

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

Robb: Welcome back one, all. All, one.

Nicki: One, all. All for one and one for all.

Robb: Something like that.

Nicki: Good morning, everybody. Welcome to Healthy Rebellion Radio episode 113.

Robb: Wow.

Nicki: That's like all for one and one for all, 113. Nevermind. Robb's shaking his head and rolling his eyes.

Robb: I'm not going to say what I was thinking.

Nicki: Good.

Robb: Yeah. It's probably better this time.

Nicki: Yes. Let's see here. Hope everyone is doing well and hanging in there today is Wednesday, June 15th, I believe.

Robb: Yes.

Nicki: And gosh, the world is kind of in a state of unravel, I guess. People are anxiously awaiting some meeting that the Fed is doing to see what that means for the financial outlook of the United States. And I guess that probably has a lot of knock on effects around the world.

Robb: Might have a little influence there.

Nicki: So we'll see. I know there's a lot of stress and anxiety and all that. So anyway, hoping that everybody remembers to go outside, if it's not pouring down rain where you live.

Robb: Which it was here yesterday and we just put on rain gear and said, "Fuck it," and we did took the dogs on a pretty epic walk in the rain. And everybody lived to tell the tale.

Nicki: We did. We had some soggy paws, but we were able to mop those up and all was good. So anyway, and then Robb informed me the other day that you need to have 12 hugs a day to-

Robb: To thrive.

Nicki: To thrive.

Robb: Eight to live.

Nicki: Eight to live, 12 to thrive, which I'd never heard of that metric before.

Robb: It's from the Creepy McCreeperkins School of Creeping.

Nicki: Really?

Robb: No.

Nicki: Sounds like-

Robb: It was some kind of hippie website, but I've heard stuff like that. And between you, the kids, the cat and the dog, if I weasel in 12 good hugs a day, I'm probably doing better with all that.

Nicki: But it's actually something that we've been more conscious about. Like Zoe came up to me the other day. She's like, "Mom, I need a hug. I'm only at seven." It's awesome. So anyway, if you're feeling down, implement the 12 hug a day-

Robb: There's just this hilarious couple of different dark humor memes where it's like Pennywise down in the gutter and it's like free hugs or some molester van and it says free hugs on it.

Nicki: Okay, stay away from that. We're not advocating for that. Just family, friends, acquaintances, but no creepy vans.

Robb: Okay. Perfect.

Nicki: Let's see here. News and upcoming events in the Healthy Rebellion, we have a food preservation class coming up next week on the 22nd. So that will be fun. And also, well timed because I think a lot of people are paying attention and more keen to have a little bit more resiliency in that food preservation area. So feel free to join us there. We also have a wrecking challenge in the month of July. So we're going to be tracking mileage, shooting for 30 miles for the month of July, which for some of you that might seem trivial, for others, 30 miles might seem like a big, big, big challenge. So clearly, people can do more than the 30 miles, but we chose a number that we thought was doable and attainable for everybody. So if you'd like to join us in that challenge, join the Healthy Rebellion. That's join.TheHealthyRebellion.com. All of these events are free for members and we'd love to have you join us. And I think that's all of my housekeeping items. What do you have for us, for a news topic?

Robb: So it's a Wall Street Journal piece, which some people like that, some people don't. But the title is, Climate-Change Censorship: Phase Two. And it's talking about... So let me read a little bit from. And I apologize. The last show we launched and just some of these things, people will say Democrat, and they'll say Republican, or they'll say progressive. And oftentimes, people will just freak out once you say that, like if you're kind of-

Nicki: If it's your party-

Robb: If it's your party that's being addressed and they just check out. And I apologize for that. I don't choose these things for that. I choose it because I think that this is actually

important. So here we go. Progressives first demanded that social media platforms silence critics of climate alarmism. Now White House national climate advisor, Gina McCarthy wants them to censor content on the cost of a force-fed green energy transition. And that really lays this stuff out. There have been folks, like Steven Koonin and others who have, Matt Ridley, very credible people who have raised the question. They've raised the question, is the worst case scenario that's being laid out around climate change, really what the science says? And by and large, what you find is that these folks go back to the original research and actually cite the upper and lower confidence bounds of what the projected temperature changes could be and what the implications could be with sea level rises and whatnot.

Robb: And what we find is that there are a huge differences between what the science actually says and what's being reported in the media. And the media would have you believe, well, like Al Gore said that New York was going to be underwater by 2020. And clearly that's not the case. And again, I'm not in the, we don't need to do anything about climate change. I think we do need to do things to prepare for what will occur on the change. But I think that what we're being goaded into it, are dumb responses, to be honest. And part of our ability to make good decisions involves having good discussions. And ever more frequently, it's becoming difficult to not only raise questions around are the claims about, say the total magnitude or the total severity of this situation accurate as per the science that's actually being published.

Robb: Now, many of the trodden out solutions like quote, green energy or renewables and whatnot, which I'm a fan of up to a point. And because I'm a decent student of physics and thermodynamics, it's only up to a point and only under certain circumstances, I don't see them as, as being complete and total solutions to this whole story. And that's what is largely being suppressed at this point is discussing the actual real cost of say, like going 100% into renewables. And it's been interesting when I've raised topics like this on Twitter, which I've been on Twitter more often, because it seems like there's actually a little bit more thoughtful discussion over there at this point. I don't know if it's because I was gone for so long that nobody cares anymore. Nobody sees my stuff, but it seems like the degree of interaction I have is certainly much, much better than on Instagram.

Robb: And I've just been raising some of these questions, like why do we have ethanol in our gasoline, in the United States? Well, it's because it is a subsidized mandated process that doesn't save fossil fuels at all. It actually costs more because it costs more energy to make a gallon of ethanol than what you get out of it. And it's stuff like that. I had a discussion with some folks the other day and they were crowing on and on about the remarkable shift towards renewables in say the UK, in particular Germany. And I pulled up some articles on that, which I had been familiar with and following. The renewables are wood pellets that are produced in the United States and North America.

Nicki: Then shipped over to Europe.

Robb: And then shipped to Europe. And what's fascinating about that is that there is no net lifecycle analysis done on this. There isn't, "Hey, what's the total carbon footprint? What's the total energy input, relative to outputs on this thing?" All that, which is terrible by the way, because palletizing wood and shipping it, a good fraction around the world, isn't actually a particularly energy efficient process. All that matters is that quote, renewables, are being used versus say coal. And it gets so thick and layered, and I'm not an expert on this stuff. I continue to study it. I would consider myself journeyman in most of this, but I have enough background to be able to read some literature on the topic, or at least look at some claims and then know where to look to suss this stuff out.

And it's fascinating. So you've got the challenge of it's incredibly inefficient to palletize this wood and then move it across the world.

Robb: There's no consideration that also these wood burning electric plants are fractionally efficient compared to evil, coal burning plants. The coal burning plants are close to 40% more efficient. And I'm not saying you got to do coal or whatever, but we should at least have a discussion around that stuff because it's being presented that, oh, we've moved to renewables and everything's good. Don't look behind the curtain. And it's ridiculous. If climate change really is important, if it really is this thing of concern and it's occurring to me, it's a little bit like one must get the vaccine. If getting the vaccine really is the only solution, then we should be able to have a discussion around that. And it should be obvious that it's the only solution. And it's occurring to me in this circumstance that if renewables are the only solution, then this should be an easy discussion, then. We should be able to easily get in, have as much discussion around this stuff as we want, because it's be obvious at the end of the day.

Nicki: That it's the best option.

Robb: That it's the best option.

Nicki: Right. But then trying to hide it, or censor the conversation is kind of a red flag.

Robb: That should be fucking suspect. That should raise some suspicions around this. So Wall Street Journal clearly has a political bias. Take that with an understanding, but the ironic thing is that whether we're talking about our vaccines, a net positive, or a net negative, and it will probably depend on who you are and what situation we're talking about, or how we might want to navigate different aspects of climate change, ironically, it's mainly kind of conservative news outlets that even allow for some type of discussion right now. So take that as you will. Also, just file this in the, we need open discussions about these complex systems topics if we're going to really get our arms around them and do anything important about it. And not just flap our gums and potentially make decisions and spend enormous amounts of resources in directions that do nothing for us.

Nicki: So once you go down one path, it's hard to unwind and go opposite direction. Before you choose the path, you really want to have a really clear picture that is-

Robb: Really what you want to do.

Nicki: The best case scenario, or the best path available.

Robb: Or you start creating situations where, hey, we're going to experiment. We're not just going to uniformly enact one policy across everything. And really quickly, I'll use an example of this. Bill Clinton, I think his second term in office, there had been a push for some welfare reform in the United States. And instead of enacting one flavor of welfare reform, Bill Clinton kicked this back to each individual state and said, "You all go figure this out." And there was a period of time that was given for the states to figure out different ways of tracking and incentivizing. It's basically you had 50 different reaction vessels with different experiments. Some of them were abject failures, and a couple of them were really, really good. And they were assessed and then they were brought up to the federal level.

Robb: And what was ultimately, which now this is like libertarian wet dream doing this. And this was, at the time, a quote progressive left leaning president, but which by today's

standards, he looks like a Ron Paul, or something like that. That's all I'm suggesting is that we have better discussions about this stuff. And if people were to say, "Well, how would you handle this?" I would do more experimenting. I would have more people tinkering with more options that we have open honest discussions about so that we can find better solutions because all the best solutions may not... What's best for Northern Europe may not be the best solutions for the Middle East, with regards to climate change and energy production and on and on and on. But what we get more and more and more is this homogenized response.

Nicki: One size fits all.

Robb: One size fits all, whether we're talking about diet or energy or whatever. And Christ, monoculture is a massive step towards death. I know that's sensationalistic, but the loss of diversity of thinking, of action, of the processes that we're doing. And we've been pretty monoculture from an energy standpoint, I guess, when we think about, quote, fossil fuels. But you've had different oil and all kinds of different oil derivatives, diesel, petroleum and all these different fractions, air, coal, natural gas, propane and methane. There is actually a remarkable diversity within just that story. And so maybe we'll want some type of diversity. Some places, if they're close to the equator and they're by the ocean someplace like Israel, maybe some sort of desalination plant that uses solar energy to make hydrogen.

Robb: And then that hydrogen is used to produce energy. Maybe that's a great spot to do that because you're almost 100% guaranteed, like 400 days a year of sunlight virtually. And maybe Norway, that's not a good option. Maybe Germany, that's not a good option. And so I do think that a diversified ecology of energy production is probably going to be the smart move going forward. And the way that the folks in power are pushing this, they don't want a diversified response, and we're going to be fighting tooth and nail the whole way. If we actually end up with that, it's going to be because we've fought and we've scrapped to get to that spot. It's not going to be because the folks that are in charge said, "Hey, peons beneath us, we need to have a nuanced discussion around climate change and energy and food and all these other things, so that we make sure that we have the most locally appropriate response and the most efficient process and whatnot." The folks in charge are not pushing that agenda. We are the only ones that will push that agenda.

Nicki: Probably lots of money to be made up for some-

Robb: Holy shit. All of the money is ready to be made.

Nicki: For pushing what they're pushing. So finding the best solution and going more localized doesn't line the coffers the same way.

Robb: My point has long been that if something is handed, again, I'll use the United States because I'm the most familiar with the way our systems work. If you really want to do something that's nefarious, you go to the federal level to try to get some action going on. Because at the federal level, you potentially have the capture of the whole country. You really don't want to go trench warfare and go state by state, or county by county, or city by city. That is exactly the opposite of what you would want to do. If you had some nefarious process that you wanted to do, you would try to get it enacted at the federal level, because then you've bypassed all the state, county, local regulatory mechanisms. And so for folks, it is so interesting, and I got to remind folks, like historically in my head, I've seen myself as being this kind of left of center political animal. And now I find myself

like, no, you're actually this right wing extremist when you talk about climate change or whatever the thing is. So it's so weird. It's so odd for me.

Robb: But historically, I've seen folks that are progressive as being distrustful of big government, the Walmartian world is this evil thing that should be shunned. Now, I just seem to see the exact opposite. But if you really don't trust big business, big government, and all the rest of that, then decentralization is a powerful thing. You don't want to overly do that. There are situations or in circumstances where you want some centralized power and some activity and whatnot, but man, it's rare. It's raising an army, having a currency, which we barely still have, and stuff like that. Anyway, I'll shut up. But please do read this, please do share it and please at least have discussions around this stuff. It's going to affect you. It will affect your children, it will affect your grandchildren and potentially in profound ways. Like the way that we are allowed to feed ourselves, the way that we are allowed to heat or cool ourselves will be wrapped into this. Our access to medicines will be affected by all of this stuff.

Nicki: Okay. The Healthy Rebellion Radio is sponsored by our salty AF electrolyte company, LMNT. You've got muscle cramps, low energy or fatigue? You just might need more electrolytes, sodium in particular. LMNT makes it super easy, not to mention tasty, to get the electrolytes you need. Choose the value bundle and buy three boxes and get the fourth box free. You can mix and match your favorite flavors and you can even add our seasonal flavor and fan favorite, grapefruit salt, which is still available for a limited time. Just go to drinkLMNT.com/Robb. That's drinkLMNT.com/Robb.

Robb: But don't slash Robb.

Nicki: Don't slash.

Robb: Yeah.

Nicki: But you could slash and burn.

Robb: Oh man. We may, for the first time in the history of the podcast, actually do an edit to remove that because my ears are actually red. That was so embarrassingly silly.

Nicki: I'm just embarrassing like that. All right. Three questions today. Our first one's from Andrea on protein for kids. "Hello Robb and Nicki, love the podcast and really appreciate the time and effort you guys put into your work for my benefit. My question is, how much protein is appropriate for children at different ages? I ask this because I understand that as an adult, I need one gram of protein per pound of lean mass. But when I look at the Googles for info on kids protein, it says half a gram per pound. This surprised me as I just assumed they would need more because they are growing. The sources I looked at were not where I normally go for my health advice. So I'm unsure if they are being influenced by the vegan agenda, or if I really am feeding my kids too much protein. Any clarification you have would be great."

Robb: So Andrea, really good question. We actually went over this incredibly thoroughly in Sacred Cow. So you might buy that or you might just grab a copy and thumb through it. But the long and short on this is, and it's cool that you made the distinction that she mentioned this kid info is not the usual places that you go for this other info. Because if you look at recommendations for adults around protein, it's about half what I recommend. Most people who make or have made money by helping people improve their health and improve body composition recommend about double the protein that the powers that be recommend, I guess, the vegans would-

Nicki: The powers that be now recommend that we have like only two pounds a year per person.

Robb: That's neat. Then within that, they're saying, "Yeah, get your protein from beans and rice," which like Diana points out in our book, that to get 23 grams of protein, it would cost us about 200 calories of like a lean red meat source or 800 calories of beans and rice. And this is kind of the trap that you get in. So yes, Andrea, the recommendations that come from August, reputable sources are off by about 50%. You're absolutely not feeding your kids too much protein. The kids can't eat too much protein. They will stop eating before they eat too much protein. I guess cost becomes a consideration at some point. But if I'm going to burn some extra money somewhere having my kids eat good quality protein is probably one of the least concerning places that I would find.

Robb: And this was Diana's section of the book. So she's much more the expert on it. And I don't have it straight off the top of my head, the way that she does. But again, if you go into Sacred Cow and poke around it, where we get the recommendations from, what those are based off of, it about doubles the baseline recommendation. And doubles, plus a little bit more for kids. So that about a gram of protein per pound of lean body mass up to a gram of protein per pound of body weight is a good upper and lower end bracket. If you want to be lean and healthy, I wouldn't go below that. And up to the gram of protein per pound of body weight is a fine place to be and some people actually do quite well significantly above that. We've never really weighed and measured for our kids, but they're they're probably a bit more than a gram protein per pound of body weight, I would guess.

Nicki: We should weigh and measure.

Robb: We should for a couple days. But my gut sense is that they're probably a bit more than that. Nicki and I are both literally average height. You're maybe a little bit taller than average height for an XX chromosomer. I'm 5'9, which is exactly average height for males.

Nicki: I 5'7.5 And a half. I'd like to say 5'8. But without shoes, 5'7.5.

Robb: And three quarters. But you're probably a little bit taller than average height, but both of our kids, and they're not done growing, but-

Nicki: At least for this stage, at this age, they are off the charts.

Robb: They're giants. They're like 98th, 99th percentile on height. And I 100% attributed that they've eaten a lot of protein the whole way through. So, okay. Did we cover that one? I would dig into Sacred Cow a little bit. You're doing fine. The kids are not overeating protein. The case that we make in the book is that the recommendations that you see from the American Medical Association, the American Council of Dieticians is flat ass wrong. And it is wrong from a neuroregulation of appetite perspective, it's wrong from a nutrient density perspective, and it is not helping people to be lean, metabolically, healthy and functional.

Nicki: Okay. Our next question is from Craig on his mattress transmitting radio waves into his brain. "Hello, Robb and Nicki. Longtime listener from back in the day. I stuck around like a leech as I had nowhere else to go. One of my wife's health quote, fill in the blank people, stated that coils in box springs can cause cancer as they magnify the radio waves coming from the outside world, or Mars. You remember the movie Mars Attacks, it can happen. My background in electronics states that the opposite will happen. It will

dampen the waves like a Faraday cage. So what gives?" And then he gives a link to a Scientific American piece.

Robb: Yeah. It's funny. Someone pinged this to me a couple of weeks back and I should have probably thrown it, at least in the news. Topic du jour, but fortunately Craig saw this one. It is interesting because it is on the Scientific American blog and I'm not an electrical engineer. I've done the physics around electromagnetism as part of my chemistry and going through the physics classes and whatnot. And I couldn't make heads or tails out of it. It seemed completely counterintuitive to me. And they laid this out in the piece, basically talking about increasing rates of cancer from people who sleep on their left side versus their right side. And then Japanese populations, which sleep on Tatami mats versus more westernized populations that sleep on more box spring type situations. And they attribute the delta and cancer rates to the fact that the box springs, in their minds, could act as like a radio wave focuser.

Nicki: Is this like one of those things that like people who eat julienne carrots have a higher likelihood to get eaten by a shark? There's so many other variables that could go into a cancer diagnosis than the side of the bed you sleep on and the type of mattress.

Robb: The left sleeper versus right sleeper. Yeah. And what was interesting about the Scientific American blog, it kind of talked about sleeping on the right side versus the left side, and there's this big disparity in cancer. And they thought that it was because sleeping on your left side puts a little bit more pressure on the heart and how sleeping on my left side puts pressure on the heart leads to cancer. There were so many wacky mechanistic jumps in this article. And again, it was in Scientific American, which I would think that they've at least got a couple of engineers, maybe somebody to oversee this stuff.

Nicki: Editorial review board.

Robb: Yeah. And so the jumps were just crazy. And to Craig's thought, my first thought was, well, I guess this thing could become like a big receiver. But when a piece of metal receives radio waves, it transforms the radio waves, it gets transferred into electrical impulse. And I guess that electrical impulse going through the coil, in some way, or going down the... so reverse engineering this, you turn on your car radio and you're getting radio waves from a radio transmission tower. The radio transmission tower, it's pumping electricity into a metal structure in such a way that then the metal structure produces electromagnetic radiation. And that radiation is tuned to a particular frequency based off of the height and the dimensions of the structure. This is kind of how you're able to change the radio frequency in that circumstance. You can do with other mechanisms in other circumstances.

Robb: But then the way you receive it is you need a piece of metal that is similarly the length, the antenna needs to be of similar length. And when it receives that electromagnetic radiation, it turns it from an electromagnetic spectrum back into electricity, basically moving through the metal. I don't see how that causes cancer. I did my piece at the beginning of COVID, looking at 5G radiation and the supposed links with all these different health things. And I still am at a loss how the bulk of wireless... Maybe I'm wrong. I really hope that I'm wrong because this would be super consistent with all of my evolutionary biology and evolutionary discordance type stuff. But laying on top of a municipal transformer node is probably not good for health because you have a massive electromagnetic field that you were existing in. But this thing drops at an inverse square where if you are four feet away, it is four times less powerful than where you were at two feet away.

Robb: And if you're at 200 feet away, it's four times less than if you're at 100 feet away. So the electromagnetic radiation from these things drops dramatically. The efficiency of all of our broadcast stuff and receiving has gotten better. So we actually use less dense energy to transmit than what we have in the past. And then you look at what does and doesn't receive these electromagnetic radiation and impulses.

Robb: And like in the case of wifi, to the degree that we absorb any of that stuff, it's absorbed in the epidermis of the skin. And to the degree it influences us, it creates a tiny, tiny amount of heat, like an infinitesimally small amount of heat that our circulatory system wicks that heat away and it infinitesimally heats our body. If you jammed a super high dose of that stuff at us, you could barbecue somebody like a microwave laser gun, basically. I'm losing my own mind trying to think about this. So yeah, Craig, I'm in the same camp as you. I don't really get this. I'm kind of shocked that Scientific American did this piece. And I don't know what else to say. Any thoughts, wife?

Nicki: No.

Robb: You were very concerned early on about wifi.

Nicki: I don't like having the wifi on at night. I like to turn it off. But that's just-

Robb: But you don't like it so much that you actually go get up in the middle before going to bed and turn it off and then turn it back on in the morning.

Nicki: I haven't since we've been here, but I did in Texas and I don't know why. I used to turn it off all the time in Reno and in Texas. And I don't know why since we've been here, I kind of dropped that habit.

Robb: Don't know what to say. Don't know what to say.

Nicki: All right. Our third question this week is from Tim on a Biogenic view of health. "Hey Robb, just first want to mention, I've been a huge fan for years. I've read *Wired to Eat* and *Sacred Cow*, have listened to many of your podcasts. And I just love you as a human, even though we've never met. I can tell you have a really big heart and you genuinely want to help the world to the best of your ability. My question, I'm curious about your thoughts on Ray Peat's bioenergetic view of health. Maybe some context for listeners. The Biogenic view, at a high level, is about increasing energy at the cellular level and decreasing stress, which in turn would increase your metabolism. Increasing energy/metabolism gives the body more resources to perform all the necessary functions the body needs to perform like digestion, healing, fighting illness, et cetera."

Nicki: "To do this, one of the main things he recommends is to eat sugar since that is the most preferred form of fuel that our cells use to convert into energy. The sugars that are generally recommended are simple sugars like sucrose, which is found in fruit, fruit juice, honey, and white sugar. He recommends these sugars because they are easily absorbable, digestible and converted into energy. He believes low blood sugar increases stress hormones like glucagon, adrenaline, and cortisol, increases free fatty acids and increases tissue breakdown and fat release to provide fuel for the body. This leads to low energy/metabolism/thyroid function, and ultimately puts us in a chronically stressed state. He also argues that the problem is not sugar, but everything else that we consume alongside the sugar in our modern diets, particularly polyunsaturated fatty acids being the most destructive to our bodies. In a previous podcast, you mentioned briefly that eating a ton of sugar potentially would work only if you lived in a metabolic

ward, but since we don't, it sounds like you don't think this approach would work. Curious about why you think this and where you think this view falls apart."

Robb: So Tim and I had a nice discussion on the Twitter about some other stuff, and then he threw this one to me, which was interesting. And I'm glad he did because I kind of have reflected on it a little bit. And I guess at the end of the day, I'm less prickly about the Ray Peatian view of this stuff, as a potential option that would work. Here's some of what I would push back on. Low blood sugar is absolutely a problem when you are a sugar burning machine. If you are reasonably fat adapted, and particularly if you are keto adapted, low blood sugar is a nonissue. It doesn't happen. And this is one of the things that I think that the Ray Peatian folks just don't get. There's a very different scenario if you are even marginally fat fueled.

Robb: You look at CGM traces of people on a ketogenic diet, particularly people on a carnivore diet, it doesn't change. It is just rock solid. And because the body can produce glucose from a whole host of things, gluconeogenesis from amino acids, from the glycerol backbone of fats, or triglycerides more specifically. And that is not inherently a stressful process. Early in the keto adaptive state, cortisol is elevated, epinephrine is elevated. If one is properly electrolyted, in particular sodium, that is largely mitigated. And then over the long haul, you don't see dramatically elevated cortisol, epinephrine or anything else in folks that are keto adapted. And we can look to children that have been on long term ketogenic diets for epilepsy, for examples of this. We have people that have been medically monitored, ketogenic diet for 10 plus years and we don't see Cushings type disease in these folks, chronically elevated cortisol levels. We don't see anything that would normally be consistent with these chronically elevated cortisol levels.

Robb: So I think that these folks, the Ray Peatian and folks are being really selective, that they're taking the hypoglycemic state of somebody who is carb dependent, primarily carb dependent, and they're applying that to scenarios in which people are carb independent, effectively. Again, under a carnivore kind of circumstances, people, and some folks like Richard Nikoley and other people have gotten in and gotten all prickly about this, or like even in muscle meat, there's some glycogen and there's some carb. Okay, fine, fine. You win, you win, I tap out. Fine, there's some. But by and large, they're not eating like any type of dense carbohydrate source.

Robb: I would still argue that 98% of the blood glucose that is seeing the interior of our vascular milieu is coming from gluconeogenesis. It's a very slow controlled process. And for some people, I think that's a really powerful control rot. When you look at kids who are type one diabetics, and you look at what the recommendation is for the Bernstein diabetes solution, he's largely recommending a high protein, moderate fat, low carb diet. So that the glucose that they're not specifically gunning for ketosis, although ketones can be a bystander. What they're shooting for is the most stable, predictable blood glucose that you can imagine so that it makes it easier to manage exogenous insulin versus endogenous insulin.

Robb: And so these things all lead me to saying it's kind of bullshit that you're just going to paint low carb diets uniformly as some sort of a stressful situation. They're not appropriate for all people. They're not optimal for all circumstances. We've talked about that ad nauseam. But we've also discovered some things that's been really fascinating. Some of the metabolic work that these high level trainers do with MMA and CrossFit athletes and these folks, despite being lean, despite being ostensibly insulin sensitive, they become trapped in a glycolytic only metabolism because of the volume and intensity of glycolytic activity that they do and the amount of basically sugar that they

consume. And people have talked, like I had seen this empirically and I'm like, "God, it seemed like this person loses the ability to burn fat."

Robb: Now we have things like lumen and respiratory quotient and whatnot. And we actually have people, I think it was Alex Friedman interview, where... I forget who it was, but it was a high level MMA coach, lots of UFC athletes. And he was like, "Yeah, we have to be careful because these people will," he was talking about zone two cardio and the benefit of zone two cardio is that you burn fat. People end up in a spot where they can't access fat for energy because of the way that they eat and train and whatnot. So this can go 100%, and this situation can go the opposite direction. How stressful is it for that person who now is dependent every two hours, as he or she's blood sugar starts dropping, they have to eat because they can't access body fat for energy, not without a super gnarly crash and hypoglycemic state and then transitioning into ketosis. So there's that. That's all the stuff that I think is missing the mark in this kind of Ray Peat phenomena.

Robb: The bioenergetic thing that you need lots of energy to be able to repair cells and stuff like that, I guess there's something to that. But when I look around the world, the vast majority of people don't seem to be lacking in energy. They seem to be flush with energy. I think that Ray Peat, and I think it's Matt Stone and some of the other people that are pretty tight in that circle, they really scoff at this whole ancestral health model. And of course, they would need to scoff at it because it ends up blowing a bunch of holes in a lot of the stuff that they do. And I do think that what they recommend is efficacious and appropriate for some people under some circumstances. But I think that they end up purposefully just ignoring evolutionary biology, which is kind of like, how the fuck do you do that? How does any credible person discuss health at all and not have some steeping in the evolutionary biology of this stuff?

Robb: So I don't think that the vast majority of people are running out of energy. I think that they have an energy excess, as evidenced by folks carrying around too much body fat. I am not in the insulin hypothesis camp. I don't think that all calories are equal. They definitely have different metabolic fates. They absolutely have vastly different neuro regulation of appetite fate protein, carbs, fat, and the relative ratios and amounts and whatnot. Like how much are you likely to eat later? But that's an entirely different discussion than all the rest of this stuff.

Robb: Here's something that's maybe a little bit interesting. It's the Paul Saladino version, current version of his carnivore diet, which ironically is paleo, minus vegetables, basically. Lots of fruit, lots of meat, some honey. That ends up looking, to me, a lot like what Ray Peat would ostensibly recommend? It's like good sourced animal products and organs and fiddly bits and everything. Lots of fruit, because it's easy to digest. I don't know if the Ray Peat people get as wrapped around the axle of things like phytates and antinutrients and stuff like that. But that seems like a pretty good interpretation or iteration of what they're talking about, but still has a somewhat ancestral health orientation around it.

Nicki: Nice. Alrighty. That was our third and final question for the week. Thank you all again for joining us. Any closing thoughts, hubs?

Robb: I got nothing.

Nicki: Got nothing.

Robb: Just take care of yourselves, take care of the people you love and the people around you. I've really been going out of my way when I see people out and about to just say

hello, and actually ask a sincere question and try to make some contact with people. And try to do it in not a creepy Chester molestery way. But I think there's a lot of pain and I think there's a lot of fear and I personally am trying to do what I can, both online and in real life. I was a total dick to a guy the other day on Twitter, and I apologize to him and I sincerely apologize. And I've been trying to be kind and thoughtful and reach out to people, like even when I'm buying gas or something like that. So I'd encourage folks to do that. It'll make you feel better.

Nicki: Give 12 hugs a day and then you'll get your 12.

Robb: Maybe don't do that at the gas station.

Nicki: Not at the gas station.

Robb: Not the gas station I go to.

Nicki: Thanks for listening. Remember to check out our show sponsor, LMNT, and drinkLMNT.com/Robb. Have a lovely weekend. Get some sun, get some hugs and we'll see you next week.

Robb: Bye everybody.