



Episode 208: Understanding Superbugs & Antibiotic Resistance With Marjory Wildcraft

Child: Welcome to my Mommy's podcast.

This podcast is sponsored by Thrive Market, my go-to holiday shop for all of the staples I need. My hubby and I are both the oldest in our families, so we often end up hosting the company for the holidays. In fact, last year, I cooked for over 40 people on Christmas Eve! We live in a pretty small town so running out last minute to find an obscure ingredient I'm missing for a gluten free recipe isn't always possible, so I have to think ahead. I meal plan for the holidays weeks in advance and make sure to place a bulk order with Thrive so I have the ingredients I need, and I always order extra just in case, so that I can make a dish or healthy dessert to bring if we get invited to a party. This year, our family is adopting a few families who were affected by the hurricane so I'm tripling my order, so I can make extra for them too. Thrive Market makes the whole process easier and I don't have to stress about last-minute planning. I highly recommend checking them out and ordering ahead of time to keep the holidays stress free. And just a tip, make sure to check out the Thrive Market brand line which has many ingredients and staples and even things like tuna and sardines at really, really good prices, so start there. And just for being a listener of this podcast, you can save an extra 25% off of your first purchase plus you get a free 30-day membership to try out Thrive and check it out. You can get both of those—lock in that discount at Thrive Market at thrivemarket.com/katie.

This episode is brought to you by Organifi and I'm so excited to finally tell you about them! Because, here's a confession... I have known about Organifi for a really long time and even though so many of my friends and experts I trust rave about them, I never tried their stuff until recently because I thought... first of all, how can it actually be that good? Well, I tried it and it turns out that it is not only that good, it's better than I expected! Organifi has green juice, red juice (which is an antioxidant red drink and it's delicious) and a golden milk turmeric drink, along with a plant-based protein. Everything they have is completely organic and they all actually taste good, unlike a lot of other green drinks and protein powders. I've especially been loving their red juice lately... especially at this time of year for immunity. It tastes amazing and it has a blend of antioxidants from strawberries, cranberries, blueberries, pomegranates and they also add in beets, cordyceps, reishi, rhodiola and a lot more. So, this particular blend is formulated to increase energy, boost metabolism and reduce factors that lead to aging. Their green juice is minty and delicious, and I noticed it has almost 800 5-star reviews. You can check out those two products, along with their whole suite of products and save 20% just by being a listener of the Wellness Mama podcast. Go to <http://organifi.com/wellnessmama> and use the code: WELLNESS20 for 20% off.

Katie: Hello, and welcome to "The Wellness Mama" podcast. I'm Katie from wellnessmama.com. And my guest today, I am so excited to talk to you is Marjory Wildcraft, who is the founder of The Grow Network, which is an awesome website. The link will be in the show notes and their whole purpose is stopping the destruction of the earth. And we're gonna talk today about a really important issue related to this but The Grow Network has amazing resources on how commercial agriculture and conventional medicine are two of the most destructive forces on the planet, and, more importantly, what we can do about it? And today, we're gonna go deep on something that I know I get a lot of questions about and that Marjory is an expert on which is superbugs. So, I can't wait to jump in. Marjory, welcome and thanks for being here.

Marjory: Hey, hey, Katie. Thank you so much for having me on. Yes, it's a super important topic we got to cover today.

Katie: Absolutely. I think sometimes that we don't even realize how important. Even though this comes up in the media regularly, I know I'm kind of always on the pulse of studies and I've seen some recent ones. I saw the statistic that over 700,000 people die already a year from infections caused by antibiotic-resistant bacteria and they're expecting this rate to actually be 10 million people by 2050. So, I'd love to get your take as an

expert on this. Are these stories just media hype? Like we all know the media can blow things up and be sensational. Or, are we facing a really serious problem here?

Marjory: Yeah. The media really, we really have to be skeptical of the media. I, you know, I hate to be a little bit jaded like that, but it really is true. But this really is an issue. It's a very, very serious issue. So, in fact almost, I feel like in this case, the media is not hyping it up enough. We really do have a huge problem and people are dying right now from, you know, the antibiotics that aren't working or, you know, they're a living system. So, bacteria have figured out how to survive that and really our antibiotics are not working anymore.

Katie: Yeah. That's a really sobering thing to realize. And, at least from my side, I feel like there's probably a lot of things that are contributing to the problem. I'd love to hear your take on that, but I know I did research for a post a while back about even just antibacterial soaps and how overuse of antibacterial soaps has made resistant superbugs even in just in our normal day-to-day environment. But there are many other things contributing to this problem as well, right?

Marjory: Absolutely. And, really, the overuse of antibiotics. You know, if you take penicillin a few times, you know, some of that, something is gonna survive eventually over it. Most of them get wiped out. But then those things that do survive end up becoming, you know, resistant to penicillin. And actually, from my research, MRSA which is, you know, just a terrible, terrible thing actually is the genesis of penicillin antimicrobial resistance. So, you know, not only is penicillin hardly effective anymore, but it has also caused the genesis of MRSA. But we have, you're right. You know, we have gotten so paranoid with things and things are too clean.

And we've lost a whole lot of our gut microbe which is microbiome which I'm so pleased to see you talk about a lot, but that's like our first immune defense system. And the antibiotics like wiped that out completely, so you're really damaging yourself. Some other things people don't know is that of all the antibiotics that get used almost and it's horrible how humans are over-abusing them. But a huge amount of them are used in the production of meat, in our commercial meat supply. So, one of the things that Grow Network is trying to do is have people, you know, create their own meat for those that are meat eaters and most of us are. But really, they raise those animals in such horrible, horrible conditions that normally, those animals would die but they keep them alive by pumping them up full of all different kind of antibiotics because they've got them in these highly concentrated confined areas which is just unbelievable torture and it's the reason why we have The Grow Network is just thinking of that horror.

But a couple of really bad side effects of that is, of course, the meat you are eating has all these antibiotics in it. And, like for example, you know, with the hurricane that just hit South Carolina, there's all these ginormous sludge pools now that are completely laden with antibiotics that are getting into our streams, they're getting into our soil. You know, when it goes into the ecology like that it kills off fish, it kills off, you know, it just completely destroys our ecosystems on a much, much larger scale. Then all of that goes out into the ocean. You know, it's just a really, really, really horrible system.

Katie: I absolutely agree. And I remember reading at one point that, for a long time in Europe and then in the U. S., and Asia, that antibiotics were just routinely added to the animal feed to keep them healthy even just like as a preventative. I don't think they fully really understood the impact that was gonna have and that's now changed in Europe. They only use them for actual, to prevent infections I believe now. But I know in Asia, they still routinely add antibiotics to animal feeds and depending on where your meat is coming from. But I think a lot of people don't realize that because they think, "Oh, it's just in animals. We're fine." But, first of all, we are eating those animals, so we are getting the effects in a secondary way.

But also, looking back throughout history, most of the deadliest diseases in human history have originated in animals and then spread to humans. So, they're in a really serious, long term impact if we're creating this resistance, superbugs in animals. And they will eventually basically transfer to humans in some way. But we also know and probably a lot of people listening have heard that antibiotics are overprescribed in humans as well. I know the last data I saw is that most doctors will still routinely prescribe antibiotics largely because people are still asking for them for everything.

And I know they did an analysis I think in 2012, and it was people who went to the doctor for sore throats. They actually did cultures and analyzed what it was actually causing the sore throat. And they found that doctors prescribed antibiotics for sore throat about 60% of the time. But based on the testing, they really should have only prescribed it about 10% of the time. So, we've got a big I think issue in the medical community as well. I'd love to hear your take on that is how much are antibiotics being overprescribed to humans as well?

Marjory: That's a huge part of the problem, absolutely. I know, just one example, my husband cut his finger open with the table saw about two weeks ago. And, you know, it was a significant wound and unfortunately, I wasn't quite there when it happened. So, he ran over to the local medical place or I would have treated it at home. But, anyway, I did catch up with him there and, of course, they hand him antibiotics and they're like, "hey," you know? Or I got a tooth extracted a while ago. The dentist is like, "Hey, here's some antibiotics." And he says, "I know you're not gonna take them, but I have to give them to you." I'm like, "Really? You have to give them to me?" He's like, "Yeah. You know, there's all kind of liability and issues." I'm like, "Really? This is still existing in our world today that you have to give me antibiotics."

So, it is a huge problem. And that actually is quite frankly the solution to most things. I think you've seen the studies on the ear infections with kids? And really, the antibiotics are not anywhere near as effective as even just doing nothing, but they still routinely hand out antibiotics when you take your, you know, your child in with an ear infection. So, it is a huge problem. And, you know, it's just the overuse of it is it's been a wonderful thing. I mean let us stop for a moment and look at, you know, at the beginning how wonderful it has been to, you know, know that you can handle an infection. But we have, really, the pendulum has swung to where we're just using them for everything and it's not appropriate.

Katie: Yeah. Exactly. And on that ear infection study that you're referring to, I feel like that data has been out there for a long time and it hasn't fully permeated the medical community or the parenting community yet. Because if I'm remembering, basically, they found that almost always, with ear infections, antibiotics like you said are completely ineffective. And it's better just to either do nothing or like probably both of us would do turn to natural remedies that help the child be more comfortable, help support their immune system to recover. But instead, we're seeing kids getting many, many, many rounds of antibiotics before even going to school for the first time and just the drastic impact we know that has on their microbiome.

For my own history, I look back and I was a kid who got strep throat constantly or they thought it was strep. I ended having my tonsils out when I was five and they found out that it was probably actually something viral that wasn't related to strep at all, that had just kind of taken up residence in my tonsils. But I had dozens of rounds of antibiotics before I was even five and, superbugs aside, from a health perspective that's really damaging. And I have a feeling, it was probably the beginning of my auto immune disease and so there are a lot of reasons both from the health perspective, from the agricultural perspective, and from the long-term survival of humanity perspective to really re-evaluate this.

But also, I get it as a parent and I'm sure you do, too. You also have kids. You hate to sit by and do absolutely nothing when your kids are sick. And I know that many parents like antibiotics or what the doctor offers and

you wanna do something to help your kids. I just think we don't really realize long term what this is gonna do society-wide, because we actually could foreseeably end up in a place where there are no effective antibiotics when we actually truly need them. So, what is that even look like? What is the future with no antibiotics?

Marjory: It's actually really, really scary. And Dr. Chan who is the director of the World Health Organization, she says, you know, "We're talking about the end of modern medicine as we know it. And let me give you a couple of, I mean really the antibiotics apocalypse and I know these are strong words, but this really is, you know, hugely significant, like medicine has got to change. In the United States, we do about 51.4 million surgeries each year and about half of these are outpatients. So, you know, what we normally would consider kinda minor and about half of them are, you know, in a hospital. Just some quick numbers, 1.3 million C-sections a year, which, you know, we both know that we could probably reduce that number pretty safely. Seven hundred and twenty thousand knee replacements, so you're not there yet but as, you know, we're not having an elder generation.

Again, I believe a lot of that can be corrected just with focusing on good posture and good posture or alignment earlier on in your life. But these are the kind of things that we're doing now and without antibiotics, there will be no such thing as a minor surgery, right? Anytime that you get cut open for anything and bear in mind that, you know, a surgery could also be an extraction of a tooth, like something that you might not think of as a surgery. But all of these procedures will become very, very, very risky. I mean would you go get a knee replacement if they knew that they were gonna cut open your knee and there was not antibiotics available to take care of the possible infections of that knee?

You know, maybe something very small you might wanna do because you can, you know, your body could withstand that. But, really, any kind of surgery going forward which really, you know, like I said, 51.4 million surgeries here in the U.S. alone, that is gonna come to a stop. Like you would not decide to get some kind of surgery done if you did not have the back up of antibiotics to make sure that that wound and that infection from that surgery did not become infected. So, we really are talking about other changes in this. We had talked about earlier, people are dying from antimicrobial-resistant superbugs that, you know, that they just give them, they throw every antibiotic they have at it. You know, maybe you have a kidney infection, you go to the hospital. They throw everything they have at it and they just don't, you just don't live through it. You end up dying of sepsis.

You know, this is a very real thing. You know, you go in for something else and maybe you've even pick it up in the hospital or even if you come with it, you know? As you and I both, I'm sure you don't necessarily believe quite in the germ theory the way we used to. You know, if you're in the hospital, you're in a weakened state and probably traumatized from whatever is going on, so you're very, very likely to pick up an infection. But people are dying from this now and the numbers are just expected to increase. It's almost a mathematical certainty with how many...you had the really good numbers like by 2050, you know, it's gonna be in the millions.

Katie: Yeah. I think that's such an important point to realize is people are already dying of this and it's on the rise. We're able to track this and it's going up, and that's also only including the cases that we can track. Because there are times when there's another medical issue going that an infection related to a superbug is kind of masked by something else, and so it might not be listed as the cause of death but it's still a contributing factor. And so, this is becoming a much more widespread problem.

You mentioned the germ theory. I'd love to go a little deeper on that because I think people still buy into this a lot or at least it's just commonly woven into a lot of mainstream conventional wisdom, which goes back to the idea that germs are bad, and we should eradicate all of them. And we've kinda tried that experiment for a few

decades and treated all bacteria as bad, and sanitized everything, and bleached everything, and that antibacterial soap, and used antibiotics for pretty much anything. And I feel like we're kind of reaping the effects of that now. But what's your take? I'd love if you could elaborate a little bit on the germ theory and the potential problems with it.

Marjory: Yeah, absolutely. I can give you a quick story and I mean it's even in my own organization. So, my editor, the editor for The Grow Network, Merin, just an amazing woman. Merin, she wrote an article about the work of The Grow Network and it was featured in...Reuters had a global competition for food sustainability media, and her article won. And as a part of that, she got a prize where she got to go to London for a week and take a class on journalism and media, and stuff. And so, she went and did that. But the month prior to that, Merin was in Durango, Colorado and they just had some huge fires. And, you know, her house was like right on the edge of that, so she was just under this incredible stress all that month.

And then she goes to London and then we have our team meeting in early July. And I said, "Merin, you really don't need to come. You've been doing so much. I know you're stressed out. You need to rest." She said, "Oh, I love the team meetings. We have so much fun. You know, we party, and we dance, and you know, look at what work we're gonna do in the world. And I wanna come to the team meetings." I said, "Okay, come along." So, she came, and she gets really, really sick after the team meeting. And she's just got this horrible bronchitis kind of thing happening and she goes, "Oh, Marjory, I saw that Jimerson had a cold when we were at the team meeting, and I think I got that cold from him."

And I said, "No, no, no, no, no Merin, that is not where you got that cold." You know, she was all like, "I think, you know, these other people gave it to me." I'm like, "No Merin, you were just dealing with a month of stress then you went to London for a week which, you know, travelling across the ocean and back, and time zones. That's incredibly stressful. Then you came to the team meeting, you know, that's high energy and a lot of fun. You are exhausted, woman. I mean colds are everywhere, right? Colds are everywhere. They're, you know, it's not the cold getting you, it's your system is worn out and you're tired, and you're exhausted, and you're completely vulnerable to, you know, what's out there."

I think was it, Louis Pasteur, the one who came up with the whole, you know, germ theory thing. I think I heard that on his deathbed he said, "Look, it's not that, it's the terrain. We should focus on improving the terrain and not focus on the germs."

Katie: Yeah, absolutely. And I think Alexander Fleming who created penicillin or, yeah, penicillin was similar. He, on his deathbed, realized the potential. Obviously, penicillin has saved many lives throughout history, but he saw this pattern and he was the first to say this has the potential to be very, very dangerous. And you mentioned sepsis, which is a common cause of death, especially in these infections related to superbugs. And I'm curious if the pharmaceutical companies are working on anything about this or if there are going to be alternatives? Because I know, for instance, I saw a study... I'll find a link to it in the show notes.

I believe it was out of Canada and a doctor in the ER just started using high dose vitamin C IVs in sepsis patients where antibiotics weren't working, nothing was working. And they saw the mortality go from 40% to I believe 4% with a really high dose vitamin C which is relatively safe, especially if the doctor knows what they're doing. And he tried to publish the results and to encourage other hospitals to try it. And he's gotten a tremendous amount of pushback because it's not double-blind placebo studied then it hasn't gone through the whole scientific process even though it's a generally safe substance. But I'm curious if there are things like that, if the pharmaceutical companies or the medical community are working on active solutions for this. Because, I mean we made a strong case for how big of a problem we're facing.

Marjory: Yeah. We'll get more into what solutions there are and there are, fortunately, we do have some other alternatives, but we'll talk about the big pharmaceutical companies. And just a little bit of background. On average, the pharmaceutical companies spend about \$5 billion in research and testing for each new drug that they bring to the market. And a part of that is just all the regulation and the FDA and the whole thing. And about 80% of the new drugs that are emerging fail because of safety or efficacy, or you know, different things. So, it's very, very expensive to bring a new drug to market. The other thing is that they can just make a lot greater profit on other drugs.

So, just in a nutshell, they're really not able to make a lot of money on antibiotics and they have not been focusing on it. And I will tell you right up front, I'm a little bit torn because I don't think stronger and better antibiotics is really the solution. But we are having this conversation about what the pharmaceutical companies are doing. And the truth is, is the pharmaceutical companies are not doing much they're really not focusing on this at all. And Brad Spielberger, he's a doctor with the University of California, Los Angeles and he's a member of the Antimicrobial Availability Taskforce. Say that fast three times, right?

Let me read you a quote of him and that will really give you a succinct picture of the situation that the pharmaceutical companies is. And he says, "The revenue potential for new antibiotics is far less for drugs to treat chronic diseases." You take an antibiotic for seven days and then you stop. Whereas, drugs for diabetes or high cholesterol may be taken for life. So, you know, where is the money, right? I would love to have a drug that I need to feed you because your life depends on it and you're gonna need to take it for the rest of your life, right? There's a lot of income from that.

Another example is Pfizer. I definitely have a love-hate relationship with this organization. But they used to be the world's champion for antibiotic development. And Pfizer does continue to make four different antibiotics that the World Health Organization has deemed necessary for a basic health system. But back in 2011, Pfizer closed its antibiotic research facility in Connecticut, which was the world's leading research institute for antibiotics. It also closed another one that was in the U. K., I think it was in England. Now, it did open a small token research facility in China, but they are really, the China facilities basically starting from scratch and its new location. You know, none of the experts that were in Connecticut wanted to move to China, right? None of the ones that were in the British labs wanted to move over.

And so, when the Connecticut facility closed, Brad Spielberger was saying, "You know, it's just a crushing blow." So, you know, really no, there's not a lot of antibiotics in the pipeline. And I think, you know, really between you and I that stronger, more powerful antibiotics aren't really the solution because as we've already seen with the existing antibiotics that we have, you know, the antimicrobial resistance just continues to go on. Life continues to evolve and work its way around it. So, coming up with stronger and bigger guns just means that, you know, life will come back with its own, you know, bigger and stronger version of how to deal with that. So, the answer is no. The pharmaceutical companies are not working on it and the other answer is, well, it's probably a good thing they're not.

Katie: Yeah. I think yeah, like you touched on such important points. And we have to realize too that bacteria, they're living species that have the ability to mutate in real time. And we're now finding that they can actually communicate and share this information amongst themselves. Essentially, like this can spread. It can spread amongst people and throughout bacterial populations. So, even if pharmaceutical companies were trying to keep on top of this, you're talking about a relatively slow and clunky development process. Pharmaceuticals and all the boxes that they have to check to get to market trying to, in real time, fight something that has the ability to mutate very quickly which is just, it will be a losing battle to begin with.

Not to mention that while it was relatively easy in the beginning when antibiotics were first discovered, and they started culturing them. It was easy to find new strains because the body hadn't been really exposed to them in those concentrations before. We kind of reached the saturation point from what I understand of new strains that we can even find for antibiotics. Is that your research as well?

Marjory: That's pretty much it. There is, you know, not only that is it more difficult to find strains that can do this, but then also there's just no real profit motive for it, you know, within the big industries? It's really, really expensive to bring a new drug to market. So, we've got a combination of forces that are just pretty much saying, "Hey, look, antibiotics, pharmaceutical antibiotics as we know it, it's an experiment we've done as humanity, and that's just not working. That's a dead-end valley, and we really have to back up and find another route."

Katie: Yeah, absolutely. I had friends who have been kind of shocked that none of my kids have ever had antibiotics. In fact, I think through my entire married life, the only time we used antibiotics was actually one of those rare cases that I think you would even probably agree. They have their place, which is my husband's appendix ruptured and he got a secondary infection that had some really severe strains of nasty bacteria, and they were internal. So, that's pretty much the only time we've turned to antibiotics. And I have friends who were like are shocked that I've never put my kids on antibiotics and I almost look at it like, "Why would you not, why would you try to treat these things naturally?"

But understanding the things we've talked about, I really think this is a very serious issue that our generation is going to face, and especially, that our children's generation is going to face. And I'm curious, what can we do about it individually? Is it possible to stop this problem or is there anything we can do to change the course of this?

Marjory: We are very, very, very fortunate in that all of our ancient and historical techniques for dealing with infection still are very, very, effective. So, the antimicrobial resistance has not really necessarily encroached on some of these older traditions that we have. And let me just paint you a picture. You know, 100 years ago, people were still getting around with horses and I don't know if you've ever messed with horses, but they are big animals. And you get kicked, you get bitten, you get, you know, bruised, you get beat up whenever you deal with horses and that was everybody dealt with horses, right? That was transportation. Women cooked over either wood stoves or fires, right? Now, if you've ever done a lot of cooking over it, if you get burned, you get, you know, it's hot, you know, all kinds of things happened, right?

Life used to be for your average human being a lot rougher than it is now, right? You think of the Greek and Roman warriors and those guys were bashing each other with swords or we go back through some of those movies, right? I mean we've reenacted it. Now, if all those people died, you know, we had techniques. Now, definitely, people died of infection. Let's not kid ourselves. I mean, you know, the natural stuff is not necessarily foolproof, but neither is currently our pharmaceutical antibiotics. But there were definitely very, very, very successful techniques for treating infections.

But one of the first things that we need to do and that we can do fortunately is get healthy. You know, build up your immune system, start, you know, making sure you're eating your clean food, reducing your toxins, your breathing, you're moving. You know, you're getting enough sleep, you're doing meaningful work, you're really doing what you can to reduce your stress, right? All the things that we know that really help support your immune system and then there's lots of herbs to support the immune system. You know, really get healthy basically is the number one thing because it really is the terrain and it's not those germs out there going to attack you. It's really how strong are you in your body.

And the other thing is, is to start learning the techniques for effectively treating infections. These are, you know, herbs and systems, and methods that our grandmothers and our great grandmothers, and all of our ancestors knew throughout time. There's the guy, Otzi, they found this guy, these hikers and I believe it's up in the Austrian mountains. And they thought it was somebody who just died recently, and they get to digging him up and thawing him out, and he's like 5,000 years old. And what did Otzi have in his pocket? He had a mushroom that's a known antibiotic. You know, we've been using some of this stuff for thousands and thousands of years. By the way, Otzi got into a really bad fight and he was killed. And no matter what kind of medicine, he was gonna die. So, it wasn't because of the, but, you know, people knew how to treat this stuff and we have known how to treat this, and we have been treating it for thousands and thousands of years. So, let's go back to those systems, which fortunately still work.

Katie: Yeah, absolutely. Especially when we realize that statistically, right now at least, most of those antibiotic-resistant superbugs are hanging out in health care and medical settings. That's the easiest place for them to spread. And so, the less we have to engage in those settings and the more we can keep our immune systems strong, and manage less small stuff at home, then we can actually hopefully avoid having to interact with these superbugs and avoid the overuse of antibiotics which we mentioned is contributing to the problem. But I know a lot of people listening may wanna hear a little bit about some guidelines of, if or when there is a time for antibiotics? Because I mentioned, we've pretty much avoided them unless they're absolutely necessary. And I'm curious, when is the time and the place or how could a mom know for instance with the child when they would want to consider antibiotics, or when they really would need to go into medical setting?

Marjory: Yeah, I hear you. And there's a lot of pressure, I know. You know, when my kids were small and very similar journey to yours and I was like, "Hey, I just don't wanna go this route." And there was a lot of pressure from family, you know, in-laws and people that were very well intentioned to like, "Look, that kid's got a fever. You know, you've got to go take that kid into the hospital." Or, you know, there was all this pressure to, you know, "You did not give them antibiotic? Like what are you... You're a bad mom." You know, there was a lot of that.

Very fortunately though, I had sought out a doctor, a medical doctor that's really switched on. We live in the Austin, Texas area and he said, "Look, antibiotics should only be used for a life or death situation, right? You should not be using them for minor things like sore throats or ear infections, or even, you know, cuts or scrapes, or wounds. Those are all things that you can treat at home or, you know, in other ways. But antibiotics should only be used as a last resort."

And I'm also a believer. I know sometimes like I get into home medicine and like I wanna do it all myself, right? You know, I wanna completely avoid the medical system and, you know, there's a bit of that. But really, when you get into trouble and you know what, and you say, "Okay, look, I'm really scared here." Which happens, you know, things get out of control or, you know, things get bigger than what you can really handle at home. Then yeah, you want to make sure you have a network of trusted health care advisers before that happens. You know, go out and seek like we went out and saw a doctor, and talked to him. And I said, "What are your beliefs on this?" And he said, "Look, I believe this about antibiotics." And we're like, "Okay, great."

We had that support, right? I knew where I would go, or I would get medical advice in an emergency that would be more on alignment with my own beliefs. And it really has surprised me though like at one time we were dealing with this one clinic and they looked all holistic and everything, but they still ended up handing out antibiotics. I said, "No, I don't want this." Right? So, naturopaths, herbalists, there are some real good switched on MDs that are starting to get developed out there now. So, find a network of health care providers

that are gonna support you in this kind of decision, and especially when you're in a crisis time. Because I totally understand what it feels like when your little ones, you know, got a fever or crying, or your kids are in pain and you get your in-laws breathing down your neck because you're not taking them immediately to the emergency center. You know, build yourself a network ahead of time with people that you trust that, you know, will help you on this journey.

This podcast is sponsored by Thrive Market, my go-to holiday shop for all of the staples I need. My hubby and I are both the oldest in our families, so we often end up hosting the company for the holidays. In fact, last year, I cooked for over 40 people on Christmas Eve! We live in a pretty small town so running out last minute to find an obscure ingredient I'm missing for a gluten free recipe isn't always possible, so I have to think ahead. I meal plan for the holidays weeks in advance and make sure to place a bulk order with Thrive so I have the ingredients I need, and I always order extra just in case, so that I can make a dish or healthy dessert to bring if we get invited to a party. This year, our family is adopting a few families who were affected by the hurricane so I'm tripling my order, so I can make extra for them too. Thrive Market makes the whole process easier and I don't have to stress about last-minute planning. I highly recommend checking them out and ordering ahead of time to keep the holidays stress free. And just a tip, make sure to check out the Thrive Market brand line which has many ingredients and staples and even things like tuna and sardines at really, really good prices, so start there. And just for being a listener of this podcast, you can save an extra 25% off of your first purchase plus you get a free 30-day membership to try out Thrive and check it out. You can get both of those—lock in that discount at Thrive Market at thrivemarket.com/katie.

This episode is brought to you by Organifi and I'm so excited to finally tell you about them! Because, here's a confession... I have known about Organifi for a really long time and even though so many of my friends and experts I trust rave about them, I never tried their stuff until recently because I thought... first of all, how can it actually be that good? Well, I tried it and it turns out that it is not only that good, it's better than I expected! Organifi has green juice, red juice (which is an antioxidant red drink and it's delicious) and a golden milk turmeric drink, along with a plant-based protein. Everything they have is completely organic and they all actually taste good, unlike a lot of other green drinks and protein powders. I've especially been loving their red juice lately... especially at this time of year for immunity. It tastes amazing and it has a blend of antioxidants from strawberries, cranberries, blueberries, pomegranates and they also add in beets, cordyceps, reishi, rhodiola and a lot more. So, this particular blend is formulated to increase energy, boost metabolism and reduce factors that lead to aging. Their green juice is minty and delicious, and I noticed it has almost 800 5-star reviews. You can check out those two products, along with their whole suite of products and save 20% just by being a listener of the Wellness Mama podcast. Go to <http://organifi.com/wellnessmama> and use the code: WELLNESS20 for 20% off.

Katie: I'm so glad you mentioned fevers because I think that's, as a mom, it's one of the tough things. It really is hard, obviously, to see your child suffering and having a fever, and how awful they feel. And it's something I've written quite a bit and actually taken a lot of heat for. But the idea that the fever is actually a completely normal bodily response, even high fevers. Even the ones that caused febrile seizures almost always are not dangerous. They're there for a reason and we now have some data about high fevers in childhood and even like certain illnesses in childhood, and a reduced risk of certain types of cancers later in life. And it appears that those high fevers are not only helping engage the immune system, but they also have a long-term protective effect because the way they interact with the body.

So, I think if some things like that shifting the perception of not thinking as a fever is a bad thing necessarily, but, realizing that they're doing their job. And how instead can we support the child to help them be more comfortable, support their immune system, keep them hydrated. Let them relax rather than trying to just get

the fever down. I think just shifting those perceptions will help so much over time and I hear you so much on finding doctors who can really be in your corner and finding partners in your own health care, not someone that you're gonna have to fight with to do whatever you feel is right for your family. I know, for me, the area we live there are not a lot of options, so I've actually turned to concierge medicine called SteadyMD, which connects you with functional medicine or different types of doctors who are all much more on board with the way we choose to manage our medical care.

And I have access to my primary care doctor now 24 hours a day. And I can call and be like, "Hey, my kids got 103 fever. Looks like probably an ear infection." And he knows I'm not gonna jump on the antibiotics unless I absolutely have to, so he'll recommend other methods as well. And just having that, having that peace of mind and having a medical professional tell you it's okay, the body is doing what it's supposed to do. Just make sure they stay hydrated. Just hearing that I think as a mom sometimes give you so much peace of mind. So, I can't emphasize enough how important it is to find practitioners who are in your corner. And I know firsthand how difficult that can be at times but, really, I would encourage anyone listening to find those people ahead of time. Like you said, don't wait 'til you're in a crisis to have to then figure that out as well. I'd love to hear your personal experience also about if you had to navigate any kind of severe infection without antibiotics and how you were able to do that?

Marjory: Yeah. I have been treating my own infections for now going on almost two decades. And the very first one that where we really just found and there's, boy, I got to tell you, there's two aha moments that you'll have when you start to become your own home medicine maker. And the first is when you realize how simple it is, like, "Oh, my gosh." And the other is when you realize how effective it is. And the first time, for me, was when I was nursing my one-year old son who is my first son and I got mastitis in my right breast. And, you know, the classic, you know, the whole thing is red and tender, and swollen. And I'm having those fevers that spike up really fast, really hard like it would just shoot up to 106 and be there for a little while and then go down. And that's, you know, one of the clear signs if you got an infection going on.

And, I don't know, you know when you're nursing, like my son they said... I was a new mom, I said, "How often is he gonna nurse?" And they said, "Oh, about once an hour." And my little son, yeah, he nursed once an hour for 59 minutes. I mean that boy loved his milk. So, anyway, he nursed right through this whole thing too, by the way, which is totally, you know, the midwives and the doulas were saying that's totally fine. And fortunately, we did have some, you know, switched on help and I... you know how when you're nursing so much, I guess you kinda get into this almost, I don't know, it's kind of a trance, you know?

I've seen it now with my hens when they get on their eggs and they get into this kinda trance. And you're breastfeeding and you kinda got this home mellowness going, and my husband is like, "Hon, you've got mastitis." And I'm like, "It's okay, hon. Like whatever, we're just nursing." And he's like, he freaks out and I found his freak out was like way inappropriate. But it turns out, he grew up in South Texas as a farm boy, and the way he made his money as a teenager was, he would milk his cow. Every morning he'd milk the cow and then he would take the milk in and sell it mostly to people at his dad's work, but that's how he made his pocket money. And his cow had gotten mastitis on one of her udders and she died from it.

So, he knew, I mean that cow was a big animal, and he knew what could happen with an infection like that. And he was completely, you know, like, "Oh, my god, we have got to take care of this." And I was like, "Well, you know, I'm really not gonna do those antibiotics things." And we worked with our midwife and she said, "Make a cabbage poultice." And so, he got a, you can use a green cabbage or a red cabbage. Cabbages are wonderful poulticing material and you basically chop the cabbage up as if you're gonna make coleslaw. And he added in also just some chopped up ginger. I think he added a few other things but really, the basic thing as a

chopped-up cabbage like coleslaw and then used... And I would say about a half of, you know, medium sized cabbage for the material.

And then you use the big outer leaves to hold, you know, to hold the things all together over my breast. And we put that on there and I'll give you the two rules for poulticing. But we put that on there and, you know, sure enough I mean really the mastitis was gone in about 24 hours. And the two rules of poulticing are, one is you want to make it much, much bigger than you think you need, you know? So, he had almost half of my chest covered with the cabbage poultice basically. And the second rule, so you wanna make it bigger. Like let's say you have a small burn on your arm and the burn is about the size of an inch. Well, you're gonna want that poultice to be like it's six or eight inches in diameter around that whole thing.

So, you really, you go big, you know, go big or go home, right, with these poultices. And the other thing is you need to keep it on longer than you think. I know I've had people, you know, they cut themselves out in the wood and they chew up some plantain, and they put it on there for 15 minutes. They're like, "This didn't work, Marjory." You know, you got to keep it on there for a while. So, he had that on there. We would change it out maybe every four to six hours. And we basically have that on for, you know, most of the day and in evening. And, you know, that really cleared it all up. So, the two rules of poulticing are go big and to keep it on longer than you think you need.

But that first time, it was like, "Wow, this is amazing." You know, like we have just gone through mastitis and that completely cleared up that infection. And since then, and like I said, you have this two aha moments of one is how simple it is. You know, you just went and got a cabbage and chopped it up, right? And the other is like how effective it is. It's amazing. And I did not, unfortunately, one of my nieces recently with her new baby, she had mastitis and they went and did the whole hospital thing. And it was so sad because, you know, the whole family has to mobilize because while she's in the hospital, who's gonna take care of the other kid, and who's gonna take care of the dogs, and then the husband has to take off work. He's there and there's this whole big drama around the whole thing.

And, of course, she ended up with a ton of antibiotics. And I wish that I had enough influence in that family to say, "Hey, look, here's this other alternative, but mine was so simple, right? And so easy." But I have treated so many things, conjunctivitis or really, really bad eye infection, all kinds of ear infections. Those, again, and you have a really great article on how to start treating ear infections with just garlic. Burns, a couple of years ago, I was out in the yard and harvesting some tomatoes and I got bit by a copperhead snake. This is a venomous snake. You know, it's not that common to die from it because people usually get medical equipment right away, but it is potentially a lethal bite. And we just completely treated that at home. And really, and I was fine from it within about two days, so that was another really powerful experience.

I don't recommend you go treating venomous snakes bites, right, out of the get-go. I really don't recommend that you start with that. But it just shows you where, you know, with all medicine, you should start small. Just start on the small things like little burns or, you know, cuts, or a sore throat, or an ear infection. When you really start to realize the power that's inherent in these older techniques. These ancient techniques actually, and, start to really get a sense of that and start to get familiar with medicine and making medicine, and using medicine. You know, yes, after a while you'll be very, very comfortable treating something even as lethal as a venomous snake bite.

Katie: I'm curious to hear a little bit more about what you did for venomous snake bite because we live in an area with a lot of cotton mouths and rattlesnakes, and we have all the natural wild animals down here. So, I'm curious what you did for that. Obviously, understanding before you go further. This is not medical advice, and anyone should use caution when dealing with any kind of snake bite, but I'm really curious what you did.

Marjory: Yes, absolutely. And, you know, a couple of things that we did way before, so you should really prepare for this. And I really also don't want anybody thinking they can just go out and treat a snake bite. One is these are some of the preps we had in place and one is I was very aware of the dangers in my regions. I was very aware of what snakes look like, which ones are poisonous, which one are not. You know, the spiders and the different things, the different hazards in my region. I was aware of them, I knew what they look like, what their levels of toxicity were, what the symptoms were, that kind of thing. So, you know, there's a level of preparation here. It wasn't just like some random snake bite like, oh, you know, we knew it was a copperhead. We knew what a copperhead snakebite and what the effects were gonna be. So, we knew ahead of time.

The other thing I am very, very healthy. You know, I have been growing at least half of my own food now for almost a decade, a decade and a half, and I eat very, very clean. I move a lot, I breathe a lot. You know, I'm a very, very, very healthy person. My husband went in for a medical test a while ago and they said, "You aren't on prescriptions at all?" He said, "I don't have any." They're like, "Oh, my god. That's amazing." You know, so our family is very healthy. You wanna have that level of health going. But I will tell yeah, I came into the house and I had seen the two puncture wounds, and I knew that was a snake bite.

And I had felt when the thing bit me, I'd like involuntarily shaken my foot. I didn't see it, but I had checked my foot. I thought it was like a vine or something that was on me. And I'm a barefooter, so I was also violating one of the most fundamental rules of home studying in life and that is, don't put your hands or your feet where you can't see them. But I was way thick in this tomato patch. I was so excited because I had just harvested this one gigantic tomato and I was wondering if there was another one in there, right, you know, and I was so excited. And bam, that thing bit me on the foot and jerked my foot back to like, "What the heck?" And the fangs just dug in deeper and I'm like slinging the snake around with that thing.

Anyway, I wasn't totally certain it was a copperhead at that point in time, but both my husband and I, we live in this region. There's a lot of copperheads and it's pretty common to get bitten by copperheads in this area. Most of our neighbors have been bitten. I went in the house, I said, "Hon, I've been bitten by a copperhead. I've been bitten by a snake." He says, "Was it a copperhead?" Because we know that's actually the only major snake to be worried about in our region. Even though, technically in Texas, you'd think there are rattle snakes in our particular area. We have a lot of sand and rattlers like out cropping. So, I said, "Well, yeah. I'm starting to feel the pain." And we both shook our heads, we both knew it was copperhead.

So, the first thing he does is he looks at the clock. Because we both know our plan B and have a plan B is we're gonna go to the hospital if this gets way out of control and we can't handle it, right? And so, he's looking at the time because he knows if he's gonna be. And also, for our own record and tracking, you know, you wanna know what time things happened at and what happened when, right? So, you can be clear about the treatment and where you're going, and all that sort of thing.

And then he says, "What do you wanna poultice it with?" And I'm scratching my head, you know, and I said, "Prickly pear, prickly pear pads are great poultice material also because we didn't have any cabbage. Our plantain which would have been another good material is a very narrow leaf plantain. It would taken hours to harvest enough you know. And I would have a prickly pear patch that I grow specifically just for these kind of things in addition to food, it's also a good food.

So, he went out and he harvested some prickly pear. And meanwhile, I was like told my daughter. I said, "Kim, I need something for the internal infection." And she immediately got some garlic and the way you treat garlic, I'm pretty sure I've seen you reading or writing about this on your blog. You wanna crush it and chop it up kinda fine and let it get exposed to the air to really activate that alanine and the other compounds. We don't even know how many wonderful compounds are in garlic.

So, she made me some garlic to take internally for internal infection. And I didn't think about it is a lot of times right there when you're in the crisis. You are not gonna be a clear-headed as you are, as we are right now, right? I would have taken a bunch of echinacea and I've heard a lot of people also successfully putting echinacea on a snake bite too to stop it. But actually, I don't think we had any at that point in time, that's kind of a sad thing. We should always have a big jar of echinacea on hand. Anyway, we basically poulticed that with prickly pear mush and, again, go big, right? So, what we did was we used a plastic, you know, garbage bag.

My husband, it ended up being two pads. What he found was a good thing. By the way, with the prickly pears when you're harvesting them, if you take two rocks and you scrub the prickly pear pad with these rocks while it's still on the plant, you can completely de-thorn it there which makes life so much nicer. He brought two pads and the size that he realized they need it for this particular injury. So, the bite was on the top of my foot and the pads were I'd say about 10 inches in diameter and about 3 quarters of an inch thick, and 2 of those. And what he found normally, you have this whole process of chopping it up and all. He just, he's my husband, he threw it in the blender. He was right, it was faster and better. He just basically made the slurry.

We put my foot in the plastic bag and then filled that slurry in there so that my whole foot is in this prickly pear slurry that is basically from my toes all the way about halfway up my leg. And, you know, let my ankle basically soak in that. Now, I will say with a copperhead snakebite and I got, you know, a really good dose of venom because if you remember, I was swinging that snake around on my foot for a bit there. Yes, I had some very, very amazing hallucinations. I was definitely vomiting at one point in time and it's really pretty neat actually. I know that vomiting is not fun, but I had this really strong inner sense that the vomiting was really important just to get, like my body did not have time or energy to focus on processing food right now. It just needed to get that out of my system so that all my energies could be focused on healing my ankle, basically where the snake bite was.

So, even while I'm vomiting, I'm really having the sense of calm and peace about it because I knew that that's part of the process. So, yeah. You know, then there's the other end, a lot of projectile diarrhea almost. It's like there's another hole. Your body is like, "We got to get rid of this right now. We have to focus on something else. We're not gonna spend time processing waste." And again, you know, I really had a strong sense that that was what was a part of the process. So, I will say that this journey was really also being me being very comfortable with having used home medicine for at that point, a decade and a half, of being comfortable and confident in my own body and my own body's resilience to healing.

And, as I said, you know, my husband, we had the back up. You know, he was watching me very carefully. And like if he felt it got out of hand and he was checking in with me from time to time, you know, like, "Are you okay? Do you think you can handle it? You know, where are we at?" I'm like, "I'm in incredible pain but I can handle it. I think this is, you know, I think we got this, right?" You know, so we were checking in with each other. And really, by the time I went to bed that night, which was five or six hours later, most of the pain was gone and most of everything had been purged, and I just slept. And really, it was just about two days of that, just sleeping and we would keep the poulticing material on the prickly pear on for about eight hours and then change it out.

And just basically two days of that and, you know, I was up and walking around, and doing chores, and feeding the chickens, and back to work. So, I think a couple of things about this story, one is one thing, if you're gonna do home medicine, you have to take personal responsibility. Which, you know, you know that and I'm so appreciative of you, that's the message that you have with what you're doing. And the other is, you know, I think part of the reason people like antibiotics is you just take these pills, and you can be back to work right

away, and it doesn't involve anything. You know, so I very much had the care and support of both my husband and my daughter who were the ones who were at home.

And I know in a lot of these older techniques do require one that you're not gonna go right back to work, you got to take some time off which is what you should be doing. Your body is needing to recover. And the other is that it does, often you need a little bit of support from family or friends. And, you know, but I got to tell you, over the years of treating my family which I think you're right. I'm technically not sure I'm allowed to even legally treat my own family but, you know, I'm taking care of my family. Some of the most precious moments of being a mom, like that time when my daughter had the fever, you know, holding her and having a cold cloth and wiping her brow, and just being reassuring for her. Those are precious, precious moments.

Or, you know, when my son had a cough and he's like, "Mom, what should I take?" And making the syrup for him and, you know, nurturing him or taking care of him. Or my husband you know when he's had problems, just being the one to care for them and support them. Or when I had that snake bite thing, you know, I count on my husband and my daughter. I don't count on some faceless nameless white coat somewhere, you know? So, the family bonds are, well, that's I wanted when I signed up for motherhood, you know? It was that taking care of my family and being taken care of by my family and creating those bonds and creating that relationship. So, yes, I've treated a lot of infections and you can, too.

Katie: Yeah. And just like with how we talked about like the fever can have a time and a place. I feel like you mentioned vomiting as well, like maybe we shouldn't also shift our focus and not thinking these are problems but realizing the body's innate wisdom and that these are processes that we have as defense mechanisms. And times like your case, it's a perfect time not to fight that. Not to take anti-nausea medication and try to keep from vomiting but to actually embrace that the body knows what it's doing. And I had a similar experience to you with mastitis. Actually, while travelling, so it was easier for me even if I wanted to get antibiotics it would have been difficult.

And so, I went to the grocery store instead and I was able to handle it naturally and easily in a couple of days. And I think it's so easy to think that conventional medicine is more effective, but when we look at the history of use, we know that things like plantain and even honey for burns, or oregano, vitamin C, all these things are actually highly effective when you know how to use them. And it's that, exactly like you said, I think that's such an important point of taking responsibility and realizing even if you're working with the doctor which everyone should have someone in their corner like we talked about, but you can't outsource the responsibility for your health.

And all of us can learn so much by just having with these remedies on hand then we can save a lot of time and money if we're able to handle minor stuff at home. I'm curious if you have any tips for people on how to get started with that, if someone is coming from a more conventional model of working with the doctor or using antibiotics. How can someone jump in and start to learn?

Marjory: Yeah. Well, I love all the resources that you have on your blog and especially, you know, ear aches seem to be real common with kids and you had that wonderful thing about how to make, you know, that garlic oil is so effective for ear aches and it's so soothing. You know that nice, warm oil in your ear, it's so nice so then, you know, start with that. Or even, you know, garlic is a really great one and you've got that little, write up on using garlic and it's really useful. I would say garlic is one of the really first home medicines to start using. But start, yeah, start small, you know? Just start doing a few things when things come up. And then instead of running off to the drug store to get some chemical cocktail, go, "Hey, you know, what can I use here that's at home." And also, as we talked about before, you know, start really shifting your lifestyle which is

what you're all about, Katie. It's awesome of, you know, start becoming healthier in general and taking responsibility for your health.

And then the other is, you know, that poulticing is one of the greatest ways to treat infections and start learning to treat infections now. As we discussed really, antibiotics are coming to an end. And, you know, like all things, change is both good and bad, but it's change. And fortunately, we do have these resources. We have a video called "Treating Infections Without Antibiotics" that I created because I'm so passionate about this. You know, the overuse of antibiotics, it's just gotten way out of hand and it's going to be a crisis that's even more and more apparent, and more horrible. So, if anybody wants, I think you're gonna have that in the show notes the links to pick up that video which will take you step by step and show you exactly how to do the poulticing, the different poulticing materials. You know, show you how to treat bites, stings, burns. But start small, you know, get comfortable with a few herbs and a few remedies, and a few plants, and just keep taking it. So, it will be amazing to you after a few years of what you've accomplished. Don't worry, life will throw things at you. Life will throw that sore throat at you or something at you, it happens. But just, you know, just take some small steps and, you know, start with one or two herbs, and just get started.

Katie: Yeah, absolutely. I'll make sure that that link is in the show notes at wellnessmama.fm. So, anybody who is listening on the run or driving, don't worry about trying to write it down. You can always find those links in the show notes. And I feel like that's such wise advice, that it's easy to baby step into this especially for those of us with kids. There will be plenty of opportunities to practice and almost all of them will be non-life threatening so it's a great time to start learning those tools. Because, unfortunately, we really need them one day if this path continues. And then we can also all be involved in reducing the overuse of the antibiotics and hopefully slowing down this cascade that's already happening.

And I can't believe our hour is already almost flown by, but I have a selfish question I love to ask at the end which is, if there had been any book or books that have really influenced your life? Because I'm an avid reader and I'm always looking for recommendations, and I would love to hear yours.

Marjory: Well, about 25 years ago, I met who would be my spiritual teacher, and his name is Dr. Brugh Joy and his book is a little bit esoteric. But he was one of the most, he was the most profound influence in my life and he's one of the most egoless people that I've ever met. And the name of his book is "Avalanche: Heretical Reflections on the Dark and the Light." And that book really, really summarized all of his teachings and I regularly refer back to it and read it. So, that for me, it may not be mainstream, but that is the book that has really been a mainstay for me in my life.

Katie: I love it. That's a new recommendation for me, I'll have to check it out. And also, I wanna make sure everybody knows about your website, I mentioned it at the beginning. But you have also so many incredible resources at thegrownetwork.com and encourage people to check it out, I know I've learned a lot from you. But can you just kinda give us a rundown of what you talk about on the Grow Network and what people will find there?

Marjory: The Grow Network is the premier community of people who make our own medicine and grow our own food, and we're becoming extraordinarily healthy. So, all the information that we have there and we're very practical DIY people. We're not into activism. I mean that's important but other, you know, like we're not gonna complain about GMOs. We already know they're bad. We're beyond that, right? So, you know, how do you grow food? How do you have tomatoes come miraculously off a plant, or how do you make poultices? Or how do you identify that chickweed that's in your yard and how do you make these chickweed fritters out of them, right? So, we're a real community of doers.

We're also a community of backyard researchers, like we just really love experimenting with things and trying things out. And like we have this one guy, Colorado, he's awesome. He's built this greenhouse and he's trying to figure out how to heat it throughout the entire freezing Colorado winter without, you know, anything, completely sustainably, and he's like measuring how many BTU's a chicken throws off. This is awesome, you know- can he heat that thing just with chickens so we're just a really fun, crazy group. It's actually a global community so we have people all over the world. I mean if you live in a desert, if you live in the Mojave Desert the same as the Sahara desert, I think the plants and animals that you get to use are different from there.

So, we try to connect people up regionally around the world also. It's a really fun group though and, you know, we really are - the purpose of The Grow Network is to stop the destruction of the earth which sounds like a big and lofty goal. But to be honest with you, commercial agriculture and conventional medicine are two of the most destructive forces on the planet. And what you do matters, you know, it might be small but what you do matters. And that's what the whole genesis of The Grow Network is about.

Katie: I love it. And I'll link to a few of my favorite articles in the show notes as well, so people can find them. But I'm a huge fan of big, lofty goals because my whole reason I blog and the reason I still do this every day is that I saw the health trends that our kids, they're gonna face in their lifetime. And when my son was six weeks old, I was not okay with that and I decided I was gonna do what I could to help change those statistics for our kids, and like it dovetails perfectly with your mission. Because when we make the earth healthier, we also can help ourselves become healthier, and vice versa. So, I love the work that you do, and I really appreciate your time in sharing today and get anyone listening. If you wanna learn more about how to battle these superbugs and to treat infections without antibiotics, that link will be in the show notes. So, you make sure you can pick that up. And Marjory, thank you so much for your time. This has been so much fun.

Marjory: Thank you, Katie. It's really wonderful. I really do appreciate the work you're doing. It's gonna take a bunch of us. And I'm so glad to see the tide turning though. I really feel it's palpable. We really are all making a difference and we need to, it's time.

Katie: Absolutely. And that's largely thanks to people like you guys listening and the work you're doing in your own families. I know Marjory probably is equally grateful. I'm so grateful to you guys and for being on the front lines of doing this in your own families, in your own homes. And thank you also for you time in being here and joining us and listening today. And I hope to see you again on the next episode of "The Wellness Mama" podcast.

If you're enjoying these interviews, would you please take two minutes to leave a rating or review on iTunes for me? Doing this helps more people to find the podcast, which means even more moms and families could benefit from the information. I really appreciate your time, and thanks as always for listening.