



Episode 527: Kale Schulte on the Chemicals You
Are Encountering Daily Without Realizing It

Child: Welcome to my Mommy's podcast.

This episode is brought to you by PaleoValley - a company that is near and dear to my heart. I really like all of their products and my family especially loves their 100% grass fed beef sticks, which are a clean, gut-friendly protein snack option. They never last long in my house because my kids enjoy them so much, and I love how seriously PaleoValley takes creating healthy and environmentally friendly products. PaleoValley Grass fed beef sticks are the real deal. They are sourced from 100% grass fed and finished cows that are never fed grains or harmful antibiotics. And they come from small, family owned farms right here in the USA that practice rotational grazing, meaning farmers literally rotate the pastures in which their cows graze. So they aren't feeding on the same soil forever, depleting its nutrients. This means the cows are helping increase the nutrient density in the soil and put carbon back in the soil where it belongs. Another important difference- Virtually every other meat snack on the market is made with a processing agent called encapsulated citric acid (ECA). Companies use this in order to guarantee a long shelf life for their products but one study from The University of Illinois at Chicago found ECA can cause: Joint discomfort caused by stiffness and swelling, muscle aches, upset stomach, and shortness of breath! Instead, PaleoValley Beef sticks use old world methods of fermentation, which gives the beef sticks a long shelf life without the use of harmful acids and chemicals. They're also free of Brominated Vegetable Oil, hormones, and MSG and the natural fermentation process means they are a good source of probiotics. Check out the amazing beef sticks and all of their products at paleovalley.com/mama and use code `mama15` at checkout for 15% off your order!

This podcast is sponsored by Wellnesse, that's wellness with an E on the end. The brand I co-founded when I realized there just weren't truly natural alternatives to some personal care products that performed as well as many conventional brands. We've been sharing our popular toothpaste and haircare for almost two years, but today I'm excited to tell you about a new star in our lineup. The charcoal toothpaste that provides the same mineral-rich benefits as our original whitening formula with a boost of charcoal for extra whitening and mouth-supporting benefits. It's made without glycerin using oral microbiome-friendly ingredients to help your body create stronger, healthier, whiter teeth while you sleep. I love to use charcoal and whitening toothpaste on alternating days to keep my teeth looking and feeling their best. You can check out our toothpaste and all of our products at wellnesse.com.

Katie: Hello, and welcome to the "Wellness Mama Podcast". I'm Katie from Wellnessmama.com and Wellnesse.com, that's Wellnesse with an E on the end. And this episode is all about the chemicals you're probably encountering on a daily basis without even realizing it. I'm here with Kale Shulte, who has a lot of experience and personal experience in this area. He's been in research and development for different products for over 15 years, but he's also chemically sensitive and has a background in chemistry, and a very innate natural ability to smell and react to things, so that makes him effective in formulating. And we go deep on how he grew up in a botanical garden, and how this influenced his life. How he got into the world of formulating natural products, the biggest defenders in your products, and what to watch for, and why companies aren't required to disclose ingredients in care products. The reason to be careful about scents in products like air fresheners, perfumes, laundry, etc. And why indoor air is often the most toxic, as well as guidelines on how to actually choose good products and which scents can be beneficial. So, lots of directions on this one, without further ado, let's join Kale. Kale, welcome. Thanks for being here.

Kale: Glad to be here.

Katie: Well, we're going to go deep on some of the stuff that's lurking in a lot of products that we may encounter daily. But before we do, I have a note in my show notes that you grew up in a botanical garden. And I have to hear more about this because I am in the process of trying to revamp my entire yard. So, I would love to hear about this and any ideas you have.

Kale: Yeah. So, the story's a little long, but my father was a veterinarian, and my mother was a clinical psychologist and not working, taking care of us kids at home. And she started building a little garden. My dad helped her build it. And it just kept expanding. And before we knew it, it ended up being about 10 to 12 acres. And I don't know at what point my parents opened it to the public, but we worked on it together as a family, building it, waterfalls, lakes, and then it became quite a large attraction. And later, she filed for, I think, a status on botanical garden. And I don't know how to describe it, it was a beauty, it was a magical place to be able to be raised. And I think a lot of, you know, my life, I've always tried to build waterfalls or things that...where I've gone. So, as far as, like, advice on gardening and all that, there's a lot of details with it. But it was a very unique upbringing, taught to learn about plants, and what they offer. And with my sense of smell that ended up being pretty, pretty beautiful. They moved away from it about 10 years ago. And I think the new owners of the property let it go a little bit. So, it has since been given back to nature, in some ways.

Katie: That seems like such a picturesque childhood. That had to be so cool, and probably a great early experience for you on the power of plants, and seeing that firsthand, and smelling them, and getting to interact with them. And for anybody who's not familiar with you, I'd love to also hear a little bit of background about you about how you got into your current line of work. And we're going to go a lot of different directions from there. But for anybody new to you, can you kind of give us an overview?

Kale: Yeah. I think it started when...you know, my mom and I have both very sensitive skin, and my mom wasn't satisfied with soaps and didn't want to use animal-based soaps. And my dad is a veterinarian and chemist. And so we started creating a soap for my mom, and it wasn't working. And one time he had an accident in the lab unknowingly, and when my mother tried a soap, she's like, "Stephen, honey, this is it. It's perfect stuff." And so he had to go back and look at his notes. It took about five or six weeks to discover what had happened in the lab. And it was just about mixtures, temperatures, and everything that's been done. When he started making that for her, I had 50 bars of it in my trunk one day, and I took it to a farmers' market, and everyone tried it, sold it. And they called back and they said, "This is amazing. This is really wonderful." So, I called my dad and I said, "Hey, we have a business." So, that meant that we had at least a platform to be selling that. It wasn't full-time, but it was just, you know, like a weekend. And from that, I started asking myself if there were other products that I could start to look at and possibly formulate or change, and just started developing a passion for getting products that were safe, natural, and effective, that could actually be affordable. So, deodorant was really the first one because that's been a challenge for many people with getting one that actually works and lasts. And once I have that under my belt, I guess, I just got a little

confident. As an engineer, an MBA, I thought, "Hey, I can do this." So, I started looking at other products that my skin didn't react well with, and if I could go and change those in some way to make them work.

Katie: And I know there's lots to talk about on the positive side of this. But before we get to that, I'd love to hear about some of the things to be aware of. I think a lot of listeners are pretty educated and are aware that what goes on our body goes in our body, and that we need to be aware of what's in our environment. But there's also so much information and misinformation out there, and we encounter so many chemicals on a daily basis. I would love to hear you kind of break down what are some of the biggest offenders to be aware of that are in some of these products.

Kale: I'd start with anything that has to do with color or smell because those things I think can be unnecessary. So, if you have someone that's really concerned about skin, they're not going to be concerned about necessarily the color of the product, or how...well, when I say smell what I mean is natural versus synthetic. So, fragrance oils, it's not necessarily required of a company to disclose the list of chemicals that they put into those. I would say sourcing is also part of this process in order to find the best available natural products that aren't doing excessive damage to the environment, or wherever they're being sourced from. So, I think those are the main two things that I have looked for in order to make this the product line that it is.

Katie: I'm familiar with this from also being in the personal care world, but can you explain why companies aren't required to disclose their ingredients? I think a lot of us are used to food, which, of course, does require you to disclose the ingredients on it. Personal care products don't, neither does alcohol. And I've always found that interesting, especially knowing the skin is the body's largest organ, those things are passing into the body. It can be hard to find what's actually even in a product. So, can you explain why companies don't have to disclose that?

Kale: I don't know the exact true answer, but I think it has something to do with the proprietary nature of some of the ingredients. If you're going to create something unique that has a specific effect on the skin, I don't think as far as fragrances go, that's one part of it. But, I mean, that's a good question. I think it has to do with keeping their competitive advantage out there. There's also if you are fully transparent in what you are providing and you can maintain a source that is not going to change. I think one of the challenges of our business is if you have a product that you're ordering for years, and then all of a sudden, you formulate with it and something changes, you don't necessarily know, did they mix it at a different temperature, was there something that was done to it, chemically?

I think also there might be a dimension of this where it would scare people if they knew sort of how that was...no, scare is the wrong word, but if they were processed in a specific way, would people start to make choices in their buying habits based on that? So, it's almost like, you know, you shout it, don't ask, don't tell what's in that, but it's...I think those are probably some of the main reasons. I wouldn't know specifically, per company, but, for us, what we've tried to do is stay away from all of that, all of that detail to...or at least stay away from all of the minutiae to try to stay on the positive end of keeping it organic as much as we can.

Katie: Yeah, I learned firsthand also when I started formulating for Wellnesse how involved that world is, in a natural sense are their own whole...it feels like a college degree to learn when you start doing that. Let's talk a little bit more about scents, in general, though, because I feel like the majority of people probably encounter many, many more of these on a daily basis than they would expect that they do because we could maybe like pay attention to things like perfume and cologne and think, okay, that's an obvious scent that I'm encountering. I would think most people actually think that's relatively safe or don't see any problem with those, which I think we can delve into as well, but things like air fresheners, even laundry detergents that have very strong scents, and from my understanding, things like SVOCs that you're breathing and touching at a low level all day long. But I feel like this is an area where some people need some convincing, especially if there's tons of scented candles and air fresheners in their house, and they're wearing perfume. So, why do we need to be careful about scents?

Kale: When I was in engineering school in Minneapolis, I took the air pollution quality control class and it had a really strong environmental focus. And we built apparatuses that would test the air quality within the house and on vehicles. And you'd be surprised how many VOCs and other things are floating around the air in places. And our conclusion was, the air that is in your house is sometimes some of the most toxic. What you have under your sink that you're going to use to clean your countertop, all of that emits a certain amount even just being under your sink. And then when you use it, it's everywhere. Beeswax candles versus soy, or paraffin, these things have a way of infiltrating all of the surfaces and substances in air within your home.

So, I think it's very important that people try to keep those types of chemicals out of their house because that's where you're spending a majority of your time. You can also, you know, run HEPA filters and the like. I'm extremely sensitive, so I would have just my natural need or sensitivity that's required. I mean, I'll go into people's houses, and I'll start having a reaction at times. I'm a little sensitive to dogs and kind of allergic to cats, so kind of my own canary in the coal mine when it comes to that.

Katie: And can you explain a little bit more about what it means to be chemically sensitive for someone who's not familiar? Because I also wonder if maybe there are kids who have this but it's a harder thing to pick up on maybe for parents, then maybe a cat allergy, you see a direct response. So, can you kind of explain what you mean by chemically sensitive?

Kale: If it's in the smell spectrum, if someone walks by and has a specific perfume on and it has a certain amount of chemicals, I can get a headache in as little as 30 seconds, or it feels like as if you were looking at the sun. It's that type of sensory experience. Contact, like, I can't wear wool. I have to wear unscented or use unscented laundry detergent. Most of the time if a dog, like, comes up and licks me on the leg, it starts to get red. So, it can be pretty intense at times. But there's also a flip side to that is that when something smells really good, something actually works, you know it pretty quickly. So, it's kind of the duality of that spectrum. But it's like a sensation if you were looking at the sun, it just stings inside. I don't know how better to describe it.

Katie: And I think that duality is a great way to also illustrate the importance of paying attention to these artificial scents because I've used this analogy with food, you know, we'll take one capsule of Motrin and expect it to take our headache away, but we'll ignore the same amount of additives in food thinking they're innocuous. Same with like scents, we understand that aromatherapy or at least a lot of people do that inhaling these scents can be very beneficial for the body, in certain ways, but then we ignore the fact that maybe inhaling the same amount of harmful scents can be just as negative for the body. So, to keep from getting too deep in the negative, can you talk about some of the positive ways that we can use things like smell and taste to influence health?

Kale: Yeah, I think one thing I experienced years back was aromatherapy in the shower where you put some eucalyptus oil and just you have invigorating scents. From a positive standpoint, one of the products we've created was like a CBD tincture, and those are pretty commodities...very much commodities now, but you can drive the feel and the mood of what you have based on cannabinoids, and that's a whole another story, you know, with the CBD side of the business. What's the question? I'm just trying to think back. Was it... Could you repeat the first part of the question?

Katie: Yeah, just kind of focus on that duality, like highlight some of the ways we can use scent to our advantage to improve the body, to improve health?

Kale: I think that growing up in that garden, I would walk out and I would smell something in the spring, like lilacs or the fresh smell of rain, you know, that petrichor smell, and you become invigorated. And I think there's ways to customize fragrances within products to drive some of those effects. So, I have really done it in my products here, but what I really love is when I'm walking down the street... And I'm gonna use smell as sort of my baseline here. If you smell something good, I just have to follow it. There was this time when I was 12 years old, I was in a Macy's and I smelled something that was amazing. And I followed it around and then ended up being this lady and she was startled, and I said, "Can I just ask you what you're wearing?" She told me, went and bought it at Bath and Body Shop, I tried spraying it on people, it didn't smell like that. So, there's a combination of the mixing of people's pheromones as well as that product. So, I think it's a little custom for each person, but that is really...that's where it started getting at least the drive to try to make things that smell in the way that they do, to take that scent.

Katie: Yeah, that's fascinating to me as well, how the same scent on different people can smell so different. And there seems to be, like you said, a biochemical thing going on there, for sure. And I've written before about aromatherapy and essential oils, and how this has been a long tradition in lots of different cultures. And like I said before, I think that really illustrates the importance of just being aware of that and not having negative sources of scents in our environment. And those are relatively easy to replace because usually, you have to buy them and intentionally put them there. They're not coming from nature, they're either chemical from cleaning products or chemicals from air fresheners, or from perfume, or from laundry. And there's now easy replacements for all those things.

Kale: Yeah, and I think some people don't have a sensitive smell, as I do, truly out there, and they're not aware of how that smell is relative to putting on like one squirt of cologne or perfume versus five, air fresheners, all of these things. It's very difficult for people that don't have a developed sense of smell. So, it's up to people who are creating products that do have these sensitivities to help do that because what you put on your skin, someone may not react to that, but someone who has a sensitivity to it, will.

I'll give you another example. My father and uncle were veterinarians, and some people are very sensitive to light and something called stray voltage. And they go up to farms and there was actually a lady that had skin that was twitching according to some of the electric current that was out there. She's hypersensitive, great. They went and turned off the switch, and she stopped twitching and she started to recover. And there's a lot of illnesses that come about that people don't associate with the things they're putting on in their body, but once those are discovered over time, people can eliminate the substances out and people become generally well than before.

Katie: And I would say, most people don't have the same developed smell that you have. And hopefully, most people would have...at least they know of chemical sensitivities, which is why it makes you a good marker for these products. But for someone who doesn't have those abilities, are there any guidelines for researching since most companies don't necessarily disclose everything that's in these products, for reading the labels, for researching, for figuring out what you're actually interacting with?

Kale: I think understanding the chemical properties, so what is in the ingredients, that's probably a really good start. So, if you know that there's associations with specific ingredients that, you know, could cause cancer, or there's studies that, you know, it could, stay away from them. One time I went to...actually many times, there's websites that rate chemical substances, so people can take an ingredient, let's say the deodorant that they're using, and go do the research online. I forget the name of the website, but it allows people to cross-check what they're putting on their body with potential chemical sensitivity. I think California has put out, I forget the name of the proposition, but things that may cause cancer, you know, of the like, as long as people are paying attention to that, and not just buying something because it smells good, or because...you know, even on deodorant, it could work for six or eight hours. I used to use Axe deodorant, I think that's terrible. And I think it's about taking a conscious approach to health and wellness and making sure that the products that you have are within your grouping.

Katie: Yeah, I think you might be talking about that EWG's Skin Deep database for researching the ingredients. I'm a fan of that as well. In fact, with Wellnesse, when we were developing, I made sure every ingredient was rated as one or two safe...it had no harmful effects that we know of and that was a non-negotiable for us. And it sounds like in your development of products, you're the same way with that. I also would love to go a little more granular, if we can, on, are there any specific scents that can have, like, a positive either body or mental effect in a safe way? A lot of people listening make their own products at home in different ways. Any guidelines for scents that can be beneficial in certain ways?

Kale: I think what I've always found is that lemon scents tend to invigorate the body. You know, there's a lot of data out there showing that it stimulates certain neurons and that effect. With lavender, that has some sedative properties. I have hundreds of essential oils sitting over here. So, it really has to do with a mix of those and what effect you're trying to get. But I think those would be the main two that people would be familiar with. I think it's why a lot of cleaners have a lemon scent to them, and the nighttime with lavender, but there are variations of that. For example, when I smell amber, when I get a really good amber scent, that is very invigorating to my senses. It's like an awakesness, but it's subtle. So, those would be the main two. How about yourself, does that align with what you do as well?

Katie: Yeah, and the only external scents I bring into my house are usually essential oils. And I've got diffusers in most of the rooms and I will use them to kind of help my kids' energy levels where I want them during the day. So in the morning, we'll put mint or different blends that are uplifting, and then starting in the afternoon, I'll put on blends like calming the child that have lavender and chamomile, and things like that, and just kind of help calm their nervous systems before bed. And it's subtle but there really does seem to be an effect from that, for sure.

Kale: There certainly is an effect if you're sensitive. And I think one of, like...on my deodorant, I found a scent...I was at the Wynn Hotel in Las Vegas one time and I smelled something amazing. I've never smelled anything like this. I followed it down, found a spa and got a bottle of the essential oil. I got in contact with the supplier and she has since helped me formulate, I think, five or six different scents. And when someone does it right and does it naturally, I don't know how to describe that, it is very different than a lot of the chemical fragrances out there. But since we're on smell, that's definitely true. It can have those effects on you. I think they pump certain smells in Disneyland and other areas. I've done events here in Austin, and I'm designing one that is going to be done in Denver, and they said, "Come up with a custom fragrance." So, we looked at all of the attributes of the event and started working with that. I have one that smells like the ocean, and I have one that smells like a bazaar, like those bazaars where someone's selling rugs and everything. So, that's...I mean, to me, it's very exciting.

Katie: Yeah, and it's an easy change of if you would have air fresheners in your home anyway, just switch them out for essential oils, and you can get the benefits versus the downsides and your house still smells good. And I know you've also formulated quite a few different products. I'd love to hear a little bit more about what you have formulated and maybe what were some of the really fun ones to formulate.

Kale: So, we started doing the deodorant, and we had a serum in there that was necessary to keep the underside of the armpits smooth in a skin integrity test. Then, cost-wise, I needed to learn how to make serums. That came next. That was easy...well, it wasn't easy. My great-grandmother had an easy recipe, which was rosewater and glycerin, I started with that, and had to augment it with some additional products like aloe. So, then I started getting into the skin creams. We have an eye cream that we use. And that was great. So, that's all the topical. And then we started working with the ingestibles with CBD. We have a hemp cream

called Hemo, that was a really unique product. Body sprays that keep your skin soft for six hours, even one version of that, this is...a lot of people might not think about this, but have you been to an old person...you know, a nursing home and there's a specific smell? That's because of a chemical that is on the skin that as you get older, your proteins don't break down as easily. So, my dad and I formulated a product that has ingredients in it that break that down. So, when you smell a baby, or, you know, someone who is younger, there's always like a sweeter smell that you typically get. That was a really fun one to do.

Relief...pain creams, you know, we started working with things that try to alleviate pain, creams and things that help take away the darkness that is under the eyes when we wake up. So, it really had to do with researching ingredients, finding products out there that were doing something really good, but something was wrong with them. One of the products I was just working on last week was a, sort of...have you seen those skin tightening creams that sort of you put them on or there's a serum, and then all of a sudden your wrinkles are gone in 60 seconds? You know, it's great, excellent. There's some problems that I found with that. And I think I've solved them as of yesterday, it was an elasticity problem and the ability to put on makeup and foundation after it. So, my goal is really to be looking at products that are out there that have a lot of great attributes and trying to reverse engineer them and make something better because my skin might be a little bit different and maybe there's a way to make them better.

Katie: That's really fascinating. And I know a lot of people listening, at least, for me, personally, I know that as I get older, I'm more aware of skincare than I was in my 20s, certainly. And without wanting to turn toward the unnatural stuff like Botox, I'm against all of that. Like, I would love to know any tips you have for the anti-aging side of skincare using natural ingredients because I know there's a ton of products out there, not a ton of natural ones that seem to be super effective.

Kale: Yep, I'll say just on a non-health...or a non-product thing, you know, the sleep, the water, the exercise, all of those things definitely play a part to that. But understanding your skin is one of the first things. Some people have more oily skin versus dry. So, if you're going to be putting something on that's gonna sit there during the eight hours at night, you should know if it's going to be a water-based serum or an oil-based cream. That's probably a good place to start. And it could... Repeat the first part of that question again because like I got a little sidetracked with some of the thought process.

Katie: Just anything related to effective natural ways to combat aging or to keep skin elastic, and healthy, and young?

Kale: I think just having products that react well with your skin and that over time are going to show those results. I think it's a very personal thing because I've put on products that people have sworn by and I've had a reaction to it. I've put on products that people are like this is fine and I start to notice, you know, crow's feet wrinkles reducing. I'm also of the belief that, you know, try to hold off as long as possible on Botox and anything unnatural. And I don't know if I have much more of an explanation for that answer. It's just it's been

a personal journey to find my own products and create them. So, trying someone else's products is always interesting. Yeah, it can be bad sometimes too. I've had skin reactions that happen when I play with that.

Katie: Have you had that with products you've created like negative reactions? Or what are some of the, like, risks and obstacles you run into with formulation?

Kale: I'll admit my first deodorant formula seven years ago, I didn't smell for three days, but I had a skin rash under my armpits that lasted a month. I threw everything away and I was essentially giving up until I started reading some articles of people that had something similar, and found out to be...that it was a baking soda sensitivity. So, baking sodas, in certain concentrations, which if people don't understand their body and their chemistry, it can really be harmful. So, reduced that, replaced it with some more magnesium hydroxide, and was able to do that. But that was probably the worst case of some reaction happening.

The other was, we formulated a group of products for a company in New Zealand, and they were required to put certain fragrances in there to abide by standards of import, one of them was cinnamon. Cinnamon is a very difficult product to have in a cream that's going on the face. And even in the smallest concentration, my face was completely red. So, that was just one of those things that you have to understand how your skin's gonna react to those substances, even in the smallest quantities. But those are two that I created, at least back in the day, that I did not react well. Those were failures in the beginning.

Katie: Yeah, and just like in my world that is more of the nutrition side, just like in that world, there's so much personalization and individuality that comes into play. And so like I tell people, your body's a chemistry lab, and you're not necessarily going to have the same reaction in everybody. And so it's learning that personalization and learning your own experimentation because, like to your point, you could have the same ingredient that might be great for one person, and it's not that the ingredient itself is bad, it's that people have different biochemical reactions to that. And I'm glad you brought up deodorant because it seems to be a struggle point for a lot of people. And most people have probably heard the problems with a lot of conventional deodorants, not just the scents, but the added aluminum and the antiperspirants which is blocking your body's...your natural detox pathways of sweat isn't the best plan long-term, but a lot of the natural ones overuse baking soda. And I hear from a lot of people who get that itchy reaction, and then give up on it. And so is that a concentration issue? Like is it...in smaller amounts, it tends to be fine? Because it also seems like in a natural setting, that's the more effective ingredient to use.

Kale: Yep. So, what I did was I found where the threshold was, and this was something I had to edge closer to. So, I made a certain amount of batches that have increasing amounts of baking soda in them, and the replacement ingredient was magnesium hydroxide. That works extremely well to do the same stuff. I also have the activated charcoal in there, which helps with moisture absorption. You still want to be able to sweat a little bit in your armpits. You don't want to clog those pores. So, that had to be stepped up to a point where I started to be sensitive, and what I did then was like cut that in half. I remember that one specifically because

I'm like, I want to make absolutely sure that even if someone is more sensitive than me, then they have that. So, that was the creation of it.

And you're right, deodorant is just one of those things where people...they also have habits on how they use the product. So, if you imagine you have a stick of deodorant, they want to rub it on with the deodorant stick, no mess, no fuss, no anything like that. Our deodorant is closer to the consistency of a very hard clay. So, you can rub it on with the stick that is there, but I've used my finger with it for five years, rub it in completely so there's a barrier layer there, no issues whatsoever.

And I can also go to Whole Foods and essentially get all of the ingredients that are in my deodorant. So, you can technically eat it, you know, it's going to be a little bit bitter, but this is how we started creating this deodorant and we have very long-term customers with it. Would I like it to be spreadable, easier to stick? Yes, but I tried two ingredients that did that and it adulterated the formulation. So, we have had to market and brand this as more like a soft, hard clay type of application so someone can be fine with that process. I kind of think it's a little more personal. You're taking your skin in your hands and you're putting something on and you're good for 8, 12 hours.

Katie: Well, and to that point that we mentioned earlier of what goes on your body goes in your body, I know at Wellnesse, I've used that as a metric of, okay, that means we should not be putting harmful things on our body. To me, that should be the baseline. That should be the obvious thing. And, of course, we should be avoiding the harmful stuff. But I think often the positive side of that gets ignored, which is if what goes on the body goes in the body, what you use on your skin is actually a chance to benefit your body if you put beneficial ingredients in. And there are so many natural ingredients that do have a benefit to the body. So, I'd love to hear you talk about any of those that you use, or particular kind of favorite ingredients that you find have a lasting benefit?

Kale: I think the one that has the most direct benefit has actually been to start infusing cannabinoids into our...some of our skincare line. We have an under eye cream, we have a pain relief salve that we do, and, of course, the ingestibles. So, cannabinoids have a variety of healing properties that I think we're on the cusp of fully understanding, though it's been, you know, 10 or 20 years really having the CBD train come at us. But as people start to use them and has that repeated effect, it's definitely very beneficial.

When I taught in California for about a year-and-a-half, I worked with a company that was distributing THC-based products as well. And I saw people use creams on their skin and they had certain cancers, ingestibles as well. I used to be against all of this. Like I was raised, like, don't touch drugs, don't do anything. And I was like, "Oh, geez." And then I had to do a 180 because I saw firsthand how even topically you can start to heal and change the skin. So, that really became part of our product line at a specific point because there were definitely healing benefits there. So, I think cannabinoids have that, for sure. Hydration of the skin, rebuilding of collagen, I think there are products that can assist with that. But I think, you know, the diet, you know, it's a two-part system. It's what you put on your skin, it's how you're eating and how much water you're doing, and

all of these things make a big difference. You'll know that if you start cutting out some of your health routine, and you'll start to just see subtle changes in the face and everything. That's usually where you see it first.

Katie: Yeah, and I've seen that. My world is more in the formulation side of oral health right now. And when it comes to teeth, and enamel, and remineralization, like you said, it's very much a two-part thing. It's the nutrients you're taking into your body that then show up in your saliva combined with a healthy oral microbiome, an oral environment that's mineral-rich that allows the enamel to continually replenish and stay strong. And so you actually need both pieces. And I think that's often an overlooked part of the beauty industry as well is, like, yes, it matters what we put on our skin, it matters more what we put in our body, especially hydration, especially high-quality food and micronutrients.

This episode is brought to you by Paleo Valley - a company that is near and dear to my heart. I really like all of their products and my family especially loves their 100% grass fed beef sticks, which are a clean, gut-friendly protein snack option. They never last long in my house because my kids enjoy them so much, and I love how seriously Paleo Valley takes creating healthy and environmentally friendly products. Paleo Valley Grass fed beef sticks are the real deal. They are sourced from 100% grass fed and finished cows that are never fed grains or harmful antibiotics. And they come from small, family owned farms right here in the USA that practice rotational grazing, meaning farmers literally rotate the pastures in which their cows graze. So they aren't feeding on the same soil forever, depleting its nutrients. This means the cows are helping increase the nutrient density in the soil and put carbon back in the soil where it belongs. Another important difference- Virtually every other meat snack on the market is made with a processing agent called encapsulated citric acid (ECA). Companies use this in order to guarantee a long shelf life for their products but one study from The University of Illinois at Chicago found ECA can cause: Joint discomfort caused by stiffness and swelling, muscle aches, upset stomach, and shortness of breath! Instead, Paleo Valley Beef sticks use old world methods of fermentation, which gives the beef sticks a long shelf life without the use of harmful acids and chemicals. They're also free of Brominated Vegetable Oil, hormones, and MSG and the natural fermentation process means they are a good source of probiotics. Check out the amazing beef sticks and all of their products at paleovalley.com/mama and use code `mama15` at checkout for 15% off your order!

This podcast is sponsored by Wellnesse, that's wellness with an E on the end. The brand I co-founded when I realized there just weren't truly natural alternatives to some personal care products that performed as well as many conventional brands. We've been sharing our popular toothpaste and haircare for almost two years, but today I'm excited to tell you about a new star in our lineup. The charcoal toothpaste that provides the same mineral-rich benefits as our original whitening formula with a boost of charcoal for extra whitening and mouth-supporting benefits. It's made without glycerin using oral microbiome-friendly ingredients to help your body create stronger, healthier, whiter teeth while you sleep. I love to use charcoal and whitening toothpaste on alternating days to keep my teeth looking and feeling their best. You can check out our toothpaste and all of our products at wellnesse.com.

And I think because there's not requirements for labeling in the personal care world like there is in the food world, like I said, the burden of proof is on us as consumers because it's not always disclosed. And it seems like

there are many more options for ways to verify that and testing. I know we do third-party testing on ours. I'd love to hear how you approach that with how you test your products. Is there a third-party verification? Are you checking the ingredients before they go in? I know you have the metric of your body being more sensitive, but what kind of testing do you look toward?

Kale: So, when we're talking topical products, we're looking at the ingredients first. So we're making sure that at a bare minimum, those, if they're not allowed by, let's say, like a Whole Foods or a large company, that's one thing to look at, Whole Foods, the site, to double-check those. So, I know if I'm putting specific ingredients and starting at a certain standpoint, certain testing facilities are quite expensive. If we deal with CBD products, we have to do the equivalent of about \$400, you know, \$600 in testing per product, depending on looking for heavy metals, pesticides, fungus, anything like that. So, that is required by law to keep the quality and standards where they should be. It wasn't in the past and you have people putting out products there, they sell a whole bunch of them, and all of a sudden, people are getting hurt by that.

When I deal with the skincare products, I start with ingredients that are already on the good list. So, that I know during formulation, it's not gonna have that sensitivity. And I've never encountered this but you could encounter where if you're putting certain ingredients together, you might create another, you know, compound or something that is there. So, we do probably about a month to two months of testing.

My mother has sensitive skin, like friends do as well, so I make some guinea pig friends, I guess. Yeah, it's a process. But I think it's always best to start out with ingredients that are on those good lists so that you know as you're mixing them, then that you have a reasonably high chance of having a product that isn't going to react to the skin in a negative way.

I did like what you were talking about with the residence time because, in the beginning, my father and I were looking at the skin and how certain things can penetrate, certain things can allow your skin to absorb and have products penetrate faster. And it's fascinating that what you put on your skin and what stays there, it doesn't have an organ to filter and process that, like your kidneys or liver, it is in there for a certain period of time. So, I think, in some ways, it's more important to...than what you eat because of the residence time that it will actually spend on your skin.

Katie: Yeah, and that works both ways, too. I've seen interesting data, like I mentioned in the beginning, about things like SVOCs in laundry detergent, which are basically a low-level constant chemical exposure for most people because that scent and those chemicals, you're getting constant skin contact, you're getting constant inhalation. Even if you don't consciously smell it because you're going to get adapted to that scent and not pay attention to it, it's giving you that low-level exposure constantly. And like you're saying, you can use that in a positive way if you find those beneficial things, you get the constant beneficial exposure as well.

I also want to make sure we circle back to what you mentioned about that kind of scent that you often can sense in a nursing home, and things like that. And you mentioned it was protein changes as the person gets older. I also know as a mom, how intoxicating and wonderful new babies smell, and how they tend to be on the opposite end of that spectrum. And it makes me wonder, are there any things we can do biochemically to help that protein process still happen in a healthy way as we get older, and/or are there ways to combat that scent for people who are older?

Kale: I know that...or, I don't know if there's anything you can do chemically to eat because I think it has to do with, you know, as you age, your body's skin doesn't have the ability to break down some of the proteins that are there. But my dad was able to find an ingredient that he was able to put in in specific concentrations that helped break that down and tested it, you know, until...because the thing is when you have...with this product, for example, you have that is more oil-based. Think of it like poison ivy, where you actually mechanically would have to rub it off, that can't be washed out with laundry detergents and stuff. There's just something about that specific grouping of proteins and smell, so that I wasn't in belief of this, at first. And this isn't a product that we've really marketed yet. We've had our hands tied and full with a bunch of other things, but that is...it's fascinating.

So, I don't think there's anything on the diet end that anyone can do to sort of change what is the natural aging process, but to slow that, that's something I don't know. Maybe there are certain things to keep general health, you know, your metabolism good, the products going into your body that would change that. I think you'd need to do a study that had a group that didn't take that approach versus that did. But, you know, you, with having kids, you know what that's like. I have a daughter who's 14, and the smell of the top of her head it's like, she still smells good. You know, I'll let her know if she smelled bad, I'll give her some deodorant. But, you know, it's an interesting one. I think some of the initial research with that type of product started in Japan. I think there was some past literature with those proteins because certain ethnicities have different sensitivities to smell. This has also been something I could dive a little bit into, but I won't go too far, dating, how someone smells, chemistry, all of that. My father was a veterinarian and he said that, you know, there's gene pairing, you know, ways that we help to sense genes that would be compatible with our own. So, yeah. I think that's it with that product.

Katie: Yeah, actually, I'm glad you brought that up because I've seen some of that data as well. And it's really fascinating that we may not pay attention to it consciously, but there seems to be an underlying kind of like pheromone interaction and biochemical process that happens in human interaction. And I've heard that in, you know, an optimal scenario, our senses are actually well-gearred to picking a mate that is complementary. And it seems like there are a variety of factors, including I've heard people bring up things like hormonal contraceptives that change our pheromones, and actually can make us...they think we're supposed to bond with someone who might not actually be the best biochemical fit. I know that's a whole wormhole to go down, but it's a fascinating thing to pay attention to.

Kale: Yeah, it's something that has driven, you know, dating. You know, it's really something that as people start to pay attention to it, they can do things that will amplify their own pheromone sensitivity, whether it's

smelling it or other people smelling it, and it's part of our genes, it's part of our chemistry. And the more we understand about it, the more we can find sort of where that matches. You know, I've gone on dates with people and just like there's not going to be a match there. And my father was a veterinarian, and he said, animals have these gene pairings, and they may base it on smell and they, you know, procreate, and all that. So, it's definitely something that I'm paying close attention to.

I've created one product that I think helps to sort of amplify that. And, yeah, it's that...I can't wait to get more of that. And especially on the diet end, as well, if you think about that, you can do things that are not going to mask or shroud what that naturally is going to be. I also recommend, like on deodorant in the armpit area, that everybody keeps just a tiny bit of hair that's there that helps with the biome, and helps where everything grows. So, some of that natural sort of attraction and pheromone can remain there, rather than having it be masked.

Katie: And what other fun projects do you have in the pipeline or what are you working on next?

Kale: Well, one that I've gotten done with recently, and have made, you know, some small changes to increase, we have this pheromone enhancing roll-on. This was kind of fun because I have smelled people that have been really...you know, smell great my whole life and I'm like, "I wonder if there's a way to help to amplify that because I've smelled things on people that have been really strong and no matter the attraction level, you know, physically, it's just...it's not going to be a match." So, I started working on that product. And I would take out different variations with me to groups for dance, you know, with friends and eventually, I stumbled upon a mixture of our essential oils and stuff where almost all of the time people were coming up and saying, "What are you wearing? That smells amazing." And it's unisex so it doesn't matter. I will literally take that out with me and say, "Oh, it's this," and rub it on, and then people will start to order from there. So, that has been exciting.

The wrinkle-shrinking cream that I talked about, that's certainly been exciting. The problem with that was on the elasticity, and as you put it on your skin and it stretched your skin, you get that white sort of dusting, that's just on the micro concentration there. So, I have to look at a few ingredients that we're looking to help with keeping that elasticity. So, that one was recently. I work on sleep formulations as well. So, we also have a part of the business that deals within the body.

And I seem to have a knack for picking the right combinations of products. You can have things like, you know, valerian root, 5-HTP, lactium, there's a lot of things I can do with that. But I have difficulty sleeping, I had difficulty sleeping so I started finding what that exact mix of products were to do that, they work very well. We're currently working with a company right now, we're creating cookies and some sort of evening protein bars. And that'll be exciting because it works. It's really good to send out bags of these test samples and someone writes back and says, "I've been asleep the whole night. Like, this hasn't happened in years. I don't wake up at 4:00 a.m. and have that." So, I sort of have two parts of the business, certainly the topical, but the ingestibles as well.

Katie: And I'm going to ask an unrelated question that I think could also be a really fun tangent, which I asked in show note research about if you had to give a TED Talk, what would it be on? And your answer in my show notes was the authenticity of decentralized systems and online communities. I know that's a little bit of a deviation from what we've been talking about, but I would love to hear some high-level thoughts from you on that.

Kale: Yeah, I think COVID has forced a lot of people to adapt the way that they interact. And a lot of that has now had to be online, like this podcast. So, what I have found is that if you're going to join online communities and talk with people, and one of the groups I've talked with, it's about finance, everything, you know, Bitcoin, stocks, GameStop, all that stuff, you have to operate in a way that...I mean, for me, it's just like, you don't have to wear your mask, you can just be who you are. And I think what I have found is that that authenticity, now that we're starting...I mean, in Texas, we're pretty open as far as masks and everything, the restrictions here.

A lot of people have taken what they have learned through online sort of interactions and started applying it and being nicer to people. Maybe it's just me, but I think they're starting to do that, the whole decentralization part of that. Now, a company doesn't have to worry about having an office in a specific location. It is, "Can you do the work in specific areas?" because we've all been taught to do this. Now, I love that, but there's also the human interaction. There's things that I think we are losing from that. So, I would want to just talk about what I found in communities, people that...I have a group of people, you know, 15 people that I have never met them in my life, they are some of the kindest, nicest people that I know. We know intimate things about each other's lives, we've sent each other gifts. Like, it's just it bloomed into this thing that I didn't expect pre-COVID, you know, didn't have a lot of this type of interaction. But there's beauty in it, and there's a real vein of authenticity that I think is developed through online relationships.

Katie: Yeah, the world is definitely shifting. And I've had so many experts on this podcast that mentioned community as being one of the actual most important factors in health and longevity, and so many other things. And I think this is a challenge of our time is how do we adapt that in an increasingly technological world.

Kale: The mental health aspect of that with groups of people that just might need to hear others, I mean, it's worth to do many TED Talks just on that. I think it's an incredibly positive thing. I think it's apparent that you need human interaction as well, but it's...yeah, I'm very happy with it.

Katie: And then a couple rapid-fire questions I'd love to ask at the end of interviews. The first being if there is a book or a number of books that have profoundly influenced your life, and if so, what they are and why?

Kale: Well, Lord of the Rings is amazing because that's just...my brain goes on fire with adventure and creativity. To be honest, I haven't done a lot of reading in my early life, only in the past three or four years have I developed a passion and read probably three to four hours a day on various article sites and everything else. So, book-wise, it's kind of difficult to say that. I don't have a favorite book. Like, I wonder if I'm odd in having that. I read so many things but I don't have a lot of physical books, if any. What was the second part of that question?

Katie: Just ones that have had a profound influence on your life. And I'm with you, though, I don't like favorite questions because I don't like picking one.

Kale: Yeah. My dad wrote a book one time that talked about the history of money and the evolution of it. I felt that was fascinating. It's just a lot of studies and papers, I think that's what I have started to dive into. That's really my passion has been with reading, but I am just looking around, I don't see one book. I hope that's not a bad thing.

Katie: Well, I'm actually with you as a fellow reader of studies, and I spend quite a bit of time in PubMed. So, I don't think that's unusual. At least to me, it seems very normal. But I'll make a recommendation. If you liked Lord of the Rings and you like fiction, the "Red Rising" series is one I've really enjoyed recently.

Kale: "Red Rising" I will look into it. Yeah, for sure.

Katie: And then lastly, I would just love to hear any parting advice you have for the listeners today. It could be related to something we've talked about or completely unrelated.

Kale: I think everyone is bombarded with products and marketing and everything else, and it's changed over time. Being in tune with your body and listening to how it reacts, and paying attention to it, I think is very overlooked because you may not know why there's sort of a subtle stress level or something that you have going on. And what works for one person on a product might not work for someone else. So, start at a baseline where you can look at ingredients, you know, possibly know the company or recommendations as your starting point. And if you even have started along that path, you're on a very good, you know, intent.

I think also in these past couple of years, this has forced people, at least a good amount of people to say, "I want to do something to make my body better." And it's a conscious choice to go and to seek that. So, under...taking a little bit of time to research and understand what ingredients are, maybe what combinations are, and using that as your starting point is probably the best thing for anyone. You know, there's tons of us, you know, that do this as product companies, and it's a beautiful thing when you solve someone's problem. I've had that in the past, you know, you put a cream on, I had a woman come back that was crying after 30

seconds. And I've never had anything that works like this, that works for her. I've had that same pain cream not work for someone else. It's a very custom thing. So, I think it's just on someone to really pay attention to those things, and not think it's just, you know, out in the ether. These things are real, these substances, and how they affect our body are absolutely real in both positive and negative effects. That would be my parting advice.

Katie: Awesome. Thank you so much and thank you for your time.

Kale: All right. Thank you so much.

Katie: And thanks as always to all of you for listening and sharing your most valuable resources, your time, your energy, and your 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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