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. Morning when Robb gets passionate, he's been known to use the occasional expletive, a foundling which is not your thing, if it gets your britches in a bunch. Well, there's always Disney plus.

Robb: What's cracking wife?

Nicki: Goodness. Just got some jujitsu in.

Robb: How do you feel? You've got a little bit of a rotator cuff impingement going on which you're working through.

Nicki: Yeah, my left shoulder is a little bit buggered right now, but I was able to do all of the drilling. We were working half guard bottom in escapes from half guard bottom and getting that under hook and I'm able to do with my right arm, but with my left arm, I'm babying that for a little bit because I want to make sure it heals up and I don't want it to get any worse.

Robb: Good plan. Good plan.

Nicki: Yeah. So lots of drilling. Wasn't able to do any live rolling kind of taking the week off with that, just to let it rest and heal.

Robb: Cool. Cool. What else? What else?

Nicki: Gosh, inside the Healthy Rebellion, we've got a lot of fun stuff going on in there. Just wrapped up the four week straight summer strength program with basis health and performance in Chico, California. I'm actually wrapping the pieces, tank top here today. That's been really fun. A lot of folks are going at their own pace. We are...

Robb: We're like two weeks behind, approximately yeah.

Nicki: It kicked off the week that the book launched. So we were a week behind and starting. And I think other folks have had a similar-

Robb: And we've been getting three days a week basically of training vs four, yeah.-

Nicki: -Instead of the four. They programmed for four days a week. But it's been great programming and definitely getting a lot out of that. And a lot of the members too are getting a lot out of that. So a single leg glute bridges on the bencher-

Robb: For the win?

Nicki: Or a party.

Robb: They are?

Nicki: Yeah. Other than that, we're just August in the Texas Hill country.

Robb: Thank God there are swimming pools.

Nicki: It's warm, it's toasty. And what did we do today after jujutsu? The girls have been begging to go to this store that is near the gym. It's called Dirt Cheap, but there's a picture of a chicken as the logo. And so they call it chicken cheap and they've wanted to go in there since fifth-

Robb: Since they first laid eyes on it. Yeah.

Nicki: We finally did that today. That was an experience.

Robb: Take a dollar store and then set a bomb off in the middle of it. And that is dirt cheap.

Nicki: Yeah. It's an experience.

Robb: Yup. Yup. I'm sure there is many a bargain to be had, but you're going to devote some time to find it.

Nicki: Yeah, we left empty-handed this time. Although there were some items that the girls singled out, but.

Robb: But didn't mention upon getting home. So I think we're free in a way on that. So the news topic there's a new paper out hit or miss the new cholesterol targets and the long and short on that is that it was a really comprehensive analysis of arguably the best literature available. And it paints an interesting story that lowering LDL particularly via statins doesn't really seem to correlate well with improved outcomes. In the literature, there is some case to be made for statins mitigating some percentage of cardiovascular disease events. But what's interesting is it seems to be independent of the lipid lowering effects. So then it begs the question. Well, can we do the things that help, in these other ways, aspirin is kind of an antiplatelet activity.

Robb: There's a variety of ways to improve nitric oxide release within the vascular endothelium, not the least of which getting out in the sun and stuff like that. So it's interesting, but I'll read a couple of pieces from this. I have links in the show notes, but again, the name of the main piece is hit or miss the new cholesterol targets setting targets for bad LDL cholesterol levels to ward off heart disease and death in those at risk might seem intuitive, but decades of research have failed to show any consistent benefit for this approach, reveals in analysis and the available data published online in the

British Medical Journal Evidence-Based Medicine. The BMJ is one of the most well respected medical journals, scientific journals around.

Robb: This thing has really been hot. Let's see here, their analysis showed that over three quarters of all the trials reported no positive impact on the risk of death and nearly half reported no positive impact on the risk of future cardiovascular disease. And the amount of LDL cholesterol reduction achieved didn't correspond in the size of the resulting benefits with even very small changes in LDL cholesterol, sometimes associated with the larger reductions of risk of death or cardiovascular events and vice versa. And this really flies directly in the face of the general lipid hypothesis, which is this idea that atherosclerotic plaquing is a gradient driven of fact, the higher the LDL particle count, the more likely that this event is to occur. And if that's really the case, it's a simple dose response curve.

Robb: This is paradoxical. And so then it really suggests that what's going on in the lipid lowering process is something other than, as far as whatever benefit we see with a statin use, it's attributable to something besides the lowering of the lipids. And it's interesting, even over the course of time. Initially there were some really hard targets that were put out around lipid lowering, and then over the course of time, those targets were kind of abandoned. They're still out there, but the main thing was just trying to get people on statins and call it a day. Some more stuff considering that dozens of randomized control trials of LDL cholesterol reduction have failed to demonstrate a consistent benefit. We should question the validity of the theory. Can you scroll me up a little bit?

Robb: Couple of pithy ones and maybe it's because this is British and most fields of science, the existence of contradictory evidence usually leads to a paradigm shift or modification of the theory in question, but in this case, the contradictory evidence has been largely ignored simply because it doesn't fit the prevailing paradigm. Moreover, considered that the Minnesota coronary experiment of four year long randomized controlled trial folks might remember this. We talked about it in wired to eat. I think we mentioned it in that, and we've mentioned it elsewhere, but this was a like gold, gold standard randomized control trial. Now it would never get passed by an IRB, but they did different dietary interventions on hospitalized, mental patients.

Robb: Some of them, they continued with their standard high saturated fat diet. The other one was replacing saturated fat with heart-healthy polyunsaturated plant oils and on the low fat diet involving 9,400 subjects actually reported an increase in mortality and cardiovascular events, despite a 13% reduction in total cholesterol. So this stuff is super interesting. I have a link also to Dr. Malcolm Kendrick. He did some great analysis on this piece. I don't know that this completely gives one a get out of jail free card for like all of the lean mass hyper responders out there. I don't know that this whole story... just because lowering cholesterol via statins, the main beneficial effect of statins appears to be not the lowering of lipoproteins, it seems to be a bunch of other stuff.

Robb: I think that it would be easy to jump onto this and just say, well, it doesn't matter, like our good friend Dr. Saladino, I forget what his lipoprotein number was, but is-

Nicki: He said his LDL were really, really high.

Robb: LDL cholesterol was over 500, so far so good, but is all of the risk or potential damage being mitigated due to a low inflammatory state, a low flux of endotoxemia through the gut, because there's not a lot of gut irritants. Is he in people like him? Which probably includes me, riddled with soft plaques, which are actually not well detected on coronary calcium scan, but were just like ticking time bombs? I don't know. I think we still have a long way to go with that, but it is interesting that if we zero in on some of the other mechanisms, like reducing inflammation, platelet aggregation, nitric oxide release, if those are the things that are legitimately reducing cardiovascular events, then that it's really kind of cool because, whether you're lean mass hyper responder and on the higher side, or you're just motoring along living your life, it really suggests that we have some interesting opportunities to do some things other than statin therapy.

Robb: And Dr. Kendrick mentioned some of these new cholesterol lowering drugs, PCSK9 inhibitors, they'll drop cholesterol by 50% like though, if you've got a LDL cholesterol of 100, it'll drop it to 50. And again, within the lipid, this is what's so fascinating within the lipid hypothesis story. If the whole thing hinges on LDL particle count, LDL cholesterol count, and we reduce the count by 50%, we should see a 50% reduction in events. And we do not. It's a poultry reduction and events. If there's a reduction in events at all. And then with all of these drugs, there's a whole host of side effects. It's really interesting.

Robb: But to date, there has been over a trillion dollars worth of statins sold alone. I think Malcolm Kendrick mentioned that if, in an effort to double down on this whole story, if you shifted the totality of everybody in the UK who is on statins currently and put them on these PCSK9 inhibitors, they're shockingly expensive, they're injection only. They're very, very expensive that it would be nearly as much as what they spend on their defense budget. And so it's just probably not going to happen. But this is some stuff that probably needs to be kicked around and discussed. And again, it's really interesting stuff in a previous salty talk, we dug into one of the early, it wasn't a statin, but a different cholesterol lowering drug fenofibrate, if I recall correctly appears to have some potential benefit dealing with the COVID-19 disease process.

Robb: Again, these things aren't necessarily worthless. There ends up being upsides to almost anything. If we poke around and find the right context, but just a very interesting, very solid paper that really should shake some things up. And the folks that are just wanting to reign statins upon us, it really questions the scientific validity of that recommendation. Again, there may be different pathways that we want to consider, like nitric oxide release, like reducing inflammation for crying out loud, just reducing hypertension, high blood pressure, like Malcolm Kendrick makes the case that atherosclerotic plaquing requires a endothelial damage event. And then the lipoproteins play a role in trying to heal that. And if the body can't get ahead of that, then this whole thing can spin out. So reducing blood pressure in my mind is probably one of the most powerful things to do right on the front end of it.

Nicki: When you say nitric oxide release, like what are ways people... how does that happen?

Robb: Vegetables, beet juice, viagra, exercise, being in the sun.

Nicki: One of the things in that breath book by James Nester, he has a whole thing at the end and his introduction to breathing techniques. And one of them is humming through your nose, obviously-

Robb: Which Nicki's been humming a lot lately.

Nicki: ... for five minutes, and it's supposed to increase nitric oxide.

Robb: In the nose?

Nicki: Okay. Just in the nose. I mean maybe it's good for the rest of your body?

Robb: But maybe it's got spillover systemic effects. Yeah. But that's a great case in point though, that we have either low risk nutraceutical pharmaceutical interventions that we could do, or even just breathing techniques, maybe this is part of the reason why breath work is it reduces stress and then it improves nitric oxide release-

Nicki: Lowers blood pressure.

Robb: Yeah, it lowers blood pressure. And so the interesting thing is when we find things that work well, they tend to address a lot of different issues simultaneously instead of it being this like standalone thing. Again, to the degree that Statins appear to offer some benefit, it's not because of the lipid lowering is because of all the other stuff that they do. That's just kind of interesting.

Nicki: We will, of course include links to these things in the show notes. Let's see here, let's announce our t-shirt winner for this week. It goes to South of grace, or it could be sough of grace or sough of grace

Robb: Sough of grace.

Nicki: S-O-U-G-H.

Robb: S-O-U-G-H, yeah.

Nicki: But as we know, that can say that, O-U-G-H, says many things. So I'm working with the girls on their phonograms.

Robb: Just as we are going to do a salty talk on homeschooling. And so, we'll talk a little bit about that. I think folks will find it interesting.

Nicki: Yeah. Okay. Let's this review. It says, love it. Salty talk is bay. There's a smiley face with a little like hands in the air emojis. Thank you for your review. Send us an email to hello@rev.com include your t-shirt size and your mailing address. And we'll send you a healthy rebellion radio t-shirt. And I would have read that in a salty talk episode, but we

don't do reviews and salty talks. So I figured we'd get a shout out to the Salty talk review in particular. And all of you also can win a healthy rebellion radio t-shirt, just leave us a review on iTunes. And if we choose yours to read on the show, you'll win a shirt.

Robb: Awesome.

Nicki: This episode of the healthy rebellion radio is sponsored by Paleovalley. Do you feel tired? Groggy have trouble focusing. You can be one of the many Americans suffering from B12 deficiency. The deficiency and B12 used to be fatal until researchers found it can be corrected by supplementing the diet with none other than beef liver. Enter Paleovalley grass fed organ complex. It combines three of the most nutrient dense foods on the planet, cow, heart, liver, and kidney into an easy to take capsule. So you don't have to worry about the taste. I know one of the most people following our show Robb are aware that awful or organ meats are really beneficial for the body. But a lot of folks have a little bit of resistance to trying to include it in their diet because of the taste-

Robb: Yeah, we do the best we can, but it doesn't happen as often as we'd like. One of the most common things that we do is we have a heart liver and other fiddly bits mix.

Nicki: When we order our half a cow, one of the things they do is they have ground beef and then they'll do a blend with organ meats and heart ground beef heart organ meat.

Robb: And so we do a taco night and I do two pounds of ground beef and then one pound of the mix. And so we at least get that in like once a week, but it's not-

Nicki: This is where the Paleovalley organ complex comes into play because you can be consistent. It's easy to do. And it's one of these things that traditional cultures ate all the time. and Paleo Valley organ complex is like nature's multivitamin. You get vitamins and minerals like vitamin A, B2, B3, B5, B6, B9, B12, iron phosphorous, zinc, copper, and selenium. So give it a shot. If you're not getting organ meats in your diet, Paleo Valley organ complex is a great source. Go to paleovalley.com/THRR and use code THRR10 to save 10% off your order.

Robb: Cool.

Nicki: Okay. I think we've got our five questions queued up here. Are you ready?

Robb: Let's do it.

Nicki: Let's do it. Okay. We've got our first question from Charlie. He's wondering if he should give up keto, if it skyrockets his LDL kind of ties into your news topic today. Hi, Robb and Nicki, big fan of the show after learning about the many health and longevity benefits of keto from folks like yourself, Dr. Peter Tia and Dom D'Agostino. I gave it a go for four months. I followed a clean dairy free version with loads of greens and cruciferous veggies, a variety of meat and fish, avocados, olive oil, nuts, and coconut. You get the idea. I confirmed ketosis regularly with a blood meter. I felt great during the four

months and by the end even started making gains again with my kettlebells and barbell, the diet wasn't a huge adjustment for me since I was already essentially paleo.

Nicki: After the four months, I got my blood work to compare to my baseline, my triglycerides and HDL remained excellent, but my LDLC skyrocketed. And my LDLP is fairly elevated. I am so bummed out and discouraged because I was so excited about all the longevity benefits of ketosis. But my primary care practitioner told me to go back to my previous eating habits. So here's my question. Do you have any ideas for ways I can achieve some of the benefits from ketones beta hydroxy butyrate while mitigating my LDL going haywire, maybe intermittent fasting, cyclic keto, exogenous ketones while the high LDL numbers scare me.

Nicki: I know from listening to your podcast, as well as Dave Feldman that LDL, isn't the end all be all for cardiovascular risk. I find solace with my HDL and triglyceride levels. Also my fasting glucose is very low and my LPR score is below the low range indicating I'm highly insulin sensitive. Any advice you have for me regarding my path forward with Keto is greatly appreciated. Thanks guys. And for context, I'm a lean active 34 year old male.

Robb: It would be nice to know exactly what the LDLC and LDLP are, he said that the LDL cholesterol skyrocketed and the LDLP is fairly elevated. You can end up in a situation where the cholesterol content of each particle increases, and it actually just makes for larger, more buoyant varieties of the LDL particle, which in theory, they're less atherogenic. And again, this goes back to our opening news piece. Like it's still really, for me in oblique problem to figure out like, what exactly is the story with regards to lipoprotein levels and cardiovascular disease risk? And I think that there's just a lot of different factors going on there. Some of the things, like he really detailed some of the primary things to do like more of a cyclical approach. Just leaning on the notion that doing some amount of time restricted eating is probably going to be hugely beneficial.

Robb: And then I don't know if Charlie has checked out my talk for this year. There's a couple of different locations to find it around the interwebs, including in the Healthy Rebellion, but longevity, are we trying too hard? I make the case that once we're pretty lean, pretty active and eating something like an ancestral appropriate diet, I don't know how much more upside there is. Like maybe ketosis gives you a little bit, maybe a little bit of fasting, gooses things in a favorable direction, but it's also one of these factors that, the dueling banjo there is sarcopenia. And in theory, I'm working on a book with Ken Ford to tackle this sarcopenia topic and how I got roped into yet another book I will never know, but Ken's one of my personal heroes.

Robb: So we're going after this, but it's interesting that everything... there is a case to be made that the potential protein loss and muscle loss of a fasting protocol may not be as much as what some people think, it may not be as bad particularly if we are strength training during that time. There's a bunch of other factors there. So maybe I'm overhyping that, but it also becomes pretty clear that there's a dose response curve with all that stuff. And again, when we look at just general longevity features centenarians, these people, one are kind of lucky, both genetics and just life circumstance. And then two, they're just not overeating. None of these people are doing keto. None of them are specifically

intermittent fasting, not really, maybe like for Ramadan, there's some amount of that, but they tend to be spiritual people. They tend to be highly motivated people. They have a reason to live. So there's all these other external features.

Robb: And then they have a generally healthy lifestyle. And that seems to confer a pretty good likelihood of hitting like your 90s and above and being in pretty good shape, comparatively. We don't really know what the true risk profile is on these elevated lipoprotein levels. If you were eating in a way that was more or less kind of lowish carb, paleo, and we didn't see, sky high particle count, makes sense to modify that, that direction. There is a reality that when we flow things through the HMG-CoA reductase enzyme, you can elevate cholesterol and lipoproteins from an overabundance of calories in general, but also just the state of being in ketosis, flowing nutrients through the enzyme, in the key tonic environment. For some people, it just shockingly elevates the lipoproteins.

Nicki: Robb, he tested after four months. And I remember you mentioning that especially health in Reno, they would test at three months, but then they found that often things got a little bit worse before they got better. And so then they would, instead test at six months, do you think there's a chance that he could be in that sort of phase of things that if he had waited two more months and tested his blood work at six months, it might have looked different?

Robb: That's a great point that popped into my head when you were reading it. And then I lost it along the way. Generally when we saw that with folks, they were already not in great health.

Nicki: Right. Okay. That makes sense.

Robb: It might be the case, but the interesting thing with those folks is sometimes they looked worse before they looked better.

Nicki: But he was already eating a paleo diet-

Robb: He was already pretty well. Yeah.

Nicki: ... already reasonably lean and active and all that. So it wasn't such a dramatic.

Robb: It's a possibility like you could make the case of write it out, check again, it's six months. And if we see another like step wise increase, then we might want to reevaluate what's going on. And again, there are people that are adamant that super high lipoprotein levels in a low carb environment are completely safe and benign. We're going to get Bill Cromwell back on the show at some point. And he really makes a damn strong case that that is not the story. And he looks at the divergence of different disease processes. So insulin resistance can foster cardiovascular disease, but what's interesting is in the literature, you have people that are not insulin resistant, but still developing cardiovascular disease. And so now again, there may be other factors going on, and this is where, it's just like this infinite onion appeal, but it may be the case that very low

insulin and inflammatory levels are largely protective under this circumstance, but there needs to be a little caveat, little questioning.

Robb: Like for me, I don't know what else I would do at this point. It's like, this is about the best that I feel. And so my numbers aren't like sky high, but they're higher than what most people would want them to be. I need to get them rechecked. And then we can unpack all that. But it's literally this thing where I don't know what else I would do. Like I'm at this spot where if I'm going to eat this ketogenic level, I don't do great with a ton of nuts. I'll get the trot, if I just pour all the oil in my meal and eat just pure liquid fat. Adding more carbs, like I did more carbs for probably a month and a half of the summer and started feeling like shit. Like kind of a little bit of blood sugar, roller coaster. So I'm going to pepper in some fruit here and there, but I've actually really cut that back for the last four days and I feel better, but I really wanted to pressure test that whole thing.

Robb: I don't know what else I would do. And if I die in five years from a heart attack, I think I'm going to feel really good up until I go. And that may sound ridiculous. And like, there'll be a shit show for all the rest of you guys, because it's like, "Oh, the paleo diet guy croaked." But I just don't fucking know what I would do at this point. And I think that some people-

Nicki: It's not worth it to you to increase your carbs, to lower your numbers and feel like shit.

Robb: Yeah. It's still, it's like, well, okay, now we'll have some blood sugar dysregulation. And I have the like, am I enhancing neurological deterioration? And because I feel cognitively sharp and on point when I'm ketonic. I don't know, like this is for some people, but going back to Charlie situation, it sounded like he was looking, feeling, performing well with a basically like paleo type approach. So I could make the case run it to what you said, run in another like three months, recheck. And if things aren't looking the way that you want, I do think that it's a pretty reasonable thing that if you're already insulin sensitive and all this other stuff looks good and we can cut your lipoprotein number in half, that's probably okay. Even just for getting like life insurance and stuff like that.

Robb: Even if it is okay on a longterm medical basis, there's all these other life factors that like, let's say Charlie gets married or he is married and he wants to get life insurance. He's going to have a bastard of the time getting that, like if his cholesterol and lipoproteins are sky high. There's some other things to think about if you've got the latitude to do that and maybe do a little bit of fasting, that three days a quarter, maybe January, February, you do a month, two months of ketosis each year, and then the rest of the year, it's more paleo or something like that. So you do cycle this stuff around, but man, it's just like I really, really pine for the days where I was like, your insulin is low. Like there's no cardiovascular disease risk there.

Nicki: Okay. Let's see. Our next question today is from Devin on 5:2 fasting. He says, "Hi. I was wondering if you had any good resources, guidance, recommendations, or considerations, basically anything about 5:2 intermittent fasting. It is difficult to sift through all the crap on the internet."

Robb: Indeed it is.

Nicki: What is 5:2?

Robb: Basically you eat normally for five days, and even within this, there's a ton of different little iterations. The basic idea is you eat Monday through Friday, Friday night, you wrap up your nachos and whatever it is that you're doing. And then Saturday, Sunday, you fast. And then Monday morning you jump back on board. Some people do five days of normal eating and then half calories on the two days and people get benefit. They get some metabolic and improvements on this stuff.

Nicki: Do people use this as a way to eat all the shit and then don't eat?

Robb: They often times do.

Nicki: So they're not necessarily changing the quality of their food during the five days?

Robb: It often times becomes an excuse of like, well, I'm not going to be able to eat this weekend. And so I'm going to get my hog Fest on. And this is some of the challenge that I have with these approaches, not everybody does that, but a lot of people do. The meal coming off of this usually is kind of a humdinger also. Again, I would definitely make a case for move towards some paleo West cold food type diet as a baseline. And as with always, so Devin, just asking for like, how do I do this? I would look at whole foods, paleo leaning, adequate protein, for sure. But I would still want to know, why do you want to do this? What's the motivator here? Is it weight loss? And the goal is going to drive this stuff.

Robb: The time restricted eating and even more alone and there was a recent nourish balance thrive podcast where Christopher Kelly interviewed a guy who is a circadian biology expert. And he had a really great distinguishing kind of line between what's time restricted eating versus fasting. Like the time restricted eating is compressing the eating into a specific window, fasting he doesn't really consider it fasting until you've gone a full 24 hours. And then that starts beginning a fast and all that type of stuff. Those approaches are legitimately interesting for people who are just like, "I'm never going to change my diet. I'm going to eat what I'm going to eat. I'm going to have cereal and donuts for breakfast." But if you could get these folks to eat between 9:00 AM and 4:00 PM or something like that, and they don't have a restriction on the quality of what they're eating, but they've got a time restriction, seems like it still benefits people.

Robb: I wouldn't poopoo this stuff as one of the valuable tools to help people make diet and lifestyle change. But again, as always, I think a qualitative shift in food, adequate protein, like all of those things really, really benefit us. And then again, depending on what the goal is, like if Devon's already lean in athletic, I don't know. I don't know that it's going to do a damn thing for them. Could make the case for just time restricted, front loading calories early in the day, like more and more of that seems to be a little bit magical and the results that it provides for people. And it seems easier like the weekends, and I guess you could do this during, you could have two with the eating days

during the weekend, and then, during the week, your fasting days, but like social events, family functions, like taking two days off of eating, that can really start getting in the way of social interactions. And showing life.

Nicki: I think if I did this, you would definitely make it to work days to go out, have all the fun on the weekend, if that was the reason for doing it. It's just sort of, eat whatever, go to the weddings. Go to the bars, do whatever. And then like Monday, Tuesday-

Robb: You'd get after it because those days suck anyway.

Nicki: That's if you're going, if you're doing that approach.

Robb: So Devin, hopefully that helps, there's just a million ways to slice and dice this, but I really would. And if you want to circle back around and tell us what your goals are, and we could try to dial this in further, but I would really just try to orient this around your goals and maybe just some early time restricted feeding. And then if you want to skip a day here and there or extended a little bit longer, just take it as it seems to make sense. But other than people who just refuse to modify dietary quality, I'm kind of whole-home on the shifting in a really fasting centric kind of approach. Yeah.

Nicki: Okay. Our next question is from Sarah on avoiding weight gain, weight regain after losses, "Hi Robb and Nicki. I was wondering if you too can have a nice discussion about the optimal way to avoid gaining back the weight you've lost while dieting. There's a lot of talk about the best way to lose weight, but not enough on what happens after. I know you'd say that to lose weight, to try a low carb diet with adequate protein and electrolytes and exercise, using fat as a lever and everything will work itself out. However, during the pandemic, I ended up doing a very low carb diet and I lost about 42 pounds from mid March to mid may. You'd likely agree that this rapid weight loss is problematic because of lean tissue loss. I'll tell you right now, I wasn't eating adequate protein. The food I ate was primarily protein, but it wasn't much some days just a few meatballs.

Nicki: Also, I chose not to exercise during this time. I'm sure I'm not the only one out there who gets impatient. And isn't satisfied with losing a half a pound per week, even though it's the most sustainable way to lose. Anyway, I did some research, lost my job because of COVID no kids, lots of time on my hands. And I wrote it all down in a comprehensive plan to avoid gaining the weight back in the summer and moving forward. I was wondering if you might like to consider taking a look and perhaps bringing some criticism comments and tips for the other five listeners on what we can do to stabilize after weight loss. I'm a woman 37 years old, currently 208 pounds besides obesity, all healthy biomarkers. I normally enjoy CrossFit style workouts once a week or less. I'm not hardcore enough to build lots of muscle and mini triathlons in the summer. Thanks."

Robb: Can you scroll down a little bit? And what's her name again?

Nicki: Sarah.

Robb: Sarah. Sarah did an amazing job on this. And is this the one? We should hire her as a researcher because she did an amazing job on this. And she really got in and broke all the stuff down in a great systematic facet. And she had a PS in here. I didn't cite the sources according to APA or anything since I'm not really posting this anywhere, habit formation for why not throwing-

Nicki: -No, no those are my notes.

Robb: Okay, so those are your notes. That.. - Like what you put in there, Sarah has a really detailed list here, looking at the neuro regulation of appetite, systemic inflammation, entirety meal timing, it's a phenomenal resource and we'll put it in the show notes. And then the bits that you added in there, like having a why, I think is huge in the beginning, it's kind of your overarching, like this is helping to drive the goal. It's maybe overly simplistic, but it really helps me a lot. It's like, if you're going to do a road trip, generally you pick a destination. Some people just get in a car and they start driving and that's just fine. Like, they're just kind of see where they end up. But generally, if we pick a destination, then we know where you are. We know where we want to go. And then we can figure out the details along the way.

Robb: And that why, like I have kids and I want to see them have kids. And I want to be a factor in my grandchild's lives. My parents had type two diabetes and I never want my kids to do diabetic wound care on me. There's a huge list of things. And I think that some big stuff like that is really valuable.

Nicki: I think celebrating too new things that you can do because you're healthier and stronger and movement is just easier. So like maybe before you lost the 40 plus pounds, it might've been really challenging to hike a certain hike, or do certain things. And so like really relishing and celebrating the fact that, gosh, I just walked three flights of stairs and I'm not out of breath and I feel good, those types of things that you can remind yourself each day, like how you feel in your body can really help keep you moving forward. And we have a member in the Healthy Rebellion, Charles, who has lost a ton of weight, and he's been doing kind of iron man, half iron man's-

Robb: And he's gearing up to do a full one.

Nicki: And he's just loving the fact that it was something he never-

Robb: It's blowing his mind that he can run bike swim.

Nicki: ... dreamed that he would ever run bike, swim this amount of mileage and he's leaner and stronger and faster, and he's setting PRS and he feels great. And so finding something that you can do with your body, that you feel good doing it at this lighter weight can keep you moving forward. I think.

Robb: Yeah. And then, you had a great additional piece here, which is the, I think one of the most powerful tools and when folks approach dietary and lifestyle change with perfectionism, it's a poison, it's a guarantee for failure and problems. And we have a

saying that you're only one meal away from being back on track. And so don't throw in the towel. If you slip up, like one meal is inconsequential in the big picture. One good meal out of 10 or 20, we got a problem. Like we need to address that. But one slip up, if you eat three meals a day, seven days a week, that's 21 meals, one or two of those meals so long as you're not like getting kicked out of them at all, you can eat buffet or something. Probably not a big deal. Yeah.

Nicki: Sarah, you pulled out her the conclusion that she had and the doctor-

Robb: Yeah. Sarah had an amazing conclusion here. A diet consisting of high levels of animal-based protein combined with the lifestyle of a consistent strength training should go a long way to help the diet or not regain the fat mass that they have lost. General recommendation to seed a diet of 35% protein, 15% carbohydrate and 55% fat. I'll push back a little bit on the percentage part of this. I would say, get a gram of protein per pound of body weight. Figure out whether you're low carb, very low carb, or moderate carb, and then let the calories play out from there. The carbohydrate and fat can be adjusted based on how addicted the person is to certain foods and how they see the body responding during refeeding.

Robb: It's just an amazing resource that she's put together. Sarah, I think you're super on point. I've, jabbered a lot about this, but it's a challenge to improve on what she has put together here. Again, I think finding a why, celebrating the new things that you're able to do under this circumstance. And then, just remembering that, one deviation off plan is not sufficient to throw in the towel on this process.

Nicki: Right. And just to like hammer home and reiterate the importance of the protein because I know Sarah said that she knows that she wasn't eating adequate protein some days, just a few meatballs, like again and again, in our resets, in the side of the Healthy Rebellion community. Like that is usually-

Robb: Nobody's eating that protein.

Nicki: It's the takeaway from everybody who participates is that they thought they were eating enough protein, but Holy smokes, when they actually do eat enough, they're like, "Gosh, I wasn't hungry. I feel great." It's such a profound difference in how they feel. And it's always a big aha. And so we can't highlight that enough. Like if you might think that you're eating adequate protein, you might not be.

Robb: Chances are, you're not like the folks that have generally signed up for the Healthy Rebellion, we have some people that kind of newbies, like they're for whatever reason, this kind of ancestral eating got on the radar generally though, folks have been following this stuff for a while. And so they're not just fresh off the turnip truck. They're well steeped in this and folks virtually never are eating enough protein and Diana Rogers and I talked about this, like in her dietetics practice when she was seeing more patients on a day-to-day basis, no one, literally no one walked through the front door who had health or weight problems and was eating adequate protein yet. Like it's kind of a one-stop-shop for fixing whatever it is that's ailing her son on this stuff.

Nicki: All right. It's time for the Healthy Rebellion Radio trivia. Our episode sponsor Paleovalley is giving their immunity bundle, which includes essential C-complex, turmeric complex and grass fed beef sticks to three lucky winners selected at random who answer the following question correctly. And Rob, this one's a simple one. Brisket or ribs.

Robb: Of course, it's never simple with me. Are we talking beef or pork ribs?

Nicki: Pork.

Robb: Then I would go with brisket.

Nicki: Beef ribs.

Robb: Then beef ribs. Yup.

Nicki: Okay. So the answer is-

Robb: So it's like rock, paper, scissors, like beef ribs, brisket beets, pork ribs.

Nicki: There you go. The answer is to win either brisket or beef ribs, all right. Folks to play, robbwolf.com/trivia-

Robb: We make these things really hard.

Nicki: Enter your answer. We'll randomly select three people with the correct answer to win Paleovalley's immunity bundle the cutoff to answer this week's trivia and be eligible to win is Thursday, August 13th at midnight, winners will be notified via email and we'll announce the winners on Instagram as well. And this is open to residents of the US only. I have to say that these new headphones are, I think they're giving me a headache. We're, we've changed our microphones folks. And we're trying out these headset one so that we can move our heads a little bit more and talk, and it's like pinching my ears. That's why I keep adjusting them. Because they're like, my ears are getting pinched. And try-

Robb: Two more questions.

Nicki: Sorry, two questions.

Robb: Two more questions.

Nicki: ... to whine a little bit. Okay. Our next question is from Marco on element and sodium and breast milk production, "Hey Robb and Nicki, my partner, Garrett, and I have been huge followers of you since the beginning of our relationship 11 years ago. We just welcomed our second daughter about two months ago." Congrats, congrats. She says, "I'm exclusively breastfeeding and I've noticed an increase in milk supply while drinking element. Is it safe to drink more than once a day or is that not recommended? Thanks Marco."

Robb: Marco in this highly litigious world we live in, just doing a blanket statement of yeah, it's totally safe. It's tough to do that. That said, it's very defensible site from a scientific basis that a minimum of five grams of sodium intake per day is reasonable from a health perspective. We've talked about this before that studies in diabetic heart patients looking at sodium intake, people that were at the lowest intake, like two grams or less per day had the highest rates of morbidity mortality. And then there was a U-curve where at five grams per day of intake was the low ebb. And then you had to get out to eight or nine grams a day to get to the same levels of morbidity mortality as the two grams. And this is in an arguably pretty sick population that's already negatively impacted.

Robb: Up to five grams a day, totally, I think is totally reasonable. But then what's interesting is when we look at the literature on folks that are high performance athletes, heat, humidity and breast milk production that the demands increase. And like in the case of athletics, the starting place per day for athletes is seven to 10 grams per day in hot humid environment. So it's almost double what our kind of general baseline is. And for a larger individual or very high activity, it can nearly double, even beyond that, like in the keto gains community, they have folks that consume up to 15 grams per day of sodium, which is a lot like it's a jaw dropping amount. I don't even think that I get near that most days. And I might actually feel far better if I did, but we have all that stuff.

Robb: We have a lot of anecdote about people seeing enhanced breast milk production using element. And there's a study that in theory is underway at Vanderbilt. I'm not sure how COVID may be impacted that, but the Dean of the school of epidemiology has taken an interest in this sufficient to allocate funding and to have a study, to look at it, basically a feasibility study using element and tracking breast milk production. And we have a general baseline of what most folks produce under general circumstances. So even though this isn't like a randomized deal, it's not really a crossover deal, but if we see a significantly enhanced breast milk production in this group, we can assume that there's something real there because we have these other baselines to compare against.

Nicki: Yeah. And you mentioned it briefly, but I'll just reiterate that, within the keto gains community in particular, they've had several breastfeeding moms who have shown pictures of their breast milk production pumping in bottles and then without adequate electrolytes, then it's literally like double, triple, quadruple the volume post electrolytes. I think you even shared an image on your Instagram a while back that we could link in the show notes too. But it's stunning. A lot of people have noticed that.

Robb: In general, I would say it's probably pretty darn safe and definitely whether use element or not making sure that you're on point with electrolyte intake, which is sodium in particular, just drinking water doesn't cut it, like that will not yield necessarily enhanced breast milk, production volume. You need those electrolytes because-

Nicki: I so wish I knew this when I had Sophie, because I ended up exclusively pumping with that because I had a bunch of trouble latching with her. And I was doing all of the fenugreek and every possible little herbal remedy thing that was supposed to help with milk production. And had I only known.

Robb: And if we had just given you like bone broth and some salt, like you could have been good to go.

Nicki: Yeah it might have helped. Yeah. Okay, let's see. Our final question this week is from Diva on low T3 levels after longterm keto adaptation, "Hello, Robin, Nicki. First of all, thank you so much for the wonderful work that you two do. I would like to know what are your thoughts on low T3 levels after longterm keto adaptations. According to Finney's work amongst other evidences, it seems that it is physiologically normal for keto adapted people to no longer require high free T3 levels according to standard recommendations. I'm a 44 year old athlete and I've been keto adapted for over 12 years. I was diagnosed with Hashimoto's hypothyroidism 25 years ago. My antibodies have been under control since after starting a keto paleo lifestyle. And I've been able to reduce my T4 dose considerably as well. However, my free T3 levels are very low below the standard recommendations of 2.0, I am completely asymptomatic though.

Nicki: My body composition is great. I'm very muscular and carry 9% body fat effortlessly throughout the years, despite knowing about the T3 efficiency that keto adapted people acquire, about two years ago, I decided to experiment with adding exogenous T3 to my T4 dose. I noticed no difference on energy levels, but I did notice that I started losing muscle mass, which makes sense because one of the reasons that T3 may be lower on Keto is due to muscle sparing. I stopped taking T3 about one year ago and I've gone back to T4 only since then. But one trend that I noticed is that my fasting insulin has increased a little, nothing much. It used to be around three. And now it's 5.3. This started happening after I added T3 to the mix. I have since stopped taking T3, but my insulin has not gone back to levels that it used to be before taking it.

Nicki: I know that artificially raising T3 levels raise insulin, but shouldn't it have gone back down after stopping the med? I wear a CGM and my blood sugar control is stellar. I handle carbs very well. I've been testing with that even after eating tons of carbs, like 200 grams at one sitting, my blood sugar didn't move past 13 points. The maximum increase was 105 and I'm not kicked out of ketosis. Other than that, my average blood glucose is about 85. The only times that it goes up is after high intensity exercise, then it goes above 150, even to 170 sometimes. But I know that this is physiologically normal, so it doesn't concern me. My question is what are your thoughts on the T3 efficiency after being keto for so long? Should we try to artificially push up FT3 levels despite having no symptoms? And should I worry about a fasting insulin of 5.3, despite obviously being super insulin sensitive? Thank you so much."

Robb: Maybe starting at the end here and then walk our way back. The difference between three and five on an insulin assay, I would ask, was it the same lab? Was it the same assay? That's close enough that, just from one test to the other, you might have a point to half a point difference. And so I would be curious about that, beyond that I don't really see that being an issue at all, Diva's eating a ketogenic diet. One of the challenges even Peter Tia talked about this years ago was that he had effectively like undetectable levels of insulin. And he started suspecting that that was problematic over the long haul. Like we don't want chronically elevated insulin, but we also don't want chronically disappeared insulin either. So anywhere in that range, I think is fine.

Robb: Again, I would be a little suspicious that that really is what's going on, or there's enough variability there in the insulin testing that I wouldn't be too freaked out about that. The main concern that I would have with the free T3 levels is if there was some clinical manifestation, like a brittle hair falling out, nail problems, cold hypogonadism, foggy headed doesn't sound like any of that stuff's happening. And then an interesting thing, when we do consider the literature on longevity, people who run on the lower thyroid output side tend to live longer. It's just, I don't know if their body temperature is just naturally a little lower, or what, there's a lot of different factors that could be going on there, but so long as we don't see an overt clinical manifestation, again, like being cold, really cold hands, stuff like that.

Robb: I just don't see there really being a downside to this. I think doing of what Diva has done, which I don't know that I would do 200 grams of carbs in a sitting, but every once in a while, do a hard workout, then do 50, 100 grams of carbs post-workout just to kind of switch the metabolic gears and sounds like they're doing a great job monitoring things, looking at blood glucose levels and whatnot seems great. Like I would probably kill to have the metabolic flexibility there. I don't overall see any big things to be concerned about either way on this. And I don't really see the case for, I'm not even totally sure what else one would do other than more consistently consuming carbs to up that T3 level.

Nicki: Okay. That is a wrap for this week. Thank you all for joining us, please don't forget to get your hands on Paleovalley's organ complex for all day, energy and long lasting health. Go to paleovalley.com/THRR and use code THRR 10 for 10% off your order. Any parting words, hubs.

Robb: I have nothing.

Nicki: You have nothing hope you all have a fabulous weekend and we'll catch y'all next time.

Robb: Bye, everybody.

Nicki: Bye.