

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 a bold aim to help 1 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 changes. 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.

Nicki: Morning hubs.

Robb: Morning wife. You're looking quite lovely today.

Nicki: Cool. Thank you.

Robb: No, you can't even lie in a reciprocal way. You look pretty good today too.

Nicki: You're looking dashing, hubs.

Robb: Thank you. Thank you.

Nicki: Dashing.

Robb: For some reason I have watery eyes. I took the garbage out and it was chilly. I've lost my cold tolerance being in Texas apparently. Wow. We're off to a hell of a start man.

Nicki: I am verbose this morning, apparently. What's new?

Robb: I was sick last week.

Nicki: Yeah. You were not feeling well.

Robb: No. I had several days of just tired, end of the day, I'd be like, "Holy smokes I'm tired, then what?"

Nicki: We had our holiday party on last Thursday.

Robb: Virtual holiday party.

Nicki: Yeah. The next day you were smashed.

Robb: Then I slept two hours longer than I ever sleep. I woke up with a sore throat. I had a little loss of sense of smell and taste and was just really, really tired. I started looking at options for COVID testing and it all seemed really fucking onerous.

Nicki: It's not like you go anywhere anyways.

Robb: It's not like I go anywhere anyway. I was betwixt in between as to whether or not to follow up on that and then ended up not and was each day incrementally. I was really tired, Friday. Saturday I felt 85% better, Sunday another 10%. Then yesterday I was fine. I worked out, I didn't log like a PR on anything, but I got through it and was quite tired by the time I went to bed. But I feel fine today. I don't know if I had Corona or not. The

weird loss of smell like you went out in the backyard and you were like, there was a skunk back here. I stuck my head out and I'm like, are you fucking with me? I couldn't smell it at all. Had some raspberry element, and it did taste like that had been brewed in the ass of a skunk and then decanted. It just tasted-

Nicki: I tasted it and it tasted totally normal.

Robb: You were like, it tastes completely normal. I don't know.

Nicki: Kind of bizarre.

Robb: Yeah.

Nicki: But I don't know with some of the rapid test stuff being 50-50 accurate, it's if you're not you don't need to go anywhere. If you don't need to interact with other people and you seem to be getting better each day, there was not really much point to getting it.

Robb: Right. I'm still curious, just like, was that ... Was it? I mean, I've been sicker from stuff that isn't shutting the world down. I don't know, I'm curious. I think the antibodies stay high for at least a couple of weeks. I may still follow up and get that checked out. I'm sure somebody will be like, "So irresponsible for you to not do it." It's like, "Listen, fuck head, I don't go anywhere. I don't really do anything." I didn't go shopping and I didn't go lick doorknobs or anything else the two days that I was legitimately sick. I don't know. I don't know.

Nicki: Let's see, we've got our Rebel Book Club just started this past Monday inside The Healthy Rebellion. We've got Rachel James, one of our rebels leading us through that. We're reading *The Secret Life of Groceries*. I'm super excited. My book is coming late, so I'm going to be jumping in late. Lots of people can jump in late if that sounds interesting and you want to get in on that, just join The Healthy Rebellion.

Robb: There's a lot of folks in there.

Nicki: A lot of folks reading it. Rachel has put together some amazing reading questions for the first couple chapters and I'm excited to jump in, looks good. Let's see, we also have our seven day cold exposure challenge coming the first week of January. Anybody who's eager to test your resilience when it comes to cold water, I think it's mostly a shower challenge unless you have access to a freezing cold swimming pool or some other body.

Robb: I swear a shower just seems worse in a way. I feel just immersion is not as bad as a cold shower, but maybe it's just me.

Nicki: Maybe. One of our rebels Ashe Higgs is going to lead us through that beginning January 1st. Then of course, we've got our rebel reset beginning, January 15th. Lots of fun stuff coming down the pike inside The Healthy Rebellion community.

Robb: Indeed.

Nicki: Indeed. All right, hubs, let's get into this episode. What do you have for our news topic today?

Robb: I guess I'll read off of this screen even though we have a ...

Nicki: Do you want me to scroll over here or?

Robb: We're still figuring together our gig.

Nicki: We're figuring out our setup.

Robb: The news topic du jour, glucose or insulin, which is the culprit in patients with COVID-19 and diabetes? It's a interesting paper we've had a good discussion in the rebellion about this. When I just looked at the title, I tried to take a stab at what I would predict being the more problematic feature there. I guess that glucose would be the ... What are you doing you're just?

Nicki: Nothing.

Robb: You're drifting around.

Nicki: Well we have two screens going and I was seeing that the red recording icon was on this one, but not on the one that I was looking at before. I was having a little bit of like, shit is this still recording moment?

Robb: I could tell you weren't paying attention, not that you usually pay attention to me, but there's usually some like, "Hey, hand something off here." Like, "Oh man".

Nicki: I'm clued into what you're saying. I had a brief moment of like, hopefully we're still recording.

Robb: Unknown and unknowable, that's what Greg Glassman would say.

Nicki: Carry on.

Robb: My guess was that glucose would be the more injurious of the two factors within this whole COVID story. Extrapolating from the fact that in Sepsis septic individuals, they see remarkably high blood glucose levels. They will apply insulin. Not only does the insulin, it clearly drives down blood glucose levels appears to be an anti-inflammatory agent in that process as well. I was guessing maybe the glucose would be the worst one, they're both bad. From the paper, several comorbidities have emerged as risk factors for severe COVID-19 development, including type two diabetes, increased body, weight, hypertension, and dyslipidemia. These illnesses characterize the metabolic syndrome, thereby increased glucose concentrations may be responsible for the reported poor outcome. Indeed in a large retrospective study from Wuhan type two diabetes was associated with a higher death rate due to COVID-19 though the death rate was lower with better controlled blood glucose.

Robb: This would advocate for aggressive treatment with glucose lowering drugs, such as insulin. Contradicting this deduction is a new correlative retrospective paper by you at all. The authors identified insulin treatment as a possible trigger for death rate in COVID-19 patients with diabetes, thus, which is the culprit for the worst outcome in patients with COVID-19 and diabetes, hyperglycemia, or insulin, perhaps both, and there are still other suspects in these multi morbid patients.

Robb: It's interesting, one of the big ... It is well understood that elevated insulin levels, particularly chronically elevated insulin levels increase the likelihood of clotting. Clotting appears to be one of the gnarly co-factors that goes along with this COVID disease progression, stroke, a heart attack, a clot in the lungs or more systemically. The long and short of it is that poor glycemia needing to be controlled by elevated insulin levels, one

way or the other is a bad scenario. Fuck we're nine months into this and we knew this literally almost from day one, almost from day God damn one.

Nicki: It seemed like in March. It really became a thing here in March. March was when places first started locking down. I feel that's when the first paper came out that showed that there were more deaths with comorbidities happening in China.

Robb: Right, with type two diabetes and metabolic disease. Where are we at this point? As a nation, we will focus on the United States. I know there are folks listening from all over the world, but within the United States, are we healthier?

Nicki: No, we're worse.

Robb: Is our vitamin D better? Is our metabolic health better?

Nicki: We've been inside for most of the year.

Robb: Where is the messaging from the Fauci's and anybody on this and people will say, well the current administration fucked this up in a variety of ways. Okay maybe. If we don't see Joe Biden standing on top of the entire state building beating a pan saying, get metabolically healthy, then he fucked up the same way too. It's just like, this is the one thing-

Nicki: If you really cared about outcomes and saving lives, this message metabolic health coupled with vitamin D. Those are the two things that have been shown again and again, to have a positive outcome in COVID-19 patients.

Robb: The only thing that's driving me to want to go get my tests is to be able to say it was a gnarly cold for two days for me. I was tired enough where I was like, "Oh, I get it." If you were in shitty shape, if you had some other problems, if you were a smoker or something, I get it, it could have been really bad. But I wasn't. Your dad is convinced that he got it in January.

Nicki: He couldn't smell or taste anything for, it was like three weeks.

Robb: He's 70, he's in phenomenal shape.

Nicki: He walks up this hill that we call Heart Attack Hill near his house every day. It was four months where he couldn't do that.

Robb: He just started doing-

Nicki: The fatigue was just massive.

Robb: He would do part way and then a little further and a little further. He is 70 years old in great shape and it kicked his ass pretty good, but he wasn't hospitalized. I know his vitamin D is good. He eats more less kind of keto.

Nicki: He works outside most of the year doing landscaping.

Robb: He works outside. He lifts some weights a couple of times a week just getting his pump on, but he's in great shape. And he's 70 and he motored right through it. It had some after effects for sure, but this is some of the stuff that it is just so controllable. Again, today's not a fucking Salty Talk, so I'll get off my high horse with this thing, but all the

drama around masks and lockdowns and this, I don't want to turn it into a Salty Talk, but just really quickly. People losing jobs, people under stress, they eat poorer, they exercise less, they sleep less well, they will be less healthy. Some other thought just really quickly, and maybe we'll dig into this with a legit Salty Talk, but some other thought is that the United States similar to Sweden is having such a rough go because we had two years of very mild flu seasons.

Robb: This is pretty darn defensible. You just look at CDC numbers and compared to historical outliers, it was actually very mild seasons and then COVID hit. People are nicely run, nicely calling, dry tender or what have you, but a lot of people who were exceptionally high risk for severe disease and dying. They're getting quite sick and they're dying, and in remarkably high numbers. Really about the only thing that we can do is get people as metabolically healthy as we can, and age being an independent risk factor in this whole story and being 80 and healthy is still going to be a rough go.

Robb: It just most likely is, it would be a rough go with standard influenza like that. That's just our deal, but mixed into all that. If tons of people who otherwise would have been reasonably healthy, eating reasonably well, sleeping the sleep of somebody who has a roof over their head and isn't facing eviction and foreclosure and all the rest of that shit. How many other people are going to get sick and die because of the way that shit's being handled. It's not entirely clear that lockdowns are really doing much of anything. If you really have some stout feelings to the contrary of that, get in and read the literature on that. In fact, I'll do one better. I'll do a Salty Talk on it and present some literature on that. Then we can have a discussion. Okay, we'll shift out of that.

Nicki: All right. Let's move on to our t-shirt winner this week. This week goes to Runnerschmom, encourages thoughtful conversation on topics for health and life. I appreciate the thought and research that goes into these podcasts. Could we have more thoughtful conversations like this, please? Thank you for having common sense, encouraging people to think things through and really listen to the science. Strange times we are living in. Ranash mom, thank you for your review. Send us an email to hello@robbwolf.com with your t-shirt size and your mailing address. We'll send you a Healthy Rebellion Radio t-shirt.

Robb: What more could you ask for?

Nicki: What more could you ask for? This episode of The Healthy Rebellion Radio is sponsored by Joovv. Joovv red light therapy devices can help reduce pain, inflammation, improve sleep, help rejuvenate your skin and boost your libido. Joovv is a leading brand when it comes to red light therapy devices. They pioneered the technology and they were the first ones to isolate red and near-infrared light and make it accessible and affordable for in-home use. Joovv just launched their next generation of devices that are sleeker. They're lighter up to 25% lighter, actually. If you're wondering where you would even put your Joovv, their new devices have quick, easy mounting options, so you can fit it in just about any space.

Nicki: We have a thread going in The Healthy Rebellion Community right now, where somebody is considering buying one for his wife. One rebel said, we gave ourselves a Joovv last Christmas. So it's the old one, but even so I absolutely think it makes the little aches and pains go away. It makes my skin look better and puts me to sleep at night. When I use it on the back of my head before bed. She says the sleeping part is probably subjective on my part because I sleep pretty well anyway, but the skin and sore muscles and joints is a definite win.

Nicki: It's time to treat yourself or someone you love to a Joovv red light therapy device. For a limited time Joovv wants to hook you up with an exclusive discount on your first order. Just go to joovv.com/rob, that's, J-O-O-V-V.com/R-O-B-B and apply code Robb and Joovv will hook you up with an exclusive discount on your first order. Again, that's J-O-O-V-V.com/R-O-B-B.

Nicki: Alrighty. You ready for questions hubby's?

Robb: Let's do it.

Nicki: This one is from James.

Robb: This one gets a little squirrely, there's a lot of moving parts in this. It's interesting.

Nicki: His question is about eating until satiety on a carnival diet. James says after almost a year of strict elimination diets, amongst other therapies, I'm trying a beef only diet to get to the bottom of some chronic health issues. I'm three weeks in and all my symptoms are worse than before. I'm eating to just above my estimated energy expenditure by about 400 calories, but I've been advised to eat until satiety and that my appetite will eventually regulate. Until then as someone who's been doing keto for two years, suffering with autoimmune stuff, tracking my macros and my workout consistently, as opposed to being overweight and coming from a sad diet. I can expect to gain some body fat, but I struggle with ever feeling satiated after a meal. I can eat over two pounds of meat in a meal, or even until I'm physically sick and still be hungry.

Nicki: I'd love to be able to eat intuitively and until satisfied, which is why I'd consider taking the advice yet as someone who struggled with anorexia, I know it will be incredibly difficult for me. My question, do you think this is the way to go or would it be better to gradually increase calories like reverse dieting style? If the former, how do you imagine it's working if the latter, how do you know when to stop increasing calories and on average, how long should it take? I imagine the major benefits from carnival diets come from elimination of sensitive foods and subsequent gut relief and healing. I'm sure this helps the satiety, but if eating until satiety is simply revving up the metabolism, maybe it'd be better to do so with reverse dieting to minimize the damage. I'd just be afraid if I didn't follow the advice and did it in a more measured way, I'd still be continuously hungry after. I'd be willing to gain body fat temporarily if it helped resolve this. Thank you for your help, loving the podcast.

Robb: What's your take on this?

Nicki: Oh, goodness.

Robb: Why are you going to my screen?

Nicki: Because I'm trying to ... This is a mess. We're not doing the two screen thing again. I'm trying to make sure that the screen you're looking at is at the same spot as the one I'm looking at.

Robb: I'm just looking at yours.

Nicki: So I can abandon that one.

Robb: I'm good. I'm adaptable.

Nicki: Then I'll abandon that one.

Robb: There's something here, one thought that I had is a man with one ass cannot ride two horses. It's what specific ... Again he alluded to this. He's like, I get that if ... It's sounding he's reasonably lean, but he's dealing with what sounds like some pretty gnarly health issues. Those health issues appear to be getting worse, not better. That's a thing. One of the main questions we ask folks is what is the primary goal? I don't get a sense of what the primary goal is here. I think that that's root cause for the problem.

Nicki: I think primary goal is to get rid of all of his health issues.

Robb: One would think so, but he devoted nearly all of his effort in to figuring out, I guess, to some degree, how to induce adequate satiety and, or not lose or gain body fat. I'm really getting the sense that he's super concerned about gaining body fat and I don't know how lean he is, but I think that that's miss applied focus. If there are indeed these underlying health concerns here-

Nicki: Number one, let's get you healthy, period.

Robb: Yeah. If things, indeed ... It would be again interesting what got worse? Is it digestion? Is it inflammation? We just see person after person, we just had somebody in the rebellion the other day, they were like, my MS it seems to be going into remission and they just started this. Not everybody gets that from carnival. There's the funny thing, I was just on Jorge Cruz's podcast the other day.

Robb: He's like, so tell me what carnival is. I'm like, it could be a million different things. You've got one cup carnival, and then you've got nose to tail. Even within those tails, some people eat dairy and other people don't. Then you have some people that eating chicken and pork is a no-no because of linoleic acid. Point to that being usually people get better on this stuff. The fact that he's not, is interesting and concerning. I would be really interested to know, okay, what else is going on inside James?

Nicki: He's doing beef only, is he doing ground beef? Some people don't tolerate that. You could play with the cuts and stuff, because there are certain people that only tolerate a certain kind of beef, which is more on the ...

Robb: Correct. People who have histamine issues sometimes don't do as well with the ground beef and that they need to stick more with a steak and then you have to go more rib-eyes and things like that because the fat content, otherwise you got to render fat and provide it from outside. I'm not really answering his question much here, like the reverse dieting thing. I don't know. I'm just so perplexed, what type of hunger?

Nicki: I'm wondering if he's eating any fat.

Robb: Well, that would be a good ...

Nicki: Because you need fat as well.

Robb: You do. One of the interesting things is if you eat too much ... Protein is very satiating, it's satiating and then it flattens and can decrease to some degree because protein requires co-factors either fat or carbohydrate to be metabolized, to remove it from the system. It's satiating up to a point and then if you consume more protein than that satiating level, it will stimulate appetite. I guess maybe-

Nicki: I'm wondering if that's what's happening. If he's sticking to a really lean cut of beef, because he's concerned about his calorie level.

Robb: It wouldn't necessarily have to be a really lean cut of beef. He may just be over eating the whole thing just across the board, just entirely just overeating. It's funny, I was pushing back on this whole notion of following the reverse dieting deal. But something like that where you're just set your baseline. Although, he said that he's only eating slightly above energy expenditure and he's still-

Nicki: 400 calories.

Robb: He's still hungry. I guess I would ratchet it up in small increments would be a way to look at this. Also the fact that we're not getting resolution of these underlying health problems seems concerning. I know I'm just all over the map here, but for some reason, something about this thing is, I don't want to say irritating, but there's something unsatisfying here. It's like, what else is going on? There's something about this that it just is not satisfying. What's his name again?

Nicki: James.

Robb: James, again, nobody ever seems to circle back with us when we asked for this, but if you do want to circle back and give us some more input, then we could follow up and later-

Nicki: I would love to know, what symptoms are worse?

Robb: What's going on there?

Nicki: What's really going on there?

Robb: Give us some actual ...

Nicki: What are you eating? You say beef only, but what specifically does that look like in a given day?

Robb: How much do you weigh? Give us ... What are your dimensions? What exactly are your ailments? Exactly how much food are you eating protein, carbs, fat. I assume carbs is pretty low because it's a carnival. He said he can eat two pounds of meat in one meal. I definitely cannot do that. Not generally every once in a while, but it's got to be the right deal.

Nicki: You go to a Brazilian barbecue-

Robb: Brazilian barbecue, I can put some damage in, but it's interesting, I had this deal and it could be because I was a little under the weather, fat, just isn't super appealing to me right now, which is interesting. Anyway, belaboring, this one would love to hear back, but I think that long and short, whether James wants to get back or not. I think just incrementally, we won't call it reverse dieting, but just incrementally increasing total caloric load make sense. Could also be that for him some carbs ... In theory, a healthy functioning person, elevated insulin levels are anorexigenic. They stop appetite. They stop hunger. The problem is that almost nobody is healthy. Like the thing we were listening to yesterday, Peter Attias' podcast where the guy was talking about insulin resistance in young populations, in their twenties. 50% of people in their twenties in the US are insulin resistant, by standard ...

Nicki: These are lean people. These are healthy ...

Robb: These are otherwise lean, healthy ...

Nicki: You'd look at them on the street they're 20 to 24 year old college students, who are skinny lean by anybody's standards and that half of them are insulin resistant.

Robb: Which also circles back to the, why we are having all kinds of problems with COVID. But yeah, but point to that, being that some people do experience better appetite control with some amount of carbs in the mix. I mean, there's just a lot of stuff to unpack here. I would love to talk to this guy though. There's just something, spidey-sense there that is intriguing. Moving on.

Nicki: Our next question is from Ashley on weight loss plateau. Ashley says, hi, Robb and Nicki, a huge thank you for all your research knowledge and opinions, especially when salty that you share with the world. I'm currently studying natural nutrition and every time I read something in my books, that sounds outdated. I literally go through all your episodes to hear if you have any insights and almost always you do. My question today is about weight loss plateau on keto. I'm 35 years old mom to four ages six, four, two, and 12 months. Holy smokes.

Robb: Holy smokes. Clearly she's younger than us.

Nicki: Clearly sleep is probably an issue here. Since about the age of seven I was a vegetarian because I didn't like the idea of eating animals. I was even vegan for a few months of my early adult years. Wait, you'll start liking me in a minute, smiley face. My entire diet pretty much consisted of simple carbs and low fat dairy at times, insert woman hitting herself in the face emoji here. During my first pregnancy, I began craving chicken, which was so weird, but I knew that cravings for healthy food meant I was probably missing nutrients. For the baby, I stopped being a vegetarian. I gained 30 kilos, 66 pounds during that pregnancy. Before losing all of it became pregnant again and again gained far too much weight. During my third pregnancy, I had gestational diabetes and decided to make all dietary changes necessary because I did not want to start with insulin.

Nicki: That's when I started to read about carbs and sugar, et cetera. I made changes to my diet to reduce the simple carbs, mostly and stopped eating things like bread, crackers, and cookies, the junk. During this pregnancy, I didn't gain as much weight and it was much easier to get most of it off quickly. But then eight months later I got pregnant again. My fourth pregnancy was amazing because I was following a low carb, healthy diet, but I knew that after having the baby, I would need to work hard to get back to the body composition that I wanted. That's when I learned about keto. Four weeks after the birth, I began keto and couldn't believe how fast the weight and inches were coming off. The change in diet affected my life in every way possible that I've decided to go back to school for nutrition too.

Nicki: Exactly one year postpartum, I have lost 16 kilos, which is 35 pounds. This weight came off by six months after having the baby. But since then, it hasn't budged. I'm five foot four and 138 pounds. I would like to lose those last annoying five to eight pounds. I've completely plateaued. I eat two meals a day, about 1200 to 1300 calories a day with pretty good key keto macros of about 20% protein ding, ding, ding, ding, 75% fat and 5% carbs. I do eat a lot of veggies. My protein comes mostly from salmon, twice a week, beef steak or hamburger twice a week, eggs and nuts. I do like to treat myself once or twice a week to some full fat whipped cream with some berries and usually finish off my meals with some 99% dark chocolate. I have to admit, I add a hundred

percent natural peanut butter to smoothies, 10% yogurts, or just shamelessly put a tablespoon in my mouth when I feel like something sweet. I'm trying to cut down because of the toxicity, Omega six and carbs and peanut butter, but I just really, really love it and that's hard.

Nicki: I don't get hungry much only after fasting more than 18 hours. I feel great. I haven't been sick once, all year. Lift weights twice a week. She checks her blood ketones and she's in ketosis. She's wondering, should I reduce my calories to get past this plateau? I don't want to mess with my metabolism or the indulging snacks is holding me back. They're pretty much accounted in the calories. Then, or is this a plateau or should I just accept this new body composition as being post for pregnancies? Thank you so much for your time and sending you both lots of love and appreciation from Israel.

Robb: Thank you.

Nicki: The protein. She ...

Robb: You hit it early on. One four kids sleep, isn't going to be an issue. Some reasonable expectations around that, but who knows, maybe her kids are wonderful angels and sleep through the night. There was a period of time, not really with Sagan, she was up a lot. We had this window where Zoe 6:30, I would read her book.

Nicki: She slept from 6:30 to 6:30 clockwork from four months on.

Robb: Until we screwed up and got her-

Nicki: -Until Sagan was born.

Robb: But Sagan didn't do that. We had this window of time where life was good and then life went back to hell after that. But that is a thing for sure. But she said two meals a day, 12 to 1300 calories a day. Then when ever we see the ratio provided for a ketogenic diet, it's shit. Because if, Ashley right?

Nicki: Ashley.

Robb: If she's accurate on this at 1300 calories and 20% protein-

Nicki: Well, she's only eating beef twice a week and salmon twice a week.

Robb: That's 65 grams of protein per day, God damn it like-

Nicki: You're speechless about this.

Robb: That stuff is not going to work. This is the stuff that all of the really bad advice around ketosis and low carb diets spurred out of. You must hit these ratios and just absolute dog shit came as a consequence of that. I zeroed in on that too, a couple of times a week she's, are you eating-

Nicki: She's eating twice a week, salmon and beef twice a week.

Robb: What are you eating in between?

Nicki: That's only four days of protein. Then the other three days it's eggs and nuts, I'm guessing.

Robb: And smoothies, which none of ... It's very problematic. Very, very, very ...

Nicki: Ashley number one, a high-fat ketogenic diet, which is what you're doing definitely works to get you in ketosis. People can lose weight for a period of time, but almost always, we see this plateau.

Robb: Honestly the plateau usually happens earlier than this.

Nicki: Far sooner.

Robb: Yes.

Nicki: If you have a medical condition and you need to be in ketosis for that reason, then what you're doing works, but for body composition, you have to prioritize the protein. In our keto masterclass, you have to hit your protein macros, no matter what, fat is a lever. If you're hungry, you can eat some of your fat. You don't have to eat all of the fat in the type of keto diet that we recommend. Then carbs, most people depending on what you're up to and your activity level that can fluctuate. But we've mentioned this before with all the resets that we do inside The Healthy Rebellion community more often than not people don't ... They think they're eating enough protein and they're not. If you were to just focus on protein, you said she's eating about 65 grams of protein a day. She weighs 135 pounds. So bumping, doubling that.

Robb: She needs to at least double it every single day.

Nicki: Double your protein.

Robb: I would ditch the smoothie. She's only eating two meals a day too. If one of those meals is smoothie, it's not going to stick with you. If you want to sneak in a scoop of peanut butter, I don't care about that, but just get-

Nicki: The dark chocolate after a meal is not a problem either.

Robb: Don't care about that. But you have to at least double your protein.

Nicki: Both of your meals it needs to be a bunch of protein have as many veggies as you want. You said you like eating a lot of veggies that's not a problem at all. But the protein ... That's going to be your key. I can't tell you how many people have come from a standard keto diet, like what you've described. Then after doing the keto masterclass and following the protein centric recommendations, they just-

Robb: Magic happens.

Nicki: Magic happens.

Robb: We've said this virtually every podcast we've had for maybe a month or two months, but we never, ever, ever see people who have struggled with body composition currently, or in the past who were eating enough protein. It never happens. Every single time, people are like, holy smokes, I had no idea I needed to eat that much to hit these benchmarks. The funny thing is, it's still modest by the standards of some people in their recommendations around protein, but Ashley, you're going to have to double at least your protein intake. Don't really care about the protein currently. Don't really care about the dark chocolate.

Nicki: Drop the fat. You're not going to need 75%.

Robb: We cannot go by ratios, as a baseline. If you want to use the keto gains macro calculator and set it to the 1.0 gram of protein per pound of lean body mass, that's cool. That would be a good starting place. Trying to use ratios though, is a recipe for disaster in trying to make this stuff work. It sounds like you're doing great otherwise. You may see your blood ketone levels trend down a little bit. That's fine. Doesn't matter. Doesn't mean you're not burning fat. This is again, one of the problems of tracking things like ketones is that we turn it into a game and it's like, well, if my ketones could be a little bit higher then maybe I'm doing a little bit better. Again, if you're managing a medical situation, a specific medical condition that necessitates a certain ketone level, that's one story. This is not that situation though.

Nicki: All right, Ashley, we would love for you to circle back with us, try this and then report back. We want to know how you do.

Nicki: Our next question is from Tim on handwriting. Hey, Robb, I really enjoy the podcast. I just started listening a few months ago and it's great for when I'm driving to work or really anywhere that'll take me at least 10 minutes to drive to. You have a good combination of complicated science explanations and dumbed down explanation. I can follow along with most of what you're talking about without needing to fully understand the more scientific stuff. I feel I'm always learning something that'll make me healthier or keep me healthy longer.

Nicki: I've been doing CrossFit for a couple of years now, and I've noticed my handwriting neatness has gone to shit. It seems to take a lot more effort to write legibly than it used to take. I feel there's some connection between all of the exercises and lifts that use my forearms, pull-Ups, snatches, cleans, et cetera. My handwriting troubles. My girlfriend started going to the gym I go to about a year ago. I asked her about this handwriting issue recently, and she said she noticed it with herself, also. I was just wondering if this is common for people who do CrossFit as workouts, and if there's some kind of stretch or exercise I could do to help with it.

Robb: Nicki and I, we were talking about this last week when we were reviewing these papers, you had some thoughts around flexor compartment tightness. I have some different thoughts on this. When we look at the muscle physiology of chimpanzees, chimpanzees are very closely related to us, but they're remarkably stronger than we are. But the muscles are effectively the same. The main difference is that they have more gross motor innervation and less fine motor innervation. That's also the reason why we are comparatively less strong, but we're very good at this very fine motor skill type dexterity.

Nicki: Dexterity type things.

Robb: Yeah. This is also to some degree why our legs, although larger are comparatively stronger than our upper body, because it is more gross motor unit activation. For the most part that can be trained, people who've lost their arms learn how to load BBs into BB guns with their toes. It's absolutely amazing. It's very adaptable and flexible and whatnot. But I see a lot of things about CrossFit, one of the things that I've observed, and this is an opinion piece, but given that I founded the first and fourth CrossFit affiliate gyms in the world. Then-

Nicki: You get an opinion.

Robb: You can go fuck yourself, if you have an opinion contrary to this. But one thing that I noticed is that with gymnastics and weightlifting, and weightlifting being power lifting or Olympic lifting, or even just bodybuilding. But one of the benefits that you learn out of these endeavors is full body stabilization, recruiting out of the full body. You don't relax under a back squat or a deadlift or what have you not without facing really serious problems. What's interesting about CrossFit, they used to make fun of the power lifter that showed up and they would get smoked immediately and whatnot because these people recruit really effectively.

Robb: We're making fun of something that is actually a favorable, trained adaptation. I think what frequently happens with CrossFit is that people learn how to relax under load, which in wrestling and things like that you don't really want to do that either. You learn how to relax at the places that you can and because you're actually struggling against an opponent, he or she is also fatiguing at some rate, maybe they're in better shape than you. They just don't fatigue at the same rate. That's part of the reason why you get your ass kicked and they don't. But if you're doing 2159, 315 pound dead lifts, if you are recruiting the way you would to do normal power lifting, you will blow up on that. You by definition have to learn how to breathe and ventilate and relax to some degree under load.

Robb: I see that turn into things where you're psoas and the muscles, that should just be orienting posture, become prime movers. I see all kinds of problems with that. I wouldn't be surprised if there's not some type of software over writing that occurs in these scenarios where people are recruiting to such a degree that their brain is like, well, fine motor skills, you don't need those. You just need to go. I wouldn't be the least bit surprised if you see some problems with that. There are people high level shooters, high-level pianists people who their manual dexterity really matters. Surgeons who do not partake in significant amounts of physical activity. They don't do things like boxing. I noticed when I would do Thai boxing that after ... This is a different deal where your hands get just ... It's like working with a lawnmower. I get done with it and the shaking afterwards, I look like I'm having a seizure trying to write something and my handwriting's abysmal, anyway.

Robb: But I see folks that if their livelihood or their passion really relies immensely on super fine motor skills, they're not out doing Makiwara boards, punching a stone thing to toughen up their knuckles. They may be exercised, but they've kind of, I noticed if I lift weights or something my fine motor skills decrease and whatnot. It makes a lot of sense. Again, man with one ass cannot sit on two horses. That makes a lot of sense. Again, it doesn't necessarily mean that you don't want to do CrossFit or shouldn't do CrossFit, but it is interesting that we've been talking about wanting to get the girls into track and field, and although time efficient. Circuits are time efficient. There's something to be said for going in and doing very good Olympic lifting, very good power lifting and doing legitimate track and field work, throwing a shot put, throwing a discus.

Robb: This is another example, our friend, Dan John, a very good shot putter and discus thrower. One of the techniques that he has used coaching people when they would hit a PR maximum is they would no longer throw for distance, but they would aim for about 80% of their max distance and then go for accuracy. They would shift gears and try to get more accurate, more accurate. That doesn't exist in CrossFit, stuff like that, because it's always about how fucking hard can you go? What's another rep within the-

Nicki: Can you shave five more seconds off your time.

Robb: When you have something that really isn't focused on qualitative nature, then all of the software, even the hardware starts getting rejiggered in a way where it's like, well, we don't need quality of movement, really. We just need gross movement. We start driving towards that. Again ...

Nicki: Is there anything Tim can do to improve his handwriting or is it just gone to shit?

Robb: Doing more fine motor skill type work. Even on the exercise side, the thing about CrossFit very time efficient, you've got that community element. It's fun. I really get all that stuff, but this is a case for some of these gyms not focusing so God damn much on just the churn and burn deal. Do some track and field days where you do some 50 meter buildups and then taper down. There's so many other ways to get folks a good workout and get them their dose and not absolutely smash and bludgeon them. Then of course, there's always Brazilian jujitsu, which is far superior anyway.

Nicki: It's time for The Healthy Rebellion Radio trivia. This trivia question has a little bit of a spoiler. We'll warn you all here. Today's trivia sponsors, Drink LMNT. Drink LMNT is giving a box of element recharge electrolytes to three lucky winners selected at random who answer this question correctly. If you're not watching the Mandalorian-

Robb: If you ... How do we want to say this?

Nicki: How do we want to say this?

Robb: If you are following the Mandalorian but not-

Nicki: But you're not on the current episode.

Robb: Which would be episode six of the season two, right? Six or seven.

Nicki: I think it's seven.

Robb: Seven. Okay.

Nicki: Because there's only two more, right?

Robb: Right.

Nicki: I think, if you're not on-

Robb: No six, because then seven, eight, because I think it stops at eight.

Nicki: If you're not-

Robb: There's a spoiler alert here.

Nicki: There's a spoiler alert here. You can tune out or skip ahead if you don't want to be spoiled. Yes. All right. Robb, does Mando get baby Yoda back this season or next?

Robb: I think next. I think he's close to doing it this season, but there's going to be a cliffhanger. I have some other thoughts too, but I'll keep those to myself. I'm going to write them down and see if I'm correct.

Nicki: See if you're right.

Robb: But yeah, next season.

Nicki: Next season is the answer to this week's trivia. To play, go to Robbwolf.com/trivia and enter the answer. We'll randomly select three people to win a box of element, a Drink LMNT electrolytes. The cutoff to answer this week's trivia and be eligible to win is Thursday, December 17th at midnight. We'll notify you via email and also announce the winners on Instagram as well. This is open to residents of the US only.

Nicki: Our fourth question this week is from Mark on HPA and glycogen. Mark says my understanding of your work, high-intensity exercises, heavily glycogen dependent, and some level of carb fueling is required to refill glycogen storage, or you risk adrenal fatigue. I periodically experiment with checking blood sugar levels and have noticed after a 10 minute intense TM interval workout, what is TM?

Robb: I'm not entirely sure.

Nicki: My blood glucose can stay relatively stable in the eighties or shoot up to a high level for me, 110, which is typical of eating a higher carbohydrate meal. This seems to correlate with either low or moderate carb fueling the previous two to three days. With very small changes in glucose levels before and after intense brief exercise indicate inadequate glycogen levels and thus a higher risk of adrenal fatigue. I've not found any studies on this related to non-diabetic subjects with good insulin response. I've been following your diet recommendations for several years and tend to be low carb, or excuse me, tend to be carb sensitive. I stay in the 50 to 100 gram daily range. I'm wondering if I can use this change in glucose levels to help me gauge when more carbs are needed. As a side note, I've noticed the first couple of meals when I eat higher carb actually causes a drop in my blood sugar one hour post-meal, which makes me think it is replacing glycogen.

Robb: Some really good stuff in here. Absolutely. When we consume carbs, it's either getting stored as glycogen in the liver or the muscles. It's getting converted to fat, or it's being consumed directly to produce ATP and provide energy. Or it's glycosylating our proteins and making us go blind and stuff like that. This is again, we should maybe do just a dedicated show. Maybe it would be a Salty Talk or something around testing in general. Because there's ketone testing and there's blood glucose testing. There is variability to all testing. At a baseline, just every time you do ... The person could prick their finger and we could get three drops of blood from the person and then run those three drops of blood serially through their blood glucometer or Keto meter whichever one, it doesn't matter. It's the same type of story.

Robb: There may be different variability on both sides, but just the act of feeding that blood three times through the glucometer there is some degree of inherent error. Just the fact that there's blood on the strip and then it gets fed in there is that changing some of the interface between the strip and the glucometer? Is there any type of residue? There's all these different variables and in general, there's at least a 10% error rate from one reading to the next and some of these glucometers may be as much as 20%. With that said, if your real blood glucose level is a 100, and we've got a 10% error rate, then you might read as high as 110 or as low as 90, but the real number is actually a 100 and that would be within normal range.

Robb: I can't think of any way that you could possibly make an informed decision, how to fuel around that. Also some of these post exercise, blood glucose spikes are in response to the intensity, and generally they're very normal. They're really only problematic if you have someone, a type one diabetic, in which the blood sugar doesn't easily go back down and then you administer insulin and then it goes too far down. Then it's that

skidding out on an icy road thing again. That could be a problem, but again, with that, are you doing exactly the same type of workout at exactly the same time of day under exactly the same conditions of sleep and stress and hydration. This is where to some degree it's ... I applaud people that do some data analysis and track some stuff. I'm too God damn lazier, just bored with this type of stuff at this point to really do much of this.

Robb: Part of it too, is I think I have a good grasp of the error inherent in this. You would need to work so incredibly hard to really have data that was meaningful. Otherwise you could make all these decisions and it's just magic. By magic, I don't mean in a good way. I mean, it's fairy tale shit. You're making all these, well, I love my glucose. You don't really know what the true story is, or you don't really have an adequate baseline to know that workout A versus workout B really has a meaningful impact on your blood glucose. You can find trends with it, man you have to be careful.

Nicki: If you really wanted to do this, I know they're hard to get without a prescription, but would a CGM be a better route for him?

Robb: A CGM is nice in that it shows trends, but it is even less accurate for these precise measurements, moments and times. Yes and no.

Nicki: But from a trend perspective, if Mark is super geeked out and really wants to see how he's doing that might be the direction to point him.

Robb: Could be. Sybil in the rebellion is super geeked out on tracking this stuff. I'm also at a loss as to how it really further informs anything that she does. I've poked her a little bit. I'm like, "What is this providing?" But I think for her just that she manages a lot of different health problems and whatnot. I think that data makes her feel more comfortable and she has a PhD in immunology. If somebody's going to ... Somebody asked a question about blood glucometers the other day, and she like "prprprprpr" like there was just this list of shit. She did another one on the, don't overly undersell, the efficacy of RTPCR, in viral analysis. It was three paragraphs, but it was dense as neutron star matter.

Robb: She's very good at this stuff. Not everybody is Sybil and not everybody is able to extract the same type of value out of doing things like this. Mark, I don't know if I'm helping you at all on this, but I mean, and the fact that you're eating somewhere in that 50 to a 100 grams per day range, I think is totally fine. Honestly, most of my gnashing of teeth around carbs and higher intensity physical activity was because I was unaware of the need for more sodium and electrolytes. Since we've been on top of that, then it seems to open up much more latitude for folks to do more high intensity activity and maybe at a minimum, just putting in some pre-workout carbs. That mainly seems to be a central governor issue. It's telling the brain something, it doesn't really have to do with the muscle glycogen status. There's a whole bunch of a lot.

Nicki: A whole bunch. Our last question this week is from Danielle on leptin. Hey, Robb, I've been following you for many years. Read your books and love learning from this paleo keto carnival community. I have a question for you regarding this very low carbs slash zero low-carb lifestyle and leptin resistance. I've been an athlete my whole life, but I've also struggled with the last 10 to 15 pounds my whole life. So when I had my DNA tested and learned that I have homozygous result for the LEPR gene, it really didn't surprise me much. Explains a lot why it's always been tough to shake these last few pounds, no matter what I try. I'm a 37 year old female, five foot three, 135 pounds. Last time I had a DEXA in August, I was 30% body fat. I went paleo about seven years ago, keto, about

two and more recently carnival, although the past month or so, I've started to reintroduce some plant matter and other fat sources.

Nicki: I feel like I've tried every macro combo you can imagine. I've also tried every exercise method from hit to running to weights, yoga, you name it. Anyway, I'm just curious what your advice is for someone like me. I used to fast every day, but I have read that people with leptin resistance really shouldn't be engaging in fasts, longer than 12 to 15 hours. Eat smaller, slower meals and that's all good, but what about carbs? Do I need some, none or more than keto standards? I would really love your advice on this. I don't see much from our integrative/bio-hacking community on this subject. Thanks for all you do.

Robb: I've got a paper here leptin receptor deficiency and it goes into what it is. If people aren't familiar with it. Leptin is a key mediator of the neuro regulation of appetite. If you have leptin receptor deficiency, then you're just not reading leptin. Different scenarios ... I think where she's driving at here is that different dietary scenarios can elevate or suppress leptin. If you're already leptin receptor deficient you further decrease leptin and that could be a big factor. Leptin is definitely a major player in appetite control, but it's not the only player in appetite control. Amylopectin, Cholecystokinin, insulin itself there's a pretty long list of different neuro hormones. Ironically, they're very related to the gut also that have a factor in this.

Robb: Although I would ... There is a tendency for these leptin resistant individuals to be overweight. They're definitely folks tend to have higher appetites and all the rest of that stuff. I do though still think that things like keto at a minimum adequate protein, high protein, low carbs. Not necessarily keto, we really need to come up with some jazzy new do for keto, what Whole30 did for Paleo do some completely arbitrary lane lines and then just have a copyrightable trademarkable name and ride off into the future. I think stacking the deck every way possible on the satiety side of this story, this is where Danielle needs to do some experimenting with things like carbohydrate intake. Do you feel better appetite control with more or fewer carbs or different types of carbs?

Robb: Maybe fruit works better than starch, things around that. But I would start it like that one gram of protein per pound of lean body mass, or one gram of protein per pound of body weight, even as a benchmark. Then drop in either carbs or fat or your carb fat combo based off of the way that you operate best from there. It is interesting that folks with potential hypothalamic damage from being overweight for say extended periods of time, ketogenic diets do seem to offer a disproportionate degree of appetite control for those folks. It's interesting. Ketones, ketosis, they do seem to have some benefits in different arenas. I don't know if that's going to be a different angle on this, but I mean, really this whole story is going to be about stacking the deck in ways that offer better and more broad ranging appetite control. Because if the leptin side of this equation is maybe skewed towards increased hunger, then we need to stack the deck every other direction in a favorable way.

Nicki: That makes sense. All right. Any other thoughts?

Robb: I have lots of thoughts, but I'm going to keep them all in myself that way we won't get canceled, at least not this week.

Nicki: All right, everyone. Thank you for joining us. Remember to check out our show sponsor Joovv for your red light therapy device and get an exclusive discount on your first order. Go to joovv.com/robb and apply the code Robb to your qualifying order. That's J-O-O-V-V.com/R-O-B-B. All right, everyone have a fabulous weekend and we'll see you next time.

Robb: Bye everybody. Take care.