

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 1 million people liberate themselves from the sick care system. You're listening to this Healthy Rebellion Radio. The contents of this show are for entertainment and educational purposes only. Nothing in this podcast should be considered medical advice. Please consult your licensed and credentialed functional medicine practitioner before embarking on any health, dietary or fitness change.

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

Robb: How do you wife?

Nicki: How do you hubs?

Robb: What's going on?

Nicki: Oh, you know just another gorgeous day in the Texas Hill country.

Robb: Indeed. It is pretty nice. It's heating up.

Nicki: It is. We've had not as many scorpions thus far although, we are moving into that season. Yep. No stings yet. This is a plus.

Robb: Other than whatever stung twice that looked like a snake bite, but details.

Nicki: Yeah. So anyway, moving into the summer. Yes. Looking forward to it.

Robb: Me too. It's quite nice vicious beginning.

Nicki: Let's see any updates or news for folks. We're in the middle of our seven-day carb test in our 30 day reset seven-day carb test inside the Healthy Rebellion. That's been fun seeing how people are responding to different types and amounts of carbs. And it's been fun watching the reset in and of itself and seeing people come together and lean on each other. We did some buddy groups this time. A lot of cool stuff.

Robb: Yup. Sacred Cow is getting close to being released. I should have grabbed a copy to sit down with and brandish, but just a little ask for the folks listening. If you've had any inclination to purchase Sacred Cow, which discusses the ethical environmental and health considerations of a meat, inclusive diet and a food production system. And it paints a very different narrative than what we're typically told from the mainstream media and the information monopolies.

Nicki: You mean it doesn't support what the game changers though?

Robb: There might actually be some differences of opinion and some material being taken out of context. And there might even be some people that are outright lying if you could believe that in this day and age, but because of COVID-

Nicki: Say it isn't so.

Robb: It is so. Because of COVID the Brick-and-mortar bookstores are closed, unsure when they're going to open. Pre-orders have really been a bugaboo for our publisher is understandable because they don't want to be sitting on a massive number of these books if they don't sell. I do have a feeling that, because this thing isn't a diet book per se, that a lot of folks that might normally be a little bit reticent to get in and really lend a lot of support to this thing. Anybody in the ancestral health space that has benefited from a meat inclusive diet really stands to benefit from the hard work that Diana and I have done on this because they get deluged with questions about all that stuff. And they're not really in a position to tackle it. We did. We do actually think that people are going to support us, but generally these things wait until right before the last minute

Nicki: Not many people like to order a book that they're not going to receive for a few weeks. First of all, thank you to everybody who has pre-ordered because I know a lot of you have, and you've tagged us on Instagram and you've replied to emails and tagged Diana. And so huge huge, thanks to all of you who have pre-ordered and then this is just another ask. If you are inclined to buy it pre-ordering would be awesome.

Robb: It'll help because what that's doing is it's telling the publisher, yes, people are interested. Yes, it's safe to do a reasonable print run because again, I suspect that will probably make the The New York Times Best Seller, fingers crossed, but we have a decent chance of doing that. When that happens, they begin supporting you and promoting you in a very disproportionate fashion, which is maybe it's fair. Maybe it's not fair. I don't know that's beyond the scope of this thing, but the reality is that's what happens. But if we run out of books, if Amazon warehouse has run out of books, if there are Brick-and-mortar stores open and they are out of books, even if you go and pre-order the book, then it doesn't matter. It doesn't count.

Robb: And so then we could fall off the list and it's very difficult to climb back on that. Clearly self-interested an author of the book I stand to gain financially from the sale of the book, but I am asking you to help support us because we need this push early to be able to make this thing a success.

Nicki: Yup. And the message in the book is one that I think so many people need to hear, and it will be a great book that you can hand to friends and family and coworkers and folks that are like, "Well, meat's going to give me cancer or it meets killing the environment or it's not humane to kill another living thing." All of these questions that come up again and again and again, especially in response to some of these other documentary films that have been put forward by the vegan side of things. The book answers those questions. Anyway, that's the Sacred Cow announcement. What else hubs?

Robb: Do you want me to jump to the news topic? Dujour?

Nicki: Dujour, DiGiorno can't always say it in French. We got to mix it up a little.

Robb: I don't know the French have so little now, we've got to give them what they can, but the paper called evidence, supporting a phased immuno physiological approach to COVID-19 from prevention through recovery. I've mentioned this at least here, maybe elsewhere that early in this COVID story, I really tried to focus on those things that helped us to better inform our understanding of the situation. And then also what were the things that we could actually do. And similarly early, it became obvious that getting anything approximating valuable information was almost fucking impossible. Because it's just turned into kind of a political topic instead of something that's being handled in a scientific fashion. But we do have better and better data on things that people can do before catching the virus when they catch it, what practitioners can do. And so this paper lays out a lot of things and it makes the case that a solid level of vitamin D is important.

Robb: Metabolic health is important, well controlled blood sugars are important. And again, I don't want to turn this into a too much of a COVID rant. But it is very frustrating that our public health officials from the World Health Organization, all the way down to the local level, nobody is talking about the fact and could have been talking about the fact for literally three months now. Hey, you should get metabolically healthy. Here's what that is. Here's two or three different options, low carb, low fat, whatever, just don't eat fucking Twinkies and hohos all day long and maybe take some vitamin D and those things are pretty reasonable. Cover your ass type things.

Robb: It is unfortunate that we live in this world of hyper litigious bullshit. And that may be part of the reason why these folks aren't doing anything like that. Because if they say, take vitamin D it may reduce your likelihood of catching COVID and then somebody takes vitamin D and they still managed to catch COVID. Do they Sue the public?

Nicki: You said I wouldn't get it. I got the vitamin D and took it.

Robb: That probably is the case. And that's why we get why we deserve them. We can't have nice things. So yeah.

Nicki: Oh man.

Robb: We're in a good place here folks. We're in a good place. Anyway, link to that paper in the show notes, it said super valuable practitioners should definitely be looking at that in anybody concerned about their individual health in this kind of scenario. It's super valuable paper.

Nicki: Okay. Let's move on to our t-shirt winner. Our Healthy Rebellion Radio t-shirt winner from our review from Chelama, she says my favorite podcast. I've been a listener since 2017, and I'm still learning new things with every podcast. I'm forever sharing the podcast with friends and my Wired to Eat book is almost always out on loan to friends, looking to change their eating habits. Thank you, Robb and Nicki, for all you do to get

this life changing information out to the masses, my life and health has changed because of you I've lost and kept off over 50 pounds for almost two years now.

Robb: Awesome, very cool.

Nicki: So cool. Thank you so much for your review Chelama. Send us an email to hello@robbwolf.com with your t-shirt size and your mailing address. And we'll send you a Healthy Rebellion Radio t-Shirt. This episode of the Healthy Rebellion Radio is sponsored by Four Sigmatic. If you're in need of a productivity boost, if you want something to help with creativity and focus, Four Sigmatic is incredibly popular mushroom coffee with chaga and lion's mane should be your go to morning beverage. They have a whole suite of yummy mushroom products and ways to incorporate health boosting mushrooms into your daily routine.

Nicki: We've talked about cutting back on coffee recently, but we still do a little bit in the morning, probably about 80% decaf. And then we'd like to have Four Sigmatic in the afternoon. And frequently for me my favorite is the think with lion's mane. It's very smooth, very yummy, and gives me that extra little boost in the afternoon. So check out Four Sigmatic mushroom coffees matches Coco's mushroom elixir mixes. They've got a lot of great, great stuff, folks. So make sure you check them all out [@foursigmatic.com/rebel](https://foursigmatic.com/rebel). And if you use code rebel, you can get 15% off your order.

Nicki: Are you ready for a question?

Robb: We're finally here for questions.

Nicki: Are you ready for question hubs?

Robb: Yeah.

Nicki: We've got one from Steven. He's looking for fast morning nutrition for kids fast as in quick, not like fasting.

Robb: That's an easy way of handling the nutrition, no food for you.

Nicki: Skipping breakfast. Stephen says even with all the importance put on sleep, schools still are having kids wake up at very early hours. So clearly this is a pre-COVID question. My son is not eating breakfast because as he says, I'm just not that hungry that early. And I don't have time to make anything. Yes, he could get up earlier, but then he's cutting into the limited sleep he is trying to maximize. So my question is, what quick morning nutrition can you suggest for kids aged 10 to 14? Does it differ if they're highly active or not, or for an undersized child, as opposed to an average sized child? I am open to homemade and store bought options, trying to find something he can run out the door with an even eat on the bus if he needs.

Robb: What are your thoughts on that?

Nicki: Things that are quick that you can grab and run and eat on the bus or in the car. I'm thinking a lot of egg cupcakes, hard boiled eggs, those egg muffins, hard boiled eggs. You like to do for the girls, a frittata with pepperoni in it. And those can be sliced into wedges that are like quiche thickness, depending on how many things-

Robb: Or again put into a very shallow kind of muffin. What are those mini muffin things?

Nicki: Just a muffin tin. You just use a muffin tin. Yup. A lot of-

Robb: Those things are great because they're not really oily, unlike hard boiled eggs, which I know you're a fan of, but it gets crumbly and kind of messy. Whereas like if it's all mixed and blended together and who knows, maybe you sneak a few tomatoes or vegetables-

Nicki: Or ground beef or leftover taco meat or you'd basically... the nice thing about the egg cupcake muffin thing, and I know not everybody can do eggs, but if your son can eat eggs, there's like eight bazillion different ways to make these. You can put tomatoes and cheese and basil and any kind of leftover protein from the night before. They can be made ahead of time. They can be frozen or just made in the morning. So that's a definitely a nice quick option. Any leftover proteins are also a good option in the hamburgers.

Robb: What we do for lunch frequently is a Turkey or lunch meat roll up where there may be some avocado, maybe some tomatoes, maybe some cheese in there and you just roll the thing up. And again, this stuff could all be prepped the night before in a little Tupperware and then just grab and go. Similarly it could just be pepperoni, salami, cheeses, maybe some olives. Again, it depends on what the kids actually like both of our kids like olives So, not a hard sell they're jerky, stuff like that.

Nicki: The thing with the speed though, that's key is prepping the night before. This can be something that your son does or you help with as a family. But yeah, it would be great if it helps promote that sort of independence and autonomy with feeding yourself, which is great. So he can prep it the night before, have a little Tupperware that has his breakfast box and off he goes.

Robb: Again, I know we're kind of bouncing around, but with the egg muffin dealio, you can prep a week or half a week. One prep effort and you've got multiple dates dealt with, whereas the cheese plates and different stuff like that, like maybe you can prep several days in a row and just stick them in the fridge, but the muffins really do lend themselves to that.

Nicki: There's also a really great coconut pancake recipe that Robb found that we were trying to make. So Rob doesn't tolerate eggs, all that well. So I was making them without the whites, just with the yolk. It doesn't lend it when you remove the whites, it doesn't lend itself to a great pancake consistency, I put them in a muffin tin. You could play with like a higher protein grain-free pancake type recipe-

Robb: You could even do protein in it.

Nicki: Yeah, put some protein powder in there and also bake those as muffins just for some variety as well.

Robb: Good question here, do you need to modify this stuff based off the kids activity level and whatnot, really the big challenge we seem to be facing in this scenario. And so many people face, this is the early wake up time that kids have, and it's not surprising that the kid rolls out of bed and isn't immediately hungry. I think just getting something that is protein and fat centric as the first meal, just so that they're not starting the day off with a hypoglycemic crash on the back end of a crappy composition sandwich or something like that. I think that, that's a win. And then at lunch and dinner, if it's a very active day, then we can backfill the calories. If it's a less active day, then the kid... kids are pretty good at spontaneously dealing with their energy needs.

Robb: We just break that over time eating like adults. Our girls will have a very active swimming day and they may not eat much throughout the day. And then when they sit down to eat dinner, it's like scraping that off the walls. Yeah. And then they may eat a lot the next day too, so they make up for it. I do think in general, so long as decent options are being presented, I wouldn't worry too much about maybe he is a little calorie deficit early in the day, but he can make that up later in the day.

Nicki: Okay.

Robb: Good question.

Nicki: Good question, Steven. Our next question is from Emma different dietary needs within the household. Hi Robb. I just finished Wired to Eat and loved it. I'm currently overweight and have struggled with weight for about 20 years. I really want to try the paleo diet, but struggle when trigger foods are in the house. My husband and daughter, however, have very fast metabolisms. And my husband is on his feet over 12 hours a day at work and cannot function without a high level of carbs at meals. How can I balance their need for carbs with my need to stay away from them without having an anxiety attack or watching them eat all the things I wish I could have.

Robb: I'm not entirely sure. Again, I'm going to punt to you first. What are your thoughts on that.

Nicki: It's definitely a challenge, because one of the things that you have always said, and we've always promoted was don't have it in the house. It's certainly a challenge when you've got other family members who for whatever reason, insist on having foods that cause you to have cravings and this internal battle about what's in the cupboard.

Robb: I guess the cutting the Gordian knot deal. Could there be a meeting of the minds in which I'm assuming that it's probably things like pasta or bread or stuff like that-

Nicki: Chips, krackles.

Robb: That are the problematic things. Is there a case to be made that maybe that stuff only comes out on weekends and then in the middle of the week, it's more potatoes, sweet potatoes, fruit, like they eat a little bit more paleo, throughout the middle of the week. If your husband legitimately is one of these folks that just functions on a higher carb and he's super active and your daughter is carb sensitive, that's great. But at the same time, it is a family. You are a team and this is a situation where-

Nicki: And hopefully they're excited to support you on this process that you're motivated and excited and ready to make a change here. So hopefully you can get some buy-in from them to support you in this.

Robb: So they don't need to go to keto land, but maybe there are some things that can be done five days out of seven, so that the carbs aren't quite as tempting for you, but they're still ticking the boxes more or less for them. And that's kind of the-

Nicki: The other thought too is if you were to do a lower carb, paleo diet frequently the satiety is high enough where the cravings might not be as strong. Another thing to consider is having something like some really great dark chocolate that you can have as your thing. That is just like, okay, after dinner or whatever people are having the other stuff, this is my thing that I'm having.

Robb: That's a great thought.

Nicki: There's something else on the tip of my tongue that is that is not coming forward right now. We'll see if it resurfaces.

Robb: It'll percolate later, but that's a great suggestion, maybe to reincorporate that what we hit, I would sit down and have a conversation with your husband and your daughter and be like, "Hey, I'm really trying to get healthier and it's really challenging if you guys have chips and this and that and the other every day, it's hard to say no to it. What can we do to have a middle ground here so that it sets me up for success." And it doesn't mean that they never have it, but maybe even a great deal with that would be, if you go out to eat, they kind of kick their heels up and order what they want. Because it's that home environment, that's really tough granted we're on house arrest right now it's a more difficult deal. And then from there, Nicki made the point that if you can motor through for a bit, usually this tidy starts winning out and these tempting foods are perhaps not quite as tempting. And then finally having some options like dark chocolate so that you've got a treaty type thing.

Nicki: And one more thing, Emma as part of our 30 day resets that we do inside the Healthy Rebellion, we have a dear friend of ours Coach Cinnamon Prime, who has done some mindset coaching within our group with personal friends of ours. She's amazing. But then there's also a video that we share in the Healthy Rebellion when we do these resets and she talks a lot about how our brains are not really wired for like, I'm never going to... you described having an anxiety attack, watching your husband and daughter eat all these things. And so in your head, you're thinking, gosh, I can never have this ever again. And it's not how our brains are wired and stressful. And so cinnamon

recommends having a mindset of just for today. And this is something that we've used throughout the reset with, and people love it and it's really, really effective.

Nicki: So when you wake up, say, even write it down on a piece of paper, like just for today, I'm not going to have this or just for today, I'm going to be fine with my piece of dark chocolate when hubs and daughter are having that, or just for today, I'm going to focus on getting a little extra movement in. And so really framing it in what is your... just one day at a time, instead of I'm never going to have these things. And then the next day it's just for today and just for today and just for today.

Robb: And if you string more of those together than not, then we're doing pretty good.

Nicki: Yup. And just reframing that a little bit might help you to take it one step at a time and not think of it as a deprivation thing, but just for today, I'm feeding my body what it needs so that I can be healthy and get to where I want to go health wise.

Robb: I knew you had the goods on this one. I knew it.

Nicki: All right, Emma, please report back, give that a couple months and then ping us back and let us know how you're doing. Let's see. Our third question today is from Michael hot baths versus saunas. Greetings to you both. Can hot baths stimulate the system, sweating and activation of heat shock proteins in a way that is comparable to a sauna because of distancing. Very tired of that word. As to Michael, a lot of people have baths at their homes than saunas, which is why I'm asking PS Nicki has the best infectious giggle I have ever heard ever. I laugh every damn time she does.

Robb: You do.

Nicki: Thanks, Michael. Thank you. All right, babe, hot baths or saunas.

Robb: I don't know that there's great research one way or the other on this. It's interesting. The thermal capacity of water is something like 30 times greater than air. So if you get into cold water or hot water will raise or lower our body temperature really quite rapidly. But the magnitude of the temperature difference, my sense is there's some benefit to the heat receptors on the surface of our body registering the fact that we're in 180 degree air. 180 degree water would scold us because it transfers the energy so rapidly that it would burn the tissue. 104, 105 degrees is about as hot as you can you can get and only be in there for a comparatively brief period of time. There's not really that temperature Delta, that temperature difference. You can't do the duration, a big part of what I'm taking away from the benefits of sauna, particularly on the cardiovascular front is you need 20, 15 to 30 minutes in this environment and you get this peripheral heart action.

Robb: The heart rate gets up to 150 beats per minute. And for the volume metric loading and unloading of the heart, it's effectively like low-level cardio. Clearly you're not working the muscles in the same way, but there's a case to be made that you're getting a cardiovascular stimulus, there's angiogenesis in our vascular bed and whatnot. And so

there seems to be something magical about that longer duration. The way that you could do a longer duration in water, you need something warmer than body temperature. So let's just say 100 degrees. You could probably motor that for a decent period of time and it will feel warm, but it doesn't feel hot, but it probably, at some point would raise your heart rate. But I just don't think that it's going to be quite the same.

Robb: I know for sure there are undoubtedly benefits to doing a hot water immersion relative to a dry sauna or maybe some of these infrared saunas and whatnot. But I think that that big temperature differential is an important factor in this story. And at the end of the day, if the best that you can do as a hot bath and just write that out as best you can, then that's fine. If you live anywhere sunny and warm we're now in a situation where if you just go park the car and point the wind screen Southwest or whatever it's going to get damn hot in there. Keep the windows rolled up, bring a hammer in case the door locks on you and sit on a beach towel. So you don't ruin the upholstery in your car. There's other options until things start opening up. I think maybe in some cases, do the best job you can with what you have.

Nicki: Baths are also very relaxing and can help with stress and help you wind down.

Robb: But you know in the whole heat shock protein activation and stuff like that, I don't think it's the same. I did some poking around on this and it's just not, my sense is it's that big temperature differential, and then also the duration that you're able to experience it. And again, if the water is much above, maybe 105, most people can't handle that for very long. It's like five, maybe 10 minutes and then you're nauseous and you feel terrible and you're out of there. And so it's not really long enough to get that peripheral heart action type activity. And then the flip side is if it's just a little bit warmer than your body temperature, and you can write it out for a while, then it's not really that much hotter. So you're not getting that kind of effect.

Nicki: Gotcha. Okay. It's time for the Healthy Rebellion Radio trivia. Today's trivia sponsor is Drink Element. Drink Element is giving a box of element recharge electrolytes to three winners selected at random who answered the following question correctly. And Robb, you put in this question and it's so boring.

Robb: Well, you can pick a different one if you want.

Nicki: No, we'll do it because it's right here.

Robb: Damn me for doing some of the work that Nicki does. I'll never ever.

Nicki: I was stumped on a question that you filled it in. And I remember seeing it before we record and thinking, gosh, I'm going to change that to something else. And then I didn't do it. So now we get this very boring trivia question.

Robb: I will never help in the future. You just solve that problem for sure.

Nicki: Robb, what is your favorite color?

Robb: Cobalt blue.

Nicki: All right. Folks, cobalt blue go to robbwolf.com/trivia. And give your answer-

Robb: Trivia question to be what is the last time that Robb was helpful in the Healthy Rebellion Radio?

Nicki: Episode 30?

Robb: So either way, episode 30 or cobalt blue we'll work.

Nicki: Those will be the winning answers. Okay. robbwolf.com/trivia enter the answer and we'll randomly select three people with the correct answer to win a box of element recharge electrolytes. The cutoff to answer this week's trivia and be eligible to win is Thursday, May 28th at midnight. Winners will be notified via email, and we'll also announce the winners on Instagram. And this is open to residents of the US only. All right, speaking of electrolytes, we've got an electrolyte question from Katie. Hi, Robb loved the podcast. We'd love to ask a couple of questions. I follow low carb and am currently breastfeeding. I'm wondering if it makes sense, if that makes it more necessary for me to take an electrolyte supplement. How does one know if they are low carb enough to need one? I'm also wondering about insulin sensitivity and the best way to test this CGM, fasting insulin C peptide or A1C. Thanks so much.

Robb: Katie snuck in a lot of questions there. I love questions like this, where it's actually very brief, but you're like there's 15 different things done pack with this. In general, we could probably make the case that breastfeeding probably increases the need for hydration broadly. Something that people forget, though, when we say hydration, this became synonymous with water. But when you look in a textbook of medical physiology, hydration is the electrolytes that come along with the water. And this is one of the big problems that I think people get into these days is we pound a lot of water. We pound a lot of beverages and there's not really any electrolytes in there. So like I'm drinking a pretty good size tea here, but I've got an orange flavored electrolyte in it because I am low carb keto, so pretty low carb, but I definitely need that.

Robb: I definitely feel better. And as knuckle headed as I am, I will start motoring through my day. And then I'm like, "God, I feel bad. Did I eat something weird?" And it's like, "Oh, I need some electrolytes." And then I'll go drink some electrolytes and I feel great. The need for electrolytes, it varies from person to person. Like we've seen some people that are on the lower carb side of things and they seem to still be sodium sensitive, both with GI reactions. They get a little disaster pants stuff. And then also some people seem to see a little bit of hypertension and it's really rare in these lower carb scenarios. Typically, we see hypertension and sodium retention, fluid retention, more in a hyperinsulinemic state. but in general, like unless you're one of these outliers, the data suggests that about five grams a day of sodium intake is actually the best for all cause morbidity, mortality.

Robb: And then we could see sodium needs get as much as two to three times higher than that based off size temperature, exposure, humidity, and a host of other factors. And this is kind of some American council of sports, medicine guidelines type stuff like very Orthodox, not fringy at all. But in this rush to demonize sodium, which is a really common factor in processed foods, we forgot that sodium is an essential nutrient and we maybe need more of it than what is has generally been appreciated. I think that five gram level is completely reasonable as a starting place for folks. We've had some remarkable feedback from breastfeeding moms that their volume and productivity when they are supplementing.

Nicki: Their milk production production. Yeah. We've had some exclusive pumpers that have sent us pictures of their bottles of milk after pumping pre-sodium intake. And then the following day after supplementing with sodium, supplementing with element and the volume is just shockingly different. I ended up exclusively pumping with Zoe and gosh, if I had known that eight years ago, that would have been a lifesaver for me. Because it's a rough spot if you have to have you have to do that. But so anyway, that's something to keep in mind too. It can definitely... we've got lots of anecdotal evidence showing that it's helpful for milk production. Okay. Robb, what about her questions on influence-

Robb: The question around influence sensitivity. Part of my question around this is why do you want to know? What are we going to do to affect this one way or the other? I think going into testing with kind of a goal, sometimes it's just kind of like, I want to know where I am and that's fine if she is still in the breastfeeding phase sleep deprivation could really skew this. I would just keep an eye towards that, but it also can help inform, like right now might not be the best time to do a bunch of carved vendors. If you are still kind of stressed out and sleep deprived, I'm leaning evermore heavily towards the LP-IR score, the lipoprotein insulin resistance score. It tells us so much, it tells us our cholesterol levels, our lipoprotein levels, the relative ratios, and it also via pretty slick bit of mathematics and science. It gives us a very good approximation of what our insulin sensitivity is.

Robb: So the LP-IR score using the data that came out of the MESA studies has been correlated with the home IR, which is total area under the curve of insulin, it had A1C incorporated into it. using LP-IR plus A1C plus a fasting glucose gives us a really nice way to triangulate in on things. And then if you just kind of are aware, if you eat some carbs and you feel good, then you're probably more insulin sensitive. If you eat some carbs and you get the hypoglycemic, like peak and crash, probably less so, but that LP-IR score gives you a really concrete number. And if it's poor, then there's a risk associated with that. Both with regards to developing type 2 diabetes, and cardiovascular disease.

Robb: But if we change that score, if we improve it, that Delta, that change tells us a risk savings. So it's a very valuable number and I lean heavily on it because it's a one stop shop. You get a lot of information out of it. Whereas like a fasting insulin just tells you your fasting insulin like that. That's cool. And you could do fasting insulin plus A1C plus fasting glucose. And that gives you a really specific picture on that alone. But looking at the LP-IR score gives you, in my opinion, just about everything you would care about that insulin piece. Plus it talks about systemic inflammation. Plus it looks at our

cholesterol and lipoproteins status. So it tells us a lot. And honestly, I think the LP-IR score is cheaper than doing a fasting insulin assay.

Nicki: Okay. We are already at question five for this week from Andy, keto and dopamine and cortisol. Good morning, Robb and Nicki, I've been listening to your podcast since March and recently joined the Healthy Rebellion. I really enjoyed the Ziva meditation broadcast and I greatly appreciate the COVID salty talk. I was out for a walk and laughing my ass off at some of the comments. Please keep up the dark humor. I greatly appreciate it. I've been a fire fighter for 20 years or so have been eating paleo for the last 10. One of my CrossFit firefighters got me introduced, but I've always had an issue with the rate weight around the middle.

Nicki: We work 48 hour shifts and sleep loss is a common thing. I do my best to take naps at work and I'm trying meditation to balance it out. I've also struggled with depression and recently found a good counselor. My question is with the sleep and depression issues, does this cause a cortisol response resulting in the weight around the waist and can keto diet help to balance this out? Thanks for putting together the Healthy Rebellion, what a great resource.

Robb: Thank you. It's interesting. So the work that we did with the Reno Risk Assessment program because of the hypervigilant state, that police military firefighters experience, and it's interesting with the firefighters. I've heard tell that like in a 48 hour shift, folks may go out on as many as like 30, 40 calls, depending on what the-

Nicki: The activity is like.

Robb: -location, that's just like a grinding schedule because you just start to relax and then in the back of your head, you're like, fuck, something's going to happen and sure enough, it does. And then you're you're up and Adam, and Dave they've changed things a lot in the past. It was like this blaring siren that woke the firefighters is fucking killing them because they're already sleep deprived. So now it's a much more gentle waking. Some of these places have a situation where the lights will slowly start turning up. So they're trying to make that like, 'Hey, you got to go save somebody's life.' A more gentle on ramp versus just like shooting them out of a cannon. This stuff is no joke. It's a really big deal.

Robb: What's interesting is when we look at the metabolic health of folks in this hypervigilant state, not infrequently from standard testing. They don't look that bad. Cholesterol might be a little high blood sugar might be a little high, but folks kind of fly under the radar. And again, going back to the question we just had, the LP-IR score is really interesting in that it will show insulin resistance and systemic inflammation very early on that 10, 20 years early, we start getting a picture into this stuff.

Robb: And are we going to be able to perfectly fix the sleep in these people? Probably not. Are we going to be able to dramatically improve their hypervigilant state? Probably not. If your cop or a firefighter, you need to be on or you're going to die and other people are going to die. So when it's time to ratchet it up and be hyper vigilant, you have to do that.

Those two things we can't tweak those levers too much. We can help people to exercise. And I think lifting some weights and doing some cardio type stuff CrossFit in these contexts, I think is a disaster because unless you can do it in a way where you mainly maintain an aerobic pace, if you're writing names on the board and it's a fucking bloodbath competition, it is a disaster.

Nicki: You're doing a Fran and fight combat.

Robb: You've already dug a deep hole. You're just expanding your grave by doing that stuff. And so as cool as CrossFit is for many scenarios, I think it is completely inappropriate for these hypervigilant States, unless you're taking it and you're saying CrossFit inspired. And so maybe you do two minutes easy on the AirDyne and then you do five deadlifts and five standing press, and you do 20 minutes of that. And it's an aerobic pace. Cool. I'm okay with that. But if you're trying to compete against Charlie and everybody else, that's just not going to work. It's just going to bury you that much worse.

Robb: Finally, super long drawn out answer, but the exercise is a lever that we can use to tweak this whole story to some degree. And then it really boils down to food. And if somebody is insulin resistant from sleep deprivation in a hypervigilant state, then the carb control is kind of the last thing we've got. It's like the graphite control rods that we use to control a nuclear reaction. That's it, that's what we've got. Exercise and food become the things that we actually do have control over. And not everybody needs to be keto. But usually figuring out where your carb tolerance is. This is maybe a case for doing the seven day carb test or a day at a minimum, just doing a little bit of post meal subjective, but also doing a little bit of blood sugar testing. And it's like, okay, white rice, if I'm going to have that, it needs to be a small amount. Post-Workout those sorts of things.

Nicki: Yeah. And really focusing on your protein, trying to get as much greens tubers that you tolerate for mainly for your carb sources. If you're-

Robb: To the degree you're doing it, getting as nutrient dense as you can. Yeah.

Nicki: Andy, thank you for the question-

Robb: And your service

Nicki: -and your service. Absolutely. And we'll see you inside the Health Rebellion. I think that was our last question babe.

Robb: It was.

Nicki: It was. All right, folks, thank you so much for listening. Be sure to check out our show sponsor Four Sigmatic mushroom coffees, mushroom Cacaos, mushroom elixir mixes and all of it @foursigmatic.com/rebel use code rebel for 15% off. Please share this episode and leave us a review. Wherever you go to consume your podcasts and you might be our next Healthy Rebellion Radio t-shirt review winner.

Robb: What if I go to the bathroom to consume my podcast? Or you're saying download?

Nicki: You can write it on the wall. I just know that you might be setting a bad trend for our kids.

Robb: Okay. Fair enough. Okay. Folks, take care. Bye.

Nicki: All right.