

**Speaker 1:** 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.

**Speaker 1:** 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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**Speaker 1:** 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 changes.

**Speaker 1:** Warning, when Robb gets passionate, he's been known to use the occasion of expertise. If foul language is not your thing, if it gets your britches in a bunch well, there's always Disney Class.

**Robb:** Hey folks, welcome to another edition of The Healthy Rebellion Radio. We did start a moment ago, but I had some sort of an alert blast on my computer and I'm hoping it doesn't happen again.

**Nicki:** I hope it doesn't happen again.

**Robb:** I'm not totally sure what I did, but... Wife, how are you?

**Nicki:** I'm good, I'm good. How are you?

**Robb:** I'm good. You're looking pretty hot in your transition to salt and pepper. Salt and pepper is here and they're in effect.

**Nicki:** The transition.

**Robb:** The transition.

**Nicki:** It sounds sort of ominous.

**Robb:** It does. The transition.

**Nicki:** It has felt a little ominous at points.

**Robb:** You're owning it though. I like it.

**Nicki:** I'm owning it. I'm owning it. Yeah. And hopefully it won't be too, too long given that I don't have long hair. So maybe a year. A year of transition.

**Robb:** Cool.

**Nicki:** A year of sometimes hat days, sometimes letting it all out days.

**Robb:** Sometimes regretting your life even more than you usually do.

**Nicki:** Yes.

**Robb:** You okay? Do you need a hug?

**Nicki:** No. I'm good.

**Robb:** I can get one of the kids to hug you. I'm not really feeling up to it. But...

**Nicki:** I'm good babe. I'm good.

**Robb:** Okay. Cool. Cool. I going to support you.

**Nicki:** Yeah.

**Robb:** Just not-

**Nicki:** You're so supportive.

**Robb:** ... too much.

**Nicki:** So, so supportive.

**Robb:** Yeah.

**Nicki:** What do you got for us here for our news topic?

**Robb:** News topic is a guardian piece. Veganuary is huge.

**Nicki:** Veganuary.

**Robb:** Veganuary. But is it really as simple as animal foods? Bad plant foods? It's a nice piece and it's good to see a little bit of push back on this stuff.

**Robb:** There's just such a wall of assumption that animal products are terrible for your health, that they're going to destroy the environment and all the rest of that. And there's just a lot of detail on new ones from the piece.

**Robb:** I just had some interesting stuff and this is what's crazy. And there've been some pieces that basically make the case that the way that veganism is being pushed it is cousins, like Greek friends with Monsanto and herbicide and stuff like that.

**Robb:** Because that's the only fucking way that you can make that work at scale. It is the cornerstone of our industrial food system.

**Nicki:** The monocropping.

**Robb:** The monocrop deal. Yeah. And that is what people are advocating for more of in addition to just some lead to material that these companies have a goal of owning the electoral property around our food. And so this one-

**Nicki:** What can go wrong with that?

**Robb:** Yeah. What could possibly go wrong with that? It reminds me of Total Recall where the people living on Mars, they would cut off the oxygen to them to keep everybody in line and stuff like that. So it's... Yeah.

**Nicki:** The only thing I remember from Total Recall is the eyeball getting pulled out through the nose. Right?

**Robb:** Right. Right.

**Nicki:** Yeah. I need to watch it again.

**Robb:** Yeah. Well, I think it was a probe but yeah.

**Nicki:** Okay.

**Robb:** But from the article just when ultra processed food manufacturers were being skewered for the health damage or products cause, the plant based push has given them a get out of jail free card.

**Robb:** It's a pity that the public food discourse has become so binary. Animal foods, bad. Plant foods, good. Perhaps it's time to reacquaint ourselves with the defining characteristics of food that keeps us and the planet healthy.

**Robb:** Whether it comes from a plant or the animal kingdom is irrelevant. What really matters is how that food is produced. It's not the cow, it's the how.

**Nicki:** Mm-hmm (affirmative).

**Robb:** And just as a side note on that, there've been a good number of people. Sometimes in fairly lofty positions that have been pinching a lot of Diana Rogers work around Sacred Cow. And so if you folks see that, if you see some of her work, an attributed jump on people with both feet up.

**Nicki:** Yeah. Speak up.

**Robb:** Speak up. Yeah. Diana is incredibly talented, super creative-

**Nicki:** She has been working her ass off for the last three, four years on this film and then also with you on this book. And, yeah. She deserves all the credit she can get for the work that she's doing.

**Nicki:** And if you don't follow her on Instagram @sustainabledish, she's putting out amazing content, infographics, blog posts, and it's just, her work is so, so important.

**Robb:** She's kind of fighting the fight that nobody else takes the time or has the wherewithal to fight. And so at a minimum, we as a larger community need to give attribution where it's due. Because, again most people may not know, she has a really pretty advanced art background before she got into science and dietetics and all that type of stuff.

**Robb:** And so she's able to take an angle on this material that just nobody else does. And it's been popping up a lot where folks just threw her material into their posts. And it's cool on the one hand.

**Robb:** They say, I've been torn on this because on the one hand it's cool because this message is-

**Nicki:** It's exposing it to broader audiences.

**Robb:** Yeah.

**Nicki:** Bigger audiences than ours, bigger audiences than hers.

**Robb:** Yeah. So I don't want to be a dick as far as that goes, but at the same time, it's not a difficult thing to go to provide some attribution on this stuff.

**Nicki:** Right.

**Robb:** So anyway, and again, we have this garden piece-

**Nicki:** Veganuary. Yeah. Linked to the show notes.

**Robb:** ... in the show notes. But this is a case that isn't really being talked about in the pushback against veganism due to the degree that folks feel inclined to do that. And I think that there's a really powerful case to do that.

**Robb:** But this notion that, what's being put forward is basically raw crops as far as the eye can see. And all this stuff with James Cameron, there was a guy that I'm supposed to have a debate with at some point on Instagram that was defending the fact that he has a \$140 million position in this pea protein company.

**Robb:** And I'm like, "That is not a whole unprocessed food. Why doesn't he just recommend like-

**Nicki:** Peas.

**Robb:** lentils or split peas or something. "Uhh, well uh.." Yeah and so it's kind of bullshit. And I think that both that and kind of the entitlement privilege, angle of veganism, mainly being white and wealthy and all the rest of that. Interesting angles to take on this stuff. But yeah.

**Nicki:** Okay. Let's move on to our iTunes Healthy Rebellion Radio tee shirt review winner. This award goes to app user three and the review says, awesome please keep up the foul language. Those of us who do not have a cob up our bums are not bothered by it.

**Robb:** God bless you app user three.

**Nicki:** Yeah. So that one definitely made us chuckle and thank you app user three. Send us an email to [hello@robbwolf.com](mailto:hello@robbwolf.com) with your tee shirt size and your mailing address and we will send you a Healthy Rebellion Radio tee shirt.

**Nicki:** All right. This episode of The Healthy Rebellion Radio is sponsored by Perfect Keto. Perfect Keto makes snacking on Keto easy with their Keto bars and nut butters, trail mix and chocolate covered nuts. And the best part is that Perfect Keto products are super clean.

**Nicki:** They don't contain any soy, dairy, gluten, artificial sweeteners, binding agents or anything that doesn't directly improve your health. And their Keto trail mix actually is quite, quite tasty. It's like a nice combo of chocolate covered pumpkin seeds, roasted almonds, macadamia nuts, coconut flakes-

**Robb:** The kids really like it and they're kind of finicky with stuff like that, which I can't as a kid, anything that looked like trail mix, I could basically go head first into a 50 gallon barrel of it and just come out once it was empty. But those are our kids, so yeah.

**Nicki:** Yeah. And it doesn't have, for those who are sensitive to sweeteners, no sugar alcohols, no Stevia. I think it has...

**Robb:** Yacon.

**Nicki:** Yacon. Yeah. As the primary sweetener. So those are super, super tasty. You can go to [perfectketo.com/rebellion10](https://perfectketo.com/rebellion10) and use code rebellion 10 for \$10 off orders of \$40 or more.

**Robb:** Awesome.

**Nicki:** And our questions for today, Shall we go there babe?

**Robb:** Sure. Sure. Why not?

**Nicki:** All right. Our first one is from Steven on estrogen and soy. Steven says, "I'm wondering how much you've researched about the relationship between soy and estrogen and or

it's estrogen mimicking characteristics. This would be an interesting thing to explore and explain on a Q&A podcast. Thanks."

**Robb:** Yeah. It's interesting when you, and I dug into this stuff a lot more 10, 15 years ago actually. And genistein and some of these other soy isoflavones are non-trivial estrogenic agents.

**Robb:** And what's interesting when you poke around in the literature, there's instances where it appears that they could play a beneficial role. In some cases. Like in PCOS there is some suggestion that these agents mitigate some of the effects of PCOS and there are some other situations where they have efficacy.

**Robb:** But what is typically happening there is an estrogen dominant situation in women. And although these soy isoflavones have an estrogenic effect, they work is what's called a competitive inhibitors.

**Robb:** So they occupied the binding site and although they do have an estrogen signal, it's weaker than the estrogen molecule itself. So in certain situations it can actually mitigate some problems. But I would still argue that you're basically covered. It's a symptom relief story. You're not addressing the foundational-

**Nicki:** Root cause.

**Robb:** ... Root cause problem there. And then we have some other linkages to thyroid dysregulation and some gut health issues. Soy is one of the most common allergens. It's a close race between it and peanuts as one of the most common allergens. So you've got a bunch of different problems there.

**Robb:** But it is interesting, even some folks have put forward the use of certain isoflavones in the situations of menopause or perimenopause. I would make the case that seeking out a good functional medicine practitioner. Getting your numbers run.

**Robb:** And then using things like bioidentical hormones and having some sort of a pulses howl release. That makes a lot more sense. And I think that the literature supports that and the anecdote supports that.

**Robb:** So yeah, the estrogenic effects of soy are real. They're non-trivial. There are situations in which it looks like they could be beneficial, but in my opinion, it's not addressing the root cause in that situation, which doesn't mean that you always have to go down that route.

**Robb:** My improvement with Imodium and my digestion, I'm still kind of perplexed about that. Should I need to use an outside agent to normalize my digestion? Why? Don't know.

**Robb:** Gets kind of wacky. When I use it, I feel better. My digestion is better, my whole an affect is better and I use two to four milligrams of it a day. So I don't want to get poly

purist about it and just say, "Well, any outside thing isn't a good idea because it can be under certain circumstances."

**Robb:** But there is also a decent amount of literature that the cast kind of dark shadow over the use of soy, particularly longterm.

**Nicki:** Okay. Let's see. Our next question is what causes insulin resistance? From Frank. Hello, Robb and Nicki. I'm currently studying kinesiology and there's one question I cannot get my head around. What causes insulin resistance?

**Nicki:** From my research, there are two schools of thought. One is the repeated exposure of high insulin levels cause the cells to down regulate resulting in insulin resistance.

**Nicki:** The other school of thought is that the fat cells and the liver cells is so full of lipids that insulin physically cannot push more sugar or fat into the cell.

**Nicki:** If the first is true. Why some other peptide hormones like growth hormones does not seem to down regulate when there is a chronic level of high exposure. People who even abuse MK 677, a growth hormone secretagogue. They do not seem to have a growth hormone sensitivity downregulation.

**Nicki:** The only studies I could find is growth hormones insensitivity due to genetics. Some steroid hormones even upregulate the receptor when exposing chronically like testosterone.

**Nicki:** If the second school of thought is true, why are there people who are lean and work out but start developing insulin resistance?

**Nicki:** Many distance runners start developing insulin resistance even though they train heavily. I wish to hear your thoughts. Thank you. I love the work you are doing and I learned so much from your talks and Q&A.

**Robb:** Really great question. And it's actually a lot of material to unpack. And this is some of the interesting stuff about just kind of science and research. There's a lot of different routes to developing insulin resistance. Sleep deprivation, stress over feeding, becoming very, very lean.

**Robb:** And so, which itself can become a stress, maybe backing up a little bit, back in the early 2000s, I was definitely in the insulin resistance as a downregulation process due to exposure. And did seminars talking about that.

**Robb:** And then people like the cracking Mat Lalonde, got in and really looked at this stuff and he was like, "I think we're missing something here." And so the insulin hypothesis stuff has definitely gone out of Vogue for me. It seemed to fit a lot of things, but there were a lot of glaring gaps with the hypothesis.

- Robb:** And so in an overfed state scenario, insulin resistance from my best understanding of this is, and it's interesting and it's kind of counterintuitive because it kind of boils down to an insulin sensitive person who is over eating, gains weight easier than an insulin resistant person.
- Robb:** And this kind of blows people away. If you are insulin sensitive you are generally more anabolically prime. And that weight gain could be muscle or fat.
- Robb:** And as you become insulin resistant you can make the case that it's an effort on the part of the body to try to mitigate the further input of nutrients into the body.
- Robb:** And there's this concept called the personal fat threshold and yeah, again, the insulin hypothesis was so compelling and so steep things that now when you put this kind of personal fat threshold forward, it's kind of like, wait a second, did I really hear that?
- Robb:** It's like you missed the punchline for a joke, but this personal fat threshold story makes the case that depending on the individual they will be able to gain weight up to a point, this is in the overfed state, they can gain weight up to a point in which their personal fat threshold is met.
- Robb:** And then this is where we start seeing blood sugars elevate and circulating triglycerides and glycoproteins because the body is trained to stick this excess caloric load somewhere.
- Robb:** And what's interesting is depending on your ancestry and your genetics, you may have a personal fat threshold that allows you to gain enormous amounts of weight before overinsulin resistance sets in.
- Robb:** So these folks they get four, five, 600 pounds. They typically, although overfed, they have an ability to continue remaining insulin sensitive and they have things like hyperplasia, the splitting of fat cells so that a fat cell can only get so large before it becomes kind of nonfunctional for adding more fat to it. But if that cell can split, then you have two of them that can get large.
- Nicki:** There are twice as many.
- Robb:** And some of the thought around that personal fat threshold, is that some people are quite good at the adipocyte hyperplasia and creating more fat cells. The bummer with that is once you got them, you got them and so your propensity for regaining body fat is even greater.
- Robb:** So you lose that weight. But if you screw up a little bit then you can reap gain that pretty quickly. People of Indian, Pakistani descent specifically, they tend to have a very low personal fat threshold before insulin resistance sets in.

- Robb:** So this is where at a population level looking at things like BMI are really misleading because these folks are typically from a body mass index, a height to weight perspective. They're not particularly overweight.
- Robb:** They may even be underweight because these people also tend to have significant sarcopenia. They've lost muscle mass in the whole process of this thing going on. They're wickedly insulin resistant and I'm kind of like this in that if I overeat, I start seeing my glycoproteins and lipids go up.
- Robb:** My blood pressure goes up. I start having really significant problems. I would probably never be able to make it to 300 pounds because I would probably die before I got there from cardiovascular disease or something like that.
- Robb:** So that's kind of one chunk of where the insulin resistant story comes from. In the case of really lean athletes, we kind of have two inputs there that are stressors that feeds into developing insulin resistance.
- Robb:** And insulin resistance you could think about it as kind of hedging of bets against stress. And so physiological insulin resistance that comes about from fasting and or occasionally low carb diets. It's partitioning glucose for those cells that must use glucose.
- Robb:** And then kind of a similar effect is occurring in very lean high motor output athletes. And so this is kind of that diminishing returns that we see with regards to leanness. Some people typically get healthier at a certain degree of leanness, but it's not an infinite slope with that because you-
- Nicki:** More lean doesn't always mean more healthy.
- Robb:** Correct. Yeah. Yeah. If you're a male and you're at 20% body fat, you will probably be significantly healthier. If you get to 10% body fat, you will not necessarily be significantly healthier at 5% body fat body fat.
- Nicki:** Got you.
- Robb:** Yeah. So it's interesting stuff. And Peter Attia, he just did a podcast with a guy, Ethan Weiss, and they actually talk about some of the growth hormone receptor. Considerations of insulin resistance and a bunch of other stuff too.
- Robb:** The front half of that podcast is very kind of cardiology dense, which I think is super valuable to listen to any way. But if you do check that one out and you're only interested in kind of the endocrinology, you have to go about an hour into it before you get into that.
- Nicki:** Got you. Great.
- Robb:** But good question. Who was that from? Is it Frank?

**Nicki:** That was Frank. Yeah.

**Nicki:** Alrighty. Our third question this week is on the topic of weight loss resistance and detox kits from Amanda. Hi Robb and Nicki, after my third child and third caesarean section, I couldn't lose all of the baby weight.

**Nicki:** Even after almost three years, no amount of whole 30 rounds, paleo or exercise is helping me to lose the baby pooch. A friend of mine who is also my chiropractor recommended that I do a detox that he coaches called True Cellular Detox.

**Nicki:** He believes hormone imbalances due to toxins in my body are what are causing my weight loss resistance. I'm a little skeptical. What are your thoughts on these detox kits? Are there other ways of handling weight loss resistance without all of these supplements? I appreciate your help, Amanda from New Hampshire.

**Robb:** Yeah. So, man, am I a fan of detoxes?

**Nicki:** Not really.

**Robb:** Not really. It's in the same genre as bio hacking and we would probably have a private Island in The Bahamas. Had I just been able to shelve a little bit of-

**Nicki:** Integrity. I don't know what is.

**Robb:** ... Yeah. Integrity, silly shit like that. Is the process of detoxification really important for our health in life? Yes, absolutely. But the body is generally really good at it.

**Robb:** And the funny thing about that is if you want to enhance detox, you actually want a significant amount of protein in your diet because so much of that plays into the production of glutathione and making sure that superoxide dismutase is up regulated.

**Robb:** And there's things like alpha lipoic acid that you can put in the mix to help augment that. Making sure you get enough selenium. But that's just some kind of basic nutritional support that's going on.

**Robb:** So if this problem is about hormones and it is true that some amount of our hormone status can be related to the way that the liver removes or modifies hormones and whatnot and like sex hormone binding globulin and all that. But it seems suspicious to me that you hang this on hormones yet don't test hormones.

**Robb:** It would be nice to know where we are in that story and then if we were going to drop in a detox, then you would check it afterwards. But I suspect it folks don't do that because this ends up having fuck all to do with hormones at the end of the day.

**Robb:** So I'm just not really a fan of this stuff. And really at the end of the day, typically what happens with these detoxes is they're very low or no calorie intake.

**Nicki:** A bunch of supplements.

**Robb:** A bunch of supplements, which funny enough, no matter how theoretically down-regulated somebody's thyroid is, if you starve them, they will lose body fat. They will lose everything else too. But...

**Nicki:** I'm wondering, Amanda, I'm wondering about a couple things. Sleep, which is a huge one. And given that you have three children, I'm assuming that sleep is probably not always as great as you'd like it to be.

**Robb:** Just real quick on that point, we have a seven and five-year-old, they tend to sleep pretty well. Last night Sagan woke up in the middle of the night, jumped in bed with us and now she's big enough that it's like I can't stand her there.

**Nicki:** And she sleeps sideways so she's got her feet on-

**Robb:** Well, she spins like the exorcist doing so.

**Nicki:** ... one of us. And so it's not comfortable.

**Robb:** I just bailed out of there and went and slept on the couch because I'm like, "Okay, she had a nightmare or something." So we're at year five of the youngest year seven for the oldest and we still don't always get great sleep.

**Nicki:** Right.

**Robb:** And without a doubt it affects our body composition and recovery.

**Nicki:** And then the other thought that I have for you, Amanda, is you mentioned exercise and I'd be curious to know what you're doing for exercise and ideally getting in some strength training and lifting weights, dead lifts, squat, presses-

**Robb:** You want to share a little bit of what you've been up to in that regard?

**Nicki:** Just some kind of volume work with a variety of exercises. So, and I'm trying to do it movements, neck style, in the middle of the day, because sometimes it's hard. The time that we have to train, ideally we're doing jujitsu because that's what we really enjoy.

**Nicki:** So if we have an hour to go do that, then that's what we do. The gym is getting up and running, but we have been doing a little bit of that in the garage.

**Nicki:** But as far as strength work, I can go out in the garage, I can do 10 dead lifts with the kettlebell or I can load a barbell and do rounds of that. So maybe five rounds of 10 super setted with some body rows or some press, chins, and just kind of rotating each day with whatever the movement is.

**Nicki:** And then my goal is, because I haven't been consistently strength training given the move and all that. It's like been a year since I've really been on a program in training.

**Robb:** Honestly since we've had kids. You haven't been as-

**Nicki:** It's been pretty sporadic.

**Robb:** Yeah.

**Nicki:** It's been pretty sporadic and I've prioritized going to jujitsu over my strength training. So now I'm trying to get that back in and instead of, I used to lift reasonably heavy, instead of jumping right back in there and trying to push hard on the loading side.

**Nicki:** I'm really trying to just be really concerned. I don't want to get injured. I want to get all my connective tissue strong again. So I'm starting really conservatively on the loading and just working volume. And then each week I'm trying to add five pounds and go again.

**Robb:** And you've been kind of stair stepping that up or you'll do seven rounds, five or 10 on a given movement and then maybe nine and then 10 over the course of a couple of weeks and then you'll bump the load up.

**Nicki:** And then I go the load up. Yeah.

**Robb:** Yeah. Yeah.

**Nicki:** I'll do five sets of five, it depends on what the movement is. Squats I've been doing five sets of five reps at the first load, which I started at 45 pound front squats, reasonably light for me.

**Nicki:** But I, again, wanting to just have a long run at this and then the next week it was seven sets of five reps at 45 pounds and then 10 and then jumping up to 50 pounds. I'm super, super slow. I know people listening are probably like, "Oh my gosh, that's such a slow ramp up."

**Robb:** What if you do this over the course of the year then you're going to be doing sets with 155 pounds.

**Nicki:** Right.

**Robb:** Which is non freaking trivial for small females and all that.

**Nicki:** Right. And I just find like it's easy too, when busy and you're stressed and you're trying to push things too hard, it's really easy to go do something and then tweak some1thing and then you're out for three weeks.

**Robb:** Mm-hmm (affirmative).

**Nicki:** And then that's setting you back. So I'm like, no ego about the load and I'm in my garage, there's nobody watching me. I'm telling all you that I'm lifting 45 pounds at a front squat, which, but it's just where I chose to start and am just slowly ramping that up.

**Robb:** And how is your body responding?

**Nicki:** Great. Great.

**Robb:** Yeah.

**Nicki:** I feel good. I wake up the next day, I'm not sore. I can go back into the garage and train.

**Robb:** Get more done.

**Nicki:** Get more done. And...

**Robb:** And you look if you're leaning out and you're clearly putting on muscle mass.

**Nicki:** Yeah. Because I was definitely lose. And all the stuff that you've been doing with your longevity talk in this book that you're doing with Dr. Ken Ford on sarcopenia, I'm like, "Holy shit." I used to carry a decent amount of muscle and not like I've gained a bunch of weight, but I've lost that muscle mass and that's been like, "Okay, that has to stop."

**Robb:** This is our window of opportunity to build it and-

**Nicki:** Yeah. I'm 42 and if I go another five, 10 years of not really being mindful of my muscle mass that could put me into a deficit as I age.

**Robb:** So Amanda, long deal...

**Nicki:** To sleep. Yeah. Sorry it's really long, but figuring out all the things you can do to really protect your sleep as best as you can with three kids. So all of the sleep hygiene stuff that I know.

**Nicki:** If you've been listening for a while, I'm sure you recall, the consistent bedtime, ideally some blue blockers at night, no devices, no TV in your room, no lights in your room, super dark, dark as a cave, cool environment.

**Nicki:** Try to protect your sleep as best you can. And then really look at your exercise routine and see about if you're not already doing some really smart strength work.

**Robb:** Mm-hmm (affirmative). And I'll throw one final thought in there, which is jam over to the Keto gains macronutrient calculator, put in all your data and then set it for a mild caloric restriction, about 10%. And what happens in that scenario is people are kind of floored by how few calories that thing recommends.

**Robb:** And this is also why Tyler and Louis get such damn good results because they're not over feeding their folks when the goal is body composition change, get adequate protein. But you've got to have a-

**Nicki:** Yeah. Focus on the protein.

**Robb:** ... Mild caloric restriction.

**Nicki:** Always focus on the protein.

**Robb:** Yeah.

**Nicki:** Okay. So Amanda actually if you implement that stuff, we'd love to hear back from you.

**Robb:** We would super. Yeah. Yeah.

**Nicki:** So please give it a couple of months and then ping us back and let us know how you're doing. Our fourth question is from Raysha. Hi Robb. I love listening to your podcast. It just educated me so much and you've become my number one source of all things nutrition. Thank you.

**Nicki:** I eat really well most of the time, 80% paleo, but with some cheese and peanut butter every day. I try to keep sugar to a minimum, but I include some fruit and gluten-free crackers in my diet as well.

**Nicki:** I live away from home for most of the year and tend to go back to my hometown about two to three times a year. Whenever I do go home, my diet is a little relaxed. Specifically I tend to consume more sugar and sugary beverages.

**Nicki:** This isn't every day, but it does happen a couple of times a week. I was just wondering if this sort of thing can leave a lasting effect on my metabolism. More broadly does eating bad a couple of times a month leave a lasting effect on my metabolism or health if I tend to eat relatively well most of the time?

**Nicki:** Do you have any advice to better approach my diet? Hope you can help me with this. Thanks again for all you are doing and come to Asia one day.

**Robb:** We'll do it and we may not come back. So let us in and we may not leave. This is really interesting stuff, and I can hear folks in the evidence based nutrition scene, their eye roll is so loud and profound over this that it's virtually deafening.

**Robb:** It's like, "Oh, well of course this wouldn't be a problem." And what's interesting to me about some of this stuff, if we really want to get in and kind of get geek out a little bit.

**Robb:** When I was at the last year's USCSF evolutionary medicine conference, I got to hang out with Erica Sonnenberg in the Sonnenberg lab. Is arguably the best regarded gut

microbiome lab on the planet. They're doing all the work with the Hadza and the human gut project.

**Robb:** They have amazing information. She shared with me this data that the Hadza kind of revered for their super diverse, interesting microbiota and they're kind of held up as it's seemingly an example of what we should all be shooting for.

**Robb:** They have a very high fiber diet and all this type of stuff. What was interesting is there was somehow, even though these folks are pretty self sufficient, they ended up being the recipients of some sort of United Nations grain relief program.

**Robb:** And so they got a giant bolus of corn and granted. This is big corn, hominy corn. Not processed. You basically cook it as a porridge. It's about as whole and unprocessed as you could imagine.

**Robb:** But over the course of just a matter of about 10 days, the Hadza's gut biome started westernizing from eating a bunch of this corn. And again, this is something that's about as unprocessed and natural and-

**Nicki:** Especially relative gluten free crackers and peanut butter and cheese.

**Robb:** Absolutely. Yeah. And so they were kind of like, "Wow." And now the thing is that with changes in the gut microbiome, we just flat don't know what the story is with regards to what does it matter.

**Robb:** We do a round of antibiotics and it changes. We go out and get a tan and it changes. We sneeze and it changes. And so the fact that the gut microbiome changes it seems to be kind of the one rule to it. It's always going to change.

**Robb:** But it definitely shifted in what we would consider to be a more westernized profile which typically tends to be more pro inflammatory and potentially problematic. And it doesn't take much to start shifting people down that direction.

**Robb:** So this has been something that I've been somewhat perplexed on. It's like, well, what is the safe, reasonable addition of processed foods such that we don't start setting that process up.

**Robb:** And I wouldn't be surprised if the answer is effectively none. And the thing about that is that even in this description here, this is a fairly serial event.

**Nicki:** Mm-hmm (affirmative).

**Robb:** Now again, at the end of the day, what is this ultimately going to mean for performance, health and longevity? Is eating some gluten-free crackers taking 10 years off your life? Fuck no. Not saying that. But it might have some knock on effects elsewhere.

**Robb:** But there's also kind of a reality that we do live in a modern world and the degree of rigidity that might be necessary to 100% protect oneself from deleterious effects is probably enough that then you are so socially isolated that you die because it's like you're in solitary confinement.

**Nicki:** Your luck of community. Yeah.

**Robb:** Nobody wants to hang out with you. So this is where I kind of end up siding with the evidence-base nutrition people to some degree where it's like-

**Nicki:** Wait, did you just say that?

**Robb:** To some degree? Well, once in a while or even a broken clock is correct twice a day.

**Nicki:** Okay. You heard it folks.

**Robb:** But I think being honest, it's like you can't also just say, "Well, there's going to be absolutely no downside to this." Saying if you're an evidence based person there is actually no evidence to support your supposition that there was going to inherently be no downside.

**Robb:** We just don't know. I think that it's reasonable, at kind of an instinctive level to say, "Well, a little bit of latitude isn't going to be that big of a deal." And there's also our super purists people are going to freak out, like Raysha mentioned, like sugary beverages.

**Robb:** At this stage of my life, I just can't figure out why people don't do diet soda. If you're going to do a soda, I just-

**Nicki:** Or a Zevia.

**Robb:** Or a Zevia. Or something like that. When you've been on a little bit of a vodka tonic tear and we get sugar-free tonic and... Because regular tonic it has twice as much sugar as a Coke. So...

**Robb:** And again the Uber purists will be like, "Oh, aspartame altered your gut microbiome and it's a neurotoxin. And it's like, well..." Okay, everything altered your gut microbiome. Again, what is the greater context here?

**Robb:** I guarantee you drinking hyper tokes corn syrup alters your gut microbiome and it's setting you up for non alcoholic fatty liver disease and a bunch of other stuff.

**Robb:** These have this sneaky suspicion that sugar-free beverages are probably a better option than sugared beverages. So even in this mitigating process, I would shift to a sugar-free beverage and on those days that you're going to kick your heels up.

**Robb:** We've had some friends in town recently and we know that we will be going out for a pretty extensive dinner and drinks and I might typically still have breakfast, but I may have no lunch and it may be a small breakfast because I know that evening I'm going to kind of burn it all down.

**Robb:** And so there's some kind of mitigating strategies that we can do around that. And if we know anything about this stuff, if you're going to eat crap, just eat less of it there's less of an effect there.

**Nicki:** And try to get some movement in beforehand or afterwards.

**Robb:** Trying to get some movements before, afterwards.

**Nicki:** Yeah.

**Robb:** Or go for a walk, all that type of stuff. But it's an interesting question and again, not to say that I'm implicitly correct about this stuff, but I think if you're going to give stuff like this, a really thorough honest unpacking it's a complex topic.

**Robb:** Even this thing of, is a little bit bad food on the side. Is it a trivial thing or a nontrivial thing and it kind of depends, and you really don't know.

**Nicki:** And it'd be one thing Raysha hasn't said that she's struggling to lose body fat or anything like that. So it'd be one thing if you had excess body fat that you were really trying to lose and then we'd look at the peanut butter and the cheese and your total caloric intake and all of that and dig there.

**Nicki:** But this seemed more like she was just curious if there was going to be some sort of problem down the road health wise, longevity wise doing this.

**Robb:** Right. Right.

**Nicki:** Cool. All right. Our fifth and final question for this week is from Josh and he says he's not chasing ketones or bullshit. Hey guys, love your info that you give out to keep it up. Let me get to it. One, I'm a 47 year old high school weight training teacher, Non-Hodgkin's lymphoma dominator 2012, bodybuilder and cross country coach.

**Nicki:** I work really hard on both ends of my fitness, both with weights and with trying to keep up with my kids that I coach. Typical summer day is lift hard and heavy for an hour, sauna run for a minimum of 20 or on the top end, 60 minutes. I have a six pack and I weigh 170 pounds.

**Nicki:** I'm five foot eight. I adopted a gaps diet five years ago, Keto, about three years ago and for the last year and a half I've been carnivore and more recently 10 months, nose to tail carnivore. I've always been military strict about my diet.

**Nicki:** I'm very aware of my electrolyte intake, sodium, potassium and magnesium and calcium. And I found a good balance so far. My question is that I've always had a hard time getting into nutritional ketosis from the start. My ketones are at 0.2 and my blood sugar...

**Nicki:** Okay, so not chasing ketones or BS in the title that I read, I said bullshit and it was actually meant to be blood sugar. Oops. Now that I'm into the question I...

**Robb:** The bullshit made more sense in the original context.

**Nicki:** Well, in the title that we have here.

**Robb:** Yeah. Yeah.

**Nicki:** Okay. So it is actually blood sugar. So my ketones are at 0.2 and my blood sugar is at 100 always or above, no matter what pre-post weights after runs or middle of the night. What the heck? I'm trying to be in ketosis for cancer reasons, but I still want gains.

**Nicki:** Eating 65% fat, beef trim and butter, 30% protein and the rest, carbs or less. Total calories are about 2,800 on average depending on my training cycle. Gene's diet, too much meat. Do I need to supplement with MCT? I'm tired of trying to figure it out on my own.

**Robb:** Man. This is one of those things where if we ever get the technology figured out on the Collen show-

**Nicki:** To do the live pulse again.

**Robb:** ... There are just a lot of questions that I would want to have on this. It's very rare that I recommend genetic testing. I think that that can just muddy the waters remarkably. But there are a few different genotypes around the fat mobilizing genes and whatnot that could really be at play in a story like this.

**Robb:** Another thing that could be interesting is actually an aggressive carnitine supplementation regimen. We need carnitine to shuttle most fats into the mitochondria to be used for fuel.

**Robb:** Supplementation with carnitine could help in this regard. The addition of the MCT could goose the ketogenic state. What would be interesting for me in this scenario is to see what a fasted state looks like.

**Robb:** And again, it's funny, like I'm not really have been a huge fan of fasting of late. It's like, yeah. Some. But I think people are just going super overboard on it. But this would be interesting because it's even in a fasted state, are you able to get some ketones then?

**Robb:** And if not, is it just like dinging the liver and causing kind of a stress response of glucose? And so there's, I'm not entirely sure how to tackle this. Certainly could try

additional MCT just to try to goose the ketogenic level. Looking at fasting would be interesting to just see what the numbers do in that scenario.

**Robb:** And then this would be something that doing a run through like DNA fit. It's a UK based outfit. They actually do a nice analysis of their own with regards to what macros you probably will do better with.

**Robb:** And it was interesting. It prescribed a low carb diet for me based off of my genetics and so confirmation bias or it's actually on point. You pick. But those are some things that I would tinker with or think about or I would be curious about to continue to unpack this.

**Nicki:** All right Josh.

**Robb:** I'm going to steal your water.

**Nicki:** Yeah. There's a little bit of lemon juice in it.

**Robb:** Perfect.

**Nicki:** All right. Josh, let us know. Do you do some fasting?

**Robb:** I would like to follow up on this.

**Nicki:** And then retest and let us know what your numbers are.

**Robb:** I'd be inclined to give Josh a month or two of free access to The Healthy Rebellion if he circles back up with us. Because I would be interested to unpack this stuff.

**Nicki:** Okay.

**Robb:** So if you're willing to do some of this follow up and you're willing to share it with the folk in the rebellion, I'd be happy to let you in so that we can unpack this stuff.

**Nicki:** Okay.

**Robb:** Yeah.

**Nicki:** I think that was our last question for the week.

**Robb:** Cool.

**Nicki:** Awesome. So thanks everyone for listening. Please share this episode or share one of your favorite episodes. We're really wanting to spread this message and get the word out so we would appreciate if you leave us a review, subscribe and share with a friend.

**Nicki:** And make sure to check out our show sponsor, Perfect Keto for all your Keto needs @perfectketo.com/rebellion10 and use code rebellion 10 for \$10 off your order of \$40 or more. And finally, join us over in The Healthy Rebellion.

**Nicki:** We've got a lot of great stuff. Actually when this airs, we will be just finishing up our seven-day carb test as part of our first 30 day reset seven day carb test that we did together as a group inside of The Rebellion.

**Nicki:** So we're excited to see the results that come from that and we'll share that with everybody. But, yeah. Hope y'all have a fabulous weekend.

**Robb:** Take care guys.

**Nicki:** Bye.

**Robb:** Bye.