



Transcript of “JJ Virgin: The Sugar Impact Diet, Artificial Sweeteners, & Your Gut Microbiome – #169”

Bulletproof Radio podcast #169



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Dave: I'm Dave Asprey and this is Bulletproof Radio. Today's cool fact of the day is that cats prefer salty over sweet, and that's because they have a defect in one of the two genes that cause your taste buds to form sweet receptors. The big question now is how do we transfer that to humans so that we eat like less sugar?

Today's guest has been on Bulletproof Radio before and she's a nutritionist and an author of multiple New York Times bestselling books including her latest book, the "Sugar Impact Diet." JJ Virgin, welcome to Bulletproof Radio.

JJ Virgin: It's great to be here.

Dave: I'm excited that we get to record in person because-

JJ Virgin: I know!

Dave: I see you when I go to your Mindshare Summits and I got to hang out with you a lot but we almost never get a chance to film in person, so we're actually doing an episode live. If you're watching us on YouTube or you're watching this on iTunes on video, you can actually see us together in the studio, which is cool.

JJ Virgin: It's working for me.

Dave: JJ, let's jump in to sugar. Neither of us think sugar is very good for you, but you focused a whole book on it whereas I'm like put it low on the [Bulletproof Diet Infographic](#).

JJ Virgin: There was a reason for that. The number one question asked on The Virgin Diet was about sugar and it seemed that there were two camps. People were either confused by it and thinking they were doing everything right, but actually still getting in high sugar impact and still suffering from all the symptoms, what that does like fatigue and weight

gain and brain fog and moodiness and joint pain and gut issues, or they're just controlled by it. They knew they need to give it up. I mean it's like, "Sugar is bad." Duh! But they were controlled by it and they couldn't get rid of their cravings.

That's why I devoted an entire book to it, but what was so interesting as I dove into the subject, because I don't have a sweet tooth. I don't like sugar, but that didn't happen overnight. I was raised on Pop-Tarts. My nickname growing up was Poppy. I mean seriously, not for the flower. It literally was frosted Pop-Tarts.

Dave: I'm using that against you later.

JJ Virgin: I know you are. I know, I just threw that out there, that "Oh damn." I actually had a sweet tooth and what I did over the years, I got very into health when I was 12 and working out and just was crazy about it. I grew up in Berkley so that was helpful. I thought that I was getting the sugar out of my diet when I started having frozen yogurt, when I switched to dried fruit, when I went to carob, but in reality, I hadn't lowered my sugar impact at all, and so that's what's really important for people to understand. Because they think they're doing better because they have the green drink.

That says no sugar added, but in reality it's got 56 grams of sugar because it's like all fruit juice with some green thrown in or they're having one of the enhanced water, so that's 31 grams of sugar. Maybe they're even having just some, God forbid, gluten. It raises your insulin as much as sugar does. It's really about re-education because if you're just pulling the sugar out and it's just the obvious stuff that we think of like desserts or cookies or cakes and you don't realize that those things you don't really consider like the balsamic vinegar or sun-dried tomatoes or the fruit juice. They're still creating the same problems.

Dave: Is this just the glycemic index all over again?

JJ Virgin: Don't you hate the- ... didn't we agree, like how did this happen? You look at it and you go, "How did we create a framework and live by a framework that's making us all fat, old, and tired?"

Dave: I'm so happy you said that because I mean I've read your book, I know it's not the glycemic index again. I used to eat according to the glycemic index which drove me to eat a lot of really crappy foods. It's entirely useless as far as I can tell as a health indicator, but why do you now use the glycemic index?

JJ Virgin: Why? Because it make me so angry. Because it makes agave look like this great food, like we should have agave and skim milk. This is the perfect thing. Here's the challenge. There's multiple challenges with the glycemic index. The first being that it makes a carrot look like a potato because it takes a 50 gram dose of a food and then measures your blood sugar response, but people don't eat an isolated 50 gram doses of carbohydrate so it doesn't really work. In reality, should we just be looking at what's happening with your blood sugars? We also look at what's happening with insulin and ghrelin and leptin and cortisol. It's really the impact that's so critical. What's really got a bigger impacts?

When you look at sugar, there's two fates. It's going to be broken down into glucose or fructose and those fates are so different. While glucose isn't something we should be hitting ourselves heavy with, fructose is the scariest of all because a we know, fructose got this great stamp of approval because it didn't raise blood sugar so it was low on the glycemic index, but that's because it just went straight to the liver where it's going to make fat and along the way, because it bypasses all those satiety signals, you're still hungry, the more of it you eat the better off you get at absorbing it fast. It's glyccating so it ages more than any other sugar. It leads to fatty liver so we have fatty liver in kids.

Remember when fatty liver used to have ... It was only alcoholics and now we have to call it non-alcoholic fatty liver disease. You look at like the increase in weight gain, diabetes, heart disease. It's crazy for cancers. It actually creates a much more aggressive cancer type than regular glucose dose. You look at this and go, "How can you create a glycemic index that makes the worse sugar of all look great?" and then discounts, doesn't even take into account like fiber and nutrient density. I blew that thing up and I created a whole new rating scale that incorporated glycemic load, how much of a food you actually eat, fructose grams, and then contrasted it with fiber and nutrient density.

Dave: It is a far more sane way of looking at the insulin impact of what you eat. One of the anti-aging things that I follow and that I recommend is I like to keep my fasting blood sugar below 87 which is a kind of a well-established anti-aging number. Anytime you eat, your blood sugar spikes a certain amount and then it falls very quickly. It's called a postprandial spike. When people eat according to the things you outlined in the Sugar Impact Diet, what happens to their average fasting blood glucose and what happens to the postprandial spike?

JJ Virgin: I haven't looked at the postprandial spike, but what I have looked at is I've now got case studies of this where I just had one, you just went from 97 down to 80 in a matter of weeks. Because what's happening when you eat this way is a couple of things. Number one, there's a transition phase where I actually take people to as low a fructose as possible, hopefully close to zero, if not zero, so that their ability to transport of fructose goes away, and they lose their sweet tooth, but they also start to become more insulin sensitive. One of the challenges with, and I know we're both not fans of this snacking thing, the snacking thing.

If you look at some of these, it's really going to jack your blood sugar and make you fat. Where did this urban legend of snacking as this great thing to do and I still see it in these diet books. I mean there is one well-known diet book that tells you, you should have a evening snack before

bed, and one of the recommended evening snacks is a diet soda and pretzels. Like crazy craziness. I know that it helps now with reclaiming glucose tolerance and glycemic control and there's a lot of different reasons for that. One is because you're getting great fiber which slows down the blood sugar response but also feeds the good gut bacteria so you were storing the better gut bacteria and not having those bad gut bacteria that can make you more glucose intolerant.

I mean I'm sure you just saw that study that came out. That's like, "Hallelujah!"

Dave: It's talking about the effect of gut bacteria on insulin levels?

JJ Virgin: I was looking at artificial sweeteners and your gut microbiome.

Dave: Yeah.

JJ Virgin: I mean was that ... I was like, "Finally, people."

Dave: For years.

JJ Virgin: I mean it's like we knew Splenda did that. It was like, "Shh, shh."

Dave: I mean a real study to say what we all knew is really cool.

JJ Virgin: Do you see thin people having diet sodas?

Dave: All right, one of the things that drives me nuts, there's a low carb community and many of them are dear friends and I was like this when I stated my path more than a decade ago. I would eat according to the glycemic index and I would eat lots and lots of protein, moderate to low fat, the wrong kinds, and I would always use acesulfame potassium. I figured out NutraSweet made me weak. It made me shake, it affected my vision, like it was really bad for me. Splenda was ... actually some of it

hadn't quite come out in the market yet. I tried all these different things and all of them create toxins.

What I got from Ace K was not a blood sugar spike, it was not that I monitor it, but I got benign nodule growing in my thyroid and they went away when I quit using acesulfame potassium but all of them contribute to your body's toxic burden which makes you fat. Low carb, high fat with this set of principles that says it doesn't really matter what kind of protein you're eating.

JJ Virgin: Yeah, it could be pork rinds and diet and tap.

Dave: Yeah, it doesn't work, yes.

JJ Virgin: One of the challenges with low carb is low carb could be soy-based, like you see a lot of the low carb, it's got tons of soy in it to lower the carbohydrate and then they use artificial sweeteners.

Dave: That will jack you up. I used to eat that years ago but your brain goes-

JJ Virgin: I did too.

Dave: Before your body.

JJ Virgin: No, I did too. I mean I was like Diet Coke was probably the toughest addiction for me to break. I still remember when I was eating and I went totally fat-free vegan too. Now, a fat-free vegan, what does a fat-free vegan eat?

Dave: Pretzels.

JJ Virgin: Right, I mean if you're a fat-free vegan, you are basically eating almost completely carbohydrates. I mean I was trying to get my fat down to 10 grams a day. Do you remember the Pritikin days?



Dave: Mm-hmm (affirmative).

JJ Virgin: Like any diet fad, this body has had to recover from. That's crazy.

Dave: That's damaging, especially for women. It's even worse for men.

JJ Virgin: Yeah, to not have the fat and the protein and to live on diet soda and non-fat, fat-free frozen yogurt, and I would literally drive throughout the day and get sourdough bread and then frozen yogurt then a bialy then pretzels, because I was a trainer at the time, craziness. We were all trying to get our fat down to as low as possible. Yeah, and then when I got to be that like some fats were okay but you still want to eat very low carbs then you went in to soy and you see people who's all of a sudden now their thyroid is just trashed. All of these things have issues with them. None of them are benign, and I think that's like when I look at creating this new way of looking at sugar, it's not about calories. I know we've always been like this.

I mean if you look at the obesity epidemic, the heart disease epidemic, it's not a calorie tracking. Look at what's happened with sugar and especially what happened when all of a sudden we learned how to unwrap fruit and pull the fructose out of corn and so just hitting people with things where they always would have gotten it in food before. All of a sudden, all of these disease rates are skyrocketing. There's no simple way to do this but artificial sweeteners are way worse than sugar and that's clear. Way worse.

Dave: Thank you for getting that message out there. On the [Bulletproof Diet](#), I put them at the very bottom and it makes a set of people very angry.

JJ Virgin: Why do people-

Dave: Like those people who are addicted.

JJ Virgin: They're as addictive as any of these ... I mean, look at gluten, dairy, sugar, and artificial sweeteners are all drugs. If you looked at them in any other context, especially let's look at something that stimulates the ... Well, Oreos, because Oreos are the perfect one and they did that study to Connecticut College where they gave rats morphine or Oreos, and then they let them go out and have their way with them. The rats, when they were given the choice, because they checked their brain on both of them and they both lit up their brain, both triggered the reward center, but given the choice they chose the Oreos because they got more pleasure. Same rewards and about more pleasure cracking that Oreo open, and that's what they did, they cracked the Oreo open, went straight to the middle.

If you looked at that and you said, "Okay, we don't let people just have morphine. We don't go to the store and you could have some morphine, but you can go to the store and get the Oreos." It's crazy.

Dave: I would rather have morphine than Oreos.

JJ Virgin: I think it would be better for you.

Dave: It would be better for you, yeah.

JJ Virgin: You look at these things and you look at what artificial sweeteners do and how they light up your brain and what they do ... I mean the fact that you're not supposed to as a pilot go hit yourself with a bunch of NutraSweet before you go fly, like what more do we need to know here? There's so many levels of bad with artificial sweeteners besides the calorie disregulation so you no longer can calibrate the sweetness with how much you're eating. They glycate too. They raise insulin too. They feed the bad bacteria in the gut. They make you crave more sweet, that's for sure, so like why would you touch them? They clearly don't work for the whole point of what they were setup to do.

Dave: There's a dark side there. If you want to make a lot of money in the diet industry, there's a very simple formula. You get people to do something that makes them fat and tell them they don't make them thin, and then like, "I must need to do it more and then spend like the diet-

JJ Virgin: I know, isn't it?

Dave: Spend the diet soda-

JJ Virgin: That's the message of insanity.

Dave: Yeah, one didn't work, I'll do two. Two didn't work, I'll do three. I was also hooked on this and diet gum, the sugar-free gum, I used to eat it all the time because I was terrified I might have bad breath because I was so toxic, I actually do have bad breath. I'm always chewing on this stuff and constantly dosing myself. I remember really distinctly when it finally hit me what I was doing to myself. I had eaten probably five or six pieces of gum and then I got like a giant big gulp with all diet soda on an empty stomach and I drank it and I was trying to perform in this college class and like the room started swimming and I was in this extreme weird altered state. The only thing I've done was just masses of stuff, and I'm like, "What if I stopped all of it?" I did and it made a huge difference.

JJ Virgin: Yeah, what if I just eat like real food?

Dave: I was in college, real food was one of those pre-packaged pies. I'm like, "There must be fruit inside there."

JJ Virgin: I see. I worked in catering. I agree. In college, I figured that one out.

Dave: You are smart. I used to not eat that well. The thing that still makes me mad is that no one was talking about this stuff. I honestly believe that

what I was doing was scientifically based and I was making good decisions. If you believe you're making good decisions because you have bad data, you're screwed.

JJ Virgin: I believe most of us are being duped and that the misinformation is killing America. I'll just give the example of this green drink that literally on the front says, "No sugar added," and it's green boost. It's got a green boost which really ... and if you look at it, it's actually got four fruit servings in it.

Dave: Four?

JJ Virgin: In 16 ounces. Now, okay, so a 16-ounce soda has 44 grams of sugar and a 16-ounce of this green drink has 56 grams of sugar, but the challenge is you look at it just like you look at the jam, you look any of these things and says no sugar added. Or if it does have sugar added, what they'll do to distract you is they'll say fat-free. They'll do one of the other of those, you go, "Oh, it must be good." Or maybe they'll put organics. They've got all these things, or all natural. All natural is a great one they can use because natural means really nothing. They can use these different words and think about the person who's not studying this stuff and trying to make good decisions for their kids and that's what makes me so angry.

Dave: There's just about no way if you buy stuff that comes in boxes. There are too many intentional lies.

JJ Virgin: Jars, cans, yeah, yeah.

Dave: Yeah.

JJ Virgin: Well, because they have to sell them and the average person wants to make better choice. If it says, "low fat pretzels" or "fat free pretzels" or "low fat chips," guess what?

Dave: What about gluten free on the Sugar Impact Diet because gluten-free foods, we don't know, they're better for us than gluten foods, right? How do you account for those? How do you help people understand what this is?

JJ Virgin: A gluten-free food like an avocado or a grass-fed beef or asparagus, those ones are fine.

Dave: Yeah, we like those.

JJ Virgin: We like those. The ones that actually don't have to put gluten-free on the label, but if you look at most of the gluten free food out there, it's absolutely junk. It falls all into high sugar impact. What I did was I rated things as high, medium, and low sugar impact. I have a transition peer, so I have people first figure out all the places that's sneaking in and it is amazing how many places. For people who think they are eating healthy, that these high and medium sugar impact foods are sneaking in, because you don't pay attention. You go out to eat, you don't really think about the Asian vinaigrette or the balsamic vinaigrette or you'll get something that's glazed.

Or say if your fish was glazed, it just got shined with sugar. If you have that salad with the glazed nuts and the dried fruit ... I got a little note from one of the dried fruit companies that said, "We have to add sugar, because otherwise it's a little bitter."

Dave: Like cranberries.

JJ Virgin: They said, "But it has the same amount of sugar as raisins do." I'm like, "That's the point. You missed the point." I thought, "Oh."

Dave: I think I get the point. Crack has less cocaine in it than cocaine, so therefore it's good for you, right?

JJ Virgin: Yeah, so it's better, so it's better. You look at all of these things that they've done, and again, now gluten-free being this big buzz, it's like you weren't eating cookies before and you look at even say a gluten-free muffin and you take that muffin, look at a cupcake, if you took the cupcake with the icing off, you'd have the same amount of sugar. Do you know that two Hostess CupCakes has the same amount of sugar as a lot of these healthy muffins at the coffee places? Two Hostess CupCakes.

Dave: You're saying we should eat Hostess CupCakes?

JJ Virgin: Yes, that's exactly. That was the message. That's the takeaway for today. We actually don't have to talk anymore. Just go get some Hostess CupCakes, wash them down, but make sure it's fat-free milk.

Dave: You go to Costco and you buy like a bran muffin or something. You're saying that's-

JJ Virgin: By the way, those bran muffins at Costco, we actually looked at them one. There were like a thousand calories in mainly all and not just from sugar because carbohydrates turn to sugar, and that's the real important thing is people say, "Okay, I'm not eating any sugar," and we all now are focused on how much added sugar people have, but it's not the issue. I mean we are eating a 150 pounds of sugar per person and I think we are not, so that means there are some people, they are really eating a lot. That's not the problem.

It's all the places that you don't realize you're getting it in that they're actually not counting because they're looking at added sugar, but it's like, "Well, what about the juice and what about the jam and what about the flour? What about the gluten-free flour that's not this corn flour?" What about all those things because the minute that you start to put them in your mouth, they start turning into sugar. It's all the

same. All that matters is the impact, what's it telling your body? Is it helping you burn fat or store it? Is it making you tired or energetic? We should be able to go to 4 to 6 hours before we need to eat again. If we have to snack, you're a sugar burner. You've taught your body how to eat, raise your insulin, drop your blood sugar down so you need to eat right away again.

It's like Poof! You should not have to eat every 2 to 3 hours. That is a marketing ploy by the snacking foods groups. I got invited to be in one of their ... I remember I got a note in a big box of all these low-fat chips. I get this big box. I'm like, "Someone did not do their homework." They invited me to join their snacking council.

Dave: Wow.

JJ Virgin: Yeah, could you imagine?

Dave: A snacking council.

JJ Virgin: A snacking council. I'm like, "Snacking? What is a snacking council? What do you want me to do? Like be tweeting out, 'Oh, did you have your fat free Frito-Lays today? Go get them.'" Don't forget to snack.

Dave: You should have joined. You could have been our inside mole.

JJ Virgin: I know. Well, I just got that cranberry one that I could join.

Dave: There you go.

JJ Virgin: Because they want me on board. I'm like, "It's not happening."

Dave: It's sad, the snacking board or the other business model we talked about, you know, selling things that don't work. Hundred calorie bars

that are mostly sugar and carbs. Hundred calories isn't enough to do anything. You cannot fuel your energy with that.

JJ Virgin: But you can raise your blood sugar.

Dave: You can get really hungry.

JJ Virgin: You can raise your blood sugar and who eats one? Who eats one snack pack?

Dave: The best business model ever, first one's free. We get that from drug dealers. If they had those packs at the store, a dozen of those little hundred calorie things, which is still 1,200 calories, like less than you eat in a day, and the one on top is free and you can just open it right there and eat it in the store, you get double sales.

JJ Virgin: Yeah, you're right. That'd be it.

Dave: Because you're like, "I got to have another one!" If your food makes you hungry, you're doing it wrong. Would you agree with that?

JJ Virgin: Like cereal. Cereal, first of all, to me cereal is the perfect trifecta. Think about it. It's cereal and milk. Sugar, gluten and dairy. Talk about just the perfect triple hit of opiates. You look at cereal and milk and, of course, you have fat-free milk and you are literally hungry within an hour. Yes, if you eat something and all of a sudden you're hungry again, there's clearly something wrong. You clearly didn't get enough fiber, protein, and healthy fats in there to keep you sustained. That really is a benchmark for me. When people say, "I got to had to remember to eat." I go, "Bingo. We got there." You should be able to go four to six hours.

Dave: I had to remember to eat. This may go a little beyond just the Sugar Impact Diet but you're a nutritionist and you've done a lot of work with



a lot of really high performance people who look great. What's the difference between hunger and a food craving?

JJ Virgin: That's a good one. A craving, for me, a craving has nothing to do with being hungry and you've got to have that thing, and it's a drug. Now, it can happen because you've become intolerant to that food, you have a delayed food reaction. You have a food sensitivity. Or it could be because you've created a drug-like effect to it. It's interesting because I've never heard someone say to me, and I've been doing this 30 years, "I had such a craving for Brussels sprouts. I just had to go get them." Never in 30 years. It's always the same foods. It is dairy, it is gluten, and it's sugar. If I had to say what are they, I mean you'll get the random like, "I need some corn chips," but-

Dave: Fat and salt, aren't those cravings-

JJ Virgin: Sugar, salt, and fat. Sugar, salt, and fat, but it's not fat like, "I'd like to have an avocado."

Dave: Yes, it's bad fat.

JJ Virgin: It's not like I'll go ... I mean, I have an issue with almond butter, but it's not typically I'm going to go eat a jar of almond butter. It is I'm going to go have the fat, it's wrapped up with some sugar and salt like a corn chip. That's the ultimate sugar, salt, fat. People don't look at it like that, but corn is sugar.

Dave: Corn is sugar. The other thing that amplifies the effects of sugar is when you damage fats with heat. You're frying oils that should never touch heat, in fact oils that shouldn't be eaten, and then you're doing it on a sugar substrate. How does that change the sugar impact of chips?

JJ Virgin: Yeah, so that's great because what's so fabulous about that is now you're going to eat something that's high sugar and raise insulin so that

you're body's going, "Cool it, store it all." They got these damaged fats, it's like incoming. It doesn't get worse than that. Then you got these damaged fats that are making your receptors less sensitive to the message, so they're destroying your receptor walls so now your walls are not able to have the flow they need so the hormones can get in to give their messages to talk. If you start to look at all of the levels of bad because I think people don't think long-term, and what I loved about the gut microbiome artificial sweetener study is that these changes happen in 6 to 7 days.

We think of these things and we go, "Oh, sugar is bad but I'll just do it this once," which, of course, is this once and this once and this once, but these changes happen very quickly, very quickly. The good news there is they can also get fixed fairly quickly too.

Dave: If you look at how quickly you can fix the gut biome, it sounds like a good story. We know that gut biome changes within 24 hours of eating food. You can have marked changes when you had resistant starch or other things. [Collagens](#) are good substrates to make butyric acid, for instance. When you have all of it going on, a lot of people have bad bacteria in their guts. What does eating sugar do if you have bacteria going on in the gut?

JJ Virgin: Sugar is basically the fuel for the bad bacteria and that's the worst thing you can do. We don't think about this. I think the coolest thing going and the next biggest trend I'm hoping is going to be all about the gut microbiome. It is the biggest thing controlling us. It's for obesity, that's huge. You have too much bad bacteria in the gut. You extract more calories from the food you eat and you store them as fat. It can just be that. I had a client. Suzanne Somers' stepdaughter was a client of mine and she'd gone to all these doctors in LA and she had this chronic gas and bloating. They kept giving her probiotics and it was getting worse because no one was dealing with the fact, "Well, wait a minute, what's ..." and she just needs to exercise more.

Dave: Oh, jeez.

JJ Virgin: She needs to eat less and exercise more. That's it, right? Because that's why we've got this obesity epidemic. Clearly, we've all of a sudden eaten 10 times the calories we used to eat a hundred years ago. It's interesting. I'm looking at her, I'm like, "Well, she already exercises and she was doing all and all high intensity training and she actually wasn't eating enough."

Dave: That happens a lot, yeah.

JJ Virgin: She was bloated all day long and the reason she wasn't eating is because whether she ate or not, she just got more bloated as the day went on. I mean, that is just slam dunk on you've got small intestinal bacterial overgrowth. You just get more bloated as the day goes on whether you eat or not. We went on a killing spree and it took a while. I mean, if you've got an overgrowth of bad bacteria, you've got to get those things gone. If you just keep going, "I'll just keep feeding those good ones." No, you're going to get the bad ones jump in there too. They'll take over.

Dave: That's one of the problems with some approaches to fixing the gut bacteria is that you don't know which ones you're feeding.

JJ Virgin: Right, and those bad ones are worse. They're the big bad army. You look at things that are so great, berberine, cultured foods for soft ... I mean, shout out to Donna Gates who made me try the cultured veggies. I'm like, "Eeee!" They're a little scary but the cool news is when you eat those, you will develop a taste for them. That's something that we don't have in our culture that we should. The sour takes the sweet taste away and I drink a lot of cultured drinks. I do cultured coconut water every day. You can develop a taste for these things and it works and it helps feed the good bacteria and fiber's so critical too, but I love berberine

and garlic. I think these and berberine, it's one of the coolest herbs on the planet because it also helps balance blood sugar and it probably helps balance blood sugar because it's killing the bad bacteria in your gut.

Dave: Berberine is magic stuff and people who listen to Bulletproof Radio all the time know I'm not a garlic fan as an herb. As a medicinal herb-

JJ Virgin: Let's say raw garlic. Throwing some in is a great thing.

Dave: Exactly. When you're dealing with bad bacteria, that's an appropriate time to use a medical herb, but I wouldn't suggest using it every single day, and I think we probably differ in that.

JJ Virgin: Yeah. Well, no, I don't think so.

Dave: There's so many people who are like, "Well, garlic must be good, therefore, I should have it three times a day," and I found out that it affects cognition when you have high doses like that on a regular basis.

JJ Virgin: Yeah, I think when you're going after gut microbiome and the bad stuff, you have to hit it hard and that's what I see is most people don't hit it hard enough, and so they don't get it dealt with because for a lot of people this just ... especially if you've eaten a high sugar diet or you've done birth control pills or antibiotics or any of this stuff and set up this inhospitable area, you've got to go in hard. Hard and heavy and then you've got to come back now and be gentle and repopulate, right, so.

Dave: Part of the [Bulletproof Diet](#), the stuff that I've written about in there has to do with what you were saying and the things that you've written about and certainly things that you've researched when you were writing the Sugar Impact Diet, about this gut microbiome issue. It turns out that when you eat certain strains of probiotics, ones that are even sold in stores, that they can make you fat. I remember this blog post

that really made a lot of people angry. I'm like, "Yogurt has some of these strains." If you're eating sugar and you're taking things like that, weird stuff can happen, for instance. I thought, "All right, I'm going to try doing a probiotic [Bulletproof coffee](#) in the morning." I made [Bulletproof coffee](#) and I added artichoke syrup, which is sweet tasting but it actually started Jerusalem artichoke syrup.

JJ Virgin: God, didn't that make you gassy? Sorry to ask.

Dave: Yeah.

JJ Virgin: Let's find out. Dave, did that make you gassy?

Dave: It didn't just make me gassy. The stuff is a big source of FOS or fructooligosaccharides.

JJ Virgin: Yes, so it's like, "Err."

Dave: I took some probiotics with it, so the idea is it would feed the probiotics. If you've had [Bulletproof coffee](#) and you have too much oil in it, which gives you disaster pants, you add gas on that and it's not okay. Worse than that, I can cope with a little bit of gas. The problem is, and especially if I'm expecting my gut to transform itself, after a week on this I gained 10 pounds. Like my pants didn't fit. It was because of the species of-

JJ Virgin: That is un- ... Well, there's some very interesting testing now to look at that whole ... and I'm going to kill this, but firmicutes to the bacteroides and ...

Dave: There we go.

JJ Virgin: I think will be so interesting if we start to look at that and understand that your gut really is the master switch that we don't think about.

That's why, honestly I keep going back to this article but I went, "People will start to get it with this one," because now you've hit them, they can make sense of this especially when you saw it happen in 6 to 7 days.

Dave: I was mystified and I know there was a sugar impact. I was eating sugar at the beginning of that, so that is ... FOS is a form of sugar and I don't know if it raised insulin specifically, but what I discovered, and this actually made me mad, I'm a computer hacker by background, so I look at systems differently. When you look at what your gut bacteria are doing, like, "Okay, how do I hack my own systems so I can lose fat and gain muscle and stuff like that and eliminate sugar, do it, eliminating high insulin foods, do it," in very much alignment with what you teach in your book. The problem is that when you try to attack or hack a system, there might already be a hacker in there. The gut bacteria are hackers.

There's this annoying hormone, it's called fasting-induced adipose factor. What happens is that bacteria, the firmicutes the ones that tends to be higher in fat people, well, they make extra FIAF ... FIAF, if you like the acronym, is something made by your liver. Your liver will naturally regulate your energy even if you eat too many calories or even if you eat the wrong kind of food. Once you introduce bacteria, the bacteria are afraid that you'll die so they make extra FIAF or turn it off. Your liver is doing its job and a hacker came in and compromised your ability to regulate your weight and your metabolism and your insulin, just like you're saying. Depending on what you eat, you can suppress those. You eat less sugar, you get less firmicutes.

JJ Virgin: Isn't that cool? That's the bottom line. You've got a hundred trillion bacteria, hundred times of DNA, and you can control those guys with what you're eating.

Dave: Yeah, and sugar.

**JJ Virgin:** Like talk about powerful. What will be so cool is as we start to do more testing that people can look at that and go, “All right, now I know this, like I shouldn’t have this strain, I should have this strain. I should ... I need to kill off first, what should I do?” I put a client early on when I didn’t know this stuff under probiotics and she just got bloated. I remember she walked in and she was like 50 with this bowling ball stomach and I was like, “Oops.” Like, “What did I do here?” because I didn’t know. Probiotics are good. You’ve got bloating, take more.

**Dave:** It’s also a question of like, “These probiotics worked and these ones didn’t because different ones do these things.” I’m a fan of, like you, a zero sugar breakfast, which gives the bacteria, the ones that make you fat, very little to eat. When they don’t get fed, they send a little ... basically, they change their excretion of fasting-induced adiposity factor. By eliminating sugar the way that you recommend, you actually get the bacteria to behave themselves.

**JJ Virgin:** We saw like ... so what I do is I have a taper week because I understand that most people walking in, if you take someone who’s a sugar burner, who’s used to eating a lot, even if they think they’re doing well but they’re eating those gluten-free things. It’s like some of this crap. It’s like, ugh! They’re having the marinara sauce with all the sugar in it, all the stuff. I have them taper down the first week from high sugar impact to medium sugar impact, but I’ll tell you, those two weeks where the fructose goes down to basically nothing and we have such low sugar impact is mind blowing.

It looks like the [Bulletproof Diet](#). It’s like that same thing where all of a sudden sugar impact is so down, you’re regaining your glucose control, your insulin sensitivity, your leptin sensitivity, you’re not hungry, your waist is just gone. I mean I had someone four inches off your waist, for like a woman. I mean, it’s one thing if it’s a big guy, but for a woman, it’s like, “What?” I said, email her again and check that one again because ... and the average person lose 10 pounds, but what I really wanted to



prove, and I think we've seen this now enough times, is that you can lose your sweet tooth.

You can lose your sweet tooth. You can't lose it if you're having artificial sweeteners, all this crap. As you know, when you don't drink sweet stuff and you taste something, I mean even water with some sweetener, like, "Ugh." Like, "What's that?" It just doesn't taste good anymore. I saw the biggest die-hard sugar addicts because that's what I want to prove. I don't need to prove it on you and me. Like, "Wow, whoopee." Dave didn't like the Pop-Tart. If you can prove it on the most die-hard sugar addict that you can get rid of their sweet tooth in two weeks and a lot of that's happening because it's changing our gut microbiome.

Now, I know people listen to this are like, "Cool, that's awesome," but the average person out there really doesn't care. They just don't want to be controlled by sugar anymore.

Dave: They'll say things like, "End my cravings and tell me what to do." I think that you really did a good job in the Sugar Impact Diet of explaining the source of sugar cravings. One of the things that's a part of the introductory section, like the psychology of food that's in the [Bulletproof Diet](#) is that if you have cravings, for whatever reasons, like the ones you're outlining in your book, those cravings suck your willpower and you get tired.

JJ Virgin: Yeah. First of all, there's no such thing as willpower. If there was willpower, we wouldn't be here as a species. We are hardwired to seek out sugar and fat. There's a reason that we're going after these things. You've got to set systems into place so you don't have to rely on willpower. It's like don't bring ice cream into the house and if you're having cravings, there's a reason. Figure out why that is. It's like, so if you're having drug ... I know that if I had wine every night, every night I want more wine so I don't do that because that would be stupid. It's like, "Don't set yourself up to fail."



- Dave: Okay, so I think we both agree that if you have cravings, it's your fault. It's something you did and it's something you can control.
- JJ Virgin: That's the good thing. It's your fault. It's under your control. If you have cravings, so I always like to say, "All of the stuff really isn't your fault. You're being duped by misinformation, but now that you know, you can do better. If you knew that the Oreo cookies or those healthy low-fat SnackWells that you're having or whatever these things are that are just crazy are lighting up your brain. It make you crave more, stop it. Taper down." I have people taper for a first week and really become more aware and start to trade high sugar impact for medium and then they're ready to really just go.
- Dave: Just let it go.
- JJ Virgin: Yes.
- Dave: Cool. We're coming up on the end of the podcast and I've already asked you the cool question about the top three recommendations for performing best, so I'm going to ask you something different, JJ. What are your top three recommendations for getting rid of a sugar addiction?
- JJ Virgin: This is what is so great is it really has to do completely with, number one, making the decision. If you don't decide you're going to do something, if it's not important, if you haven't attached enough importance into this, then you won't do it. The number one way to get rid of a sugar addiction is to just decide that this is important enough, that you want to live a great healthy life and you want your kids whatever you're doing they're doing. If you want your kids to be drug addicts, be a drug addicts, and if you're addicted to sugar, you're a drug addict. Get that. Get real about that and then attach how important it is and what you're really being held back in your life from getting because

of this so that you will go after this. What is that big aspiration that this stupid Oreo cookie is keeping you from doing? If you get to that point of how ridiculous this is, you'll stop it. That's the first part.

Second part is get a sane scientific program. Again, stop being misled by the misinformation out there. Don't trick yourself into doing more of what's not working and a lot of that is because we really wish it would work. Hey, I wish it would work, that I could live on black licorice and Diet Coke. That would be awesome, and popcorns, skinny pop. I would love that. That would be great. It doesn't work. Let's get real about that. Get a program that works and then get into a community of people to support you so if you start to go off the rails, they will grab your hand and pull you back in. Because it's going to take some time to go through that. Not long. I see people in two weeks, totally lose their sweet tooth, but you want some support during that time to help you get through it.

I think that's that magic formula that you really need is that grab that lifeline if support. I know you've got an amazing community. It's so important to have that amazing community of people because let's face it, you go out into the real world and 70% of the people are overweight or obese; 35% are obese now, 20% of the kids now are obese. Those aren't going to be the people probably to support you because they're right now being duped by misinformation. Grab that community and then start pulling your friends in to save them too.

Dave: That's a wonderful piece of advice. JJ, thanks for being on the show and also thanks for coming to the [Bulletproof Conference](#) and speaking. We're actually filming this at the conference, so people know how you thought it went. Today, I'd love just a short comment because people who hear this will probably want to come next year.

JJ Virgin: You need to come next year to this conference because there is nothing like this anywhere. First of all, it's like I couldn't come till today which was upsetting so we will block it out. Do we have the dates for next

year? We'll be blocking this out for next year because just to come to play and to see all the other cool people. Again, I'm all about community. Just the lineup of speakers that you have are just amazing, not just me. You've really put together something really cool and especially, I don't really know anywhere else where you can come and find this type of information and I got my CoQ-10 B vitamin cool shot.

Dave: Your injection.

JJ Virgin: I mean it's like it's awesome. Love it!

Dave: I think this is a first for health conferences where we had just out on the floor injectable vitamin.

JJ Virgin: I know. How awesome is that? I was like, "Oh, this is the best." I was having my [Bulletproof coffee](#) and getting a B vitamin shot. It doesn't get better than that.

Dave: I still have needle marks from the conference.

JJ Virgin: This conference or was that a different conference? So yeah, you really have put together something amazing and just to come and play, I was looking at pictures of you doing some spinning thing, I'm like, (laughs). I was driving in going, "I got to get there faster."

Dave: You'll get a shot and all the big toys, JJ. In the meantime, where can people learn more about your work and specifically your new book? Where is it going to be?

JJ Virgin: The new book is [SugarImpactDiet.com](#). Yes, we've got great stuff, training videos, but more importantly, you can take the quiz to test your sugar impact and your sugar IQ.

Dave: Thanks again, JJ. Always a pleasure to get to spend time with you.

JJ Virgin: You too.

## Featured

[JJ Virgin](#)

[The Virgin Diet: Drop 7 Foods, Lose 7 Pounds, Just 7 Days by JJ Virgin](#)

[JJ Virgin's Sugar Impact Diet: Drop 7 Hidden Sugars, Lose Up to 10 Pounds in Just 2 Weeks by JJ Virgin](#)

[Twitter – @JJVirgin](#)

[JJ Virgin on Facebook](#)

[JJ Virgin on YouTube](#)

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## Resources

[The Glycemic Index \(Harvard Medical School\)](#)

[Leptin](#)

[Ghrelin](#)

[The role of leptin and ghrelin in the regulation of food intake and body weight in humans \(Obesity Review\)](#)

[Postprandial glucose test \(University of Rochester Medical Center\)](#)

[Splenda alters gut microflora and increases intestinal p-glycoprotein and cytochrome p-450 in male rats \(Journal of Toxicology and Environmental Health\)](#)

[Artificial Sweeteners May Disrupt Body's Blood Sugar Controls \(New York Times\)](#)

[Splenda](#)

[Acesulfame Potassium \(also known as Ace K, Sunett, or Sweet One\)](#)

[Student-faculty research suggests Oreos can be compared to drugs of abuse in lab rats](#)

[Berberine \(Alternative Medicine Review\)](#)

[Thorne Research Berberine, 500mg](#)

[Dietary fructooligosaccharides and potential benefits on health \(Journal of Physiology and Biochemistry\)](#)

[Firmicutes \(Microbe Wiki\)](#)



[Bacteroides \(Microbe Wiki\)](#)

[\(FIAF\) The fasting-induced adipose factor/angiopoietin-like protein 4 is physically associated with lipoproteins and governs plasma lipid levels and adiposity. \(Journal of Biological Chemistry\)](#)

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