



Transcript of “Dr. Jade Teta: The Metabolic Effect & Being a Diet Detective – #159”

Bulletproof Radio podcast #159



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Dave: Hey, everyone. It's Dave Asprey on Bulletproof Radio and today's cool fact of the day is about the shrew. The shrew has the highest metabolic rate of any animal. The masked shrew's heart beats 800 times per minute. Shrews have to eat about 90% of their own body weight each day and they can starve to death if they're deprived of food for even half a day. Now, I'm pretty sure that this might apply to your mother-in-law too but you'd have to check. Anyway, sorry, mom-in-law. Just kidding here.

Today we're going to talk about how diets can actually mess up your metabolism and make you fat. Certainly, that's something that I learned on my path to weighing 300 pounds. We're going to talk about new laws of metabolism and how you could become a diet detective. We're going to do this with a guy who's worked out about 10,000 times and has really worked through tons and tons of weight loss research. The guy's an author of The Metabolic Effect Diet and actually contributor to the textbook of Natural Medicine. I am talking about Dr. Jade Teta. Jade, tell me I said your last name right because I've only read your work. I've never actually said your last name in life. Tell me, how did I do?

Jade: You got it the way 90% of the people pronounce it. We actually pronounce it Teta (Tee-tuh), but Teta (Tay-tah), I think, is the best way to pronounce it for the real Italian enunciation. I don't know why we have the Teta (Tee-tuh) pronunciation.

Dave: I'm glad you're Italian because if you were from Mexico, we would be talking about an entirely different part of anatomy. I was like, "Do I say this?"

Jade: That's probably why they changed. Please do. That's why probably my family changed it to Teta (Tee-tuh) instead of Teta (Tay-tah).

Dave: Teta (Tee-tuh), all right. Sorry for all of my listeners in Mexico right now. I didn't mean to make this a non-proper ...

Jade: They love me, man. They're like, "Dr. Teta (Tay-tah), that's hilarious."

Dave: That's a fair point. Now, the other thing that actually had me want to get you on here, you're not just a doctor. You have a degree in biochemistry and you studied naturopathic medicine, not the hardcore nutrients and herbs don't matter perspective that some people could get from a more Western-focused program. You also are a former vegetarian and you trashed your thyroid by actually freebasing soy protein. Is that true?

Jade: That is actually true. That's at least what I think happened. I have a funny story about that. You guys, the listeners probably know a place called Jumbo Juice, right? Jamba Juice, but I call it Jumbo Juice. My brother actually turned me on to that name because I was drinking soy shakes for about 3 months straight. He said to me ... My brother has this sarcastic, wry sense of humor. He goes, "Hey, Jade. Where are you going? Jumbo Juice?" It dawned on me when he said that. I was like, "Wait a second". I had put on about 30 pounds in about 3 months, and I was doing these soy shakes daily.

Of course, I was working out. I work out with weights. At the time, I was at medical school and went down to the lab and said, "Let me run some labs." My thyroid level, my TSH, for those who know, was 11. Normal, really is, optimal is around 2. Mine was sky high. I think it had to do with all the soy protein I was doing. I went through a lot with my own metabolism, and my metabolism's never really been the same since actually but I've dealt with it and since moved away from that way of life.

Dave: How long were you a vegetarian?

Jade: Off and on, probably for about 3 years and the longest stint about 18 months.

Dave: I know that my time as a raw vegan, I developed a bunch of autoimmunity I didn't have. I was eating just massive amounts of raw cruciferous vegetables. I knew enough to stay away from soy, but man, I also had Hashimoto's, thyroiditis. I don't have any antibodies anymore and I'm still on a small dose of thyroid medication, much smaller than I used to take,

but I'm not entirely off of it because sometimes those diets don't actually work especially if you're over, say 30. You can get away with a lot when you're young, right?

Jade: Yeah, so our story, yours and my story is very similar. I still take a small dose of thyroid medication. There's periods of time where I do really well where I can come off completely but I still take a small dose. Same thing, as I've aged, I find that I can't be off of it for too long especially when I'm really pushing hard in the gym, I just need that little extra kick.

Dave: How old are you?

Jade: I'm 40.

Dave: All right. I'm older, I'm 41. We're roughly metabolically at about the same stage of life, although it looks like I might still have a little bit more hair than you, but hey.

Jade: Yeah, I lost mine. I don't know, man. My metabolism wasn't working too well in that regard.

Dave: It's funny how having a bad experience can really teach you something. I also did an experiment. This is going back a couple years now or maybe closer to 3 years. I wanted to test out that Eskimo diet thing. I went down to one serving of green vegetables a day and just masses of fat and some protein. After 3 months, I had to quit because I was getting these super dry eyes and my sleep quality went to hell. I was really not doing very well. I ended up, when I reintroduced my favorite foods, I got to be allergic to a bunch of them because I literally didn't have enough ability to form mucus on the lining of my stomach to protect my stomach lining. I got leaky gut from a lack of even just basic vegetable things.

I had lots of problems before that, some autoimmunity and arthritis at age 14, whatever, but when I look back at some of the experiments they don't always go well like that. The important thing when people are trying a new diet, at least in my experience, is get the data. You think you were doing well. You felt great on that first month but what did your biomarkers do?

Because they're going to tell you probably before you feel it depending on how broken you are.

Jade: What's interesting, Dave, you bring up a really good point. Actually, we just went the whole continuum, didn't we? We talked about the vegetarian approach. I did not do well on the vegetarian approach but I've seen very healthy vegetarians - biomarkers all good, energy and cravings gone, energy up, cravings down, hunger down, doing fantastic. I've seen Paleo dieters and those following stream ketogenic diets do very well, and I've seen others do very, very poorly.

What has happened both with myself — sounds like you went through a similar situation — and my clinical experience is I've moved away from these extremes, these teams in nutrition. We set up these camps. "I'm vegan, everyone should be vegan. I'm vegetarian, everyone should be vegetarian. I'm raw, everyone should be raw. I'm Paleo, everyone should be Paleo." What I've found is that actually it's not the case. It's really about you discovering and learning your own metabolism. You almost have to be the Sherlock Holmes of your metabolism. What we're not doing is teaching people how to do that.

Dave: It's funny you say Sherlock Holmes. A big part of the Bulletproof Diet book that's coming out December 2 ... bulletproofdietbook.com, get a lot of free bonuses, et cetera, et cetera, please check it out ... is an app, a free app on the iPhone called Food Detective. I list on the [Bulletproof Diet road map](#), which you get this road map for free when you download, when you basically go to the website, we'll just email it to you.

It's a [1-page infographic](#) and it's got a strip of suspect foods. We don't know if they're good for you or bad for you. They're probably not that good for you, but maybe for you they're fine, but the app can actually help you detect whether you have an unusual response to them, basically whether you have a food sensitivity, using your heart rate. That's the basic idea there behind being your own detective. There is a kind of diet that I find works for a lot of people. It's lacto-ovo-beefo-porko vegetarian. When you get all that just right, you've nailed it.

- Jade: I agree. I agree 100%. I'm so excited, by the way, to hear that you're doing that because I really feel like that is the anti-diet diet where we're basically teaching people understand your body. Learn to work with your own body. Don't be on a nutrition team. Be on yours.
- Dave: That's right. It's a road map. There are neighborhoods, right? Where are you going to be on this road map but you might be on a sketchy neighborhood but you're somewhere and no matter what you put in your body, right?
- Jade: Yup. I think for guys like you and me it sounds like you went through the whole thing. When you're so biased and attached to a particular way of doing things you often times are the last one to figure out how bad you feel and bad your metabolism is doing. If you can put your bias at the door, set it aside and just face to say "Listen, let me try this. Let me see how my hunger is, my energy is, my cravings are on this particular program. Let me see if I'm dropping fat on this particular program. Let me see what my biomarkers are doing then you can begin to understand how to build a lifestyle for you rather than following these predefined rules. I think that's really, I think there's one actual rule, the only rule in nutrition and that is "Do what works for you" but you have to understand how to do that. You have to understand how to play detective.
- Dave: Yeah. It's awesome and your perspective on "It's not the same for everyone" is one of the reasons I was like "I got to have this guy on". That plus JJ Virgin, our mutual friend was like "Dave, you got to talk with Jade." I'm like "All right, if JJ says it, it's got to have some merit there." I love you, JJ.
- Jade: Yes, I love you too JJ.
- Dave: Now, the other thing that's cool is you actually named what you do, The Metabolic Effect. What is your take on The Metabolic Effect? How does it make people better? Give me the down look, the audience who is listening mostly in their cars now the bulletpoints for what it is.

Jade: The key is the acronym tells you everything. Metabolic Effect is ME meaning me, meaning that it is all about you the individual finding what works for you. Each person has a different optimal metabolic effect or metabolic response to their diet, to their exercise, to their lifestyle. This idea in my mind and really this was a hard one understanding that we have to have exercise a particular way and you can't do cardio because that's going to make your metabolism explode. You have to only do metabolic conditioning and if you don't lift weight, this and that, and you got to eat only this way – all of that does is make you run around with a chicken with your head cut off.

Metabolic effect is really that acronym ME, tells you we're helping you find the diet, exercise, lifestyle inputs that optimize your metabolism. There's a lot of work. As you know, Dave, there's a lot of work involved in that but the good news is when you learn the process how the metabolism works globally for humans and then individually for you, you have that process that works forever. When you go through menopause or andropause if you're a man or you get pregnant and go through pregnancy or even women with their menstrual cycle, they start to learn to decipher what is going on in their metabolism because the metabolism is not static. The other thing about the metabolism that everybody misses is that it does not work like a calculator. It works more like a seesaw. It is adaptive and reactive to everything you do.

Dave: Do you know how many people complain about Bulletproof Coffee? They say "It can have up to 500 calories if you put 4 tablespoons of fat in there. Oh my god, calories make ..." and some of these guys are bodybuilders. Actually some of them are bodybuilders selling low-fat supplements. In fact one of the biggest critics out there is exactly that. I'm like "Ha ha!" What's the rationale behind you saying that because you have the Gary Taubes camp of ... I love Gary Taubes. He spoke in my anti-aging work and his book is just an amazing work of art, his first book there about Good calories, bad calories.

There's that side of things which is the seesaw story and then there's these other guys who are like "Look, I can walk you in a chamber and measure

every breath you take and clearly every calorie that comes in and calories that go out.” How do you bring those two camps and put them together because a lot of people are confused by this?

Jade: I’m glad you’re asking this question. I actually I respect both camps. I actually don’t see Gary Taubes as the seesaw guy. I see him as the hormone camp and I see the other guys as the calorie camp. Here is how I break this down. For him it’s all about insulin. These other guys it’s all about calories. To me there’s two things required to lose weight. You absolutely require a calorie deficit. You also require hormonal balance. To me both are true but here’s the problem. When you go after a calories-first approach, it actually causes an unbalanced hormonal metabolism so people are coming at it from the wrong way in my personal opinion.

Now, there certainly are those people who are numbers-crunchers and it does work. They are in my opinion, in my clinical experience in the minority. Here is the thing, yes, calories matter; yes, hormones matter. They both matter. It’s not one or the other. You can count calories which makes it alluring and people like that. “Oh, I can count these macros and I can count these calories.” They think we can’t count hormones but in a sense we can count hormones because hormones impact things like cravings. They impact hunger, they impact energy. There is what I call hunger, energy and cravings or HEC, a fun acronym HEC. If your HEC is in check you know that your metabolism is balanced. You know your hormones are balanced.

The goal is keep your HEC in check and almost everybody who does that, who eats in a hormonally balanced way quality of food, tons of vegetables, proteins, things like that ends up in a caloric deficit only. Those people who say “Hey, Dave, this Bulletproof Coffee where you’re adding in 500 calories,” if you have 500 calories in the morning let’s say and that keeps you from eating 800 calories later on at night because you had that 500 calories, because you balanced your hormones with it then you fixed this seesaw equation.

To me the seesaw is in the middle. It’s not over here with Gary Taubes and the insulin people. It’s not over here with the calories either. It’s both and it

sounds like you and I are talking about this in a way that people start to understand “My seesaw is doing this when I put something in it.” If I have something like Bulletproof Coffee and that balances my hormonal metabolism and makes me less likely to free the cheesecake later on in the evening and get into a 2,000 calorie deficit because of that then that is a good choice for their metabolism.

Dave: It’s interesting. In the Bulletproof Diet Book I write about hormones including MSH, VIP, leptin, ghrelin and basically this whole pathway. One of the ones that’s maybe not written about enough is called FIAF, fasting-induced adiposity factor. It’s an incredibly delicate and amazing and eminently hackable set of hormones where you change with nutritional input. I also believe in the very early days of my own work especially when I was on Atkins and all. You eat more protein and you eat more fat so therefore you have less calories.

After Gary came and spoke at the Silicon Valley Health Institute years ago, I was like “All right. I’m going to do this experiment.” I ate between 4,000 and 4,500 calories a day and I stopped exercising. I’m like “I’ll sleep 5 hours or less.” I’m going to get fat, I know I’m going to get fat. My deal was I was wanted to eat enough calories to gain 20 pounds. I only gained 3 pounds. I’m like, “You guys, you really think calories matter? What I just did cannot be ... What I didn’t ...”

Jade: Right. That’s because your metabolism is adjusting constantly but I want to hear this whole story.

Dave: Exactly, your metabolism adjust but here’s what I didn’t expect. I felt so good on this program that I did it for 2 years. I grew a 6-pack. The only picture of a 6-pack you’ll find of me online because I’m a dad. I used to weigh 300 pounds. I have stretch marks like a zebra. I’m married. I just don’t, I’m not that like “Take a photo of my abs” dude. That’s not how I roll, whatever, but I was like “This is amazing.” I actually lost weight and gained clarity and had profound effects I didn’t expect.

It was going all right. It shouldn’t have been but it was and Bulletproof Coffee was a major part of what I did. I was doing that in the morning with

8 tablespoons of fat in it, which is an enormous amount. I think that was almost 1,000 to 1,200 calories every morning just in my coffee and then I would eat giant loads of food, tons of veggies and whatever. I was essentially on the [Bulletproof Diet](#).

It shouldn't have been possible but it was. When I talk with the calories guys, "Well, obviously you were pooping fat." I'm like, "Well, it didn't float, I don't know." When I dug in on this, the third part of this, and this is very much in line with what you're saying, there's the calorie camp, the hormone camp and there's the gut biome camp. Those nasty little bacteria in your gut, some of which are good, some of which aren't, they'll make you fat or not make you fat. What I was doing in some part of the Bulletproof intermittent fasting protocol was modulating the ratio of gut bacteria so that I actually got these strange benefits.

Yes, sometimes it's counting calories but I do not until this day have a full explanation of why I was losing weight other than maybe I wasn't digesting some of the fat even though I was taking betaine HCL and lipase to help me digest the fat. I don't know. Got any ideas?

Jade: Yeah. Well, I do have some ideas.

Dave: Tell me.

Jade: Of course we don't really know, right, but I think it's a combination of things. Essentially what is happening is you are up regulating your metabolic machinery.

Dave: That felt great.

Jade: Adrenals, thyroid, all that kind of stuff. You are sort of being uniquely insulin-sensitive, leptin-sensitive. That's something that everyone gets but then what you're talking about and this is the thing that I think ... I'm glad you brought this up because I think this is going to be potentially the Holy Grail of weight-loss research. We know so little about it right now but these little bugs, these little bacteria that are living in our gut that are almost

acting like the friend that steals the french-fry off your plate except they're stealing 10 and 20 of these french-fries even though you're eating them.

What's happening is it's what I call the law of metabolic efficiency. These things are making your metabolism less efficient because they are using up the energy and by what you were doing, you're drastically changing the populations of these bacteria ...

Dave: Yes.

Jade: ... to make them be more of these types that are using that fat for themselves. They're using the energy. You're not pooping it all out but you're also not absorbing it all. That's part of it. You're pooping some up of course. They're using the energy for themselves, stealing the french-fry off your plate and you're also having these adjustments in leptin and adrenal and thyroid production which is elevating your resting metabolic rate. What happens is all of that together, that whole list and probably it's a whole symphony of a whole bunch of other stuff that you and I will be talking about in 5 years is going on.

If you actually probably could go into metabolism and measure in detail the exact calories you're burning up and how much heat is lost and all that kind of stuff, you probably would find perhaps a lower calorie state but it's not that that ...

Dave: I was measuring like 4,000 calories a day. It could just be that right up to this point, I was burning more than 4,000 a day plus I was sleeping less, which means what do you do when you're not sleeping? You burn more calories. I'm sure I was moving.

Jade: Eating those, the bacteria taking some of the calories that you ate. You're losing some. To me we don't yet know the whole story but to me I absolutely love that story because it perfectly demonstrates how much we don't actually know about the metabolism and all these other pieces that nobody is talking about. The idea to me and what you and I are talking about ... I love this because it's like calories on one hand, insulin on the other hand and it's really leptin, adrenal, thyroid, microbiome, liver

physiology and a whole bunch of other stuff and hormones that we don't even know about yet that are being manipulated through these changes.

Here is the point that I love about you, Dave, is that you essentially, the whole biohacking concept, what you're essentially doing is you're basically saying "Listen, there's so much we don't know. Why don't we spend our time trying to figure out how our physiology functions and works and be our own experiment in a sense." That to me is where we should be pushing people. That's what we should be talking about.

Dave: Jade, I have to disagree. We should actually spend all of our time online yelling at the guys who disagree with us and calling them poop head. That's generally what I'd prefer.

Jade: Yeah. That's a great idea, Dave ... No, but I hear you. It's unfortunate that that's going on so much in our industry because in a sense we can learn from each other if we all stop shouting at each other. I mean at least we can agree. I think we can agree. Any intelligent person can agree, there is so much we don't know. Let's stop arguing about the small percent that we do know and let's all put our heads together and just start figuring out the new stuff that's going to make a difference.

Dave: One of the reasons why I'm such a fan of the quantified self and this idea that we can get data, I was even CTO of this basis wrist band company that the guys who can get your heart rate without a chest strap. That whole point is that we've never really done very good experiments because it was too expensive and we didn't have a big enough sample size and they were always in labs with white lab coats and whatever else. The idea that you can get masses of data from potentially millions or even a billion people and then crunch the numbers using the Cloud and big data, we haven't done that before. I think we're going to learn more from that and things like the genetic sequencing of the gut biome.

I've got my U biome results. I looked at several other people while writing the Bulletproof Diet book. I'm like "Funny." There's a measureable shift that's actually also verified in animals in a lab study that happens when you mix coffee and certain kinds of fat. When you do that, there's a shift in the

biome. Wow, what else do we know about that shift? How would we know that? Well, we could note from animal studies or we could basically ask a bunch of people who do this practice and say “Huh, there’s commonalities here. Isn’t that amazing?”

Jade: I honestly think that’s the way we’re going to get to it because I think you’re absolutely right. The research moves too slow and is structured in such a way that makes it very difficult for us to pull out the important information. To me, I love seeing the micro biome project and all of these stuff that we’re doing that we’re going to be able to get data far more quickly and we’re going to be able to understand how to interpret that data far better.

To me it’s one of the most exciting things that we could be doing but we have to ... I think the thing that you and I are saying and the listeners I think needs to appreciate is we must begin focusing, in my personal opinion, now of course not everyone has to agree with me but on individualized metabolism. We understand yes, we are all human but this idea that all humans function the same is just absolutely wrong. Men function different than women. Each man and each woman is different. I would even go so far to say, and I get a lot of flak for this, that we are as different metabolically in the inside as we are physically on the outside. We really need to start understanding that.

Yes, there are some general guidelines and rules that can be applied but you must tweak that. I call it structured flexibility. Yes, let’s give a structure to the diets and general rules but then the individual must be able to adjust that. It may be more vegan-based, vegetarian-based. It may be more meat-based. It may be more lean proteins. It may be fattier proteins. We need to understand how our body is responding to all of these things. The micro biomes, the gut, those little bugs, those bacterial products in our gut, that story I think is going to fill in a lot of the gaps but we still need to realize we do not know everything.

One of the things you say ... To me the worst of human traits, by the way Dave, is the combination of ignorance and arrogance. To me it’s okay to be ignorant because there is just so much we don’t know, we don’t know but

once you have arrogance on top of that, you really get into my definition of the worst human traits. You simply can't learn and things come into a grinding hole. What I would ask people is to say "Look, be ignorant, fine. Stop the arrogance in the diet and weight loss and natural health world and let's start sort of learning a different way."

Dave: Now, I'm going to go in on a limb here and probably piss off a few people but I've noticed that there are different sets of nutritional philosophies. Many people aren't looking at words for them but that lead to certain ... I don't know if personality traits is the wrong word but certain behaviors. If you're on a super high protein, super low-fat diet, beyond what your body wants, you have high ammonia levels, you tend to be pissed off all the time. If you're on a super low calorie, deficient in saturated-fat diet, only eating Omega 6 oils, you tend to be a little bit flighty and forgetful because your basically going stay on starvation.

Your behaviors changed based on in some part what the gut biome is manufacturing for you out of what you ate and in some part because your neurotransmitters and your hormones change themselves. It's not just like "I got abs", it's more that actually "I got abs and I got pissed off" or "I like how I look but I feel like crap." If you guys are like the Hollywood superstar types on how they feel when they look amazing running from explosions with their shirts off in movies, they're like "Yeah, I was dehydrated. I felt like crap. It took me a week to recover from that scene but man, I looked good."

How do you draw the line between feeling awesome and having your brain work all the time, which is really my goal, versus looking good? How much of it is out there?

Jade: Me personally I don't like to make generalizations to basically say everyone who eats low protein is going to be ...

Dave: I never said everyone, tendency.

Jade: Tendency, but to me I do think it's interesting. Here's what I think you and I will agree completely I hope. To me it's about the biofeedback signals your

body is sending. To me we're talking about the three big ones – hunger, energy, cravings. Well, sleep is a huge one. Mood is a huge one. Digestive function is another one and there are others, right? There are many others but to me those are the big ones. Mood, you're talking about mood, ultimately these things need to be optimized. If you are looking great like you said you have a 6-pack but you are feeling depressed, feeling anxious, having anger, being uptight, something is going wrong with your metabolism.

To me that's what we need to be talking about. Instead of being like all these fancy hormones and all these names, I would like people to understand listen, when you are feeling moody and crappy and you are having hunger and cravings constantly and your energy is unstable and unpredictable and you are waking up at 4:00 every single night wired and can't go back to sleep, that is telling you that your hormonal system ... I don't care how much you know about the science of insulin and leptin and all these other things we want to talk about, that is telling you that your hormonal system is disrupted and out of balance.

That seesaw, even if you are in a calorie-deficit, you're cutting calories, weighing it down, that metabolic seesaw is going to throw you off with certainty within the next couple of weeks. This is why diets don't work. This is why 90% of people who go on diets end up gaining the weight back and 2/3 end up fatter because they aren't understand what you're talking about that we must be eating, exercising, living in a way that is going to balance hormones. Yes, but we don't know all there is to know about that. If you focus on these bio feedback signals, people listening they can be like "Hey, Jade, Dave, I get it. I can pay attention to my mood and I know when that shifts. I can pay attention."

Women for instance know what happens during the menstrual cycle. They can pay attention to that, great biofeedback for them. Hunger, energy, cravings – all these things tell us how our metabolism is functioning. Then if you want, in my opinion, then if you want you can go back and say "Oh, I feel great. Just out of curiosity let me see how many calories I'm taking in." That to me would be a much better way of doing this. You might discover

“Oh, wow, I’m only taking in 1,000 calories and feeling great,” or in your case you talked about taking 4,000 calories and feel great. That will tell you more about your metabolic engine than any study, any biochemistry book, any guru that tells you “Do X Y Z” in my personal opinion.

Dave: Paying attention to how you feel is core and it’s funny. I often thought that women are far better biohackers than men, at least when it comes to just that bodily awareness because they’re dealing constantly with that monthly cycle. Most of the time by a certain age like “Oh I know when I’m ovulating. I know I’m 3 days. I’m on day whatever.” All those things mean that there’s a little process running in the back saying “How am I doing right now?” A lot of guys, at least I never had that, some guys just naturally do but it’s interesting that “How am I feeling right now?” and then to close the loop and say “Wait a minute, the quality of my sleep last night if I even know what the quality was, or what I had for breakfast or what I ate before bed, these variable might matter. We are kind of as a society realizing that these really matter. For the most part we weren’t taught that when we were young unless we had really unusual parents.

Jade: Yeah. In the diet industry, diet and weight loss and natural health industry is not talking about it either in my personal opinion or they’re talking about it not enough. Guys like you and I are talking about it. We need to continue pushing people in this direction. One thing I’ll say about women too just in terms of hormonal balance, you women who are listening the ones who are saying “Well, Jade, Dave, I can never ... It’s all over the place for me.” I would say that’s a sign that your metabolism is out of balance when you can’t predict. Once things start ticking and that seesaw starts getting imbalanced, you start being able to more clearly see the rhythms of your physiology as well.

I think that’s partly what happens with many people. They are so out of whack that they’re bloated constantly. They’re having gas and upset constantly. They think this is normal. They’re having joint pain and they think that’s normal. They think that mood swing is normal. They think all this stuff is normal. That’s the signal that you are so out of balanced, you’re

going to have to start to do something differently. Just cutting calories and eating tons of broccoli is not going to do it for you.

Dave: That they'll listen to yourself. I go to great lengths to have ... I've had JJ and Dr. Sara Gottfried and other women who are really paying attention to this on the show because too often especially when you get into the exercise side of things, there's a lot of testosterone floating around. It's not all about testosterone. Having both perspectives but just the ones like "How am I doing now?" and even from a nutritional perspective like the adrenal stress in women based on carbohydrate consumption is just fundamentally different than men. If you don't acknowledge that or at least test it, you won't find where you are. We've had world champion female athletes on the show who are so in ketosis. I'm like "Are you kidding me? Is that even possible to be in ketosis?" then others who are completely broken by ketosis.

There's that individual variation there. I get bothered when I see someone categorically say it's true for everyone because I don't think it's that way. Honestly that's what attracted me to chatting with you because you're actually talking about new laws of metabolism. What are those new laws? Just the way you spell them out.

Jade: I think the first one and most important one is the law of metabolic compensation which essentially says ... Law number one, the law of metabolic compensation basically tells you that the metabolism is not a calculator. That's what the calorie counters basically say, "It works like your calculator. It's only calories in, calories out." Now there's the other side of the equation where these people who say "No, no, no, no, no. The metabolism works like a chemistry set. You have to worry about just hormones." To me both of those models are wrong.

What it really acts like is a seesaw or a thermostat because it's adaptive and reactive and constantly changing. There is no chemical mix of hormones that you can put together in a test tube that's going to give you optimal health and fat loss just like there's no single amount of calories just because you know your basal metabolic rate is going to give you optimal health and fat loss. Once you understand that your metabolism works like a

thermostat, that's this adaptive and reactive biofeedback system and then you understand those inputs, you understand that the law of metabolic compensation is where you want to focus your attention.

Let me give a real world example for people who don't understand this. Here is how the metabolism works. Let's say you take the old approach. Just to make it easy let's just say you decide you are going, you have 2,000 calories. That's your basal metabolic rate. You go on a diet so you know you want to cut your calories down by 500 calories per day. What's going to happen? Now you're eating 1,500 calories when your basal metabolic rate is 2,000 calories. Well, what's going to happen in the beginning is you probably are going to lose some weight if you have a healthy metabolism. You're probably going to lose some weight in the beginning.

What the metabolism then thus is it causes compensations. It up regulates, and this has a lot to do with hormones. It increases hunger, increases cravings for Big Macs and cheesecakes and things like that, starts making your energy unpredictable. The other thing it does is it down regulates your metabolic engine. This is where the individual nature of the metabolism comes in because we know on average it will down regulate your metabolism by about 300 calories but it can be much greater than that in some people but in some people as much as 800 calories per day.

You started out in this caloric deficit, 2,000 to 1,500 calories. Let's say you and I, Dave, are two guys whose metabolism compensates a huge amount. Now it compensates up to 800 calorie reduction. Guess what, we're no longer in a calorie deficit anymore and guess what else, our hormonal system is all out of whack. Not only will we hit our weight loss plateau, we may actually start gaining weight.

Now what do most people do? Because they think the metabolism functions like a calculator or a chemistry set, they either cut carbs further or they cut calories further. What's the metabolism do? You might get some results for a little bit of time but the metabolism is going to fight back against you to the nail, hunger goes up again, cravings go up again, energy becomes unpredictable, metabolic rate goes down again. Before you know it we see people like you and I see all the time who are in under 1,000

calories per day running like hamsters on a treadmill and cannot lose weight. Why? All for one simple reason, because they have this wrong idea. They're either in the carbs are everything camp or the calories are everything camp, the chemistry set versus the calculator when the metabolism works like a seesaw - law of metabolic compensation.

The other law is the law of metabolic multitasking. To me this is huge. The law of metabolic multitasking essentially says the body does not like to be burning fat and building muscle at the same time. Unless you are on anabolic steroids or a completely one or two exercise, the body just doesn't like to do that. It either likes to be burning fat and muscle or building fat and muscle. This is why we get the skinny fat look and the bulky look where you're basically gaining muscle under a layer of fat. It looks like you have basically a jacket on top of a sweater.

Dave: Yes, skinny fat is a whole thing that I think is rampant amongst especially lean younger people who eat absolute crap. They all have skinny fat, skinny fat, skinny fat. It's ridiculous.

Jade: That's that law of multitasking at work. The body doesn't like to do that. We need to do things that are a little bit smarter. Weight-training being one of them. It's one of the reasons why a smart person who is working with people who have weight-training as the dominant form of activity because it's one of the only things that when you're in a hormonal state that's trying to burn fat that makes you hold on to your muscle mass. Those two are the most important laws and then the third one and the last one ... Not the last one but the third to the last one is what we talked about, the law of metabolic efficiency which essentially says there are certain things you could do -eating fat because you may absorb more than I do, so you have a more inefficient metabolism.

Dave: You can train it, right?

Jade: You can train it. The metabolism isn't just a super efficient engine. No engine is. The last one is the law of metabolic individuality which is you and I have been talking about this this entire podcast which essentially says we are each different. We have to honor that. The only rule is do what works

for you which means you need tools, which you are wonderful at providing not just helping people understand those things but also giving people objective data to look at, which in my opinion is what we need.

These are not laws that have been studied and all these. This is just my way of helping people understand here are some key understandings about the metabolism that when you really get what we're talking about, it changes the way you will approach diet and exercise and lifestyle forever because you're now working with the way the body actually works instead of against it.

Dave: Yeah. It's kind of liberating when you finally get that right. Like "Wow, it wasn't hard." A big part of what I've written about in the Bulletproof diet is actually the notion of willpower because I struggled so much with this when I was obese where I was like, "All right. I'm going to do something that fundamentally goes against my biology" but I've been told by diet and nutritionists industry "These are the things that are going to work." Then I do it and I get tired and I get cranky and frustrated. I'm like "Okay, it's because I'm not trying hard enough." The next day I'm going to try even harder. You end up getting into this weird guilt cycle where obviously because you're a failure.

When I finally realized is that I was burning out my willpower. Now we know it's finite. I actually spent more time as the book unfolded looking at the notion of willpower and how nutrition itself can affect how much willpower you have and how the decisions you make at the dinner table or with your snacking totally change the quality of every decision you make not just what you put in your mouth. I was amazed at how I literally had more willpower when I did my stuff in a way just like you're saying, that is in line with biology versus opposed to it and believing it's in line.

Jade: Yeah. I couldn't agree more. Not only that, what's really interesting about willpower is this idea that just like you said, the willpower ... Willpower is more like a battery. It can be drained, it can be charged up. I think not only do we need to look at willpower in line with our physiology but we have to look at willpower in line with our psychology and approach things in a way that helps us build habits around willpower.

Here is an example. Here's an analogy I like to use. It's not a fun analogy because I'm a dog lover. Imagine a dog attacking your forearm and biting at your forearm. What most people will do is they will pull away from the dog which what does what? Makes the dog attack you harder and faster and is probably going to do more damage. Now, if you had the wear-it-all, probably the thing to do is shove your forearm down that dog's throat. The dog is going to let go and more likely let go anyway and you're going to have less damage.

Well, with willpower it's the same thing. Instead of being like "I'm not going to order desert. I'm not ever going to order desert." What if we said, "Every time you go out to eat, you must order desert and you must only have 3 bites of that desert." In other words every time you go out to eat, you have a will power workout around desert. "You must get desert. You must practice only having three bites." The first time we do it I'm going to eat the whole desert. Maybe I start out by only ordering desert when I have 4 friends around me but in time what begins to happen is desert loses its psychological allure. All of sudden now what is known in psychology research as the "As if" principle, I Jade Teta, now see myself as a person who never finishes his desert. Now I'm one of those people that everyone admires and like "How can he do that? How can he only have a taste of this or that?"

This is the way that I think we need to start looking at just like you said that's one of part it. Eating in a way, doing things in a way that balance our physiology but also working in a way that strengthens our psychology and has to see ourselves as different people rather than avoiding. There was an interesting study on it. They had women carrying around chocolate containers. One group was told use distraction techniques for the chocolate. Don't think about them even though they're in your purse and you have them. The other group was told take them out, interact with them, look at the chocolate, smell the chocolates whenever you have a craving then put them back. Long and behold who do you think ate more of the chocolates? It was the group trying to distract themselves doing it the old way versus the group who was interacting with them and trying to train themselves and their psychology in a different way.

To me this discussion about willpower is huge. You obviously know a lot more about it than me because I was never 300 pounds which to me is a monumental effort to do that, but certainly as my metabolism change, you and I being 40 now not our egotistical 20-year-old male selves, things change. You start realizing you have to do it a little bit smarter. That's another thing I would add for the listeners on willpower both physiologically doing it in the right way and then doing it psychologically the right way as well rather than the old worn out methods that don't work.

Dave: It's interesting. I don't ever apply my willpower to not eating something because when I do it right, like snacks, honestly I don't care about a snack. I ate 4 hours ago. I don't need a snack. I know there's 2 hours to go before I even want food but I guess if it's a really high quality dark chocolate that won't cost a craving because it's full of casein and some other weird crap, I guess I'll eat it because I like it and it doesn't have a lot of carbs, I'll be fine. The modes on desert, I love whatever the cheesecake but that's probably more inflammatory than choosing this other desert.

If you're going to have desert, I'll be like eat the whole thing but choose the desert that doesn't cause cravings and doesn't cause inflammation, assuming there's one on the menu, that's the hard part.

Jade: The point is do what works for you. I would say two things about hunger and cravings, you got the biochemical piece and then you've got the behavioral piece.

Dave: And the emotional piece, right?

Jade: The behavioral and emotional piece. To me what's happening is most people are struggling with both biochemical cravings and behavioral cravings. To your point, I've experienced the same thing. When you get the biochemistry right, often times that's what many people that's enough. It's almost just like "Uh, I could take it or leave it." For the people who have both biochemical and behavioral issues then they're going to want to take both approaches that we're talking about here and put them together to be

more powerful but I agree with you. If you get the biochemistry right, oftentimes the behavioral stuff you just don't need it as much.

Dave: It's true. Now, that brings us up to the next point. I haven't talked about it in 4 to 6 hours and I just don't care about food. There's some allure to selling 100-calorie bar and you just need to get one every two hours. That's actually a beautiful business model. A bar that causes cravings and you can sell them with another low-calorie bar every two hours later. It's like a little slot machine. I think that's a nefarious perspective there but is there a case in your experience to be made for eating every two hours, 6 meals a day, 8 meals a day kind of thing?

Jade: Absolutely. I think again when it comes to eating frequency there are those let hunger, energy, cravings, mood, all that stuff guide you. To me when the metabolism is balanced, typically these are the people who can go until noon and not eat and feel fine and don't order the burger and fries but instead get the salad with salmon, but for those just starting out my personal experience tells me that little small frequent meals often tend to do better but here's ...

Dave: If you're lectin-resistant, your hormones are broken or something, yeah okay, I'd buy that to some extent.

Jade: Yeah, what it does for these particular people too is it helps them. I think this is the hidden reason this works for many of my clients is that it helps them start to understand they can control things through food. Eventually what's going to have to happen with them, I think once they get to the more balanced hormonal state is the natural tendency will be to move to a less frequent eating pattern. They might look at people like you and me. I typically I go until noon, not because I'm trying to do intermittent fasting or anything like that. I just let my hunger, energy, and cravings guide me. It's not like I'm like "Oh I read on the internet that I should do intermittent fasting. It's just that I'm not really hungry or craving anything until around noon. I also know that when I get my workouts in 2 or 3, it doesn't impact me so I'm letting these things guide me.

I do see sometimes when I get dysfunctional sleep or I get stressed, sometimes I'll snack a little bit more within that. I've just learned to read my metabolism but one thing I don't like is the idea that "Hey, you should be intermittent fasting and everyone should be doing that or you should be eating small frequent meals. Everyone should be doing that." To me it's like again we go back to this idea do what works for you. Most importantly learn what works for you. People just starting out who are 300-pounds, 400-pound clients I've worked. Not all of them but typically most of them do better in my personal clinical experience, which is just my experience, many will have others, do better with small frequent meals. Then what I try to do is once they start to learn and start balancing their metabolism then I begin to move them to a less a frequent eating pattern. You and I know it can go all over the place. Some people go right into intermittent fasting and do great.

Dave: Usually people with monstrous adrenal glands ... Now, there was a time when I was fat, I wasn't even 300 pounds. I was probably only 250 or 260. I would end meetings at 11:45. I'm getting to be a reasonable level of executive for the first time of my career, I'm like 11:45 meeting is over. Why? Because I'm going to have to kill you and eat your arm if I don't get something now. I came to think I'm out of here. I literally just pick up my crap and walk out the door with 10 people in the room. It was true that I couldn't focus and I was physically getting angry because my hormones were so broken. I'd go downstairs and go like "I want two chicken breast. What you're just going to give me one? I'll kill you for your chicken breast."

Literally I had hormonal stuff that was causing that. To go from that state where it was "I must eat or I'm going to fall apart" to just a sense of freedom there, it was a process no doubt about it. It doesn't work for some people especially say if they're really overweight to just not do this unless whatever they're consuming means that it's something they don't care and there are tricks. Some of the Bulletproof diet stuff were like "Oh wow, I got there" or like your guy, the slim Jim and hotdog diet. Hey, if it works all right it worked. There might be some longer term cancer issues if that's what you do for 10 years but if you're doing it for a couple of months and it turns something back on, hey, that's cool.

Jade: Dave, I love the way you're saying that because I think it's so critical. The process, the journey, I think most people don't understand that. I remember I've ran the gamut with all of these stuff. It's really been a journey. I know it has been for you as well but what happens is along the way it sounds like you and I have gotten to the same place where we were probably rule followers and we go to do it this way and we got to do it that way. Some are now as we know there are just some foods that are going to be better than others for the vast majority of people. If you can eat jellybeans and have optimal biochem labs and hunger, energy and cravings to lose fat then fine but I think that's almost impossible, but the journey is what matters.

People need to understand this is a process and you have to understand that on the process to nutritional enlightenment or weight loss enlightenment or metabolic enlightenment, that all of these things can be useful so long as you are losing your bias and your rules and these hard and fast ways of doing things and staying in these nutrition camps and arguing about stuff that may be keeping you sick and unhealthy when trying something different, doing things in a different way, understanding your metabolism can free you from this. I think you and I have both had that experience.

Dave: We have indeed. We also have the experience of coming up on the end of the amount of time we have for the podcast, which means that there are two questions left. One of them is an easy one and one of them is the fun one. Let's do the fun one first.

Jade: All right. I'll do my best.

Dave: All right. It's okay. Every other guest has answered this one and it's kind of the hallmark of the Bulletproof Radio. It's given all the stuff you know, not just about nutrition although you can toss that if you want but just as a human being who has achieved something in life, the three most important recommendations for people who want to perform better at life, not at whatever their job or their sport or whatever it is although toss that if you want? Three most important things of all, what are they?

Jade: I would think the first one is take more action. To me here's the thing, I feel like us humans are inherently lazy and inherently fearful. To me if we can be a little less lazy and little less fearful, you win. What most people do is they're always waiting for the right time. They're always waiting for the right circumstance. To me, I'm on these guys that is not "ready, fire" or "ready, aim, fire". It's "fire, aim, ready" and then it's "aim, aim, aim, aim, aim." To me that's how you begin this process. That's how you become be an enlightened version of yourself. That's how you make big things happen.

The other two are to me and I'll say it this way, to me the hardest thing in the world is knowing who you are. What's harder than that is being that person. To me those are my next two that ultimately you spend your time knowing who you are, getting out of the matrix, all the considerations that society is telling you "You should do this, you should do that, this is a respectable job, this isn't a respectable job. This is the way to eat, this isn't the way to eat." Really understand who you are.

Then the third piece is be that person every single day. Guess what, you're going to mess up and sometimes you're not going to like what you're doing but you get back up and you have that resilience factor. To me those are the three things that at least in my life that have really made the biggest difference. It took me a while to understand those.

Dave: Thank you for that. I always love hearing people's answers because I truly never know what I'm going to get. I was probably hoping that you were just going to jump and go "Slam into a slim gym" but you didn't. Now, Jade, the other question is a pretty simple one but this one I'm sure a lot of people want to know, how can they get a hold of you? Give the people listening your website. We put all these on the Bulletproof podcast show notes. This will be on the blog and all but also just people driving want to put in their cellphone now ...Well hopefully sometime later but anyway.

Jade: Dave, thank you for doing that. That's so very generous of you to do that. Anyone who wants to see my work you can go to metaboliceffect.com. Follow me on Twitter, it's @jadeteta. You could check out our book The Metabollic Effect Diet. Seriously, thanks for being so generous with that. It's really, really appreciated.



Dave: Jade, the podcast is here not to sell coffee, although I appreciate it if you do want to buy some Bulletproof Coffee.

Jade: It is damn good coffee, man.

Dave: Thank you. It's here to share information and literally it doesn't even have to agree with me as long as it's good information coming from the right place that's going to help people. That's why the show is here and that's why it's not sponsored by this and that and I don't have 20 minutes of me ranting about the latest product because that's not its function. In fact something that's just worth sharing, we are just crossing about 8 million downloads for the show, which is ridiculous. It's awesome and amazing but if you look at the number of hours in a human life and you take 8 million divided by the number of hours people are awake, if this show is a waste of time I would have murdered 50 people or something. I would feel really bad about that. Really you're on the show because you have something to offer and I appreciate that. It's why I put so much energy into this.

With that said, if this show was helpful for you please do one simple thing, go to iTunes and leave a review. Tell people that it's worth listening to. This really helps people find the show and it helps it to stay number one in the health category on iTunes, at least where it is much of the time, and I'm grateful for that. It's here to help so thank you.

Jade: Dave, thanks for your work and thanks for having me on. Talk to you soon.

Dave: One of the things I don't talk about too much on the podcast is Bulletproof Upgraded Whey. Whey is great for detoxing. It is not meant to be a primary protein source. If you're going to use whey, use the very best whey you can get. That's Upgraded Whey.

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