



Episode 482: Katy Bowman on Grow Wild -
Optimal Movement for Children and Families

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Katie: Hello and welcome to the "Wellness Mama Podcast." I'm Katie from wellnessmama.com and wellness.com. That's wellness with an E on the end. And, this episode is all about movement. Because I am here with Nutritious Movement guru, Katy Bowman, and we talk all about with the idea of growing wild, and how we can optimize movement for our children and for our families. Katy is a much-requested repeat guest on this podcast. And her first episode was amazing, I'll link to that in the show notes so that you can listen if you haven't already. But in this episode, we go deep on the specifics of movement, especially when it comes to setting our children up for lifelong, good movement habits. And we delve into things like the difference between movement, activity, and exercise. Why exercise, as we think of it, is a relatively new phenomenon, and why we're seeing a decline in movement across a lot of parameters within society. We talk about how to optimize your home and even clothing environments for better movement. A reason to consider maybe changing up how you think of sitting and even sleeping in your home, and a lot more. She's so well-spoken and

always a joy to talk to. I know that you will learn a lot, and maybe this will challenge some of your environmental paradigms about your own home. So, without further ado, let's jump in. Katy Bowman, welcome back to the podcast.

Katy: Hi. Thank you for having me.

Katie: You are a much-requested return guest. People love you and love your work. And I think your message is so important. I know we're gonna go deep on a couple particular points today. But before we do, I have notes in my research about you that you also sign. And I grew up with two hearing-impaired parents, so that's a full connection. I don't meet many people who also sign. How did you learn?

Katy: I have a deaf sister.

Katie: Oh, wow.

Katy: Yeah.

Katie: Very cool.

Katy: Right. So, you know, just family style. And then when I was doing my undergrad, we had to learn a language, and I picked ASL as my language, so I even got to go deeper into, I would say, the philosophy of ASL and deaf culture. So, yeah. That's awesome.

Katie: Very. Cool. Do you sign with your kids at all?

Katy: I do. So, it was really important for me to start them out. You know, we started with... I mean, we did elimination communication, which is a small element. It's basically the concept of using non-verbal, structured, signed for that. And then I did a little bit of baby sign. But I would say rather than that, it was more just like how you would raise someone to be fluent in sign, and then sign time, during the pandemic times, like, sign time, sentences and those videos were real great, fun thing for a one keen language daughter. And she's great in a lot of languages just naturally, but ASL, too, just does seem to fall into that. So, it's super fun.

Katie: And it dovetails in a cool way with language and movement, which is a unique connection for you?

Katy: That's right. That's right. It's a very dynamic, full-body way of studying a language.

Katie: And I also have a note that you are a science fiction fan. And this is a genre I'm just getting into, so, quickly, any recommendations?

Katy: Ted Chiang's, "Exhalation." It is, like, hands down maybe the top...the sci-fi that I've read of late. But yeah. It's been a long...like, I started getting into it when I was a preteen.

Katie: I'm writing down that recommendation. Well, now, for what you are well known for and a world expert in, we're gonna talk a lot about movement today, and specific to children. I also have a note that if you were going to give a TED Talk in a week, it would be about the difference between exercise, physical activity, and movement. And I think this is an important broad starting point. So, I know that could be many hours in and of itself, but can you give us a broad overview of how you differentiate between those and why that's important?

Katy: Well, I guess I'll start with movement, the biggest category. So, I always have people imagine drawing a chart. So, a giant circle, it's labeled movement. Everything that fits into that, you know, human movement, would be when your body is changing position, changing shapes, and that could be, the rest of you is still but you're bending your arm. That's movement. It could even be, you know, the fact that your eyes, the muscles inside your eyes, have to adjust when you're looking at something up close, like a screen, versus looking at a wall 20 feet beyond that, versus looking at a stop sign when you're driving, versus looking at a mountain. Every one of those has a different eye position. These are all types of movement. Physical activity is a smaller category, a circle labeled physical activity that sits inside the circle labeled movement. And physical activity is when you're using your body in a way, changing the shape of your body in a way that elicits an increase in caloric expenditure. So, it's really talking about only movements that involve the musculoskeletal system, done to a point at which you are increasing your exertion a little bit. You're increasing your metabolism a little bit. You're expending more calories. And then, exercise is an even smaller circle inside the physical activity, inside the movement circle.

So, exercise is one type of physical activity and also one type of movement. But when you're doing exercise, because you're in the physical activity bubble, still moving your musculoskeletal system in a way that utilizes calories, but it's usually rhythmic. You've usually pre-selected a mode, meaning you're doing one repetitive motion again and again and again, for a fixed period of time, and usually for a fixed intention. You are intending to improve your physical well-being, and that is what is happening during that period of time, usually in isolation. So, if you take a spin class for an hour or you are like, "I need to go on a five-mile bike ride to get my heart rate up," or to get outside. There's a health reason that you're doing it, you've pre-selected what you're going to do.

That's what makes it exercise. But a lot of people use their bikes and ride their bikes 5 miles or 10 miles to go to work. They're not necessarily doing it for their individual health, so that's what moves it into the realm of physical activity. So, it doesn't necessarily mean that when you're comparing exercise and physical activity and movement that the actual physical experience is different, but it has a lot to do with the intentions. And then also, I think, for parents, what else is happening during that period of time. So, if you're doing exercise, you're almost always doing it alone, you're focusing on that. You have to carve time away from everything else in your life to be able to exercise.

With physical activity, maybe you're doing yard work, maybe you are walking to the grocery store, but you're meeting another purpose, you're getting to work, you're doing a chore, you're getting your food. You might have your kids with you, you're parenting, essentially, at that time, but we don't tend to see those things when people are exercising. Again, that tends to be pulled out of everything else. So, I think it's important to differentiate between the two, is because exercise and the way that we talk about it and think about it is a relatively new phenomenon that isn't really...it's not working well, in that the concept isn't translating to many people.

There are a lot of people who would like to move more. They want to increase their daily movement, they want to reap the health benefits, they want to increase their physical activity, but they don't have leisure time, they don't have time when they're not parenting, not working, not taking care of the many other to-do lists. And so, for me, like, working on a public health level, it's really critical that people understand that exercise is not the only means to getting the physical activity we and children need. And to keep focusing only on that message, I think, is part of why we are seeing a decline in human activity, despite the amount of research and billions of dollars into, like, figuring out how it works. So, I'm just trying to explain the phenomenon as a whole, so other people can see themselves in a movement-rich life, without it necessarily having to be exercise.

Katie: I love that term, "movement-rich life." And I think you're right. Like, often, these circles get overlapped. And for many people, exercise is what they think of as movement, and it's maybe, like, a box they check a few times a week and they feel like they got movement. But the statistics are saying we're moving much less as a general population than we ever have. And I know from looking at the research data, it's like, I think they call it non-exercise activity thermogenesis. That's an important predictor of overall health. And there's a lot of links there. And that is declining. So, even though people think that they're moving enough by going to the gym for an hour and exercising, like, you talk about this so much on your site, and in your work, is, we're moving less, and we're moving in a different way and more poorly than we have in the past. And I know there's gonna be connections here as well, but your new book, "Grow Wild," I love that title so much. Talk about what the impetus for this book was specifically.

Katy: Well, I had kids. You know, I think... I spent a lot of years working with adults, dealing with their movement-related issues in their 30s, and 40s, and 50s, and 60s, and, you know, they're trying to figure out, like, why do I have osteoporosis here? Why are these discs degenerated? Like, where do these problems come from? Like, what's going on? And, you know, to explain how much our childhood impacts our later years

physically was something that I was finding myself doing again and again, and just people saying, "Man, I wish I knew this when I was younger." And I thought, "Okay. Well, I think that at this point, where we are, in sort of collective societal sedentarism, to recognize how we are training children to be sedentary so early on, without really... We're not naming it that. We have lots of other names for, like, the reasons we need to be still, but whatever those reasons are, the fact remains is, like, we've just slowly seen a decrease in movement over time.

So, I spent a lot of time studying movement, and then after, like, 20 years, I was like, it's time for me to start studying sedentarism. How is it possible? What makes sedentarism? If we all had such... If humans are so dependent on movement and, sort of, the way humans work in the world is so dependent on movement, how can we function with so little movement? Where did the movement go? That's what this book was really addressing. It's, we're taking it out of children's lives, and then it's so normal to us to not move so we can stop that. Once we're aware of just, I think, culturally, how we really view movement as something easily dispensable, but yet at the same time, know its importance and struggle to fit it in. So, we're, like, fighting ourselves on both ends the entire time. So, I wrote that to address, really, that problem. Yeah.

Katie: And so, let's delve deeper there, because I agree with you. I hadn't thought of it in those terms, but I can think of examples of many of the things that we do that are essentially training children to be sedentary. But I also feel like kids come out pretty good movers. Like, toddlers are extremely active movers, and they have amazing range of motion. And every time I've seen one of my toddler squat, I'm like, "Wow, that's the goal right there, like, that range of movement." So, what are some of these ways that we are inadvertently, or, I guess, more specifically on purpose, without realizing it, training kids to be sedentary?

Katy: Well, I think it's... So, I organized the book by containers because I wanted to address that question by container. So, the containers that we are in... Culture is the biggest container, I would say second to nature, and then you are in clothing all day long. You are in your home. You're in an educational or school environment. You're within an activity container. You're within a celebration container. So, each one of those containers has a set of questions to ask yourself about, like, what are the rules? Like, bias check-in. Like, why do we dress the way we do? Like, when kids get into their clothing every day, that's a container for movement. So, we might inadvertently, without even realizing it, be selecting an outfit or garb, if you will, that reduces the ability for kids to express their full squat, right? You got super tight pants on. It's not that your knees and hips can't hinge, but your pants, around your knees and hips, don't let that hinge happen. Maybe you're wearing a skirt or something, and a kid is not allowed to invert, for modesty purposes. And so what we, I think, fail to see a lot of times is these mundane choices that we make, quite often directly translate to limited ranges of motion, so I call them casts. They're either fixtures, stiff shoes around a foot that allows, or prevents a foot from spreading out under the full weight, or a jacket that's so tight that the arms can't go overhead, so even if they wanted to do the monkey bars, they couldn't, because the cut of the fabric doesn't allow them to do that.

And then there are rules within a home. No jumping, no running, too noisy. Or maybe it's not a rule, but maybe there's so much stuff in your home that should a kid decide to move, do a spontaneous handstand or cartwheel, they're hitting their head against stuff because of the shelf for knickknacks, or things that are

important to us, but maybe, without realizing it, reduce the literal space that children can move. So, yes. They do come born extremely gifted in the fact that, you know, there's a variety of abilities, but commonly speaking, gifted in lots of range of motion, but more importantly, the curiosity and the desire, with their mind, to seek the world through physical exploration and master a task and keep layering on top and on top of it.

So, when we disrupt, when we add excessive furniture, when kids are sitting within, you know, buckets for a large portion of the time, that is safe for them in some ways, but also prevents them from moving in other ways, and when we start using these things excessively, you're just physically changing their environment, and thus end up reducing the impact that their hardware and software that they come with, that's meant to, I guess, sort of, like, really set in an amazing shape in those first, we could say the first three years or the first five years, you know, when they're very cartilaginous, very malleable, that's what that time is for. That time is to mold to the robust environment, so when we mold to a sedentary environment, then we get a body that is better suited for a sedentary environment going forward.

Katie: That makes sense. And starting to understand that, what are some ways we can set up these different environments to be more optimal for movement, especially the ones we have control over, like our home environments and our clothing choices?

Katy: Right. So, clothing and home are easy, because like you said, you do have a lot of autonomy there. So, I just give basic tests for shoes and clothing, you know, like when you put on an outfit, see if your arms go overhead, see if you can touch your toes, see if you can squat. Are you wearing slip-on shoes that a kid can't run in, can't climb in, can't engage in otherwise sprinting or dynamic play safely? And so maybe it says, "Oh, my kids are fine running and everything," but then you're like, well, you might be setting up injurious situation, if you have a shoe that doesn't fully attach to the foot, like, just to be mindful that we're making a lot of choices for kids without realizing it, that sets them up to be more or less robust movers.

So, just, like, learning how to read clothing for its dynamic ability. Becoming a better mover yourself helps, too, because if you are used to going out and walking around in the rain or a severe environment, or if there's a school campus that you can walk on, and you can look at what the gym or playground equipment is like, you know, like, "Wow, I had no idea that the soles of this shoe that I was buying have no traction. And so, therefore, when it's wet outside, they can't really climb or move around." So, just learning how the gear, the things that we put ourselves in, affects how we move can translate to a better moving experience for our kids. And then, home. You know, what are the rules? Like that's a worksheet in the book is to discuss, like, first, reflect with yourself. What are the either explicit or implicit rules that we have about movement in the home? Like, how often do I hear myself saying, "Just sit down. Just be quiet," or put on something for them to be still because I need a break? Just to recognize how I'm setting up the environment to meet different needs at different times, and then, to be like, is there a different way to meet these needs more dynamically? What is the actual need? How can we adjust it? So, that could be adjusting the movement rules of the home.

Sometimes it could be more physical, like just clearing space, getting rid of a piece of furniture. Are there any rooms in the house where children can tumble? Is there anything to hang on, you know, hanging being a very important category of movement for humans overall, but especially for children who are setting up, you know, their shoulder shape to last them for the rest of their life? Is there anything that they are allowed to hang on? Because if they're not, they're gonna hang on stuff that's not suited for it, right? They're hanging on the front of the stove, they're hanging on the... They're climbing up bookcases and things that aren't necessarily engineered for that.

So, to make sure that you do have a climbing space. There's a lot of don'ts with movement in kids. There's not a lot of dos, there's not a lot of "Here you can. We've adjusted the space." Yeah. Yeah. And then, minimizing seats. Like, how many chairs are in your house? Is there any place where your kid is encouraged to take that squat that they're so beautifully executing at two and three, so that they can continue to beautifully execute it at 16, and 30, and 45? Or do we keep putting something under their hips that stops it, so then that anatomy changes in which it can no longer tolerate that position? So, those are just a few of the adjustments that I recommend.

Katie: I love that. And I think your advice is so wise. The first step being do it yourself, because I've noticed this as a mom now, with ages ranging from five to teenagers, is you can tell them stuff all day long. When you do it, they pay much more attention, whether it be, even, like, we have a headstand stool in our living room. And me trying to learn how to do handstands and headstands encouraged them to do it much more than if I had just said, "Oh, you guys can do this now in the house."

And on the clothing side, I feel like this would be an... like sometimes in parenting, they're a tough battle. This is an easy one, because kids naturally prefer those kinds of clothing anyway, and I know my kids kind of are resistant to now jeans, or even most shoes in general. We're very much barefoot all the time. But they just prefer, they naturally have this inclination. And so, like you're saying, it's not training those things out of them. And I think those things are intuitive. It gets a little bit more maybe challenging for people when you start talking about not having regular chairs. Do you run into resistance with people on that idea of, like, what if you sat on the floor? What if you squatted? Or what if you had pillows instead? Or how do you handle that in your house?

Katy: I mean, my house has been featured in a lot of different media for its unique shape. So, we had indoor monkey bars, for example, that my husband built when the kids were young, and, like, brachiation ladders are things that are used in different scenarios. We're just really like, "You can do that at school on the playground. It's not really something for this particular space." Well, you know, it can get cold and snowing where we are, and the kids' movement doesn't necessarily...their need for movement doesn't change based on the weather, so we have those put in. And I would say that...it's hard to tell. Because when I'm speaking to an audience who's curious about moving more, it's like, "Oh, yeah. I guess I could do that." And then the normal questions are like, well, what about people who can't sit on the floor? How would I entertain? You know, like, we have this mindset, like, "What is furniture for?" It's, "How could you be comfortable? I'm so uncomfortable on the floor." And the thing is, it's scalable. And it took me a lot of years to get to the point where we have ottomans

that you can sit on. It's like just removing the back, just scooting forward to the front of your chair that's already there, moves you more. The idea is to not have everyone get rid of their furniture. The idea is to have everyone recognize that we are building environments that weaken our bodies systematically, and we're introducing our children to these environments at a very young age.

And the environment that we are in now, as ubiquitous as it feels, or as ongoing as it feels, is really sort of new. You know, the idea that we sit in front of computers for six or seven hours a day, that feels totally normal to us. But the fact that we've only been doing this for 20 years, not 60 years, it's a 20-year novel environment. And when you're born into it, it becomes even more normal for you as a kid. Like, I didn't have a computer when I was a kid, my mom didn't have a computer as a kid, but my kids will have a mom that had a computer. So, from their point on, it seems like how the world is. And so, it's just getting stiller and stiller and stiller.

So, the point with the furniture is just to say, you could probably reduce some things, furniture-wise, seats-wise, that serves you in the long run. Like, if you've been wanting to become more flexible, move more through the day, if your back hurts, your knees hurt, your hips hurt, you moving your furniture out the way to sit on an ottoman, or to sit, it doesn't have to be on the floor, it can be on a stack of cushions, is exactly what you would be given if you were going to go to physical therapy for your hip. They're going to have you do these stretches, and then you're going to be like, "I don't have time to do stretches. I gotta get my kids to this, and I gotta make all these things."

But the point is, those stretches can be done just in lieu of sitting down, swapping out one chair for the other. And when you do that, it's not only good for you, it's also good for the kids around you that see you doing that because they're like, oh, then I can continue to do my preference, which is to sit in all sorts of ways and to sort of fidget and move around. Like, we're not teaching them that there's one body position that they should strive for and be using 80% of the day, and then be frustrated on why our kids don't want to move more, and the fact that we're not getting enough exercise. So, it's a small adjustment. And then it has payoff in the fact that it's like, "Oh, I've found that my house is easier..." My house is not easy to clean, just like everyone else's. But the less stuff that I have, which I've moved or reduced for more movement, it's like less stuff for me to manage overall, less filling up my life. So, it's a different form of minimalism. It's a form of minimalism that comes about from trying to maximize physical activity. So, it's really maximalism of our physical bodies, that requires that we sort of get rid of, or reduce the amount of how much physical stuff is pulling us to this one position that we don't want to be in.

Katie: And I've followed your work for a lot of years. So, my house has gradually transitioned to this as well. And some of the listeners may have heard me talk about, but some of the ways we've implemented this are the kids all have yoga swings, or rings, or both in their rooms, so they have many opportunities to hang and be upside down. We have a tumbling mat down our hallway, so that they never walk down the hallway. It's always cartwheels or flips or movement. We haven't fully gotten rid of the kitchen table yet, but all the other sitting surfaces in our home are backless, or they just sit on the floor and play chess or whatever it may be. And, like, hang boards in the kitchen, just putting those things in their way, they use them so, so, so much. And it's been really cool to see their movement development and their muscle development and how early

and how amazing that happens when you just put those things in their way. You don't even have to consciously encourage them to do anything. They just naturally tend towards those things where they have the opportunity, like you said. And it makes me wonder, do kids have a higher need for movement than adults do? Or do we just kind of forget our innate need for movement as we get older because of our environment?

Katy: That's a good question. I think that human adults have a much greater need for movement than we are currently feeding ourselves, so to speak. But I do think that kids' need for movement is probably greater, but also, I would say their need for lots of different types of movement is greater, because they're using it to build their anatomy, right? They need to jump off something 30 times, because they're setting their bone density, they're setting the elasticness of their parts, like, they're exposing their body to these forces so that their body can respond accordingly by setting them up to be able to do that more. I wonder if as grownups, we tend to specialize into fewer movements, but we have sort of a general skill in all of these bigger movements, like the idea, like, my idea is that, you know, you still work on squatting, you still work on being able to hang, you still should be able to land a jump, you still should be able to walk and have your joints be able to take some bounds.

It doesn't mean that you have to go running for 10 miles. But it's the idea that your body is really suited to take shorter bouts of lots of different types of movement. But I think kids are, they tend to be more fearless and more exploratory through movement. They're learning through movement. Once you've gone through that phase as a juvenile, then you're a little bit more set, and you're maintaining. You know, you're working on maintaining your structure to the rest of your life. You're not necessarily building it. So, I guess the easiest answer is, I don't know. But I would speculate that it's greater in childhood, for those reasons of setting up an adult body that can thrive longer.

Katie: And a lot of the listeners of this podcast are pretty well versed in the importance of nutritious food, and that's what we talk a lot about here. I'm curious, the compare and contrast of that. I don't think people think of movement as a vital nutrient to the body in the same way, but you make such a strong case for it that it very much is and that, in a lot of ways, this is as important of a pie piece in our general health as food is, but it's easier, I think, sometimes, to focus on the food side, or that's more top of mind for a lot of people. So, can you kind of compare and contrast and make a case for, like, is one or the other more important? Or do they kind of share almost an equal importance in our lives as far as food versus movement?

Katy: So, I do go into that into the book a little bit to explain how I think that movement qualifies as a nutrient in the same way. So, nutrients are compounds... They're inputs is an easier way to say it. They're inputs into the body that, in the absence of that input, there are predictable symptoms and diseases that arise. So, nutrients are always identified in hindsight after the loss has been for a long period of time, and someone has come in and said, "Hey, you know, we added this food or compound back into this particular group, and these symptoms went away," And it's like, "Oh, this is an essential input. We will call it a nutrient. Or, we'll call it a vitamin," really. But I guess nutrients, too, is the broader category. And so, sunlight, I use sunlight, because we need another non-food example. We recognize sun as an input that then goes on to affect cellular behavior. So, when you put a chemical compound in your mouth from food, it affects the way your cells behave. There's

something about that that goes in, that then affects cellular behavior. Sunlight as well. It's an input that then creates cellular behavior. And I think we really call the cellular behavior that is affected by an input, like, that's really what the nutrient is doing.

So, for movement, are you putting movement in your body, right? That is the point in which it's not as easy to see. So, the way movement works is when you move your whole body, those movements are created by smaller movements of parts. But really, when you... And this is what I covered in "Move Your DNA," this is me explaining this phenomenon, is body movement winds up being cellular movement. And when you move the cells of your body, the cytoskeleton, so if we have a skeleton inside our whole body, you have a skeleton inside each cell. When you move the cell, this cytoskeleton is changed in shape. And the change in shape informs the nucleus of that cell, which then affects the cellular behavior. So, it used to be this idea of, like, the nucleus is controlling everything that the cell is doing. It's like, well, in a more dynamic model, the shape of the cell is informing the nucleus, and then can alter behavior.

So, when you move, it's like you are putting something into your body, and it affects how your cells move. So, in that same way, movement is converted into biochemistry, just like food, and just like sunlight are. It's an external input that then becomes biochemistry that informs the cells on how to behave. So, it is like a nutrient in that way. But just like food, what we've learned from food is there's many nutrients, right? There's calories, which means it doesn't matter what you eat, as long as you eat enough calories, you're going to be meeting that nutrient. But then we have found that you can't only eat just calories. That can certainly stave off many things, but through understanding, like, holding a baseline of calories, but playing around with the chemical compounds, the ratio of macronutrients, the ratio of micronutrients, which we can call them now, but remember, those weren't known before. Like, it wasn't clear what was inside of what we were eating until the invention of chemistry, really, and to go, "Oh, okay. So, you need to not just have calories. You need a balance of fat, protein, and carbohydrates, okay, because if you only have carbohydrates and fat, you're still gonna have these predictable diseases," that nutrition is about a ratio of these things that we call macronutrients.

So, you can even have that dialed in, and then there's still these, like, diseases that pop up. It's like, "Oh, okay. Well, there's more to what we need in food." And then, from that, we were able to find minerals and vitamins, and, of your micronutrients. So, movement, right now, we are at the stage where we're like, let's just move more. So, that would be like, we are definitely in what I would call a movement drought, where we're not getting enough movement calories across the board. But, there are many people who get plenty of movement calories. They would be laborers, athletes, and they're still seeing some issues. It's like, "Okay. Well, we need to have then a breakdown. We need to have the macronutrients of movement. You have to make sure that you're...you know, that it can't all be just strength training. You have to do some cardio, some strength training, some flexibility," right?

So, these are sort of our fitness macronutrient categories now. And maybe people have that understanding, maybe people don't, but then it gets even more nuanced. And so, when you go to physical therapy, they're not going to be like, "You need to move more," they're going to be like, "You're going to hold this bar at this angle, and you're going to pull it up, and you're going to restore just this thin strip of muscle, because we

know that when you don't have this thin strip of muscle working, then you're going to always be putting too much load on the ACL on your knee," or you're going to tear your medial meniscus, right? So, that's when we're starting to get drilled into the micronutrients of movement, the fact that your alignment or your form is moving certain cellular patches in your body.

So, we could be active, but we could be cellularly sedentary in certain areas. And so, that's why my work is called "movement nutrition," because what I'm trying to show is the whole entire movement nutrition framework. There is yes, you need to move more. We need to move enough volume. But there are also these, every part of our body needs to move more, and sometimes, certain parts of our body need to move less. So, just like, you can have too much vitamin D, you can have too much zinc, you know what I mean? Like, these are things that are nutrients, but they're only good for you in certain amounts. When you get too much, it's equally as harmful as not having enough. And the same goes for this balance of movement. So, that's what movement nutrition is.

To how it relates to food, humans, by biology, have always... Movement has been the precursor to food, right? Like, food would not exist if human movement didn't exist, to procure it, to produce it, to turn the nature stuffs that are harvested into something edible, are all dynamic processes that maintain their dynamic processes. Like, it still takes the same amount of movement, it's just that we might not be doing a lot of that work. That work might be done by machines or other people, so we can still focus on the eating part, but we've lost the movement part. So, they are at least equal, in terms of our physical experience. I would say that food tends to be more, I don't even know if this is true. I would say food tends to be more immediate.

I think that on the biggest level, calorie level, you could go sitting in a chair, probably longer than you could go not having a meal, meaning food might be more immediate in that way, but I don't even necessarily know if that's true, because if you're in a bed, if you're bedridden, if you've ever been hospitalized or bedridden for a long time, your body quickly disintegrates under pressure of being still. Someone needs to move you, or else you're going to see some degeneration. So, I would say that they're equal, and my bias is movement, but I would probably say that movement is going to be, have a slight edge over food, in terms of how it's affecting our body. Because even the act of digestion depends on you moving. Like, if you're trying to eat, for different digestion, keep in mind that you might have a sedentary digestive tract, a digestive tract that's sitting, you know, in a chair, or not moving, or not experiencing loads, and so your biochemistry is being affected by the biophysics that are creating that chemistry as well. So, I would say 51/49, movement.

Katie: Yeah. And I think that's an important connection and an important distinction. I love that you broke it down kind of by the broad categories to the comparison with micronutrients. And I think a lot of people often get stuck in thinking of movement, like we talked about already, as exercise, as to burn calories, and don't really get into the nuance of the different types. So, I'm sure there's a lot of personalization that comes into this as well, but what are some general categories we can think of in kind of that micronutrient analogy of movement, like different types of movements we should be doing or integrating into our lives?

Katy: Well, in "Move Your DNA," I use a, the bulk of humans have moved in this particular way, so we can assume that a lot of our anatomy is based on this movement environment, so it's going to be, I'm going to say walking, and by walking amount, I would mean, like, probably three to five miles a day minimum. Like, that would be sort of a food our bodies...that the anatomy of our body is accustomed and set up for digesting well, just to keep with the food analogy. Squatting. And then, it's fine... And when I say squatting, I don't only mean that one squat position that most people think. We could call it "floor sitting." It would be the idea that you could use many different positions to support your body on the floor. I have a poster that's called, like, "Think outside the chair." And it's just all the different ways that you can position your body when it's on the ground. And so, that, squatting is one of the 40 that are on there. And a squat could be one leg tucked underneath you. It could be a supported squat, meaning it could be on a short box or something that you don't have to hold your physical weight there. It's just the idea that your knees and hips and ankles are positioned in a way that's not how they are positioned when you're sitting in your office chair, or your couch, or your car, you know, that same position over and over again.

Being able to hang from your arms. So, a good strength-to-weight ratio of your upper body, not in a pushing your body up off the floor, but in the ability for your hands and wrists to support the weight of your body, which is a category of brachiation. Brachiation is really being able to swing through on one arm. But I would say, for adults, just to be able to hang on two arms, like, that would be a good goal to see if you are able to have. And then, yeah, walking then has subcategories of, like, balanced walking. Like, how complex can your walking be? Does it have to be on the street in your neighborhood all flat and level? Can you deal with uneven terrain, you know, that you might find when you're hiking? Like a sudden root that pops up? Or a curb height? Like, are you that tuned into where you're working, tripping on different things? Yeah. I think if you would just work on those categories, you would be meeting more micronutrient needs than if you were, say, pursuing all of your movement through one mode of exercise. Like, I'll just use a spin class. Like, if you're doing that regularly, that's great. You're meeting a lot of physical needs, but it's sort of like eating one really good food, but only that one really good food. So, in "Move Your DNA," like, kale was really big when I wrote that book.

My kale is great. But having kale be your sole dietary experience, you're going to be quite ill after a time, even though you're going to get a lot of nutrient from that. It's not to say that it's not nutritious itself. It's just that nutrition, dietary nutrition, like movement nutrition, is context-dependent. It's dependent on all of the pieces that you're eating together. So, to think about cross-training. Is cross-training is maybe the general term that people are used to thinking about, balancing their movement diet? It's not just taking three modes of exercise and cycling through them. There's something... It's like moving more throughout the day, in a variety of positions. It all doesn't have to be intense. Sitting on the floor is not an intense exercise. It wouldn't count as exercise, and it wouldn't count as physical activity, but it counts as movement, and it is something that more and more people are needing to go to therapy for.

So, when we see increases in a therapy for, like... Nutrients, as I said before, they were identified in hindsight, by people trying different therapies to see what went away. So, when we have a movement therapy of like, move your hip to this angle, repetitively, to get out of this situation, that would be how you would identify the micronutrient of, you know, abduction of the hip while flexed, which would also be another fancy word for

saying, sit on the floor with your knees dropped out to the side. So, it's medicine when we give it in that way, but it's just a natural food when you consider it's just a way of sitting on the ground.

Katie: Yeah. I feel like it's easier to understand when you put it in those terms. And to break that idea of just, like, a squat, just thinking of sitting on the floor or sitting on a pillow versus a couch, you're going to be much less inclined to sit in one position. Like, you can sit on a couch and not move, because it's supporting you entirely. But like, even now, I'm sitting on a backless stool, and often I'm standing when podcasting, but sitting here, I'm not sitting still, I'm moving my legs constantly, or, like, one leg up, or one leg crossed. And you're just naturally going to be inclined to do that, because it's not comfortable to sit completely still when you are in a dynamic position like that. So, little tips like that, I feel like probably make a huge difference. And you're right, we're seeing an increase in physical therapy for things that should be normal human movements that we're all doing daily. So, this is a good, like, warning light on our body mechanics that we need to pay attention to this, and it's a great teacher that way.

This episode is sponsored by Levels Continuous Glucose Monitors. I have been experimenting with this continuous glucose monitoring system for the past few months, and I've learned so much personalized data about my body's own response to different foods, even to workouts, to sauna, and to when I don't get enough sleep. I've been using Levels, and this has made a significant difference in the way I track my glucose data, and especially as it relates to diet and fitness. Levels is cool, because in addition to providing you with the continuous glucose monitor sensors, their app interprets your data, scores your individual meals, and allows you to run experiments across different inputs like diet, exercise, or even fasting protocols.

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For people who maybe are not integrating a lot of these movements, I would guess there's some potential mental resistance from adults, or certainly when we're saying, "Oh, okay. I see that my kids are not getting enough movement," in making that switch. So, any tips for maybe with kids, especially, who are resistant to moving more? Ways that we can encourage it without hitting those protests quite so much?

Katy: So, I think language has a lot to do with it. So, if you go... Imagine everyone's in the living room, involved in what they're doing, and you're like, "Hey, let's go for a walk. It'll be good for us." You know, or whatever pitch that we give our kids for why they should stop doing the thing that they're already sort of in and vibing on, and it's gonna be hard physically, right? Like, we're asking them to do something that's harder than what they're doing right now. To understand that, all humans, like, one of the reasons it's so hard to move more is because, paradoxically, we have this tremendous need for movement, and also, all the software that helps us conserve energy, meaning we're perfectly fine sitting around and not moving at all. It's a preferred state to our body, because normally the environment got us moving. You're starving, you gotta go get something, you gotta go save your kid, you gotta, like... Right? The environment made you move. We have created environments that do the opposite, that make us really comfortable not moving. So, you have to then muster the impetus to move, the reason to move. That's opposite to how humans work. And it's definitely opposite to how kids work who don't maybe understand yet the later payoffs to a healthy body. Like, you're asking them to know what you know about how they'll feel better later on as grownups, being more dynamic as kids. Like, it's too esoteric, I think, for a kid to grab.

So, in the book, I also talk about celebrations, because I think that... Kids are good at novelty. So, anything that's new or interesting to them, or has some sort of payoff, maybe like all humans, they're interested in doing it. So, you know, if your kid wants ice cream, it's like, "Great. We're gonna walk to the ice cream store. We're gonna go ride our bikes." Like, we gotta add some movement to go get the payoff of the thing that we want. My son loves... What is it? Capture the Flag. He always wants grownups to play. I never want to play. I'm tired. Like, I don't want to go play Capture the Flag. But I have realized that a Capture the Flag game is exactly what I would get in a great exercise class. Like, you know, if you're gonna go do CrossFit or something else, you know, if you're gonna do a HIIT workout, why don't you go play Capture the Flag with kids for 25 minutes, and just watch that impact? And so, we set up a weekly Capture the Flag game with just neighbors.

And so, it doesn't have to be something that you are trying to do... What do I want to say? Like, in the context of everyday life. So a big part of Grow Wild is a concept of "stack your life." So, stacking your life is this idea of, you might need to be changing the tasks that you're doing in your life, because the tasks that you are choosing to meet your needs... We all have needs, we all have similar needs, and we are using tasks to meet those needs. So, you have work-related tasks, and you have home-related tasks and educational-related tasks. You even have exercise tasks. So, if you're thinking about this, and like, "Okay, right. Well, then we need to take a walk," or, "We need to go do something for exercise," you're approaching it as finding a task to meet that need. "Stack your life" is, like, you might be able to find one task that meets multiple needs, so that you do not have to keep meeting every single need individually. So, group Capture the Flag games.

And then, family soup night, where we just go to a park, and we all take turns bringing a giant pot of soup for three or four families. And then everyone just grabs their bowl of soup and eats it, and then people are just playing games or on the playground or taking walks around the laps or hanging out otherwise, outside. That one shift in task gets us family time, nature time, movement time, dinner time. I don't have to clean the kitchen, we got time with friends. Kids always prefer being around with other kids. If you want your kids to move, think outside your own family. Invite other kids. It's like, let's go do this. Let's see if we can walk to this thing, or, you know, they want to go do something cool one time, to experience it. They don't necessarily want to take an evening walk every single night around the same block. Although you could create something like that, where, we do homework walks, where it's like, we're gonna do times tables. Like, you gotta, this month, they get their times tables, so every night, we're gonna do fives and sixes and sevens. Like, you're trying to layer movement into homework time, into the other times where you're normally being still.

And when you do it that way, I find that kids are much more up for changing the way that they're used to doing a regular task, dinner or homework, by adding movement, more so than they are taking their free time and adding movement to that. Because again, our motivations as adults, who are thinking in a health-centric model, just have a different point of view than children do, so that's a good way to overcome it. And then, just one thing to always remember is, transitions are hard.

And when you transition away from the thing that they were doing and enjoying, whether it was a video game or a book that they were into, or just zoning out or hanging out, and you want them to move and do something else, just know that whining will ensue. It's like a reflex. There's a resistance, because if they can put up that resistance, and you don't make them go, then they can continue to conserve energy. It's just a reflex. You can persevere through the whining to get to the other side. They will enjoy it. They will be glad they did it. You will be glad you did it. But the tax that you have to pay for that uphill work is the whine. And not the good kind, either. The one with the H.

Katie: Yeah. That's a good point to keep in mind. And as we get close to the end of the episode, a few kind of somewhat more rapid-fire questions that I would love your take on how you handle, because I'm guessing we're gonna get questions about this. The first being devices and screens. Because like you said, this is a new thing for this generation. They're certainly growing up with many more screens than you and I had. So, how do you handle that with your own kids?

Katy: We just don't really do them. So, we have our laptops for working. And when I had a young child, like, maybe three, my friend, who is a children's therapist, she's like, "Oh, there's this great," you know, "these are great apps. They let kids learn and play." So, I got one, and what I noticed with my son... And I don't know. Like, my son is just his own person. I'm not sure this was a him-centric thing, but he really just got really focused and sort of obsessed with wanting to play this game more and more. You know, "Can I play it now?" And I was like, "No, no." And so I'm, like, I'm saying "no" all the time. And then he finally said to me at three, he was like, "If I can't play it, I would rather it not be here." And I was just like, "Ah, of course."

Just like if I am trying to eat better and I keep having someone bring in cookies and ice cream into the house and setting them in front of me, like, I have to muster this willpower when I've worked so hard to create the environment that's supportive. And I realized that I was sort of undermining my very own message. And so, yes, I got rid of them. And we never looked back, because his statement was so pure and true for his own needs. It would be easier for me, if I can't have unfettered access, really to not have it at all. And I definitely, in my own personality, need that for certain things. Some people may be better with moderation. And so, that was one adjustment that we made.

As they got older, they wanted to be able to... I would say, you know, like, I'm on the computer. Like, my work has now become a computer-based thing. So, they see it, and just like the benefit of seeing me do handstands in the living room, me being on the computer is equally like a, "I need to be on the computer. This is what mom is doing." So, there's a lot of different things to what technology is. So, a computer screen is just its own device. And then there's the media. What's on it? Those are two separate things. So, I wanted a way... I really want them to be able to have to deal with boredom, and muster their own creativity. So, we really have very... We just don't do very much and never have done very much in the way of... We have no TVs or media. We watch movies and just bring them on here and there. And then, as they were older, they're 8 and 10 now. When they were a little bit younger, I think we used screens for breaks sometimes. And I wanted to be able to let them have some screen access, and also to have that break.

And so, one of the things that we did was, I showed them how to use the photo booth on it. And they could catch pictures of themselves jumping or doing flips. And so, we set it up so that it could still be them on a device, which is all they really wanted. They don't really think about what's on the other side, media-wise. And they spent two hours doing cartwheels and backflips and jumps, trying to catch themselves in the air. So, we are, again, used it as to stay on with alignment, with our overall mission as parents, to make things dynamic and to facilitate their creativity. And then cooking shows. They film themselves doing a lot of different cooking shows. Because I think that we are in a world where people, you know, if we watch videos on YouTube, they see that people create content and put it up. So, to let them dive into that feeling, but also while making themselves a meal, feeding themselves a snack, learning the skill of cooking, I'm always trying to figure out how can I stack it. So, that's been our solution. And, of course, that changes. Like, as they get older, access changes. I'm not a particularly dogmatic person, but we just see, like, what's working, what's not working as we get older, we discuss it, and then we figure out how to go forward. So, it's very intentional and ever-changing.

Katie: That's such cool advice, and having a more dynamic relationship when screens are used versus just staring at them, using them to stack tasks, like you were already talking about. What about shoes? I'm guessing we're gonna get specific questions related to shoes. My default is my kids, because of our environment in homeschooling, very rarely wear shoes. The point that we have traveled a couple times, and I had to go get them shoes at the last minute because they'd outgrown their shoes, because they hadn't worn them in months. But how do you handle shoes with your kids?

Katy: We do minimal shoes. So, minimal footwear is just that footwear that's flexible, it's flat. It can have a full upper, meaning it can be something that you fully slide your foot into, but it could also be a sandal, not a flip flop, but something that's fully connected. When you pick your foot up, it comes with you. And then, yeah. And then lots of barefoot time. I mean, they went to a nature school early on, and everyone was really on board in our community, like, we have a lot of barefoot kids here. We're in the Pacific Northwest, though, so the climate definitely varies. But I would say they're all very comfortable dealing physically with not always being warm and dry. Like, they have that skill. So, footwear, one of the things, like, pool shoes, like that pool shoe, that's a shoe that I think a lot of the kids in this community wear right up until it gets really rainy or sippy. So, that's our go-to. Lots of barefoot time, and then when we are shod, which is quite a bit of the time, is going to be in something minimal. Something that doesn't impact their gait or development.

Katie: And then, what about sleep environment? I know we don't think of movement during sleep quite as much, but I know with kids, sleep is such a, well for all of us, an important piece. Any tips for optimizing the sleep environment, or anything you guys do that might be outside of the usual?

Katy: So, there's a formula you had mentioned, the thermodynamic formula. There's another formula that's used in public health and movement, which is called "SLOTH," and it says that all humans are going to spend their time in sleep, leisure, occupation, transportation, or health. And that the goal is to maximize your movements in each of these categories. So, the question is, well, how do I increase my movement while I'm sleeping? So, again, we are talking about how the shape of your home environment, your furniture, is affecting the positions that your body is getting in. And so, what do we sleep on? We sleep on something high or raised, right, so that we don't have to lower all the way down. Keeping in mind, this is an outlier. Like, a lot of the world sleeps just low on the ground. So, you've got all that hip, knee, ankle squatting action, of getting down and up to the floor. And then also, we sleep on something really cushioned. So, when you sleep on something cushioned, it means that you don't have to change your position much, because the cushion does that motion for you. That's what squishy chairs do. They absorb your shape, so that you don't have to change it.

One of the reasons camping is so uncomfortable, or getting down on the floor is so uncomfortable, is when you meet a firm environment, you have to move. You have to change your shape. And so, for those reasons, we sleep on the floor. And it's a floor bed. It's a luxurious floor bed. You know, we have sheepskins, and we have sheets, and we have comforters, so it's not sort of an acetic or sparse view, if that's what you're imagining. It's very plush. It's just that it's much firmer and lower. And so, as we sleep, you know, we have to adjust our necks and our shoulders, just like I would if I was stretching those parts. I just do it for longer periods of time at night. And we started in floor beds when I was still nursing, because it was easier when they're with me. Like, they're not going to fall off anything or roll off anything. And it just became really comfortable. So, when you spend most of your time like that, when you go back into something soft, just like if you spend most of your time in a flat shoe and you put on a high heel, it's only then do you feel how your back has to really adjust. If your back was always adjusted, you don't have the contrast.

And so, the floor beds are definitely...has been our family go-to. And as they've moved off into their own beds, they are on, like, just thin futons. So, you don't have to be directly on the floor, but just low, like, everything is just low, and then without pillows. So, imagine, like, a pillow, it's such an interesting thing that, you know, if you stood against a wall and put a pillow behind your head, you'd find that your head is now projected in front of your body, which is a similar experience that happens when you're on a computer or looking down at a phone, right? You're sort of jutting your head forward. And that's something that people have to deal with quite a bit to adjust. And so, we didn't issue our kids pillows when they were... No one issues pillows to babies, but when they get their first bed, and we're like, "Here's your first set, and your pillow," and they just start sort of thinking that this is the regular sleep is with these cushions and this headboard stuff. So, we just forego that. And have gone for something a little bit more dynamic, body dynamic, less cushioned.

Katie: Yeah. I know you've talked about this a little bit. I'll put some resources from your website, because you have so many. Last two questions. The first being, if there is a book or a number of books that have had a profound impact on your life, and if so, what they are and why?

Katy: Oh. Well, I already told you my favorite science fiction book. And I would say that one of the reasons I'm such an advocate for that book is it was just transformative. But a nonfiction book of late that really, I think, changed my point of view on something, which is hard to do, it's hard to actually change your points of view, was a book called "The Wizard and the Prophet," or "Wizard and Prophet," I think, by Charles Mann. That book, I mean, I don't even know how to say it. It's like that book is, was just, it was a revelation. And it was talking about the point in our recent history where humans started realizing that there was, like, a carrying capacity to the Earth. There was, like, resources, food was failing, crops were failing. And it's the first time that we started playing with growing food differently.

And the point that was so revolutionary to me about that book was, you had two different scientists at the same time who came up with opposing ideas to solve the exact same problem. And that's when I just really tuned in to, like, oh, there's just... and the book is this calling, like, there's two primary philosophies about humans and the world. Like, there either is sort of boundaries for humans, as far as biological boundaries, which would be the prophet's belief, or there aren't, meaning humans can always exceed any physical, biological boundaries, just given enough time and resources, we can wizard out of it. So, it's the prophets and the wizards. And they're both sort of a leap of faith in either direction. But it was the first time it was so explicitly clear to me, like, "Oh. There's just two different points of view, and we all are somewhere on that spectrum in between the two." So, I really enjoyed that book.

Katie: That's a new recommendation. I'm gonna add that to my list as well. And then, lastly, any parting advice for the listeners today? And where can they find you to learn more?

Katy: Parting advice would be, yeah, find one way that you can move more that you feel good about, and don't feel overwhelmed about everything else. You know, like, if you're gonna change your diet, like, very rarely do you change 100% of everything all at once. There's a lot to learn about. Slow changes are fine. Slow changes

over years are fine. I made all my changes to my life over a decade. That doesn't have to be negativity or stress associated with it. Just pick something and start. And then, you can find me in Nutritious Movement, pretty much everything. That's the website. That's Facebook, and that's Instagram, and I'll be there.

Katie: Awesome. Well, thank you so much for your time. It's always such a pleasure to chat with you. I always learn a lot. I know a lot of people listening did as well. I appreciate your work. Thanks for being here.

Katy: Thank you, Katie, for having me.

Katie: And thanks as always to you guys for listening and sharing your most valuable resources, your time, energy, and attention with us today. We're both so grateful that you did, and I hope that you will join me again on the next episode of "The Wellness Mama Podcast."

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