



Episode 233: Decoding Childhood Allergies and Letting Kids Get Dirty With Dr. Amy Shah

Child: Welcome to my Mommy's podcast.

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This episode is sponsored by Just Thrive probiotics. I found this company when searching for the most research backed and effective probiotic available and I was blown away at the difference in their products! They offer two cornerstone products that are both clinically studied and highly effective. The first is their probiotic, which has been studied to help with leaky gut and to survive up to 1,000 times as much as other probiotics or the beneficial organisms in something like Greek yogurt for instance. The difference is, their spore-based strains work completely differently than other types of probiotics. Also, this probiotic is vegan, dairy free, histamine free, non-GMO, and is made without soy, dairy, sugar, salt, corn, tree nuts or gluten—so it's safe for practically everyone. I even sprinkle it in my kids food and bake it in to products since it can survive at up to 400 degrees! Their probiotic contains a patented strain called Bacillus Indicus HU36®, which produces antioxidants in the digestive system – where they can be easily absorbed by body. Their other product is a K2-7, and this is a nutrient you may have heard of it—is known as the “Activator X,” the super-nutrient that Weston A. Price—a dentist known primarily for his theories on the relationship between nutrition, good health, bone development and oral health. He found this prevalent in foods in the healthiest communities in the world. The K2 from Just Thrive is the only pharmaceutical grade, all-natural supplement with published safety studies. Like the probiotic, this is also, gluten, dairy, soy, nut and GMO free. Both are best taken with food so I keep both on the table. Here's a tip too..... My dad has trouble remembering to take supplements so he taped them to the pepper shaker, which he uses daily, and they're now on his daily list as well. Check them out at thriveprobiotic.com/wellnessmama and use the code `wellnessmama15` to save 15%!

Katie: Hello and welcome to the "Wellness Mama" podcast. I'm Katie from wellnessmama.com. And today's guest is a powerhouse and a wealth of information. And she's also one of my favorite people to follow on Instagram. Dr. Amy Shah, M.D. is a double board-certified medical doctor who trained at Grinnell, Harvard, and Columbia. She runs her own thriving medical practice in Arizona. She's worked as a medical consultant with Bobbie Brown, the makeup guru, to develop a line of innovative health foods and supplements.

And she's also a key medical advisor for a company that I love, Genexa, which is the first natural pharmaceutical company and Viome, as well as many other leading wellness companies. We're going to deep dive into childhood allergies, gut health hormones, and so much more. I love talking to her. Dr. Amy, welcome and thanks for being here.

Dr. Shah: Thanks so much, Katie. I love talking to you too.

Katie: Oh my gosh, likewise. And I know that you have a background and a lot of experience in immunology in childhood allergies. So I'd love to start there and kinda do a deep dive into why are allergies in children becoming so prevalent? They seem like they're definitely on the rise. Any idea what the cause is?

Dr. Shah: Yeah, Katie. One in five children in industrialized countries suffer from allergic disease or autoimmune disease. And this is rising, every 10 years, it's doubling in incidence, especially as countries are becoming more developed, which is so strange, right, because you think as we become cleaner, and more developed, and more advanced that we should have less diseases, not more, but we think there's a change in our lifestyle that's actually stimulating the rise of autoimmune, allergy, asthma, and all kinds of other inflammatory diseases.

So it was first found at the turn of the century in London, there was a scientist by the name of Strachan who said, "Hey, that's interesting. All these children who are moving into London because of Industrial Revolution, you know, around the 1900s, they were starting to get all these diseases, asthma, allergies, autoimmune diseases. However, the children who stayed on the farms did not have such a high incidence." And that was his observation.

And then he did a study on 17,000 British children. And he found that to be true that the children that lived on farms had larger families, had more exposure, presumably, to animals, dirt, they were having less allergies, asthma, and autoimmune disease. And so that's when this hygiene hypothesis was born. And that is still the leading, you know, thought process on why we have such a huge rise in autoimmune inflammatory and allergic diseases in our modern world.

Katie: That makes sense. And it's sad to see. Like, what are some of the surprising things in our environment that you think might really be contributing to this? Because I've written about it some and I have my own theories, but you obviously have the research and clinical side. So I'd love your take.

Dr. Shah: There have been so many studies looking at, you know, early antibiotic use in children, of course, you can blame antimicrobials as a huge cause for this. What happens is when our immune system is not stimulated enough as a child, especially from the ages from zero to five, we end up making autoimmune to our own body. So we think that we need that stimulation from being exposed to bacteria. And bacteria can come in the form of animal exposure, in the form of little bits of dirt from the food that we eat, it can be from bacteria from other family members.

So we found that larger family sizes, people who are exposed to more people, people who share food, people who come from families that have larger, you know, households and also animals, they tend to have better immune systems than children who are in a very nuclear setting with a very clean environment. So I can definitely say that some of these things that we think we're so advanced about are actually hurting our immune system.

I would say, for example, when my children were little, I was living in New York City, and I was pretty cavalier about, you know, taking them to the park and letting them crawl around and get exposure, obviously, not on the city streets but in the park where, you know, we felt comfortable letting them loose, being exposed to animals, sharing food with them, that was all a big part of what we think can bolster a healthy immune system.

Katie: Yeah, that makes total sense when you think about it. And I've read even of some cultures where in the early years, the mom like pre-chews the food and gives it to the kid, which Americans tend to, like, cringe at the thought. But it makes sense, there's a bacterial transfer, there's all these enzymes in the mouth plus bacteria that then get passed on to the baby.

And I feel like there was a shift at some point, or at least in cities and more modernized world, where bacteria became a bad thing. And we've started to shift that a little bit in our understanding of probiotics and how there are beneficial bacteria. But I still feel like sometimes, the perception is that bacteria are bad. When largely, we have so much bacteria in our own bodies that they are a vital part of life for us.

I know a couple of years ago I saw a lot of news come out about how triclosan, an ingredient in antibacterial soaps, for instance, had been banned. And it brought up all these questions about, "Do we need antibacterial soaps?" and kind of questioning that, you know, hygiene hypothesis. So how do you handle that both as a mom and a doctor? Because obviously, we wanna be clean and have good hygiene, but the bacteria side is so important too.

Dr. Shah: Exactly. The reason I got interested in immunology is because of this conundrum that we're in at this point in the stage of development. Of course, in our ICUs in our hospitals, especially as a health care professional, I'm keenly aware that you need to sanitize and you have to make sure that you're not spreading bacteria from one sick individual to another.

So there's two things going on here. One is, you know, increased sanitation and careful measures in the hospital setting where people are sick. And then there's this other conundrum where, "Hey, but what about when you're not sick when you're at home and living in your own home? Do you really need all these antibacterial soaps and cleaners?"

And my answer is no. If you are not sick or your family members are not sick, then that's an opportunity for you to foster your microbiome and really take in. So if you have a garden in your backyard like we do, we have a small garden, and if you use the vegetables from there, you are getting a little bit of bacteria from the garden, especially if you're not washing with an antibacterial soap.

And so little measures like that when you are healthy and living in a place where you have the opportunity to have a little more bacteria in your life, I think you should welcome it, the same thing with animals or sharing food with your healthy family members. But of course, there is a conundrum because when you're in the healthcare setting and when you're dealing with very ill patients, you have to be careful about not transferring bacteria from person to person.

Katie: Yeah, absolutely. So definitely, use some caution in how you do that. But it makes sense that we all need that exposure. And I feel like those are some easy tips. It was one of the points I used when I was trying to convince my husband that we should get a dog, is I'm like, "It's great for the kids' immune systems, I mean, there's studies that, you know, children who have pets.." And we used to also live near an Amish community. And of course, there's been a lot of things written about how they tend to have lower rates of allergies and also things like autism and ADD.

And I think there's a lot of things that could be in combination that could contribute to that. But having been out there, I also think they do so much better about getting dirty than we do. Like, those babies are with their moms in the field playing, and they're in the dirt, and eating the dirt, and playing with animals, and eating the strawberries right off the plant, and just interacting with that bacterial environment.

Dr. Shah: Absolutely. I think that's a perfect point. I think the Amish communities, as well as many communities in the developing world, are teaching us some lessons. And the fact that we don't have it all figured out. And I think we all know, you know, and I know that there's a lot of things in medicine that we still have not figured out. And immunology and the development of the immune system is an area that's super interesting because of the new discoveries of the microbiome, because we are realizing, "Hey, maybe this is an area that we can really develop and change and influence in people that can make a sizeable difference in their long-term health." So it's an extremely exciting area for me. Although we don't really have all the data on exactly what we should be doing, all of the things that we've been talking about are kind of, like, presumptuous based on the research and not necessarily things that are proven.

Katie: That makes sense. And so I know I have a lot of personal friends who have children with food allergies. And obviously, it can be very scary, especially if those are life-threatening food allergies. And likely many of our listeners today have a child with food allergies or know a child with food allergies. So other than the food itself, are there other things that those parents need to be concerned with to help their children?

Dr. Shah: So children with food allergies, it's a very, very changing field right now because we're finding out...we completely switched our recommendations. In the past, even when I was first in training, there was this recommendation that you shouldn't have your newborn children, you know, up to the age of one or two, having exposure to certain allergens such as nuts and, you know, peanuts, and tree nuts. And then we realized, okay, there's countries like Israel where the first teething food at three or four months, called a Bamba snack, has peanut flour in it. And that country has a super low rate of food allergies, especially peanut allergy. And then the studies corroborated this.

So now, the whole recommendation completely flipped and we are saying, "Hey, the more you can expose your children to new foods, whether you're breastfeeding or feeding them, you know, their first foods or chewing crackers, all that stuff, you should be incorporating all kinds of foods, which makes sense. All kinds of foods, different variations, as soon as they have their first kind of rice cereal then you should start to incorporate any kind of allergenic foods into their diet.

So I think that besides exposing them to all kinds of foods, I also think that it's really important to expose them to all kinds of bacteria like healthy bacteria, like we mentioned, you know, animal exposure, exposure to healthy other family members, friends, people who can give them different sources of bacteria, having them play outside, like we mentioned, in kind of a field, or a farm, or just your backyard where you're not spraying all kinds of chemicals on your grass, and really having them be exposed to natural forms of bacteria. Not necessarily infecting them with bacterial, you know, infections per se, but really having them get dirty, down and dirty.

Katie: Yeah. And I know also, as a side note, with the rise in other childhood diseases and obesity, it's another great excuse to get kids outside, get them moving, get them sunshine, and just interacting with the environment. And that brings up another question that I would love to get your take on, which is I feel like a lot of parents view, you know, just getting the occasional sniffles or cold when they're little as a bad thing or, like, they're doing something wrong as a parent, they need to clean, you know, sterilize more or they're just so quick to treat those little illnesses.

And I've always taken the opposite approach, thinking, like, the immune system has to develop. So they're gonna get sick a certain number of times anyway. It's good if it's mild, but their body needs to learn how to interact with that. And I know as an adult, having an autoimmune disease, I've studied that in depth because I think that was maybe one thing that contributed to mine. But I'm curious, like, as a doctor and mom, how do you look at it when kids get sick, especially those early years when they're still developing their immune system?

Dr. Shah: You're absolutely right. I think that they need that immune stimulation. I mean, we know that they need that immune stimulation. And like I said, the leading thought processes on why autoimmune diseases are on the rise, as you mentioned for yourself, is that maybe we did not get enough immune stimulation as children. And it's not to say that we purposely infect our children, but if they do get sick in a natural way, then you not necessarily foster that but don't get scared, and don't get worried, don't over-sanitize, it's really a part of childhood immune system development.

In fact, this is pretty extreme, but I don't know if you heard about this guy who was infecting himself with hookworm because parasitic diseases especially seem to really protect against allergic and autoimmune diseases later in life. And, you know, obviously, we don't wanna be doing that until we have really robust

studies. But there is some idea that, you know, parasitic stimulation, especially in children, even as adults can really decrease the incidence of autoimmune and allergic diseases.

Katie: I'm so glad to hear you say that because I have some extended family members who have been in the kind of health world for decades. And they're older now but they have been for years and years on this kick of, "We need to do all these cleanses and kill any potential parasites in our body." And I always was hesitant and never really got on that bandwagon because I was like, "People have lived much more in connection with the environment and animals than we do now." And Amish kids walk around barefoot all the time in manure.

And, you know, kids have been exposed to many more parasites than we currently are. And people weren't dying in droves from that. So what if they're, like bacteria, what if there are some kind of reason or, like, purpose that these things can exist at times, and maybe we should be a little more cautious about just, you know, killing all of them?

Dr. Shah: Exactly. And now, you know, you know very well, and I do too, with the robust microbiome research and all these new discoveries that we're finding out, I think more is better. Of course, we have to couch that with, you know, how much more is better? That's why I say really do it naturally like, you know, go out and play, and get sun exposure, and get nature exposure. It has so many other benefits, like you mentioned, beyond improving your microbiome.

You know, we have a circadian clock in every one of our cells and having that morning sunlight and that evening darkness, you know, in nature can really, really help our health in so many other ways than just the microbiome. So I think doing it naturally and having it come naturally is probably the best bet at this point.

Katie: Yeah, for sure. I often think of that small study that came out a few years ago that found that basically camping outside away from all artificial light, and phones, and whatever for seven days was enough to totally reset their circadian rhythm of the body. And I haven't gotten brave enough to take six kids camping for seven days. But it's really astounding just what light and nature can do to us if we let it.

Dr. Shah: A few years ago, my husband and I went to Costa Rica. And we stayed at this eco-resort on the river where there was no electricity. The only electricity they had is in the main kitchen cabin where they had like a source of independent electricity. But I have to say that seven days being out in nature, eating only the food from that campsite, you know, being outdoors, my sleep and my energy levels were never better. I highly recommend everybody do that at least once in the next couple of years to see how good you can feel.

Katie: Yeah, definitely. Even just shorter camping trips, you do sleep so well when you're just out in nature. And on the note of kids getting sick, I'd also like to go deep a little bit on fevers because I feel like so many moms...and I get it, it seems scary when your kid gets a fever, especially a high fever. And so many moms are quick to jump in with any fever, you know, 99.5 start giving Tylenol or start giving Motrin.

And I've also always taken a controversial approach on that where I don't fight fevers unless there's an extreme reason to fight fevers. But I'd love to actually get the doctor side on this because that's just always what has been my intuition as a mom and what's worked for me. But I'd love to hear from you on that.

Dr. Shah: You are a mom of six kids, so you know that low-grade fevers are quite common and quite a big part of an upper respiratory infection, cold-like symptoms. And I completely agree with you. In fact, I do the same thing with my children. I do not give them any kind of ibuprofen, Tylenol, Motrin products unless there is another reason to do that, or if the fever is really super-high, 104 and above.

But for most fevers, that is a natural inflammatory response by your body to mobilize your immune system to come and help fight this infection. It's actually a natural part of our fighting response. And by taking this medication, not only are you adding these, you know, toxin-laden medications into your body, but you're also maybe blunting that immune response.

Katie: Yeah. That's what's always felt right to me. Like, that's one of the only times I'll let my kids watch movies. And that's how I get them through, you know, like a fever if they're uncomfortable is I'll like put on a movie they like, give them lots of liquids, you know, not too much solid food, just rehydrate them, keep them warm, let the fever do its job. And typically, I think so many times, kids bodies are amazing, you know, adults too but kids are just phenomenal. And they can bounce back so quickly if you just let their body run its course.

And in fact, as an adult, I've kind of tried to learn from that. So I think kids get better fevers. I'm a little jealous actually how much better fevers they can get and how they get better quicker. So if I start feeling an illness coming on, I will get in a sauna and purposely, like, try to raise my body temperature and give myself a little bit of a fever. And it seems like it really does stop illnesses from coming on. Is there any actual science behind that or is it just in my head?

Dr. Shah: Yeah. No. the whole response of, you know, raising your body temperature is to immobilize this immune response in your body to kind of go, you know, mobilize all the lymph nodes. And so as, you know, being in a sauna is a really great way of cleaning out those lymph nodes. And so I think that there's no doubt...and also a great way of getting rid of toxins through your sweat. So no doubt for me that sweating it out is a really great way to deal with especially a virus or, you know, an upper respiratory infection.

And I think that, you know, when I was studying immunology, I was so shocked that sleep and gut rest is still studied. I mean, that is the top two things that you could be doing for your body, sleep and gut rest, just like you're saying for your kids, really maximizing those things and not relying on all these external, you know, medications to help fight this virus or illness is the way to go.

I think that all these things that we talk about, you know, to help with colds and viruses are all great, but nothing really trumps sleep and gut rest. And I do love the idea of saunas. I do hot yoga myself and I feel like the benefits of sweating out the toxins and mobilizing the lymphatic flow and, you know, sweating out those toxins is really unparalleled.

Katie: Yeah, I definitely agree based on my own experience for sure. And I wanna move on to a couple other topics. But before we do, I wonder if you have any tips for natural remedies for moms. We've shared a lot as far as I think sleep and gut health is probably, like, nothing can trump that for sure. But moms who have kids with minor childhood issues, I know that you also are the medical adviser for a company I love, Genexa, and they make a lot of remedies. So we can maybe touch on a couple of those. But any remedies you'd recommend for moms even if it's not to bring the fever down, but just to help the child recover or be more comfortable.

Dr. Shah: Yeah. I love Genexa, and I know you do too, because I think we don't realize that when we treat all these things, for example when children get hurt and, you know, you say, "Oh, IcyHot, that should be not a big deal. You're rubbing it on the skin." But I did not know that these kind of commercial medications have all kinds of formaldehyde-releasing chemicals, DMDM hydantoin, it has colors, and fragrances, and all these things.

And when we put things on the skin, it's literally absorbed right into the bloodstream. And with children, you really worry about that because they're getting a larger dose than we are. So for example, there is a nasal saline that Genexa makes that doesn't have parabens. And if you think about it, we have become so careful about not having hormone disruptors in our adult life by using, you know, natural cosmetics, or shampoo, and blah, blah.

But then, when our children are sick and we're using these nasal saline products, a lot of them or most of them contain parabens and all these other kind of binders that are hormone disrupting. So I am so excited that there are companies like Genexa that are changing the game, that are really saying, "Okay. Why don't we create some easy remedies, for example, nasal saline." That's something that I highly recommend for babies, especially, and infants who cannot be taking lots of other medications to kind of de-humidify their nose and kind of help them drain out all the mucus when they can't sleep well and breathe well from their nose. And can you imagine giving these babies a nasal saline that is laden with parabens and other toxins the way we've been doing it for many years now?

Katie: Especially right next to their brain. Yeah, it blows your mind. I didn't know that either, like I've been using natural everything for years. And when I started researching, like, what's in even just, like, natural remedies and medicines, I was shocked.

Dr. Shah: And it's crazy that only 10% of most medications are the actual active ingredient. Once I started working with Genexa, I was like, I had no idea that all these things like Tums, for example, just over-the-

counter, you know, things that we give to pregnant women, okay, all the time for, you know, minor heartburn issues, these are only 10% the active ingredient calcium carbonate, the rest 90% is fillers, and stabilizers, and colors, and flavors, and sweeteners, and all kinds of toxins that we're giving to people who are carrying a developing fetus, it's really scary.

So, you know, there's a lot of change coming on and lots of companies that are doing amazing things. Genexa actually has an alternative that's called, I think, Heartburn Fix that does not have any colors, and flavors, and sugar, artificial anything. And so what you are getting is minor heartburn relief if, you know, you're suffering from that, which unfortunately, no matter how healthy and clean I eat, sometimes I do have minor heartburn issues and I do use that.

Katie: Yeah, for sure. Before we move on, just a quick tip, they have this great little, like, homeopathic tablets as well. Those are enough to satisfy my kids especially if they're like, "I'm having trouble sleeping." I'm like, "Oh, here's a sleeping one." And then I think the combination of the homeopathic plus they think they're getting something that's gonna put them to sleep, so they got to sleep. It's amazing. As a mom tip, those are great as well.

You have expertise in a lot of areas, you're double board certified. But you also have a lot of expertise in gut health. So I'd love if you could walk us through just what you see as a doctor some of the biggest challenges in today's world for people, like, in the gut health department and what we can do about it?

Dr. Shah: Exactly, gut health is probably the number one thing that I hear about day-in, day-out. For example, people who have newfound food allergies or sensitivities, people who have bloating on a regular basis, people who feel fatigued, people who feel a kind of fogginess in their concentration, brain fog, or whatever you might wanna call it, those three things are often because of your gut health.

And you think that, you know, not having clear concentration has nothing to do with your gut. Also, your mood has so much to do with your gut. So by improving your gut, you can improve your energy, you can improve, obviously, how bloated you are, you can improve your concentration, and you can improve your mood. As you know, so much of, you know, 80% of your serotonin is made in the gut. And, you know, your immune system is largely located in your GI tract.

What's happening is every time you eat any food, there is a large conversation happening between the bacteria that are present in your gut and they're talking to your cells in your body. So there's this conversation going on between the bacteria in your gut and the cells of your own body. And they're all deciding, "Hey, is this foreign? Is this good? Should we take out some of the B vitamins from this, the D vitamins?" And each and every thing you eat, there is decisions being made whether to absorb this kind of food or whether to keep it in the gut as waste, etc., etc.

So that makes sense then why you want a robust amount of bacteria in your gut that's able to do this communication with your own cells. And it makes sense that taking antibiotics will completely mess up this communication method. And this whole tight system of checks and balances and conversations that's going on with your immune system will be off when you're eating irritants, when you're taking antibiotics, when you're using Ibuprofen, when you're using antacids. And a host of other preservatives and toxins can really throw off this balance. And if you're imbalanced, then you have food sensitivities and allergies that you never had before. You have bloating, you have mood issues, you have problems with concentration, fatigue, and lots of other diseases.

Katie: Yeah, for sure. I think we're learning just so much more and more. And I'm a nerd who browses PubMed, but there's so many studies that come out constantly about gut health and the different bacteria. And maybe we'll never completely understand every intricacy of that, but it's just fascinating to know, like, what an incredible job our gut does.

And I think one thing that's related too that you're also an expert in is hormone balance and hormones because, you know, so much of that is related to the food we eat or to factors in the gut. And it's something that so many women struggle with. So do you have any tips for women who are struggling to balance hormones, maybe especially postpartum or just with, like, menstrual issues in general?

Dr. Shah: Absolutely. I think that hormone imbalance is a huge problem in our current society because I think that people don't realize that when you're stressed out all the time and you're making cortisol, making adrenaline, which is good, right, you want that fight-or-flight response at certain times in your life. However, you don't want a chronic stress response when you're trying to make cortisol all the time, adrenalin all the time. You're actually stealing from the, you know, creation of other hormones, and you're creating a hormone imbalance.

So not only are you, you know, having a fight-or-flight response and chronic stress creating all kinds of other hormonal problems, you're actually stealing from your other hormones. So you'll get progesterone, low progesterone, and an estrogen-progesterone imbalance just from this chronic stress response. So I think it's really important for postpartum women, for moms, for women that are going through perimenopause to really take control of that stress.

And I think that stress can come in many ways. It's just not mental stress, it's also stress on our GI tracts, and stress on our bodies as exercise, and you know, poor sleep. And so really cleaning up the sleep, the exercise, the mental stress, and the food is key to hormonal imbalance.

Katie: Yeah, absolutely. And the key to so much else as well. There's a few more topics I wanna touch on with you, but I also realized I forgot to ask you one of the most important questions related to kids getting sick that I think you have a great perspective on, which is antibiotic use. Because I also see so many moms who that's the first line of defense if the kid has an ear infection, has anything, they want antibiotics. And I 100%

understand wanting to help your child when they're uncomfortable or in pain, especially, but from the doctor side and in the immunology side, how do moms evaluate when to give antibiotics and when to hold off?

Dr. Shah: Great question, Katie. I'll give you a story. I usually don't visit any kind of health care entities because I'm a physician myself. But when I was traveling to India this December, we were going to India and Singapore, and so we thought it was important to get some special endemic vaccines like typhoid fever, etc., hep A. And we were waiting there and there was a mom who was extremely upset with the provider there and saying, you know, "I need antibiotics for my son. You did not do anything for him. All you told him is to get rest and drink water. And that's not right. And he's been dealing with this for over two weeks now."

And, you know, it was so enlightening for me because, you know, often when we're speaking to each other and speaking to the choir, it's like, yeah, we all know that we wanna save antibiotics for the very last resort. As a mom, you know, you wanna do so much for your child. And I can understand the frustration in her voice. She was like, "And you're telling me that you cannot do anything for him at this moment in time?"

You know, but I think that what he was trying to make her understand, and I helped him, is that there is no cure for the common cold or for most viruses. In fact, most illnesses, 85% of all childhood illnesses are viral, and so when you're talking about ear infections, you're talking about sinus, you're talking about cold, even GI bugs, these are all viral illnesses, which antibiotics do not treat. And so I think that the big thing to take home here is 85% and probably 95% of the time, you don't need to be taking antibiotics for the child's illness.

And I think that if you take that into consideration, you know, I would wait at least a week before approaching a physician if it is typical symptoms of a cold or a virus, you know, with a low-grade fever, muscle aches, and fatigue, and upper respiratory symptoms. Of course, if you're not sure, you can ask your doctor, but I think that there has to be more knowledge out there that I know it's frustrating that there's no absolute, you know, one-shot solution to these childhood illnesses. But I think, you know, Katie, it's just a part of growing up, you have to be okay with them being sick sometimes.

Katie: Yeah, exactly. And back to your point about, you know, sleep and gut rest that sometimes, that is the most effective way. And especially if we're not giving kids sugar, or, you know, sugary drinks or processed foods, and just let your body rest, I think that's another common misconception with kids is that they absolutely need to eat, like, three to six times a day. And, you know, if they don't, then like, you worry about it, and I've taken the opposite approach with that.

Both with my kids and myself if I want them to actually really listen to their body and not eat if they're not hungry, but especially when they're sick, most kids aren't that hungry when they're sick, so we just do a lot of herbal teas, and gentle things, and let them rest. And it seems to work. And I've never had a kid actually need antibiotics and I have six of them. So I think there's so much wisdom to that approach.

And I'm curious too, I know that from your Instagram that you intermittent fast, and so the gut rest seems like it kind of lines up with that because anytime we're not having to expend all this energy for digestion, our body can use it somewhere else. But talk to us a little bit about the benefits of intermittent fasting or regular fasting, and how that can benefit the body.

Dr. Shah: Absolutely. I'm a huge fan of it intermittent fasting. There's a few reasons, every cell in our body has a circadian clock. So you've probably heard about circadian rhythms and, you know, helping with sleep, and energy, and all that stuff. But there's also a timing in each one of our cells. Our metabolism is just more active during the sunlight hours, for example.

And so the type of intermittent fasting that I propose, and that I do myself, is it's kind of in the literature called time-restricted eating or time-restrictive feeding when it's animal studies, which is basically eating within the hours of, say, 7 a.m. and 6 p.m. and then limiting the amount of hours, so doing it like, say, 11 hours of eating, and then 13 hours of fasting. And then there would be certain days of the week. For me, it's about two days a week where I extend that a little bit more to maybe 16 or 18 hours of fasting.

And the reason I do time-restricted eating is because of this circadian biology. So what happens is, you know, our body cannot be doing many, many metabolic processes all at the same time, which makes sense. So there's certain times of the day and night where our digestion processes, our metabolic processes are turned down. And those seem to be for almost everyone preserved among over 90% of people, 95% of people at the same time is kind of in the nighttime hours. And then during the daytime hours, our bodies optimize to be digesting and metabolically active. And so that's a great time to eat.

So not only is it giving our body a metabolic boost, but I do it because our body gets a time to rest between meals. So what I do typically is stop eating at around 6 p.m. and then don't eat again until 7 a.m. And that's something that I do maybe 5 days a week, and then 2 days a week I actually extend that to about 16 hours to get the additional autophagy benefits. Autophagy is a clean-out of the cell and that happens with a little bit longer fast.

Katie: Yeah. I got so many questions about specifically fasting for women. I think that's been somewhat a controversial topic in the last couple of years because intermittent fasting gained popularity. And then there were these counter articles saying, "It's not good for women at all." And I haven't actually found any scientific literature on why especially intermittent fasting isn't good for women.

Because when I hear people say like, "Oh, I could never fast. I get low blood sugar." I'm like, "But you fast every night when you're asleep. You know, you kinda do it anyway. We're just talking about extending essentially your sleep window with intermittent fasting." But do you think there are any concerns specific to women when it comes to fasting?

Dr. Shah: Absolutely. It's a fact that women are wired to be more sensitive to fasting than men are. You know, some people ask me, "Well, I'm a woman and I have no problems with, you know, extended fasting," and I think, Katie, you're maybe one of them, but there's many, many women who are very sensitive to the hunger signals. And our body, when it senses starvation, often turns up those hunger signals. And I think most women who've been part of the dieting culture know that feeling of under-eating one day and then waking up the next day just starving, your hunger signals are on overdrive.

And so what ends up happening is that if you ignore that, then the body keeps sensing starvation, it often turns off the signals for fertility. So people will, and presumably in animal studies this has been shown, and I've seen patients, you know, who have lost their period or get irregular periods when they're extensively fasting or doing some other kind of starvation diet.

So I always recommend for women, especially if they have that history to, one, make sure that they're not dealing with a, you know, anorexia, bulimia, that kind of issue. And then start with really short fasts, like 12 hours, like 13 hours. I mean, the studies on fasting, even just for intermittent fasting just for 13 hours a night, so that would be, like, what I was talking about from 6 p.m. to 7 a.m. are robust. There is a really great breast cancer study that showed that by fasting 13 hours nightly, women who had breast cancer had a 36% reduction in the recurrence of breast cancer if they fasted nightly for 13 hours versus the other group who did not fast.

So you can see that you don't have to have these huge, extensive long fasts to see amazing results. So any woman or man even who's jumping into this for the first time, I say start slow, start with like 12 hours, which is like you said, just extending a little bit of your nightly fast and get comfortable with that over 2 or 3 weeks before you start to extend it a little bit more. And then if you experience any hormonal fluctuations, just stop and resume your normal pattern of eating.

Katie: Yeah, exactly. It truly could be, for many people, as simple as just don't eat after dinner, which is when, you know, they say it's the least good for our metabolism anyway to be eating especially anything processed, but even to be eating late at night because then your body is still digesting when you sleep. And I know I've seen the data that if you don't eat close before bed, that, like, three to four-hour window before bed, then you are able to get more restful sleep.

And I certainly noticed that with my own sleep tracking. If I don't eat for several hours, let my body digest before I sleep, I am able to get more REM and more deep sleep than when I don't.

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Katie: And I love also that you talked about variation, that you don't do the exact same thing every day. A couple days a week, you mix it up with a little bit longer, which is great. I think it's good not to let our bodies get too adapted to doing a complete regimented thing every single day.

And you mentioned that I do longer fasting, and I do, I'm actually just finishing up a 10-day fast. But I'll make sure I say on the record, I'm not encouraging anyone else to do that. I largely do it as much for the mental and emotional side as I do for the physical side. And I'm under the care of two doctors, my thyroid doctor and another doctor. And I've worked with a geneticist to know that I have a kind of unusual combination of genes that makes fasting pretty easy for me. So it's not something I recommend for everyone.

But having had nodules on my thyroid before with Hashimoto's, it's something I look at like an insurance plan because of the autophagy that you mentioned that happens even overnight for us just it extends that window drastically. So I think that's such a good primer on fasting. So cool. And I love that you incorporate that in your life in a way that seems very easy, and doable, and probably is just part of your routine now.

Dr. Shah: Absolutely. I think that, you know, the data for cancer, the data for metabolic diseases like diabetes, hypertension, and heart disease, and brain disease, Alzheimer's, and dementia is just so positive that it is enough for me to feel that fasting should be a part of many people's...I'm not saying it's the panacea, I'm not saying that every single person should be doing it, but I think that most people can benefit from some kind of

fasting, or as I'm explaining this kind of time-restricted eating in a circadian pattern can be great because it downregulates your IGF-1, your mTOR pathway, these are all things that lead to cancer and other diseases. And we know through animal studies and also now through some human trials that intermittent fasting can be a very effective way of downregulating those cancer pathways.

Katie: Yeah. It's so cool what our bodies are capable of. Another topic I wanna touch on lastly, I'll respect your time and not keep you forever, although I would talk to you all day, is plastic use. This is a soapbox I've been on recently. I did a lot of research on this over the last few months and just realizing how much plastic waste we have. And certainly, there's a ton of health concerns, which I know that you can speak to.

But even just to touch on the environmental side for a minute, like we literally have floating islands of plastic trash in the ocean bigger than the state of Texas and they're killing millions of animals per year. And they expect by 2050, we're gonna have more plastic than fish in the ocean. And we know from the health side, these compounds, especially when they start breaking down in our water, can have a really big impact. So I know as a mom and a doctor, this is something that you also speak about. But can you take us through some of the reasons why we all need to be avoiding plastic more and how to do that practically?

Dr. Shah: I think you're absolutely right. If we don't pay attention to our environment, and our earth, and the way we live our lives, I think we're putting ourselves in a situation where there's going to be irreversible damage to our earth and to our bodies. I really keenly became aware of this going to the developing country of India during this holiday break. And I honestly felt that I saw it so clearly where, you know, the ocean side was polluted with plastic. You can see plastic coming up to the shore. And it's insane how our water supply is so ridden with plastic and our food supply as well.

So I highly recommend that besides the fact that, you know, the BPA, for example, people think, "Oh, BPA-free is going to be safe." But BPA-free plastics often have BPB and other BPs that are actually more toxic to our bodies than BPA. So I recommend that we reduce the amount of plastic in our lives drastically. And for example, you know, some easy swaps that I have done in the last year is my children have these pouches that they take with zippers. And they're little pouches that you can put, you know, grapes or you can put any kind of snacks in them, and they're reusable and washable, and they're really great alternative to plastic ziplock bags which get warmed through the day and really leach out into the children's food.

Also, you know, obviously, metal water bottles and glass use is also a huge thing that people often are able to do. And I think in our children especially, I try to be careful about giving them their lunch foods in things that are covered in plastic because often, they're getting heated or they're getting heat from just being out for a couple of hours. And we know that heat speeds up the leaching of these toxic compounds into our food.

The other thing that we can be doing to improve our, you know, plastic uses, you know, when you have less waste, there's going to be less landfills. And I think, Katie, you've talked about, you know, doing things with less waste. And I think that's something that is just becoming a bigger issue now. It's not just about our own

bodies, it's about these animals in the ocean. It's about our earth, it's about our cities and countries. We need to make this earth a sustainable, healthy place for our children and our children's children.

Katie: Exactly. And I can't believe our time has flown by already. There's a couple final questions I love to ask. The first being, do you have a book or, like, multiple books that have really had an influence on your life and why?

Dr. Shah: Yes. I have two that I wanted to mention. One is "The Hormone Cure," by Sara Gottfried, M.D. She's a physician who inspired me when I was going through my own hormonal imbalance. So just like many women that I work with now, I had my own hormonal issues when I had my second child. And I was super busy starting a new practice. And I could not get any answers from any of my friends, any of my colleagues who were physicians. And I started doing my own reading on PubMed like you do, Katie. And then I read "The Hormone Cure," which it just hit home for me and really inspired me to do much more of my own homework, research, and hypotheses. So I really thank her and thank that book.

The other book that I really, really, loved and I read kind of at this similar time was "The 4-Hour Workweek," by Tim Ferriss. And I think that the thing that I loved about that book was that it motivated me to think outside the box in my career and in my life. And I realized like, "Hey, I can create a life and a career that I love, and that can help many, many people and I don't have to be in a box created by someone else."

Katie: Yeah, I'm a big fan of Ferriss's work as well. And then lastly, if there's a piece of advice that you could spread far and wide, what would it be and why?

Dr. Shah: I guess it goes along with the theme that we talked about today is really respect nature and the earth, and incorporate it into your everyday life. I think that we've gotten so far from, you know, with our technology, that we don't really need to interact with our earth and nature in a regular way anymore. But, you know, all the things that we talked about today, getting sunlight, intermittent fasting based on the sun and the moon, getting dirty in the garden, walking barefoot, those are daily practices that are easy and can really improve your health and the health of our earth.

Katie: I love it. And I totally agree. And I think we'll have to eventually maybe do a round two because you're such a wealth of knowledge and you're so fun to talk to you. Thank you so much for your time today. This has been a blast.

Dr. Shah: Katie, thank you so much. This has been so fun. I would love to.

Katie: And thank you to all of you for sharing your most valuable gift, your time with us. We don't take that lightly. We're very grateful for you. And I hope that you would join again on the next episode of the "Wellness Mama" podcast.

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