



## Transcript of “Bulletproof Radio Q&A - #191”

Bulletproof Radio podcast #191



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Dave: Hi, everyone. It's Dave Asprey with Bulletproof Radio. Today's cool fact of the day is that it's no secret I love fat but there's new research that says even high fat diets can be brain protective. The theory behind this research is that fat particularly medium-chain triglycerides gives the brain enough energy to trigger self-repair, the idea that your brain cells like ketones especially the neurons, that it may give them the ability to repair themselves more. We don't know this for sure. It's just intriguing research but it's cool. Today's episode is one of my favorite kinds and one of your favorite kinds too because it's a Q and A episode. We get so many questions in online and I don't do these as often as I would like because I really like the opportunity to do them in person with someone else rather than over Skype.

If you're watching this live, you probably noticed that I'm not in my normal studio. That's because I'm here at Tampa at JJ Virgins Mindshare event. She brings together about a hundred successful health influencers, people who are working to make everyone around us healthier. I'm honored to be here but it gave me an excuse to hang out with my buddy, Zak. Zak is going to run through a bunch of your questions that you've submitted on Facebook, on YouTube and on our blog posts just at the very bottom of the blog. If it's a podcast blog, there's a form that you can use to submit questions. If you're listening to this and you want to get one of your questions answered, submit it there and we track these things. Then, every time Zak and I sit down together, we go through and I'll answer them for you to the best of my ability. All right, Zak. Let's do it, man.

Zak: All right. Our first question comes from Bodjie. He says, "Hi, Dave. I've been using your products for the last six months now. I just want to ask what is the difference between MCT oil, [XCT oil](#) and [brain octane](#)?"

Dave: This is a thinly veiled ... This is actually a question from someone? This isn't like a marketing question?

Zak: Actually, we got a bunch of the same questions. People want to know.

Dave: Good. MCTs are, if you look at this from a marketing perspective, there's four kinds of MCTs. The coconut oil companies will say, "Oh, look. This is 62% MCT," but they're lying to you because the richest so-called MCT that's in coconut oil is called

lauric acid. It's the predominant fatty acid like that. In coconut oil, there's just one problem. It doesn't get processed by the liver like a medium-chain triglyceride. It gets processed like a long-chain triglyceride. You can get away with selling lauric acid as a medium-chain triglyceride even though it's a lie. It's not a medium-chain triglyceride. It doesn't work that way. Now, lauric acid's good for you but it's dirt cheap. It's called eat coconut oil because half of coconut oil is lauric acid. I recommend eating coconut oil as a way to get that one MCT.

There's four kinds of MCTs that different companies will try and sell us as real MCT just like coconut oil companies but you're not getting the purest stuff that we're using from metabolic activation. Now, that's plain MCT. There's also problems with just normal commodity MCT that had to do with something called C17. I wrote about this in the [Bulletproof Diet book](#). C17 is an odd chain fat that's made by less pure processes. If you've ever had severe disaster pants after using commodity MCT, there's a reason for that. Some of it comes from cosmetic machines. Some of it's imported from China but most of it has the C17 which causes the gastro distress. It happens. You get much less of that from [XCT oil](#).

Now, XCT oil is the two shortest lengths. It's not all four of the MCTs. It's just two of them. It's the C8 and the C10. XCT oil which we usually call the upgraded MCT oil, that stuff is distilled an extra time more than normal MCTs that you'd find on the market. It's that extra step of distillation and filtering that gets rid of the C17 and the other contaminants so it doesn't have the same level of GI distress or disaster pants becomes much less of an issue.

[XCT oil](#) is more affordable because it has the C8 and the C10. That means you can afford to have it. It's roughly six times stronger than coconut oil. When you look at the GI distress though, it is harder on the stomach than pure C8 which is our brain octane oil. Brain octane oil is about 6% of what's in coconut oil. Brain octane goes to energy fastest in the body. When you take that stuff, you feel it up here first. It's literally octane for your brain. When you take [XCT oil](#), you still get some of the C8 which goes to the brain quickly. The C10 takes more time to get in. You don't get as big of a boost but it still works.

Compared to putting, say, coconut oil which is what you put in just plain butter coffee that's not [Bulletproof coffee](#), you're getting 6% brain octane oil on that. That's

why there's such a big difference between in the book I read about here's how to make a commodity butter coffee. You can throw whatever you want in there and you can get some benefit. If you put any fat, even corn oil which I seriously don't recommend, if you put that in your coffee and you blend it up, it's not going to taste that good for one thing but at least you're not binding the antioxidants.

Coffee had these polyphenols and catechins. These things are important for your health. If you put milk in there, the protein from the milk sticks to them and then you don't get them. There are studies that show a 340% reduction in antioxidants that are bioavailable just by adding milk. Any kind of fat would be an improvement including just coconut oil, including even non-organic like corn-fed butter. That's not anywhere near Bulletproof. Bulletproof is [brain octane](#) or [XCT oil](#), grass-fed butter which preferably is cultured and unsalted. The culturing helps to reduce casein even more and then you add in this XCT or brain octane. That's what gives you like, "Wow, something just happened in my day." Hopefully, that's a good difference.

Zak: Yeah. When you talk about people that are making a decision about I want to get XCT or [brain octane](#), what are the tangible benefits from a physiological standpoint that they can expect?

Dave: You get faster and more for your brain when you're doing C8 versus C10 but you save a few dollars. One of the things that's really important to me, I don't think high performances is for rich people. I am willing to invest more. I always have been even when I was living paycheck to paycheck which I had for a lot longer than I'd like to have been, I would prioritize my health.

I had spent money on the things that made me perform well and feel good because it's a long-term investment. You can put a little bit in now or you can pay your cardiac surgeon later. I do my best to make things affordable. Both of those things will work for [Bulletproof coffee](#) and you feel different than if you have coconut oil or you're putting in a bunch of lauric acid and thinking you're getting the benefits of a medium-chain triglyceride. You're not. Eat some coconut oil. Get some lauric acid because lauric acid has some antimicrobial effects. It's a good thing. It's not just a medium-chain in the technical definition of what medium-chains do. If it goes through liver, it's not medium-chain the way we're using it for biohacking.

Zak: Fair enough. The next question comes from John. He says, “Dave, I’m interested in hearing your thoughts on chiropractic work. This seems to be one of the most popular yet least associated biohacks and has a good deal of promotion and criticism for its health benefits.” Your opinion on chiropractic?

Dave: Chiropractic is like doctors. Our doctors go to doctors then. I don't know. Which doctor are we talking about? The school or the study of chiropractic care is such a broad spectrum. I know chiropractors who are basically practicing anti-aging stuff. I know others or maybe I wouldn't want to go there because they're really aggressive in their treatments. I've had profound benefits from chiropractic work. I know countless other people who have.

That said, to say that this enormous body of study is good or bad is incredibly simplistic. There are amazing chiropractors who are very quantitative in their analysis. There are others who frankly probably aren't helping. The same is true if you go into any medical clinic of any kind of medicine. I would never say I think that the entire study of chiropractic is useless. It's not. Now, one of the things that I find really interesting is that you can take a very, very sensitive basically thermometer and you can run it down the spine. This is a relatively old thing you could do as a chiropractor. When you run it down the spine, what they call subluxations, areas where the spine is aligned properly, you'll actually get a small, like a .1 or .2 degree Fahrenheit difference between those vertebra and the other ones.

Funny, those are the same ones they'll find with their fingers. Why is there heat there? Some things may be happening but then you go in a little bit more and you say, “All right, maybe you don't need to do any work there.” Maybe you do. What would tell us whether it works? You could do clinical studies. There are clinical studies that show chiropractic works. There are also some that show it doesn't work. I might add that it could be a question of the patient. It could be a question of the chiropractor. It could be a question for diagnosis. It could be a question of the study authors but I've seen huge benefits.

In fact, one of the things that was most profound, when my son Alan was born, he was for the first five days of life, he had a rough time. It was pretty tight coming out. Apparently, that happens when you're born. He would sit there and he lay on his back.

He'd only sleep for 20 minutes. His right shoulder was up and he was a little bit like the right side of his face was scrunched a little bit. He looked like he was in pain.

It just so happens that one of my friends, one of my our family friends is a guy named Dr. Peter Fish. Dr. Fish has lectured at medical schools around the world. He's a pediatric chiropractor. He's gone around and he's taught doctors in ICUs for infants how to raise oxygen levels in babies by basically lightly, lightly touching this spot on the back of their neck because they have this little crick in their neck that lowers their oxygen levels.

This is biohacking. In fact, Dr. Fish used to be a computer programmer before he got into chiropractic. I loved the guy. Dr. Fish, if you're watching, kudos man. Anyhow, Alan's there. Dr. Fish put his hand behind Alan's right shoulder, just barely touched it, the lightest touch. Literally, Alan melted into the table and he slept for eight hours straight. He stopped moving that weird way. He stopped crying.

I've seen this happen. I've had adjustments myself that were enormously useful. If you watched the podcast with Jeff Spencer, Jeff is basically the team doctor for multiple Tour de France teams where he keeps them healthy. He's also a chiropractor. He gave me an adjustment because something happened at the Bulletproof Conference where something was wrong with my back. He fixed it. It won't fix everything. I don't think chiropractic care is that likely to fix a broken bone or a tumor but can it functionally help you? Hell, yeah. It's okay to be skeptical of anything. You should be skeptical of any healthcare provider until you see their track record and their abilities and you see if it works but to throw out that entire school of medicine because you're skeptical, you're not doing yourself any favors.

Zak: Good answer. My personal experience with chiropractic is very quantitative. My doctor in Portland, Dr. Guthrie who you've been adjusted, right, she actually does all those tests like the thermometer on your back, checks your posture. They measure your feet to see how your arches are. They actually do an HRV test also. Then, I get those done every three months to track the progress. I can point to the data for myself that it's really improved over the times that I've been doing it. I can't say enough good things about chiropractic if you have the right doctor. The next question comes from Beth. She says, "I have a copper IUD and I'm curious what birth control is the most Bulletproof?"

Dave: Wow. Some people don't know that in the first book that I worked on with my wife Dr. Lana, the fertility specialist was a book on fertility. It's The Better Baby Book. The best birth control you could possibly have is learn when you're ovulating. Learn when you're going to ovulate. There are very predictable changes in the female body. You can look at mucus. You can look at changes in temperature. There are various apps. There's calendars.

If you're in tune with your body, you will know this. Here's a weird little trick. If you sleep in a blackout room the way I recommend, if when the moon is full, you open the curtain and that night, you don't get that much sleep with the full moon because you're going to lighten your window but your body will start to synchronize your cycles with moon the way they would have if you lived in a cave. That can actually help you predict when you're going to ovulate.

If you know you're going to ovulate, the simple thing to do is use a condom around that time or just avoid having sex when you're ovulating. That's hard to do because when you're ovulating, you're actually horny. Also, men around you know you're ovulating through subtle biological signals like pheromones and then we keep trying to have sex with you. I would rely on the backup method during that time.

Now, what about IUDs? I think IUDs, there's a case for them but IUDs also can trigger some autoimmunity in some cases and there's some cancer risks. I would look very carefully at the research behind the one you're looking at using to see what studies have been done and how long has it been used and what are the risk factors that go with it. There can also be clotting things and IUDs can get lost but they can be a safe method of birth control. They can also be better for you a lot better than the birth control pill. I will tell you flat out, if you're on a birth control pill, you should get off of the birth control pill for your health, for your breast cancer risk, especially your breast cancer risk. The other thing that's just terrible, if you're taking the birth control pill, it influences your ability to smell a good prospective mate. It sounds a bit weird but there's good science behind this.

We use pheromones. Basically, you'll choose a mate who's biologically more likely to be compatible with you based on how he smells. If you take the pill, you can't smell a proper biological match. This actually happens where you're on the pill, you meet



someone. You fall in love. You get married. You decide to have kids. You go off the pill and suddenly, the person you married doesn't smell right. You're not physically attracted to them anymore. This is the nitty-gritty of biohacking.

The pill not only raises your cancer risks substantially. It also means that you're less likely to pick the right person. From a health perspective, allow your body to do what it's supposed to do, become aware of it and then be extra careful with the backup method like a condom or a condom and even a spermicide. There can be risks from spermicides. You don't want those inside you all the time but if it's the time of life where you don't want to get pregnant. Okay, fine. Do that but to take a pill every day or to use an IUD if it's an IUD that is one and there are many that are associated with problems, you should watch out for that.

There are a few other methods you can use. Basically, some of those things are ... Man, I'm blanking on it. This is the end of a long day. The ring that goes over your cervix, the diaphragm. No one I know actually has ever used the diaphragm but you read about these things. Apparently, the diaphragm, from the studies that I read during the creation of The Better Baby Book, the diaphragm is a safe and an effective and actually quite useful and good method of birth control but not one that's that widely used anymore.

That may be something that's worth investigating. Whether a diaphragm or an IUD is better, I don't know because I haven't seen any studies that say that. There might have been something in the last three years since I put together The Better Baby Book that's changed but I would lean as far away from the pill as I could and lean more towards what I suppose you could call the rhythm method but it's not a rhythm. It's the biohacker method. What's going on with my body, am I about to ovulate, am I expecting it to happen, things like that and that's pretty safe. If it's in that week when it might happen, use a condom. You totally go with it and you're safe.

Zak: This next question is about protein. It's from Jonathan. He says, "Dave, I recently have been using the [Bulletproof grass-fed collagen protein](#) and I noticed that the actual grams of protein per serving were only 7 grams per serving. I've always been told that in order to put on a lot more muscle weight, one needs to consume around 25 grams of protein per serving three times a day. Is this true?" Also, he suffers from

chronic tendonitis and was wondering if [collagen protein](#) is a good choice over other proteins for his joints.

Dave: Serving size is something that's entirely variable. I went with 7 grams because that's a tablespoon. If you want 25 grams, let's see, seven times four is 28 grams. You basically use four tablespoons. It could have easily said serving size is four tablespoons but then people want less. If you're bigger, you eat more protein. If you're smaller, you eat less protein.

If you want to get the benefits of using collagen for skin hydration and collagen for allowing better electrical flow through well hydrated skin as well as joints support and things like that, even 7 grams a day will do that for you. You can basically take a spoon of collagen and put it in your coffee. You can put it in soup. You can basically ... It will disappear in any hot dish. That's the way a lot of people use it. If you're using it specific as a protein source which I certainly do, if I'm going to do it, I'll do 30 grams because I weigh a little bit more than 200 pounds and I've got a lot of muscle. The idea there is I want to support that. [Collagen](#)'s interesting because it's high in glycine but it's low in cysteine and methionine and some of the other things.

You get too much cysteine like you would if you consume a lot of [whey protein](#) more than the two tablespoons a day I recommend even of upgraded whey, that can trigger inflammation. One of the reasons the BF [Bulletproof Diet](#) is a moderate protein diet is that excessive protein triggers inflammation. Protein's a crappy way for you to get energy. You shouldn't be metabolizing protein for energy. You should be metabolizing protein as a building block and you should be bringing fat and even starch or carbs to get energy for yourselves. Beta oxidation of protein generates ammonia and excess biological burden. It just doesn't serve you.

Then, that goes back to your question. How many grams of protein do you need in order to build muscle? The short answer to that is enough. You can do this by testing. In the [Bulletproof Diet book](#), I actually published a range of things. You want to eat the minimum amount of the least inflammatory protein that it takes for you to put on the muscle you want. Don't make the mistake a lot of bodybuilders will do by just cranking up the whey because of the cysteine problem. Whey can be really irritating to the gut. I would say use good quality animal protein like grass-fed meats. Use eggs and yeah, use collagen protein and use it intelligently. That would mean that just crank up your

protein. Do the workouts. See what works. I think you can get there but start with the guidelines in the book.

Zak: Cool. I recently made a bone broth just last weekend with some grass-fed bones I had. That's really great. I love that but it takes 12 hours if you got to do the whole thing. Most of the time, I'll just put a scoop of the [collagen protein](#) and then it's like ... It's a nice little hack.

Dave: I also want to call it instant bone broth but here's the thing. Bone broth, when you make it, it's broken down by heat. You're getting good quality gelatin in bone broth. You're also getting the minerals from the bones which are not as present in the [collagen protein](#) that we make. I've created collagen that was processed by enzymes so it's broken down. It's not broken down by heat or acid like a typical gelatin would be. It's actually seven different cycles of enzymes that we use on it. When you get that, it doesn't require digestion.

Bone broth is also broken down so it's very easily absorbed. It's like juicing a cow when you think about it. It's very interesting to think of what happens if you make bone broth to get the minerals and just the goodness of it but then you add collagen to it and I ... That's actually what I do when I make bone broth is like a double down on the collagen because if that's what you're having, you want to be able to do that.

Zak: You get more protein that way and all the benefits and minerals. Nice. The next question is from just K. She asked ...

Dave: Like OG or some of ...

Zak: She or he asks, "Can you talk more about the benefits of water with Himalayan salt in the morning?"

Dave: I love Himalayan salt in water in the morning. I first heard about this through Jim Wilson's ... He's wrote a very old book on adrenals. In fact, he's one of the first guys to point out adrenal fatigue. It's all the rage now. Alan Christianson's book just came out, The Adrenal Reset Diet. The first guy to really say, "Oh, it's the adrenals," was Jim Wilson going back almost 15 years. He talked about doing this as a way of healing adrenal fatigue. What I started doing was using it as a way to prevent adrenal fatigue

and to have more energy during the day and found out from that that it's actually also an aerobic thing that's been done for quite a while by some herbalists particularly going back into India. What you do is you put about a teaspoon, sometimes more, sometimes less, enough that you don't get disaster pants. You put it in water and you drink it as soon as you wake up. It sounds a little bit gross but it's not. It's energizing. The reason for this is as you're working to wake up in the morning, there's this Circadian, I don't know, spike in your cortisol.

The reason for this is really important. When it's time to get out of bed, if you don't have enough cortisol's for your blood pressure, if you're going to stand up ... When you stand up, your blood pressure changes. You'll pass out. When you pass out, you could hit your head and then a tiger could eat you. Since this is bad for your ability to reproduce the species, your body is like, "This is kind of an emergency because you're getting out of bed so I'm going to do what I need to do to change my sodium potassium ratio by generating more cortisol." If it needed to make enough cortisol to raise sodium and drop potassium, what if you just step in and kindly help your body by increasing sodium so that your body can balance sodium and potassium more effectively? That's the idea behind this. Many, many people who've heard about this on Bulletproof are like, "I feel noticeably more energy throughout the day" That was my experience when I started doing that as well.

Zak: Personally, I noticed a difference. I just take ... I have a little thing of salt next to my bed. I just take a small amount and wash it with water. I don't mix it water. Personally, I don't like the taste of it.

Dave: Still good.

Zak: Just as good or ...

Dave: If you're really into the salt thing, everyone knows to make sole, which is when you take a crystal, preferably one that's been properly massaged and you put it in a bowl. The bowl has to be special bowl. You let the water percolate the salt. Then, you take two teaspoons of the saltwater and you mix it with water. Seriously, this is in the book. I'm not joking on salt. I tried it. It did seem to work. In fact, it's interesting. You get two pinches of salt. Tossing it into your mouth and throw it down but sometimes, that brings it through a little bit, the salt. What do I do? That's what I do. I take a pinch of salt

in the morning. I put it in my mouth and I just wash it down too because it's just easier but for people who don't or people who have a problem just swallowing stuff like I don't take big handfuls of vitamins too, I feel good about that, having a little bit of it dissolved in the water ahead of time is actually just easier going down. It can be less nauseating.

Zak: That makes sense. Another related question is from Alexander who's curious about the notion of supplements cycling. What supplements do you take every day? Which ones get cycled? How often? That relates to adrenal fatigue, right, with different substances or supplements that you may be taking. Do you cycle your supplements?

Dave: We're not robots. Taking the same supplements every single day forever is something that maybe new supplement users might do. There are some supplements that I do take pretty much every day but there's a bunch of them that I don't every single day. Over time, I'd become much more open about that. At the beginning of this 10, 15 years ago, I was like, "Okay, here's my spreadsheet. Here's ... I'm actually going to make this pack because I usually just ... A whole two weeks or whole months' worth. I'd get this Monday through Friday when I was younger. I'd be like just like old people, pill things. I'm put my little vitamins in there and I'd count them all up. What I found just from doing research is that vitamins interact with air. They interact with light and interact with each other. That isn't really the ideal way to do it. The other thing is that your requirements for vitamins, they change every day. Some days, you need more vitamin C.

Here's an example. Let's say that you have the amount of vitamin C you can absorb and you can tell this with a really cool test. It's called the bowel tolerance test. You just keep taking vitamin C until you get disaster pants. That's your number. That's as much vitamin C as you could need but here's the problem. Get on an airplane and fly somewhere and take twice that amount and you probably could abuse it. You start getting cold. Your ability to take vitamin C will drop dramatically. Vitamin C only works ... It's actually a very, very steep dose-response curve. You need to get really close to bowel tolerance for vitamin C to work. Years ago when I was just finishing, 15 years of sinus infections, I had these terrible things like every month that I'd get when I go on antibiotics. I swore like I'm done with this. I'm not going to take antibiotics anymore. I had a really strong sinus infection.

I went to a local physician. I said, “Look, I’m not going to do it. I’m going to work with.” He’s an alternative functional medicine guy. We did 100 grams of vitamin C intravenously. 100 grams is 100 large vitamin C dose. Intravenous vitamin C is more potent than taking oral. On top of that, it took 75 grams of vitamin C capsules, that’s 75 large capsules to try and reach bowel tolerance. I couldn’t do it.

I went back the next day and I did another 100 grams of vitamin C intravenously and another 75 grams, extra 75 grams throughout the day. I still didn’t reach bowel tolerance. The sinus infection did start to get better though. Those ones were really bad, that’s really the bad ones I had before I did some other protocols that helped me with it. How much vitamin C should you take every day? Are you sick? Are you stressed? The same goes for things like adrenal glandulars. I take those things anytime I got less sleep than I wanted, anytime I’m traveling, anytime I got any sort of jetlag issues where I’m going to be doing something that might make me want to be more resilient than normal but there are good studies that show antioxidant enzyme while it’s in the body are really important. If you take antioxidants all the time, you can suppress your antioxidant enzymes.

The short answer here is what I do today is I have ... I know you guys aren’t going to see this and I’m not going to show it to you. I’ll tell you why. I have a shelf this wide. This part of the shelf is stuff I take in the morning. The others, unfair advantage and there’s some other things that you would expect to be there, some of my stuff. There’s stuff I take with meals. It’s a bunch of stuff that are absorbed best with food. Then, there’s stuff I take before bed. Those are the three categories. Some of the stuff that I take with meals, I also take when I wake up and before bed but I have a little part for that. The way my brain works, I’m very spatial in things. I just know this part of the shelf is where I go. I know what everything does. I really encourage you. If you’re serious about biohacking, it’s know why you’re taking your supplements, think about the day that you had yesterday and think about the day you’re planning today and take the supplements that will increase your performance or increase your resilience. That’s literally what I do. The more you do that, the more connected you’ll be with why you’re taking these things and what they do for you.

When I travel, I’d pick what I’m going to be doing and I’d say, “All right. This is an intense trip. I’m going to be jetlagged.” Then, I put extra stuff. For instance, on this trip, I have three bags for every day. There’s a bag of items in the morning, bag of items for



one meal and a bag of items before going to sleep and a little bag, these little crap bags. Every one of them has 4 grams of vitamin C in a time release form.

I'm taking 12 grams vitamin C a day because this is a relatively intense trip. In 10 days, I'm going to three cities and I'm pretty much on 12 to 14 hours a day with interviews, with recording this. I've been on Fox News on this trip and I'll be on stage in front of 100 health people later today at JJ Virgins event. This is an intense time. That means I want to up my vitamin C. What was the answer you're looking for? How should you cycle it? Don't cycle like a robot. Cycle like someone who knows what you did yesterday and know what's happening tomorrow. When you do that, you'll say, "You know, this was a stressful day. Maybe I'll take more of my coenzyme, make it B complex." That's a healthy thing to do. If you just don't feel like taking it and you would rather go "meh", just don't take it that day. It's okay. You're not a good person if you take your vitamins every day. You're not a bad person if you don't. Those vitamins are there for you. You can use them to make your day better. That's a long answer.

Zak: It was. Great. I have two follow-ups. One, for beginners who aren't as in tune or aware of what all those vitamins do and it's a little overwhelming to start, do you recommend any of those blood test that can be like a nutrition profile, say, when you're low on vitamin D, things like that? That's the first question.

Dave: Red blood cell mineral analysis can be really good. They can tell you what's there. They can also look at what's going on with your fatty acids in your red blood cells which should be interesting like shocking.

People think too much fish oil. It will disregulate your cell membrane if you have too much fish oil. I'm a fan of fish oil and all that stuff but if you take masses of it, short-term, it can actually really help with inflammation. If you take mass of it long-term, it can actually trigger problems. Yes. Getting a quantifiable test to see your B vitamin levels is also really, really useful. Totally spend money on test if you knew and you're willing to spend money on test but if you don't have the money to spend on tests, that's okay. What you do is you take the list on the website, we'll put it in the show notes, the 10 most important vitamins. It's pretty likely you're magnesium deficient. Taking magnesium is a really good thing and it's very affordable, vitamin D, affordable, vitamin K2, not that affordable but really, really critical to keeping your calcium where you want it.

These are things that pretty much everyone should do. The reason that I'm not going to tell everyone, "Here's what's on my shelf," is that I weigh 300 pounds. I had toxic mold exposure. I had chronic fatigue syndrome. I had fibromyalgia. I have arthritis when I was 14. I have a unique genetic profile. I have, let's see, I don't methylate vitamins very well.

If I write that whole list of everything I do for all the reasons I do it, it is so customized after nearly 20 years of customizing my stack that people out there who will go and copy what I do and it won't work. You need to build the things that support your biology.

That's why the [Bulletproof Diet](#) is a roadmap and a spectrum with three tools that tell you here's how to navigate the roadmap to get what works best for you because you're not that person if you enjoy white potatoes without peels. You're just not assuming that you're genetically okay with it. They make me itch and cause me joint pain. That's why they're a suspect food. The same thing is true with vitamins. One of the things I did early on with B6 ... B6 is good for you. There's a problem with that. Excessive B6 is tied to peripheral neuropathy which means numbness and tingling in your fingers and toes. I actually got this from excessive B6 a long time ago. If you don't catch it in time, you keep taking B6, it can be permanent.

It actually makes me a little bit scared when I see supplement companies just including vitamin B6 all willy-nilly because everyone knows it's good for you. If you're taking five different things and all of them had a bunch of B6 on them, you could have problems there. Be aware of the toll you take from different vitamins as well. Bottom line is there's a science of supplementing. I recommend blood tests but don't do it just because I do it. Do it because your body and your day and your diet and exercise and the amount of sleep you get, the amount of stress you're under, those dictate what you do. Be quantitative with the blood test if you can afford it. If not, go down the list with cost benefit analysis. That's why the top 10 Bulletproof supplements are there.

Zak: My second follow-up question on that is something that I know is in a lot of people's minds. Why does everything that we talked about biohacking and stuff cause disaster pants? It's like we've mentioned different ways you can get disaster pants already on this podcast. Is that ...



Dave: Why does everything cause disaster pants?

Zak: Too much MCT, too much vitamin C.

Dave: It's true. Your body is good at absorbing stuff. It will absorb so much but it's not that good at it. One of the reasons that I do intravenous nutrition on occasion, probably every time I go on a long trip, when I come back ... If I can arrange it with local people where I live or sometimes, I'll just stop by in New York and I'll see someone who does intravenous vitamins. The reason I do that is that your gut can only absorb so quickly. If you want to get extra vitamin C into the body beyond what the gut can absorb, you'll do it.

Here's what happens. Because I wanted to bring this in, I brought it as much as I could do and what do I do with what's left? You push it down. If it's irritating and the gut wasn't designed for basically the large intestine to have this present in it, the body's like, "Oh, it's in the large intestine and it shouldn't be. Let's get it out of there." Thus, disaster pants. It's funny. It's one of the ways the body eliminates too much of something.

Things like MCT oil, you absorb it. The body loves MCT oil. It goes through very quickly. It will escort other things through which is really, really cool. In fact, here's a cool study we haven't talked about yet. There's a study from the top of my mind. I don't remember where it was done but they looked at using what's in [brain octane](#) or [XCT oil](#) with cayenne and found a 50% increase in thermogenesis which is cool because cayenne itself can cause thermogenesis, [brain octane](#) and [XCT oil](#) can cause thermogenesis. You put those things together. Why, because the oil helps the cayenne to come in.

Now, I would caution you cayenne is on the list of suspect foods for two reasons. It's one of the highest aflatoxin harboring spices. 85% of people with Crohn's disease have aflatoxin present in their blood at higher levels. That's an interesting other study. You might want to avoid it for that reason. Also, it's a nightshade. If you're sensitive to nightshades, you can get autoimmune reactions from them. Take cayenne because it kicks ass and take it with [brain octane](#) if you want to kick even more ass. It's a great nuance but if you take too much of it and you're not only going to have disaster pants. You're going to have hot disaster pants. That's even worse. Watch out.



Zak: Disaster pants is your body's own way of quantifying what we can ...

Dave: It's a strong signal that says don't do that much again.

Zak: Andy Hnilo talked about putting cayenne in his [Bulletproof coffee](#) and taking it up a notch. I tried that. Oh my gosh.

Dave: I've done it too. Man, you sweat when you do it. It doesn't taste good though is the problem. I don't appreciate it.

Zak: I like it actually.

Dave: Do you?

Zak: Yeah.

Dave: I like it more in the hot chocolate kind of thing.

Zak: That's really ...

Dave: That's more of a Mexican thing.

Zak: Cool. That is going to wrap up part one of this Q and A podcast. We'll be back probably later this week within the week with part two.

Dave: Awesome. Hey, thanks Zak.

Zak: Thank you.



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