

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 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. Warning when Robb gets passionate, he's been known to use the occasion expletive. If foul language is not your thing, if it gets your britches in a bunch, well there's always Disney plus. We're live.

Robb: I think we are going.

Nicki: I just realized as I was looking in the video when we do this test, that my hair matches my sweater with the gray splotchy splotchers.

Robb: You're going for camouflage, from head to toe. Literally.

Nicki: I was like I have this brindle look going on.

Robb: It's good, I think you look hot.

Nicki: Hair is a thing in quarantine.

Robb: It is. In all forms of places.

Nicki: And lack of the ability to get a haircut especially when you wear your hair short. One of our members in the Healthy Rebellion was commenting to that effect and I seriously feel her pain about now. When you wear your hair short and you usually get it cut every six weeks or so and you're unable to, then it's a thing.

Robb: "I get my haircut all the time," the girl who is super hot. I don't know what you are bitching about.

Nicki: I'm just laughing. Yeah. I can't shave my head the way that I shave yours.

Robb: You could, it would probably just be tactical error.

Nicki: It wouldn't look good, yeah. And then I had this extensive conversation over Slack with Jessica and Elizabeth on our team about other like hair eyebrows and upper lips and other types of hair that women to maintain like fairly regularly. And I usually get waxed and since I cannot, I'm trying to do a deep dive into how to do self threading. So Elizabeth learned this a while ago and so she can thread herself. And for those of you who don't know what threading is, it's this way of removing hair where you use a long a piece of apparently needs to be cotton thread. And you twist it a certain way and then you put it on your eyebrow or your upper lip and you move your hands a certain way and these hairs are yanked out. And it looks fairly complicated, I'm going through the tutorial and prepping myself.

Robb: Is that why you're stressed out today?

Nicki: Maybe that's why I'm a little stressed out.

Robb: We sat down here I'm like, "Jesus, your ponytail's pretty tight ponytail here."

Nicki: Ponytail tightness is Robb's code word for-

Robb: What movie was that?

Nicki: It wasn't even a movie. You've now been saying this to me forever.

Robb: I'm sure it was a movie, it was like Eric Baldwin or some Alec Baldwin and oh man, I'm blanking on her name. But I'm the girl from Miss Congeniality.

Nicki: Oh, Julia Roberts.

Robb: No, not even fucking close. Okay, moving on. This is definitely not what people came here for.

Nicki: Oops. I'm bad with movies. Okay. A couple of announcements let's see. We're just wrapping up the mobility reset in Healthy Rebellion, which has been so cool. Sarah and Grayson from Basis Health and Performance in Chico-

Robb: Don't forget Nate.

Nicki: And Nate absolutely. They've been sharing some amazing videos, I think our rebel community has a whole new skillset for maintaining their range of movement with their cars-

Robb: And the respect for the importance of that, yeah.

Nicki: And also working towards improving their end range mobility so that's been super cool. Let's see, our next 30 day reset starts on April 20th. So that's where we go through food, sleep, community, movement.

Robb: The last one was huge.

Nicki: It was awesome.

Robb: Like really, really good. Folks made amazing progress on that.

Nicki: And we have an optional seven day carb test on the tail end of that, for those that want to do that. So that is again, starting on April 20th. We do start everyone in that one together so there aren't any stragglers. So if you want to participate in that, you have to join and join that prior to April 20th.

Robb: And everybody who is part of the Healthy Rebellion, they get these resets for I think is part-

Nicki: Free. Its part of the membership.

Robb: Membership and I had some other profound point to make around that. Oh, metabolic health is pretty important these days and you can affect changes in your metabolic health in at least days, possibly weeks. So if you've been waffling on whether or not to get on top of this shit, it might be time to do it now. I don't want to be pushy but-

Nicki: Or if you have friends and family that this might be a good time to encourage them.

Robb: This might be a good time to have a little bit of leverage on that.

Nicki: Yup.

Robb: Yup.

Nicki: All right Hubs. So what do we got for our news topic today?

Robb: I had to dig far and wide to find something not COVID related like my-

Nicki: I know we were debating. And actually this is a good thing to just chat about because so much is COVID and we've had several episodes related to COVID and the salty talks and whatnot. And we were like, "Do we want to keep..." Obviously it's top of mind for everyone and as new stuff comes out certainly include it, but we're also trying to find a balance between that and also just the same general health, wellness, fitness-

Robb: Right because that stuff is all important too.

Nicki: Because that's always important. So anyway, you guys can give us some feedback. Do you want more of the general nutrition type stuff? Do you want to keep heavy on the COVID stuff? Do you want a mix?

Robb: Because honestly, the question from a general perspective have really dropped, so the questions are largely in this COVID thread. So we're going to try to have some balance on that and again, try to hit the things that I think are important to understand and also actionable but not do the 24/7 news cycle on this space.

Nicki: I think sometimes we all need to have a little break from the COVID-19 stuff so anyway.

Robb: Yeah. Indeed. So the news topic, does your methylglyoxal content and drinking coffee as a cytotoxic factor? Methylglyoxal is one of these advanced glycation end products that are really significant in metabolic syndrome type two diabetes. Oftentimes ketogenic diets are mis-characterized particularly by the vegans as being significant methylglyoxal producers and in early stages of ketosis, methylglyoxal production does increase in ketoacidosis it increases. It down regulates and decreases under nutritional ketosis. So as usual, they're just spinning bullshit on that. But this coffee thing was interesting because they looked at the seeming contradictions that we experience within, looking at epidemiological research around coffee.

Robb: Which seems to suggest kind of a linear relationship between intake and better health, or at least better health outcomes and whatnot. But coffee can be a nontrivial source of methylglyoxal, so they looked at a couple of different ways of mitigating it. And interestingly, just a splash of cream actually cut the methylglyoxal production by a significant amount. Adding sugar to the coffee did not decrease the methylglyoxal, but it also didn't increase it.

Nicki: *Sneeze* Excuse me.

Robb: Salud. And final takeaway from that, this was all a cell culture study. So it's tough to extrapolate to a living organism because we don't absorb these things through the gut the same way. They don't get shipped around the body the same way versus just basically pouring this stuff onto a cell culture medium. So take it with a grain of salt, but it's something that's not COVID related and many people drink coffee so there we go

Nicki: Yup. And we will link to that in the show notes. Our iTunes t-shirt review winner goes to Rooted Growth this week. Rooted Growth says, "Trustworthy stuff. I came across Robb

when I was in utter desperation to get my life on a healthy track after college. His insights in health have made an extraordinary impact on my life today. I'm loving him and his wife's new outlet to getting this vital information out into the world. We only have this one life, and this podcast encourages me to take care of my body so that I can live my life to the fullest."

Robb: Awesome.

Nicki: That's awesome. Thank you Rooted Growth. Send us an email at hello@robwolf.com. Include t-shirt size and your mailing address and we'll send you a Healthy Rebellion Radio t-shirt. And this episode of the Healthy Rebellion Radio is sponsored by Four Sigmatic. Four Sigmatic has you totally covered with a variety of go to beverages to support productivity, focus and creativity. Including their mushroom coffee was shot chaga and Lions mane and Robb is flashing me. So the people listening to this via audio cannot see this but Robb is flashing is a Four Sigmatic branded blender bottle which he loves.

Robb: It's a rare piece. It's really nice bottle.

Nicki: Anyway, whether you're looking to decrease your caffeine intake or you just want to incorporate some health boosting mushrooms, you'll want to check out Four Sigmatic. They have a whole suite of products, caffeinated caffeine free. I'm a big fan of the elixir mix think with Lion's mane. And it's nice sometimes and we mentioned in a recent episode that we've definitely dropped our coffee consumption with just kind of the elevated stress levels with all of this COVID stuff. But it's nice even if you're not dropping caffeine, if you tolerate caffeine really, really well to have something different later in the morning or early afternoon when you don't want to be having coffee for sleep purposes and whatnot. So wonderful products. You can check them out at foursigmatic.com/rebel and use code rebel for 15% off. And let's get started with our first question of the week.

Robb: Sweet.

Nicki: This is a question from Megan on keto and polycystic kidney disease. "Hi, my name is Megan. I'm a 30 year old female with an inherited disease called polycystic kidney disease. I have many large cysts covering my kidneys and liver and with an MRI scan I have an 80% chance of reaching kidney failure before I turned 40." Yikes. "There's no cure for it. My grandfather passed away from it at 47 and my mom is on dialysis waiting for a transplant. There were some studies showing previously that calorie restriction and low body weight can slow cyst growth. I'm five foot four and 126 pounds. And recently, the Wyman's Lab has done studies in rats and cats that have shown that keto diet with intermittent fasting is reversing the disease completely.

Nicki: The PKD Foundation is wanting to start human studies, but it won't be for a while. My nephrologist called keto the starvation diet when I approached him about it and told me it was too restricting and it would take too long to see. He would rather me eat less meat and more grains. I've experimented with keto and overall feel better with less flank pain. So my question is, I know that animals and humans react differently to these studies, but I'm wondering if I should do the keto diet longterm anyways instead of waiting for human trials to come out. Or if it may do more harm than good with my low body weight and kidney issues. Thank you for your time."

Robb: So I linked to the study that she referenced that was published in Cell Metabolism, it's really interesting. The effects that they had in these animal models were nothing short

of just shocking. Like she alluded, it largely halts and reverses the progression of this essentially fatal condition unless you go on dialysis or kidney transplant and what not. Clearly this is something that you have weigh the pluses and minuses, but the mechanism that seems to underlie this growth appears to have a hyperinsulinemia vector to it, so elevated insulin levels. Now consuming carbohydrate does not guarantee that people are in a hyperinsulinemic state that gets mis-characterized in low carb land a lot.

Robb: But that said, the work that came out of the Wyman's Institute that showed the variability in folks responding to different glycemic load meals kind of paints a picture. And also when we think about things that we've talked about a ton, the fact that 12% of Americans are considered being metabolically healthy, I'll go out on a limb and say that most people would do well to reduce their carbohydrate intake. It doesn't necessarily need to be ketosis per se, but there's actually a paper later where just the presence of ketone bodies appear to have some really beneficial effects on certain conditions. So you could eat in this way and be under hypocaloric and lose weight.

Robb: You could eat at maintenance or you could eat in this way and lift weights and gain muscles. So the whole starvation diet thing is just bullshit and kind of makes me want to wring this guy's neck. But if this were me, I think that I would at least give this thing a try. Because the notion that if we are tracking this on probably an annual basis, which you already are and you have imaging and so you'll be able to do compare and contrast. You're going to eat something over the next year anyway, so why not at least try this and just see. And it doesn't need to be a super high protein intake, but also it doesn't necessarily need to be a rock bottom low protein intake.

Robb: The likelihood of low protein benefiting kidney disease is really only seen at the end stage of that process. And so we should have a window of time to be able to see if there is some benefit here. And again, the mechanisms support this, we have some animal models stuff and the bugger of waiting for a human trial, the period of time that we're waiting for that to happen could be the time that she could save her own kidneys. So to me it seems a worthwhile risk, but clearly this is something that Megan is going to have to noodle on and think about. But when I think about the risk benefits, and then also the mechanism of reducing protein and eating grains versus doing a low carb ketogenic diet.

Robb: It just doesn't make any sense to do anything but some time restricted eating, some ketogenic diet, maybe a little bit of intermittent, a little bit of an extended fast here and there if that makes sense. But all of that is going against the mechanisms that caused this disease to progress. So I means again, I'm not offering medical advice, all the disclaimer stuff and all that jive but just from a mechanistic perspective, I can't think of why someone wouldn't at least kick the tires on this.

Nicki: So is her doctor concerned about the fact that she has low body weight?

Robb: That's kind of what I was inferring from this-

Nicki: If she's five four, 126 pounds he's calling it the starvation diet and she's wondering if will do more harm than good with her low body weight and kidney issue. So it doesn't have to mean that you're going to lose weight as Robb mentioned. So you can set your calorie level to a maintenance level and still be in ketosis.

Robb: Cue this macro nutrient calculator, set it for a 5% excess if you want or whatever but yeah.

Nicki: Okay. Our next question is on amenorrhea after two years on keto and this is from Kate. "Hi Robb and Nicki. I'm a big fan of the podcast and I've had a dilemma weighing on me and wondering what y'all's input would be. I have been on a standard macro keto diet, 70% fat, 25% protein, 5% carbs for the past two years. I went keto after to my alarm going to the doctors and finding my flat fasting blood sugar at 124 milligrams per deciliter. I've experienced all the benefits of keto from normalized glucose levels throughout the day to mental clarity. My fasting glucose is now 80 milligrams per deciliter and goes into the seventies three hours post meals. My only problem is that my period has completely stopped since going keto. I don't really restrict calories, I only lift four times a week for around 45 minutes and I don't do any high intensity exercise or running.

Nicki: I also meditate daily and even use red light to combat daily inflammation and stressors in life. To add to this, I also am at a healthy weight for my height and I've never had any weight problems all my life. I just had metabolic syndrome at a healthy weight. To take a deep dive, I ran an ultrasound and found that I have a small cyst on my liver as well as a small amount of biliary sludge on my liver. And then proceeded to get an HIDA scan, and MRI of my abdomen and pelvic area. Everything came back normal, so I then proceeded to run a hormone panel, which then led me to get diagnosed with hypothalamic amenorrhea. I then decided that my HPA axis most likely needs stimulation, so I had a sweet potato consisting of 25 grams of carbs with ground beef for lunch one day.

Nicki: The problem is after the meal, I began having to urinate around every 15 to 20 minutes for the next two hours. I then proceeded to feel very jittery and anxious quickly following the meal. This led me to have a crash later in the day and I had to have a snack as I became profusely famished. I've never had a snack before if I eat three large meals a day filled with whole keto foods and plenty of protein. I believe I still have insulin resistance, but I want to be able to transition to a low carb style diet in order to stimulate my luteinizing hormone, HPA axis thyroid, and increase my estrogen levels in order to menstruate to protect my body from osteoporosis and other side effects of amenorrhea. My question is, what route should I take in order to become fertile and is it possible to never reverse insulin resistance, but just to put it in remission?"

Robb: Wow. That's a lot.

Nicki: Big question.

Robb: It's a whole lot of load of stuff. So we just had an interview with Dr. Jamie Seaman and we talked about a lot of stuff like this. I'm going to have two thoughts. One is a way to reintroduce carbs and another is actually getting in and looking at the way that Kate is putting together her ketogenic diet. Whenever we see people reference percentages immediately I get nervous because that 70% fat, 25% protein, 5% carbs, when you actually end up breaking that down... and this may be an appropriate way to do a ketogenic diet for epilepsy, although even in that situation it's not a total uniform thing. But what we find is people are woefully under eating protein, even small females end up getting 75 grams of protein a day, which is probably too little. So one is if you feel really good in a ketogenic state, the first thing that I would do is again go back to the keto gains macro nutrient calculator.

Robb: And set that for the protein being at one to 1.2 grams of protein per pound of lean body mass, and I would give that a shot. And it would be really interesting if you've been documenting this stuff what is the actual daily intake of protein, carbs, fat, not by percentage but by grams. And look at what you've been doing versus what the recommendation would be in this. That's one whistle stop that I would do on this. And

this is again, because I'm kind of getting the sense that other than the minor issue of amenorrhea, she seems to feel good and her blood sugar is better. She's super resilient from blood sugar lows and all that stuff and that's great. So we've seen a lot of women who experience different hormonal problems improve that situation by making sure that they focus on protein first, use fat as a lever of blah, blah, blah, all that type of stuff.

Robb: If that doesn't work or if that's not the route that Kate wants to try, Sarah Strange who has been leading our mobility reset along with her team from Basis. She wrote an article back that we published it in 2014, yeah and it's called Carb Reloading, I have a link to that. And the basic idea there is that we set an ISO caloric calorie intake, starting at that typically where the person is low carb and then we add 10 grams of carbs per day for a week. So if you've been eating 20 grams of carbs, then you pop it up to 30 grams of total carbs for the day run one week. Then week two you're at 40 grams of carbs a day for one week. So doing that 25 grams of carbs in a single meal when people are very fat adapted, a big whack of carbs people can have physiological insulin resistance and you got which is exactly what she had.

Nicki: Which just sounds like what she just explained with the sweet potato, yeah.

Robb: So what we need to do is either not over eat and there's even an argument for in this transition period, setting the calorie level slightly at a caloric deficit. Because it will tend to encourage your body to take whatever substrates we're putting in and use it effectively, so you could set it at even like a 5% calorie deficit or something that if you wanted to. But again, we're basically starting at a very conservative beginning point with the introduction of carbs and then a super slow titration.

Robb: And this can be a months long process of reintroduction, but Sarah's had great success with this. I believe Mike T. Nelson developed this to help it's reverse dieting process, but focusing more on the carb reintroduction versus the calorie reintroduction. Which is something that he put together to help folks that have damaged their metabolism from the figure competition type scene where they're real low calorie. So those are the two ways that I would tackle this. Revisiting the protein intake on the ketogenic side and/or looking at this carb reloading approach.

Nicki: And Kate after you do this run with it for a little while and then ping us back and let us know what you find out and how you do. Our next question is from Joshua.

Robb: This is a goody.

Nicki: This is a goody. "Hey y'all, it's time to take down the Girl Scout Cookie army. Dear Healthy Rebellion. Okay guys, I've been crazy keto carnivore, low carb, high fat for nine years now. I follow Paul Saladino, HPO was Sean Baker, Bret Scher, Gary Fettke, Diana Rogers, Mark Sisson, [inaudible 00:23:19], Teicholz et cetera. You get it, I'm on the scene. My wife has rheumatoid arthritis and together we have gotten her health and wellness in check due to the above crowd and amazing people you. I'm grateful to the low carb and similar communities. I've personally gone from a six foot 190 pound competitive cyclist to a lean mean 169 pound, very competitive cyclist in Colorado. I also use Element and love it. I spent a decade while my whole life not understanding salt, electrolytes, et cetera. What a great product, man I love it."

Robb: The Cocaine, really helps.

Nicki: "I use S Caps similar stuff and Element is by far the best. Anyhow, the tone of your podcast is such that I think you are the crew to call out and take down the Girl Scout

community or at least call them out. A quick search yields that Girl Scouts sell 200 million boxes of cookies each year. What the fucking fuck. Will you do an episode and take this on? Sincerely, Josh T."

Robb: Yes Josh, we will. We've been talking about this a lot because when we and I've been... It's funny and I think I've talked about this in previous episodes where I'm really uncomfortable with throwing things out like the truth and the facts. And because this is just so bandied about and it's great for polarization and sometimes when I see the polarization that occurs, I root for the virus, I root for the asteroid.

Nicki: Shit.

Robb: It's like fucking come and wipe us out. We're such dumb fucks, like just press reset, start over maybe the raccoons will evolve into sentience species and they'll have a better run at it sometimes. And then other times I realized that there are a lot of good people out there and I have children and so I have some obligation to not burn the whole thing down. But I've shied away from doing the really vicious attack on say like the industrial food system. I mention it and I tried to be clinical about it and everything and it works a little bit, but it doesn't really work that much. And when we look at the comorbidities that are associated with mortality with this COVID epidemic, it's fucking crystal clear that like metabolic syndrome, metabolic derangement is the underpinning driver.

Robb: Folks who have metabolic disease, and we have a question kind of delineating what I considered to be metabolic disease here in just a minute. But folks who have metabolic disease, it makes you as at risk for death from the COVID experience as age. Age is not a guarantee of having problems, having metabolic disease is virtually a 100% guarantee of having significantly poorer outcomes in this scenario. And so this actually in addition to just Girl Scout Cookies, but the industrial food system writ large needs to be held accountable here. And this starts at government recommendations all the way to what our schools feed our kids. The fucking pushback that we get from the medical establishment or around like, "Oh this is a fat diet or that's a fad diet." And it's like, maybe it is but something needs to be done.

Robb: This is literally kind of like we need to try every fucking thing that we can because the likelihood of something like this happening again is there. Bill Gates in 2015 was warning that, "Hey pandemic, that's an existential threat." If this virus was a 30% mortality rate, that's a civilization ender. If it's a 60% mortality rate, that is a species ender and there's no guarantee that being metabolically healthy is going to get you out of those things, but it's not going to make it worse. And in this case it certainly looks like it could be the difference between having a really shitty 10 days of a decent fever or potentially dying. So our government needs to be held accountable, the subsidies that go into making junk food artificially inexpensive needs to be held accountable.

Robb: And also throw out there that the people that have been doing this defense of shit like sugar, there's a prominent person in the kind of evidence-based nutrition scene. That had this eight page take down on some studies around sugar consumption and basically in a metabolic ward setting, eating sugar is not a problem. Fine, I acknowledge that cool. Some of the people in the low carb scene are dumb, they don't get that reality, but they're also arguably doing more good because they're actually affecting change in people that is equivalent to improve metabolic health. And again, low carb is not the only way to do that, but it's a God damn effective way. And so this is something also that the first public talk that I gave on the pending healthcare crisis that we were facing due to diabetes.

Robb: The projections around the Congressional Budget Office suggesting that the United States would be bankrupt from diabetes related costs around 2030, 2035. Which seems a long way off in 2013 but is not so fucking far off now. All that this SARS COVID two has done and I've said this before, but I think it's worth saying again. Is it took a process that was going to take years or decades to cripple our medical system and it's compressed it into days, weeks, possibly months. And that's it, that's the only fucking thing that's different with that. It's the same process, it's a faster rate of exponential growth but what we were facing before was exponentially increasing costs and impact to our medical systems. So going forward, we're going to have to do something and be more vigorous with it.

Robb: And it's tough because again, I'm torn because this vitriolic talk radio personality shit works, but it's also repugnant. It also leaves virtually no room for discussions of nuance. But when you're in a crisis scenario, this was the guy that was from the WHO and he's basically you need to act and you need to act decisively, and he's a pandemic expert. And I think that we're in this mode where it's like we need to act and we need to act decisively. If we need to split up the American medical association into five different pieces and be like, "Hey, you guys compete. You're the vegans, you're the low carb. You keep doing fucking standard American diet and let, you know Kellogg's underwrite all of your symposia and stuff that. Fuck you, go do it. Fine."

Robb: But we need to extract ourselves from this and really have these methodologies compete and see which one wins. And some things will be appropriate for some people and other things will be appropriate for others. But this is where the one size fits all, ignoring evolutionary biology, ignoring the basic neuro chemical wiring that we have to eat as much as possible while doing as little as possible. We need to fucking acknowledge that and not... The entrepreneurship and the values that are learned in things Girl Scouts and Boy Scouts is amazing, that type of stuff is amazing. But we need to figure out something that isn't making people fucking metabolically ill and increasing all of our healthcare costs across the board. Shortening lives and then setting us up for what's my analogy for how we're handling this? It's like our pants around their ankles, we have a carrot stuffed up our ass and we're being asked to run a marathon and it's time to stop.

Nicki: It's I just see it being a monumental thing to change though. I mean, just in our neighborhood we have this neighborhood Facebook group and people are like, "Do any Girl Scouts still have any cookies? I need five more boxes of Thin Mints and some Samoas or whatever they are." And you know darn well that if the Girl Scouts changed it and started selling something else, sales would absolutely go in the toilet. And those are the funds that they use to run their entire organization so it's not an easy thing.

Robb: It's not an easy thing to fix.

Nicki: Like the whole population, all the people that are conditioned that every year annually they get to stock up on 20 boxes of Girl Scout Cookies. Those people aren't going to stop all of a sudden unless they get really bludgeoned upside the head with something like what's going on right now. And then they have a major eyeopening experience.

Robb: And you raise a great point. And that's where I think that our core mission of the Healthy Rebellion, which is liberating a million people from the sick care system. We have a real opportunity right now to enact some of the things that I've talked about like Medi-Share's, like extracting people from the third party payer system and then rewarding them-

Nicki: For getting healthy.

Robb: No joke fucking rewarding them for good health. And so we're really going to work hard to make that a reality, and part of that reality is that we're not going to save everybody. I wouldn't say it's every man for himself at this point, but I'm kind of at the point in my career where I just want to help the smart people and I just want to help the people that fucking get it, that get the big picture. Because I can't help everybody, so at least help those people. And then we've got a kernel of a proof of concept that then other people can look at and start thinking, "Wow, maybe we need emulate pieces of this and do parts of that." So I agree, you're spot on it's going to be a bastard fixing this, but it will not be that hard to get 100,000 or a million people doing things in a profoundly different way. And once we have a slipstream that, then again we have a proof of concept that people are not going to be able to ignore.

Nicki: All right. You had another thing there did you want to mention that or not?

Robb: Oh, I just had a link too that kind of supports this, "American millennials mental and physical health is on the decline and they're on track to die faster than Generation X." A new report says. We've talked about this, I did a lab piece that was entitled for the Healthy Rebellion millennials aging like shit. And it basically talked about rates of Parkinson's and Alzheimer's that have been unheard of in populations this young shouldn't exist, but it does so yeah.

Nicki: The next question is from Jason. Diabetes. All of the iterations and different ways to treat. Jason says, "First off like everyone, thank you for all you do and provide. I've been following you for several years and I really appreciate your approach to health and trying to be the healthiest version of ourselves and also being open minded and not super dogmatic. Which leads to my question. As a healthcare provider, I'm always trying to learn new approaches and stay open to ideas on health outside of my normal. As a result, I recently listened to a podcast on a plant based podcast by Cyrus Khambatta and Robby Barbaro about diabetes and the mitigation and reversal using high carb, low fat, low protein. Some of the things made sense to me, but it is also contrary to what I learned and what I hear most people talking about. I'm wondering if you've heard or read anything by them and have thoughts on their biochemistry reasoning and/or how they are reportedly fixing diabetes by prescribing a high carb approach. Thank you again."

Robb: Yeah, this is a great topic. And these guys and even like Michael Greger, the NutritionFacts guy, they know their biochemistry pretty well. And they make the case that if you reduce saturated fat, that people will tend to see an improvement in insulin resistance. But really what they're driving at is just a caloric deficit. And anytime that we can get people who are insulin resistant into a caloric deficit, then typically good things happen. The bugger is that the standards that these folks use, like there was one paper published out of India and I actually need to throw that in the show notes that was suggesting a reversal of type two diabetes.

Robb: And this is a situation where the vegans do goalpost moving. So the goalpost moving is such that what they call a win and granted people are improved, their A1C's improve but they're still terrible from my perspective. They're calling like a A1C of 6.5 that they're no longer diabetic, even though people are still needing insulin and stuff like that to manage it. So when you look at the numbers that these folks produce, they're really lackluster and I'll go out on a limb and say that for a type two diabetic, they might be able to get a reasonably good numbers out of these folks. Still they're not that great but it's going to be better.

Robb: Over eating is going to be a problem, like eating too much fat, eating too much carbs is a big problem. If you reduce the fat or reduce the carbs and eat less, then you're going to be in a better metabolic state. The vegans won't agree with that because fat and animal products are horrible, but when you really look at the science, that's the credible position on this. But the goal post end points that they use to call success is just bullshit, and this is particularly damaging for children who are type one diabetics. When you look at what the Bernstein Diabetes Solution Approach is, which was studied at Harvard in the journal that published this.

Robb: And this was from the Typeonegrit folks that helped to make this whole thing happen. The journal said that this was the best glycemic and blood sugar control they had ever seen in a type one diabetic population. And so this is just where I don't know that it's irresponsible, this is again, circles around in this greater geopolitical thing. Works like, "Well, these people shouldn't be allowed to say this, that." And the other is like, "No, let them do it. Buyer beware." But I think that their methodology is incredibly flawed. It may be well intentioned, it may be of benefit to some degree.

Robb: Again, not over eating is better than over eating, both fat and carbs and just processed food and all that stuff. So could there be some benefit here? Yes. Is it providing the ultimate benefit? No. Some people don't want to eat keto, some people for ethical reasons want to be vegan so if that's the case, then by all means I guess that what they're doing would be the reasonable answer there. But I think it would be incredibly unethical for a parent of a type one diabetic kid to use this protocol versus the Bernstein protocol. Let the fucking kid get to adulthood and let he or she make the decision about that versus damaging your child for the rest of their life and really increasing their likelihood of all manner of complications.

Nicki: Or even a type two diabetic who could try this plant based approach that they're putting forward and they might see results initially, but to your point they're not going-

Robb: It's not going to be as good.

Nicki: Right. Their A1Cs might drop and so like I said there is a small win, but are they dropping to be in the fives or sub five? Which is like the goal.

Robb: Which is what we're able to do within the Typeonegrit. That's a great point that the people routinely have A1Cs below five and you fucking never see that in these vegan populations. Never. They're in the sixth, sometimes sevens and they're high fiving each other because it's not in the tens and Eleven's. Okay. Yeah, it's a win but still it's like, okay, the whole house isn't burning down, but just the kitchen, laundry and bathrooms are. It's kind of like, okay-

Nicki: Smoke inhalation can still get you.

Robb: Absolutely, well said.

Nicki: All righty. Let's see, our final question this week was from Instagram. Yankee Roots Southerner has a question about how you're defining metabolic health conditions. "Rob, I saw your Instagram story where you mentioned that people with an existing metabolic health condition have worse outcomes when it comes to COVID-19. How are you defining metabolic health condition?"

Robb: So this is something that I should have probably done a better job of upfront. This is where you operate in this stuff every day and you just assume everybody else knows

what the fuck you're talking about. But at the brass tax level, the metabolic conditions that really appear to be worsening the outcomes within this COVID outbreak are diabetes, it's hypertension, it's existing kidney disease, lung disease, heart disease. The thing is, is that when you dig into what conditions are related to hyperinsulinism, which is syndrome next, metabolic syndrome, it's so many things. And acne tends to be associated with metabolic syndrome, polycystic ovarian syndrome, on and on and on.

Robb: Now, if somebody is manifesting insulin resistance or metabolic syndrome and their main manifestation, let's say is polycystic ovarian syndrome. I would suspect that they're not as likely to experience deleterious effects as say somebody who has really poorly controlled hypertension. And even the controlling of hypertension, they're using ACE inhibitors which appear to make the whole condition worse and it looks the data is pretty clear on that at this point. So there's just a laundry list of shit that is associated with metabolic derangement. And I mean I put in two lanes hyperinsulinemia unifying theory of chronic disease and hyperinsulinemic diseases of civilization: more than just syndrome X. That one's actually a Loren Cordain paper, but it is by no means exhaustive, but it's shocking how many things this thing, this thing, this thing.

Robb: Whenever somebody asks me a question about a particular condition the two things that I search for, it's usually condition name hyperinsulinemia and usually you find something with that. And if you don't, then I do condition name, either gluten or zonulin because it's gut related and there's virtually nothing that doesn't end up falling into one of those two buckets. So I will do a better job going forward trying to define I guess better what the metabolic health... It's easier to define what metabolic health is versus doing the laundry list of everything that is associated with poor metabolic health. So going forward we'll do a better job of kind of delineating what you would look like and this is some of the testing that we do in the Reno clinic the lipoprotein insulin resistance score and some things that. So, yeah.

Nicki: Great. That was our episode this week. Let's see, thanks for joining us. Please check out Four Sigmatic our show sponsor today. They help us do what we do and get these episodes out to y'all. Go to foursigmatic.com/rebel and use code rebel for 15% off. A reminder that we're starting our next 30 day reset and seven day carb test on April 20th inside the Health Rebellion community. So jump on over and join us before April 20th if you'd like to participate in that. And we are thankful as always for you for listening and hope you all stay safe.

Robb: And if you guys like conversations like this and you want to go deeper, join us over at the Healthy Rebellion. We do this all time.

Nicki: You can go to join.thehealthyrebellion.com.