



Transcript of “Brad Pilon: Eat Stop Eat & the Fundamentals of Intermittent Fasting - #174”

Bulletproof Radio podcast #174



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Dave: Hey, everyone. It's Dave Asprey with Bulletproof Radio. Today's cool fact of the day is that people with red hair need about 20 percent more anesthesia than people with brown or blond hair. We think that's because they have a different MC1R gene which is what causes the red hair and fair skin and 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 your environment. Those freckles that make you cute may also make you a little bit more sensitive to the world around you.

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 because I kind of 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 is it going, buddy?

Dave: I got to admit something, Brad.

Brad: Hit me.

Dave: I've read your stuff.

Brad: Right.



- Dave: There's only one problem. I've never actually heard you say your last name, right? Tell me I didn't just butcher it.
- Brad: No man. Pilon is the most accepted way. If you want to get kind of French Canadian, you could say Pilon, but Pilon is the preferred over Pylon, Plan, and all the other weird ones I get.
- Dave: Awesome. I usually just get called Asspray, so I think you win in any day.
- Brad: Yeah. Fair enough.
- Dave: All right. You can tell, this is the first time we chatted but I feel like I already know you because you work in ... Just because I think we have a lot in common from that perspective. Your blog is on bradpilon.com and you're also someone who grew up in Canada, which is kind of cool. I live up here in Canada now but you're on that other side of the country where they speak foreign languages and stuff.
- Brad: Exactly. Yeah. Over in Ontario, just within an hour outside of Toronto. We're in the same country but, man, where we're like seven hours by flight.
- Dave: Yeah, exactly.
- Brad: Different worlds.
- Dave: Speaking of different worlds, you're an interesting guy from an education perspective because there's lots of people who study nutrition and there's even more people who studied PE, essentially not a physical exercise, exercise science and things like that. You've done applied human nutrition and I have to say the difference between nutrition and applied nutrition isn't that clear in my mind. Will you explain what makes what you did applied?
- Brad: I will and I'm going to preface it by saying that 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, right?"

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

My one ended up being nutrition but one of information and counseling. Of course, I did my first counseling class and I said, "What is this?" I actually tried the [inaudible 00:04:06] route, 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. They kind of blended but it gave you an idea how messed up that is.

Part of the curriculum ... This may have changed. I'm old now. Part of the curriculum for nutritional sciences was nutrition, exercise and metabolism with Dr. Terry Graham. Frontier guy in the caffeine research knows his stuff. That was mandatory for nutritional sciences, but an optional one if you're in applied human nutrition.

Little different thinking there but that was my ... My undergrad is in applied human nutrition which is the one you would take if you want to become a dietitian in Canada.

Dave: Got it. From there you went on and I ... Forgive me for kind of going through your background but ...

Brad: Yeah, no man.

Dave: There is a lot of people who do different things, but you've done this all through college before you got in to being an author. Like I talked with science journalists and I talked with biohackers and then you've got like the pedigree, so it's kind of cool. You also study 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. Yeah.

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

Brad: That was kind of fun. I went from 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&D there, so creatine research, leucine research, protein research and albumin. You name it.

Dave: Yeah.

Brad: During those conversations, I kind of realized I was on the wrong side of the table. I was the guy with the money funding the trials and I kind of wanted to be doing the research. Decided to leave the job because that's what every smart [inaudible 00:05:59] 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 just a ton of crazy happenstance, we ended up deciding the best place to start would be to study no nutrition. What happens when you're not eating? Then the idea was ... because obviously not eating is horrible for you, right?

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 of months of that original research that's looking at no eating is when I had to kind of make a decision because everything was different the way I thought it should be.

I have six years in the bodybuilding industry. I knew you had to eat every three hours. You had to eat 300 grams of protein, right? You had to eat at night. You need to wake up at 2 a.m. to eat. This is common knowledge.

Dave: Yeah. Yeah.

Brad: When [inaudible 00:06:54] paper is being like, hey, their metabolism didn't slow down. This paper is just wrong, right? Garbage. Then you read the next one you like didn't lose muscle and you got 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 kind of redirect and study the effects of short-term fasting on human health metabolism. That was my graduate work.

Dave: There is an interesting phenomenon that happens with all researchers because we're humans and it's ... It can't be because it isn't or it isn't because it can't be. That can't be possible. That kind of logic is harmful to research because it lets you conveniently throw out the garbage.

You're like, "Well wait. I just had an experience that matched the garbage and now there's three garbage studies and like, oh wait, that was actually innovation, not garbage but the first one might be garbage."

Brad: Yes, yeah. You never know but ... When you're building up.

Dave: You experience this and you're like, "Okay, so 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, right, build muscle, lose fat, everything else is just minutia.

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

Brad: Yeah, because the abs, my friend, that's all that matters, right? The main thing was from the bodybuilding perspective, if you didn't eat every three hours, you lost muscle. The food guaranteed known fat. It starts seeing people in trials where ... We're measuring lean body mass via DEXA and we're not seeing changes.

That looks 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? Then you of course, you look back to the research and like they're burning fat.

Dave: That was air. You can't burn fat if you're not [crosstalk 00:08:52].

Brad: Yeah. No, it was air, right? 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 the ... I mean, you're aware but for everybody who is not, the measurement of the fuel mix that you're burning, it's a very ... actually simple measurement, just the [inaudible 00:09:11] your breath, the oxygen you're breathing in, carbon dioxide you're breathing out. It's fundamental to human physiology and respiration research. It's kind of if that was wrong, everything we know about human physiology is wrong.

That measurement, VRQ, consistently showed that these people were burning more fat as their fast went on. I'm actually going like, "Are you kidding me? Like I've been eating every three hours, waking up at 2 a.m. to eat because if you don't eat you burn muscle.

Dave: Yeah.

Brad: I am finding out this guy is just burning fat. It was, it's ... That's all I had to do was just take a break from eating, and that was the part that was the most interesting to me.

Dave: The whole idea in the '90s, and I was into the natural bodybuilding. I was never competitive. I was a 300 pounder. I have stretch marks. That means I'll never like be pulling my shirt off on stage because I was a fat ass, right?

Brad: Yeah.

Dave: When I look back on that, I was doing the same thing and as you probably found in your research ... If you're getting excessive amounts of protein, there is this little thing called ammonia that can affect human performance and also, I was over beating on protein. I was getting not enough fat. Not enough for 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 the working in an office building with about 200 mostly guys in the bodybuilding with free access to protein. The ventilation system had to be one of the best ventilation systems in the world because it was bad sometimes. Especially you adapt to it. It was the new hires, the new employees they're like, "Dude you're ... Okay, I'm happy you're in the lifestyle. You should go home for a couple of days."

Dave: It's a known problem with excessive protein because it tries to ferment in the gut and ...

Brad: Yup.

Dave: I've seen some research. It's in "The Bulletproof Diet" book that's coming out about like the fermentability of different types of proteins in the gut. Like collagen actually makes a reasonable ferment that creates [butyric 00:11:08] acid almost as well as your resistant starch and it doesn't smell too bad. If you're trying to ferment eggs ...

Brad: Whey, casein, eggs to stand a few ...

Dave: Yeah. That's just not okay, all right?

Brad: It's not good. It's not good for anybody, right?

Dave: Yeah. Do you think there's a biotoxic lipopolysaccharide 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, right? I mean six to eight weeks is a typical high protein diet nice thing is what they study. You start at 16. You go to your 25 before you're out of the bodybuilding lifestyle. That's a big period of time to be really consuming ultra high amounts of dairy processed protein too, right?
- Dave: Yes.
- Brad: 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, right? Very, very processed, quickly digested hits the gut very, very fast, doesn't take time to ... There's no coagulation, right? They just right through. That would be what I'd be really interested in and see what that does long term.
- Dave: You also have that idea that between 16 and 25, your prefrontal cortex just finishes wiring itself in at 24. Now, if you have increased the number of biotoxins in the gut, which surely has to do with the bacteria that are there and lots of other factors. 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 ...
- Brad: No, that's ...
- Dave: It's a question in my mind.
- Brad: Yeah. Tangent for a second for I love this topic, but applying research to the population based on research on a small subset of even age, that's my favorite one. Up until age about 24, 25, we're 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. In fact, at the edges of that, bring them back in, you have very different types of human beings but we kind of just lump them together and [inaudible 00:13:19] everybody, right?
- Dave: Yeah.



- Brad: I totally agree, breaking it down by age, it would be ... It's fundamental to understand nutrition because I think it changes as we age.
- Dave: I've talked to a few companies who are now starting to do like 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 munging 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 that together like your idea of protein ratio for the next two years, protein to fat and how often you should eat and everything else, we may be able to actually tease that out to the point that you go to a restaurant like I would like option 76 and then there's figures.
- Brad: Yeah.
- Dave: That's my dream anyway.
- Brad: Yeah, I love it. It's good.
- Dave: Let's jump back to intermittent fasting because I'm ...
- Brad: Let's just go right back into that.
- Dave: Yeah, we'll just transition smoothly.
- Brad: I think that's a good segue. We didn't follow that. Yeah.
- Dave: Yeah.
- Brad: Hit me.
- Dave: Talk about glucose regulation and specifically neuronal resistance to injury when it comes down to intermittent 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 the hormetic effect of fasting. It is a small stress that we go through that tends to strengthen the system, right?

I guess that's a good generalized description of hormesis, right? The body is introduced with small stress and that small stress actually has beneficial effects. If the stress were to get too large, it would become a negative on the human body. 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, maybe not a prolonged fast but a brief one, tends to follow this hormetic curve when it applies to the brain, when it applies to [inaudible 00:15:13], when it applies to even inflammation responses, all of these areas. I think it's that small brief stress that causes the ... What we would consider a beneficial long-term adaptation. I don't think it's much different than a weight training session.

Dave: Yeah.

Brad: If you were to look at your body right after weight training session and whether it's functional MRI or something we are actually looking into the muscle, if it was a minute after a [inaudible 00:15:40], you would like don't ever do that again. Whatever you just did to your cuff, don't ever do that again because it's a bloody mess. It's a grade went off. When you go three or four days later, you're like, "That's all the muscle fibers are organized. They're a bit bigger, whatever you did that was good." Right? I think it's a lot like that whenever you deal with small fluctuations.

Whether it's the increase in blood few fatty acids. If it's a decrease in blood glucose back to a basal level, then it 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, so that's how I feel. It affects everything, not just the brain but your entire body as a kind of 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 into the gut microbiome.

Dave: Amen, brother.

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

Dave: Yeah, a little bit.

Brad: Yeah, and if they're fasting induced people want this in. Yeah, really fascinating and the thing I like because I've been very interested in the gut microbiome. Very interested in ... Even like endocrine disrupters from the environment.

Dave: Yes. Yeah.

Brad: People know me for fasting. I always kind of like to tie it in. When I found that, I thought, okay, now we have a connection. Now, we have some way to get microbiome. It's interacting not only with the foods you eat but it's also contributing at times you don't eat or an equivalent matter. That was a very interesting thing that isn't maybe getting us enough playtime as it deserved that only because of course it's known by three or four different names right now, right?

Dave: I covered it in the Bulletproof diet and it's ... There's another unrelated study to that one that looked at the impact of coffee and butter on the gut microbiome.

Brad: Right.

Dave: Funny enough, especially if you add the Brain Octane Oil to it, it has ... It's essentially going to tell the biome in the gut-like, it is 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 kind of 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.

Brad: Yes.

Dave: Funny, I mean, 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 weight like 4000, 4500 calories a day for two years kind of thing.

Then I think that had to do with that. In the morning, if you're not feeding the bacteria and you think 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 have an amplification of that one signal and this is probably a part of why people get some benefits from things like that.

Brad: It's interesting because the one thing we do know from research is that well, obviously amino acids and glucose do have the latency of knock you out of the [fasted 00:19:03] state. Fat doesn't, right? You still have to deal with the fat that's still there to disappear.

In terms of actually affecting what I would consider a classic example the 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. Large amounts of fat. It is very interesting because now we're looking at really two separate systems, your body and your gut microbiome working together which only makes sense, otherwise why would they be together, right? They have to be synergistic somehow.

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

Brad: Yeah. Just synergistic, parasitic.

Dave: I come with this from my computer hacker perspective. My background is decision support systems which is a subset of artificial intelligence and like literally hacking. I accidentally wore one of my hacker t-shirts today like great segue.

Anyway, one of the first things to do if you want to take control of the system, whether it's your body or someone else's computer is you want to get in there and look and see how's anyone else already taking control because I could exploit their control mechanisms. When I started looking at my body, why I was 300 pounds? Why was I fat, inflamed all the time, and that gut biome? They're not there for my best interest. They are there for their best interest.

Brad: Yeah, people ...

Dave: Their best interest is, well, I took over the body. I was like, "I don't care if he doesn't have a six pack but I want to make sure there's like extra fuel in case there's not food for me because this is my walking support system as a bacterium."

Brad: Right.

Dave: You say they aren't that smart, but emergent behavior happens so they don't have to be smart but they just have of course set of rules. I'm like, "Okay, these little bastards are telling me to store fat when I want to so like, take that."

Brad: Oh yeah. You look at how their communication, they share DNA the way we would text message each other, right? They're just like, "Oh, you need this, here, there you go," right? They adapt unbelievably quickly and it's funny we're calling them they like they're a different unit because they actually are.

Dave: Yeah.

Brad: Each thing from what you just talked about, the only takeaway I have is that Dave is going to be responsible for Skynet. I think that's what I told from [inaudible 00:21:19] the packing.

Dave: Bio and Skynet, it's totally different.

Brad: Totally different, yeah. Okay. Good. The flesh around the terminator. Good for you.

Dave: All right, that's evil.

Brad: Yeah. In terms of terms of the gut microbiome and its role on 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 happen to them. They get an idea. Pretty soon, research takes a while so you've got your six to eight-week study that actually took about 14 weeks to do. Then you have here your whole process of writing, revisions, getting it published. In a couple of years, I think it's going to be another big area.

Dave: Now, we've pumped up intermittent fasting and it talks ... I'm actually fascinated that you've looked into what happens if you eat only fat because I, honestly when I started some of my Bulletproof got the experiments, I feel freaking amazing but I didn't have all the research that I have now about, okay, 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, okay, fat ... 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 walk [crosstalk 00:22:35].

Brad: Yeah, I'm going to leave the rest for the crows, right?

Dave: Yeah. Maybe I'll make a smoothie out of it, right? 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 because ...

Brad: Again, 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.

Dave: Right.

Brad: In terms of a feel good energetic point of view, it's hard to measure in trials in a way that it will ever come across as significant because what you're asking your subjects to do is be in tuned with how they feel without the

placebo effect of me saying, “Hey, Dave, how do you feel right now?”
You’re, “Oh crap. Good. Oh, I never even thought about it. I feel ...”

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 just fat versus some form of placebo rather than just a fast, right?

Dave: Like olestra or something?

Brad: Yeah, yeah.

Dave: Maybe [crosstalk 00:23:48].

Brad: Plenty enough, it turned out great. It [inaudible 00:23:51]. Yeah, I see the idea and ...

Dave: Here’s an interesting result that I think is going to fascinate you because I actually did this study. We did seven measures of short term executive function like three back memory and finger top time and stuff like that. Quantifiable university grade kind of measures and we test the 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, right? We’re basically black coffee versus black coffee and butter, no mold coffee versus butter, regular coffee.

Brad: Cool, okay.

Dave: What we found was putting butter and coffee improved whether it was bad coffee or good coffee that it improved almost everything except one thing. Here’s a visual color perception thing like what’s slightly down.

Brad: That’s through tester ... Okay.

Dave: Yeah.

Brad: Yeah.

- Dave: Then all the other ones, essentially no mold coffee outperformed moldy coffee and butter though didn't always outperform. We're expecting you know if there's butter in your coffee. We are expecting a substantial placebo result for butter but butter underperformed which means that we probably didn't have too much placebo in it. Butter still outperforms 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 trouble with same coffees but decaf if possible and get the caffeine out of there is maybe a confounder.
- Dave: That's a good idea. I'm funding some more research on different fronts there. There's an inflammation side of what coffee oils do for you and there's the coffee gut biome. I am looking into this more. Of course everyone is saying, "Well, you have coffee and you have this excessively purified cooking oil stuff." You know because you're from the [Southland 00:25:46] business like half of people say, "It was funded by industry." I'm like, "I'm not really industry and I'll post the data."
- Brad: Yeah. It was ...
- Dave: It's the best practice there.
- Brad: I think it's a series that like being the guy who have handed researchers money, I will tell you that you don't really have that much say, right? If anybody's known, a very well-known person who performs research, they're rather opinionated and they don't really take advice kindly.
- Dave: Oh yeah.
- Brad: Especially when you're younger and you don't have 20 years of postdoctoral experience, it tends to just ... They just ignore you.
- Dave: Yeah. Hiring real scientists is amazing because like they act like scientists. It's a good thing.

- Brad: Yeah. It is a good thing. Now with the coffee thing and even the butter thing I find it interesting because getting back to supplements, right? I have Brad's whey protein. In any given time, I may be sourcing my whey protein from four, five different providers depending on cost. My protein may be different now than it was last year and nothing's changed in 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, right?
- Dave: We controlled that and we told everyone to use Kerrygold Irish Butter which comes from a selection of Irish farms. What does change in grass but butter is ...
- Brad: Seasonal.
- Dave: It's seasonal, right? They did all the test at the same time but was their butter three months old or six months old because that changes the season, right?
- Brad: I see.
- Dave: I did not control for the [inaudible 00:27:22] on the butter.
- Brad: Crap. I know.
- Dave: We've probably could have recorded that but it wouldn't have been statistically significant because the sample wasn't big enough.
- Brad: I have a hard time with any dairy stuff ...
- Dave: Yeah.
- Brad: You and I are really, really lucky. Being in Canada, a lot of our cows are just grass fed. You drive by and you see them. When everybody in the US was very up and trying to find grass fed butter and grass fed milk ... I'm out in the country too so I should caveat that.
- Dave: Not [house 00:27:47].

- Brad: I kind of looked around and like how do you not find them? They're right here. There wasn't until going down in the US to visit a lot more. I was like, "Oh, I get it." There's fundamental difference between Canada and then Ireland, Scotland, US in terms of how you raise your cows.
- Dave: It turns out that getting pasture butter here is ... In Canada is really hard because most of it is fat [grain 00:28:09] because you get higher just for the dairy thing and there's also a national quota system. It's [crosstalk 00:28:16] finish.
- Brad: Right, grain finish I believe.
- Dave: Yeah, but not for dairy cows. Dairy cows is always [unit 00:28:20] grain because you get like twice as much milk that way even though it's lower quality. For the beef cows, yeah, some of them are grass fed, some aren't and so they were finished to get their marbling.
- It's gotten to be such a point that finally Organic Meadow started putting a pastured sticker during 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 like this little like butter smuggling racket where people are ...
- Brad: The black market butter [inaudible 00:28:47].
- Dave: Yeah, they have like a special vest with butter sticks in it. You wear it carefully and try and make it over ... No, I'm kidding. There are literally thousands of Canadians who drive over the border and buy two cases of grass-fed Kerrygold Irish Butter because it's not legal to import in Canada.
- Brad: Right.
- Dave: It's like, "Come on, couldn't we just get it here?"
- Brad: We have in, I mean I'm going way off topic here. [Guernsey 00:29:07] milk.
- Dave: Right.

- Brad: This Guernsey cow and so they have Guernsey ice cream and Guernsey body as well. For anybody whose doesn't know we're talking about, different cows, different breeds ...
- Dave: Yeah, species.
- Brad: The types of species, [crosstalk 00:29:21] ...
- Dave: I guess the cow species.
- Brad: ... produce very markedly different milks, right? In flavor, in color, in [inaudible 00:29:27] profiles. We all just have gone with the standard across the board but I'm just lucky, I think it's ED Manner is the name out here in Ontario and it's just like a fantastic Guernsey milk. When I taste it, it's like, how can milk be so different. That's when I realized, wow, that must affect then ice cream, butter, everything, going down creamer, like everything. It's interesting we don't have that much selection available to us compared to what is actually available to us.
- Dave: Yeah, and there's again the French butters and the German butters and all this.
- Brad: Yeah.
- Dave: We may sound like butter snubs but I proudly call myself a butter snub, right? Just like I'm a coffee snub and I'm a butter snub, like it matters. Plus, there's the taste.
- Brad: There is a taste difference, absolutely.
- Dave: Also ...
- Brad: Now, we've done butter. We've done coffee. What do you want to do now?
- Dave: I wasn't planning on any of that, but I ... Use actually can answer the questions that I have or like, okay, I've never asked anyone else about fasting induced adipose factor who knew what it was, so boom. You got it.

Brad: Here 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 problems or even lose their cycle entirely when they are intermittent fasting. What's up with that?

Brad: Yeah. Okay, so this ... I will lie. This hurts me and it hurts me because what we've taken is known physiology, known biology and used the crap I think because it was beautiful for SEO. When you couldn't get any SEO at all for intermittent fasting, all you had to do is intermittent fasting, bad [inaudible 00:31:11] boom, you were getting hits. It happened about a year ago and what happened was we took a known thing so I probably mostly would have recognized that the female athlete triads.

You have a combination of very low body fat, excessive exercise, very low calorie intake. That system sets up for intermittent women and multiple other problems, and I'll get you how this applies to men intermittent too. It's this idea that, yeah, you get too low of a body fat and you're not eating enough and you're excessively exercising. Things are going to shut down.

Dave: Yup.

Brad: That includes your period. What was interesting is the fitness worlds specifically caught on to the idea that women shouldn't fast at all because some women like 14 percent body fat who are taking part in marathons and preparing for massive competitions, started having problems, right? The general idea here is that fasting is a tool like anything else. The leaner you are, the less you need to fast which do anybody inside of fitness is completely logical right? The less body fat you have, the less you have to diet so think fasting right off of it is because you're done, right? The goal isn't zero percent body fat.

You shredded your six pack abs, you're okay. You can try eating the maintenance or above, and that's the goal. We took it to a point where there was never a body fat level that was low enough. There is never a level of performance that was high enough so we went right back into thinking that we could instead of eat stop eat, we diet stop diet.

Dave: Yeah.

Brad: 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. Yes.

Dave: Yes

Brad: You do not need to diet very hard. The part that I wish was brought to more of attention was it that same thing happens guys. We just don't have as obvious markers for it. A girl doesn't get her period. She will go to her doctor and say, some things up.

Dave: I got to say Brad, women in general are better biohackers than men because they have better signaling and better body awareness.

Brad: Exactly.

Dave: Because of their monthly cycle. Like it's ... They'll see it before we will.

Brad: You and me where ... Let's imagine we're in our 20s and we're athletes. We're lean. We're fasting. We're dieting and we're just ... We don't ... got it. We're lethargic, we're tired, [inaudible 00:33:49] the bed, no sex drive. You can go tell your coach, "Coach, I don't feel so good. I'm tired." He like, what the ... "Dave, laps, go, right. 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. Now if you're fasting, because that's my gig, then the leaner you are, the less frequently, so less often or the shorter 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, and that's ... Imagine it's the same thing that you have with your coffee. You just want to put your head through a wall because everybody is doing Bulletproof coffee, right? They put margarine in their coffee, Bulletproof coffee, made up, margin, done. Intermittent fasting became what you'd label everything that's fasting.

Dave: Yeah.

Brad: People who are doing my favorite thing ever is that people doing the 24-hour fast everyday. I don't know how they do it. Then saying I don't ... Fasting didn't make me feel great and they go, so there is, okay, that's why I didn't ... Look I promise you ...

Dave: You're doing it wrong.

Brad: Yeah, I promise you I did my research when ... and 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 because we know from whether it's fertility data to like female athletes data, we know those three things aren't great and then exacerbating the problem with fasting and diet and then whatever other weird things you're doing with your diet.

It's a recipe for disaster and that's ... One thing I always want to get across to people with my D1 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, 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 update of "Eat Stop Eat" is maybe you need making that a bit clear 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 you're grown up like an adult. You don't get to eat like it's Halloween everyday. 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 just the notion of total biological stress load.

Brad: Yes.

Dave: Which is something I think we both understand where it's not just exercise but like, "Oh, you didn't sleep? Like you had 12 hours of aggressive meetings and then you got in a fight. Maybe you shouldn't fast the next morning," and just ...

Brad: You got fired, a moment you found out you're getting divorced. Maybe you take it easy, right? Now it's weird I say that but we've actually had [inaudible 00:37:10] people and I'm like I don't understand ... Like honestly, from all my background, I don't know what's going on. You should be losing weight. Then you go, this is horrible because also I just lost my job and then my wife is leaving me. I'm like, okay, you left that part out.

Dave: Yeah, that little cortisol factor.

Brad: It's fairly significant, right?

Dave: Yeah.

Brad: Let's look on other parts first. Yeah, the total biological stress is something that ... We don't want to admit, right, because we want to leave. We're all professional athletes who's gotten missed in the draft.

Dave: Totally.

- Brad: You can train four hours a day. Despite the fact that for me and almost every professional athlete my age is retired, right? No, I still think I should be able to train for two, three hours a day, compete the high level four or five times in a week, right? You have to realize that's not ... That's four 20 year olds in peak condition and only the top 1 percent of 1 percent 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 just learning how to control my biology more. Especially earlier on, I would get like the 11:30, 11 a.m. energy dip. I wasn't like starving like I'm going to die. It was like, I really ... I'm in the middle of my workday. I have a social life and things are busy. I can't bring it right now and I need to do it and that was one of the things where I'm like, wait, what if I just had some fat because I really believe in fasting. I also don't have the professional athlete sort of luxury of work my ass off and then recover my ass off because my recovery time is very limited.
- Brad: I see it taken now, right? You can't do that work always.
- Dave: Yeah.
- Brad: The little dips, and they're difficult because they're different from ... for everybody.
- Dave: How do you measure those?
- Brad: Okay, so for me, what I found again ... For everybody hasn't read my book, shame on you but no.
- Dave: Yeah.
- Brad: "Eat Stop Eat" is a 24-hour fast that's divided between two days. If Dave and I were to start fasting today at 3:00 we will fast 'til tomorrow at 3:00.
- Dave: Yeah.

Brad: 24 hours, anybody who's saying you do eat stop eat by fasting for day straight, that's technically 36 because you go night, day and night. 24 hours divided between two days. You effectively get to eat everyday. The other thing it gives you is control over your start-stop time. When I first started, 7 p.m. to 7 p.m. was a dream for me. It was the perfect fast. I didn't even notice it was happening. Then two the kids happened and there are other changes and 7 to 7, it didn't work. It did not work by 4. I was an angry, frustrated father, right? It wasn't my fault. It was the kids but it happens.

Dave: I get it.

Brad: All I had to do is change it to a 2 p.m. to 2 p.m. 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 kind of 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 the glucose.

Anything as simple as if you have the luxury getting up and going for a walk, doesn't ... be a long one, 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. Then finally it's accepting for people like me that a lot of the midday grumpies, it wasn't hunger, it wasn't metabolic. I just was habitually trained to eat that.

Dave: Yeah.

Brad: I was breaking that training. That was the hardest part getting all the way back to my first attempted fasting. The hardest part of fasting wasn't the not eating because I was hungry, it was the not eating because of my habits and when I drive down that road at that time I stop for coffee every time. Driving past the [inaudible 00:41:13] from a 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 trained eating styles. That could be it too.

There's all kinds of workaround. It's never not impossible. The last thing which is super cool is you can stop fasting, right? Twenty-four is picked because I like it. It makes a great research. It's memorable. Twenty is still fantastic.

Dave: Yeah.

Brad: Right? If people are like I can always make it to 22 and then everything crashes, I'm like well then go to 21.

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

Brad: Yeah.

Dave: Yeah.

Brad: 12 to 24 ... 12 to 22 is my research.

Dave: Okay.

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

You see some other cool things. Your excretion of phthalates is increasing. As little as 12 to 15 hours you're starting to see these environmental toxin loads decreasing, so it does not have to be 24. I just prefer 24 over 2, right? The occasional break from eating is really all I'm asking. Eighteen if that's what you do is beautiful also. The leader ... When I'm below 10 percent, 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 to 20 because I'm lean. I don't have to do more.

A lot of it depends on the available fuel source, your body fat. If you got a ton of it, you can probably handle 24. If you have been dieting, you're leaner and 24 is getting hard, stop doing 24. That's kind of how I view it.

Dave: Being less dogmatic is helpful. You mentioned that tough part when your body is kicking over into ketosis and how that's stressful. Do you have an objection to using a tablespoon of, well, in my case I would use straight CAMCT because this is the stuff that goes most quickly into beta-hydroxybutyrate and then into coenzyme A and then ATP. Essentially you can measure ketones in blood a half hour after you take that stuff.

Brad: Yeah.

Dave: 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, right? Is it ... If you're trying to sneak your way through a fast and you could have totally made it and you're just being lazy or getting into the want, right? there's a big difference between doing something like you're talking about and grabbing a handful of M&M's just because they were there, right?

Dave: Yeah.

Brad: My big thing when I first started writing [inaudible 00:44:03] and it was before sort of Bulletproof coffee movement it was, okay, can I have cream in my coffee? I'd say, okay, but I prefer you not to. Okay, 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 benefit. If adding the cream into the coffee reduced you from 100 percent fasting benefit to 98.72 percent, I'm cool with that, right?

A lot of it is 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. You really have to wait four hours and you can have the M&M's.

Dave: Very, very well said. I really admire that. For me it was I want to be able to bring in 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 and I love that you're so open about how many hours are you going to do your thing.

Brad: Yeah, does that ... Just do it. There is no right way to do this. There is wrong ways for you, right? There is no way for me to tell everybody exactly how the whole entire world should attempt fasting. I introduce you to it and you played until you get what works.

Dave: let's switch gears a bit because one of the other areas of interest for me is neuroplasticity and brain training. I do a lot of neuro feedback.

Brad: Right.

Dave: I've done this for years as anything many times for weeks. I found sort of having ketones present allows me to spend more time training my brain before I hit the wall. Just you can bonk from riding too far or running a marathon. You can bonk from neuro feedback 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 listing, okay? What is neuroplasticity, the short version, and what does "Eat Stop Eat" or 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, just the idea that your nervous system can grow new nerves. BDNF, like brain-derived neurotrophic factor or things like that.

Brad: I think I want to say it's like the flexibility of your neurons to adopt. I don't know if it's exactly the easiest way to explain it. When you're dealing with the overall that the brain is a system is a way I like to think of it. Truly its flexibility almost like we're talking about the hermetic response, right, its

ability to adapt to its environment and the stresses placed on it. That's a lot of what neuroplasticity is. You could almost view ... Would it be fair to say that neuroplasticity is almost the opposite of Alzheimer's? Would people get that ...

Dave: Maybe.

Brad: Yeah.

Dave: We can look at synaptogenesis, growing new synapses. We figured out your brain can do that with the response to environmental inputs. Then there's myelination or myelinogenesis which is that the brain can grow new myelin, right? Which happens when you practice a lot. Those are like the two mechanisms that we know about from neuroplasticity but I know that you've looked at what intermittent fasting does for like [crosstalk 00:47:26].

Brad: For the brain. It's hard because the ... 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. Fundamentally the short term fast that don't include water, you have a pretty immediate reduction in cognitive ability, the mention of stress loads, the ability to recount numbers. You just do bloody awful on the Stroop test.

The addition of water seems to be important but we do know from the way intermittent periods of not eating will chronically affect 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 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 would have a hope that it's going to reverse anything. I mean you're probably farther into that than I am based on the experiments that you are doing.

- Dave: There's definitely a ton of research about ketones and Alzheimer's. I had Dr. Mary 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 has ever tested ketones from food versus ketones from fasting on Alzheimer's patients, I don't know. I have ...
- Brad: The one that heard 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.
- Dave: No.
- Brad: I'm like, no, that's way ... Alzheimer's is so devastating.
- Dave: Yeah.
- Brad: Right? That I hate seeing that we can fix it in three days by fasting. It's encouraging. Man, yeah, when I saw that research come out because it ... First you're like this is amazing and you see the headlines an hour later, right? Like you're literally ... I'm barely through analyzing the introduction and the headlines are always coming out. I'm like, don't do that. I guess it's so, so bad.
- Dave: We call Alzheimer's disease type 3 diabetes in some bodies of research of it. I have to say that the evidence is still out on that, but there's really some cognitive or some brain insulin resistance going on there.
- Brad: There is the glucose toxicity theory, right?
- Dave: Yeah. I think telling someone who essentially has a blood sugar regulation issue who's old and has weak mitochondria, like just don't eat for a while and you'll get better. Honestly, I don't want to be dramatic here but like you could die if you don't eat and your system is weak like that can happen.
- Brad: Yeah, that's one of the things where you ... Individual type stuff is what you want. You want to deal with ... Which I think is what medical doctors are great for. They deal with the actual person with both the need.

Dave: Yeah.

Brad: We just write the blog for anybody to read, right? You have to be somewhat realistic but I do find because it's the ... The two things you have going. You have a cause of the 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, right? The problem is glucose, go ketose, everything is fixed. I don't think we're anywhere near there yet. On a protective side of things, that's what I think the research is, should definitely move very quickly is in terms of people who have a ... 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 acts for Alzheimer's disease that are out there and I ... There's so many people who have it and don't know it and so many people know they have it or a loved one has it that like the internet is helping people be like, "Well, funny. My grandparents or my parents, they sure ... like they were ... I can talk to them when they do this." Then they talk about that enough time.

Brad: This scene, there is a crazy, and if I remember here, there's some sort of connection between a pseudo Alzheimer's and certain blood pressure medications.

Dave: Yes, yes.

Brad: Yeah, so you limit it. You're thinking of Alzheimer's and I don't know what it's like in the states but in Canada, there is like a handful of specialists in Alzheimer's. Once you think that might be the issue, you're waiting seven to eight months to meet a specialist.

In the mean time, you're ... You're on a drug for something else. Diabetes and then lead some blood pressure. When you're blood pressure med, they could actually be contributing the Alzheimer like symptoms. That's horrible but it's also mind blowing because how much of them skew the data.

- Dave: I actually have chronically low blood pressure and I have for a while. It's probably as a result of chronic neurotoxin exposure from toxic mold. They live in several houses that had mold that jacked my biology.
- Brad: The black mold of death behind the walls like ...
- Dave: Yeah. In fact I'm doing a documentary on that because ...
- Brad: Oh yeah?
- Dave: It's become such a big problem that people like I don't know why everything is falling apart and I'm fat and I'm tired or I just lost my edge.
- Brad: This is student housing or?
- Dave: It's not just student housing. The experts I've interviewed are like 50 percent 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 like interviewed them all. It's going to be an amazing thing.
- Brad: If you want to bash your head against the wall. When I was in ... Out of [inaudible 00:52:57]. In the first few years in university in Canada [inaudible 00:52:59] and after that you tend to go and live in a house with a group of people.
- We're in a 30-year-old house and we [crosstalk 00:53:04] lights all the time. Right, so you're just spraying the dry wall with giant super soaker guns, right? If anybody is living in that house now, I apologize. I do.
- Dave: It's funny because like 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 five gallon water coolers in the room and it leaked.
- Brad: Yeah.
- Dave: My roommate was like, it feels like turtles in here all the time. We had mold in the carpet and I didn't know I was genetically susceptible and I'm

getting acne and I'm gaining weight and I'm farting death all the time which are symptoms of this. My nose is bleeding many times a day and all this weird stuff.

Brad: Right.

Dave: Of course my grades are not doing very well because my brain is touched like that. I had no idea at the time. Years later ...

Brad: It is too ...

Dave: Yeah.

Brad: You have a water that was leaking, you put a towel under it. Done.

Dave: Totally. Right, right.

Brad: Problem solved.

Dave: You might have a fan but ... Yeah. It turns out that for everyone, it's bad and for me though, having acquired chronic low blood pressure as 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 like it's metabolic, right? You don't have enough oxygen in your blood, in your brain, then you're going to have low performance and you can increase oxygen. Then if you have enough fuel, it's like glucose or ketones, you're going to have low performance.

If you get all that stuff in there and your mitochondria are damaged by something, then you're going to have low performance. It's like the stack where like get the fuel in there and then let's see what happens.

Brad: Very cool.

Dave: Let's see. There are two other big questions I want to ask you. One of them is around [cheat 00:54:38] days. What's your take on cheat days? I've had people on the show where like eat, eat whatever the heck you want, kind of thing and others who are like, eat intelligently during 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 like ... I don't like the idea of chronic diet. There's a calorie restriction thing. I don't mind if you averaged out your calorie and take over the course of two months if it was low. I really feel like you need to have days you're eating too at least [inaudible 00:55:16]. "Eat Stop Eat" is designed so almost all your days at your 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 four or five days and just eating up to maintenance on three, two or three days, right? I like those periods of just like okay, like the mental stress, the ... Ego depletion, what we called of dieting.

Dave: Mmhmm (affirmative).

Brad: It's difficult, right? You're literally crossing literally. You're costly 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 overconsumption is a solution or should it be longer?

I would opt for longer. I like the idea of eating the 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 and I just go to town.

Dave: Maybe like 6000 calories and just ...

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

Dave: That's a question there. It's a cheat day of Skittles, M&M's 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 like it's not really cheat day but it's like a full fuel day, right?

Brad: Those dependent for me. A full fuel day ...

Dave: Okay.

Brad: ... as opposed to I'm going to try to make up for a week's worth of calorie restriction in one day. Now my general opinion on that kind of cheat where it's going to be a large amount of calories, above what you need is it can happen. I wouldn't plan it then. You're going to have a wedding to go to. You're going to go to a kid's birthday party and you're going to eat the cake. I prefer not to plan that into my diet because it's going to happen.

Dave: It's going to happen naturally, right? You don't need to have a special day where you're got ... You buy a wedding cake and eat the whole thing.

Brad: Exactly. In terms of using the ... Okay, say in eat up days as opposed to cheat because cheat gives the impression that you're going for a new record of calorie intake.

Dave: Okay.

Brad: Just a day to eating back up. I think that they're extremely helpful, if not physically, mentally. The ego depletion, the psychological part of dieting can be exhausting and mostly the reason why most people stop. Mostly [inaudible 00:57:29].

The reason most people stop the diet. To take a break from that every once in a while without undoing the damage, I think is a fundamental part of a long-term diet strategy. The issue I run into with people is that you have to understand your fasted or dieted weight is a bit of an exaggeration. You have the water loss. You're just as not your true weight.

On your eat day, if your weight goes up by a pound or two, please don't freak out, right? There's just ... That's more in line. Like it's when you're done, you're dieting, and then after three or four days, you're like, "Oh my God, all the weight come 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 days, your weight is going to go up and it was ... People are dieting in general when it comes to weight. You get really hypersensitive to these fluctuations without admitting that you have the exact same fluctuations as before when you were heavy, right?

Dave: Yeah.

Brad: Just be aware of that if you're going to enter them into your ... Enter this sort of cheat day, eat up day into your diet. Your weight will change but 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 asks some of these hard questions that most people just have never heard of. I'm hoping 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 and "Eat Stop Eat" 24 hours is totally legit and read Brad's book because it's also totally legit.

Brad: Thank you.

Dave: Yeah.

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

Dave: That's like a tweet right there.

Brad: Yeah, yeah, sort of thing.

Dave: Brad, there's one more question though that I ask every guest.

Brad: Yeah.

Dave: This is your top three recommendations for people who want to perform better. You want to kick ass at life not ... It doesn't have anything to do with fasting but it can. What are your three biggest nuggets?

Brad: Okay. First, outside of things, they're going to land you in jail, rules or guidelines. They're only guidelines. Especially when it comes to diet and exercise, you get hung up in these rules. It'll defeat you, right? You're supposed to [inaudible 00:59:55] of six, use that instead of six, instead of six, instead of four, not getting to the world.

Pilon says 24 hours, I don't think 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 but if you treat them as these hard and fast rules, you burn out. That's number one. Number two 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 two pounds up, two pounds down, one pound up mentality and try to go backwards and find out and see why that happened, you can find amazing things and make breakthroughs, 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 reproducibility is the key to research, right? If Dave had something and it turned out really, really well for him and then I tried and it turns out really well from me, then three of my friends, right, it turns out well for them. It's more likely to be right than the one outlier who's bragging on the forums about how he's 302 pounds with 5 percent body fat and you get upset that you're not.

Reproducibility. The things that have had results for most people, something you should ... Pay attention to that. Stop thinking that you're going to buck that system. If you think you're broken and if that specific thing isn't working for you, well, it just worked for a lot of people. Let's look at other parts of your life that may be the issue. This goes all the way back to that guy who just lost his job and divorce, right? Generally, the diet that he was on was very reproducible. Lots of people had good results with that.

His exercise program, lots have had results with that. Because they are so reproducible, I was able to look other areas of his life and find the issue. That's not a thing. It's always kind of be aware of everything is going around and look for the weird blips rather than the thing obviously sticking in front of your face that you want to change that might not need to be changed, [inaudible 01:02:14]. The last one was if there's a point there I had [inaudible 01:02:17], if you replay that will make sense.

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

Brad: Perfect.

Dave: If you enjoyed this podcast, do Brad a favor and check out "Eat Stop Eat" and please do me a favor and head on over to iTunes and leave a review for Bulletproof Radio. I 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 and I really appreciate kind reviews because those help other people find the show.

Brad: Perfect.

Dave: See you on the next episode.

Male: Check out the free app called Bulletproof Food Sense. It works by using the phone camera in order to get a measurement of your heart rate or you can just type in your heart rate if you know what it is from some other monitoring device. You do this before meal and you do it after a meal a couple of times. Based on changes in your heart rate, the application can help you to identify which foods are causing an immune response in your body.

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