

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 full aim to help one million people liberate themselves from the sick care system. You're listening to the Healthy Rebellion radio.

Nicki: The contents of this show are for entertainment, educational purposes only. Nothing in this podcast should be considered medical advice. Please consult your licensed and credentialed, functional medicine practitioner before embarking on any health, dietary or fitness change. Warning, when Robb gets passionate, he's been known to use the occasional expletive. If foul language is not your thing, if it gets your britches in a bunch, well, there's always Disney+.

Robb: Howdy wife.

Nicki: Hubs in the house. Hello everybody. Welcome back to episode 86 of the Healthy Rebellion Radio.

Robb: We've been tech hell, trying to... We had something go crazy with our Camtasia and our video quality.

Nicki: Our video quality is terrible right now. It's still terrible for this episode because we spent the last hour trying to upgrade.

Robb: Download updates.

Nicki: It was not going favorably, so it was either record as is or not record. So we are-

Robb: Throw the mother lovin computer out the window.

Nicki: We are recording. If you're listening to this, it should be fine. If you're watching any clips on Instagram, we're going to be looking very pixelated.

Robb: Apologies in advance.

Nicki: But what evs.

Robb: Yeah.

Nicki: What's knew?

Robb: Got beat up at Jits today just like always.

Nicki: We did, we did. Good times. It's fall here in Montana, which I am loving. It's cool in the mornings.

Robb: I hate it. It's horrible. The weather is appalling. Deeply regret even being born at this point.

Nicki: This is sarcasm Soren?

Robb: Yes it is.

Nicki: Hey, that should be our trivia question for this week, since I don't think we plugged one into the thing.

Robb: Okay. What show?

Nicki: What show is the quote, "That's sarcasm Soren." Where did that come from?

Robb: Okay. We shouldn't provide the answer. We should just see if anybody knows it. So that is, yeah yeah.

Nicki: Usually we do provide the answer.

Robb: Let's not this time. Let's see if anybody actually knows it.

Nicki: Okay. That will be a twist.

Robb: We'll raise the stakes a little bit.

Nicki: A twist to the trivia this week. Everybody, it's September. We are recording this on September 1, 2021. First day of September. Let me share a few updates. Our kick off call for our next Rebel Reset is Friday, September 10, so just ten days from today. That's where Robb and I do a call. We have a big overview of both the seven day cart test, which we do that very first week, or the week following the kick off call, and then also the 30 day Rebel Reset, which follows that cart test. So, if you want to get in on this action, join the Healthy Rebellion. You can do that at join.thehealthyrebellion.com. Again, that kick off call is Friday, September 10.

Nicki: Then the official 30 days, where we start counting the 30 days for the reset starts on Monday, September 20. So if that sounds fun or you are looking for some community and accountability and some guidance and just a kick ass group of people, then I highly recommend you join us in the Healthy Rebellion.

Robb: Me too.

Nicki: What do you have for us for our news topic today?

Robb: It's a piece called, Energy Compensation and Adiposity in Humans. It's out of the whole constrained energy hypothesis, which was kind of mind blowing. For ages we've been told, eat less. Exercise more. We've seen challenges around that. People would go to exercise more and then they would just get hungry. This is where the whole world of calories in, calories out versus, some of the hormonal models of weight loss and obesity and all that stuff. It's where I think that they're just really tightly intermeshed. If people are just being honest and not pricks, it's both. You got to figure out a way of eating less, but the body is remarkably adaptable at not allowing you to do that. This paper looked at the reality that in the group of folks that they observed, they would exercise people. In some people, as much as 30 to 40% of their non-exercise activity went away. The way that they equated this in equal energy terms, basically it erased up to 25 to 30% of the energy expended during exercise. The little fidgeting and wiggling and all that type of stuff, people just stopped doing it, just exercise them.

Robb: Interestingly, people that are already metabolically unhealthy, people who are overweight, tend to have a more pronounced effect with this. This is one of the bedeviling characteristics of trying to get people healthier, just exercising them isn't generally going to cut it. Yes, you can concentration camp people and starve them and do all that stuff. You're going to get some results, but in free living humans, it's a really challenging problem which is why 95% of the people that start... What was it in Wired Eating, it was like 40 million Americans or 140 million Americans each year start a diet

and virtually all of them fail. Most of them start some new dietary regimen four to five times a year. It's a tough slough.

Robb: Part of this is this constrained energy hypothesis just makes this case that the body really resists change unless you stack all the cards right, get all your ducks in a row. The original research suggested that if you just exercise people enough, they stop digesting. They stop repairing. Your basal metabolic rate, which is a non-trivial slice of your total energy expenditure. If you're bed ridden, it's still more than half of what you typically spend in a day. That just goes away and then your body starts breaking down and what not.

Robb: It's a very non-linear process. It's a very counter-intuitive process. It really shines a light on, at a minimum, even though the calories in, calories out people I think are right in saying you've got to find the caloric level that works for you, it's not that easy. It is not as simple as making the bong calorimeter analogy or gasoline in a car. If you drive a car faster and harder, it will run out of gas sooner. But this is like if you drive the car harder and faster, the front end falls off. It starts shedding mass.

Nicki: The struts wear out.

Robb: It starts shedding mass. The fuel efficiency improves as you go. Or it has a governor that says you're going 60 miles an hour but you're really only going 40 miles an hour. It's a really non-linear process. Very accessible paper, it's worth reading. We have links to it in the show notes. That was far more than I said about it than what I anticipated saying, but it's pretty good and it's not a COVID topic, so hallelujah.

Nicki: Hallelujah. Okay, our iTunes t-shirt review winner this week goes to Kirk Moconner. He says, "Enjoyable and watermelon jolly ranchers." He says, "I've been enjoying past episodes and fresh ones as they are released as they are informative and encouraging. And enjoyed several flavors of Element for me and my family, but the latest was watermelon salt. It took us a few minutes to pin down the flavor until we realized how much it reminded us of watermelon jolly ranchers. It's been a long time since we've had one, but immediate flash back." I will say, Kirk, yes. That is what turns me off of the watermelon flavor. That is why it is not my favorite flavor.

Robb: It is amazing in tea.

Nicki: Some people love the watermelon flavor. I was never a jolly rancher... I did eat watermelon jolly ranchers as a kid, but.

Robb: Of those super shitty, pure sugar candies, jolly ranchers were pretty good to me. I was more of a chocolate kind of gato.

Nicki: I was more of a chocolate kid too, or those sour things.

Robb: I like the jolly ranchers.

Nicki: Anyway, Kirk, thanks for the review. If you send us an email to hello@rebels.com and include your t-shirt size and your mailing address, we will send you a Healthy Rebellion Radio t-shirt.

Robb: Cool. Clearly I got ahead of myself here by-

Nicki: You did. That's a good tee up. Our sponsor is... You threw me off my mojo hubs.

Robb: That's the only reason why I exist.

Nicki: That's why you exist? Well, as you all know by being ardent listeners and followers-

Robb: Literally all six of you.

Nicki: All six of you. The Healthy Rebellion Radio is sponsored by Our Salty AF Electrolyte company, LMNT. Robb, as you already spilled the beans, you've discovered something this week. You posted about it on Instagram. It's a new favorite way of yours for enjoying LMNT.

Robb: Yeah, I didn't want coffee that day. I've been doing some tea. It's kind of weird in the summer. I just lose my taste for coffee and I'll do more tea. But I didn't just want plain tea. So I thought, I don't know, I'll try some raspberry salt in there. It was a 20 ounce cup, just some plain old Lipton tea. People got all up in my junk about drinking Lipton tea and I'm like, back the fuck down. This stuff is good. They're like, "Pesticides and arsenic." I had a field day on that one with some basic toxicology but anyway. It was really good. Then I thought, I wonder how watermelon tastes and it tastes even better.

Nicki: You thought, gosh I wonder what it tastes like to put a jolly rancher in my tea?

Robb: It was damn good. I have not tried anything else citrus. I think I burned myself out early on. I've had one or two of them here or there but I think I just overdid it.

Nicki: You gravitate more towards the raspberry and watermelon these days.

Robb: I might try one of the Buried in a Bunker grapefruit options and see how that goes. I'm going to drink the whole thing regardless if it's cat piss or not.

Nicki: I think orange would be really good.

Robb: Orange might be really good in tea.

Nicki: That should be one to try.

Nicki: All right folks, if you want to try Drink LMNT Electrolytes, you can do that by going to drinklmnt.com/robb. That's drinklmnt.com/r-o-b-b. Remember, you can get the best value for purchasing your Element is with the value bundle. You can buy three boxes and get the fourth box free. Again, that URL is drinklmnt.com/r-o-b-b.

Robb: Cool.

Nicki: Okay.

Robb: Let's do this thing.

Nicki: Question numero uno this week is from Keith on high ferritin levels and resistance training. He says, "I'm a 40 year old male, five foot 11, 200."

Robb: Pounds, 15 to 16% body fat.

Nicki: Okay, this was written in such a non-punctuated interesting.

Robb: Keith did not actually add percentages, commas or anything.

Nicki: Lots of digits. A string of digits here. 15 to 16% body fat. "I follow a higher red meat diet, around 180 to 200 grams of protein and 80 to 100 grams of fat, and 80 to 100 grams of unprocessed carbs. I had some blood work done and my ferritin came back at 803, which is concerning. My iron was 98. TIBC 286, and transferrin saturation 34. Hemoglobin was at 12.9. Hematocrit 38.4. My PA thinks I have anemia. I have no symptoms of fatigue but she's referring me to a hematologist. Would heavy resistance training have an effect on ferritin levels? In searching the interwebs, I saw a few mentions of inflammation from heavy resistance training causing elevated levels and one should take 48 to 72 hours off."

Robb: Hours off.

Nicki: There's no units, no units in any of the numbers here.

Robb: Keith, you got to show your units man.

Nicki: "Should I take 48 to 72 off from training before blood tests? Any thoughts on resting and then retesting my ferritin?"

Robb: Yeah, I did some digging too and I likely found the exact same things that Keith did. Ferritin is really malleable or changeable. If you catch a cold, you get a bacterial infection, ferritin levels can skyrocket. This can give a false appearance of anemia or very low iron. There wasn't a ton in the literature in looking at this though. I don't know. It would be worth doing that. Give it Tuesdays off or just don't do a blistering session. Or maybe do some low intensity cardio the day before going in to check that.

Robb: Would definitely be interested, if Keith would circle back, because nobody ever does. We're like, hey man, tell us what's going on and nobody does. If he wanted to circle back and let us know what the hematologist tracks down and if this does change over time.

Nicki: Cool.

Robb: I got this. Oh you got this.

Nicki: I got this.

Nicki: Okay, let's see. Next question is from David. He wants to know if he should use his electrolytes before or after his workouts. He's like, "I'm writing from hot, humid Singapore, 54 years old and work out in the cooler early mornings before work. 60 to 75 minute work outs of running, sprinting and or body weight work outs. I'm a big fan of LMNT citra salts and find that I perform and recover better using it. My normal routine is to drink one stick immediately upon waking and then get after it. I always end my work outs drenched in sweat. Is it better to wait until after my work out to replace my lost electrolytes? I would consume one before and one after, except that importing LMNT into Singapore is expensive. I appreciate any insight Robb, and I love your work dude."

Robb: Yeah, that may be where maybe you do some of the home brew just to spread all that around. If you just search LMNT home brew, there's a downloadable PDF and then page 19 of that gives you a very nice way to salt, no salt, magnesium and using magnesium malate is great. I was just reading a paper on magnesium malate diminishing delayed muscle soreness without impairing the overall adaptation and recovery. Honestly, and it's totally self-serving. It's the company we co-founded so we're like, more, more more of course. Generally people seem to benefit from pre, during and post electrolyte consumption, particularly in an environment like that. I've been doing the LMNT in my

tea first thing in the morning. Then we go to jiu jitsu. We leave home about 11:30. Jiu jitsu is noon to about 2:00. I do one during jiu jitsu, sometimes part of another one. Then I finish the second one on the way home. So I'm three in by that point. Depending on how knackered I am, I may do more throughout the rest of the day too.

Nicki: Definitely check out that home brew guide. There's also other options as well, using bullion cubes, pickle juice. Lots of people, olives.

Robb: Olives.

Nicki: Let's remember, Robb, let's type in here and make a note and we can link to the home brew guide in the show notes. If you go to the show notes for this episode, on robbwolf.com we'll have that in here too.

Robb: Cool.

Nicki: Shannon has a question on post-COVID hair loss and food aversions. "Hello Robb and Nicki. I had COVID at the beginning of April 2021. Had a very easy time with it, likely thanks to ten years of being careful about my diet and taking a preventative approach to my health. Thanks to info from you guys and many others in the paleo KETO space. I had a slight fever on and off for about ten days, a migraine which isn't uncommon for me, and fatigue. My appetite was suppressed for many days and when it came back I wasn't craving the foods that I should be eating. In fact, my favorite foods, which are steaks and beef, still aren't as appealing as they used to be. Meat in general I'm not craving but I do make myself eat it. I take quality supplements that contain zinc. Do you have any other suggestions for how to repair my taste buds? I also have started to lose some hair. Apparently this is common three to four months after COVID, but I'm praying that it stops soon. Any suggestions would be greatly appreciated. Your work has definitely helped me get through the pandemic and I rock my Healthy Rebellion radio t-shirt on many of my walks. Thanks for all you do."

Robb: Oh man, thinking a couple of things here. One, I was not aware that hair loss was a-

Nicki: Post-COVID.

Robb: A post-COVID thing. Your dad has had some lingering, of the people we know, maybe he's the longest-

Nicki: He has no taste for coffee or dark chocolate at all anymore and those were two things he enjoyed daily previously. He wants coffee and he'll try it, but he can't drink a cup. He'll take a sip and he's done.

Robb: You know, I'm guessing here. I don't know if this is a viable approach or not. Shannon, if you've listened to the show, I'm usually kind of down on fasting and extended fasts. But there is some interesting literature and we have some knowledge, repair of neuronal tissue is enhanced with fasting. That is one of these, the ketogenic state is beneficial. Fasting is beneficial. Folks don't often times appreciate but it's nerves that innervate our nose that basically connect directly to the brain. That is our sense of smell. That really is a powerful maybe 70 to 80% of our slice of our sense of taste also. The aromatic compounds of food go up into our food while we're eating and so we smell it and taste it at the same time. We mainly perceive it as taste.

Robb: So I could see this maybe being the case for a three day fast or something. Then I'm kind of nervous because fasting is one of those things that makes people's hair fall out because of the stress of the whole thing.

Robb: I'm at a loss here as to what to do, other than as we motor through this, it does seem like symptoms decrease for people over time. They do seem to get better. Taking care of all the other things that improve our recovery, really being dialed in on sleep, twice a day meditation, all of those things are really going to be powerful in supporting immune function and supporting recovering. I think that's really the main thing that's going on here. As we go forward, we'll just see how much of a long lasting impact we see.

Robb: I was reading a paper, just as a side note, I've been trying to stay on top of this stuff and it's just impossible. There's so much material that I could do two full time jobs just trying to stay on top of this stuff and due diligence on it. I still try to pick and choose, try to look at some things that I feel like are pretty germane to our corner of the world. One was looking at the autoimmune tendencies that occur both post-COVID and also post-vaccination. It is non-trivial. The paper suggested that it is not super severe but autoimmunity is autoimmunity, and you can have some impacts on taste and smell from autoimmune situations. This could be part of that, which again, modifying the immune response, trying to figure out ways around that, maybe this is a case for making certain that one has adequate vitamin D, doing the D3 K2 combo, zinc, omega-3 fats. We looked at a paper in the Rebellion the other day that looked at those three items in particular and every pro-inflammatory pathway got down regulated when adequate levels of those nutrients were present. Inadequate levels of those nutrients meant that you had a pro-inflammatory cascade. It sounds like Shannon, fortunately, had a pretty easy time with this other than some lingering long COVID type stuff.

Nicki: Lingering effects.

Robb: Yeah. I don't know if that was helpful at all, but I would look at Omega 3's, zinc and-

Nicki: Vitamin D3.

Robb: Vitamin D3 and then maybe entertain a three day fast here and there and just see if that could press a reset button on things.

Nicki: Okay. It's already time for our trivia.

Robb: Oh man, it happens so fast.

Nicki: Everybody already knows the question here. We'll give a box of electrolytes from LMNT to three winners selected at random who answer the following question correctly. Robb, there was a line in a movie that we've watched with our children. I'll give some clues here. We've watched it with our children.

Robb: I think we've mentioned it a time or too.

Nicki: Is it a movie or a series?

Robb: It's a series.

Nicki: It's a series okay. It's animated. One of the characters names is Soren. He is very literal and has no sense of... He lacks the irony gene.

Robb: Yes.

Nicki: So the line is, "That's sarcasm Soren."

Robb: What show is that from?

Nicki: What show is that from? We're not going to give the answer this week, so we'll see who, which means there might be fewer entries because some people might be like, I'm not going to play because I don't know the answer. So your chances of winning might actually be good if you know the answer.

Robb: Or maybe nobody wins.

Nicki: Or maybe nobody wins, or maybe nobody plays this week. We will find out. If you would like to play, go to robbwolf.com/trivia and enter the answer. We'll randomly select three people with the correct answer to win a box of electrolytes from LMNT. The cut off to answer this week's trivia and be eligible to win is Thursday, September 9 at midnight. We will notify winners via email as well as on Instagram. This is open to residents of the United States only. I will say that people with children probably have a little bit of a leg up on this one.

Robb: Could be, or just anybody into anime.

Nicki: Right, oh you're giving a big clue.

Robb: I'm giving a little clue. There's a lot of anime out there.

Nicki: Yes, this is true.

Nicki: Okay, fourth question this week is from Scott, how to get young kids to try new foods. "Robb, I've been following you for years, since about 2009. The amount of knowledge you have is impressive and I never get tired of listening to you, although I do miss the good old days with Greg Everett." Don't we all. "I never adopted a paleo diet because I have never had any health issues, but I'm now looking for some advice. My four year old son is showing asthma like symptoms and I think it's due to his diet. We have tried to get him to eat healthier, but he always gags when he tries something new. Do you have any book suggestions or advice for me to help my son eat new foods? I understand you are busy so I just wanted to ask because I really value your opinion. Thank you for all you do."

Robb: He said his four year old son.

Nicki: Four year old son.

Robb: Do you have some thoughts on this?

Nicki: Just some of the standard stuff, and it's different because it's challenging. Some kids really do have sensory issues where textures matter.

Robb: Zoey is a good example.

Nicki: Yeah, Zoey in particular, any kind of meat with gristle or fat.

Robb: Gristle.

Nicki: Which a lot of people don't like, but even if it's the slightest amount, she has an aversion to it. If you can tune in and maybe pay attention, if it is a texture thing, figuring out what those textures are and catering to the ones that he does tolerate well. The old advice to give a child something ten times. They might like it the first time, they might not like it the fourth or fifth time, but if you keep offering it to them, over time their taste buds do change and grow and by the tenth time, magically sometimes they actually like the thing. So that's an option too.

Nicki: We just got a copy of Maria Emerage's new book, which is called, Sugar Free Kids. It's beautiful. She obviously, as you guys know, she's very prolific in the book writing world, especially in the cookbooks and what not. But this one, I think she hit it out of the park. I wanted to just share a couple of things from her, because she actually has a section on getting your children to try new foods. One of her number one tips is have them help you make it. She has a bunch of tips also for getting your kids to help you in the kitchen. This is a big one too, when the girls actually help chop things up or stir or add spices or help us measure things, it gets them involved in the cooking process and then they're more excited about actually tasting the thing.

Nicki: Her other thing was to put it on a stick and she has such cute... This whole book is super cute. Obviously is some of the stuff takes a bit of time, but antipasti on a stick. Basically kind of like a kabob stick and you put olives and cheese and tomatoes and salamis. Changing the visual aesthetic of the food, making it more fun for kids, I think is a big one.

Robb: Along that line, if we're doing some salami and cheese, I will make cartoon faces out of the salami and cheese. I drop the plate in front of the kids and the kids like salami and cheese. It's not an arm wrestling match to get them to eat it. One is a cat and one is dog, or one is a clown or something. They're really jazzed about that. It doesn't take all that much extra time to do it, so that visual appeal is really cool.

Nicki: That was one of her next tips was to make the food cute. She'll use cookie cutters to cut vegetables and cheeses into fun shapes like hearts and stars. She's got hard boiled eggs that she's cut in half and then made a mouse tail and mouse ears and eyes, or spiders on top of deviled eggs. If you have a picky eater or you're having a challenging time getting your kid to try new things, I definitely recommend this book, lots of great ideas. The thing that was sort of the aha for me in here, is the way she's doing noodle soups. She calls them protein noodle soups, chicken protein noodle soups. She'll take chicken deli meat and slice it so it looks like a fettuccine noodle and adds that to chicken soup with chunks of chicken too. So the noodle is also a protein. Great stuff in this book, I highly recommend it.

Robb: Palette wise, it's a different experience, so that breaks things up. It makes it easier for the kids to eat that. In our Healthy Rebellion Reset, folks are like, "I have a challenge eating this much protein," the protein that we recommend. We recommend breaking up the protein, so instead of 50 grams of protein from beef, it's like 22 from chicken, beef, pork, chicken, beef, salmon. It makes it much easier.

Nicki: Or mincing it and just dicing it smaller versus bigger chunks changes, like you've mentioned, the palatability, the mouth feel, and the flavor profile frankly.

Robb: Yeah, and I guess one other thing, and this circles back to what you had mentioned right at the outset. With Zoey, she really likes crispy things, so like crispy bacon. Sagen, funny enough, likes slippery bacon. So it makes it a little bit challenging to cook but basically Sagen's bacon comes off first and Zoey's bacon we leave it on the griddle a little bit

longer. Tri tip is interesting because it's a bugger to cook uniformly, but for our family, it's actually great because if I leave the thick end piece medium rare for Nicki and I, and also Sagen honestly, then the more pointy part is crispier and more well done. Then we cut that part up for Zoey and I try to make sure to pull out some of the fiddly bits that are a little more chewy and I throw those on my plate or Dutch gets a snack. I think paying attention to, what is it that's throwing the kid off and then is there a workaround for that?

Nicki: Yeah, all good things, so hopefully that's helpful Scott.

Robb: Good question.

Nicki: Let's see. Our final question this week is from Nicholas on methane mitigation. "Dear Robb, I recently read, Sacred Cow, and found it absolutely brilliant. I'm trying to deepen my understanding of regenerative agricultural practices with a view to one day starting my own farm. I have a question regarding cattle feed additives for methane mitigation. On a recent Meatrix, Meat RX podcast, Sean Baker asked Dr. Frank Mitloner about his work on feed additives and whether they are required in regenerative systems. Dr. Mitloner says, 'Grazing animals are currently the greatest challenge with respect to enteric methane because they are not as accessible. Some thoughts are to include some active ingredients into the salt lick or into the water that the animals drink. Vaccination is another possibility.' Here's a link to his full answer and there's a video link here which we'll include in the show notes as well."

Nicki: So Nicholas is asking, "Robb, do you agree with Dr. Mitloner that these kinds of additives are necessary? I was under the impression from your work and his that enteric methane was not something to worry about when animals are well managed in concert with the surrounding ecosystem. I'd be very interested to hear your thoughts on the issue. Thanks so much for your time. PS, Sacred Cow has changed my life and the lives of many of my friends and family. Thank you."

Robb: Really interesting question and I guess kind of insightful because I guess I'll speak mainly for myself. I won't throw Diana under the bus on this. Part of our challenge in tackling this topic is giving a hat tip to the reality of climate change, but then also try to auger into the nuances of what do we really need to pay attention to? My position on this is that we are discovering sources of methane production in the natural world every day and it just seems to get bigger and bigger and bigger. When we're talking about biogenic methane from organic living systems, it's part of a loop. We're not just mining carbon that's been locked in the Earth for hundreds of millions of years and dumping it all out in pretty quick order. Methane definitely has a greater greenhouse gas effect than carbon dioxide does, but it also has a shorter life span.

Robb: There's pluses and minuses to both sides of that. Part of my thinking on this is that I think that in the long arc of history, folks are going to look back and they're going to go, oh my God, we focused all this effort on being worried about methane from biological sources and that really wasn't an issue because it was part of this whole cycle. But then we have the reality that people are really, really concerned about it. What folks will say is, well, any source of biogenic methane that we can control we should. I don't know that that's actually true because of course the thing that they focus on or the primary thing that they focus on is animal husbandry, but they're not out burning down termite mounds and preventing shellfish from growing although people have suggested crazy things like that. I think that's part of the problem with demonizing methane in this scenario.

Robb: There is this flip side to this, which is some very modest inputs from things like seaweed have dramatically reduced methane production in these roaming animals. So, it's a way to thread the needle of making regenerative agriculture, animal husbandry in general, reasonable to people because they're like, okay we ticked the box of mitigating methane production. Even if it doesn't really matter in the long term, we're not probably going to win that fight right now, so if it's a nominal input to be able to address this, and this is kind of my only point to this. Even if when we're talking about, say the inputs of seaweed into animal feed, how much energy goes into growing, harvesting, collecting, drying and distributing that seaweed. I could really, quickly imagine that the carbon footprint of that upfront process ends up nuking all of the benefits of.

Nicki: Negating the benefits.

Robb: The backside, and the example that I turn to with this again and again and again is corn for ethanol. Ethanol is used as this fuel additive so that we use less gasoline, but it costs more energy than it makes. It's a boondoggle. It's a net loss. My big concern around that, like these feed additives, there needs to be a good life cycle analysis to really show that, yeah, we are in fact coming out net positive and not net negative, thinking we're doing something good and smart because the flip side of this, the people who are really against animal husbandry, whether it's vegan or the world economic forum or whatever. If we start driving down this road and we're like, okay, we're reducing methane because we're putting this animal feed in and then they pop out a report of a life cycle analysis on this process and we're like, oh that input is costing more carbon than what you're mitigating in the reduction of methane, then that's going to be used to undermine animal husbandry again.

Robb: Again, big picture wise, Allan Savory has made this case, and we just met some folks. What's the name of their ranch?

Nicki: Roam Free.

Robb: Roam Free Ranch with buffalo in the bison in the high plains of Montana. These animals, the positive impact that these animals are having on these landscapes is just jaw dropping. When you look at the areas that have been grazed a couple of years, versus the ones that are getting ready to graze, it's just stunning. They are converting stuff that has been turning into scrub brush and chaparral into grasslands, back into grasslands. These cows hate going up and down hills. Bison love hills. In these areas, it's all grassland but it's either up or down. What they're finding is that it's reversing desertification in these areas. These areas are turning into high desert, and that wasn't their original state when they were covered in elk and bison. Reintroducing these animals is reversing that. Alan Savory has made a really strong case and this is one of these things that we get so wrapped around the axle of this carbon topic, but desertification means that that land is unusable for anything. It's not growing animals. It's not growing crops. The top soil is blowing away. It's a disaster for everything.

Robb: Even if there is a larger net carbon footprint due to the presence of those animals and those systems, which I don't think there is, but this is where we have to have a nuanced discussion of this, if that area is still productive, if it is a lower temperature signature on the planet because it's not desertified. It's actually got green, living things growing there. It's retaining water so it refills aquifers. This is all a win. Again, this is where I think it's so important to have a deep, nuanced conversation about this stuff and really talk about the trade offs. The trade offs are probably going to be regionally specific. This is again the danger of overly centralizing the doctrine around our food systems. What's appropriate for one area is maybe not going to be the best practices for another.

Robb: As we all know, the tendency with this collusion between government, big tech, big pharma, is a one size fits all approach. It doesn't include regenerative agriculture. It is demonizing meat. I think it's very, very dangerous. Most of the folks that listen to the show are probably at least somewhat bought in on that, but this is the fight that we have.

Nicki: Indeed. All right, that was our fifth and final question this week.

Robb: Cool.

Nicki: Anything else you want to share?

Robb: I got nothing.

Nicki: You got nothing, all right folks. If you're not already a member of the Healthy Rebellion, you might consider joining before September 10, which is again our kick off call for our next 30 day Reset and seven day carb test. If you join by September 10, you can get in on that call. If you don't want to do the seven day carb test, that is 100% optional. Sometimes people do it once and then they don't want to do it again for six months or so and see how things have changed, if they've changed. The reset itself starts on Monday, September 20. That growling was Dutch in the background.

Robb: Laying down and going to sleep.

Nicki: It's not us. That's his pre-nap groan. Anyway, that URL to join us if you're not already a member is join.thehealthyrebellion.com. Please remember to check out our show sponsor at LMNT at drinklmnt.com/robb. Remember you can get three boxes of electrolytes and get the fourth box free at drinklmnt.com/robb. I hope you all have a fabulous long three day weekend. Hopefully you get a three day weekend. Stay safe.

Robb: We'll see you all soon.

Nicki: Get outside and enjoy yourself and we'll be back next week.

Robb: Bye everybody.

Nicki: Bye.