

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 1 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. 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: Welcome back, wife.

Nicki: Hello everybody. Hello hubs, first and foremost, and then welcome everybody. This is episode 182 of The Healthy Rebellion Radio. Sun is shining here in Bozeman, Montana, so spirits are good.

Robb: Spirits are better. Spirits are better.

Nicki: Spirits are better. We did have snow on Easter again this year. This is, let's see, was this our... One, two, three, this is our fourth Easter in Montana. And out of the four, I think three of the four had snow. So snow again this year, but you know. We have a whining dog too in the background, sorry for that. But yeah, I think spring is officially here. We had some ducks out flying. Robins are out in the yard gathering worms out of the yard and I don't know, lots of signs of spring. So that's exciting.

Robb: There's hope.

Nicki: There's hope. And we do have our baby chicks. I don't know if we mentioned that last time, but they are feathering out and growing rapidly as baby chicks are-

Robb: Wont to do.

Nicki: ... wont to do, so that's been fun. Yeah, yeah.

Robb: I've got nothing else.

Nicki: You've got nothing else?

Robb: I'm working on a chicken tractor. I've finished all my cuts for the lap joints and now I'm laying it out and going to spill a bunch of glue on the shop floor and get drilling.

Nicki: Yeah, that's good. I did want to share about the rice experiment video that I showed the girls, because-

Robb: Ah, okay, okay.

Nicki: So there's this place in town called The Marketplace that has a couple of restaurants and a couple of little shops, and it's kind of a fun place to go. And one of the shops in there is a satellite shop for one of the main nurseries in town. And so they have plants, and they actually have a little room upstairs that you can go-

Robb: Rent time with a cat.

Nicki: ... rent time with cats. If you want to pay \$9 an hour, you can go sit in a room with a handful of cats. But anyway, the shop sells plants and gift items, and they frequently have a distressed plant sale area. And the girls have been very keen to try to rescue some plants. So in January there was this banana plant. There were two banana plants, one looked quite nice with multiple leaves and the other one was very, very sad, drooping leaves, brown. And these banana plants are normally \$189. And the one that looked very, very sad, they had had it marked down to \$100. And so I was like, I asked the guy, I'm like, "This looks really rough. Would you take half, would you take 50 bucks?"

So we got this first banana plant and it's been three months now and we've rehabilitated it, and it now has eight nice looking leaves. A couple of them are a little brown because when we were out of town, didn't get watered as well, but it's thriving, it's doing quite well. So we were back there, I was there with the girls yesterday. Rob was, you had a meeting or something. And the one that was totally in perfect condition at full price three months ago looks so terrible, like worse than the one that we got three months ago. It literally has this tiny green shoot. It looks so bad that it's marked down to \$20, and it almost is kind of bending the stem, has a crease in it. And I'm like, I don't even know if we can save this one. So I tried to get it for five bucks because I'm trying to... My Italian bartering skills, got to work on those.

The lady wouldn't have it so we got \$5 off, so we got it for 15, and it's so sad looking, but it does have one little tiny green leaf. And so it reminded me of this video that I had seen, and so I showed it to the girls, and I'll post a link in the show notes just because it's interesting. And I think it's this guy, it's just a short clip of a Ted talk, and the man is talking about how much our words matter, and in particular how words affect matter. And apparently there was some researcher or scientists who did an experiment with water and he had two different bottles of water. One was labeled "love" and the other one was labeled "hate," I believe. And then he poured water from each of these bottles into 50 different Petri dishes and froze them... And all the Petri dishes were labeled with different words like love, gratitude, hate, disgust, positive words and negative words.

And then under a microscope they looked at the crystalline, like the frozen structures and the ones that have positive, affirming words are really beautiful, like snowflake-type crystalline structures. And the ones with more negative words are really ugly. And then the man goes on to talk about an

experiment you can do with rice, if you just cook or boil rice, you can put some separated into two different jars, label one jar "love" the other jar "hate," and you put it on your counter in the morning and you tell your kids, every morning you go and you say three words to the love jar, like "You're beautiful. I love you, you're doing great." And then three negative things to the hate jar, like, "You suck, you're ugly," whatever.

And he showed multiple examples of different people doing this. And then over time, and it can take weeks or months, the love jar remains white. It's like the rice in there looks like you cooked it yesterday, and the hate jar turns this orange, brown, moldy, nasty, ugly color. And Rob is like, he watched the video too and he has all these incredulous... Even right now he's looking at me with incredulous looks. But anyway, long story short, this struggling banana plant that is barely alive at this point, which the girls wanted to name Phil, where I was like, let's try this experiment. Let's see if we say lots of loving words to Phil every day and see if in three months, which is the time from our original banana plant to now, if we can get this one that looks even worse than the first one we got to a better place in three months. Same sunlight, same watering, but just adding the positive words. And Rob is rolling his eyes at me. Hey, it might be hippy dippy, but-

Robb: I thought I married better than this, but apparently not.

Nicki: Hey, you saw the... I mean, we can do the rice experiment ourselves and verify it.

Robb: I'm good with making two jars of moldy rice.

Nicki: Okay, you don't have to believe me. And he's like, "So what's the control?" And I'm like, "Well, the control is we have this first plant and..."

Robb: Folks, the short answer is, there isn't a control.

Nicki: No, there is. We know how well it did in three months. We have before and after pictures. And this one-

Robb: We know how well it did in three months transitioning from winter to spring, and-

Nicki: Right, okay, so it's a different-

Robb: ... now we're heading into a period of time where it's going to be-

Nicki: More light.

Robb: ... it's going to be far sunnier, far warmer, in a completely different set of circumstances. And the true control is that you would need to hex or curse one of the plants.

Nicki: I'm not doing that.

Robb: And you're unwilling to do that, so you're unwilling to actually explore this scientifically.

Nicki: Okay, you're right with the amount of sunlight now in this next three-month period of time versus the previous, but I'm still going to do it, because this plant-

Robb: Yeah, yeah, absolutely. Positivity is great, but whenever I see things about this that or the other alters the crystalline matrix of ice or the-

Nicki: So do you think that that was an inaccurate experience? Do you think there's something flawed with that experience?

Robb: I think it's absolute bullshit.

Nicki: You do?

Robb: I do. And I would love to be proven wrong. Love it.

Nicki: Well, can't we try it ourselves?

Robb: We can absolutely try it ourselves.

Nicki: Okay.

Robb: But that this is where some of these things about... Oh God, I forget the term, but not stasis water. What the heck is it? It's something about those... Structured water? Structured water and people will say, "Oh, if you put it in the sun, then it absorbs the sun's energy," and it's like, yes, in the form of heat. And then when it cools off, it dissipates that energy as per thermodynamics. Because the question there is just like what energy is being stored? Where is it being stored? How do we track it down? It just-

Nicki: But there are some things that are yet to be explained, right? You're saying that these frozen Petri dishes of water can't express different crystalline structures because there's nowhere for the energy to be stored?

Robb: Correct.

Nicki: Okay, I think we should try it.

Robb: We absolutely can.

Nicki: Okay. Folks-

Robb: And I hope you're right. It's a much shinier rosier universe to live in, if

you're right versus I am.

Nicki: Okay, I'm determined. We will report back, folks. I think that's all for our front end of this here show.

Robb: Oh, hopefully it is. My god.

Nicki: Okay, what do you have for a news topic for us?

Robb: The pretty cool paper, the title is Separate Gut-Brain Circuits for Fat and Sugar Reinforcement Combine to Promote Overeating. And it's basically talking about one of these neural regulation of appetite points or sticklers or what-have-you. But just that we have individually these gut-specific neurons that are sensing lipids and that are sensing sugars, and both the magnitude of the lipid or sugars that you expose these things to will have a feedback mechanism related to appetite. But when you layer both of them together, fat-carb combo, it just pushes the satiety signals into the basement and it makes it super easy to overeat. And this is... If you want to put on a paleo type lens, like when in nature would we see fat-carb combos? Usually towards the fall, usually as we are transitioning out of a period of relative abundance and then we would see more fat, more carbs, everything's been well-fed throughout a spring and summer, and then we're heading into a relative winter.

And this is true even at equatorial areas, there's variation to this. And it's great for storing fat, it's phenomenal. It's just fucking off the charts fantastic for storing fat. And there's some great insights to be had for what we should do to avoid getting fat, and this is something that I talked about in *Wired to Eat*, whether you approach things on the low-fat side or the low-carb side, those things seem to work pretty well, comparatively. It's still hard because people just get sucked back into the fat-carb combo. People are not overeating butter specifically. Generally, people are not overeating rice cake specifically, but when you start layering in these complex flavor combinations and the fat-carb combo, it's devilishly hard to avoid overeating. And this is also where I think that for some people it works, but the calorie-counting, portioning out your Doritos and your Twinkies and stuff like that, some people are able to do it, they've got that discipline or they've got the satiety signaling that that will still work.

But I think it's playing with fire, and I really don't think it works particularly well for the vast majority of people, particularly if you've been overweight in the past. Because I believe once you've been overweight in the past, there's a tendency for your appetite suppression or just basic satiety signaling to not function quite the way that it should. We might get that back over a period of time being healthier, but I think that that is where these "extreme diets," whether it's vegan or keto or carnivore, end up being pretty powerful for people, because it limits those paladoptions, and there's great just basic mechanistic description for why that works.

Nicki: Cool, and we will link to that in the show notes. The Healthy Rebellion

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Robb: Outstanding.

Nicki: All right, three questions for y'all today. The first one is from Dana on dietary changes to suppress estrogen. "Hi Robb and Nicki, thank you for all you're doing in the health space. I'm a longtime listener and appreciate your podcast. I'm 51 years old, 5'4 and 145 pounds. I'm fit and I've been competing in CrossFit and functional fitness for a long time, including some international masters competitions. I've eaten a paleo diet since 2016 or 2016 and added dairy to that in 2020 when my hoop told me my recovery was better every time I had dairy. More recently, my diet is leaning toward carnivore, but I still do eat fruits and vegetables, just not as frequently as before. Unfortunately, I was recently diagnosed with stage one invasive ductal carcinoma, breast cancer. I underwent a bilateral mastectomy on March 18th of this year, and we'll be seeing the medical oncologist for treatment planning on April 12th.

I know your podcast cannot give medical advice, but my question is regarding dietary changes that could reduce my estrogen levels. My cancer was estrogen positive. Through conversations with my surgeon as well as the breast cancer groups I've recently joined, it is likely the medical oncologist is going to recommend I start hormone blockers. I would prefer to find ways to reduce my estrogen with lifestyle changes versus medications if I can. I am in perimenopause, so my total estrogen is lower to begin with. It was 43 pg per-

Robb: Picograms per milliliter.

Nicki: "...picograms per milliliter when it was tested in January. So my question, is there anything I can do dietarily or with other lifestyle changes that can reduce my estrogen levels? Thank you so much."

Robb: Dana, two thoughts on this, and again, this is being theoretical. It is not medical advice and all those other exculpatory things, but maybe something that can be explored. One thought is that one of the challenges that we sometimes see with low-carb, keto carnivore, all those types of things, is sex hormone-binding globulin is high. And when it's elevated, we tend to see less active hormones in circulation. So like free versus bound testosterone, free versus bound estrogen. So one thought is, could a really low-carb diet, which I think also has benefits in this kind of cancer treatment arena, both with limiting angiogenesis, the growth of blood vessels for cancer to grow, ketogenic diets, the

state of ketosis tends to make normal cells more resilient and abnormal cells less resilient.

And also there are great mainly animal studies, but examples of a ketogenic diet improving outcomes with chemotherapy and radiation in particular, because again, it makes normal cells more resilient and abnormal cells more susceptible to chemo and radiation. Not across the board, not in everybody, but there's a tendency towards that. So one could maybe make the case that a low-carb diet, maybe even carnivore, certainly in the keto realm, could be beneficial because it's going to increase sex hormone-binding globulin, and that would reduce androgens across the board. This would be something that you would need to track and see if you're actually getting that type of effect and kind of go from there.

The other thought, interestingly, and this is... People in the carnivore space and whatnot are probably going to gas, but there's the idea of limiting the amount of estrogens or the concentration of estrogen that you're being exposed to. The other idea is kind of blocking that, and this is to some degree what we're talking about from the pharmaceutical level, but there are soy isoflavones, genistein, different isoflavones like that, that are weak estrogen binders, and these have shown some benefit in certain breast cancer and estrogen-positive cancers, in that they basically work as a competitive inhibitor. They will occupy that estrogen receptor site, but they don't turn the estrogen receptor site on to the same degree that the normal hormone would do. Apigenin, genistein, there's a laundry list of these different isoflavones that could be an option in this story too.

Clearly this is something that needs a lot of research. There is information out there, there are people that look into these things, but again, the two thoughts that I would have is low-carb for the just general potential anti-cancer benefits, the reduction of estrogen because of increasing sex hormone-binding globulin. And then the other thought is the potential of using some sort of soy isoflavones, these phytoestrogens that can work as competitive inhibitors, and maybe those are a little more mild. Maybe you have a more benign effect using those.

Nicki: Okay. Our next question is from Colette on electrolytes and respiratory rate. She says, "I have a question about electrolytes affecting respiratory rate. I got a notification from Apple Health that my respiratory rate had gone over the last 10 days from an average of 13.7 breaths per minute to 15.9. I've never received that particular notification from Apple before and I'm wondering if it correlates with me starting LMNT around the same time. I did a Google search and did see that salts and water, along with a list of other things, can affect respiratory rate. So I wanted to check to see if I should cut back on the amount I'm using, I'm using about one packet a day, or if I should be concerned."

Robb: Colette, it's a great question and it's something that you should probably

just monitor. I do think that when people add something like LMNT or just a really robust dose of electrolytes, you do get some fluid shifts and so that can alter respiratory rate. Usually within about two weeks, though, you're going to see that normalized, so it shouldn't take that long for that to normalize. And I guess the easy experiment there is introduce it, remove it, and just see what the respiratory rate does in that interim.

Nicki: But there's an adaptation period.

Robb: There's going to be an adaptation period either way, yeah.

Nicki: Okay. All righty. Last question this week is from Anne about supplementing collagen for joint pain. "Hi Robb, wondering if you could shed some light on the efficacy of adding collagen to treat knee pain and arthritis. I'm 61 years old, normal weight, low-carb diet, regular walker and I resistance train three to four times per week. After a lot of years of sports running, et cetera, I've developed some pretty bad knee pain and have been advised that knee replacement surgery is in my future. I'm not really on board with that and I've been experimenting with red-light therapy and recently added collagen supplements to my diet. I followed the advice of another individual in the low-carb wellness space and ordered from a particular company. While the product seems fine so far, I think it's too soon to see improvement, the over-the-top aggressive daily emails and constant pushing of other products are starting to make me think there's something scam-like going on.

My understanding is that it's important to get types 1 and 3 bovine grass-fed, hydrolyzed collagen, but I'm having trouble finding objective advice that isn't promoting a specific company's products. I'd appreciate any advice you can give, big fan of LMNT, and I appreciate all you do."

Robb: And I'm going to answer this, but kind of in a tangential way. One thing, and I didn't add this to the show notes yet, we'll get that in there. There's a chap on the interwebs called the Knee Over Toes Guy, and he has a remarkable story. He was a student of Charles Poliquin, who's one of my favorite strength coaches of all time, a real character, we lost him a couple of years ago and miss him on the daily. But this guy was a real student of Charles and he had... God, I don't even know how many knee surgeries, surgeries on both knees. He played basketball, he has a partially reconstructed artificial knee on one side, the other knee was in need of more surgery, and he got in and just started doing some really interesting rehab-based movement, and now the guy is able to, he's still able to dunk, at like 45 or 46 years old, and he'll jump up, dunk, land in the splits, drives his knees forward to the ground.

He does all these kind of crazy things, and he has a 68-year-old mother doing this stuff. And so he has a wonderful progression, and the guy is great in that he gives everything away for free. He's got an app, he's got some gizmos to sell and stuff like that, but he basically has adopted the "give it all away, and then the people who get benefit..." Usually the people who end up buying his stuff are

the people that did it and got wonderful results, and he has been someone that actually his protocols and some of his work have helped my back. It's been helping my shoulder and I would highly recommend getting in and looking at what he's up to. And maybe you sign up for his stuff, maybe just follow along with the online, but there is a place that you can plug in and start doing some of his things like the knee-over-toes lunge and things like that. And I think it's just magic.

The number of anecdote, but strong endorsement from people doing this stuff is jaw-dropping. Every once in a while you get an orthopedic surgeon that absolutely clutches their pearls over what he's suggesting, which makes me think that this guy is absolutely onto something. Anything that usually makes a surgeon freak out might be something to at least investigate. I'm being facetious on that, but I would really look into that.

Then next in that thing, it sounds like you eat pretty well and you take care of your nutrition, but I would definitely take a look at any potentially immunogenic or inflammatory foods that you're consuming. Nightshades, A1 dairy, there's just a laundry list of things that will worsen inflammatory response, and it won't really matter if you're doing the collagen or not if there's something that's just-

Nicki: In the background.

Robb: ... in the background causing inflammation. So I would really kick around the idea of some sort of an elimination diet. Doesn't necessarily need to be keto, doesn't need to be carnivore, but I would look at what you're eating and just, if you've been doing a lot of dairy, maybe you pull the dairy out for a while. If you're doing a lot of nightshades like tomatoes or tomato sauce, just try peeling that stuff out for a bit, and see if you get some benefits. I would make sure that you are getting a gram to two grams of EPA DHA per day on average, either from a quality supplement or consuming fish. We get decent amounts of those things from grass-fed meat and whatnot, and just even conventional meat, although it can be lesser than what we need. Getting adequate Omega-3s definitely helps with inflammation. So I would think about that.

And then I would look at the collagen as kind of the cherry on the sundae. If you've got a good product that's got the type 1 and the type 3 collagen, even though this company seems to maybe be going over the top in their marketing-

Nicki: Sometimes people-

Robb: Companies stay alive when they market, and that's just kind of the unfortunate reality. Just because they maybe are over the top in their marketing, it doesn't necessarily mean that their product is inferior, it just means that they're trying to be successful and sometimes they can overdo that. So I wouldn't necessarily shy away from that just because they are maybe filling up your inbox with too much stuff. You can always-

Nicki: You can always unsubscribe.

Robb: Yeah, unsubscribe and dial that stuff down. Usually when you go to unsubscribe, they have an option where you can get maybe like a digest once a month or something like that. So what to review, I would really check out the Knee over Toes Guy. He's got a great YouTube presence and-

Nicki: We'll put a link to that in the show notes.

Robb: Yeah. I would think about any type of irritating foods that you're experiencing currently, and then steady as she goes... Probably Omega 3s, and then steady as she goes with the collagen. I think that it can be helpful for people, but I think it's kind of cherry on the sundae type stuff.

Nicki: Awesome. Cool. Man, we went through those a little more quickly than I expected.

Robb: You feeling-

Nicki: You're on a roll.

Robb: ... short shrift?

Nicki: No, just, I don't know. You're just very to the point and eloquent today. You're getting it out.

Robb: Oh, thank you, thank you. Well, this was an afternoon recording instead of a morning recording, maybe I'm just more woke up and ready to go.

Nicki: Woke up but not woke.

Robb: Correct. Correct.

Nicki: All right folks, thank you for joining us again for this episode of The Healthy Rebellion Radio. Please check out our show sponsor LMNT for all of your electrolyte needs, and we will see you again next time. Hopefully there's some sun shining wherever you live-

Robb: In your part of the world.

Nicki: ... in your part of the world, and get outside. It is spring, at least in the Northern Hemisphere, starting to be spring.

Robb: Bye everybody.

Nicki: Bye folks, bye. We'll see you next time.

