

Nicki: It's time to make your health an act of rebellion. We're tackling personalized nutrition, metabolic flexibility, resilient aging, and answering your diet and lifestyle questions. This is the only show with the bold aim to help one million people liberate themselves from the sick care system. You're listening to The Healthy Rebellion Radio. The contents of this show are for entertainment and educational purposes only. Nothing in this podcast should be considered medical advice. Please consult your licensed and credentialed functional medicine practitioner before embarking on any health, dietary, or fitness change.

Nicki: Warning. When Robb gets passionate, he's been known to use the occasional expletive. If foul language is not your thing, if it gets your britches in a bunch, well, there's always Disney Plus.

Robb: Welcome back everybody.

Nicki: Hello, hello. Just chuckling at our little test that we do every time. We test the audio, before we push record for Reels, just to make sure we don't have a pair of headphones plugged in or something weird going on, and we don't record the whole show, and have it not record.

Robb: About half of them, we should keep and put into some sort of like a yearly highlight Reel, because there's some pretty good stuff in there occasionally.

Nicki: Anyway, Robb's final words were, because we're like test, test, test. Robb's like, "We are being tested in all the ways."

Robb: You want to illiterate that, flesh it out.

Nicki: Well, just, currently just the normal parenting stuff. Sibling, the joys of siblings.

Robb: Trying to convey to the kids that an ounce or two of kindness might facilitate better outcomes, and yeah. It's interesting.

Nicki: Yes. I mean, as you all know, we have this new puppy who's coming up on four months, and it's Zoe's dog, but Sagan has been helping quite a bit. And they've recently rigged up some little jumps to kind of-

Robb: Agility training.

Nicki: Agility type training, and Sagan likes to do it with him as well. And apparently, Zoe was giving her some feedback, which is more like, "Don't do this, don't do that. Don't do it like," and telling her what to do, but Sagan was taking it as this just barrage of ...

Robb: Negativity.

Nicki: Negative feedback instead of ... So we have to talk about, how can we say it in a way that is going to encourage the person? And we can say things in a way where you're giving them I don't know. What am I trying to say?

Robb: Well, just that it's not like a complete ass chewing, every single time.

Nicki: Yeah. And when the person does it, takes the feedback and actually implements it and does it correctly, or even partially correctly like, "Good job. That was way better this

time." Yeah. Anyway, been having lots of heated conversations about this, and it sounds trivial, but it's a lot to a seven-year-old and a 10-year-old.

Robb: Well, it's a lot to the functioning of the house, when you have two members that are bickering and super antagonistic to each other. And we've pointed out to them, just as, I think we've mentioned this on a previous show, but we try not to shy away from conflict, but we also try to discuss things in a healthy fashion, and silly stuff like that. And we mentioned, both girls when they were at a Montessori School, they mentioned a couple of kids that would, funny enough also siblings, that would bicker constantly at school, around school. And it was just constant, like roiling mess.

Nicki: They were twins.

Robb: Fine, they're twins, but it was a constant roiling mess, and it was super stressful to be around them. And so, we've mentioned, "You remember when it was stressful to be around those two," and like, "Yeah." And then once or twice, Nikki and I had started bickering at each other.

Nicki: Like play bickering.

Robb: Play bickering.

Nicki: But just like, but ...

Robb: But really getting after it.

Nicki: Then saying like, "Is that fun? Do you want us to keep doing that?"

Robb: And the kids were like, "No." And that was helpful for a while, but it's kind of lost ...

Nicki: I think we need to kind of, yeah. Yeah. I think we need to ... I don't know. I don't know. Maybe some of our listeners have better tactics for this, but it's almost like, you know how you can think that you're behaving a certain way, but you don't really realize that you're really behaving this other way, unless you see it or hear it? It's almost like needing to record their voices so they can hear how they sound like that. Like, "You really are sounding like a snarky little ..."

Robb: They know though, because I mean, you just asked them, "Was that the kindest way that you could convey that?" And they're like, "No." It doesn't take that much self-reflection on their part to get that.

Nicki: That's true.

Robb: So, anyway. Yeah.

Nicki: Little glimpse into our day today. Moving on, this is episode 116 of The Healthy Rebellion Radio. We are fully in flow with the July Wrecking Challenge or fully in full force, I don't know the right way to say that.

Robb: We're in full ruck.

Nicki: It's full ruck. There we go. Lots of folks posting pictures of tired, tired pups that have been dragged along on these long rucks. People have seen porcupines, deer. We even had somebody find a fish head on a beach. Their dog found a fish head, so.

Robb: Of, course, their dog found a fish head.

Nicki: Yeah. Lots of good stuff. Yeah. Good stuff. We've done three days of our Wrecking Challenge, so we need to step it up. We're behind on our mileage, babe.

Robb: Oh, we are?

Nicki: We are. Yeah. Let's see. I think that's it for news in the Rebellion, just trying to think, July. Our next Rebel Reset will be in September. And as we get closer, I will share specific dates. But yeah, I think that's all for community news. What do you have for a news topic?

Robb: News topic is kind of interesting. One of our friends shot this to us. It's a web archive of a post that ended up on the United Nations website originally. And I think it was a day ago, or it was 15 hours ago.

Nicki: It got shared this morning. We were recording this on Wednesday, July 6th.

Robb: But, it's called The Benefits of World Hunger. And it is what, what's astro-turfing versus, there's all these terms, but so for how long has it been that we're-

Nicki: Is it a contentious thing to say that world hunger ... Who doesn't agree that world hunger, we should work to eradicate world hunger?

Robb: Well, this dickhead George Kent, who is a professor in the Department of Political Sciences at the University of Hawaii, apparently thinks that it does.

Nicki: Who works on human rights and international relations.

Robb: And the funny thing, he has written several books. The latest is Freedom From Want: The Human Right to Adequate Food. Which, nothing speaks to-

Nicki: This piece is so appalling. It got shared in the Rebellion earlier this morning, and there was some conversation around that. It got shared to us from a handful of places on Signal. And then the link, this page now 404. So I think they must have gotten so much backlash, and-

Robb: So now you find it on web archive, like the Wayback Machine. And it is, again, I'm losing my mind. I forget it. It's not AstroTurf, but when you take something and it-

Nicki: Gaslighting?

Robb: Gaslighting. Yeah. It's like Gaslighting of the Vanities. It's, I don't even know where to start with this thing.

Nicki: Well, let's just start with his first two sentences. "We sometimes talk about hunger in the world as if it were a scourge that all of us want to see abolished, viewing it as comparable with the plague or AIDS. But, that naive view prevents us from coming to grips with what causes and sustains hunger. Hunger has great positive value to many people. Hungry people are the most productive people, especially where there is a need for manual labor." This whole thing is just so appalling, I can't even believe that it got published. And if you scroll to, let's, we'll share the last two paragraphs because this is again, it's just no wonder they pulled it.

Nicki: "The non-governmental organization, Free The Slaves, defines slaves as people who are not allowed to walk away from their jobs. It estimates that there are about 27 million slaves in the world, including those who are literally locked into workrooms and held as bonded laborers in south Asia. However, they do not include people who might be described as slaves to hunger. That is those who are free to walk away from their jobs, but have nothing better to go to. Maybe most people who work are slaves to hunger. For those of us at the high end of the social ladder, ending hunger globally would be a disaster. If there were no hunger in the world, who would plow the fields? Who would harvest our vegetables? Who would work in the rendering plants? Who would clean our toilets? We would have to produce our own food and clean our own toilets. No wonder people at the high end are not rushing to solve the hunger problem. For many of us, hunger is not a problem, but an asset." There are no words.

Robb: There is, like socialism and communism, and other words that go along with that, but it's the gaslighting that's occurring around things like hunger and eating bugs, and food shortages, and energy shortages, and rolling blackouts, the normalization of-

Nicki: And heart attacks from reading a high energy bill.

Robb: Right. I don't even know where to go with this. This one may be good enough to drag me back into my Sub-Stack though, to put a few pens to paper about this, but I just had to share it. And it's, we've had some really epic gaslighting in the last couple of years around COVID and different things. We have members of ostensibly, the ancestral health broader community that have made tons of money selling people dietary programs, and now they are too good for quote "diet culture." And this is all a ruse. And these people are pushing, healthy at any size-type narratives. Even though, there was just a brand new report today. A few years ago, maybe six years ago, it was estimated that fewer than 12% of Americans are "metabolically healthy." That report now has been adjusted to 7% of people. And the implications are-

Nicki: We lost 5% in two years.

Robb: Well, see, this is absolute versus relative risk. If we do a fucking relative risk deal, it dropped by more than 50%, which it did. And the implications for this stuff, of poor metabolic health leading to cancer, diabetes, Parkinson's, Alzheimer's, joint deterioration, curtailed health, astronomically increasing healthcare costs. And this shit-

Nicki: Sleeping, sleep problems.

Robb: Poorly, on and on and on. And we just continue to gaslight our way through this stuff. It is, in some ways I'm just impressed by the whole thing. It's really kind of magical in a way. And part of me kind of just can't wait for the next like, "What's the next chapter in this thing? How much more ridiculous can this get?" And, I would've never in a million years, predicted this degree of ridiculatude, and here we are. It ended up on the UN website, which just kind of further affirms my notion around the more centralized power and governance, and messaging that matters becomes, the more worthless it is. And this is, still goes back to my point of, or my only hope through any of this is some degree of decentralization. Some hope that local communities are able to navigate this idiocy. And we don't just have a complete implosion of Western liberal democracies, but it's incredible. This thing's definitely worth a read, certainly worth a share. And I'm going to be digging into this guy, George Kent, a bit more and just kind of see what he's all about.

Nicki: Well, the nice thing is that he has, he works also on environmental issues, with a special focus on nutrition and children.

Robb: Which he probably thinks that kids need to die so that there's not overpopulation. Even when I'm reading all this stuff, that population collapse is a real present danger. But man, anyway.

Nicki: Anyway. Moving on to our sponsor. The Healthy Rebellion Radio is sponsored by our salty AF electrolyte company LMNT. If you feel like you're dragging in the middle of the day, like I was right before jujitsu today, you might just need more sodium. Instead of reaching for the coffee, grab the LMNT, because it is by far the easiest and tastiest way to stay hydrated. Yes, I was.

Robb: You were sending out an SOS.

Nicki: I was sending out an SOS. I had my one LMNT and that was not sufficient, but I do feel better now because I have one right next to me. And it is, it's a real thing. It's a real thing.

Robb: No, we just make all this shit up.

Nicki: The middle of the day energy slump thing, potentially being low electrolytes. So make sure you stock up on yours. Grapefruit Salt is still around for a limited time. You can get it at drinklmnt.com/robb. That's drink drinklmnt.com/robb.

Robb: Perfect.

Nicki: Okay. Three questions for y'all this week. The first one is from Chris on glucometer testing and some puzzling results. "Hey, Robb, loved the audio book." Thanks. "I'm reaching out because I was inspired by your book and started experimenting with a glucometer, and I wanted to see how different carbs affect my blood sugar. I made some delicious whole wheat bread for the first time in my life and decided that was a perfect way to start my testing journey. However, the strange part is my blood sugar was actually lower two hours after eating the bread, 3.7 millimoles per liter, and then began creeping back up after. This is the opposite of what I expected. According to Google, what's happening might be reactive hypoglycemia, but I just wanted to know what you thought about this. According to the chapter in your book, it should be good news that my blood sugar is on the lower side after eating whole wheat bread, but something makes me feel this isn't right. Would love to know your thoughts."

Nicki: And then, I guess Swatchie kind of pinged him for a little bit more information and he responded with, "I checked at increased intervals and my blood sugar actually peaked at 35 minutes, and then was lower after an hour. And by two hours, I was back to my fasting level. I'm guessing the time doesn't matter as much as how high the peak was, because it reached borderline pre-diabetic levels after 35 minutes at 138 milligrams per deciliter. But since I was back to normal after two hours, like the book says, does this mean my body reacted favorably?"

Robb: Yeah, it's, this is a great question. And it sometimes makes me rue the day that I decided to open up the topic of blood glucose testing, because it's just so many variables and so many different situations. Folks like mentioning the Kraft patterns. If folks haven't dug into the Kraft pattern stuff, like Ivor Cummings and some other folks went really deep on that. And Kraft was this physician who'd kind of characterized, I think, four different blood glucose responses and kind of insulin stories. And it was basically this case, that

maybe three quarters of people have suboptimal insulin signaling, insulin response. And it's kind of interesting, if we go back to Barry Sears. Way, way back when he released his first book, Enter The Zone, he made the case that about 25% of people are pretty insulin sensitive naturally, and do pretty well on high carb diets. And, the rest of people really don't.

Robb: And, there's kind of a sorting mechanism around where you fit in that. There's again, kind of a bell curve and maybe you're closer to healthy than someone like me. But, there is kind of this reality that when people get these kind of super physiological blood glucose responses, and I would argue that anything getting much above maybe 120 milligrams per deciliter, it is probably going to lead to challenging problems later, mainly in the form of kind of rebound hypoglycemia and being hungry, and then needing to go back and eat something else. And, I would make the case that's probably the largest problem. I do think that there are some issues around advanced glycation in products, and caramelization of our proteins from excessive blood glucose levels. And a lot of the evidence-based people would absolutely scoff at this, because normal blood glucose response is routinely up in the 140s, 150s when people eat a regular meal, and then they go back to, "Normal blood glucose levels."

Robb: But like I mentioned at the beginning of the show, we have like 7% of the US population that appears to be metabolically healthy. And that's using the standards that, how do we define metabolic health.

Nicki: With Western medicine.

Robb: Yeah. Within Western populations, only 7% of people end up ticking that box. So, if you look at kind of a non-westernized population, which is a lot of what I'm using to bracket this stuff. Stephen Guinea did some work that in which pre-westernized people, hunter gatherers, horticulturalists, pastoralists were given oral glucose tolerance tests. And by and large, what you found, and these are generally people that are not really physically large. And so, the relative bolus of glucose that they're given is really quite enormous, because the average male body weight was 135 pounds, female body weight, proportionately smaller.

Robb: So, they're kind of little people. And they're given anywhere from 75 to a hundred grams of glucose as part of this oral glucose tolerance test. But still, they rarely got much above a 105, occasionally 110 in total magnitude. Then they tended to go back down to a pretty normal baseline. What I've noticed in kind of my hypothesis, or kind of takeaway with this, is that one way or another, whether you eat less of the carbohydrate, do a walk before, do a walk afterwards, eat it with protein, eat protein, veggies, and fat, and then eat the carbs. There's all these ways of mitigating blood glucose response. But if you figure out a way of getting the total magnitude of blood glucose response less, then we tend to have less of a rebound hypoglycemia, less of a tendency to go back and need to eat more food.

Robb: And so, carbohydrate amount matters, but it matters in my opinion, mainly because most people, other than people who are dying of hunger as per like George Kent's deal. But, if you get hungry, you're going to go seek out more food. And that hunger can be primarily driven by an overly aggressive peak in blood glucose, too much of an insulin response. That insulin response causes a rebound hypoglycemia. The brain hates big deltas and blood glucose levels. We talked about this, I believe the very last show where people who are in fasted ketogenic state, they can have an average blood glucose level that's remarkably low, and would be quite dangerous for somebody to be at that level. If they were normally eating carbs, they're a three meal a day type of person, 60%

carbohydrate diet and they got their average blood glucose down to the seventies, they might be unconscious. They might be in really significant problems, but somebody who is blood sugar adapted, keto adopted, fasted, that may be no issue whatsoever.

Robb: But the brain really dislikes the big delta, the big difference in blood glucose, and typically going from high to low, the brain really doesn't like that. And it will tend to cause us to eat more food. And so, this is the big concern that I would have, Chris. And, or is this Chris, or Chris was, follow us. Two Chrises. So, if you find yourself hungry after a meal like this, then that would be a challenging problem, whatever the amount of carbs that you ate. If you just ate half of that, that would probably be remarkably beneficial for proving your blood glucose response. Eating a big block of protein, some veggies, some fat, and then eating the carbs at the end, it's really well established that, that can help things. Doing a walk afterwards, a little bit of apple cider vinegar. Although, you have to be careful, so you don't dissolve your teeth while you're doing that, and on and on, and on. But, there's ways to mitigate that stuff.

Robb: So his final question was, "Does this mean that your body reacted favorably?" I don't know. Really, to some degree that is dependent on how you felt afterwards, particularly were-

Nicki: Were you foggy headed? Were you cranky?

Robb: Foggy headed, hungry, yeah.

Nicki: Were you hungry, irritable, all that stuff? Any GI distress.

Robb: And, if you had any of that stuff, assuming that there's just no gluten issue here, if we're just concerned about blood glucose response, then there's a ton of different things that you can do to mitigate the negative blood glucose response. Little bit smaller portion size, macro-nutrient timing, so you eat protein, veggies, fat, then the carbs. Take a walk before or afterwards. Afterwards seems to have an even more profound effect in reducing that postprandial blood glucose response. Lots of options there. And generally, whatever you end up doing clinically that improves the blood glucose response, is going to make it easier for you to eat in a way that is long-term sustainable and healthy.

Nicki: Cool. Okay. Our next question is from John, on face rashes when eating red meat. "Hey, Robb, big fan here. Love your work. So glad you exist in this world. I cannot figure out why red meat is giving me rashes on my face and eyes, but nowhere else. I'll cut to it. The two times I've eaten strict carnivore, 90% red meat, high quality, I get itchy burning rashes on my face, primarily around my eyes, about three weeks in. The skin gets very red and inflamed, but no oozing, cracking or bumps, and is very sensitive to heat. No major effect on my eyes or vision, other than some UV sensitivity on bright days. Excuse me. So far, I've tried steroid creams, tea tree oil, ketoconazole cream and shampoo, apple cider vinegar and ice packs. I even had an optometrist diagnosed blepharitis and give me an antibiotic gel, which had no effect. The ketoconazole shampoo used on my face was the only somewhat effective treatment."

Nicki: "Ultimately, if I cut my red meat back to only two to four servings per week, this almost completely goes away on its own. Even now, after being off carnivore for six weeks, if I have a steak for dinner, my eye orbits will be a bit warm and puffy the next day. Bison also triggers this. I continue to apply the keto shampoo once a week. I'm 41, 6 foot one, 190 pounds. Weights and cardio, sleeps pretty good, mostly paleo, but not many vegetables. Recent comprehensive blood's done, all good. No super crazy stress or anything obvious to point to. In addition, I feel fantastic on the carnivore diet minus the

rash. Also, I never had any noticeable reaction to red meat until the first time I did carnivore a few years ago. I contacted Dr. Baker about this on Instagram a while back, and he thought it might be a keto rash, but I've never had this rash when eating keto/high fat for several months at a time. Do you have any ideas?"

Robb: Man, the only idea I have is not really going to be that satisfying, but I think something is changing in the gut microbiota and that is likely leading to this situation. And, I think that this is another one of those examples where I know, folks like Rhonda Patrick are indirectly like big fans of keto. She didn't realize she was a big fan of keto because it seemed so counterintuitive, but everything that she was about, ultimately, this health and longevity, and telomeres and mTOR, and on and on, and on. It's like, "Wow." A well formulated, nutrient dense ketogenic diet would tick a lot of those boxes, but she had a lot of concerns around inadequate fiber to feed the gut microbiota. And I think that, we've talked about this before and other people like Sean Baker, talk about this.

Robb: Just at the clinical level, when somebody arrives at this scene and they're sick and they have gut issues, or skin issues or whatever. And then they go on keto or carnivore or whatever, and things improve, that's kind of where the rubber hits the road. But the flip side of that is probably true too. He doesn't mention how long he has kind of ground this out. And I don't know how long one would want to. The ketoconazole makes me think of some sort of, potentially like a fungal infection, that maybe there's some sort of a die off and there's kind of a toxic response to a fungal die off. Possibly something like the *Saccharomyces boulardii* could be helpful in that regard. We've recommended that since my first book back in 2009, 2010, as it's a form of beneficial yeast that when people are traveling in particular, I tend to recommend it, because it can displace the intestinal ecology that a lot of other nasty gut pathogens can occupy. And, so it can buy you a window of relative health and safety, while traveling and other people have benefit with it.

Robb: If this is a case in which say, some sort of a candidiasis overgrowth has occurred, this *S. boulardii* could potentially push that out and it could be beneficial. It's certainly concerning that now we get this serial response to red meat consumption. I'm really not sure what's going on with that, but it almost certainly has something to do with alterations in the gut microbiome. I'm guessing about like thrush or candidiasis and that being a driver. One other thought is that maybe, it's so interesting because there are these kind of two camps.

Robb: And, our next question is about omega-6 fats, but there are folks that are in the camp that we should be eating almost exclusively saturated fat, because it's this kind of metabolically neutral fat. It's very difficult to oxidize, and so you don't get oxidated stress. And man, we should just be really eating a ton of saturated fat and all will be good. And then there are other folks, including people like Barry Sears and whatnot, that suggest that a high saturated fat intake is actually pro-inflammatory. And, they've got these mechanisms for why it would be. Some of the mechanism is that saturated fats have a tendency to pull endotoxins from the gut into circulation, and that is absolutely pro-inflammatory. Although there are some compensatory mechanisms around that, but it's just kind of interesting that you just have these people at polar opposite extremes. And you seem to have people clinically that, they will report. "I went, a hundred percent, I quit eating bacon, so I'm not getting any PUFAs, and I don't eat chicken. And now it's just like beef and tall and bison and lamb, and the angels sing and all is magic."

Robb: And then you have other people that, that's the exact opposite is going on. They get these kind of funky health concerns that pop up around this. And, at the end of the day,

I do think that this is something that we just have to keep casting around and look for what we can do clinically, that provides the endpoints that we really want. And so, I don't know how helpful any of that is. I'm really guessing here. This might be a situation where a fairly comprehensive stool analysis could be helpful, particularly looking at fungal overgrowth and whatnot. That would just be somewhere that I would kind of look. It'd be interesting to know if he's had any type of fungal overgrowth in the past, like jock itch, toenail fungus, stuff like that. Has he had some sort of other systemic things there, but that's really a guess.

Nicki: Okay. Our third question this week is from Merritt on omega-6 fats. "Hey guys, love the podcast, been listening for over eight years. I am an RD and thought I had this topic pretty squared away until I came across this article." And it's a link to the Harvard Newsletter, the title being No Need To Avoid Healthy Omega-6 Fats. "Can you explain these findings or the studies they are sourcing? Is this just messing with the raw data and making a conclusion that isn't there?"

Robb: Merritt, I'm in the same camp as you, where I feel like I've understood this stuff at various points. And then, I just get more and more confused. And I don't know if this is an individual level story. Backing up with this, the Harvard piece is kind of interesting where they mention more PUFAs, specifically, basically vegetable oil consumption is supposed to be this boon, because it lowers LDL cholesterol and raises HDL cholesterol, which that's actually kind of not true. It tends not to raise HDL cholesterol. Interestingly, saturated fats do increase HDL cholesterol, which is one of these ironic things. If folks remember there was a study that I cited in Wired To Eat, and I've mentioned it elsewhere, where there was a really remarkably robust study that was at the tail end of Ansel Key's career, where they were tracking institutionalized people in psychiatric wards.

Robb: So, they're basically, locked in a medical hospital. And these folks were fed either saturated fat, reduced omega, basically poly unsaturated fat enriched diets, versus standard saturated fat diets. The people with the higher PUFA intake had lower cholesterol levels, but their all cause mortality was worse than the other group. It was actually more cardiovascular disease. And so, this is one of these really kind of weird and interesting things. Some of the claim is that the excess intake of omega-6s leads to a pro-inflammatory state. And, it is interesting, like the Harvard piece rightfully points out, that it's ambiguous. When we look at people who are being fed these omega-6 enriched diets, if we're tracking things like C-reactive protein and some of these other more durable markers of systemic inflammation, what's the one in the LPIR score? Not ACE. Oh, gosh, I'm blanking on it right now, but-

Nicki: You can't think of it?

Robb: Yeah. But, sometimes it goes up and sometimes it goes down. Sometimes it looks like this omega-3 or omega-6 intake, this plant derived, polyunsaturated fats, isn't crystal clear one way or the other, whether it's pro or anti-inflammatory. And then we have this really perplexing, just epidemiological level stuff that like nut intake, it's really strongly associated with beneficial health outcomes, like remarkably strongly associated. It's kind of funny within carnivore, keto, paleo land, everybody seems to have nut issues at this point. I don't know if they, we have over consumed that. And so, we kind of like burned ourselves out on it or what, but that's been this thing that's really perplexing to me on this story, because there is a really strong signal of health there, but it's also possibly very, very different to eat a handful of pecans versus drinking corn oil, or putting corn oil on salad. Maybe those-

Nicki: Or, drinking almond milk every morning.

Robb: Right. But although the almond milk really isn't a significant fat source. I do remember ages ago, and I just can't find the citations that Matt pinged me about this. But I mean, this was around 2007, 2008, I want to say. Was a long time ago, but he made the case that the main issue around this whole story is related to, if people are inadequately supplied in EPA DHA, then the amount of omega-6 fats become more significant. So, basically if you are consuming, or have adequate EPA DHA, like maybe you don't eat that much animal source stuff, but the polymorphisms that you have in your genetics are such that you convert the short chain omega-3s into the elongated mega-3s, and you do it really well. And, that metabolic pathway is topped off. Maybe that means something different than having an underly-fueled, omega-3, long chain pathway. That's another piece to this.

Robb: Dr. Brian Curley, who's a friend of mine and people might know him as the seed oil disrespector online. They've been going crazy on this stuff. And, really, just remarkable stories of people, not even going paleo, not even going keto, but they just really fastidiously remove all seed oil sources out of their diet. And, people were reporting these really remarkable improvements. And, and I got to say, it's counterintuitive to me. Again, when we think about nut and seed consumption and then, just other kind of extenuating circumstances. So, Merritt, again, I pretty much batted zero on all the questions today. I had nothing particularly definitive with all this stuff. I don't know what the real deal is here. It's counterintuitive. It's perplexing. I wouldn't be surprised if there's some non-trivial, individual variation around this whole story. I don't know. Do you have any thoughts, wife?

Nicki: I no do.

Robb: Perfect.

Nicki: I no do. Anything else, hubs?

Robb: I don't think so. Not today.

Nicki: Okay. Hope y'all are enjoying your summer. It's finally nice here. Feels like summer here in Northwestern Montana. Enjoy your weekend and we'll catch you next week.

Robb: Take care everybody.

Nicki: All right.

Robb: Bye.