

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. Welcome 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.

Robb: Welcome to the Healthy Rebellion Radio. I am here with my amazing wife. Wife, how are you?

Nicki: I am well, thanks hubs.

Robb: You are better.

Nicki: I am better.

Robb: You had a bit of a gut bug yesterday.

Nicki: I did.

Robb: It was kind of epic.

Nicki: It took me down. It took me down, yeah.

Robb: Yeah. Nicki is pretty tough. She's hard to kill. When she goes down, it's like a low yield nuclear device has been dropped on something. So, yeah. It was pretty spectacular, but you're on the mend.

Nicki: I am indeed back in the saddle, as they say.

Robb: Cool, cool. Well, a different saddle. You were riding the porcelain saddle there.

Nicki: Yeah, not that one.

Robb: Yeah. Okay, we just hit TMI and we're not even 20 seconds into recording this thing. So, what do you got for us? What's shaking?

Nicki: Oh, I don't know. What's your news topic for this week's episode?

Robb: You know, I was poking around. I'm not entirely sure how I got onto this thing, and we will link this in the show notes clearly, but the title of the paper is 10 Patients, 10 Years - Longterm Follow-Up of Cardiovascular Risk Factors in Glut1 Deficiency Treated with Ketogenic Diet Therapies: A Prospective Multicenter Case Series. Holy smokes. Longest-

Nicki: That's a mouth full.

Robb: It is a mouth full, and so the evidence based people out there will immediately hear, "10 patients. The sample size is too small." It's like "Oh, go fuck yourself." Let's get in and look at this a little bit more closely. What this was is the GLUT1 deficiency is really interesting in that it forces one's hand to be ketogenic. You will tend to suffer severe

epileptic seizures, probably die, if you don't use some form of a ketogenic diet. So, this is a nonnegotiable feature with people that are diagnosed with GLUT1 deficiency. So early, maybe 20 years ago, there was some thought that there were some carotid intimal-media thickening that occurs in folks. So basically, there could be the potential that there was worsening cardiovascular disease process. Is it a scenario in which these people are surviving the epilepsy only to succumb to cardiovascular disease later, and then could there be some mitigating strategies around that?

Robb: They looked at these folks and they track them at time point 0, at two years, at five years, and at 10 years. They looked at a host of different biomarkers, BMI, they didn't look at lipoproteins because this really wasn't on folks' radar. They were doing standard lipid panels and whatnot, and what's interesting is the folks that went into this study that they tracked, at year two there was a modest increase in BMI. So, it looks like people gained some weight. At year five, that was back to normal, and then at year 10 they were actually improved in BMI relative to the control group that they were looking at.

Robb: What's interesting on the cardiovascular disease front is that blood pressure, coronary calcium scan, CIMT, all those things were as good, if not better, than what they were in the control group. So, the takeaway was essentially that in this group of people, folks with GLUT1 deficiency, ketogenic diet over 10 years did not seem to correlate with increased atherogenic potential, increased cardiovascular disease risk. So, it's really interesting in that it is a small number, but it's a group of people that we know for sure eat a ketogenic diet over this period of time.

Nicki: Mm-hmm (affirmative), they weren't cheating.

Robb: They were not cheating, and they were eating a ketogenic diet. One of these three to one, four to one ratios where it's low protein, high fat, because this is a group of people that the ketone levels do matter. This isn't trying to affect body composition-

Nicki: Body composition.

Robb: And get into skinny jeans and all that stuff. So, you could maybe make the case that if there was going to be an atherogenic potential here, that you would see this. Now, an interesting side note to this is, is it possible that people with a GLUT1 deficiency have a disproportionate protection against cardiovascular disease from ketogenic diet? We don't know that, and there's a bunch of other questions that I was noodling on that you could throw at this thing. So, this is by no means something that we just nail on the wall and it's like, "Okay. This story is done." Clearly different folks have different responses to ketogenic diet. Some people see a marked increase in lipoprotein number and cholesterol.

Robb: Is that a net win, is it a net hazard? Most people in the lipidology community would say that it increases hazard. I'm not entirely sure. I tend to kind of lean that way. It would sure be nice if everybody just had wonderful looking lipoproteins and cholesterol levels on a ketogenic diet because we're controlling blood glucose levels and we appear to be down regulating the inflammasome, and all kinds of other stuff that's cool, but it doesn't always work out that way. So anyway, we'll put this one in the show notes. Definitely worth discussing. I will probably break this one down in the lab as part of the Healthy Rebellion, because there's a lot of cool stuff to unpack in this thing that I want to do a deeper, more thorough treatment than just right now.

Nicki: Awesome. All right-y. Shall we announce our T-shirt winner this week?

Robb: Heck yeah.

Nicki: All right. Our review T-shirt winner is Shane_G. He says, "Genius. Love the new format, particularly the live call in," which Shane, today's show is a live call in. So, yay. He says, "It makes for interesting listing because inevitably we all have some of the same questions. Been following the Paleo Solution Podcast since very early on, and the new format is pure gold. Your work has gotten me into jujitsu also. You guys feel like extended family. Love it. Keep it up."

Robb: Awesome.

Nicki: Thanks, Shane. If you are listening to this, thank you for your review and send us an email to Hello@RobbWolf.com with your shipping address and your T-shirt size, and we'll send you one of our Healthy Rebellion Radio T-shirts.

Robb: Then once you get that, ship us a photo of you wearing it so we can just pimp you out and show how awesome the T-shirt is, and you are.

Nicki: And this episode of The Healthy Rebellion Radio is sponsored by Kettle and Fire. Kettle and Fire makes the most incredible and nourishing non-frozen organic bone broth. Their bone broth is made from grass-fed and finished beef bones, and organic pasture raised chicken bones. Kettle and Fire bone broth is one great way of boosting the collagen in your diet. And Robb, we just talked about the benefits of collagen in an earlier Q&A episode.

Robb: Yeah, you know we've dug into this a little bit. There's definitely some great benefit to balancing the methionine glycine ratio from a diet that maybe is a little bit heavy in just standard muscle meat, and not getting enough offal and organs, which all of us should eat more of, but we tend not to. And so, bone broth is a great option for that. And also there was another study done recently where folks were exposed to UV light and had taken a dose of collagen. I forget if it was before or after. But essentially it mitigated skin damage when they supplemented with a collagen source.

Nicki: And the great thing about Kettle and Fire is they have so many delicious sippable flavors. Mushroom chicken is one of our favorites. Our girls actually love the mushroom chicken as well.

Robb: That's a pretty good litmus test. Whenever the kids are actually like "hey, can I have this" and they just tumbled out of bed first thing in the morning, and they're actually asking for that, which they do with the Kettle and Fire broth. So that's definitely awesome for us.

Nicki: So go to KettleandFire.com/HealthyRebellion and use code HealthyRebellion for 15% off your order.

Robb: There you have it.

Nicki: Robb, we have live callers today. Are you ready for this?

Robb: We haven't had any dead callers, so that's good. Yeah, and I think we've got a little bit of a better system figured out. We super appreciate the depth that we're able to go into on

some of these, but the last call we had folks that were on the line for a long time, and we lost a few folks. So, we're going to try to march through this thing at a little bit quicker cadence, do the diligence that we want to do but also shuffle people through at a little bit faster rate. You guys let us know if we improve on that with this show.

Nicki: All right. Let's get to it.

Robb: Cool. Caller from 360, are you there?

Gavin: Hey, guys.

Robb: Hey.

Nicki: Hey.

Robb: You made it.

Nicki: Tell us your-

Robb: Welcome to Healthy Rebellion.

Gavin: Yeah, guys. My name is Gavin. I am a third tier med student from Colorado, and as such from being in Colorado, I've been in a lot of civil debates with vegan so-called health experts. Some being vegan doctors, and I just wanted to know. What's your guys' take? Could you give me maybe three pieces of evidence that I could use in that argument when talking to these vegan doctors?

Robb: Oh, man. You know, it's interesting. These folks really hinge a lot of their perspective on the Loma Linda studies that have been done within Seventh Day Adventists in the United States, and one of the juiciest things to look at is the life expectancy of Seventh Day Adventists outside of the United States. When you look at that, they don't live any longer when you look in places like France and Germany where people generally live better, healthier lives across the board. So, one of the holes that you can blow in the superiority of vegan vegetarianism is looking outside of the United States for some of that epidemiological type process. Another really interesting one is to look at life expectancy and meat consumption in Hong Kong, of all places. It is the highest per capita meat consumption on the planet, and they have an extraordinarily long lived population. They're westernized and developed and all that type of stuff, but if the case that is often made that there's this linear relationship between decreased lifespan or increased morbidity, mortality, in meat consumption then we should see it in spades in that scenario.

Robb: Then I always like to default back to the ancestral health model. I don't know how compelling that is for many people, but when we look at the population on the planet that has the lowest rate of identifiable cardiovascular disease, it's the Tsimane. I think I'm pronouncing it correctly, T-S-A-M-I-N-E. It's a South American hunter gatherer tribe. They eat a mixed diet. They're by no means carnivores, but they eat a significant amount of meat and fish, and they have by a mile the lowest detectable cardiovascular disease of anybody that's been studied on the planet. So the Loma Linda, look outside of the United States. Look at the longevity and also the meat consumption in Hong Kong, and then look at the Tsimane from I believe it's Bolivia is where they're located.

Gavin: Sure. Thank you. I think a lot of it, it sounds like it's getting back to the healthy user bias that they point to with epidemiologic studies. Correct?

Robb: Yeah. You know, there was a great breakdown on that where they looked at folks that were meat eaters and non-meat eaters, but they surveyed people out of health food stores. Suddenly meat eaters actually lived longer than non-meat eaters when you considered people that regularly shopped at health food stores. So yeah, that healthy user bias is really hard to decouple and the folks that use epidemiology as a religion, they will swear up and down that they can adjust perfectly for smoking and all these other risk factors. It's really disingenuous for what these observational studies are able to do. If you have something that has an effect as powerful as, say, smoking then we can get really close to establishing causation just with that correlation, but these nutritional elements to the degree that one thing is related to different morbidity, mortality, different pathology. The power or the effect is so small that we're just not going to suss that out, particularly when there's more noise in the system than signal. Like these food frequency questionnaires. They've been incredibly critiqued, I guess, from people like Doctor Ioannidis who wrote a piece that basically suggested these things should be done away with. So yeah, the healthy user bias is definitely a big deal.

Gavin: Right, and I try and point it out that these observational studies are low in their quality. They argue that randomized control trials in the field of nutrition is next to impossible. So, they are just hanging their hat on these epidemiologic studies, which is flawed in and of itself it sounds like.

Robb: Absolutely, and we do have some interesting natural experiments like westernized Australian aborigine who developed westernized diseases, and then they've been brought back into a more traditional hunter gatherer life way and they reversed this diseases. So, we do have some other support material here but it really becomes a deal where it's just the great wall of veganism. The likelihood of being able to breach it is small, but I think that those things that we've talked about are really credible places to at least begin a conversation around it.

Gavin: Sure. Well, thanks Robb. I'm going to be giving a public nutrition talk next week, so I'm sure I'm going to be getting some of these questions. This is super helpful, and thank you for your time.

Nicki: Awesome.

Robb: Awesome, man. Keep us posted on how that goes.

Nicki: Have a good day.

Gavin: Sounds good, thank you. Thanks.

Robb: Bye-bye.

Nicki: All right. Our next caller from the area code 256, come on the line and tell us your name and where you're calling from, and your question.

Daniel: Hi. My name is Daniel from Huntsville, Alabama.

Nicki: Hi, Daniel.

Robb: Hey, Daniel. Hi.

Daniel: So, my question is about food quality. I don't think anybody would argue that everything else being the same, the higher quality foods you eat, the better. So, local fruits and vegetables, organic pasture raised meat and eggs, because they do have higher nutrients. However, the issue is everything else is not the same. Especially from a cause perspective. So my question is, for the person of average income is there any hard evidence for noticeable health benefits from eating local, organic, pasture raised, et cetera food that would justify the noticeable increase in costs?

Robb: Oh, man. Man, this is a really thorny topic. I wish I could be like, "Caller, you're breaking up." This is a really thorny topic because some of the greatest advocates for say ancestral eating are these small mom and pop farms that do absolutely amazing work. They live right at the margin. They barely are able to be profitable because they're competing in a very unfair system in which the big mega corporations are basically government subsidized. So, there's not remotely a level playing field there. That said, when we look at just animal products in general and fruits and vegetables in general, roots, shoots, and tubers, it's really nutrient dense. Now, you can make arguments that it's not as good as what it was in the early 1900s and all kinds of things like that, and that's all well and good but the reality is, what can we reasonably go get our hands on today?

Robb: There's just a reality that even if you are eating conventional meat, and conventional fruits and vegetables, and conventional sweet potatoes, you're doing way, way better than what you would do eating bagels. This is always my example. I think in my first book I had the hippie excuse for failure number one was, "I can't find grass fed, so I'll eat a bagel." Hippie excuse for failure number two was, "I can't find organic vegetables, so I'll eat a bagel." More directly to your question, I don't think that in general there is a super compelling reason for folks, students, or large families, or just folks that are living right at the margin. Emulate that kind of ancestral diet as best as you can, but make it work for your budget and we'll keep our fingers cross that things improve, and then maybe down the road we can start putting some thought towards supporting local, decentralized entrepreneurship and some of the sustainability issues.

Robb: This is one of those cases where I think folks are just going to be far healthier eating a nutrient dense, whole food diet that looks something kind of paleo-esque. That's going to be good enough unless there are situations where, like a good friend of mine Karen Pendergrass, she had some really wacky gut issues and she reacted very negatively to any type of grain finished meat. Then she had a fecal transplant, and now she can eat tin cans. So, she's very strong and robust in that regard but it doesn't always work out that way.

Robb: If there's a compelling health concern, then maybe we need to figure out how to allocate resources to get those organic or 100% grass finished and whatnot, but beyond that. This pains me because the folks doing this good work, we do to the best of our ability need to support them, but at the same time there's being honest and reasonable about this stuff. This is one of the main areas that the vegan agenda is going after, things like school lunches and stuff like that. Trying to remove any and all animal products from government subsidized food systems, which is really crazy. So, I'm not sure if I fully answered you. Does that help a little bit on buttoning that up?

Daniel: Yeah. I think that was a very honest answer, so I appreciate it.

Nicki: One thing too to consider is frequently you might have neighbors or people in your community or town who have big gardens, and they have a ton of produce that sometimes they're looking to give it away because they might not be an actual farmer who is selling this stuff at farmer's markets, or taking it to market, but they might be willing to trade or do some sort of exchange. I know in Reno they have a whole group of Gleaners because there's so many fruit trees where the fruit just falls and it goes to waste, but they have groups of people that go around and gather it. Then they take it to whether it's food banks, or there's so much product I think that often goes to waste that could be found and utilized if we look for it in the right spots.

Robb: When Nicki and I were just getting the gym going, we lived pretty tight, but one thing that we did was invest \$100, \$110 bucks into a medium sized chest freezer. Not a really big one. It was kind of small-ish, but then we went in on meat shares with other folks, so we would end up getting really good quality meat, but it would end up being \$4 dollars a pound because we were buying a half of a cow at a time and stuff like that. So, there are some ways to get creative but I definitely wouldn't make perfection the enemy of good enough in this case, for sure.

Daniel: Agreed, yep.

Nicki: Awesome, Daniel.

Robb: Awesome, man.

Nicki: Thank you so much for your call.

Robb: Take care, bye-bye.

Nicki: Take care.

Daniel: Thank you.

Nicki: So, our next caller is from area code 785. 785, welcome to the Healthy Rebellion Radio.

Ben: Yeah, this is Ben. I'm in Louisville, Kentucky right now.

Robb: Nice.

Nicki: Okay.

Ben: Yeah. My question though revolves kind of around metabolism rather than nutrition specifically. I've just been kind of pondering this since starting the reset through Healthy Rebellion. Just thinking about things. So, I was a very active athlete through developing years. All sports, all seasons, but swimming was one of them. So, I was training. Excuse me, that's my daughter.

Robb: We have a couple of those.

Ben: I was training multiple times a day. Yeah, she wants to be heard too, but I was training multiple times a day since I was I'll say 11 years old up through college, so up until 22, 23 years old. I know a little bit about epigenetics and things like that, but I don't know enough to really be able to answer this myself. What kind of long term effects would

that have, or if any, in terms of setting a barometer? So, if my body for 11 years through puberty was used to a certain activity level, does that have long term effects on just general metabolism?

Robb: That's a really good question. I'm thinking back to the research I've looked at on that. It's interesting. So, if you have folks that have generally not been active but they get after it in their 30, 40s, 50s and beyond, there's this window of opportunity where they can really turn things around and they can be quite healthy and do really well. It's as if they were more or less active their whole life. One of the hazards of being exceptionally active in more of our youth is that we can burn some stuff out like joints, and ligaments, and orthopedic issues. To say nothing of just psychologically like our good friend Eva Twardokens was a world champion skier and multiple time olympian, and she still skis but she got really burned out on it. It was a meat grinder of a schedule that she was on, but beyond that I think generally up to certain limits the more active we are, generally the better that things are for us, and I would say it acts a little bit like a capacitor. Like you're storing a little bit of charge, a little bit of inertia there.

Robb: It has been established that if you reach a certain level of fitness or even just muscle gain and then you become de-conditioned, that it's comparatively easier to get back to those places you've been before than to get there the first time. So, that speaks to me of some sort of potential genetic and epigenetic memory. Does that zero in a little bit more on what you're looking for?

Ben: Yeah, it does. A follow up to that is, again, as I'm going through the Rebellion, the reset and things like that, trying to dial back in my perception of hunger, it's a little interesting to me because I'm about 240 to 250 depending. It's the winter months, so I'm probably a little bit closer to 250 now, but I'm a relatively big guy but I'm finding as I start to pay a little bit more attention I'm just not hungry. So if I were to do the math on the calories, it seems like I'm coming in way under, so that got me thinking. Is this because I was used to such a high level of activity that now, I'm a faculty member at a university, so I'm relatively desk bound during the day and I still train two to five times a week depending on what's going on and things like that. I'm nowhere near as active as I once was, and so I just didn't know if that was residual from that. My body was used to for such a long time a certain level, or if that's more the psychological side of things.

Robb: You know, I think that there could be two pieces to this. One is that in our youth, we can typically get away with eating more really than what we need. Our body just upregulates thermogenesis. We get fidgety, we move around, all the non-exercise thermogenesis type stuff. So, I think we're generally more active. We have some of the benefits of a really youthful hormonal profile, so we can really end up putting away a lot of food. Then as we get older we do become less active typically, a little bit more sedentary, but the spread there between the way that we used to eat and the way that we eat now, it's not so much in my opinion a reflection of damage to our metabolism or some sort of downregulation, but we just become more attuned to what we actually do need.

Robb: I've talked with Luis Villasenor about this a lot, and we've just kind of noticed that when people shift into eating more of a mainly unprocessed, whole food type diet and they get adequate protein, you don't need a mountain of food usually to keep you going. Unless there really is significant activity, you're like Zach Bitter and you're doing these 100 mile foot races and stuff like that. It's a different discussion, but I think that that spread between our youth and between say middle age, it isn't so much just

downregulation of the metabolism, but just becoming a little bit more aware of we don't really need massive amounts of calories to keep us motoring along.

Ben: Awesome. Yeah, no. That helps clear things up a bit. Yeah, I guess I'm just not as hungry as I once was, which relating to the last caller happens to be a little bit easier on the pocket book.

Robb: Yeah, absolutely. Some people find that if they just tweak the glycemic load in a favorable way, they're just not as hungry. Not everybody responds that same way to lower carb intake, but a lot of people do, and that difference between physiological hunger versus hormonal hunger, the hormonal being on the down swipe of a big carb rebound, that that's manic hunger. You feel like you're going to die because you kind of are. Your brain isn't going to be real happy with that hypoglycemic state. So, shifting the fuel metabolism around a little bit dramatically alters hunger and I think also this is part of the reason why although low carb diets don't work for everybody, they work for a lot of people, and it's the only thing that ever did work for them.

Nicki: Ben, thank you so much for calling and thanks for your question.

Robb: Hey, take care. Bye-bye.

Nicki: All right, take care. We've got a caller from area code 818. You're on the Healthy Rebellion Radio. Can you tell us your name, where you're calling from, and your question?

Manny: Sure. My name is Manny. I'm calling from LA, and my question is around sleep for parents. My wife and I are actually about to have our second daughter.

Robb: Congrats.

Manny: In the three plus years, thank you. In the three plus years since we've had our first daughter, we both really started to learn more about how really impactful the quality of our sleep is on our health. So, we're obviously getting ready to have our sleep disrupted and there's no way around that, but you guys have two daughters. I'm just wondering if there's any best practices that you implemented when your kids were newborns to at least mitigate those negative effects of that inevitable disrupted sleep, or is it just accept that things are going to be wonky and just don't stress about it?

Nicki: Well, first.

Robb: I was a coward and I just downstairs and abandoned Nicki on the second kid.

Nicki: With the second kid, Robb knew what was coming and he literally did sleep in the other bedroom for the first two months while, yeah. You know what? It was sort of-

Manny: I've been told that that's not an option.

Nicki: Well, I actually was a little bit okay with it because we needed somebody who was functional for the older daughter. So, that allowed me to be the zombie during the night, but also during the day too. So, he handled the cooking, the cleaning, everything with Zoe in the first two months, because Sagan nursed really well right off the bat but she was up frequently. Zoe was a different story. She was really, really tough and both of us were up for three months straight. It was really, really hard.

Robb: I was, yeah. I was completely unraveled.

Nicki: So, I think Robb had some PTSD from that one, and that's what led to the second. Yeah, it's never easy, and I think just the things that you can do now to make it easier on both of you is try to prep as much stuff as you can. Try to get people who can be there to help you with all of the standard stuff like food, cleaning, help with your older child so that you can rest when you need to rest and you don't have these other domestic things that you have to take care of. So, getting as much support if that's possible from the people around you. Taking naps when you can, going on walks, getting sunlight in your eyes in the morning. It's easy with a new baby to be indoors all the time because you're just in this whirlwind of this phase of life that's just crazy, but get out in the morning, get sunlight on your body. Try to stick to a schedule to the degree that it's possible. It's not always. Robb, what do you think?

Robb: No, you're killing it. I assume you've probably done this, but in the areas where you're going to be sleeping, the blackout curtains, all the sleep hygiene tweaks and fiddles but Nicki made a great point, which is both for you and the baby, getting outside even if you're smoked. If you can get out in the morning, get some sunlight on your skin, get it in your eyes, it helps start to set up a normal circadian rhythm. Then in the evenings if you have dimmer switches installed, which they are amazing, then hit that. If you don't have that, maybe candles although if you're sleep deprived enough and you have an open flame in the house, maybe that's not a good idea.

Nicki: Well Robb bought me, we had a little red colored light bulb that I had in the lamp in our bedroom so when I got up to nurse in the middle of the night, I wasn't turning on a bunch of lights. That helps for the newborn too. So when it's nighttime, trying to keep it dark to the degree that you can.

Robb: This was just a cheap Walmart desk lamp that then I just got a red colored light bulb and plugged it in there. It was enough light for Nicki to get done what she needed to do, but it didn't super wake her up. It didn't really wake the kid up, and we only did that with Sagan.

Nicki: With Sagan, yeah.

Robb: That was not on our radar with Zoe, yeah. Yeah.

Nicki: Yeah, so that can help too. When is number two due?

Manny: Literally we're expecting within the next three to four days. So kind of getting in under the wire here.

Nicki: Oh Wow, okay. Yeah, yeah.

Manny: I wanted to ask really quick. You mentioned having the baby outside in the morning, and I don't know to be honest anything about sunlight exposure for newborns like that, or whether that's safe or not. I assume since you guys recommending it, it is at least relatively safe, but any issue that I should be on the lookout for there? Obviously I wouldn't want to lather her in sunblock or anything when we go outside in the mornings, but just any thoughts around exposing kids to sunlight early in the morning like that. Just some of the benefits there.

Robb: Yeah, yeah. I mean, if the kid is jaundiced at all then they will either provide a UV lamp or they'll encourage you to get outside because the UV exposure going through the skin helps to convert the bilirubin, so it can help with jaundice. I wouldn't take him out there with the intent of getting a tan on them, but-

Nicki: No. If you go on a walk and you have her bundled up in appropriate for whatever the weather is and in a stroller or even if you're wearing, I'm totally blanking, the carrier.

Robb: Yeah, yeah.

Nicki: What was the name of that thing we used?

Manny: Yeah. The Babybjorn thing.

Nicki: Anyway, you know. Yeah, the Babybjorn. So, they're not fully exposed but there is some light that is hitting the eye. You're not just laying them out there to get a tan like Robb said.

Robb: We did with both kids if the weather was amenable, we would get some direct sunlight on their skin in five minutes, 10 minutes, something like that. Again, did you say you're calling in from LA/

Nicki: Los Angeles.

Robb: Los Angeles, yeah.

Manny: Yeah, Los Angeles.

Robb: You'll have this time of year a modest amount of UV exposure. So, yeah. I could only see good things come from that, yeah.

Nicki: Just for both you and your wife, being able to fresh air, outdoors, it makes you feel human again because as you probably remember from your first child, it's like you go into a vortex. Everything changes.

Robb: I'll tell you one thing to not do, is to bake massive amounts of almond meal-

Nicki: Flour banana bread.

Robb: Banana bread and stick whole sticks of butter on it, because you'll get fat. We got really fat doing that. So, don't do that. Whatever else you do.

Manny: Roger that, and thank you both so much.

Nicki: You're welcome, Manny.

Robb: Thank you for calling in and good luck. Keep us posted. Circle back either in the Healthy Rebellion or-

Nicki: Our next live call.

Robb: Do a follow up call in, and let us know how everything is going.

Manny: Absolutely, will do. Appreciate it, guys.

Robb: All right, take care.

Nicki: All right, take care.

Robb: Bye-bye.

Nicki: Looks like we have a caller.

Robb: We have a caller.

Nicki: From area code 857. Hello, welcome to the Healthy Rebellion Radio. Can you tell us your name, and where you're calling from, and your question?

Dan: Sure. Dan from Boston.

Nicki: Hi, Dan.

Dan: Love the show. Just a quick question for you. I watch a lot of Netflix and it seems like every week a new type of health documentary comes out, and they contradict each other, and you just think there's so much information, let alone reading on the internet. How do you know besides listening to you guys what's all crap and what isn't?

Robb: Man, I would love to just say, "Well, just listen to me and you can never go wrong." Man, you know what's funny? Questions like that are oftentimes harder to answer than, "Robb, can you tell me what the reduction pathway is with methycobalamin?" Those things are really concrete and well established. This is, again and it's really-

Nicki: I'll interject.

Robb: Yeah, yeah. Please.

Nicki: One thing that's always a good idea to do is to look, and oftentimes when these types of shows come out there's lots of people from the opposite camp that will do a review, but one of the main things to look at is who is funding this? Who stands to gain from this message being out there? That will shed light on it in a way that you can ask, "Is this really an objective piece, or do these people stand to make," for example, the Game Changers movie that has just come out. Lots of people are going vegetarian or vegan just because of watching that movie, but then when you read some of the reviews of it, it's very, very clear that the producers and the people involved are tied to some of the biggest pea protein manufacturing plants in existence. So, not only is there gain to be made from the film itself but then there's also these products. They're deeply invested into products that people will consume if more people go vegan. That's one thing to look at.

Robb: Yeah, yeah. For sure.

Dan: Yeah. It's like when Phillip Morris used to say, "Oh, nicotine is not bad for you. It's not addictive. Don't worry, keep buying it."

Nicki: Right, right. He stood to gain massively from that.

Dan: Okay. I actually have a second question too if you guys have time.

Nicki: Absolutely.

Robb: Absolutely, yeah.

Dan: Yeah. So, let's say it's Friday night. You know you're going out for some beers with friends, and you know you're going to be eating a lot of pizza and just basically going and eating Chinese food late night. You're really just going to go off your diet. What's your suggestion for the next day? I've heard maybe just fast the whole next day until 2:00 in the afternoon. Just drink a lot of water the next day. You know you're going to go to the gym. You're going to get back on track, but any tips for the next day after eating a ton or drinking a lot? Maybe not even drinking a lot, you just had a ton of pizza and Chinese food.

Robb: Oh, man. I would normally do a shameless plug for some LMNT, but if you're doing a bunch of pizza and Chinese food, you might actually be okay on your sodium intake there, so. I mean, it's funny. When I was power lifting and we knew that we were going to go kill a whole large pizza individually, we did a pretty frisky strength training session and a little extra volume, a little extra intensity.

Nicki: Beforehand though. You do this before.

Robb: Beforehand. You can stack the deck both ways. Doing some exercise or some training before, and then even in your drunk munchy phase, if you can take a walk during that time, that really mitigates things a lot. It's remarkable how beneficial a 10 or 15 minute walk is for reducing blood glucose levels and pushing those nutrients in the places that we want, and avoiding them from going just around our midsection. To your point, the next day, yeah. Get up, get a really stout cup of coffee, and again try to get a workout in. Go for a walk.

Nicki: Outside. Get some sun on your body.

Robb: Get outside. Get the sun.

Nicki: Light in your eyes.

Robb: Yeah, alcohol in particular decreases a lot of the energetic substrates within the Krebs cycle, and so that's part of the reason why you feel super sluggish the next day. So, getting in and just goosing that, it's a good reset and it also makes you realize, "Oh. I don't know that I'm going to go do a bender again any time soon."

Nicki: Then just get back on track. So many people will end up going out with friends and kicking their heels up and maybe indulging more than they otherwise planned. Then that becomes an excuse for, "Oh, I just can't do it. I'm just off." Then they eat Chinese food every day in a row for whatever. So if you do that, okay. It's done. Get right back on track. How can I eat clean today? Here's my hunk of protein, these are the veggies I'm going to eat. I'm going to do the things that Robb said like go out for a walk. I'm going to be outside, be outdoors, but get right back on track with whatever dietary approach you're trying to stick to.

Dan: Got you. Okay, great. So obviously you know that I might be having some beers and pizza tonight. But definitely, I will go to the gym tomorrow. Don't take an Uber home

one mile. Walk the mile from the bar, so one thing I see people at the gym doing and I'm even guilty of this, you're kind of tired. You've got to go to the gym on Saturday morning, and you have a coffee but let's say it's just not enough. Like, "Ugh, I don't want to go to the gym at all. I dread going on the treadmill," or whatever I'm going to do. Is there a pre-workout type supplement? The easiest thing to do would be to drink a Five Hour Energy or a Red Bull. Is there something from GNC that gives you that caffeine big boost that's actually not that bad for you? Before a workout.

Robb: Yeah, before a workout? When I look at the pharmacology and the epidemiology around coffee and tea, I'm just continually amazed. It's just amazing stuff, and I think that we're really hard pressed to find much better than that to be completely honest. It may be a deal where you just got to pack the coffee grounds extra tight. Instead of putting eight cups of water in it, you put four, and you've got some black tar sludge that you're throwing down. I've got to be honest. When I look at what folks get out of just coffee, black tea, green tea, whatever you want to do from that genre with regards to ergogenics, improving performance. Not just physical but cognitive and immune stimulation and all that, I'm just super impressed with that. I'm very, what's the shrug emoji? I'm like, "Eh," with the energy drinks and stuff like that. I'm kind of like, "I don't know." We do know that putting too many things like B vitamins, different types of antioxidants into a pre-workout actually blunts the benefit of the workout. So, that seems not good.

Dan: Really?

Robb: Yeah.

Nicki: That's something to keep in mind.

Robb: So, that's where just coffee if you need a little sweet in it put some stevia in it, hit it, and then go light things up.

Nicki: Call it good, yeah. Yeah. Dan, thank you so much for your questions. Thanks for calling in today.

Dan: All right, thanks a lot guys. That was awesome.

Robb: Thank you.

Dan: I appreciate all your help.

Nicki: Awesome.

Dan: Good luck.

Robb: Bye-bye.

Nicki: Thank you. All right, that's a wrap for this week. If you want to call in to a future live call in show, be sure to sign up for our newsletter at RobbWolf.com or join the Healthy Rebellion Community at Join.TheHealthyRebellion.com, and remember to check out our show's sponsor this week, Kettle & Fire. Go to KettleandFire.com/HealthyRebellion and use code HealthyRebellion for 15% off your order. Let's see finally, if there's anything in this show that helped you, please share the episode with your friends. It's real easy to share it from whatever your device is. You can tap the little share button and share an

episode. It spreads the word and if you find value from it, you might have people in your life that will as well. I think that's it.

Robb: That's it for now. We'll see you all soon.

Nicki: Awesome, guys. Thank you.