
Dave Asprey: Willpower, Decision Making and Food

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Steve: Rather than asking a logical question, I am going to ask an illogical question. How many of you guys don't know who Dave Asprey is? There's a few. Then I'll link in the introduction. For those of you who don't know, Dave is actually our chairman here at Silicon Valley Health Institute, and he is CEO of the Bulletproof Executive, Bulletproofexec. He spent two decades, and over three hundred thousand dollars to hack his own biology. He lost a hundred pounds without counting calories or excessive exercise, he used techniques to upgrade his brain by more than twenty IQ points, and lowered his biological age, while learning to sleep more efficiently in less time. Learning to do the seemingly impossible things transformed him into a better entrepreneur, a better husband and a better father.

Dave is the creator of the widely popular Bulletproof Coffee. If you haven't had a cup, check went out. He is host of the number one health podcast, Bulletproof Radio, author of the New York Times best selling book the Bulletproof Diet. Through his work Dave provides information, techniques and keys to taking control of and improving your biochemistry, your body and your mind, so they work in unison, helping you execute at levels far beyond what you'd expect without burning out getting sick or allowing stress to control your decisions. Dave's newest venture, Bulletproof Coffee shops and cafes are coming your way soon. There's one in Pasadena, and another one in Santa Monica. Please welcome Dave Asprey.

Dave: All right. It worked. Am I up? Thank you. Hi everyone. Thank you for coming tonight. A lot of people don't know it, but Silicon Valley Health Institute has been meeting for twenty ... Since 1992-1993, which is remarkable. For there to have been for more than twenty years now, this group is continuous every month hearing from top experts. It's remarkable, and people oftentimes ask me like, "How do you know? You don't have a degree in medicine." Fixed the mike now. Are we good? All right. My whole dancing routine is ruined. Nice. Anyhow, this group is near and dear to my heart. And I'm still chairman. I've been president. I've been a board member for a long time, because when I first started coming here, I was like, "Wow there's a lot of people who know a lot of things, and you don't have to have a degree to learn from experts like this." I'm really grateful to have had a chance to do this and eventually to be able to coming and present. I think this might be my third presentation in ten years.

My first one was about mold toxins and mycotoxins, and what to do about them, and that's still online. And the last while we've put, in last three years we put ten years' Worth of video up on the website, and we haven't had a chance to transcribe all that but we're working on it. This is a huge amount of knowledge that's been out there, and it's supported by ... Basically, it's five bucks to come in. I think the first one might be free. But if you have an extra five bucks, and you leave it with our esteemed treasurer, it actually helps. Is it ten? Sorry. It is five bucks if you subscribe for the year. It's ten bucks if you just show up on time. But if you're feeling generous, this is certainly ... A couple of other board members donate. I donate much more than five bucks, but it actually helps because we pay for the room, and we put all this online for free, and it's a meaningful thing, and we get feedback that it's actually helping people change their lives, and it really matters.

Thank you for coming tonight and supporting a live event instead of just having all emailed to you. Not that I mind emailing people. Tonight, it's time to introduce you to something that you may not know about. Actually, I need to know something, just so I know who I'm talking to. How many of you have read my book? That's like half of you, maybe a little bit more. First, thank you. Secondly, you might have heard a little bit of this, but I'm not regurgitating what's in the book. This is mostly stuff that isn't in the book, but the model for understanding this is from the book. Inside your head, you have a Labrador retriever or some other floppy dog that drivels a lot. There's really only three things that this dog will do. And they're very carefully engineered things.

The first one is run away from things that might eat you. It's a really useful skill to have, and if you can't run away, try and kill the thing that's trying to eat you. It turns out that if you have this skill, then the odds of the species's surviving go way up, which is why you have this skill even if you don't really have the human parts of your brain. This is why pretty much any mammal can do these kinds of things and a lot of lower forms of life as well, but not trees. What? No one laughed? The second thing that any Labrador will do is it will eat stuff. If you imagine this Labrador walking down the street and it's like, "Look, a gutter Taco. It's been there for at least a week. I think I'll eat that."

Why? Because if you don't eat, you might starve. And hey this is great. This species will survive. It doesn't matter if you throw up on the rug later. Like you've got to eat it. When I see you have it in a Labrador, you have the same thing. But you're in a conference room, and someone sits down with a plate of cookies, and this conversation will happen with your inner Labrador. And it goes something like this. The Labrador says, "Eat that. And you say, "no." And then the Labrador says, "no, seriously, eat it." You're like, " Show up." And then you sit there and it basically just wears you down. Eventually like "How about if I just eat half?" And then, you're like "bad dog." And you're like "I'm a bad person. I'm weak." It turns out you're not necessarily weak, but this dialogue happens, and there's a huge number of decision to say no to this thing that's screaming at you, like the cookies are like "eat me"

And the Labrador saying "eat it." And you're like "no" But, I mean if it was about an hour or two and you're going to say no so many times before you're like, "will you like be quiet, if I just do that?" Those are just two of the main things that the Labrador likes to do. And it turns out that not starving to death does really help with the survival of the species. The other thing that's involved in the survival of the species is the other F word, I'm frying, like french fries. That would be reproduction and well the Labrador inside your head spends a certain amount of time thinking about that on a daily basis. More so if you're one gender versus the other. I'm not pointing fingers, or identifying which gender I'm talking about.

But if you imagine that there's this thing inside of you that is programmed for the species to survive without any of your knowledge or permission, it's going to do those things, whether you like it or not. It's actually causing a lot of trouble in your daily life. In fact everything that's ever gotten you into trouble is probably one of those three

behaviors, including like, "oh I'm easily bored." That's actually the fleeing or fighting. You're just looking for something that might you more aggressively than other people. Just accept that these are survival behaviors. This is what we all have and something else happens here. If you look at that sitting in your head, and you look at what willpower itself is, you'll find that willpower itself is just a series of decisions to say no to what the Labrador wants to do. You said no to the cookie, the Labrador said yes.

You said no that's willpower. Right? The Labrador says, "you know, you could lay back and just you know stretch out and lay in the sun", and the other part of you says "you know, I'm going to do the dishes." Lay in the sun, do dishes. Right? The willpower is the part doing the dishes, the "I just want to lounge around" Is basically what the dog does, because you can pretty much imagine that. In order for you to make those decisions that say "I'm not going to go home that leg, I'm not going to eat the gutter taco. I'm not going to spend all of my time basically chasing sticks." That requires your PFC, which is also known as your prefrontal cortex. This is the frontal part of your brain using a relatively simple thing called the triune brain model, which says that there's parts of the brain. There's a reptilian part, a mammalian part, and then the human part. I know it doesn't sound totally accurate. Is that a good framework? Yes, it's good for discussion, discussing things for sure.

And the prefrontal cortex here is the most mitochondrially dense part of the body. Mitochondria are the power plants in your cells. They make all the electrical energy that powers your entire body, which actually is powered by little electrons that are made. It's part of our ATP cycle. If you realize that in order for you to say no to the Labrador, well that's something that requires energy. And you do run out of energy. You can run out of energy. Which is particularly interesting, because in order to use that willpower we make a decision. "I'm going to do the dishes, I'm not going to do the dishes." "I'm not going eat the cookie." All those things, it's a decision. And decisions have a problem. There's only so many decisions in a day.

In fact if you want to get a parole and you're in prison, you really want to be the guy that goes up to the parole officer at eight thirty in the morning. You have a really good chance, 80% Chance, this is in Israel anyway where they did the study, of getting your parole. And if you want to stay prison to get the free fine cuisine, you go there at four o'clock in the afternoon. The people making decisions, they're zombies. They're done making decisions, and they're not going to make a decision. They're like, "whatever, do it later." You're kind of the same way. And this is because we didn't use to believe this. We used to think if you didn't have more decisions, if you didn't have more willpower, it is because you were weak. No, no, it has nothing to do with weaknesses. It has nothing nothing to do with desire. It has nothing to do with morality. It has to do with energy and the fact that it takes food to make decisions, it takes energy. Because you translate food in energy. In fact you translate calories into energy.

And if you want to make good decisions, eating only four small salads a day, you probably won't make decisions for very long, because you run out of energy. This is

actually shown in studies. Your ability to make good decisions goes down over time, because you get tired and if you're hungry, or you didn't get enough sleep, you make worse decisions and you actually have less willpower. This is awesome, because what it means, is there must be some things you can do to hack that, to have more control, to have more willpower and that's what we're talking about tonight. I've also never presented from an iPad. I forgot to pack my laptop. Because I was chasing a stick. The first thing you can do to grow willpower is you could turn off parts of the Labrador. Shut up permanently. Like here's a bone, and suddenly the Labrador stops bothering you. You could stabilize energy so you can make better decisions for longer, because you have more energy. Wouldn't that be amazing?

You could just have more energy in general, which would translate to more willpower and more decisions. You could get rid of things like boat anchors that you're dragging around. You could train the Labrador to bark less and to be well behaved. I was giving a version of this talk at a conference called paleo FX. And there was a former navy seal next to me, a good friend actually, and we were talking about struggle. His point was that "Good change happens through struggle." And here's my definition of struggle. You've ever seen someone walking a six month old puppy? That's struggle. Because the dog's on a leash, and they're walking like this, and the dog's not going. It's sitting, it's digging its heels in, it's trying to throw the collar and it's not trained. That's what struggle is. When you look at what happens with a service dog, like you snap your fingers, and it walks next to you, and it's effortless.

It doesn't take any work. You turn sideways, it turns sideways with you. Your brain can be one of those two kinds of dogs. And there is no nobility in dragging your brain along behind you on a leash. That's just an untrained brain. The idea that it's supposed to be easy, and if it's not easy one of these things is wrong, that's great value in that, in knowing which one is kind of an art. This is the art of hacking yourself, that you can have more willpower. The other thing that I've become really good at is making fewer decisions. And there's four words you need to know for that one. If someone asks you to make a decision, here's what you say. What do you recommend? That is the greatest hack of all. And as a CEO of a company that is growing at a good clip, especially more junior employees going, "yeah, but what to do?" The answer is always the same. What do you recommend?

And it turns out that someone that's coming to you with a problem has probably looked at the problem more than you have. Their recommendation may be wrong, and it can be corrected, but the bottom line is that you probably make hundreds of decisions every day, that you really don't have any reason to make or any need to make, and you can build your environment so that you have less decisions to make. Did you really need fourteen forks next to you? Probably not. Just one fork for the whole meal. It's less decisions involved. Just doing little things like that, every decision comes at a cost. Stop wasting decisions their precious. They're like dollars. Hold on to them, and don't don't give them away easily, unless it's for a good cause, in which case you should. The reason some of these are red, and some of these are black is that I've done a lot of work on these two particularly in the last couple years.

A lot of brain training, neurofeedback and things. We're going to talk about these first four tonight, because these are more biological things that we can handle. Now, what am I supposed to stop talking? Because I'm going to manage to that time. I'm sure they'll be some questions at the end. Quarter of? All right. I'm just like, can I check my email real quick? Just kidding. I'm just figuring out where the clock function is. There we go. So, quarter of. That's out about an hour. Good. Here's the first thing you do to turn off the Labrador, which is really kind of ridiculous. You can feel full. Have you ever? Ok, this is mean, but I did this when I was a kid. I've had dogs since my whole life. Because they think they're Labradors, but they're easier to feed. They're hunting dogs, meant for hunting badgers. They're actually tougher than they look, which is ridiculous.

But when I was a kid, I ate hot dogs. The way we would cook hot dogs is we would boil them. And then I would take the pan of hot dog water, and I would set it on ground, and the dog would drink the hot dog water until it was like a stretched skin. And now I know that that was not good for the dog. At the time, I thought it was just hydration. And that dog, when it was done, would just lay there and sort of wobble. The dog's name was Robin. And the dog would not do anything. It would not get up. It would not bother me. It would not bother anyone else. It just rested. The corollary here is that when you can turn on satiety, and you just have this feeling of fullness, you actually have more willpower, because that little voice that makes you make a decision, think about this decision eat the cookie, no. Eat the cookie, no. Happening every second. Eat the cookie, no.

Pretty soon those decisions are gone. They're just worn out. If you can shut that voice up, even for just three or four hours, the number of decisions you're capable of making in a day went way up. There's this really cool hormone. It's right here, and it's actually sponsored by Calvin Klein. It's called CCK. This hormone is the hormone of satiety. Satiety is fullness. Wow, there's a hormone that does this. If you could have more of your, fullness hormone, the Labrador will shut the hell up, and your food cravings will go down dramatically. If you wanted to stop thinking about, you know what? If I walk this way through the office, that drawer has a bowl of candies in it, and I'm just going to have one. Tell me, if there's someone here who's ever had food cravings, like you know where the candy is hidden in your office? I know I used to be three hundred pounds right? And if I drive home that way, I could go by Starbucks, and maybe I'll just get a little scone.

We do those things all the time. We build this into our thinking because this Labrador is going blah, blah, blah. If you can raise CCK, that random food taking stops and you can walk right past the gutter tacos of our lives, and it doesn't matter. That means that you have less decisions to not eat, and there's a magic way to do this, which is called ketones. You know, ketones are what happen when you practice fasting, or you eat a very high-fat, low-carbohydrate diet, like the Atkins diet, some forms of paleo, although not many of them anymore, because apparently like paleo fruitcake is a thing and you know, there's all sorts of like superstar sugar bombs. As long as it's coconut sugar, which is like eighty percent white sugar anyway, apparently then it's paleo, according to some food companies. But if you're on a true low-starch, low-

sugar diet, for several days especially, you can raise your ketones levels. There are other ways to raise ketones enough.

And as we go through this, I'll share with you the levels you need to get to to control CCK. But there's more to it than that. Because here's the other thing. We talked about feeling full. The opposite of feeling full is feeling hungry. But if you don't feel full, you don't have to feel hungry. It turns out there's a different hormone for that. And the hormone for this is you can remember it, because it's like a gremlin, but it's ghrelin. And ghrelin makes you hungry. If it's not enough to say I feel full, you also say I don't feel hungry. You need to change your ghrelin levels. You drop it. And if you can do that, the same freedom happens. You want to affect CCK, and you want to affect ghrelin. How do you do that? Ketones, same thing. If you can go on a high-fat diet with the right kinds of fat, and you don't eat too much protein, magically this changes. I told you this wouldn't be in the book. I hadn't actually understood the significance of certain levels of ketones when I wrote the book.

How many do you need in order to make this happen? Does anyone know how many what the blood level of ketones would be officially in a nutritional ketosis? It's 0.8, or higher. If you're like on a true ketosis, zero carb kind of diet, your blood levels can go above 0.8, they can be 1 Or 2 Even if you're like a hard core ketosis fat-burning metabolism. But what's happening here for the effects I'm talking about? These are not all the effects of ketosis. But normally the level's going to be 0 Or 0.1, if you eat a normal diet. You have carbs, your body just won't make ketones. It doesn't need to, so they'll be negligible when you pee on a stick, that's supposed to turn pink for ketones, it will not turn pink. Well, if you can get zero point three in your blood, you can control your ghrelin, and 0.5 Controls your CCK.

What happens here is that if you can be at a level of ketosis that's higher than you can naturally do, eating normal foods, unless you're on a low-carb diet, but below what happens when on a low-carb diet, you get these effects. If you're on a low-carb diet, you get these effects. And this is one reason that if you're in full ketosis, you feel really, really good. The brain gets more energy from the ketones. You feel great from that, but you also have these hormones. Like "wow, it's amazing. I'm just not hungry. Lunchtime came, and I just didn't care about lunch. Like I could eat it, I could not eat it. But the yammering in my head was gone and just like food became something that I didn't have this giant attachment to."

Ketones do that for you. If you're doing something called C8 MCT, I manufacture this full disclosure there, then that has a very specific way of raising ketones. There's some studies that will come out in the next three months, where we measure it. Orders of magnitude higher than you get from from playing coconut oil itself. This is about 6% Of the fat that's in coconut oil. And it's a hack for ketosis. It's not MCT oil. MCT oil includes some types of oil that actually don't work. They work negatively for making you going to ketosis, believe it or not, and this is also not something that's been published yet. It's a very slight negative effect. But adding the C12 lauric acid from coconut oil, which is a beneficial oil, that one I recommend you eat, it just doesn't help you get launched into ketosis.

One of the things that I do, and I have done every morning for many years now, is I do bulletproof coffee. Because bulletproof coffee has enough brain octane in it for me to do a stick, and when I make it for myself I put a little bit more than two tablespoons, because I'm a big guy I do a stick, actually it's on my finger not my arm, and I do it on a ketone meter, and I can reliably hit point eight. Even if I had a pound of sushi the night before with white rice, it doesn't matter what I ate, I can still get just enough and something really interesting happens when you can reset your ghrelin levels. It's not just that you have more willpower, it's that ... If you've gone through significant weight loss, something normally happens. You lose twenty pounds, and then six weeks later, you gain thirty. You lose thirty, you gain forty. You lose forty, you gain sixty. And this happens over and over. It happened to me. I didn't lose one hundred pounds. I probably lost like three hundred pounds for all that yo-yoing.

And it's really annoying, because you have to keep buying pants. And pleats. I used to have lots of pleats. One thing that they never tell you, and one thing that still isn't well recognized even in paleo circles, or any other mainstream nutrition, is that your ghrelin levels, this hunger level, will remain set at your fat weight until you reset them, and ketones will reset them. Which is why if you go into carbohydrate restricted diet, you can have these amazing effects, because then your body will say, "look, my craving level matches my actual weight." But until you've gone into ketosis, or until some other thing happens that triggers that, and I don't know what other things would, then you end up eating like a three hundred pounder, even if you're two hundred pounder, and the odds of going back to being a three hundred pounder go up, because you have cravings. Because the cravings will eventually wear down your willpower and you'll make that decisions. You'll eat half the bagel, and then the rest of the bagel and then the whole bag.

It was a question? I can repeat the question. The question is, if you have a ketone meter, like a blood stick one. AccuChek makes them. They're two hundred bucks I think. How long after you consume brain octane should you have a test? I usually find my levels go up within a half hour, appreciably. And I've seen some different studies, depending on how many times a day you do it. I have made a habit. Now I put some in every meal and it's just like meals come, meals go. Snacking is not a big deal. It's pretty interesting. So the timing and the other things ... With it, but if I'm doing pure fat in the morning without any carbs, that's when they see the spikes within a half hour. If you're in a very low-carb diet you can pull this off with any kind of fats, although, if you're eating margarine and soy oil, which on some very old low-carb diets like their original Atkins diet, there wasn't really quality control for those, you could do it, but just please don't.

Because that's going to cause inflammation in your body. It's not a good idea. Now we get to the next part of this, which is not turning off the Labrador. That "I'm hungry, eat all the time" It's an emergency, like there's a threat to my existence and I apologize this is so small. I didn't put these in my cool bulletproof slides and all that stuff. I'm here to slide you guys, I'm here to share info. The problem with being a Labrador in your head is that the Labrador doesn't understand what's going around

you very much. It's not good at recognizing emergencies. But one of the emergencies here is that you have a brain energy problem. If your blood sugar crashes, what happens? It's an emergency. There is nothing in my head. I don't have enough energy to regulate my metabolism. Oh my God, if that happens I could pass out an entire ...

So therefore, you should stop everything and you should fire off some things, like run away from tiger things, which would be adrenaline, and it would be cortisol. You end up with this thing, where your body says, "all right. You get a little insulin resistance, because you ate too much sugar, you ate bad fats, and you didn't have the right vitamins and minerals. Now, your blood sugar levels start to fluctuate, which is an incredibly common problem in people. Every time they drop your body says, it's an emergency. You hopefully make some from breaking down your muscles, or you take glycogen, which you can basically get from like glycogenolysis. But what's going on there is a call for energy. Your adrenals end up getting stressed, because it's adrenaline that drives that fat loss.

That drives that fat use or that use of protein for fuel. The adrenal glands are now called on every time your blood sugar crashes, which inevitably leads to adrenal stress. I say inevitable assuming that you're living in North America, and not in a log cabin somewhere, because we have enough other lifestyle stresses. There's the commute, you're balancing the checkbook, EMF, chemicals, lack of sleep and all the normal lifestyle stress. So most people have more stress than we're biologically designed to handle, and then you throw in this fluctuating blood sugar and your brain every time a drop says, "oh my God, dire emergency" And it kicks you in the adrenals until they don't get up anymore. When your adrenals are stressed, they ask you to eat sugar, which wakes the Labrador up, and the Labrador says, "hey, don't eat just one cookie eat all the cookies. It's a life and death emergency.

A tiger could eat you if you don't need the cookies. No, I'm serious this time. Eat the cookies." And now if you're like most people, you're like "I'm about person," Because I wanted to eat the cookies, and then I probably did. Because I said no to Labrador, when I had a little bit of low blood sugar and I was just little bit hungry and my ghrelin levels for my cravings were there, but also and this is like a strong craving. Now you've got some serious things going on. You're going to do what most people do, you're going to eat some sugar, which kicks your insulin up, which causes your blood sugar to fall too much, after you're done with it, you crash again, and that stresses you out, and you get stuck on the cycle.

If you wanted to have more willpower, and you wanted to make better decisions, and you're stuck on the cycle, now you got one Labrador saying, "I'm kind of hungry. I'm not feeling that full going eat the cookie, eat the cookie." And they've got that same Labrador screaming at you, "eat the cookie. You're going to die if you don't eat the cookie" And you're a bad person if you don't have the willpower to say no to that. That's actually not how it works. There's something really bad that happens though, because when you're stressed, your cortisol levels go up. Your adrenaline that you got when you had hypoglycemia also caused your cortisol to go up. Cortisol itself raises your blood sugar, which is one of its functions, so you can run away even in an

emergency, except your blood sugar went up, which cause insulin to go up, which causes insulin resistance again.

And if your cortisol is consistently high, you get a form of hypothyroidism, sometimes, not always called reverse T3. Or I would say, problems of reverse T3. This is a cycle that says, "all right, if you can break the hypoglycemia problems by having stable energy in the brain, so the body doesn't recognize that there's a dire survival of the species emergency every time you have a blood sugar swing. You know it's not a survival of the species thing, but the Labrador in your head has no idea, because it's dumb and it's an automated system that's there to keep our species alive. This is something that happens with the flee response. What do we do? Well, first, it would stop brain energy emergencies. Don't eat stuff that causes major blood sugar swings. You shouldn't do it anyway, because when your blood sugar goes up, it tends to cause events like ...

It tends to cause aging, and it's tied to a whole host of really bad things. You want to stop these fluctuations and one of the things you can do is you can have some ketones present. And if some ketones are present, when there is a drop in blood sugar, the brain can use ketones and the the depth of the emergency isn't nearly as high. You still can have hypoglycemia, but it's not the body-shaking, really, really bad hypoglycemia. The other thing you can do, and this is a little controversial. There are some people survive on no carbs or essentially very low carbs for many, many years and they love it. They are in ketosis all the time. My experience with myself and with enough other people is that there is, and it varies by person, there's some amount of carbohydrate that when you're not in full blown ketosis is going to make you feel better. If you eat zero carbs you're likely to have more energy fluctuations, than if you have a few carbs time variety.

And this may vary for you, and the kind of carbs you should eat are not Ben and Jerry's. They're generally starches that are low in antinutrients, and they don't raise your blood sugar a lot but provide some stable energy for you. When I did essentially zero carbohydrates, like one serving of broccoli a day the rest lots and lots of fat and some protein, trying to mimic like the ratio of calories from an Eskimo kind of diet, after three months, I found that I was waking up twelve times a night without remembering it, that's what my sleep monitor told me. I had no tears. My eyes were dry, my sinuses were dry, and I developed a bunch of food allergies. Because I didn't have enough carbohydrates to make mucus, which should line your stomach, as well as it is a component of tears.

It is possible to eat too low of carbohydrates at least for me. I know other people, my friend Jimmy Moore, who has recorded a thousand episodes of Live in low-carb, he eats essentially crazy low amounts of carbohydrates, feels amazing, but he used to weigh about 450 Pounds. He's an example of a ketosis adopted human who loves it, but I think there's a bell distribution curve there and that there are some people who just thrive on that, but they're the exception. And the amount of carbs and the timing and frequency that you eat them, it's kind of individual, but cyclically going into fat-burning mode all the way, full blown nutrition ketosis, this thing coming out for a little

while going in, seems to keep the body in the best shape. If you do this, you might be able to break the cycle.

You might need to take some adrenal glandulars, but anything you can do to tell your body that it's not a life-threatening emergency, because your energy's crashing. That afternoon tiredness that you feel is likely some of this. If you want to have more energy for decisions, you could maybe make a few more of them, or maybe make a few better ones, you could also do some of the things. Your brain has these two kinds of fuel, glucose. The glial cells in your brain will, well, if they're given a choice they'll use glucose. But your neurons prefer ketones. If they're given a choice of both ketones and glucose, they'll use ketones first. Know who was it was like dealing with neurological damage?

Your neurons will eat ketones before they'll eat sugar, you might want to consider a ketosis kind of direction for that, lowering cholesterol would not necessarily be the opposite sides of the coin, but that's an interesting data point. In a normal environment, you're either a glucose-burner or you're a fat-burner. Because to be a fat-burner, you need to fast for several days or at least do some intermittent fasting or you need to be eating a specific unusual diet, unusual in terms of our history. There were a lot of times when humans were like, "oh, there's so much good fat around us, that we're going to only eat that." And that's why we have expressions like living off the fat of the land. That's something you want to do, but you don't get to do. Now you actually can live off the fat of the land, you just need to pick the right fats and it's pretty amazing. You basically have a choice. What I would say is that you can have enough ketones that you can sort of break some of these rules by cheating and using some of that to artificially raise your ketone levels enough.

To cheat a little bit, ketones or glucose, you have some carbohydrates, but you also have something that raises this. I don't have a study that I can show you. I've seen results of a study that showed that coconut oil or even butter alone, unless you're on a very lowcarb diet does not have enough of a ketogenic effect, compared to something like even just the general mix of some of the MCTs or specifically the one that I focus on the most. There's also this thing called bulletproof intermittent fasting, and I wrote about it in my book. You can get the infographic for free without buying the book at all. It's called the bulletproof diet roadmap. You go to the website and I'll send it to you for free. It's at bulletproofexec.com.

This roadmap shows foods and a bunch of other things, including a timing window for how to do bulletproof intermittent fasting. This is a technique that says you wake up in the morning, and by the way if your adrenals are trashed, you don't want to do this every morning, you might do it sometimes, you might not do it at all. It's a technique. I didn't say that is good for everyone. But I think it's better for most people than plain intermittent fasting. The idea of intermittent fasting without the bulletproof edition is you just don't eat for eighteen hours a day. You have a nice big lunch, a nice big dinner. You eat a normal amount of calories for that day. You go to bed, and you don't eat until two o'clock the next afternoon. You skip breakfast and have a late lunch and when you do that, it does cause all sorts of benefits to the body. It also can

stress the adrenals. So if you already are having energy stressed issues, this doesn't work.

It works pretty well if you're under thirty, especially if you're a male under thirty, then you can get away with this. And if you're 45 Year old male, it might work. If you're forty 45 Old woman, the odds of it working are much much lower, because of hormone changes and because of this adrenal problem. What bulletproof intermittent fasting does, it says, "well you're not going to get into ketosis fast enough in the morning to get your levels high enough to give you the sense of satiety." In my experience working with clients, and in my own experience is that if I want to skip breakfast, if I have a normal life as in I have a job, I have kids, I have to wake up early and get them ready for school and stuff like that, you're not going to be able to have the full focus and energy that you want to bring for your day at eleven in the afternoon. Your energy is starting to flag, and you're likely to be cranky, and you're going to be looking at your watch like, "Okay, I can do this. I'm going to use my willpower. I'm going to make it till two o'clock and then I'm going to eat."

Well, I don't want to use my willpower. I have better uses than food. What you do is you have bulletproof coffee, which is the lab tested coffee beans, grass-fed butter, which helps with satiety and you have specifically brain octane oil, which is the recipe for it. You blend that stuff together, and hopefully soon somewhere around here, I'll be opening a bowl of your coffee shop, so you can just go pick it up. But the idea there is you do that, and that can help you to raise your ketone levels enough that you feel all these effects, and all of a sudden the quality of your morning changes. You still didn't protein, you still didn't eat any sugar. The protein digesting and the sugar digesting, the insulin effects don't happen, but you do have more energy, and specifically you have more ketones than you would have if you had just eaten nothing.

It's a hack on top of fasting. But it's one that really allowed me to have way more energy than normal and I do this almost every morning, unless there's like duck eggs and and really good bacon, and that's just for flavor and I know that I'll be hungry sooner. I know that I'll actually have less energy, but it was worth it because bacon. By the way, do you guys know what gateway vegetable is? It's cucumbers. They're from so many vegetarians, we do watch out for cucumbers. Just be careful. All right. I'll have to like go completely off-topic here, but we've all heard that animal protein is bad for you, right? And this is true because, if you have a bowl of eggs and a bowl of spider venom ...

Spider venom is animal protein, so clearly animal protein is bad for you, and you did eggs, but then of course the obvious sane person would say, "I should eat a vegetable protein, you know, plant-based proteins are much better for you." And my favorite plant based protein is sarin, the nerve gas that killed all those people in the subway. Which is why plant-based and animal-based is meaningless, from a nutritional perspective. It's about what's in it not where it came from. And you should care where it came from, because we have to live on the planet. But seriously, enough of that stuff like. It doesn't mean anything if it's animal base or plant based. It doesn't

mean it's good or bad. It hasn't zero validity for your health. Because those two examples show you very dramatically, both types can kill you. If you're doing the paleo fasting or intermittent fasting, you tend to get adrenal exhaustion.

But this is a new idea. And as far as I know, I stumbled on to this and noticed the difference about this type of pure fat in the morning, there may have been some health person in the 70s or somewhere, but I haven't been able to find the research about this. That's why I named it bulletproof intermittent fasting instead of some other thing. But it sure did work for me when I was in the process of really working this out, I added ... I went to about 4000 To 4500 Calories a day. And my idea was that when I'm writing this blog, I'm going to show people I'm going to eat enough that I should gain like twenty pounds every month. And I'm going to stop exercising and I'll cut my sleep too, just like to make sure that I stack the deck against myself. What I found was I actually lost weight doing this. And I didn't care about food and it was really hard to eat 4000 Calories.

That's like putting butter in everything, even more of it in my coffee I was doing eight tablespoons of butter in my coffee in the morning. I don't necessarily recommend that. But I was just trying to get enough calories in to do experiment. I felt so much energy, I felt so amazing, that I ended up doing it for two years. And I posted exactly one photo of my abs on the internet. I saw stretchmarks like I was a three to five guy I'm like a dad. Like I'm not the fitness celebrity. But it was just kind of interesting that that happens even on that ridiculous number of calories. I don't recommend. That's not the bulletproof diet. That was an experiment. But what I'm talking about though is the power of having only fat with nothing else in the morning, that is worth consideration. If you have genetic issues like familial hypercholesterolaemia, you don't want to do this. If you're dealing with excessive inflammation in the body, you need to deal with whatever the inflammation is, this isn't going to be a cause of information that I'm aware of.

If you have problems, digesting fats, if you have no gallbladder, it's not right for you. But for the average person this can have profound effects. And if you're a woman, especially a woman over 40, you might actually find that it works better with some protein in the morning. In fact, I hear that quite a bit. What I do there and I do this pretty much every other day now is I add upgraded collagen, which is a grass-fed collagen powder that I make to it. And collagen has anti-aging benefits anyway. That's something you may do. You might also just have an egg with it. That happens pretty well. I would say though, on average having the right kinds of fats in the morning makes makes a really big difference for how you feel the quality of life. The next thing you could do is you could get rid of things that suck energy.

There is something called antinutrients. And when you look at a food, most foods have good stuff, and most foods have bad stuff. And there's a funny film called Idiocracy, where we fast forward to the future several generations hence, and everyone drinks basically what they call Gatorade, because it has electrolytes and they're spraying it on the crops. Why? Because electrolytes. Of course the crops are all dying because they weren't meant to live on Gatorade and they can't figure it out.

And the world's dumbest man from now goes to the future and becomes the world's smartest man and tells him they can't use electrolytes. We have this going on in nutrition now. I had a friend a few years ago, type two diabetic, weighs 300-something pounds, and we're going to have breakfast at a hotel, and he says I'll have two bananas. I looked at him like, "you're an engineer. You're a smart dude, why are you doing that?"

And he goes like, "Oh, I have high blood pressure. I have to have that potassium." So you're going to completely destabilize your bloodflow. You're having fruit in the morning as a diabetic with no protein and no fat, because potassium. It doesn't work. And antinutrients are one of those things. Different antinutrients effect different people differently based on genetics, based on your gut biome and things like that. But if you don't know which foods are messing with you, or you eat foods that are very high in antinutrients, they will suck energy, especially over time, and in some cases very acutely. And if you figure out what those are, you can make dramatic changes in energy levels. You can have more willpower, and you can make better decisions. The way you can do that, there are blood tests for food allergies that are very important.

And there's a free app that I give away called Dood Detective. You can also replicate the app with a blood pressure, anything that will count your heart beat, basically. You see how many beats per minute is your heart beating, and if you can do that, and you measure yourself before and after a meal, if you eat something in a meal that you're sensitive to, your heart rate will go up predictably. The app is called ... Actually it's now on iPhone and Android. Is called Food Detective. What that is is your body will respond with the Labrador. "I'm stressed, my heart rate went up. I'm ready to run away" Because, it doesn't know why it's stressed, because one of the foods you ate didn't agree with your system. This is a common source of energy drain, that affects your decision making your willpower. There are also direct toxins and that are sometimes in food. Sometimes we add them and sometimes mother nature adds them for us. And different people respond to different toxins in different ways depending on how their liver processes things, depending on what else is going on in their body.

But I would submit that if you can eat fewer antinutrients, and you can eat fewer toxins, that you'll require less energy to manage, oxidize and excrete these, and the energy is now available for you. It lowers overall biological stress on you and you don't want to do that. Some toxins are particularly nefarious and nasty, because they effect the mitochondria, those power plants in your cells that are at the very core of that prefrontal cortex activity. Prefrontal cortex requires the most energy in that it has the most density of these things. If you have a toxin that affects the mitochondria, well, you should expect to have lower decision making, unless you can eliminate that toxin so effectively that it doesn't work on you.

One of my favorite toxins that does that is called ochratoxin A. It is the most common mold toxin found in red wine, chocolate and coffee. And it's hard to spot in these things. In the US we have no laws protecting us from OTA in coffee, however every

other first-world country has laws that make it illegal to sell coffee with OTA in it. So, the stuff that's illegal to sell in Japan or Europe gets sent to the US, and you drink it and there are studies that show it has inhibitory effects on the mitochondria. In fact there are 34 Studies showing that it has bad things in it. But that is one example. It's just one example. If you go to the fast food joint, you can get other things that have bad mitochondrial effects, like deep fat-fried foods. You meet those regularly. They can affect your mitochondrial membranes and your cell membranes. Lack of vitamins and all can do this as well. What I'm saying here is, stack the deck of cards in your favor.

Avoid the stuff that makes you weak, and do more of the stuff that makes you strong. Most foods have some mix of those two. Try and choose the foods that have more things that make you strong and less of the things that make you weak. You don't have to freak out about it. You'll never avoid every toxin on earth. But when you can make an intelligent decision to lower your exposure to things, especially things that affect your mitochondria effectively, that makes sense from an aging perspective and certainly from a willpower perspective. And this is something I notice very very specifically. A lot of these toxins also stress your adrenals, some of them have direct effects on your adrenals, and they trigger inflammation in your body. If you're inflamed, you'll be less efficient in general, you'll make worse decisions, because inflammation also affects the brain. I already talked about antinutrients to some extent, but I have a slide on them. Thyroid inhibitors that happen from eating lots of soybeans, phytates, lectins, oxalates.

If you get the bulletproof diet roadmap that is free, I basically list foods that have these things in them as suspect foods. And you can eliminate them for a while and then eat a bunch of suspect foods, say, got to have pizza, and see if you're a zombie the next day. And if you are, then you know maybe there's something going on. And if you get adrenal response, you can get that hypoglycemia thing. The direct toxins I talked about parts per billion levels. You don't smell or taste a toxin like that. There are things that are specifically toxic to your nervous system so if you're dealing with peripheral neuropathy or nerve damage and at same time, you're eating foods inadvertently that are high in neurotoxins ... And you can Google around you'd be surprised, sometimes vegetables have this thing.

And it also can depend on your own genetic status. For instance, you may have real problems with nitrate vegetables and I don't off the top of my head remember if nitrates have direct neurotoxic effects, but some foods do and they may just be enough for you. If you're dealing with a specific problem, you might even want to be more careful about this. One of the other things about direct toxins that's really important to understand, many of them especially mycotoxins are cumulative carcinogens. Things like aflatoxin which is found most famously in peanuts but also pretty heavily in wheat, is the most regulated of the mycotoxins, but it's still there in levels that are "economically" safe for consumption, but not ideally safe for consumption.

Aflatoxin is the most carcinogenic substance known to man. And it's formed by these these fungi that grow in the field. They're cumulative. There is no benefit to eating just a little bit. In fact there's something called hormetic stress. When you exercise, you're damaging your muscle. And then you make the muscle stronger. That was hormetic stress. You damage it, you got stronger. The kind of toxins I'm talking about here, including man-made ones, including nature made ones, they're not hermetic they just cause damage. They don't cause you to bounce back. There are other toxins that plants make that aren't actually toxic to us. Some of them are vitamins or the phytonutrients we call them. They are three poisons for bugs, but they are things that actually make us respond really well. The blueberry, the phenoles there that's not a direct toxin. That's something that keeps away some types of bacteria from the plants but we benefit from those.

I'm talking about things that are not hormetic. The paleo diet when you cut something like beer which is another very high mold toxin food, you can cut, you can at least reduce these things. One of the reasons, I believe, that the paleo approach is working is that you're just consuming less of these things that affect your parts per billion. Not the only reason ... When you have toxins in your diet, it's a survival emergency, because your blood sugar is going to drop, your liver and kidneys are going to say, "Can I have some glucose?" In fact I want that glucose more than the brain. Because these toxins are going to get to the brain anyway. Your body says, "Give me sugar," And it may also want you to have glutathione, or glucurates. These are two of the main detox pathways in the liver. You can take glutathione supplementally.

You can take vitamin C, and alpha lipoic acid, and N-acetylcysteine, to some extent to raise it. But these are things that your body is going to ask for and if you regularly consume these things or you live in a house with toxic mold, then you're going to be experiencing a depletion of glutathione and you can get hypoglycemia and ... I've lost track of them when people emailed me and said when I switched to coffee that didn't have toxins, I didn't get my afternoon crash. I thought that was a crackpot idea, but this is a known issue. There's probably ... I'm looking and I'm seeing some nods. This can make a difference. If you eat food that's three days old leftover for breakfast, and you have an afternoon crash it's the same thing. It happens, but we're really terrible as a species at understanding that something that happens to us in the afternoon was correlated to the morning. And if you're like I was with gluten where my gluten symptoms happened two days after I ate gluten, it took me like three years to figure that one out because I just feel crappy every Monday.

I didn't know it was because on Friday night I ate gluten. That was my cheat day. We're not good at correlating events, but there is a correlation there. And it's worse for probably 28% Of the population than the other rest of the population, but it's not beneficial for anyone. I already talked about coffee. What is causing this particular problem is mostly *Aspergillus*, which is a really common species, but this is something really relevant for for all of us. *Aspergillus* in agriculture, it's a soil fungus. But when we spray Roundup or Glyphosate on crops, it kills the bacteria on the soil, the bacteria

that's supposed to be there, and then it makes the toxin formation by this mold go up by more than one hundred times.

So Aspergillus was already a toxin former, it just didn't form very many toxins until we hit it with some chemicals and it got all pissed off and now it makes a lot of toxins and then we eat them. That's a problem. This is getting worse because of our agricultural problems. I already talked about some of those studies, a whole bunch of them. We're not going to talk about OTA stuff. All right. Here's an example. I know you guys can't read this in the back. I apologize. We did a study. A not-blinded study, because you can taste the difference in your coffee, but we tested coffee with no mold versus coffee from the corner coffee shop with 54 People. For six weeks they did a mix of different coffees with or without butter, and twice a day they did a ten minute battery of cognitive function tests using university grade tools. And what we found was a statistically significant difference in cognitive function the score was higher on lab tested coffee with or without butter.

In fact, it was actually slightly lower, very slightly lower, not statistically significant, but slightly lower on butter versus ... This is no-butter, just black coffee. This is butter. And it was lower, when people were consuming stuff that are higher in toxins. It's small but it's there. We also found ... I apologize again that it doesn't project very well. That on different things we found the same response. This is called backward sorted scan. I can read them myself on this kind of projector. Something called coding sorting color word match. A visual matching, free back analysis. These are things you can use to see whether someone's brain is working really well, and there are statistically significant differences in all of these based on the level of toxins that are in your food. That is something that isn't well understood. There's a safe level, and there's a kick-ass level.

And I would tell you that if you want to have more willpower or more energy, lower your exposure to these and other toxins and you you'll be able to do it. Here's what we do. If you want to have more willpower, you turn off those parts of the Labrador, the hunger part, the part they want to see the Gutter Taco, and you give it some ketones. Go into full blown ketosis. Eat a low-carb diet or cheat and get just a little bit of ketones in there. You can stabilize energy delivered for decisions. Have some ketones and have a few carbs every now and then. It's ok. But don't eat sugar bombs when you do that. Have a reasonable amount of starchy carbs, like sweet potatoes or white rice with a lot of vegetables to slow down the spike. Get more energy for decisions, have glucose and ketones present at the same time, and eliminate things that don't benefit you in any way, shape or form. Like mother in laws, I'm sorry. And bottom line, I would say and all of this is that neurotoxins matter more than we like to think they do for willpower decisions and whether you're breathing them in your environment or you're consuming them in your food, they really matter.

I lived in several houses that had severe water damage without knowing it, I finished a documentary that I funded out of my own pocket called Moldy. It's moldymovie.com and interviewed a dozen top experts in the country about environmental water damage, and I interviewed a dozen people whose lives have been severely affected by

these neurotoxins. I think this is part of my own mission to help people understand there are things in the environment that make you less able to regulate your emotions. And if you feel really guilty because you don't really understand why you were such a jerk, because that really wasn't like you, you know it wasn't like you, and maybe don't have enough energy that day, because you're having blood sugar swings that made you cranky and made you act in a way that you don't admire.

And sometimes that is environmental exposures and sometimes it's something you ate that didn't agree with you for whatever reason. But understanding that those are major variables for the type of decisions you make, and I'm going to yell at my kids or not yell at my kids? Or any of the other types of willpower activities, you know, am I going to really do everything I can do today for whatever cause I'm supporting? These are influenced by your environment, and you have a lot of control of your environment. And the kind of knowledge here about low level ketones in the blood giving you different energy pathways and turning on and off hormones, that's really amazing stuff. And I would encourage you to not take all of this at face value, but to just pick up your fork and experiment, and see the things that make you stronger or the things that make you weaker.

And things that make you go at the end of the day like wow. I recently raised venture capital funding for Bulletproof from a local venture capital firm called Trendy Ventures, and one of the partners there ... Actually I saw him this afternoon before I came over here. I worked at that venture firm and when I was there, I was eating butter in my coffee and doing weird stuff like that, and he just made fun of me for it. And one day we sat down and I told him what I thought I should try, and he was like I was nuts. I thought that I would kill him, but he tried a little bit of the stuff. And the reason I'm relating the story is, he actually wrote the story on a big website. But two months after he started doing this, at the end of the day, he set down in his car and realized that he'd gone through the entire day without one energy crash.

And he actually started crying. This is like a powerful venture capital guy and he wrote about it. That's the reason I'm telling you. But he started crying because he had never experienced a day without profound overwhelming fatigue. He just realized, "Wow, for the first time since I was seventeen years old, I had energy for the full day." And why? Ketones. That's why. As well as avoiding some of the other things that make you weak. To be able to have that kind of power in about sixty days is pretty amazing. And the point here is you have way more control than you thought you did, and that you can go and you can hack this. And you'll have more willpower you'll have more decisions to make in a day and hopefully you'll be a better person. That said, I have ten minutes of questions. I could repeat all the questions if you want but we'll do it with mike, that's better.

Q1: Hi. Can you speak to the fact of, you know, eating a lot of protein and like meat and all that if you know the whole belief system there's going to be damaged if you eat too much protein, and then can you give me a day in your diet, like breakfast, lunch, dinner what it looks like?

Dave: Sure. Excessive protein consumption is really a bad idea if you want to live a long time. When it breaks down in the body, it makes ammonia. Protein is not a great fuel source at all. And trying to eat, you know, lean chicken breasts and lettuce and feel good, it won't happen. It's just not a great source of fuel. It's a really good source of building blocks for the body. That's what I recommend you do, is that you sit down and you have you have moderate protein. And that depends on your activity levels, it depends on your gender and I recommend some levels in the book half a gram per kilo from memory but I'd actually want to check that. What I find is that most people especially if they're on a paleo kind of diet are like, "Meat, good," And I've certainly been there or, you know, have scoops and scoops of whey protein, because "protein's good". Well, protein is good, but too much protein isn't necessarily good. So, I would focus on very high quality protein in moderate amounts. And that makes a very big difference. But trying to get most of your calories from protein and vegetables will not make you feel good.

Q1: What does your day look like, breakfast...

Dave: Breakfast for me, depending on the day, it's bulletproof coffee, either with collagen and protein or without, depending mostly on exercise levels like, "Am I recovering from something?" The lunch is a plate that's covered in vegetables with probably four ounces of grass-fed meat of some sort and guacamole or butter, some brain octane and put into it olive oil or some other source of fat. I'm looking at 50 To 70 % Of my calories coming from fat. And then dinner is pretty much the same thing. And depending on if I'm having carbs that day or not, I may have some rice or sweet potatoes. Something like that with dinner. After dinner, I may have some berries if I feel like dessert, or something like that. It's a pretty typical day. It is a plant-centric diet. But if you try and do low-fat plant-centered diet, or you going to be a raw vegan like I used to be, it just doesn't work. And if you're going to go on a high-protein, low-fat diet, that also does not work, especially over time. Like your liver has to deal with all that.

Q2: Most of what you've talked about in terms of carb has been direct effects on metabolism, but carbs also go through the gut and affect bacterial, fungal balance in the gut. Can you talk a little bit about endogenous neurotoxins from our microbiome?

Dave: Yes, this is a huge issue. Thank you for bringing that up. It's not in this talk, but it's the microbiome, the bacteria in the gut are a major issue. There's something called lipopolysaccharides. I think you're going with that. These are the bacterial toxins that are in the gut. And when you have bacteria or even candida yeast, when they're used to getting sugar and they don't get sugar, they get stressed. When they get stressed, in fact when any bacteria or fungus gets stressed, it puts out a lot more of toxin. One of the things that can drive cravings is if you have an imbalance in the gut, bacteria, or you have yeast or fungus growing in the gut, then what happens is they get stressed, because you don't have enough sugar and then they pump out toxins and then you feel absolutely zombified. The type of fat you eat can affect whether or not these things get absorbed. For instance palmitic acid from palm oil is shown to increase lipopolysaccharide absorption, whereas the medium chain triglyceride oils are

actually protective against lipopolysaccharides in the liver, in multiple studies. It's very interesting that there's that level of variance there. The other thing that I didn't mention that's a huge part of what I do is activated charcoal. And yes again I manufacture one of those. I tend to manufacture things that I like to use. But activated charcoal can bind to lipopolysaccharides in the gut.

If you're having ... Especially if you're feeling unwell after a meal, or if you're just having energy fluctuations, sometimes taking a capsule or two of activated charcoal has a profound calming effect. I give it to my kids. Like when my six year old is going stable and normal and happy, and then all of a sudden we eat and then a little while later they're bouncing off the walls it's not just sugar. Because even if it was a little bit of sugar in the meal, that's not how he acts. It's a toxin effect. You give him charcoal and five minutes later he's back to normal. If you don't give him charcoal he's a whiny brat for two hours. It's a big difference, but it's very noticeable and I felt it myself.

If I'm off after that, I'll just take some charcoal. And part of this is dealing with the stuff in the gut. If you don't eat any carbs ever, your gut bacteria is going to shift, but that Cauldron protein that I talked about is almost as effective as basically vegetable fiber at forming butyric acid or butyrate in the gut. This is actually what they call animal starch. It is collagen. It is a fermentable substrate. I don't think it's the most ideal fermentable substrate, that's why I recommend you go eat carbohydrates. You go in and out and you'll eat a ton of vegetables which are food for the microbiome. But if you have bad bacteria going in the gut, you're going to get direct neurotoxic effects that mess with what I just told you. Thank you Steve.

Steve: I'm going to try and get this as close to an order of people raising their hands as possible, but it may be a little difficult. Please wait for the mike too.

Q3: Hi Dave. That was terrific. I've actually been on this program for, I don't know, quite a long time because I really do believe in intermittent fasting. What I have found most recently ... And I was having very severe crashes, I mean to the point of pulling off the freeway and parking because I couldn't drive anymore kind of thing ... Was that this idea of having fats in the morning is terrific. Just I wanted to add, though, I do homeopathy so I'm not doing coffee. But I found that I can decaffeinate my black teas and put a tablespoon of cream in them, have a couple of those in the morning and that holds me until two o'clock in the afternoon and then I can have my two minimal good fats and minimal protein and vegetable lunches and stay right on track and the gut biome changes, the waistline goes down, anything stabilizes. My brain works better. A little MCT oil and alpha lipoic acid, theanine, it's all different. I mean like I have a new life again. In my case I'm like reaching 65 Here pretty quick, and you know, I do bioidentical hormones and so I totally recommend them. I do a bunch of them and, you know, I think that diet works excellent as long as you're keeping your hormonal panel up. I just wanted to share.

Dave: Thank you. And I'm not sure about the homeopathy versus coffee versus tea. I didn't get the connection there.

Q3: First of all coffee oils and coffee caffeine antidote are homeopathic remedies. So you just can't use it.

Dave: Interesting. I'll actually research that. I do know a bunch of homeopathy. I use a bit of homeopathy. But I will figure that out.

Q3: They might not be remedies themselves.

Dave: That's a fair point. I'm really thankful that you threw that one up. Thank you.

Q4: If you have inflammation, none of this is going to work for you or is not going to be appropriate?

Dave: It's kind of the opposite. If you have inflammation you need to do this. But if you have inflammation and the inflammation can be contributing to these problems. I had profound inflammation I weighed three hundred pounds and going on a low-toxin diet, eating a higher amount of fat, more vegetables and less protein and focusing on quality protein are some of the best things you can do, when you have high amounts of inflammation. And I have a moderate to low inflammation most of the time. I do tend to get inflamed. I am one of the 28 % Of people who are sensitive to environmental molds. I've been exposed enough times that I react more quickly which will trigger information. I can grow a muffin top between now and tomorrow morning if I walk into someone's house that has water damage. My body is like that. I manage my information carefully, but it's manageable and most people don't have it like me. I'm a good guinea pig for managing information. I would highly recommend this kind of thinking. Eat more of the stuff that makes you strong. Avoid the antinutrients and get enough vitamins and a high fat diet with the right fats can do wonders.

Q4: Ok. Thank you.

Q5: Every time I drink Bulletproof coffee, I get a mind rush and anxiety. What could be the issue?

Dave: When you drink Bulletproof coffee, you get like a mind rush and anxiety? Are you drinking actual Bulletproof coffee or you're putting butter in some other beans?

Q5: Yes. Actual Bulletproof coffee.

Dave: Ok. You're probably one of the people who is a poor caffeine metabolizer genetically. Have you tried it with decaf?

Q5: No.

Dave: I'll talk to you after, and I will send you a bag of decaf at my cost and if that causes it, then I'll be really surprised.

Q5: When I actually drink regular coffee without MCT oil and butter, I don't really feel that effect.

Dave: You don't get it from regular coffee. In that case you may be one of a small percentage of people who just gets too much energy from the MCT. You need to back away off on the MCT. There are some people who need to start out at even a half a teaspoon. They are the exception. For most people a teaspoon or two is right to start and a tablespoon or two is where you end up. But I suspect that that could be what it is. You need to back way off on the MCTs. Do you get disaster pants?

Q5: No.

Dave: Any of you don't know what that is? That's also a sign you've had too much. By the way, it's almost gone with the brain octane versus the street grade MCTs.

Q6: Do you recommend any regime of vitamins for the general population or more for women than for men?

Dave: On the bulletproof website, there's a top ten supplements list. It's free. And you don't even have to sign up for just bulletproof supplements top ten. The top of the list are magnesium, vitamin d3 And vitamin k2. I wonder where I learned those. Might have learned a few things here. We actually have a policy it's a long standing thing at Smartlife. When your phone goes off, we ask you to sing a song.

Q7: I just wanted to tell you. I have a similar effect and just varying the dose with a slight amount really makes all the difference. I had two Bulletproof coffee every day in the morning, and I'm by the way over forty, and I have no problems doing that. I've been in ketosis for three years and I don't have a problem that either the dry eyes or anything.

Dave: That's so cool. One of my podcast guests, an Olympic champion said, I've been in ketosis for years and I never want to go back. It's so cool that you could do that.

Q7: You can even exercise. Recently I did a backpacking trip six days and I almost didn't eat anything ...

Dave: Beautiful. Keep your resilience up. I love it.

Q8: Two questions. First. Have you heard of any of the negative effects if you use the coconut oil to cook with? And second. Any good supplements for magnesium?

Dave: Coconut oil, ghee, butter and some types of like carefully rendered animal fat are the most stable cooking oils, because they're fully saturated. So they're the only kinds of oil I recommend cooking with are those. But even then, adding a little bit of water, so that you're lowering the temperature of the pan rather than frying temperatures to steam temperature is really going to make you live longer. Like doesn't matter what you're frying, fried food is bad for you. Like don't do that. You can stir fry with some

fat in the pan, just make sure there's enough water, like the Chinese did it a long time ago, and we somehow forgot it in the west. I want to come down and fry chicken, but it doesn't matter if it's gluten free, it's still fried, and it's still chicken.

Q9: Thank you Dave for coming in speaking. Your information is invaluable. I've been doing the bulletproof coffee and diet and in about ten weeks, my blood pressure has gone up to 140 Over 80. This is just in the morning, when I first wake up and I take my blood sugar. It's always been around 86 And it's gone up to 96. And I feel like crap in the morning, until about one o'clock or two o'clock.

Dave: This is not something that I've heard of from this. Steve, you're would probably be the guy I would want to call if I heard that. Do you have any thoughts? No, seriously. Ok, this is really interesting. I want to hear the answer too, because this isn't one that I know.

Q10: Just a real quick comment I I want to make about coconut oil. If you're going to cook with it, I recommend cooking with refined coconut oil versus the raw, just because it has a higher flash point.

Dave: It also tastes better, unless you're making a Thai dish.

Steve: I had a similar patient like, and what I started doing was I had them start with a protein meal first. And it seemed to help immediately get rid of that kind of activity and then you can do David's program after that. But just ... The soft boiled, anything like that really works. Two eggs in the morning or three is ideal. And it works really well.

Dave: There's also a question about salt in the morning, salt intake which would tie in with aldosteron. That's a really interesting one, and I want to hear about it at the break but I don't want to take up a lot more time on it.

Q11: A question about the brain octane oil. Whether that is you say the most regularity? Maybe a little too much? Well, it turns out, there's four kinds of medium-chain triglycerides. C6 Provides the off flavor that you can find in MCT oil and it is a severe gastric irritant. And different brands have some c6 In them, because they don't do the right steps of distillation. Which is why we do a triple distillation in a non-oxygen atmosphere. And it's the only one like that that I know of. The the other thing that happens is something called c17 Forms, which is a severe gastric irritant. You get like burning in your throat from some brands of MCT, especially the Chinese sourced ones that are very affordable and come in glass bottles that cost less than it cost to manufacture the stuff. Not to name a brand. But those problems happen. You get a lot of those problems. And then there's what's left is basically c8 And c10. And c10 Is much rougher on the gut than c8. When you have ... And this is what I make my XCT oil from. It's effective the c10 Is less effective at raising ketones quickly. The c8 Is the most effective, and that's why at home I used brain octane. You basically eliminated the gastric irritation for 90% Of people. But if you use XCT oil, there's a lot more of this explosive regularity.

Q12: Where does wine fit in responsibly to this plan, if at all?

Dave: I like how you added the word responsibly, in a hopeful way. It turns out, and there's a free infographic on the website, about alcohol on bulletproofexec.com. I rank all the alcohols from those with the most toxins to the least. The worst is beer. The second worst is red wine. I'm sorry about that. If you're going to take it, at least take some activated charcoal and glutathione, because you're going to have to use your kidneys and liver to filter out all of the unfiltered yeast byproducts. Yes, I enjoy wine too. However wine is a source of ochratoxin A. And it's not very well regulated in the US. If you're going to drink wine, drink dry white french wine, and you're going to be much much better off. If you're going to drink red wine, drink red wine from France with a yellow label, that means it's not OK to export to the US, because the Americans will drink anything. But the yellow label means it was meeting European standards for mold, which are far far lower. It's 0.2 Parts per million and that stuff you'll probably feel OK on, unless you're allergic to yeast. Or you could just have some ... If you can be done with it.

Q13: Dave, could you repeat the underlying condition that both you and Steve mentioned at the beginning related to, I think for you, mold? I just can't remember the name of ...

Dave: Peripheral neuropathy.

Q13: Does that have anything to do with the blood flow to the prefrontal cortex? I'm just kind of interested in getting more blood flow to the brain. That has more to do with sensitivity at the periphery, not in the brain, so I would not say so off the top of my head

Q13: Coagulopathy ?

Dave: That basically means that your blood is sludgy and it coagulates too quickly. Then you have oxygen problems and I believe that probably could contribute to peripheral neuropathy and it seems like it would. Because you'd have not enough oxygen in your peripheral tissues. If you want to get more oxygen in the brain, hyperbaric oxygen is a pretty cool thing to do. I have a tank at home for that now. And there's various things like seropectase and neurokinase, which are enzymes that can break up the thrombin and the fibrinogen in the blood so that the blood flows better. That's a pretty meaningful thing. Those are available at any vitamin shop.

Q14: Well I haven't read your book. If I had read the book I might know...

Dave: You don't have to read the book to hear me talk.

Q14: But I was wondering how you feel about vegetarianism, meaning like what I do is I'm a vegetarian, I eat eggs and soy products and I do eat cheese.

Dave: So the question is, you know, what I think about vegetarianism. I find that most people especially soy products ... Like the soy products are bad for humans, just in general. You can be a vegetarian, but you don't have to eat soy to be a vegetarian, it is bad for you at a fiber level or a hormone level and bad for the planet. There's just all kinds of reasons not to do soy, bad fats, antinutrients. If you don't give yourself a dairy sensitivity and you don't give yourself an egg sensitivity those are both two very common allergens and you're doing vegetarian diet, you're going to be missing out on some very essential fats that come from eating grass-fed animals. You're also unfortunately going to kill more animals than eating the kind of diet that I'm recommending, because when you look at net kill of tractors in fields in order to get you know a loaf of bread, you're talking turtles, bunnies I'm trying to name the cute ones. Grasshoppers aren't that cute, roly polies, gophers ...

But basically really you're looking at habitat destruction to eat a loaf of bread versus a cow or goat or a sheep that's on rangeland, that's undisturbed, that eats things that were not food for humans and doesn't kill anything in its life. For instance the cows that I eat literally live next door to my house, in fact they eat the grass from the front of my property. And I feel like I'm doing more for the earth there than I am like importing some sort of vegetables from somewhere else. This is a vegetable-centric diet, but it's much less grain-centric, much less corn-centric, and much less soy-centric, because those are really harming the planet. There's an argument ethically and morally and even like number of deaths per calorie for the way of eating that I'm talking about here. If you're going to be vegetarian, for God's sake, eat a lot of ghee, it is going to help.

Steve: Ok, so we're going to take a break. I want to thank Dave for his lecture.

Dave: Thank you.