, whether that's walking in nature, you know, having a good laugh, you know, doing some meditation and breathing exercises or using devices that stimulate your vagus nerve. There are a variety of them that are available here and may also be in Australia as well. So if we do those, the mindfulness, the sleep, the exercise, each of those independently have been associated with beneficial effects on the gut microbiome and one of the fascinating things in the research is that these can benefit your gut microbiome without any change in diet.

Dr Elisa Song *[00:30:33]* So independent of diet, because for a lot of families, the most daunting thing is to change your child's diet. And so eventually, yes, we need to work on diet. However, just even working on maybe taking some mindful moments every day or practising having a gratitude practice at dinner or, you know, going for a family, you know, by bicycle ride on the weekends. I mean, all of those things will help support a healthy gut microbiome. Now, the other thing that you can do is stay hydrated. We know that good water drinkers, right? Kids who drink enough water have different microbiomes than people who don't drink enough water. And in fact, what's very interesting is that people who drink more water that is also associated with eating more fruits and vegetables. I mean, you know, go figure. But yes, all of these healthy habits that you kind of come in a package. Right. But drinking just focusing on that, let's drink.

You know, so I tell kids, so I know this right here is about 24oz of water. And so I... And I tell kids, get your water bottle, whatever it is, maybe it's 12oz or maybe it's a 16-ounce water bottle. Just know how much it is and do a little exercise, do a little, you know, do a little game. We calculate how much water or fluids would be ideal for them on any given day the minimum amount. So I have them take their weight in pounds. Let's say they are, you know, 80 lbs. And so you take that number, divide in half and that's the minimum number of ounces of fluid that they should drink in a day. Now, the conversion in kilograms, you know, two litres is going to be a little bit different, but you get the gist. You can calculate that out. So if I have a child who should be drinking at least 40oz of fluid in a day minimum, this is excluding a really hot day. Or if they had a really intense workout where they need to hydrate even more. But if they have, you know, a 12-ounce water bottle that they carry with them, I have them calculate, okay, I'll need about three and a half of these to drink in one day, then just drink from that all day long, you know, for about a week, just whenever you need when you're finished that you fill that up and notice how you feel. Notice how your tummy feels, what your poops are like, how restorative your sleep is. A lot of kids notice, a teenagers will notice their skin looks better or their hair looks better. So that's one way to do the hydration. And I don't know, Ron, in Australia, if that... If these hydration drinks have taken over and are all the rage, are they?

Dr Ron Ehrlich *[00:33:12]* They have. Yeah. They have.

Dr Elisa Song *[00:33:14]* And so, you know, it used to be that Gatorade was the thing, but now there's Prime and there's... I mean, all of these things, these drinks. And I let kids know, you know, electrolytes are great. However, many of these hydration drinks that are filled with electrolytes, they are complete junk because they've swapped out. They'll say no sugar, you know, low calories, but they've replaced the sugar for Sucralose is the main artificial sweetener used in most of them, and another artificial sweetener called acesulfame potassium and artificial sweeteners. Many of them have been found to have a distinctly disruptive pattern effect on the gut microbiome, so they disrupt the gut microbiome. And so... And there's really no evidence showing that these artificial sweeteners do anything to impact our sugar cravings or our risk for diabetes or metabolic syndrome.

And in fact, it may be more addictive than sugar itself. I mean, a lot of people through the years have heard or seen that diagram where, you know, where sugar will light up those parts in your brain, those reward parts of your brain that cocaine does. So sugar has been noted, too, right, to be maybe almost as addictive or as addictive as cocaine. Well, there was one study in rats that they took these rats who were already addicted to cocaine. I mean, they sadly made these rats addicted already to cocaine and they showed them cocaine versus saccharin and artificial sweetener, saccharin. Those already addicted rats chose saccharin over cocaine. That is frightening. I mean, that's frightening. So these hydration drinks, I mean, I because a lot of kids come in and I'm fortunate they ask me, they asked me, hey, Dr Song, would this be okay for me to drink or what do you think about this? And so we have some hydration drinks that are more approved, but I just let them know. Look at if it first of all, if it has artificial colours in it, you have to throw that out. There's no place for neon green or blue hydration drinks. But if it says Sucralose or acesulfame K, then that also has to go. So...

Dr Ron Ehrlich *[00:35:36]* Mm hmm. And often, apart from what's in them, the PH of these things, the acidity of these drinks is sometimes also another issue.

Dr Elisa Song *[00:35:45]* Oh, absolutely.

Dr Ron Ehrlich *[00:35:47]* So, listen, we've got sleep, exercise, mindfulness, hydration and diet. Are they the five...

Dr Elisa Song *[00:35:57]* Oh diet, let's talk about diet, because I kind of saved that for last because...

Dr Ron Ehrlich *[00:36:00]* Yes.

Dr Elisa Song *[00:36:01]* Because, you know, when I think about diet, I. Divided into two different areas. Right? So the first area we want to think about, well, what do we want to try to get into your child's diet? And so, you know, when we think about what we want to get into our child's diet, I try to make it really easy for parents and kids to remember.

So I let them... I have them think about this, the three F's. Okay. What are the three F's we need to figure out? We need to have fibre. Where do we get our fibre from? Fibre are those prebiotics, those starches that feed the probiotics. They feed the good bugs to help them grow and make all of these amazing compounds that help us stay healthy. And so those are going to be in things like legumes, whole grains, vegetables, fruits. So loading in that you know, that... The fibre and that goes hand-in-hand with then phytonutrients, which is not an F, that's a PH, phytonutrients. It's close enough. So phytonutrients. So as we're thinking about getting in our fibre, think about all of the colours that make each... That give each plant a different phytonutrient benefit. Phyto means plant. So these are plant-based nutrients that have different heart, healthy immune health, eye health, brain health, gut health benefits. And phytonutrients can actually act as prebiotics as well. So when we're thinking about the legumes you want to get in, are the nuts and seeds or the vegetables or the fruits really thinking, How can we vary that colour on a daily basis? And then the last F is fermented foods and that it's not. Last but least. In fact, one one study at Stanford Doctors Sonnenburg who are microbiome researchers, they found in the study of college students that the group that fermented foods compared to the group that had a high-fibre diet, the fermented food group, had a greater change in their beneficial microbiota. So the microbiome now the fibre group also had benefits more in the function of the microbiome. But there is a greater diversity and abundance of microbes... Of the microbiota seen in the fermented foods group. So trying to get all those in. But you know, then I have parents who kind of look at me cross-eyed or kids and they're like, I don't know if we can do that because they're just eating mac and cheese and, you know, chips and, you know, out of a package all day long. And so then we go to the second part of nourishing your gut microbiome. And the second part is, well, if we're having a hard time, think about what we can get in. Let's think about what we can take out and have healthier swaps so that if your kids are eating out of a package, let's say they love mac and cheese, well, why don't we take a look at that box and look at the ingredients, learn how to... Talk to kids about learning how to read food labels. Be a gut hero, right? Learn how to read their labels like a gut hero. And what do we look at? We look at first of all, on the nutrition facts, how much added sugar is there? Because on any given day, you shouldn't have more than 25g of added sugar in your diet.

Dr Elisa Song *[00:39:18]* So if you see that mac and cheese has I mean, mac and cheese might be a bad example, but let's say I mean some mac and cheese might have added sugar. Let's say that the protein bar that you think is so healthy, but it has, you know, 13g of added sugar. Well, that's half your sugar intake right there. Right? And that's something that we really want to minimise are added sugars. And then we look at the ingredients panel, the ingredient list, and we just want to make sure that there are few ingredients as possible and recognisable. Now some ingredients, right, and some ingredients may not be recognisable at first and so then they may have to look it up or Google it and see that, oh, pyridoxine, oh, that's vitamin B6 or, you know, folic acid. Oh, that's actually, you know, a vitamin as well. Although you have to think if it's a food is so healthy for you, why would they have to add back vitamins? But then there are so many FDA-approved additives that really, really wreak havoc on children's brains and their gut microbiomes and their immune systems are associated with the higher risk for autoimmune diseases in some studies. And so learning how to choose a healthier version of this mac and cheese and picking the, you know, the organic, healthier version, by the way, organic isn't always healthy, right? So You still have to read the label. But and then or I mean, chips if your kids are living on chips, I mean we have these chips called Takis here. I don't know if you have them in Australia, but they're rolled, corn tortilla chips that have artificial flavours, red dye, whatever red dye number it is. I mean, so many additives in it and a lot of kids enjoy these. So then I'll have them look up. Well, let's take a look at which could be better swaps. There is the Trader Joe's ones that are a little better. And then there are the Siete ones that are even better. So we go through this process so that they have this exercise of, Oh, if I'm at the grocery store, I'm at, you know, out to lunch with my friends and everyone's getting a soda and a bag of chips and they would like to participate. What can they choose instead? They can choose a healthier drink that still comes in a can, right? They can choose a bag of chips that they can have. Yeah, but it's still. But it's a healthier version of it.

Dr Ron Ehrlich *[00:41:43]* Hmm. Another keeping on the F theme or the F-sounding theme, at least. What do you say to people who come in and say their child's a fussy eater? Because watching my grandchildren in ages from 1 to 8, I know that when my grandchildren are one and one two, they would eat anything and possibly even chicken, liver paté and all sorts of different

things. But after two, they became very fussy. And so what do you say to parents who say, Oh, my kid would never eat that? They're really fussy eaters.

Dr Elisa Song *[00:42:16]* Yeah. So that is I mean, that's a very important issue, which is why I give parents and kids all the the four other things to work on besides diet first or taking the swaps. But, you know, when kids get fussier or picky or selective, one of the things we have to think about is, you know, what are some of the other factors? Is it that, you know, kids initially a lot of kids, as you've personally experienced, I mean, I have many parents who say they would eat anything when they were babies, right? And then all of a sudden they're getting more selective. But is it because of, you know, are they seeing something that seeing what maybe their classmates are doing or reacting to foods or maybe an older sibling? But a lot of times it comes down to as kids get older, these nutrient deficiencies can become more prominent and one of the ones that is very, very, very common in children is zinc and we know that zinc. I mean, that is one of the most common nutrient deficiencies in children, even infants, which is why here in the States, the American Academy of Paediatrics has recommended animal proteins as one of the first foods for infants, knowing that iron and zinc are very likely to be insufficient in our babies reaching that low point at around 6 to 9, maybe 12 months of age. And so animal proteins are rich in zinc. So and, you know, some are going to be richer in iron than others but when zinc is low, outright deficient or insufficient. It changes the way your... You perceive taste and, you know, and it actually affects all of our sensory systems, even sound sensitivities. There's something called gain amplification where if you are insufficient in zinc, it can make certain sounds seem amplified. And so these are kids who might, you know if you are in a public bathroom and you flush the toilet, they'll cover their ears or they won't let their parents, you know, run the blender or the vacuum at home and other even, you know, tactile sensitivities. If your kids don't like the tags on their shirts or, you know, are on, you know, have to wear particular soft pants or only one pair of shoes or maybe no shoes at all. I mean, all those go along with, you know, zinc issues. And so... But even if you know all of those if you just have a very, very selective eater, fussy eater, then I think just trying to get a little more zinc and you know, you may not be able to do that with food at first,

but sometimes just give me a little extra zinc as a supplement, seeing how they do and then I've had parents just note over time, over the next month, you know, they're actually more willing to even like put that in their mouth and just lick it, you know, and then gradually tried and taste it. And they don't say that everything is yucky anymore. So that would be one of my first tips to kind of see if that's an issue, because it is for so many kids.

Dr Ron Ehrlich *[00:45:30]* Hmm. The other one is... You mentioned meat, animal protein in that because veganism has become a really big issue. Well, a big subject. And people are doing that for many, doing it for ethical reasons, which I totally get. You know, animal health and what's good for the animals is generally good for us and good for the planet and the converse is true. What are you seeing and is this a trend that you're seeing in your practice? A lot of kids coming in on vegan diets.

Dr Elisa Song *[00:46:03]* Yeah, I have you know, I have some families who are vegan for, you know, have been vegan for a long time. And so they are raising their children vegan. And I have, you know, some kids who choose to be vegetarian or vegan or maybe they're, you know, they might eat eggs or some dairy, but otherwise are vegetarian. I think it can be a well-rounded, healthy diet. It has to be done very mindfully. So, you know, if you are truly vegan, then you do need to take an extra B12 supplement, you know. Methyl cobalamin... Cobalamin Methyl B12 supplement. It can be very challenging to get enough protein and to meet the needs of especially a teenage athlete in, let's say, or even a child who's pre-pubertal and about to go through puberty. And I'll go back to the zinc. You know, zinc levels are high in your blood are highly correlated with animal protein intake. And I don't mean just chicken and, you know, poultry and beef and lamb and pork, You know, seafood and shellfish in particular is very high in zinc. Now, I have had kids be able to replenish their blood zinc levels with lots of pumpkin seeds, you know, different seeds that are rich in zinc but it's harder to do. And especially for boys going through puberty zinc is especially important for healthy, you know, male sex hormone levels. And so, you know, for boys who have maybe a little slower in their puberty and we're concerned about their growth, I always look at zinc and that is something that, you know, in a vegan diet or a vegetarian diet, you have to be really conscientious about, really mindful about because it takes a lot

more, you know, a much bigger serving of, you know, lentils, you know, to get in amazing fibre. But, you know, if you want to get in enough of your child's protein requirements and zinc requirements, you're going to have to eat a lot more and you're probably going to need to eat legumes and at almost every meal, you know, for that certain time.

Dr Elisa Song *[00:48:07]* So it's not impossible to do, but it's a little more challenging. And also, you know, for some of the kids who choose to be vegetarian or vegan for, you know, animal rights, ethical concerns. A lot of times their diets end up still being just white, you know, bread and cheese. And so that is not I guess cheese wouldn't be vegan, but, you know, but that is not the way to really choose to be a vegetarian or vegan. And what's interesting, I haven't looked into this too much, but I was listening to a podcast where there was a farmer who is a regenerative farmer and, you know, raises cows and has chicken and also, you know, farms his land. And what he was explaining is, you know, really when we think about, you know, as for folks who really are turning to vegetarianism for the ethical concerns. But he was commenting on is unless, you know the farmer and how they are farming their land and cultivating their plants, there can be a lot more, unfortunately, you know, death and destruction to animal life in the soil as they're just ploughing through, you know, homes of these, you know, underground burrowing animals. And I hadn't even thought of that. But it gave me pause to think. And that, you know, really, if we think about, you know, the carbon footprint in that, you know, it may be actually environmentally more sustainable if we raise animals ethically and gratefully. And so I'm not advocating one or the other, but I just... I want kids and parent... Children who are thinking of, you know, changing their diets in certain ways to really think about what are the reasons why. Do the research to make sure it fits in line with your core values that you are really trying to embody and then also make sure that you are doing it in a way that is really healthful for you, that you've... You figured out all the elements of whatever particular, you know, dietary pattern you would like to follow, how that fits with you. And then also check in and see, you know, how it makes you feel because some kids are going to feel better on a vegetarian diet. Some kids are going to feel better if they have a little animal protein in their diets. As always, tuning back in and checking in with their bodies and their brains and seeing what is the best way of eating for me because

I don't prescribe any particular, Oh, you should be keto or gluten-free, dairy-free or anything like that. It's really got to be, you know, individualised.

Dr Ron Ehrlich *[00:50:52]* Hmm. Well, we have been focussed on regenerative agriculture for many years and it's a passion of mine and the overall message is don't blame the resource. Blame the way the resource is managed. And I think that's an interesting one. When you mentioned protein though, and how do we know when we're getting enough for... What is a measure of adequate protein?

Dr Elisa Song *[00:51:14]* Mm hmm. I mean, you know, and I will say protein now there's more science coming out that probably more protein is needed than we think, especially for our active youth or teenagers. Now, you know, in some recommendations are for adults to get at least one well, to get around one gram of protein per pound of body weight, which is much more than what is generally recommended, but...

Dr Ron Ehrlich *[00:51:43]* Which for our kilogram people, one gram of protein for £1 of... What is that, I think there are... One gram kilo is 2.3 lbs.

Dr Elisa Song *[00:51:55]* Yeah. 2.2 lbs. So it would be about one gram per every half kilo of body weight. About. So taking your body weight in kilos. Dividing that by, I guess, 2.2. And then that's the amount of grams of protein.

Dr Ron Ehrlich *[00:52:16]* Which it's interesting because the standard advice was always around 0.8 of a gram. Yes, per kilogram. And now that is increasing at the same time as this whole movement towards veganism and vegetarianism and demonisation of meat is occurring as well. And that adds an extra challenge really, doesn't it?

Dr Elisa Song *[00:52:37]* That does. But yes. So then you know for kids then I mean I still you know I... For children I'm still a little bit more on the conservative side once kids get to be you know, are in high school and really, you know, increasing their athletics and their, you know, their sports. And I might increase that a little bit more. But I'm probably going for about maybe half, half a gram per body weight. So and then it depends on, you

know, how active they are and what kids you're going they are during puberty, maybe a little bit more. But certainly, I'm kind of inching up over time, you know, as the data comes out in adults and how important I mean, we know that I mean, muscles are the... I mean, they're your mitochondrial stores, your mitochondrial powerhouses that really are required for all of your cellular functioning. And so, you know, for kids, we want to make sure that we optimise their mitochondrial function. I mean, it's you know, yes, it's your microbiome, but it's also your mitochondria. And there's a lot of microbiome, mitochondria, crosstalk, which is fascinating.

Dr Ron Ehrlich *[00:53:46]* Hmm. Yes. No, That whole story of mitochondrial function leads us into the whole story, which we've been exploring of quantum biology here as well. This... Not only is meat being demonised, but so is sunlight has also been demonised to almost ridiculous. Where are you? I mean, you're in California. Well, you're in California, too, isn't it? In Australia, we have this policy. Slip, slop, slap. Yes. Slip on the cover, a slap on the suntan cream slip, slop, slap. Anyway, I forget...

Dr Elisa Song *[00:54:18]* And a hat

Dr Ron Ehrlich *[00:54:18]* And a hat. That's right. And so I go down...

Dr Elisa Song *[00:54:23]* I remember seeing that policy.

Dr Ron Ehrlich *[00:54:23]* Yeah. Yeah. We can get down to the beach and I see kids completely covered from head to toe. Is that... That has its own implications on mitochondrial function really, doesn't it?

Dr Elisa Song *[00:54:36]* Yeah. I mean, we, you know, we need fresh air. We need sunlight. I mean, we need to be out. And, you know, I understand the concerns with skin cancer, but even just being out without any sunscreen on for, you know, part of the day before the hottest times of the day, just exposing your skin. And it's interesting because I have some parents come in I think is a little different. But I'll have some parents come in and almost. I don't want say the word embarrassed, but, you know, just hesitant to show that their kids are so have such a tan over the summer. I'm like, that's great. That tells me you've been outside all the time, right? You know that golden colour that you should have.

Dr Ron Ehrlich *[00:55:22]* Hmm. Because, I mean, the other one is the alternative, of course, is this exposure to so much blue light. I mean, social media is one thing, but the blue light of devices is quite another as well.

Dr Elisa Song *[00:55:34]* Well, yeah, and our circadian rhythms for the most part, I mean, they're so disrupted and I mean, kids, the circadian rhythms, I mean, and if you don't have the sunlight and with that comes the vitamin D, if we don't get enough sunlight, I mean, most people are deficient or insufficient in vitamin D, and a large reason for that is because we're indoors so much. But then when we have the opportunity to be outdoors, if we're lathering ourselves with sunscreen, there is no way those sun's rays are going to be able to penetrate enough to have adequate vitamin D conversion. So that has implications for our brain health and mood and immune health. You know, even vitamin D has been found to have prebiotic qualities, properties, you know, for the gut microbiome. And so, you know, lots of concerns there. But then when we're not... If we're thinking about being not outdoors, what do you do indoors? And most kids, when they're indoors, they're, you know, on their screen or they're on their computer or they're playing a video game. I mean, that's just sadly, that is a... During the pandemic, it got much worse. I've so many kids who really I mean, the screen addictions became much more apparent during the pandemic and the kids were really in a catch 22 situation because they weren't allowed to see their friends. And yet kids need social interactions, especially teenagers. And one of the only ways they could do that was for boys it was mostly through video games and chatting through something called Discord. And I'm going to sound like a mom, you know, but then for girls...

Dr Ron Ehrlich *[00:57:18]* Don't apologise for that.

Dr Elisa Song *[00:57:19]* But for girls, it was, you know, chatting and also social media. Now, I don't think that there's any role for social media in young children, our middle schoolers. I really even don't think teenagers should have social media. Is anyone going to, you know, any teenager and parent really going to pay attention to that? Probably not for the high schoolers. But, you know, there... We know from some of the studies, it's interesting social media, we know very often and most often you feel worse about yourself after you're done scrolling through social media than when

you first hopped on. And those effects on self-esteem and self-confidence seem to be most pronounced in the pre-teen age group. And then are older teenagers like our 18 and 19-year-olds. And so, you know, we just... We really want to be aware that we want to know what our kids are scrolling through. We want to know what, you know, what YouTube is auto-playing for them as their next video. Because even if they started watching a video you approved of to maybe learn how to make this little robot piece or, you know, whatever, you know, bake, I mean, Kenzie looked up a lot of baking videos on YouTube, but that autoplay, you never know what's going to come next. So you just have to be aware and talk about it with your kids, you know. Talk about, you know, if you see something inappropriate or frightening or that could look like cyberbullying, that you have that conversation. I noticed that. You know, how did that make you feel? I know. You know, if it were me, I might feel this way and oh, how do you think it made your friend feel to see that post directed towards them and, you know, really trying to, you know, help them understand, you know, that being on social media really should be about connection, not about comparison and not about putting anybody else down.

Dr Ron Ehrlich *[00:59:21]* Yeah, that's nice, connection, not comparison. But for anybody of us that have gone on to YouTube or TEDTalks ourselves, you know how easy it is to go down a rabbit hole as the algorithm kicks in?

Dr Elisa Song *[00:59:33]* Yeah, I mean, that is the rabbit hole, right? I mean, you go on for, you know, even as an adult, you think, Oh, I'm just going to do this for, you know, 15 minutes, ten minutes. And then before you know it, it's an hour later and you're like, oh, my gosh, I wanted to be asleep, you know?

Dr Ron Ehrlich *[00:59:51]* Yeah. Which is hard enough for us as adults. But if we are modelling for our children, it's... It creates an even bigger challenge. Elisa, thank you so much today. You've given us so many pearls, so much to think about and so many wonderful insights and it's always such a pleasure to talk to you and I really thank you for your time and sharing your knowledge and wisdom with me today.

Dr Elisa Song *[01:00:14]* Oh, thank you so much for having me. And I do hope to make it back to Australia before too long that as soon as the borders open up, I told my husband, I'm like, let's plan our trip soon.

Dr Ron Ehrlich *[01:00:25]* Well, let us know when you come on the show. Thank you so much. Well, so much to think about in that. And as I say at the introduction, kids are the canaries in the coal mine. And the kids that Elisa sees are those under 21 years of age. And again, here it is again. It's this recurring theme. It's as relevant for children as it is for anybody. Sleep, exercise, mindfulness, diet and hydration. I mean, as the world we live in becomes increasingly more complicated. The solutions are remarkably simple, accessible, cheap, sustainable, and most importantly, effective. So we will have links to Elisa's website. She has great resources on her website. But just talking to her and listening to her again has been a great experience for me and I hope it has been for you as well. I hope this finds you well. Don't forget to go on to our unstress health, explore the unstressed health community. Until next time, this is Dr Ron Ehrlich. Be well.

Dr Ron Ehrlich *[01:01:26]* This podcast provides general information and discussion about medicine, health and related subjects. The content is not intended and should not be construed as medical advice or as a substitute for care by a qualified medical practitioner. If you or any other person has a medical concern, he or she should consult with an appropriately qualified medical practitioner. Guests who speak in this podcast express their own opinions, experiences and conclusions.

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