

A sunburst graphic with numerous thin, light gray lines radiating from a central point behind the text.

Healthy Moms Podcast

BY **Wellness Mama**[®]
simple answers for healthier families

Episode 130: Biohacking for Moms & Reversing
Aging with Bulletproof's Dave Asprey

Child: Welcome to my Mommy's podcast.

This episode is brought to you by My Green Mattress. If you've been reading Wellness Mama, you know that I have used and recommended natural and organic mattresses for years. And I've tried a lot of them. We spend a third to a half of our time in our beds, especially children. So this is one great place to optimize and reduce exposure to harmful chemicals. We've tried, like I said, several different mattresses over the years and I love all the ones that we've tried. They're all natural options. But I've been getting a lot of requests for a more budget friendly option that is good for kids. Which is why when our littlest needed a bigger mattress, we ordered one from My Green Mattress. They are GOT and GOLS certified, they are GREENGUARD certified and they're completely natural. They're also much less expensive than a lot of mattresses. So you can check them out and find out more at wellnessmama.com/go/green-mattress.

This podcast is brought to you by myobuddy. This thing is one of my daily go-to's for relaxation because it combines the benefits of infrared heat, percussive massage and vibrational therapy for what I can only describe as a mixture of deep tissue massage and myofascial release all in one device. It has really reduced my muscle tension and my need for massage and many people with conditions like MS, chronic fatigue, etc are using this for muscle relief. Also, many athletes use it for faster recovery. I personally find the biggest benefit for relaxation and for fascia work, but you can try it out at wellnessmama.com/go/myobuddy and make sure to check the show notes for a special discount.

Katie: Hello, and welcome to The Healthy Moms Podcast. I'm Katie from wellnessmama.com, and I am here today with someone I cannot wait to chat with, Dave Asprey is the founder and CEO of Bulletproof. He's the creator of Bulletproof coffee which you've probably tried. He's host of the award-winning podcast Bulletproof Radio, and he's the New York Times bestselling author of "Headstrong". He's also a dad of two, and he's taken his background in computer technology and applied it to the body, to help thousands of people perform at a higher level.

And he's here today, we're gonna talk about bio hacks you can do at home, how to improve your mitochondria, and how we can give our kids the best foundation for lifelong health. So welcome, Dave. Thanks so much for being here.

Dave: Katie, it's a pleasure.

Katie: Awesome I would love to hear a little bit of your story because I've heard it personally. But I'd love for everyone else to hear it as well because I've known you for a few years and in those few years, I literally...I think you're aging backwards you seem to get younger. But I know that hasn't always been the case, so can you kinda take us through your journey and what life was like before you became the Bulletproof guy?

Dave: Oh, sure. I used to weigh 300 pounds, and I've lost 100 pounds of fat and since then put on a little bit of muscle, but losing that much weight was a huge thing for me. Problem is this all started because I was old when I was young. I was diagnosed with arthritis when I was 14. I was obese as a teenager and by the time I got into my mid-20s, I had tried working out six days a week, an hour and a half a day eating a low fat, low-calorie diet and I couldn't lose the weight.

And I just had this voice in my head that, Oh, maybe it's because I'm not trying hard enough. Maybe I need to

eat even less or work out seven days a week or whatever it was." And one day, I just got to this conclusion that maybe what I'm doing just doesn't work, and I sort of felt betrayed by the medical profession. And I went to the doctor and said, I'm getting brain fog. I can't pay attention at work, my career is taking off, but I'm really worried. And he basically looked at me and said, "Maybe you should try and lose some weight." I'm like, "How?" He said, "Eat healthy." What does that mean?

And he had nothing to offer me. And I said, "Well, vitamin C makes me feel better." And he said, "Stop, it could kill you." And I said what about Linus Pauling? Linus Pauling is something I would expect a doctor to know about. This is a guy who won two Nobel Prizes who took 90 grams of vitamin C a day. And the doctor looked me and said, "Linus who?" And I said, "You're fired." And I walked out the door, and I spent \$300,000, in the next five years hacking my own biology. And just deciding I'm going to spend four hours a night until I literally fall asleep in my computer learning how the body works.

Because if I can hack the Internet, I can hack this. And eventually, I got to the point where I was getting younger and my brain works better now in my mid-40s than it did in my mid-20s. And I started writing saying, well five people knew what I know now. If five people could pick that up in their 20s, it would so radically change their life and my blog will be worth it. And it turns out I reach 10 million people a month, and well now my blog became "Bulletproof," and a line of products that things I couldn't buy, things I wanted to use.

But it all came from this idea of having a really old person's brain with what would be considered early onset Alzheimer's or cognitive dementia or just brain dysfunction, and biological dysfunction, and being unwilling to put up with it anymore.

Katie: That's incredible and I'm curious, so you said you spent \$300,000 and many years on this process. I'd love to hear a couple of the things that you tried that worked really well, and a few that maybe were complete fails.

Dave: Sure. At this point, the number is substantially north of a million. This was going back to the beginning of the blog. What I did is I just realized because I'd had so much cognitive dysfunction, just so much pain and waking up feeling like I hadn't slept, and my back always hurt. My skin was always puffy, and I just I didn't feel right. And I realized the most important thing I could do was invest in that. So I would always take probably 20% of whatever I made and put it into my own biology, assuming that's the best investment I could make.

And what I did at the beginning is...okay, I'm 26, so this is going back 20 years or so, I went to an anti-aging doctor. And you don't see a lot of people in mid-20s going to an aging doctor. But this was the first guy to get a full hormone workup. And we figured out oh look, you have less testosterone than your mom. And a lot more estrogen and your thyroid isn't working, and you're actually at high risk for stroke and heart attack. They actually diagnosed that before I was 30.

And you're pre-diabetic even though you work out a lot and you eat what you think is a healthy diet, and all these things were sort of like, "What's going on?" So getting the data helped, and back then this was quite expensive. And I also would go out and I tried a lot of different supplements, some of which were really effective and some of which weren't. I learned about a light therapy 15 years ago and bought my own devices and now light therapy is finally coming of age.

And I started looking at okay, what's going on inside my head? I went to Tibet to learn meditation from the

masters, that was where I first tried yak butter tea. Which was the genesis for the idea of Bulletproof coffee, which I came back and did a lot of tweaking on that original idea. And through the course of exploring what was going on in my head, what's going on in my biology and trying things like ozone therapy which was profoundly effective, and learning about mitochondrial function and how to turn that back on.

It was literally thousands of little things, and what I found that was most important was stop doing the things that make you weak, and then do the things that make you strong. There are so many of us right now who walk around telling ourselves that we're doing something that makes us stronger and maybe it does. But quite often at the same time, we're doing something that also makes us weak at the same time. So we get random results or it's uncomfortable or we don't do it. So it's just less work to quit harming yourself than it is to make yourself better.

Katie: Yeah. That makes so much sense, and you talk about mitochondria a lot. I just read "Headstrong" recently and you talk a lot in "Headstrong" about mitochondria. But to kinda start at the beginning, for anyone who's not familiar with them any more than freshman biology, can you kinda go give us a rundown of what they do in the body why they're so important?

Dave: Sure in seventh grade maybe you might hear this thing, that mitochondria are the power plants of your cells, and there's a few of these things floating around inside each cell. And they used to be ancient bacteria. Well, the story we tell ourselves is that 2 billion years ago, we harnessed these organisms so that we could have energy from food and air. But the real story is that 2 billion years ago there was a cell floating around in the ocean some kind of a creature, probably a parasite they're not really sure, and that's our cells today.

And then these ancient little bacteria found the cell and they're like, "Hey, that looks like a great Petri dish, let's move in and take over." And they did. And they've been running things ever since. So the mitochondria are inside almost all the cells in your body except for your red blood cells. You have up to 15,000 of them in your neurons, in your brain, in your eyes, and in your heart. And women interestingly have 100,000 mitochondria per cell in parts of their ovaries.

And what mitochondria do is not just make energy for you, they sense the environment around you and change what your cells are allowed to do. And what they will do even when genes get expressed based on real-time changes in your environment. What they're doing is they're working to keep their Petri dish alive, which is you, and they run very basic bacterial processes. And the three things that mitochondria care about are the same three things that a single cell bacteria floating around in a lake would care about.

Number one, run away from, kill or hide from scary things. Number two eat everything, number three have sex with everything else. And this is a great recipe for keeping a species of bacteria or a species of mammals alive forever. Make sure you don't starve, make sure nothing kills you, and make sure you reproduce the species. And I'll just tell you, Katie, everything I've ever done that I'm ashamed of was a mitochondrial behavior, not something I necessarily chose to do.

Because they are still in there. There's a quadrillion of them more of them than there are cells in your body, more of them than there are bacteria in your gut. And they are making micro-decisions every second. And they decide things like, will you get Alzheimer's, will you get cancer, are you going to have a food craving right now, are you going to make hormones tonight, will you get deep sleep tonight, will you form new neurons, what will your skin look like. And they do this based on their interpretation of the environment around you

and inside of you.

Katie: Yeah, that makes perfect sense too and I love that because in the book you talk about that a lot, how like your mitochondria controls so much. And you mentioned like for instance, for someone trying to lose weight or just eat healthier that giving into cravings is not a moral failing. But a lot of people I think, feel like it is. So can you explain that a little deeper, of like how this affects our lives like that on a daily basis and what we can do about it?

Dave: It's funny that you asked that because it's why I call the book "Headstrong" because part of the word headstrong is that it's about being a little bit stubborn, but it's also about making your head strong. So will power itself is your ability to make decisions about what to do. The problem is that making decisions takes energy and energy comes from mitochondria. So if something lowers their ability to make energy, or if you have low blood sugar, let's say, you will have less willpower by definition. Because willpower takes the electricity that's made by these cells and you have less electricity.

So right when you're gonna call in your willpower to deny a craving, you don't have enough charge in your battery to use the willpower. So then, someone sets a cookie in front of you, and I remember this so well when I weighed 300 pounds in the afternoon meetings. And I'd say, "I'm not gonna eat cookies because they're gonna make me fat even though I'm already fat." And the little voice in my head would say, "Eat the cookie." And then my willpower would kick in and say, "No." And then the voice would come back stronger and say, "Eat the cookie." And I'd say, "No."

And then we'd go back and forth like you do with a two-year-old. And then a little while later I'm like, "Okay, I'll just eat half the cookie." And then I would feel like such a failure because I wasn't strong enough. But what was going on is that the MSG and sugar that I had in my lunch caused a blood sugar crash. So the part of me that was screaming for the cookie was trying to keep my body from starving to death, and it was giving me these signals that got progressively stronger. And at the same time, it was taking away my energy to say no. So no wonder I gave in to the cravings.

It's a normal thing to do, but the cravings were not coming from me, they were coming from ancient bacteria that are running things. And when you realize that there's a separate consciousness inside of you that wants to do these three things and that you can control the environment, so it won't get in your way that's how you get on top of these cravings. When you eat enough of the right kinds of fat suddenly your cells don't feel like they're starving even if your blood sugar moves a little bit up or down, and then you don't get the craving.

So you don't have to use the energy to say no to the craving, and then you can congratulate yourself for being a good person and having more willpower, or you could just say, "Well, I hacked that problem so the voice in my head didn't tell me to eat the cookie." When I do what I do with the Bulletproof diet and especially with a Bulletproof coffee that contains an oil called Brain octane, that raises energy in the blood that doesn't come from sugar. There is no voice in my head. You put the cookie in front of me and it's like actually, I'm full. I don't really want the cookie.

And for me, that was very liberating as an obese person that was pre-diabetic. It used to be such a huge part of my life, when I'm I gonna have lunch, what's gonna be next? And there was always a little process running in my brain saying, "You know, what's the next meal? What are you gonna eat? How are you gonna keep your energy up?" And it's completely different when you can just look at food and say, "If I don't eat this meal, I'm

gonna be fine. Nothing's going to happen. And if I eat this meal, I'm gonna choose to eat the stuff that makes me feel good and taste good."

But it isn't born out of a sense of desperation or like I'm going to die or I'm going to crash if I don't get it. I never had that when I was young, and it's pretty liberating to just get control of your biology that way.

Katie: Yeah, and I've heard it explained as well like for someone who's having those kinds of cravings, and has those kinds of biochemical issues, it's literally like if you try to tell yourself, "Just don't breathe for a while." Like eventually your body's response is going to make you do it because like you said, there's a biochemical thing happening in your body, and it's not just your willpower at that point. I think just that alone can be very liberating to people, just to understand that so they don't feel like a moral failure.

Dave: It is not a moral failing if you are fat, and I will tell you fat people, having been one for much of my life, are the best willpower athletes in existence. And it's because when your body is taking the energy you're supposed to use for thinking and feeling and moving and breathing, and instead of doing that it's putting it into excess fat storage, that means that you're chronically deprived of energy that should be going into activity. And you have less free willpower. At the same time, you are using that willpower to tell yourself not to eat and to do everything else that you're supposed to do in your life.

Like have normal emotional responses, and not yell at people you care about all that kind of stuff. And it was just really liberating for me to understand oh, this is a separate consciousness trying to keep my body alive, and the fact that this happens isn't a bad thing. And even to this day, I do not experience cravings, unless I'm in a really toxic environment. And there are certain things in my case, one of the reasons I was fat and my mitochondria broke, is that I lived in a house that had toxic mold when I was a child, and again as a young man.

Toxic mold breaks your mitochondria and causes you to gain weight no matter what you eat. So I was dealing with less energy and more fat and blaming myself for it. But to this very day if I walk into a moldy building and I stay in there for a little while, I will get a sugar craving and what that is, is my body going we just lost our ability, my mitochondria saying, "We lost our ability to make energy the way we did before. Something got in the way. Could you please eat some sugar." And you know what I do is kind of amazing, I eat some sugar.

And I do that once and I have the right kinds of fat at the same time, and I take toxins bidding substances and mitochondria enhancers, and I'm back up and running again in a couple hours. If I didn't quote "give into that craving," I didn't listen to my body, I would actually crash harder than I normally do. It used to take me a month after I would be exposed to really toxic environment before I'd feel like my brain was back online. Now, it's a couple hours because I understand the biochemistry. There are hundreds of millions of people who walk around with brain fog much of the time or some of the time.

And oftentimes it's an environmental toxins, sometimes it's toxins formed in the gut, sometimes it's because they're eating a bunch of fried food, and MSG, or food chemicals that are poisoning their brain, or it's just aging mitochondria dysfunction. All of that is hackable and it's not even that hard when you understand the system and you have the tools at your disposal. I wrote my last couple books specifically to just show people this is what no one told me when I was 25 and struggling to focus in a meeting, no matter what I did. I could bite my lip.

I could squeeze my fingernails into my palm to try and stay awake, and stay focused and just apply every bit of willpower I had, and still not remember anything in the meeting. Because my biology wasn't working. When you realize your body doesn't listen to you very well, it listens to the world around you, and after it does that it listens to you to see if you have chronic anxiety which it can detect through the way your heartbeat changes. Well, okay change the environment around you and inside of you including the food that you eat, including the air that you're breathing, including the light that you're exposed to.

Making simple changes that way can radically improve the amount of willpower you have and the amount of energy you have. And the side effect of that is you might grow abs and you might need new pants, and that's not a bad thing.

Katie: Yeah, I love that you're bringing that voice to the conversation and taking that away from what for so long was just like calories or macronutrients or these things that people would get hung up on. And I'm curious, so you've done a lot of research on this and also trial on yourself, but what do you think are some of the biggest factors that are affecting mitochondrial function kind of across the board for all of us?

Dave: Right now 48% of people under age 40 have early onset mitochondrial dysfunction, and everyone over 40 has mitochondrial dysfunction called aging. And I would argue that's also early onset because we don't have to age the way we do. So some of this happens just because over time your mitochondria wear out and they don't replace themselves. So one of the things you can do to force them to replace themselves is you need to teach these quadrillion bacteria floating around, they work as a system but they're also a bunch of individual bacteria that are now linked into our cells.

You teach them you know what, if you can't make energy quickly you'll have to die. So you send them this rule that says only the strong survive. One of the ways you do that is high-intensity interval training. And here's the deal, I have two young kids, I have basically three full-time jobs. I'm New York Times bestselling author, I run an award-winning podcast, and a venture-backed food company, Bulletproof, right? So these are all things that take up more time than they should. So I don't wanna spend two hours a day exercising.

High-intensity interval training means that once a week, you sprint for 60 to 90 seconds rest for a minute, and then do it again. And I describe that in "Headstrong" there's a benefit to actually laying down between the sprints to cause your body to recover even faster, but it's that intense exhaustion. Same thing if I'm gonna lift something for weightlifting, I do that once a week and I do it usually with a computer. We have a whole lab in Santa Monica now, we just opened last week actually to the public, where you can exhaust your muscles as fast as possible.

The point here is you're talking about 15 minutes a week of exercise, but you send this really strong signal to the mitochondria that says, "If you can't produce all the energy I want right away, you're too weak. You can die, and form a new, fresh, young, healthy mitochondria capable of producing energy that will be demanded by the world we live in." The other thing that's in the book that's really helpful, is something that people listening will not like me for, for the first four days. And every morning at the end of your shower when the water is hitting your face and your chest turn it on full blast cold water.

You'll last about eight seconds and swear the first time, and that's your mitochondria telling you that you're going to die from the cold water. You know that's a lie but you're gonna get out of the water. The second day you'll probably go 20 seconds, the third day 40 seconds. And after the fourth or fifth day suddenly, you know

what this doesn't hurt at all. In fact, it feels really good. And what happened there is that thing that says, "You're going to die," was not you going to die. It was your mitochondria saying the weak ones of us are going to die.

But as long as you consistently do this you feel supercharged when you get out of the shower. Your skin looks better and you burn hundreds more calories throughout the day because of a brief cold exposure. You just told those mitochondria, "If you can't make enough heat to stay warm, get out of the way. There are other things you can do." And there's something called intermittent fasting which is a powerful technique but one that's a bit risky for women. And in this technique, you don't eat for 18 hours a day effectively with...you sleep. You don't eat when you're asleep usually.

And then, don't have breakfast. You can have coffee or tea, either black or there's a technique called Bulletproof intermittent fasting. We have only certain kinds of fat but no carbohydrates and no protein whatsoever, and then have a late lunch, which is around 2 or 3 p.m. And you eat a nice lunch and a nice dinner. And if you do that even a couple times a week, it just tells your mitochondria, "You better be willing and able to live for 18 hours without food." But if you do this every day, especially as a woman it tends to cause renal distress, it lowers sleep quality, and it can cause problems with the monthly cycle.

So this is something to do a couple times a week. These are things that you just say, "Hey, it's time to be strong." And when you do that at the cellular level it rolls up and all of a sudden you have more willpower. You have more energy. You have less cravings. Your brain works better, your hormones work better, your skin looks better. And on top of that, one of the most important tools out there is something called ketosis. I think you've talked about it with your listeners before. But basically, your body has the ability to burn sugar as a primary fuel source, and it has the ability to burn fat as a primary fuel source.

To go into this ketosis fat burning mode it takes about four days of eating low protein and very low carbohydrates and relatively high amounts of fat. And this is a good thing to go into sometimes. However, most of us with jobs and kids and busy lives don't necessarily do this very often. And I know because I've gone to the American Academy of Anti-Aging Medicine. I'm presenting to a room full of 3000 anti-aging doctors, and I say, "Raise your hand, how many of you have been in ketosis?" Every one of those doctors in the room raises their hand.

They've at least tried to doing this low carb thing, and they know that it's good for them. And then I said, "All right, how many of you are in ketosis right now?" And you see like 20 hands go up. So we all know it's good but no one does it. The hack for that is an ingredient in Bulletproof Coffee, it's something you can get at Whole Foods, it's called Brain Octane Oil. This is an oil that comes from coconut oil, but it's about 5% of what's found in coconut oil. So you can't get enough of it from just eating coconut oil.

And it causes your body to make ketones directly that will go into your blood as if you've been fasting for four days even though you didn't. So what I do...I do this for my kids, my wife who's a physician, and I do this every day. We pour a little bit of Brain Octane into whatever we're eating. And when I have Bulletproof coffee for breakfast which is my normal breakfast, it's in the coffee. But I'll pour it on my sushi. I'll pour it in my vegetables. I'll use in my salad dressings. So my body always has some fat burning molecules called ketones, and there's some blood glucose present.

When you do this, any time your blood sugar goes down a little bit, you don't have the emergency response in

the body anymore, because the cells are like, "I've got this backup energy source from fat." And that radically changes your appetite levels and they're even studies that show mild ketosis. Which is what I'm describing will change two different hormones that can radically change your relationship with food. One of those hormones is called ghrelin. and levels just very mild levels of ketosis the kind you can achieve with brain octane or by fasting, or by a high-fat, low carb diet.

It changes ghrelin levels which makes you less hungry. And there's another hormone called CCK, and CCK is not brought to you by Calvin Klein even though it kind of sounds like it. It's the fullness hormone. And CCK levels go up when there are mild levels of ketosis in the blood. So you pour this stuff on your food or you go into the ketosis mode of the Bulletproof diet, some paleo diets. I know that your work, Katie, you talk about ketosis as well. Any of those ways to get into it will automatically mean you look at this food, and before you've heard the voice in your head saying, "Eat it or you'll die."

And all of a sudden, the voice in your head says, "Actually, I've got enough energy right now. Like you could eat it or not. It doesn't really matter." To look at food and have the ability to make a rational choice about whether you wanna introduce that into your body, that is one of the most liberating things you can do. Because the guilt and the shame and the sort of beating yourself up because you ate that, back away. Because you're usually eating it because part of your body thought you're gonna die if you didn't eat it. And it was a reasonable thing to do.

There are people with emotional eating disorders where you're eating for love or company or things like that, I'm not going about that. But a lot of times these cravings, these intense cravings, most of us don't even know the difference between hunger and cravings. Because we're constantly craving because we eat so-called healthy whole grains or eating chemicals or even types of vegetables that trigger intense cravings in us and we just don't know it. So my work has been around showing people how to turn up the energy available for your cells to make energy and turning down these things that cause cravings.

And the side effect is less inflammation, less hunger and you typically lose weight without effort. But more importantly, you have the energy to bring it every day, the kind of energy that I was desperate for in my 20s that I had lost. I have more energy than I've ever had in my life, and I run circles around people 20 years younger than me. And I just love it because I built that, and it's not that hard when you have the right info.

Katie: Yeah, I love it, and I bet there's a lot of women listening who are saying like, "That's all great. I'm not doing the cold thing because that's horrible and I don't do cold." And so I wanna like echo that because I was that way for a long time. I was like, "Nope, I'll do everything else. I don't like the cold, and we started doing ice baths. Like not just cold showers, but like full out sitting in a bathtub full of ice. And the first time, like you said, I could last like 10 seconds, and then the next time it was like a minute. And now like we'll do like 30 minutes ice baths on the weekend. It's like a challenge.

But it really does, like the feeling that you get when you get out of that is absolutely incredible. It's second to none. And I'm also glad that you mentioned your kids because I was really hoping we could talk about this topic. I'm guessing you don't get to talk about it as much on "Bulletproof." But I know that you're very passionate about raising healthy, amazing children, and I've met at least your daughter and she's absolutely incredible. So I'd love to hear...like let's talk about parenting and your parenting strategy, what are some of the non-negotiables that you do with your kids to make sure they stay healthy?

Dave: All right, I'm going to answer that. But first I'm going to be terribly rude and I'm gonna talk about boobs, is that okay?

Katie: Go for it.

Dave: Okay. My wife is a physician from Sweden. She couldn't make the conference this year because she actually had a concussion believe it or not. But our first book was about fertility, and I spent four years doing research to restore her fertility because she was infertile. And I really dug in on this stuff and we had our kids at 39 and 42. But one of the things that she's noticed from doing these cold showers, and things like that is, I mention the water hits you in the forehead and the chest is that you have much more youthful breasts as a result of doing the cold shower.

And because she is from Sweden she said, "This is an old Swedish tradition that women would do, where they would use snow on their breasts." But a little bit of cold can go a long way towards maintaining youthfulness in a part of women that well, I think most women would like to keep them in the best shape they can. And that cold shower really helps because cold water causes collagen re-synthesis, which collagen is the connective tissue in your cells. So if you can have a tighter healthier skin on parts of the body that tend to sag especially if you have had kids, there's an extra benefit for women, that men don't usually get from those cold showers.

Katie: That's awesome and for the face too, that's great if it improves collagen.

Dave: Yeah, it really does

Katie: That's an awesome thing to do.

Dave: All right, so see that wasn't as bad as you thought it would be, right? Now, let's talk kids. I live on an organic farm. When my kids were young we decided to move up to Vancouver Island. And one of the reasons for that was that I wanted my kids to go to a Waldorf school, and I wanted them to be able to play outdoors for two hours a day. And about two months ago, I took my kids to San Francisco where I used to live, and we were wandering around downtown.

And my daughter looked at me, she's 10, and she says, "Daddy, what do all the children do here for fun when they don't have a forest?" And she was looking around like what do you do here? It was almost like a foreign environment to her, and it was such an innocent cute comment. But one of the things that I think matters most for kids, is that they get the right building blocks so that they can learn to manage all the emotions that turn on as they hit different stages of childhood development.

But if they have a voice in their head screaming at them, "You are starving right now," they have a hard time focusing. And they get these big emotional swings and they get amplified by their food. And then if kids are always on devices and they don't get time in nature, and time to just play and time to be, they get really, really stressed. And one of the things that stress does is it inhibits mitochondrial function. And I think that stress and toxins and just the lack of nature and bad diets are some of the reasons that we're seeing half of people under age 40, having poorly functioning mitochondria.

So my kids get...they eat the Bulletproof diet. They get moderate amounts of low toxin carbs, things like white rice, and sweet potatoes, and butternut squash. They don't avoid all sugar. Every now and then we'll have jam. They can have a piece of fruit a day, but they don't eat a giant fruit smoothie for breakfast, which so many of their friends do, and then two hours later, their friends are starving. And my kids are like, "I had duck eggs and bacon or I had avocados and smoked salmon for breakfast, I'm not hungry. Can we just keep playing?"

And they always get an ounce or two of Bulletproof coffee because when my kids get brain octane oil, they're calm and focused. And if they don't have enough fat in their diet, or they don't have those mild ketones, they become food obsessed. Last night was Halloween, and the kids went out and they trick or treated with all their friends, and they came back and I said, "All right, here's the deal you can trade your candy for 20 bucks or you can trade it for dark chocolate. And bulletproof makes a dark chocolate with zero sugar.

But frankly, if it's a clean, well manufactured 85% dark chocolate, I'd had given them that too. And so the kids are like, "Oh, this is great. We're gonna get the kind of chocolate we like. We're not gonna eat all these tartrazine dyes and strange colors." And they actually read the labels on the candy and they start laughing, like "Why would you wanna put this stuff in your body?" And I dealt with this situation a couple years ago when the kids were younger. Our housekeeper went to...I'm gonna say this, went to McDonald's for coffee. I'm like, "Why would you go to McDonald's? Like I run a coffee company. There's plenty of coffee here." But she's like, "I needed my coffee before I got to your house, and I was gonna die." Like all right, fine. So the kids were just fascinated because we don't really go to McDonald's. In fact, we've never taken them. And they saw the drive-through and they're like, "What? You mean you can talk to the speaker and then food comes out like this is amazing." So our housekeeper ordered coffee and then the kids rolled the window down and said, "I want one poopy, chemical latte, please."

Because we've talked about how adding chemicals to your stuff isn't okay, and that they do that at fast food places. But when they got home and the housekeeper told me and my kids, "People are gonna eat what they're gonna eat and it is not your job to judge other people. And people can make their own choices. And as people get older, they get to make more choices. So here's what I want you to do, I want to go to McDonald's with me, and we're gonna order whatever you want, have some French fries. You know have the pie, you'll get a toy, you'll get to play, it's gonna be fun."

And they looked at me offended, and they said, "You can't make us." I said, "What do you mean, it's gonna be fun." And they said, "We've eaten food that doesn't make us feel good. We know what that feels like, and we don't like feeling that way. So when we eat food that doesn't make us feel good, we ask you to give us the charcoal." Bulletproof makes an activated charcoal that I'll give the kids if they're feeling like really anxious, and like basically cranky after a meal. Especially when they eat out, it's usually there's something in the meal that didn't agree.

You give them a toxin binder, and then they're back to themselves 10 minutes later. But they literally are like, "We're not interested. We don't care how good it tastes, we care how we're going to feel." So teaching the kids like this is what food does for you. Of course, you want it to taste good, and you can make it taste good. But if all you care about is taste, you don't care about how you feel you're probably gonna walk around yelling at your brother or your sister and feeling lots of emotions that are really hard to deal with.

Whereas if you eat the right foods, when you do feel your emotions, you have more energy to learn from the

emotions, and draw a picture of them and figure out what's really going on here. Why are you feeling all upset right now, so that they can learn to manage what it is to be a human. And I think it's a great gift, but it's definitely a burden as a parent because we live a different life than a lot of people.

Katie: That's so true and I'm glad you brought it up because we had the same sort of experience here. We live in an awesome neighborhood and thankfully, the kids were able to go out and play with their friends, and get to do the costumes. And mine actually chose not even to go get candy. They just wanted to play the whole time, but I take a lot of heat for that. It's kind of a soapbox for me because I hold very firm behind the statement that kids don't need refined sugar ever. It's not a balance thing. They truly don't need it ever.

And I take a lot of heat from people who are like, "No, that's all part of childhood. You shouldn't. It's not balanced if you don't let them eat sugar sometimes, and all this." And I'm like I'm glad to hear there are other parents who hold firm to that line as well because it's so true. It affects them drastically.

Dave: It affects us a lot, but we have this prefrontal cortex that's fully formed, the so-called adult part of the brain that finishes getting baked at about age 24. So we're better able to handle a craving or an emotional surge and make the right choice. With kids, they're just learning to do that, and they don't have the hardware in place to do it yet. So teaching them to have less of these surges by controlling their diet, actually really is of service to them.

So they can take all of that extra energy, and use it to learn how to empty the dishwasher the first time you ask them, and how to brush their teeth without being distracted 75 times, and all of those other things. It also has a side effect of radically improving sleep quality. My kids sleep in blacked-out rooms, because light exposure is a huge problem for your mitochondria. They're light sensitive. And if you expose your eyes or your skin to bright...especially LED and fluorescent lights, anytime after the sun is gone down, what happens is that sleep gets disrupted.

Or if you eat toxins at dinner, sleep gets disrupted, and they get sweaty and cranky and itchy and have to wake up and pee all the time. Since my kids sleep in blacked out bedrooms, we have dimmer switches and red lighting at night. And I started a company called True Dark that makes special glasses, we just came out with kids' glasses that filter out every kind of light that tells your body that it's daytime. So if you wear those for half an hour before bed, you can get the kids to sleep all night, which improves the quality of my marriage for sure.

Because we get better sleep and we get some adult time, which is wonderful. But it's also like kids need their sleep and if they're getting poor quality sleep because your lighting environment or because your food environment is unintentionally moving in the wrong direction, like your quality of life goes down too.

Katie: Yeah, exactly and I think the key to what you said was also the education piece, because you didn't tell your kids, "You absolutely may not eat this candy." You educated them. And I think that in a culture where every kid's meal ever is like chicken tenders and French fries and burgers, we often underestimate how much kids can learn. Because how old are yours? Ten and eight?

Dave: They're eight and ten, something else interesting, about a quarter of us are sensitive to nightshade vegetables. And these are things like potatoes, tomatoes, eggplants, bell peppers, hot peppers and it's genetic, and it's not an allergy. It's just the compounds that these plants make to protect the plant from being eaten, they are directly toxic to your mitochondria, if you have certain DNA. It runs in my family. So I grew up with

this arthritis and this constant pain in my neck and shoulders that just never ever went away. It turns out it's caused by those food groups, for other people they might be healthy.

But my son has this for sure. And he knows if he eats a bite of potato that he's gonna have neck pain for a week, and it's absolutely repeatable and reproducible. So last night he said, "Daddy, somebody gave me this gluten-free cookie, but they didn't know what was in it. I'm pretty sure it has potato starch, so I'm not gonna eat it. Is it okay?" I'm like, "Yeah, you can eat it or not eat it, but if you want when you come home, I'll give you some coconut ice cream instead because we know that that's safe." And he thought about it and said, "I think I'll eat the ice cream."

And he was completely happy because he doesn't like it when his neck hurts either. Before it was just, "Daddy, can you rub my neck, can you rub my neck." Just those little things. Imagine the next 40 years of his life if he didn't know that, he could have chronic pain, the way I did, and not know why, and it's because he ate the cookie with potato starch in it. It's not to say potato starch is bad, but if you haven't tested, if you don't know whether you respond to these or not, you're just walking around unintentionally doing things that make your kids less comfortable, make you less uncomfortable.

Katie: Right, which isn't truly balanced at all, and I think that's such the important part is. If we can educate them and let them make the decisions, we might be shocked how often they make good decisions.

This episode is brought to you by My Green Mattress. If you've been reading Wellness Mama, you know that I have used and recommended natural and organic mattresses for years. And I've tried a lot of them. We spend a third to a half of our time in our beds, especially children. So this is one great place to optimize and reduce exposure to harmful chemicals. We've tried, like I said, several different mattresses over the years and I love all the ones that we've tried. They're all natural options. But I've been getting a lot of requests for a more budget friendly option that is good for kids. Which is why when our littlest needed a bigger mattress, we ordered one from My Green Mattress. They are GOT and GOLS certified, they are GREENGUARD certified and they're completely natural. They're also much less expensive than a lot of mattresses. So you can check them out and find out more at wellnessmama.com/go/green-mattress.

This podcast is brought to you by myobuddy. This thing is one of my daily go-to's for relaxation because it combines the benefits of infrared heat, percussive massage and vibrational therapy for what I can only describe as a mixture of deep tissue massage and myofascial release all in one device. It has really reduced my muscle tension and my need for massage and many people with conditions like MS, chronic fatigue, etc are using this for muscle relief. Also, many athletes use it for faster recovery. I personally find the biggest benefit for relaxation and for fascia work, but you can try it out at wellnessmama.com/go/myobuddy and make sure to check the show notes for a special discount.

Katie: And also take away our preconceived notions that like kids will only be happy in their childhood if they are eating sugar all the time. Because certainly...like you've seen that and I've seen on my kids, it's not like that at all. And you're giving them the gift of not only health but education and independence to make their own decisions about it. And that's much more empowering than being balanced and eating sugar once a week, I think.

Dave: I think so. My kids sometimes have a little bit of sugar and it's okay, and we don't judge them on that. But we explained, "Look, sugar makes you go bonkers if you have a lot of it. And if you eat it every day you're not gonna like it." And then they eat it and then a little while later they feel all over the place. And I'll say,

"Hey, you notice how your body feels right now? That's what you ate." And they're like, "Oh, okay." And then you know they run into the wall or do whatever they're gonna do.

But just to tie that in that what you did changed how you felt, nobody taught me that. It was like oh you just feel the way you're feeling and you act the way you're gonna act and you're doing that because you're misbehaving, or because you weren't strong enough to do what you're supposed to do. Or because you don't have enough focus, or because of some intrinsic deficit. No, it's just the cells in your body responding to what's in them.

Katie: Yeah, exactly. And so a lot of the people listening, I would say probably over 90% of the people listening are moms, and I know a lot of times moms kind of have a negative reaction to the idea of biohacking which is largely what you do, but because it just...I think partially it sounds very masculine but also like there's a lot of...it sounds complicated, I think. And so I've always said this, but I would love to hear your thoughts, that I think actually moms of all people are the ones that should be biohacking because we have the ability to directly impact the next generation and to give them better health.

And also if we improve ourselves, we can improve our families. But I'd love to hear your take on that, and also as moms, what are some of the most important things we can do with our families to start, like right now, what are some of the top steps you would give?

Dave: Here's the deal when you do these biohacking, just the definition biohacking is you change the environment around you and inside of you so that you have full control of your own biology, that's all it is. And when you do this as a kid even for a very young child, heck even in the womb, you set up the environment properly, it removes so much stress, and it makes growing and thriving easier. So it isn't this big complex thing. There are some low hanging fruit that you can do that will radically improve your kids' behavior, and improve how they feel.

And one of the things you can do is try cutting out grains from your kids' diet. I don't mean just gluten, I mean whole grains except for probably white rice which most people tolerate really well, do it for a couple weeks. And while you're at it at the same time cut out fried stuff, because your kids are working really hard to make new cell membranes, the cell membranes are made out of tiny droplets of fat. And it turns out eating French fries or chicken nuggets or anything fried causes more inflammation and damage around those cell membranes than smoking a cigarette.

You get 24 hours of damage from a meal of fried stuff than you get four hours of damage from a cigarette. You wouldn't tell your kids to smoke. Don't feed them fried stuff. And you do that, you cut out the grains you may find that the kids rashes and skin stuff goes away, but their sleep quality will improve, but their behavior and their personality can change. And if you feed the kids something and 20 minutes or half hour later they're all over the place, there was something in there that didn't work for their biology.

The simplest thing you can do there is try the activated charcoal, and activated charcoal can be constipating. Bulletproof makes an activated charcoal that has a very fine particle size. And what's really fascinating there is when you see that marked change in your kids' behavior after a meal, that's just a simple thing to do. You give them one little capsule of it and if your kids don't like, or they can't take capsules, you can take a little like a half a teaspoon of raw honey and mix it with charcoal like a little sweet tasting palate and they'll drink that. Look in the mirror and have black teeth and think it's funny.

And that can have a really big effect on how they feel, and then they're just back to being their smooth normal. Like I'm gonna play with my Lego's, I'm gonna go do what I'm gonna do, and they're back to their thing. Kids are wired to be kind and nice and cooperative and selfish, sometimes because they're still learning their egos and things like that. So if you can remove all of these things that cause huge swings in their emotions that come from outside of them, it allows them to just know themselves better but it also makes your life as a mom way easier.

The other thing is this brain octane oil that I give to my kids in Bulletproof coffee. And if you're offended, okay, kids metabolize caffeine twice as fast as adults. We're talking about a little espresso cup with an ounce or two of this, is because I want them to get the oil in the morning. And because it allow them to do something like what Daddy does. I'm not talking about drinking a large cup of coffee that wouldn't be something I recommend for anyone at that body weight. And things like getting enough oil, enough undamaged oil, binding toxins with charcoal.

And here's the other thing that will just change your life as a mom that is classical biohacking is changing this environment around you. If you have LED or fluorescent lights in your bathroom, stop. Don't turn those on. Don't allow your kids to get up to go to the bathroom and turn on the lights. Get them a red night light in the bathroom, not blue, not green. And in my house, we have dimmer switches, and the kids have a little red light in the room that they can turn on if they need to have a light at night not a white light.

Even a few seconds of white light at night tells the mitochondria that control the timing system in the body to stop making melatonin, which means your kids won't sleep well the rest of the night. So if they're running around brushing their teeth getting ready for bed, and your kitchens brightly lit, you're actually taking away sleep quality and kids usually don't get enough sleep. And if you do that you can radically change things. Inside the kids' room, it needs to be pitch black. Get blackout curtains so that the street lights don't come in.

And if there's any LED in the kids' bedroom, put tape over it, or the company that I started that makes the true dark glasses, the ones that filter out these kinds of lights. You could have the kids wear that before bed that's what my kids do they look like little Spidermen in glasses. And what that does is it tells the cells in the eyes that communicate with the part of your brain that tells you whether it's night time, it tells them it's night time, so they be ready for sleep. And they make little stickers called true dark dots that you can put over the LEDs, so you can see if something is turned on or not.

But the light spectrum that comes out isn't the kind that signals to your kids' body that it's daytime even though they're supposed to be sleeping. So this is little signals that come in that are entirely not a conscious signal that are changing your kids sleep and changing their behavior. So there you go, eat more good undamaged fat, don't eat whole grains with the toxins that they contain as natural defense systems made by the grains. Don't eat fat fried stuff, reduce bright light exposure in the evening, and get more of the good fats in the diet.

And you'll find that your kids grow up to be healthy and stronger with better cells. And a bonus suggestion there would be something that I know you're a huge fan of, it's bone broth. In order to make bones, and to make skin and to make organs you must have a collagen in your body. Our grandparents ate Jell-O which is actually kind of disgusting the way they make it. But at least they got collagen or they would boil chicken bones after you ate a chicken, or they would make these stocks out of things that we don't get anymore.

So you can start making bone broth the way we do at home and I also make a Bulletproof grass fed collagen and this is the same protein that's found in bone broth. But sometimes frankly, we don't have time or energy to make bone broth. So I put collagen in food. We make mashed cauliflower, or mashed sweet potatoes. I throw a couple spoons of that in and now my kids are getting this collagen building block that's really important for them to grow strong and healthy. And I put it in my Bulletproof coffee that I share with them sometimes as well.

So getting a little extra collagen that can help kids grow up to be stronger and have straight bones, and just healthy teeth, and just to let the body build itself the way it's supposed to.

Katie: Yeah, I love it. I think those are all amazing tips, and anybody listening if you're driving or not, where you can't write it down, all those links will be in the show notes at wellnessmama.fm, so you don't have to remember them. And Dave, you have some great posts on those topics as well. So make sure we link to those too. I would definitely encourage people to check out your podcast because I'm a listener and also "Headstrong" is awesome, those links will be there as well. But where else can people find you online?

Dave: Well, you can go to Instagram. I'm [dave.asprey](https://www.instagram.com/dave.asprey), "Bulletproof Radio" is easy to find, you go to bulletproof.com/itunes, it'll give you the link for it. And then bulletproof.com has a huge amount of content, a lot of it is in alignment with the things you write about Katie. And you do such a fantastic job on your research, I actually read your blog. And I don't read a lot of blogs these days because I'm super busy, and I'm usually reading scientific references on PubMed and things like that. But I think you do a great job of filtering through a lot of the bad info out there, and then citing your sources. So I really respect your work as well, and I would say people should keep listening to you, and keep reading your blog as well.

Katie: Thank you so much. That means a lot, and thank you for your time. I know that you are incredibly busy and I'm so honored that you would take the time to be here and to talk to us today, so thank you.

Dave: Thanks, Katie, I look forward to seeing you again in person.

Katie: Awesome, I look forward to it as well. And thanks, to all of you for listening, and I will see you next time on The Healthy Moms Podcast.

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