

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.

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Robb: Welcome back, friends, neighbors, loved ones, wife.

Nicki: This is episode 180 of The Healthy Rebellion Radio. It's sunny here today. It's beautiful. Hi, Hubs.

Robb: Howdy.

Nicki: Howdy. We are gearing up for a-

Robb: An aventura.

Nicki: ... an aventura. My cousin and her family, they have four children, and Robb and I and our girls are going to meet up in Washington DC and do a big US history field trip.

Robb: It'll be a mostly peaceful field trip.

Nicki: No. We're going to see a lot. We're going to go to Mount Vernon, George Washington's house. We're going to go to the Spy Museum. We're going to go to the National Zoo. What else is on the agenda? The White House, the National Archives.

Robb: Did we make it in the White House?

Nicki: My cousin-

Robb: I didn't think that-

Nicki: The tour-

Robb: Or we just get to go buy it.

Nicki: We get to go buy it. My cousin and her family left yesterday, and they're having two extra days of sightseeing that we aren't participating in. Unfortunately, the day, when you book a tour of the White House, it's a big process. If you're going as a group, you have to spit your names, your social

security numbers, all these things, and then they get back to you a week before you want to go and let you know whether or not you get a slot. And they got back to us and let us know that the slot awarded to our group, we're still mid-flight on the way there tomorrow, so we won't actually get to do the tour, but they will. But we'll go by the outside.

Robb: Cool.

Nicki: Anyway, so it should be lots of walking, lots of learning, and we're excited. It's something that I don't think that Robb and I would have planned on our own and tackled on our own with just our kids. But my cousin, being the house of fire that she is and the organizer that she is, it'll be-

Robb: We-

Nicki: It's nice to tag along with somebody so-

Robb: Full of piss and vinegar and organized.

Nicki: ... piss and vinegar and organized in this department. And both her family and our family, since the kids are doing classical conversations as we mentioned in that homeschooling episode we did a few episodes back, the topic this year is US history, so it's very relevant to what the kids are learning. So anyway, we're recording this on Wednesday, March 6th. I'm trying to think if there's anything else, anything else up front?

Robb: Not a huge ... I've got a few things for the news topics. It's more than a topic but ...

Nicki: Okay. Well, one thing first. I did want to mention Coach Cinnamon Prime's Mindset Mastery Workshop course is starting next Wednesday, March 13th. I'm going to put a link in the show notes for that for anyone interested in checking that out. We mentioned it in response to a question. Gosh, I think it might have been episode 178, a couple of episodes back. Anyway, I mentioned it then and we weren't sure what the dates were, but the dates are now available and she is starting it on March 13th. So it's 15 weeks of coaching, tons of value, tons of amazing results come from going through this program. So if it's something you're at all interested in, go to the show notes, click on the link, read more about it. You can even do a call with her to just see if it seems like it's right for you.

Robb: And we personally have folks that we know that are as top of the food chain go-getters as you could get, who had great benefit from working with Cinnamon and folks who were just really struggling with the basics of life that got a huge benefit from it. So yeah.

Nicki: Okay, I think that's all I've got, so onto your stuff, HUBs.

Robb: So real quickly, I added more and more stuff to this. It just grew over time, but the first link is to a YouTube piece from Nick Norwitz. He's the PhD and also a medical student I believe at Harvard who's been working with Dave Feldman and Dr. William Cromwell and some other folks in that lean mass hyper responder world. And he has a piece, Six Ways to Lower LDL on Keto, and it's just fantastic information. He goes from just run-of-the-mill solutions like if you're legit lean mass hyper responder, adding in some carbs, also talks about the benefits of swapping out some saturated fat for some polyunsaturated fat.

It's interesting. He's a similar perspective that I've had, but he substantiated these feelings better than I have done, which is that polyunsaturated fats from nuts and seeds and non-damaged oils is probably a very different thing than getting seed oils out of a fryer or something like that. But he lays out the mechanisms behind why each one of these things might work, including that reduced meal time spacing can also improve this because the body isn't relying on shuttling energy around via packaged lipids. You're actually using some of the dietary stuff. So I think that's super valuable.

And then if anybody that listened to last episode, at the end of it, I was maybe having one of my existential crisis moments. It's been interesting in that I'm unsure sometimes where the leverage is that I should be pushing. There's that saying with the lever long enough, you can move the world. I feel like in the past when paleo was not a thing, I felt like I was one of the only people in the world that had this notion that a particular way of eating might super benefit autoimmune disease and stuff like that. And I really had a fire under my britches to articulate that because it felt like if that information didn't make it to the world, it would be a huge loss and I think it would have, but stuff like that is out in the wild.

I could croak. That's not going to change anything at this point. And so I really do think about what is it that I should be doing? I'm interested in health. I'm interested in this sustainability thing. I'm interested in the intersection of economics and social topics and really just trying to help people, trying to minimize suffering. I think a lot of the suffering that occurs is due in part to people having faulty operating systems. There's a lot of good intention that goes awry. I've really tried to stay off social media, and so my only crack-like scrolling thing that I have at this point is cruising through YouTube. And I at least, I feel like with that, I find somewhat interesting stuff and I listen to it, not the least of which is the Critical Drinker and Nerdrotic talking about the implosion of woke Hollywood and whatnot, but ...

Nicki: Which our kids call the critical slurper.

Robb: The critical slurper. Damn kids. But there was an interesting piece where Tom Bilyeu was interviewing Jordan Peterson, and they were chatting and they just had this moment where they laid out not all of the problems in the world but enough of them that it should liquefy your innards and leave you stunned for a

moment. And Tom asked Jordan, "Well, what do we do?" He had some great answers as he always does, I feel, but he had a couple of these lines, "Redemption is a matter of individual determination and how is that connected to the destiny of the world?" Jordan made this point. He's just like, "You go take care of you and unfuck you to the best of your ability and then help the people around you and help them help the people around them." And all of a sudden, you start getting-

Nicki: Like a domino effect.

Robb: You get this domino effect. And this will be an unpopular thing to say, but there are cultures out there that we see that are pretty good at this, right now, today, and there are cultures that are very not good at this and you see the people in these cultures suffer. And so I do have an interest in this energy sustainability, climate change topic. And I really, like Nicki and I have talked about how something like 85% of young people report significant anxiety around the idea of climate change because they feel like they do not have a future. They're being told basically that the planet is going to end, which the worst case modeling, the worst case scenarios, which have a lot of issues with them, but the worst-case scenarios of this story do not remotely suggest that the world is going to end.

Nicki: But Greta Thunberg said so and AOC and that other guy,

Robb: A lot of wealthy, famous people say that we're doomed, and those people still continue to buy beachfront property, which is really ironic.

So another thing popped up today, this guy, Tomás Pueyo, who gained some notoriety during COVID. He wrote that piece, The Hammer and the Dance, I believe something like that, which advocated for the two weeks to flatten the curve, which turned into two years to flatten everything. I like him. He's a smart guy. He thinks about a lot of different stuff, but he, in my opinion, oftentimes goes into these complex topics with this cocksureness about a relatively simple answer that just drives me nuts.

And it reminds me of Paul Volcker right around 2006, 2007 when he was being interviewed and people were just starting to make some noise about problems within the mortgage-backed security story. And he said that we have offloaded risk, that the way that they had folded this trench of mortgage-backed securities into that trench of mortgage-backed securities, that somehow magically the risk was gone, the possibility of problems were completely mitigated. And we're told this stuff around modern monetary policy and a host of other topics, and it's wrong. These people do not have God-like control over the economy. And we bring things up to brinkmanship and when they fail, we act surprised. And oftentimes, there's all kinds of unintended consequences.

But Tomás, in this Twitter post, which I linked to, he was making a very impassioned case that, and he said in part of it that, "If we don't do something,

we're going to burn," which is just the planet has existed-

Nicki: Very melodramatic.

Robb: Very melodramatic, and the planet has existed multiple times without any glaciers and any polar ice caps. And it's a very different world than when it has ice all the way down to the equator. And I would argue that the planet that doesn't have any ice on it actually harbors much more opportunity for life than the one that snowballed earth.

Nicki: It's covered in ice. Yeah.

Robb: And what Tomás is suggesting is this seeding of the upper atmosphere with sulfur dioxide in an effort to cool the planet. I have no doubt that this would probably work. I am super, super nervous about this being-

Nicki: Sounds like a great idea.

Robb: Sounds like a great idea. With the best of intentions.

Nicki: With the best of intentions, what could possibly go wrong?

Robb: With the best of intentions, what could possibly go wrong?

Nicki: Hat tip to Reason Magazine for that one of our episodes.

Robb: I don't even sometimes know where to start with this. I replied to him and I tried to be not too big of a jerk, but I made the case, why don't we focus on nuclear energy? Why don't we have a Manhattan Project around fusion power, sustained fusion power and make energy so cheap that if we want to pull carbon dioxide ... The problem with carbon sequestration right now is it's massively, energetically expensive and you end up dumping a bunch of carbon back into the atmosphere when you're trying to pull the carbon out.

Nicki: It just seems like, as we know, the human body is so complex. We know this with drug interactions. You give somebody one drug, it doesn't do only the thing that you think it's going to do. It has all these knock-on effects. So why is the biology of our planet any different? Oh, let's just put some aerosolized sulfur dioxide in the air to cool the planet. What other knock-on effects are going to take place that are going to be potentially catastrophic?

Robb: Well, we've seen some of this in the past like the mini ice age that happened in the 1700s, I believe, happened as a consequence of, at least in part, of a large volcanic eruption, and it was a year where there effectively was no summer. It continued snowing in latitudes above 30, 35 degrees north, south, continued snowing all summer. It never stopped, and a lot of people died and a lot of problems.

Nicki: Food production.

Robb: Food production.

Nicki: How does that change animal behavior, animal ecology?

Robb: Just on and on and on. And a planet that's warming will absolutely have issues. There will be things that we need to do to figure that out. But I've made this case before. The Netherlands has been dealing with climate change for close to 600 years. Two-thirds of that country is below sea level, but they've been building dikes and levees and doing different things to make that a livable, tenable situation. And part of the reason why they've been able to do it is that country existed in a spot where the industrial revolution occurred and they had the energy to do things in response to it.

And so this is some of the stuff that I guess this was a clarion call to get my shit together and get back into this. It's tough though because this climate change stuff, fuck, the vitriol that one receives from being like a diet guru is mild in comparison to being a climate change denier, which I'm not denying any of it.

Nicki: The climate is changing.

Robb: I'm just suggesting the climate is changing. Let's change with it instead of trying to control a planet like the shit that is ... There was a saying when people thought about sustained controlled fusion reaction that electricity would be too cheap to meter. And if you imagine a world like that, we lift the rest of the poor out of abject poverty. We have energy to do things like there's this thing called a ... like one of the problems with trash and plastics is what do you do with them? A bunch of it gets land-filled. A bunch of it ends up in the ocean. You can burn it, but standard incineration processes make their own nasty bunch of side effects.

There's this thing called a plasma incinerator that burns things at 7,000 degrees. It's very energy intensive, but it burns so hot that everything is just reduced to base elements. So even if you throw a battery in there, you're going to end up with just lithium at the end of it and stuff like that. And you probably wouldn't necessarily want to do that.

But the only reason why we don't have better solutions to some of these other problems is that the energy cost is so great. And when you look at nearly every problem that people face, whether it's inequality or just elevating the poor or access to XYZ scenario, it's because of energy and the knock-on effects that energy has on our economy. I will shut up here and we'll actually get into the meat of the show, but a bunch of interesting things happened right around 1970, 1971. The United States went off the gold standard. It was right around the time that there was a significant inflection point in the amount of energy that we get from fossil fuels. There was a time where people would barely scratch the earth and oil would gush out of the earth. And now, we're in this process of fracking where you have to pump water and everything below ground to push some of

these hydrocarbons out. And the delta between what you get out and what you put in is narrowing.

That process when it has happened before in cultures, in societies, the civilization dies. We've talked about this a little bit before on some shows where we talked about some of the challenges with wind and solar. I think those things are really cool in appropriate places, but I was just watching a John Stossel piece today where these guys have become millionaires in Minnesota because they got these super fat government grants to install solar there. And Minnesota is one of the cloudiest places on the planet.

Nicki: Yeah. I just going to say, how much sun do they get in Minnesota?

Robb: They get fuck all. And the guy, he was like, "I'm a millionaire now," because he had a bunch of land and because of the cushy grants that he gets from this stuff.

Nicki: It's like the misaligned incentive thing.

Robb: Yeah. And what it does is it sticks resources in places that are really inappropriate. This is where a market-based system, if something really needs subsidies to get it going, maybe the time isn't quite there for it. Yeah, anyway. So I just wanted to share that with everybody, and I am motivated to get back in and do more work in this thing. This Tomás Pueyo guy, I think he's super sincere and really thoughtful.

Nicki: Very certain of his position but not-

Robb: He is absolutely certain of his position and shit like this will kill us.

Nicki: Yeah.

Robb: People could push back and they're like, "Well, aren't you wrong on this?" But again, what I would lean into is that even the most extreme modeling cases around this climate change story is not actually portending doom for us. It portends change. It portends challenges, but goddamn, start seeding the atmosphere to cool the planet, shift 60 to 80% of our energy production to wind and solar, drop the energy capture of the planet capability because it's cloudy all the fucking time and we're hosed. And if this is part of some grand plan for depopulation, it sounds smart if you're looking at it from that, but I don't really want to sign up for that idea.

Nicki: No.

Robb: So that was a lot more of an intro than I think either of us were-

Nicki: We will put links to-

Robb: ... looking towards all that crap.

Nicki: ... these videos and all the stuff that was aforementioned in the show notes.

All right. The Healthy Rebellion Radio is sponsored by our Salty AF electrolyte company, LMNT. Hydration is crucial for health as well as for performance. If you find your energy is dragging or that you're feeling less than optimal, you may need more electrolytes, particularly sodium. LMNT has all the electrolytes you need with none of the sugar that's common in most electrolyte products on the market. Remember, if you eat low carb or keto, if you're an athlete, if you get muscle cramps, if you're a breastfeeding mom, if you work in hot or humid conditions, if you have pots or even if you're just feeling a little tired and need a natural energy boost without caffeine, LMNT is for you.

And I want to let you all know that the last day to order this year's chocolate medley is March 28th. So this year's chocolate medley contains 10 sticks, each of chocolate raspberry, chocolate chai and chocolate mint, all of them scrum diddly umptious in hot water. You can grab yours at drinklmnt.com/robb. Remember the insider bundle? Buy three boxes, get the fourth box free. That last day for the medley is March 28th. [Drinklmnt.com/R-O-B-B](https://drinklmnt.com/R-O-B-B).

Robb: I think Layne Norton would want to see your RCT on it being scrum diddly umptious.

Nicki: Mmm. I have all that data handy. Just let me-

Robb: Okay, perfect.

Nicki: Give me his email address. I'll send it on over. Okay, our first question this week is from Kevin on testosterone levels and fasting insulin. He writes, "Hey, Robb and Nicki. I am 65 and a half years young. In the last couple of years, my sex drive has not been like it had been. It comes and goes but mostly goes. I did a self-referred testosterone level test, thinking my levels were low, also was feeling sluggish and just not feeling quite like myself, but I was thinking that was from my age. To my surprise, my level came back at 1,150. I've been taking a prostate supplement the last six months called ProstaGenix. Before that, I was taking Flowmax for about five years and it just seemed to not be helping my symptoms. It's taking a lot longer to empty bladder, and when I had the urge to go, I had to go, if you know what I mean."

"So I switched to this natural supplement. It has a sterile blend on the supplement, so I'm thinking that maybe that is causing my elevated levels. I also Googled it and have seen that adrenal gland problems can also cause the high level. I had never had a testosterone level done before, so I have nothing to compare this high level with. What are your thoughts on that?"

And then secondly, "Also, I did a self-referred fasting insulin test and it came back at 5.2. My last two fasting glucose tests were at 112 and 117. I did a

fasting A1C and it was 5.1. So I just want to know if 5.2 is high and will lead to insulin resistance or am I there already? The test shows I'm in the normal range between 2.4 and 26 something. I just don't trust what they think normal is. I've been listening to you guys for a while now. I first heard of you when you were on the Tom Woods Show and have been following you since. Keep up the great work."

Robb: Kevin, good stuff. Again, this is like the call-in show or being able to do these things. Serially would be great. It would be really handy to know ... I'm guessing that the 1,150 was total testosterone. It'd be great to know free testosterone. It'd be really, really good to know sex hormone binding globulin, estrogen, estradiol. All of those things have big impacts on libido and so it's hard to really pin down what is happening here. That's definitely potentially an enviable testosterone level to have. Also, it's interesting he mentioned that it was an at-home test, so I would be a little bit-

Nicki: Self-referred. I don't know what that means.

Robb: Oh, self-referred.

Nicki: That might mean that he paid out of pocket to a doctor but didn't have a referral from a specialist. That's how I read it but ...

Robb: Yeah, that's ambiguous too. But depending on where that was done, was that actually accurate? But the 5.2 insulin, it's a little bit high but not terrible. The A1C is a little bit high but not terrible. But this is also one of those things that depending on the individual, then we might have some problems. This could be a trend in a not great direction and we're just catching it mid-flight. The fasting, 112, 117, that's definitely concerning. Usually, we like to see A1C more along the 4.8, 4.9 level. Not everybody runs with that for a host of reasons. I just ran across a couple of people in talking about this lean mass hyper responder story that they really run quite high A1Cs, and they're legitimately in that scenario where when they cross-check with fructosamine, their total glycation load is normal. It's just because they're low carb. Their red blood cells are living three times longer, and so it makes it artificially elevated.

So Kevin, there's just a lot going on here. And I think ... Did he say that he was working with a functional medicine doctor? This is where finding somebody who is good at lifestyle medicine, anti-aging medicine, functional medicine, somebody who works on old dudes like us, that 50 to 70 year range, but they're really trying to optimize performance, health and longevity. Those folks will have some wherewithal about looking into this other stuff like sex hormone binding globulin and whatnot, and just being able to maybe monitor things and keep an eye on it. We don't know anything about activity level. We don't know anything about sleep. We really don't know anything about circadian biology.

Nicki: Or diet or body weight.

Robb: We had the good fortune to just spend some time in the sun recently, even though Montana is sunny. We just maybe 10 days ago got back to where you can make vitamin D outdoors, but we're still far enough north that you make eight IUs a minute or something like that where you make 2,000 IUs a minute practically, not that much but a lot. And my goodness, the change it has in my libido, my outlook on life and everything.

So this is another piece that God bless Jack Kruse, but the photobiology I think is equally as important as the hormones and the food and all the rest of that stuff. There is really a photobiological trigger with regards to libido. When you dig into the research, even modest UV exposure really dramatically improves libido in folks. And so all of this other stuff could be a hundred percent buttoned up, but without adequate photo exposure and UV, the system is just not working and it's this biological entrainment. Even though in theory, humans are fertile all year round, there is a real seasonality to it as you get further north and then people are more equatorial. You see much less variation on this ostensibly because of just light exposure.

Nicki: Same with chickens.

Robb: Same with chickens. If you want them to lay eggs, you keep a light on them. Yeah. So Kevin, I would track down a functional medicine doc. I would do ... and maybe I'll try to remember to put some of the papers in here about UV exposure and libido. If you just search that, UV exposure and libido, you'll track down the same shit that I'm going to put in there, but I'll try to remember to put a couple of those. It's a really big deal and it's a really underappreciated piece. And again, all the hormones can be clicking along correctly, but there's a priming or a charging element to proper photo exposure that just makes all that stuff work better.

Nicki: Cool. Okay. Second question this week is from Teresa on Neu5Gc. "Hi, Robb and Nicki. Love your show. Listen to it all the time. I recently listened to Dr. Gundry speaking on Gabby Reece's podcast about Neu5Gc, which we get when we consume red meat. He says it causes inflammation and cancer and that we should only eat it sparingly or only naturally fermented. Not exactly what I want to hear and I find it hard to believe. I have cut out high FODMAP vegetables, nightshades, high oxalate vegetables, and I've adopted a higher protein diet, one gram of protein per pound of desired body weight. Chicken is not my favorite and I find it hard to digest. Can you shed light on how much truth there is to this claim? Thank you."

Robb: So there's a lot to this. The first paper that I'm going to reference is, and we'll have all these links in the show notes, uniquely human evolution of sialic acid genetics and biology. So this Neu5Gc is part of these cell recognition glycoproteins, these sugars that are involved with a host of different immune functions and whatnot. And in human evolution, we did at some point lose the Neu5Gc, and there's a possibility that this may have aided in certain pathogen

avoidance, like there appears to have been a benefit for mitigating a certain type of malaria. There may be some other benefits with regards to some gut pathogens like cholera.

What's interesting is that humans aggregate this Neu5Gc via pinocytosis, even though there are auto-antibodies in our body looking to destroy this stuff. So when you bring something into the system via pinocytosis, it literally just creates little vacuoles and pulls it into the body. So the body will bring this stuff in and actually store it and use it. And it appears to have, it does have a role in inflammation, both vascular and tumor. There may be the story of antagonistic pleiotropy that this thing may be beneficial early, but it's not really selected from a longevity perspective.

But check this out, this is from that paper, and I'm pulling something out of some of the later parts of the paper. Of course, high levels of these antibodies may instead kill tumor cells. And it is possible that persons with very high anti Neu5Gc antibodies are protected from some cancers. Indeed, can we harness human anti Neu5Gc antibodies to target human cancers specifically?

And what's interesting is when you, I'm not an immunologist so reading these papers is a tough go for me, but what's interesting is these papers consistently, and I have to also mention, these things are uniformly mouse models. They're like humanized mouse models, and so there's always some caveats that we need to make with that. But all of these papers make the case that this Neu5Gc can be inflammatory. It maybe can affect the vascular system. It maybe could be tumorigenic. And all of them also mention deep down in the guts of it that there's a dose response curve on this, that if you get the right amount of the Neu5Gc in the diet that it's actually cancer protective.

And all of these papers end up mentioning this, but none of the news stories actually make any case around this. And it's a little bit reminiscent of humans, unlike other primates, we lost the ability to ... or is it all primates? I'm forgetting now ... the ability to manufacture vitamin C because at some point, we ended up getting so much vitamin C out of the diet, and I think there's only a few other critters like some hamster, a Guinea pig or something like that. Most animals make their own vitamin C.

So is this a deal where we lost the ability to manufacture this Neu5Gc because humans had a really meat centric diet and we were getting it out of the diet and it played a role in that whole story? There might be trade-offs with this stuff, but there might also be benefits at high doses.

And then there was another paper, a simple method for assessment of human anti Neu5Gc antibodies applied to Kawasaki disease. Neu5Gc is an immunogenic sugar of dietary origin that metabolically incorporates into diverse native glycoconjugates in humans. Anti Neu5Gc antibodies are detected in all human sera, though with variable levels and epitope-recognition profiles, these antibodies likely play a role in several inflammation mediated pathologies,

including cardiovascular disease and cancer. In cancer, they have dualistic and opposing roles either stimulating or repressing disease as a function of their dose.

There may be this story like some of the problem here may be that some of the anti or pro cancer elements is not getting enough of this. That's some possibilities out there. I think it's interesting. And I kept digging on this.

Rhonda Patrick actually had an interesting take in all this stuff. She touched on most of what I've mentioned here, but she also went a step further or maybe in a little bit of a different direction, and just backing up, looking at the epidemiology on this. And this is something that I've talked about, Diana Rodgers has talked about, we talked about it in Sacred Cow. Meat consumption is only associated with cardiovascular disease and cancer in particular when there are other negative lifestyle factors incorporated with that, smoking, obesity, alcohol consumption and things like that. And so as a standalone, meat consumption is never a standout item that appears to confer these problems by themselves. They always seem to be associated when we have other problematic issues in conjunction with that.

So it's another one of these things where even the most recalcitrant people in evolutionary biology, they admit that humans, pre-humans have been eating meat somewhere probably around like three million years. All the way from homo erectus Neanderthal to homo sapiens, we were big game hunters during this period and probably ate a lot of protein, mainly of red meat origin. And so that story doesn't in and of itself absolve this Neu5Gc of potentially being problematic. There is that possibility that there's some antagonistic pleiotropy there that the nutrient density of red meat may be beneficial in youth and then there may be a problem that is brewing later on.

But I think even then, when we dig into mechanisms, epidemiology, there's a strong case to be made that adequate intake of these foods is actually protective. And then there's this other piece that even at any intake level, red meat really isn't associated with these problems unless we have other issues going on. We'll lean with-

Nicki: And it's coupled with a bunch of carbs. It's not just a standalone. Pizza, for example, is lumped into red meat.

Robb: Right, right, right. And there still is this weird ... two interesting outliers. The population on the planet that has demonstrated the lowest rates of cardiovascular disease are the Tsimane in South America. They barely detect any cardiovascular disease in these folks. They live as hunter-gatherers, lots of light, wide variation in diet. They're not just eating rib eyes every day so there's variation there, but they eat a hunter-gatherer type diet.

And then the longest lived people on the planet currently are in Hong Kong, and they also happen to consume nearly a kilogram, over two pounds of

meat per day per person, and they're longer lived and healthier than anybody else on the planet.

So if there's this dose response curve that's supposed to be on par with smoking and cancer and stuff like that, what is put forward so often, they should be really obvious, whereas you have to torture the statistics to get the findings that people are reporting like this.

Nicki: Okay. So Teresa, I think you're probably okay.

Robb: I think we're okay, but again, maybe there's a trade-off with things. I don't know. It doesn't really make sense to me, but this is ... and I can't stand Gundry anyway. I would knock that guy's teeth out if I could. He's such a smarmy turd, but yeah.

Nicki: Okay, final question this week is from Jessica. "Am I eating too much or not enough? Hi, Robb and Nicki. I've been listening to the podcast for a few years and appreciate the content. Also love the way you interact with each other. The love and respect in your relationship comes through and it's encouraging." Thank you.

"My question is, am I eating too much or not enough? For context, I am 43 years old, 5'7", 211 pounds. And while I'm feeling better than I have in probably the last five years, I cannot get the scale to budge. My goal would be about 155 pounds. I felt my best at this weight about eight years ago. I've spent the last two years working with a functional medicine practitioner who has helped me clear up some gut infections, mold and sort out some other digestive concerns like constipation. I've had all the tests, DUTCH, GI Map, HTMA, OAT, full thyroid panel, not just TSH and blood work. I'll mention that I am MTHFR, heterozygous, and FNP says based on HTMA, also a slow oxidizer. I'm not sure how relevant those two things are to the question."

"We redid the DUTCH recently, and I do seem to be on the low side of progesterone, so she's having me supplement on days 14 through 28 of my cycle. And I'll note that my cycle has always been very regular. I sleep eight plus hours a night, actual sleep according to the tracker. I average 9,300 steps per day according to my Garmin watch, and lift heavy 30 to 45 minutes three times a week. I do have a desk job, but I have a walking pad that I use daily at the office."

"I've been working with a nutrition coach at my gym since about August of last year, and while we are seeing some slight body comp changes based on pictures and measurements, I'm still carrying more body fat than I would like, and it absolutely seems like it's not going anywhere. We started at 1,880 calories, 160 grams protein, 175 grams carbs and 60 grams fat, and have adjusted all of those levers to a degree over these six months. Sometimes up, sometimes down. I'm still basically exactly where I started with my weight."

"My gym has an in-body machine, and according to that, my skeletal

muscle mass is 76.5 pounds with a 35.6% body fat. I hear you guys recommend the Ketogains calculator, and when I've input my data there, I get the following recommendations: 1,489 calories, which is 143 protein, 20 carbs, 93 fat for rest days, and 1,679 calories, 168 protein, 20 carbs, 103 fat. That's for training days."

Robb: For training days.

Nicki: "The overall calories seem low, and I do tend to have issues with fat digestion. I hear and read so many things that say women shouldn't be eating less than 2,000 calories because of stress on the body, etc. But then some other macro calculators I use put me anywhere between 1,800 and 2,500 calories. I lost 25 pounds in three months about four years ago but didn't keep it off. At that time, I was eating 1,400 calories, lifting heavy three times a week and training for a 10K three times a week. It was unsustainable, and I also think it may have contributed to some of my other issues. I would really appreciate your all's input as to whether my current macros really are too much or if it's not enough."

Robb: So one thing about the Ketogains calculator, I've just found that from a caloric perspective, it seems to be pretty bang on. It's within 10% I think for a lot of folks. You and I have talked about the reality that for a lot of people, and you seem to be one of those folks, when people have healthy digestion, too much fat is a problem because I think you just absorb too much and you get too much energy density out of it. I know it slays folks to hear this, but time and again, I think that I'm surprised at how low some folks need to go in order to see change. And is it sustainable or not? I'm not sure. I don't know. I'm not sure what ...

Nicki: I don't think ... She says she did 1,400 calories and that was unsustainable and she was training really hard during that. I ...

Robb: So here's the thing. Here's some stuff. Ketogains for what she is doing currently, it's got a sedentary level, which is 1,400, let's just say.

Nicki: Let's call it 15 because it's 1,489.

Robb: 1,500, and then 1,700 for activity days. If she was just at 1,400, that's below what they're recommending with this for her sedentary day, and she was working out Mach 10 hair on fire.

Nicki: [inaudible 00:44:07] Right.

Robb: I've had to really get in and track all of my food because it's so easy for me to under-eat. The other day, we did a lot of drilling at jujitsu, and I ended up, according to my Morpheus and it's consistent with other stuff that I see, given the amount of open mat and drilling that I did, it was like 1,500 calories on top of my 2,400 calories that I need just to keep the lights on. And 2,900 calories of carnivore-ish stuff makes me want to vomit. And I do get in this cul-de-sac where I can put in a little bit of carbs, but I can't put in a ton of carbs or I start feeling weird from that and I get gut issues and all that.

But what I found is, for me, I have to track because I will under-eat, but I do a pretty good job of whatever my Morpheus tells me. It's like, okay, I did a cardio session or I did weights or whatever and estimate, okay, it was 400 calories. If my base level is 2,400, then I'm about 2,800 calories that day. The other day when it was nearly 3,900 calories, I actually came up a little short. I got 3,700, but it was a hell of a lot closer than what I've done in the past. And what she, for sure ... I think two things need to happen. She probably needs to eat less overall generally and she needs to better match what the daily intake is for-

Nicki: Based on her daily activity level.

Robb: Based on the daily activity level and a very modest 10% caloric deficit. Maybe every fifth day, seventh day, you eat at calorie maintenance or maybe even 10% caloric excess, just so the body doesn't freak out. If you do a particularly hard training day and it was weight oriented, maybe you do a caloric excess that day so that you're pushing literally the scale more towards bodybuilding and muscle maintenance or muscle accretion, and then the other days are leaning. Fred Hatfield had this thing ages ago called the Zigzag Diet where some days were caloric excess, some days were caloric deficit and some days were awash, and you matched it based off of a simple algorithm. But actually, he encouraged more caloric tightness on more sedentary days. And then on the days that you were-

Nicki: By tightness, you mean restricting.

Robb: Restricting a little more. Yeah, yeah. And then on more active days, maybe those are the days where you just do a break even or maybe even a little bit of a caloric excess. People would maybe think about it the opposite way because it's like, wow, I could get even more of a caloric excess delta because I worked out and I starved myself, but then you're sending two stress signals into the body at the same time. But I do think that I could easily see using something like the Ketogains macros as a starting point. Her 1,880 is maybe not a terrible place to start, but I think you're probably a little high.

Nicki: Well, she's been at 1,880 for a long time and nothing is happening, so clearly we need to make a change there.

Robb: Right.

Nicki: She mentioned she doesn't do well with fat digestion. So these keto gain, you could look at the calorie numbers but adjust your carbs up and drop your fat-

Robb: Yeah, absolutely.

Nicki: ... to make a, what's the word?

Robb: Just a template for it.

Nicki: No. Just adjust the fat down, carbs up, but keep that same caloric number.

Robb: Yeah. And the Ketogains calculator will do that for you. If you adjust the carbs up, it'll make the fat go down.

Nicki: Do you think she should jump in here at these numbers that they're recommending? Given that she's been running at 1,880, would you stair-step down gradually like maybe go to 1,700, drop 100 calories?

Robb: I would have a credible way of tracking what her activity is, both the ... And I don't know if that's Morpheus. I don't know if it's Whoop. I don't know.

Nicki: She has a Garmin. I don't know if it ...

Robb: Did she mention that?

Nicki: She mentions Garmin, but I don't remember if Garmin tracks calories burned on activity or not.

Robb: I'm not sure. But I would have a strategy for I spent two hours lifting weights and it was at this intensity. It's not perfect, but it's better than just not accounting for it at all. And each day then you're going to ... And you start getting a feel for this over time, but then you're like, okay, my hard strength training days ends up adding 200 calories extra. My cardio days end up adding 400 calories extra. And then you could play around with that stuff. But yeah, I would use something ...

Nicki: So maybe she uses this 1,489, let's just say 1,500 calories as her baseline and then adds the additional calories based on the given day's activity.

Robb: Correct.

Nicki: So it might not be what they're recommending on training days. It might be 1,700. It might be 1,750. It might be 1,880, whatever it is, if she's doing a big training volume.

Robb: With the idea that maybe at least some days, you're doing a 10% caloric deficit. And I would say probably five days out of seven, something like that, four days out of seven is a 10% caloric deficit. And then occasionally, a caloric excess, maybe a 10% caloric excess just to mix things up, not to freak the body out. But people hate on Luis, but they get remarkable results. And I think for some people, the people that I've seen have problems with this is they're already lean, they're already athletic, and then they're just trying to push things another layer. We both know some folks that were in that scene, this woman who does jujitsu at a high level, lifts weights at a high level and was already super fucking lean and was trying to get leaner, and she ended up blowing up. It's like well ...

Nicki: It was just that excessive extra stress.

Robb: Yeah, yeah. She was lean enough already. She needed to just optimize performance and that goal of leaning out from there. But this is a different situation. If we've got a decent amount of body fat to lose, then that isn't going to be the same type of stress as trying to be both a figure competitor and a competitive jujitsu-

Nicki: Jujitsu athlete.

Robb: ... athlete at the same time. Those are the people that I've really seen have problems there where you're already lean. I know you might want to be shredded paper-like skin. The extremes are where we start seeing the real problems pop up.

Nicki: Okay. Jessica, I hope that is helpful. Please ...

Robb: And again, to recap, I would try to figure out a way of quantifying your activity level so all the stuff that you're doing so that each day, you've got some sort ... And then I use Cronometer, and I set in Cronometer 2,400 calories is my base level, and then I just do the math in my head. I do my workout. I do jujitsu. It tells me I did 700 calories worth of stuff and it's like, okay, I need about 3,100 calories today.

Nicki: Keep us posted. Give it a shot.

Robb: Yeah, I would love to hear back.

Nicki: Write us back and let us know how you're doing and we'd like to know the progress report. Okay. I think that's a wrap for this episode. Any closing thoughts?

Robb: I jabbered a lot.

Nicki: You jabbered a lot. Okay.

Robb: Be good.

Nicki: We'll wrap it here then. Thank you all for joining us. Please check out our show sponsor, LMNT, for all of your electrolyte needs. Remember that chocolate medley? Last day to order it is March 28th, so if you find yourself hankering for the chocolate mint, chocolate chai or the chocolate raspberry and you want to have enough for, I don't know, maybe you want a hot mug of chocolate raspberry one evening around the campfire this summer. You might want to have an extra box on hand. Wrap that at drinklmnt.com/robb. That's drinklmnt.com/ R-O-B-B. Thank you all. We will see you next week.

Robb: Take care, everybody.

