



Transcript – Feasting and Fasting with Brad Pilon - #348



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Speaker 1: Bulletproof Radio, a state of high performance.

Dave: It's Dave Asprey with Bulletproof Radio. Today's episode is a re-mastered version of one of the best interviews I've done to date. You're totally going to love it. I promise you that I will not take your time to direct your attention to something that isn't absolutely stellar. Enjoy this episode. We've remastered it for you.

What this is doing is it's freeing up a little bit of time for me to finish the new book. It's also making sure that you've seen the most important, most impactful, most useful content. I believe really deeply with Bulletproof Radio that given that we're pushing 50 million downloads, the number of hours that are consumed just listening to Bulletproof Radio is more than 100 human lifetimes. That's a big responsibility. I'm not going to waste your time, not with numbers like that. This is one of those interviews that you absolutely have to hear.

Today's cool facts of the day is that people with red hair need about 20% more anesthesia than people with brown or blonde hair. We think that's because they have a different MC1R gene, which is what causes the red hair and fair skin. Mice with that gene have a higher sensitivity to pain as well. This means that if you have red hair, I mean natural red hair, that would mean that maybe you really are more sensitive to pain and you also probably have a harder time detoxing some other chemicals in the environment. Those freckles that make you cute, may also make you a little bit more sensitive to the world around you.

Hey guys, Dollars Shave Club just keeps getting better. Four years ago they started delivering their amazing affordable razors. Now they have over 3 million members who no longer overpay for a quality morning shave. I'll never use anything else again. Now new members can't get their first month free.

Dollar Shave Club is about so much more than just razors. Dollars Shave Club has a mission. They want you to look, smell, and feel your best. They've been investing millions in R and D developing their own original grooming formulas for your face, hair, and body. The stuff is amazing. Pre-and post-shave formulas, skin protection formulas, killer hair styling products, and literally the most amazing soap and body wash I've ever used.

Going to the store to buy a razor is actually awful. All the stuff looks the same, there's too many options, no one's there to help you find the right products for you, and frankly, they're locked behind cabinets. You have to bring a bell or go to the front and harass someone to unlock the razor blade. Seriously? Do you have any idea why you would want to do that or why you pick the shampoo or body wash that you do? I just get all my grooming stuff shipped from Dollar Shave Club.

Give it a try. Once you get in there you'll see. The products work amazingly, the service is world-class and there is no commitment, no hidden fees, and you can cancel whenever you want. Get your first month free at Dollar Shave Club dot com slash Bulletproof. Just pay shipping and that's

only a few bucks. That's Dollars Shave Club dot com slash bulletproof.

Today's guest is a really, really interesting guy. I've been a fan of his work for a while, and I'm really stoked to have him on the show. He's an expert on intermittent fasting and how it can help you lose weight and gain muscle. He's also the author of a book called Eat Stop Eat, which covers a method of intermittent fasting which is there specifically for losing fat while keeping your muscle mass and energy.

If you're listening and you've listened to a few of these episodes from me, you would understand why I think it's pretty exciting that we're having this conversation. I do this sort of stuff a lot. That means that our guest is none other than Brad Pilon. Brad, welcome to the show.

Brad: How's it going, Bud?

Dave: I've got to admit something, Brad.

Brad: Hit me.

Dave: I've read your stuff. There's only one problem. I've never actually heard you say your last name, so tell me I didn't just butcher it.

Brad: No, man. Pilon is the most accepted way. If you want to get French-Canadian you could say Pilon, but Pilon is the preferred over Pilon, Palan and all the other weird ones that I get.

Dave: Awesome. I usually just get called Ass-spray, so I think you win.

Brad: Fair enough.

Dave: You can tell this is the first time we chatted, but I feel like I already know you because of your work and just because I think we have a lot in common from that perspective. Your blog is on Brad Pilon dot com, and you're also someone who grew up in Canada, which is kind of cool. I up here in Canada now, but you're on that other side of the country where they speak foreign languages and stuff.

Brad: Exactly, over in Ontario just an hour outside of Toronto. We're in the same country but, man, we're what, seven hours by flights?

Dave: Exactly.

Brad: Different worlds.

Dave: Speaking of different worlds, you're an interesting guy from an education perspective. There's lots of people who studied nutrition. There is even more people who studied PE, essentially physical exercise, exercise science and things like that. You've done applied human nutrition. I have to say, the difference between nutrition and applied nutrition isn't that clear my mind. Will you explain what makes what you did applied?

Brad: I will, and I'm going to preface it by saying it was just as confusing to me. I knew I wanted to go into nutrition and I'm looking at the course outlines at my school, University of Guelph, for applied human nutrition and nutritional sciences. Two different courses, completely different courses. I'm thinking, all right, applied human nutrition because I like humans. I'll go that way.

What I found out about probably right by the end of first year is applied to human nutrition is the course you would take to become a dietitian. Human biology or nutritional sciences, that's what you more would take if you want to become a lab geek in nutrition. My friends in nutritional sciences, you know it's true.

My one ended up being nutrition, but one of nutritional counseling. Of course, I did my first counseling class and I said what is this. I actually tried to transfer out. It's a huge long story. I wasn't able to but was able to take some of the credits in some of the courses that I wanted to kind of blend it.

To give you an idea of how messed up that is, part of the curriculum, this may have changed, I'm old now, but part of the curriculum for nutritional sciences was nutrition, exercise, and metabolism with Dr. Jerry Graham, a frontier guy in the caffeine research knows his stuff. That was mandatory for nutritional sciences, but an optional one if you're in applied nutrition. A little different thinking there. My undergrad is in applied nutrition, which is the one you would take if you wanted to become a dietitian in Canada.

Dave: From there you went on, and forgive me for going through your background, but there's a lot of people who do different things. You've done this all through college before you got into being an author. I talked with science journalists and I talked with biohackers and then you've got the pedigree. It's cool. You also studied protein synthesis and specifically the amino acid, leucine.

Brad: Yes.

Dave: All of that knowledge happened before you started doing intermittent fasting, right?

Brad: Absolutely.

Dave: You've got a pretty solid foundation here. What in those studies made you start looking at intermittent fasting and come up with Eat Stop Eat ideas?

Brad: That was kind of fun. I went for my undergrad, didn't want to be a dietitian. Ended up in research for a sports supplement company in Canada. Spent six years doing R and D there, creatine research, leucine research, protein research, phenylalanine, you name it. During those conversations, I realized I was on the wrong side of the table. I was the guy with the money funding the trials and I wanted to be doing the research.

Decided to leave the job because it's what every smart 30 year old does, is drop a good job and go back to school. I went back to study nutritional sciences, this time more of a science-based dig in. Through a ton of crazy happenstance, we ended up deciding the best place to start would

be to study no nutrition, so what happens when you're not eating. The idea was, because obviously not eating is horrible for you.

Dave: You'll die.

Brad: You die. You build on that. This is so bad for you. This is why my awesome diet is good for you. In the first couple months of that original research looking at no eating, is when I had to make a decision. Everything was different than what I thought it should be. I had 6 years in the bodybuilding industry. I knew you had to eat every 3 hours, it had to be 300 grams of protein. You had to eat at night. You had to wake up at 2 AM to eat. This was common knowledge.

I'm reading through these papers being like the metabolism doesn't slow down. That paper's just wrong. Garbage. Then you read the next one, didn't lose muscle. More garbage. By the time you're 12, 13 papers in, you've got to make a call. Either everybody else is wrong and you're right or maybe you don't know as much as you think you do. I decided to redirect and study the effects of short term fasting on human health metabolism. That was my graduate work.

Dave: There's that interesting phenomenon that happens with all researchers because we're humans. It's it can't be because it isn't or it isn't because it can't be. That can't be possible and that kind of logic is harmful to true research because it lets you conveniently throw out the garbage. Then you're like, wait, I just had an experience that matched the garbage. Now there's three garbage studies. You're like, wait, that was actually innovation not garbage, but the first one might have been garbage.

Brad: You never know. You're building up.

Dave: You're experienced this. You're like, not eating has benefits that we didn't know about.

Brad: Exactly.

Dave: What benefits did you find?

Brad: The ones I was most interested in coming from bodybuilding, build muscle lose fat. Everything else was just minutia.

Dave: Totally, like living a long time and stuff like that.

Brad: Abs my friend, that's all that matters. The main thing was from the bodybuilding perspective, if you didn't eat every 3 hours, you lost muscle. This was guaranteed known fact. To start seeing people in trials where we're measuring mean body mass in DEXA and were not seeing changes, and DEXA's pretty good, it's a good measurement, it would be considered gold standard, that was the one that really struck me. I'm like okay, hold on, if they're not burning muscle, what are they burning? Of course, you look back to the research and you're like they're burning fat.

Dave: That was air. You can't burn fat if you're not eating.

- Brad: It was air. The hard part was if they're burning fat, but they didn't eat anything, then it's body fat. The fun part about that was, you're aware but for anybody who's not, the measurement of the fuel mix that you are burning, it's a very, actually, simple measurement just of your breath, the oxygen you're breathing in, the carbon dioxide you're breathing out. It's fundamental to human physiology and respiration research. If that was wrong, everything we know about human physiology is wrong. That measurement, the RQ, consistently showed that these people were burning more fat as there fast went on.
- I'm actually going, are you kidding me? I've been eating every three hours, waking up at 2 AM to eat because if you don't eat, you burn muscle. I'm finding out these guys are burning fat. That's all I had to do was just take a break from eating. That was the part that was most interesting to me.
- Dave: The whole idea, in the 90s, I was into the natural bodybuilding. I was never competitive. I was a 300 pounder. I have stretch marks that mean I'll never be pulling my shirt off stage because I was a fat ass. When I look back on that, I was doing the same thing. As you probably found in your research, if you're getting excessive amounts of protein, there's this little thing called ammonia that can affect human performance.
- Also, I was overfeeding on protein. I was getting not enough fat, not enough of the right kinds of fat and I was eating all the damn time because I didn't want to lose muscle because muscle helps you burn fat and I was desperate to burn fat.
- Brad: There you go, exactly. My favorite was working in an office building with about 200 mostly guys into bodybuilding with free access to protein. The ventilation system had to be one of the best ventilation systems in the world. It was bad sometimes, especially you adapt to it. It was the new hires, the new employees. You're like dude, I'm happy you're into the lifestyle. You should go home for a couple of days.
- Dave: It's a known problem with excessive protein. It tries to ferment in the gut. I've seen some research. It's in the Bulletproof Diet Book that's coming out about a ferment ability of different types of proteins in the gut. Collagen actually makes a reasonable ferment thick, creates butyric acid almost as well as resistant starch and it doesn't smell too bad but if you're trying ferment eggs ...
- Brad: Whey casein eggs, the standard.
- Dave: That's just not okay.
- Brad: It's not good for anybody.
- Dave: Do you think there is a biotoxic polysaccharide kind of effect from having protein doing that in your gut? Have you come across that in your research?
- Brad: I haven't but I would be interested in long term. Six to 8 weeks is a typical high-protein diet. Same thing as what they study. You start at 16, you go until you're 25 before you're out of the

bodybuilding lifestyle. That's a big period of time to be really consuming ultra-high amounts of very processed protein, too. When you're eating 300 grams of protein a day plus, it's not typical for that 300 grams to be from steak and vegetable sources and chicken. It's normally about a 50-50 split of food and whey casein shakes; very, very processed, quickly digested, hits the gut very, very fast. There's no coagulation or anything, it's just right through. That would be what I would be really interested in to see what that does long term.

Dave: You also have that idea that between 16 and 25 your - cortex just finishes wiring itself in at 24. Now if you've increased the number of bio toxins in the gut, which it surely has to do with the bacteria that are there and lots of other factors, but if you do that during a critical formation phase of your brain, I don't know what happens. I don't know that it's bad either, but it's a question in my mind.

Brad: We're on a little tangent for a second, I love this topic. Applying the research to the population based on research on the small subset of even age, is my favorite one. Up until age of about 24, 25, we are growing and developing physically, mentally like you said. Then after that, you're fighting periods of decay. You have a study group of people who are 18 to 45. On the edges of that, bring them back in, you have very different types of human beings. We just lump them together and apply it to everybody, right? I totally agree. Breaking it down by age is fundamental to understanding nutrition because I think it changes as we age.

Dave: I've talked to a few companies who have now started to do real research looking at your genome, looking at your gut biome, looking at your age, looking at your gender, looking at your activity levels and then munching all that data together. Who knows? In another five years we may have shockingly good information that's for you because of where your ancestors are from and because you live in this region. We'll just pull all that together. Your ideal protein ratio for the next two years, protein to fat and how often you should eat and everything else, we may actually be able to tease that out to the point that you go to a restaurant. I would like option seven-six. That's my dream anyway.

Brad: Love it. That's good.

Dave: Butcher Box delivers 100% grass-fed beef, organic chicken and pork directly to your door. All their products are humanely raised and free of antibiotics and hormones. You can think of them as the neighborhood butcher from modern America. Each box comes with 7 to 10 pounds of meat, which is enough for about 20 individual size meals depending on how big you are and how hungry you are.

You can choose from four different box types: all beef, beef and chicken, beef and pork or the mixed box. My favorite would be the all-beef. You can also customize your box with add-on types like bacon, rib eye, and beef bones. I love that stuff. You get some high-quality bacon, you get rib eye which is the best steak you can get, and beef bones are how you make beef broth.

It's basically your meat for the month in a box. They also include step-by-step recipe cards and a note from the butcher describing the cuts and farms featured that month. I've seen these guys everywhere from Mark Sisson show to the Today Show and for good reason. Sourcing high



quality meat you can trust is hard, especially in some areas of the country. The fact that they deliver for free nationwide is pretty cool.

By taking out the middleman, grocery stores, and purchasing direct from farms, Butcher Box can help you buy meat at a lower cost and then you benefit from that. It's a cool business model that makes sure you get the best value instead of just passing it off on the supply chain.

The price is just \$129 a month which works out to less than \$6.50 a meal. Every box comes with enough meat for at least 20 individual size meals and shipping is free nationwide except for Alaska and Hawaii. Sorry guys. Order now and get free 100% grass fed burgers. You get 6 6-ounce burgers in your first box. Use the code Bulletproof to get an extra \$10 off.

Get started by visiting [Butcher Box dot com slash Bulletproof](https://www.butcherbox.com/bulletproof). You can cancel any time without penalty, so give it a try. Visit [Butcher Box dot com slash Bulletproof](https://www.butcherbox.com/bulletproof) to get your free 100% grass-fed burgers. You get six of them and \$10 off with the code Bulletproof. Get your meat now. That's [Butcher Box dot com slash Bulletproof](https://www.butcherbox.com/bulletproof). Let's jump back to intermittent fasting.

Brad: Let's just go right back into that.

Dave: Let's transition smoothly.

Brad: I think that's a good segue way. We did well there. Hit me.

Dave: Talk about glucose regulation and specifically neuronal resistance to injury when it comes down to interment fasting because having tough neurons is bad ass.

Brad: It is bad ass. My personal view on it without getting too technical is it's just another example of hormetic effect fasting. It's a small stress that we go through that tends to strengthen the system. I guess that's a good generalized description of hormesis. The body's introduced to a small stress, and that small stress actually has beneficial effects. If the stress were to get to large, it would become a negative on the human body, but a small amount tends to allow the body to learn to adapt.

I think that a lot of what happens in brief periods of fasting, so maybe not a prolonged fast but a brief one, tends to follow this kind of hormedic curve when it applies to the brain, when it applies to autophagy, when it applies to even inflammation responses, all of these areas, I think it's that small brief stress that causes the, what we consider a beneficial long-term adaptation. I don't think it's much different than a weight training session, if you were to look at your body right after weight training session, whether it's functional MRI or something where you're actually looking into the muscle. If it was a minute after a ton of calf freezes, you'd be like, don't ever do that again. Whatever you just did to your calf, don't ever do that again. It's a bloody mess. It looks like a grenade went off. You look three or four days later, you're like, all the muscle fibers are organized, they're a bit bigger. Whatever you did, that was good.

I think it's a lot like that. Whenever you deal with small fluctuations whether it's the increase in blood free fatty acids, if it's a decrease in blood glucose back to a basal level that has to be

supported by the liver, whether it's changing over to a mix of blending fuels that includes ketones, all of that tends to be a small stress or at least an introduction of a new metabolic pathway maybe we haven't been using because we eat all the time. That introduction, it strengthens the system. That's how I feel it affects everything, not just the brain but your entire body as a holistic approach.

Dave: Have you come across fasting induced adipose factor in your research?

Brad: I did, and you probably found it in the same area when looking in the gut micro biome.

Dave: Amen brother.

Brad: There you go. I was really interested in that. The name was a tip-off that I should maybe look into it.

Dave: A little bit.

Brad: Fasting introduced, Pilon is in. Really fascinating. The thing I like because I've been very interested in the gut microbiome, very interested in even endocrine disrupters from the environment, but people know me for fasting. I always like to try to tie it in. When I found that, I thought, now we have a connection. Now we have some way the gut microbiome is interacting not only with the foods you eat but it's also contributing at times you don't eat or an equivalent matter. I thought that was a very interesting thing that isn't maybe getting enough play time as it deserves but only because, of course, it's known by three or four different names right now.

Dave: I covered it in the Bulletproof Diet. There's another unrelated study to that one that looked at the impact of coffee and butter on the gut microbiome. Funny enough, especially if you add the brain octane oil to it, it's essentially going to tell the biome in the gut it's not a good time for you to tell my body to store fat. It's suppressive basically of that kind of bacteria.

Polyphenols, the ones you find in coffee, are actually feeding the bacteroides, the ones that don't have the fasting induced adipose factor. It's a complex way of saying your gut biome is telling your body to store extra fat or to burn extra fat. It's amplifying what your liver makes. Funny, one of the mechanisms of action that I'm hypothesizing for why I was magically able to eat stupid amounts of food and actually lose weight when I was trying to gain wait, like 4000, 4500 calories a day for two years, then I think that I had to deal with that.

In the morning, if you're not feeding the bacteria anything they can eat, whether because you're just eating nothing or whether because you're eating only fat, which doesn't really feed the bacteria, you can't have an amplification of that one signal. That's probably a part of why people get some benefits from things like that.

Brad: Just think, because the one thing we do know from research is that while obviously amino acids and glucose do have the ability to knock you out of the fasted state, fat doesn't. You still have to deal with the fat, it's still there. It doesn't disappear. In terms of actually affecting what I would consider a classic example of a fasted state, growth hormone increases, insulin decreases

glucose back to a basal level, that happens even when fat is fed at an amount that's roughly equivalent to your basal metabolic rate, sold large amounts of fat.

It's very interesting because now we are looking at really two separate systems, your body and your gut microbiome, working together which only makes sense, otherwise, why would they be together. They have to be synergistic somehow.

Dave: They could be. They also could just be parasitic.

Brad: Synergistic, parasitic?

Dave: I come at this from a computer hack perspective. My background is decision support systems which is a subset of artificial intelligence and literally hacking. I accidentally wore one of my hacker T-shirts today. Great segue way.

Anyway, one of the first things you do if you want to take control of a system, whether it's your body or someone else's computer, is you want to get in there and look and see has anyone else taken control because I could exploit their control mechanisms. When I started looking at my body, I think why was I 300 pounds, why was I fat and inflamed all the time. That gut biome, they're not there for my best interests, they're there for their best interests. Their best interest is I took over the body. I don't care if he doesn't have a six pack. I want to make sure he has extra fuel in case there's not enough food for me. This is my walking support system as of bacterium. You said they aren't that smart, but emergent behavior happens so they don't have to be smart. They just have a course set of rules.

I'm like, okay, these little bastards are telling me to store fat when I don't want to, so take that.

Brad: You look at how their communication, they share DNA the way we would text message each other. It's like, you need this? Here. There you go. They adapt unbelievably quickly. It's funny we are calling them they like they're a different unit because they actually are.

Interesting from what you just talked about, the only take away I have is that Dave is going to be responsible for Skynet. I think that's what I took from it.

Dave: BioSkynet, it's totally different.

Brad: Totally different. Good. The flesh around the Terminator, good for you.

Dave: That's evil.

Brad: The term gut microbiome, and it's role in fasting, it's one of those niche areas right now where we almost have to look to the placebo groups who weren't eating and see what happened to them to get an idea. Pretty soon, research takes a while, so you've got your 6 to 8 weeks study that actually took about 14 weeks to do and then you have your whole process of writing, revisions, getting it published. In a couple years, I think it's going to be another big area.

Dave: Now we've pumped up intermittent fasting. I'm actually fascinated that you've looked into what happens if you eat only fat. Honestly when I started some of my Bulletproof experiments, I feel freaking amazing, but I didn't have all the research that I have now about what are the reasons it's doing what I can feel it doing and I can measure it doing. I came across stuff similar to what you did that said fat doesn't have the same effect as protein or sugar on the body. If I just do that, which is not natural, I don't think very often we ... I'll just eat the hump off the Buffalo with nothing else and just..

Brad: I'll just leave the rest of the crows.

Dave: Maybe I'll make a nice smoothie out of it. Given that you've got that, I would love to get your professional opinion, and you can say positive or negative on the whole idea of consuming only fat during an intermittent fast just for energy or for feeling good.

Brad: That's the hard part because I know from a weight-loss point of view, you still have to deal with the fat, it still exists. In terms of a feel-good energetic point of view, it's hard to measure in trials in a way that will ever come across as significant. What you're asking your subjects to do is be in tuned with how they feel without a placebo effect of me saying, hey Dave, how do you feel right now? Oh crap, good. I never even thought about it.

I think there's something there and I think maybe the best way to do it would be instead of looking at just a placebo, you'd almost have to go coffee versus coffee with fat, to use your thing or fat versus some form of placebo rather than just to fast.

Dave: Like Olestra or something? Or maybe..

Brad: ... turned out great in comparison. I see the idea and ...

Dave: Here's an interesting result that I think is going to fascinate you. I actually did this study. We did seven measures of short-term executive function, like three back memory and finger tap time and stuff like that, quantifiable university grade measures. We tested people on coffee from a selection of corner coffee shops, coffee lab tested to not have mold toxins in it and both of those options with butter. We are basically black coffee versus black coffee and butter no mold coffee and versus butter and regular coffee.

What we found was putting butter in coffee improved, whether it was bad coffee or good coffee, that it improved almost everything except one thing. I think it was a visual color perception thing went slightly down.

Brad: Test or ... okay.

Dave: All the other ones, essentially no mold coffee outperformed moldy coffee. Butter though, didn't always outperform. You know if there is butter in your coffee. We were expecting a substantial placebo result for butter but butter under-performed, which means that we probably didn't have too much placebo in it. Butter still outperformed not putting butter, but there were a few cases where butter wasn't as good as just the difference between the coffees.

- Brad: You'd almost want to wonder if doing the same trial with the same coffees but decaf, if possible and get the caffeine out of there as maybe a confounder.
- Dave: That's a good idea. I'm funding some more research on different fronts there. There is an inflammation side on what coffee oils do for you and then there is a coffee gut biome. I am looking into this more. Of course, everyone says you have coffee and you have this excessively purified coconut oil stuff. Because you're from the supplement business, half the people will say it was funded by industry. I'm like, I'm not industry and I'll publish the data. It's the best I can do.
- Brad: Being the guy who handed researchers money, I'll tell that you don't really have that much say. If anybody's known a very well-known person who performs research, they are rather opinionated and they don't really take advice kindly, especially when you're younger and you don't have 20 years of postdoctoral experience, they just ignore you.
- Dave: Hiring real scientists is amazing. They act like scientists. It's a good thing.
- Brad: It is a good thing. With the coffee thing and even the butter thing, I find it interesting because getting back to supplements, I have Brad's whey protein, but at any given time, I may be sourcing my whey protein from four or five different providers depending on cost. My protein may be different now then it was last year. Nothing's changed on the label, I just bought it from someone else. Your butters, if you don't know exactly who they come from, they may change dairies depending on costing.
- Dave: We controlled that. We told everyone to use Kerry Gold Irish Butter which comes from a selection of Irish farms. What does change in grass-fed butter is-
- Brad: Seasonal?
- Dave: Seasonal. They all did the tests at the same time, but was their butter three months old or six months old because that changes the season. I did not control for the age date on the butter.
- Brad: Crap.
- Dave: We probably could have recorded that but it wasn't statistically significant because the sample wasn't big enough.
- Brad: I have a hard time with any dairy stuff. You and I are really, really lucky. Being in Canada, a lot of our cows are just grass-fed. You drive by and see them. When everybody in the US was up on trying to find grass-fed butter and grass-fed ... I'm out in the country, too, so I shouldn't caveat that, but I looked around me and how do you not find them, they're right here. It wasn't until going down into the US to visit a lot more that I was like, I get it. There is fundamental differences between Canada and then Ireland, Scotland, the US, in terms of you raise your cows.
- Dave: It turns out that getting pastured butter here in Canada is really hard. Most of it is fed grain

because you get higher just for the dairy thing. There's also a national quota system where-

Brad: Where they finish, right, grain finishing, I believe.

Dave: Not for dairy cows. Dairy cows are always fed grain because you get twice as much milk that way even though it's lower quality. For the beef cows, some of them are grass-fed, some aren't and some of them are finished to get the marbling. It's gotten to be such a point that finally Organic Meadow started putting a pastured sticker during the summer months for their butter. That's the only national brand in Canada where you get pastured butter and there's a few local ones. Before that, there was this little butter smuggling racket where people would-

Brad: The black market butter-

Dave: You have a special vest with butter sticks in it. You wear it carefully and try and make it over ... Kidding. There are literally thousands of Canadians who drive over the border and buy two cases of grass-fed Kerry Gold Irish Butter because it's not legal to import in Canada. It's like, come one, couldn't we just get it here? What's the difference?

Brad: You know what we have in ... I'm going way off topic here, a Guernsey milk, cow. They have Guernsey ice cream and Guernsey butter as well. For anybody who doesn't know what we're talking about, different cows, different breeds, I guess..

Dave: Yeah, species.

Brad: Different species, proves very markedly different milks, in flavor, in color, in macro nutrition and micro nutrition profiles. We all have gone with the standard across the board but I'm just lucky, I think it's ED Manor is the name out here in Ontario. They've got a fantastic Guernsey milk. When I taste it, how could milk be so different? That's when I realized that must affect then ice cream, butter, everything going down, creamer, everything. It's interesting we don't have that much selection available to us compared to what is actually available to us.

Dave: There's the French butters and the German butters and all this. We may sound like butter snobs, but I proudly call myself a butter snob, just like I'm a coffee snob and I'm a butter snob. It matters, plus there's a taste.

Brad: There is a taste difference. Absolutely. We've done butter, we've done coffee. What do you want to do now?

Dave: I wasn't planning on any of that. You can actually answer questions that I have. I've never asked anyone else about fasting induced adipose factor who knew what it was. Boom, you got it.

Brad: There we go.

Dave: I wanted to ask you another question that's near and dear to me. I've done a lot of research on fertility and epigenetics. In fact, I was a co-author of a book about that with my wife. When it comes to intermittent fasting in women, it's become common paleo knowledge that women can

get more adrenal stress and they can get fertility or even lose their cycle entirely when they're intermittent fasting. What's up with that?

Brad: I won't lie, this irks me. It irks me because what we've taken is known physiology, known biology and used the crap out of it because it was beautiful for SCO. When you couldn't get any SCO at all for intermittent fasting, all you had to do was intermittent fasting bad a woman and boom, you were getting hits.

It happened about a year ago and what happened was we took a known thing ... Probably most people would have recognized this as a female athlete triad. You have a combination of very low body fat, excessive exercise, very low calorie intake. That system sets up for amenorrhea in women and multiple other problems. I'll get to how this applies to men in a minute, too. It's this idea that you get to too low of a body fat. You're not eating enough and you're excessively exercising. Things are going to shut down. That includes your period.

What was interesting is the fitness world specifically caught onto the idea that women shouldn't fast at all because some women at fourteen percent body fat who are taking part in marathons and preparing for massive competitions started having problems.

The general idea here is that fasting's a tool just like anything else. The leaner you are, the less you need to fast which to anyone outside of fitness is completely logical. The less body fat you have, the less you have to diet. It's takes fasting right out of it because you're done. The goal isn't zero percent body fat. You're shredded, you have six pack abs, you're okay. You can try eating maintenance or above. That's the goal.

We took it to a point where there was never a body fat level that was low enough, there was never a level of performance that was high enough. We went right back into thinking that we could, instead of Eat Stop Eat, we diet, stop, diet, run our asses off and then get confused as to why bad things were happening.

The reason I'm somewhat irked about this is that it did raise a very valid point which is to a lot of women, if you are excessively exercising or you're already lean, forget fasting. The topic is dieting. You do not need to diet very hard. The part that I wish was brought to more people's attention was that the same thing happens to guys. We just don't have as obvious of markers for it. A girl doesn't get her period, she will go to her doctor and say something's up.

Dave: I've got to say Brad, women in general are better bio hackers than men because they have better signaling and better body awareness-

Brad: Exactly.

Dave: ... because of their monthly cycle. They'll see it before we will.

Brad: You and me, let's imagine we're in our twenties and we're athletes. We're lean, we're fasting, we're dieting and we don't got it. We're lethargic, we're tired, can't get out of bed, no sex drive. You're going to go tell your coach, "Coach, I don't feel so good. I'm kind of tired." He'd be like,

“Dave, laps. Go! Don’t ever bring that up to me again.”

That’s the thing that irked me was that man or woman, you have to think of it this way, the leaner you are, the less you have to diet. Forget fasting, diet. If you’re fasting, because that’s my gig, then the leaner you are, the less frequently, so less often or the shorter the duration because you’ve earned it. You’re lean. You’ve accomplished what you’re trying to do. Now you’re basically fasting for health benefits and as a way to keep your weight in check.

Eat Stop Eat specifically was designed because of this. My personal style of fasting is fast, eat normal, eat normal, eat normal, fast, eat not fast diet crazy, fast, or fast, fast, fast, fast, fast. I imagine it’s the same thing that you have with your coffee. You just want to put your head through a wall because everybody’s doing Bulletproof Coffee. They put margarine in their coffee, Bulletproof coffee. Margin, done.

Intermittent fasting became what you label everything that’s fasting. People who were doing my favorite thing ever is people who are doing the 24 hour fast every day. Figure out how they do it and then saying fasting didn’t make me feel great.

Dave: Because you’re doing it wrong.

Brad: I promise you I did my research. When writing that book, I did fast for 72 hours, realized I’m not ever doing that again. I don’t want you to do it and that’s why I didn’t write the book that way.

It was irksome because it should have been obvious to most people. Instead of blaming the fasting, you should have been blaming the combination of the level of body fat, the level of exercise and the diet which includes, but not exclusively the fasting. It worked around there, but that was my main issue. We know from whether it’s fertility data to female athlete’s data, we know those three things aren’t great, and then exasperating the problem with fasting and diet and then whatever other weird things you’re doing with your diet. It’s a recipe for disaster. That’s one of the things I always want to get across to people with my view on fasting.

Fasting should be used as a way to allow you to eat normally on the days you’re not fasting. The fast for me was the diet. What I don’t think I ever got across clearly enough was that exact point. The fast is the diet. I don’t want you to layer it on top of your diet. I want you to replace your diet with it. That’s part of the next updated Eat Stop Eat is maybe me making it a bit clearer is that this is on the days you’re not fasting when you’re doing Eat Stop Eat I’d like you just to eat responsibly. I’d like to say like a grown-up, like an adult. You don’t get to eat like it’s Halloween every day. What I don’t want is fast, 800 calories a day, fast, 800 calories a day combined with four hours of exercise and wonder why you’re crashing..

Dave: There’s also the notion of total biological stress load which is something we both understand. It’s not just exercise but you didn’t sleep. You had twelve hours of aggressive meetings and then you got in a fight. Maybe you shouldn’t fast the next morning.

Brad: You got fired, came home and found out you’re getting a divorce. Maybe take it easy. It’s weird I say that but we actually had email correspondence from people. “Honestly, from all my

background I don't know what's going on. You should be losing weight," and then he goes, "This is horrible because also I just lost my job and my wife's leaving me." I'm like, "You left that part out."

Dave: There's a little cortisol factor.

Brad: This is fairly significant. Let's work on other parts first. The total biological stress is something that we don't want to admit. We want to believe we're all professional athletes who just got missed in the draft.

Dave: Totally.

Brad: We can train 4 hours a day despite the fact that for me, almost every professional athlete my age is retired. No, I still think I should be able to train for 2 or 3 hours a day, compete at the high level 4 or 5 times in a week. You have to realize that's for 20 year olds in peak condition and only the top 1% of 1%, and the rest of us who aren't that person, we have to manage these things and balance them out.

Dave: I found that I did do a lot of intermittent fasting with nothing in the morning when I was putting together my experiences for the book and learning how to control my biology more. Especially earlier on, I would get the 11:30, 11 AM energy dip. I wasn't starving or like I'm going to die. I'm in the middle of my work day, I have a social life and things are busy. I can't bring it right now. I need to do it. That was one of the things where I'm like, wait, what if I just had some fat because I really believe in fasting but I also don't have the professional athlete luxury of work my ass off and then recover my ass off. My recovery time is very limited.

Brad: Take a nap. Can't do that at work. The little dips, and they're difficult because they're different for everybody.

Dave: How do you notice them?

Brad: For me, what I found again, for everybody who hasn't read my book, shame on you, but, no, Eat Stop Eat is a 24 hour fast but divided between 2 days. If Dave and I were to start fasting today at 3, we would fast until tomorrow at 3, so 24 hours. Anybody who's saying they didn't get to eat by fasting for a day straight, that's technically 36 because you go night, day, night; 24 hours divided between 2 days. You effectively get to eat every day.

The other thing it gives you is control over your start, stop time. When I first started, 7 PM to 7 PM was a dream for me. It was the perfect fast. I didn't even notice it was happening. Then two kids happened and there were other changes. Seven to 7 to 7, it didn't work. It did not work. By 4, I was an angry frustrated father. It wasn't my fault. It was the kids, but it happens.

Dave: I get it.

Brad: All I had to do was change it to a 2 PM to 2 PM fast. Everything changed. A lot of it has to do with I always want you to be going through your personal hardest part of the fast, usually my

personal thought is it's when you're really switching down to an exclusively fat burning metabolism, I want you to be asleep for that part. I want you to be completely out of it. If 11 is when you're hurting, changing those times around tends to help.

The other thing is there are lots of very small cycles in the body we don't really talk about that allow you to change things like pyruvate and lactate back in to glucose. Anything as simple as, if you have the luxury, getting up and going for a walk. It doesn't need to be a long one. It can also help if it is a blood sugar issue, it's not always. It could be blood pressure, it could just be you really want to eat.

Finally, it's accepting for people like me, that a lot of the mid-day grumpies, it wasn't hunger, it wasn't metabolic. I was just habitually trained to eat then. I was breaking that training. That was the hardest part, getting all the way back to my first attempt at fasting. The hardest part of fasting wasn't the not eating because I was hungry. It was the not eating because of my habits. When I drive down that road at that time, I stop for coffee every time. Driving past the Tim Horton's because I'm Canadian, it was like a knife right in the gut because I knew I should be pulling over. It took a while to get used to letting go of my entrained eating styles. That could be it too. There's all kinds of work-arounds. It's never not impossible.

The last thing which is super cool is you can stop fasting. Twenty-four is picked because I like it. It's a great research, it's memorable. Twenty is still fantastic. If people are like I can always make it to 22 and then everything crashes, I'm like, then go to 21. You're good.

Dave: I tend to do 18 a lot. Is that still enough in your ...

Brad: Yeah. Twelve to 72 is my research. Be honest, that's getting out there, even for me. You start seeing significant changes at the 12 hour mark, even before, depending on how much you ate previous, the meal right before you started. Anything past 12 to me, you're entering into the fasting state, you're starting to make the shift. Insulin's going down, growth hormone is going up. You're seeing inflammation responses. You're seeing, let's say autophagic responses. I don't know if that's the right way to say it, autophagy.

You see some other cool things, your excretion of thiolates is increasing. In as little as 12 to 15 hours, you're starting to see the environmental toxin loads decreasing. It does not have to be 24. I just prefer 24 over 2. The occasional break from eating is really all I'm asking. Eighteen if that's what you do is beautiful also.

When I'm below 10%, I do one 24 hour, one 20 hour. If I'm beach ready or I'm being really vain just getting lean, I'll do a 20 and a 20 because I'm lean. I don't have to do more. A lot of it depends on the available fuel source of your body fat. If you've got a ton of it, you can probably handle 24. If you've been dieting, you're leaner, and 24 is getting hard, stop doing 24. That's how I view it.

Dave: Being less dogmatic is helpful. You mentioned that tough part when you're body's kicking over into ketosis and how that's stressful. Do you have an objection to using a tablespoon of, in my case I would use straight C8MCT because it's the stuff that goes most quickly into beta

hydroxybuterate and then into coenzyme 8 and ATP. Essentially, you can measure ketones in blood a half hour after you take that stuff. Kick starting ketosis that way, good or bad during AN intermittent fast?

Brad: I don't have a problem with anything during the fasting with a couple of caveats. If you're trying to sneak your way through a fast, you could have totally made it, you're just being lazy or giving into the want, there's a big difference between doing something like you're talking about and grabbing a handful of M&Ms just because they were there.

My big thing, when I first started writing Eat Stop Eat and it was before the Bulletproof coffee movement, it was can I have cream in my coffee. I said, "I'd prefer you not to." "If I don't have cream in my coffee, I'm not fasting." "Then have the cream in your coffee if that's the difference in getting the benefits. If adding the cream into the coffee reduced you from 100% fasting benefit to 98.72%, I'm cool with that."

A lot of it's the mentality. If you're doing little things because you think it's going to improve it, by all means. If you're doing things because otherwise you're not going to make it, again, by all means. If you're getting away with doing little things, that's when I want you to grow up and ... You really have to wait four hours and you can have the M&Ms.

Dave: Very well said. I really admire that. For me, it was I want to bring it all the time. I want this energy. I can do this. I've done it many, many times, but I suffer a performance decrease towards the end of it that I just don't want. I can stomp that out and I can still get what I'm looking for from it which is why I do it. It's very individual. I love that you're so open about how many hours are you going to do thing.

Brad: Just do it. There's no right way to do this. There is wrong ways for you, but there's no way for me to tell everybody exactly how the entire world should attempt fasting. I introduce you to it and you play with it until you get what works.

Dave: Let's switch gears a bit. One of the other areas of interest for me is neuroplasticity and brain training. I do a lot of neurofeedback. I've done this for years, many times for weeks. I found certainly that having ketones present, allows me to spend more time training my brain before I hit the wall. You can bonk from riding too far or running a marathon. You can bonk from neurofeedback too. I was able to move the wall.

I don't know if there's a neuroplasticity component or if it's just a ketone making ATP thing. Share with people who are listening what is neuroplasticity, the short version, and what does Eat Stop Eat or other types of intermittent fasting, what do they do for your neuroplasticity?

Brad: I've never been asked that. To define neuroplasticity in a general way?

Dave: Yeah. The idea that your nervous system can grow new nerves, BDNF and F like factor, things like that.

Brad: I want to say it's the flexibility of your neurons to adapt. I don't know if that's exactly the easiest

way to explain it. You're with the brain as a system, is the way I like to think of it and truly its flexibility almost like we talked about with the hormetic response, its ability to adapt to its environment and the stresses placed on it. That's a lot of what neuroplasticity is. Would it be fair to say that neuroplasticity is almost the opposite of Alzheimer's? Would people get that ...

Dave: Maybe. We can look at synaptogenesis, growing new synapses. We figured out your brain can do that with the response to environmental inputs, and then there's myelination or myelinogenesis which is the brain can grow in your myelin which happens when you practice a lot. Those are the two mechanisms that we know about from neuroplasticity. I know that you've looked at what intermittent fasting does for what the brain does.

Brad: It's hard. I'll tell you where I get caught on this in terms of any sort of neuroplasticity, any sort of cognition research, even memory recall Stroop test, is there's a lot of research out there but they don't divide fast with adequate hydration away from the fast that include water and fundamentally the short-term fast that don't include water, you have a pretty immediate reduction in cognitive ability, the management of stress loads, the ability to re-count numbers. You do bloody awful on a Stroop test.

The addition of water seems to be important, but we do know from the way intermittent periods of not eating, so chronically effect the brain, we're getting to the point where it seems to be ... I don't want to call it an improvement more as I do what we're seeing as a suggestion in a delayed non-improvement, delayed decay, delayed stiffening or lack of flexibility.

That's where I am with it now. I'm not far enough into understanding that research to say whether or not we even have a hope that it's going to reverse anything. You, you're probably farther into that than I am based on the experiments that you're doing.

Dave: There's definitely a ton of research about ketones and Alzheimer's. I had Dr. Marion Newport on the show pretty early on. She was talking about coconut oil and ketones and things. We know fasting creates ketones. We know ketones seem to have a beneficial effect on Alzheimer's from those bodies of research. Whether someone's ever tested ketones from food versus ketones from fasting on Alzheimer's patients, I don't know.

Brad: The one that hurt me was when that research came out, I don't know if it was a local newspaper, but you got the idea of fasting for Alzheimer's. I was like, don't. Alzheimer's is so devastating that I hate seeing that we can fix it in three days by fasting. It's encouraging. Man, when I saw that research come out because at first you're like, this is amazing. You see the headlines an hour later. I'm barely through analyzing the introduction and the headlines are already coming out. Don't do that. It's so bad.

Dave: Also, we call Alzheimer's disease type 3 diabetes in some bodies of research that I have to say the evidence is still out on that, but there's clearly some cognitive or some brain insulin resistance going on there.

Brad: The glucose toxicity theory, right?

- Dave: Yeah. I think telling someone who has a blood sugar regulation issue who's old and has weak mitochondria that don't eat for a while and you'll get better. Honestly, I don't want to be dramatic here, but you could die if you don't eat and your system is weak. That can happen.
- Brad: That's one of those things where individual type stuff is what you want there, you want to deal with, which is what medical doctors are great for, where they deal with the actual person as opposed to me who just writes a blog for anybody to read. You have to be somewhat realistic.
- The two things you have going, you have concept of glucose toxicity in the actual brain. You have the idea that ketosis is either helping or delaying. It's really easy to go, obviously, boom, the problem is glucose, go ketosis, everything's fixed. I don't think we're anywhere near there yet, but on the protective side of things, that's where I think the research should definitely move very quickly is in terms of people, you're prone to Alzheimer's, you have a history of Alzheimer's, is there something we can do here.
- Dave: There's definitely some hacks for Alzheimer's disease that are out there. There are so many people who have it and don't know it. There are so many people who know they have it or a loved one has it that the Internet is helping people be like, funny, my grandparents or my parents, I can talk to them when they do this. They talk about that enough times.. things.
- Brad: I'm trying to remember here. There's some sort of connection between a pseudo-Alzheimer's and certain blood pressure medications.
- Dave: Yes, yes!
- Brad: Literally, you think you have Alzheimer's. I don't know what it's like in the States, but in Canada there's a handful of specialists in Alzheimer's. Once you think that might be the issue, you're waiting 7, 8 months to meet a specialist. In the meantime, you're on drugs for something else, diabetes and that leads to blood pressure. You're on a blood pressure med that can actually be contributing to the Alzheimer-like symptoms. That's horrible, but it's also mind-blowing because how much of that skew the data.
- Dave: I actually have chronically low blood pressure and I have for a while. It's probably a result of chronic neurotoxin exposure from toxic mold. I lived in summer houses that had mold that jacked my biology.
- Brad: The black mold of death behind the walls?
- Dave: Yeah. In fact, I'm doing a documentary on that. It's become such a big problem that I don't know why everything's falling apart and I'm fat and I'm tired or I just lost my edge.
- Brad: Student housing or ...
- Dave: It's not just student housing. The experts I've interviewed are like 50% of houses have water damage at the low end and it goes up from there. I brought in all these physicians who have been made ill by mold toxins, and some of the world's top experts and interviewed them all. It's

going to be an amazing thing.

Brad: If you want to bash your head against the wall ... I was in res. The first few years in university in Canada you're in res. After that, you tend to go in a house and live with a group of people. We were in a 30-year-old house and we used to have water gun fights all the time. You're just spraying the drywall with Super-soaker guns. Sorry for anybody who's living in that house now. I apologize.

Dave: It's funny because a third of people have genes where it's going to just trash them. I remember my freshman year of college, we had one of those 5-gallon water coolers in the room and it leaked. My roommate was like, "It smells like turtles in here all the time." We had mold in the carpet. I didn't know I was genetically susceptible. I'm getting acne and I'm gaining weight and I'm farting death all the time, which are symptoms of this and my nose is bleeding many times a day and all this weird stuff. Of course, my grades are not doing very well because my brain is shut down. I had no idea at the time. Years later-

Brad: When you're a student, you have a water cooler that's leaking, you put a towel under it. Done. Problem solved.

Dave: You might have a fan. It turns out that for everyone it's bad. For me though, having acquired chronic low blood pressure as a result of that, the cognitive thing is what made me think of this. The cognitive thing you're talking about with Alzheimer's, it's metabolic. You don't have enough oxygen in your blood, in your brain, then you're going to have low performance. You can increase oxygen. If you don't have enough fuel, either glucose or ketones, you're going to have low performance. If you get all that stuff in there and your mitochondria is damaged by something then you're going to have low performance. It's like this stack where get the fuel in there and then let's see what happens.

Let's see, there's two other big questions I want to ask you. One of them is around cheat days. What's your take on cheat days? I've had people on the show are like eat whatever the heck you want and others who are intelligently doing your cheat day and don't set yourself back. Where are you on that spectrum? Can I go out and have apple pie and cherry turnovers or is that not the right approach?

Brad: I don't like the idea of chronic dieting, there's a calorie restriction thing. I don't mind if you averaged out your calorie intake over the course of two months if it was low, but I really feel like you need to have days you're eating to at least maintenance. Eat Stop Eat's designed so almost all your days are to maintenance. If you didn't want to follow Eat Stop Eat, but you still wanted me to help you with your diet, I'd have you dieting for 4 or 5 days and just eating up to maintenance on 2 or 3 days.

I like those periods of the mental stress, the ego depletion is what we call it of dieting. It's difficult. You're constantly making decisions about food. It's exhausting. Every once in a while I want you to take a break. If you're dieting very, very hard for two weeks at a time, does that suggest that just one day of over-consumption is a solution or should it be longer?

I would opt for longer. I like the idea of eating to maintenance. I don't like the idea of a cheat day being, once a week I pretend it's Halloween, Thanksgiving and Christmas all mashed into one, then I just go to town-

Dave: You eat 6000 calories in just ...

Brad: Yeah, from Skittles and M&Ms put on a pizza, that kind of thing.

Dave: That's a question there. Is a cheat day of Skittles, M&Ms and pizza, even with the right caloric number, is that different in your experience than a cheat day with ... I would recommend grass-fed steak and sweet potatoes where you're eating ... it's not really a cheat day, but it's a full fuel day.

Brad: Those are dependent for me. A full fuel day as opposed to I'm going to try to make up for a weeks' worth of calorie restriction in one day. My general opinion on that kind of cheat where it's going to be a large amount of calories above what you need, it's going to happen. I wouldn't plan it in. You're going to have a wedding to go to. You're going to go to a kid's birthday party. You're going to eat the cake. I would prefer not to plan that into my diet because it's going to happen.

Dave: It's going to happen naturally so you don't need to have a special where you go out and you buy a wedding cake and eat the whole thing.

Brad: Exactly. See eat-up day as opposed to cheat. Cheat gives the impression that you're going for a new record of calorie intake, but just a day of eating back up. I think that they're extremely helpful, if not physically, mentally. Be it the ego depletion, the psychological part of dieting can be exhausting and mostly the reason most people stop. Mostly, mostly. The reason most people stop a diet.

To take a break from that every once in while without undoing the damage, I think is a fundamental part of the long-term diet strategy. The issue I run into with people is that you have to understand you're fasted or dieted weight is a bit of an exaggeration. You have the water loss. It's not your true weight. On your eat day, if your weight goes up by a pound or two, please don't freak out. It's when you're done your dieting, then after 3 or 4 days you're like all the weight came back. I'm like, "No, it didn't. That was just an artificial low. This is about where you are now. You should be happy. Now try to maintain that."

That would be the only thing is mentally you have to be prepared for on the cheat day, you weight's going to go up. People at dieting in general when it comes to weight, you get really hyper-sensitive to these fluctuations without admitting that you had the exact same fluctuations before when you were heavy. Just be aware of that if you're going to enter them into this cheat day, eat-up day into your diet that your weight will change, but in long-term, it's probably going to help you stay on that diet longer.

Dave: Brad, it's been amazingly fun to have you on the show and get to ask some of these hard questions that most people have never heard of. I'm hoping that everyone listening, just

enjoyed learning more about fasting. I fully recommend that if you're listening to this and you're trying intermittent fasting or you practice it regularly, play with the timing. Eat Stop Eat 24 hours is totally legit. Read Brad's book because it's also totally legit.

Brad: Why, thank you. Every time you see 24 from me, in your head go 24-ish and then you'll get a flow of what I'm trying to do.

Dave: That's a Tweet right there.

Brad: Perfect.

Dave: Brad, there's one more question though that I ask every guest and this is your top 3 recommendations for people who want to perform better. You want to kick ass at life. This doesn't have to have anything to do with fasting but it can. What are your three biggest nuggets?

Brad: First, outside of things that are going to land you in jail, rules are guidelines. They're only guidelines. Especially when it comes to diet and exercise, you get hung up in these rules, it'll defeat you. You're supposed to do 3 sets of 6. You said instead of 6, you did a set of 4, not the end of the world. Pilon says 24 hours. If I don't do 24 hours, I'm not doing Eat Stop Eat, 24-ish. Stay cool with it. These guidelines, et cetera, they're meant there to help and guide you on your way. If you treat them as these hard-fast rules, you'll burn out. That's number one.

Number 2 is the ups and downs of life, whether it's your weight, whether it's performance in the gym. The people who come to me wanting help on their diet, and they present me with their Excel spreadsheet of everything and they're worried about these little blips, what you want to do is really think about the overall trend. If you get caught up in the 2 pounds up, 2 pounds down, 1 pound up mentality and try to go backwards and find out why that happened, you can find amazing things and make break-throughs, but also you can make yourself completely neurotic. Always go with the trend of what's going on.

Again, another life thing I'm taking from diet or exercise but you can apply it to everything, is reproduce ability's the key to research. If Dave had something and it turned out really, really well for him and then I tried it and it turns out really well for me, then 3 of my friends try it and it turns out well for them, it's more likely to be right than the one outlier who's bragging on the forums of how he's 302 pounds and 5% of body fat and you get upset that you're not.

Reproduce ability, the things that have had results for most people, something you should pay attention to that, but stop thinking that you're going to buck that system. If you think you're broken and that specific thing isn't working for you, if it's worked for a lot of people, so let's look at other parts of your life that may be the issue.

This goes all the way back to that guy who was just lost his job and divorced. Generally, the diet that he was on was very reproducible. Lots of people had good results with that. His exercise program, lots of results with that. Because they're so reproducible, I was able to look in other areas of his life and find the issues. That's another thing, is always be aware of everything that's



going around and look for the weird blips rather than the things that obviously sit right in front of your face that you want to change that might not need to be changed. That last one, there's a point there, I promise if you replay that, it'll make sense.

Dave: I will. We'll boil it down. Just kidding. We will have a full transcript on the show.

Brad: Perfect.

Dave: If you enjoyed this podcast, do Brad a favor and check out Eat Stop Eat. Please do me a favor and head on over to iTunes and leave a review for Bulletproof Radio. Do this as a labor of love to help a lot of people try and get smart people on the show. That succeeded this time with Brad. I really appreciate kind reviews because those help other people find the show.

Brad: Perfect.

Dave: See you all on the next episode.