Nicki: It's time to make your health an act of rebellion. We're tackling personalized nutrition, metabolic flexibility, resilient aging, and answering your diet and lifestyle questions. This is the only show with the bold aim to help one million people liberate themselves from the sick care system. You're listening to this Healthy Rebellion Radio.

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

Robb: Welcome back, friends, neighbors, loved ones.

Nicki: Hello everybody. This is-

Robb: Haven't seen you all year.

Nicki: In fact, Robb has not been getting a lot of mileage out of that joke. Only every single person we see, from jujitsu to element-

Robb: All six of the people that we see on any regular basis.

Nicki: I haven't seen you all year. Yes, indeed. Well, happy New Year folks. This is the Healthy Rebellion Radio, episode 174. Wish you all had a very Merry Christmas, happy holiday and happy New Year. Let's see, we've got some new things we're trying this new year. In fact this evening-

Robb: I'm trying not to die.

Nicki: Trying not to die, that's always on the list...

Robb: Top list.

Nicki: ... of things for each and every new year, but we're going to try skate skiing for the first time. We're actually going to have our first lesson, despite there being...

Robb: Almost no snow to speak of.

Nicki: Almost no snow, but apparently there's enough for the beginner course for folks like us. We are going to give that a whirl this afternoon, see how we do. It looks really fun. I've heard that it's harder than Nordic and we've both only done Nordic skiing once, so we are probably going to...

Robb: Be in for it.

Nicki: ... be falling all over the place.

Robb: Yup. Yup.

Nicki: That's fun. The other exciting thing I have to share is that I signed up for my first beekeeping 101 lesson coming up here in a couple of weeks for Christmas. One of the things I want to do this year, I wanted to do it for a long time, and Robb got me a bee suit and the necessary-

Robb: Just replacing the one that I got rid of when we left Texas.

Nicki: Accoutrements, yup. We're going to get our first package of bees here this spring, but I have my first class coming up in a couple of weeks, so I'm excited to see how all that goes.

Robb: It's terribly exciting.

Nicki: I know. It is for me.

Robb: You got a fair amount of bee-related schwag for Christmas...

Nicki: Mm-hmm, yeah, stoked.

Robb: ... which was cool.

Nicki: Stoked. Super, super fortunate and excited to see how it goes. Our neighbors across the street here, they've done bees for a couple years. They did lose their last year bees because of hornets or wasps, which are predatory on honeybees. It'll be interesting to see what the possible ways of preventing that eventuality. Obviously, we have bears here too, so we'll have to hot wire for bears. Then, I don't know what we do for the wasps and hornets, but I'm sure there's something that I'll learn in my beekeeping 101 class. Any other stuff you want to share up front?

Robb: Nope.

Nicki: Nope?

Robb: I have nothing to share.

Nicki: Nothing to share?

Robb: No.

Nicki: You want to just dive in? You don't want to share that I almost broke your arm in Jiujitsu?

Robb: Oh, you did. You did. Yup. We were farting around. I am fairly frisky with

Nicki, but she-

Nicki: He's mean with me.

Robb: I'm a little mean.

Nicki: If he gets side control top, he is like...

Robb: Oh. Oh.

Nicki: ... all the pressure.

Robb: No. For three seconds, you get all the pressure and then I...

Nicki: Until I start squealing.

Robb: ... back it down.

Nicki: Yeah.

Robb: Yeah, once you squealed, then I stopped, but I was kind of in a sitout, underhook sitout [inaudible 00:04:08] kind of position and my outside arm, I don't still can't quite figure out what Nicki did with it.

Nicki: Somehow, I was able to use my legs to capture his arm.

Robb: Well, you threw my arm backwards and then somehow, caught it between your legs and it just about broke my elbow. It fucked it up pretty good.

Nicki: I felt pretty bad.

Robb: You felt marginally bad.

Nicki: Anyway, onwards.

Robb: Yeah.

Nicki: You survived. You were able to do jujitsu the other day. No problems. You've recovered-

Robb: Next time, maybe I'll keep side control pressure for the duration.

Nicki: What do you have for a news topic for us?

Robb: This one has made the rounds. Everybody may have seen it by now, it's called the anabolic response to protein ingestion during recovery from exercise has no upper limit in magnitude and duration in vivo in humans. Super interesting paper, but I got to see Dr. Don Layman and Gabrielle Lyon break this thing down.

When I read through the paper, it was interesting because the authors were presenting this as kind of a counterpoint, that there is this upper limit to the anabolic response to protein that if you take in more than, say like 40 grams of protein at a feeding, that you don't get additional anabolic response, that you just plug these additional amino acids into the TCA cycle. They get oxidized. For the people who are mTOR pearl clutchers, then they're afraid that you're over activating mTOR and whatnot.

Some of the limitations of this study is that the feeding that they gave, jumped from 25 grams all the way up to 100 grams. Instead of doing a staggered feeding to see the dose response curve, there was just this massive gap in between, which was odd.

The other odd thing is that they used a really unique blend of proteins. They used 80% casein, 20% whey. Casein is notoriously slow digesting. It's very atypical compared to a piece of steak or fish or something like that. It has some laudable characteristics, like many people in the bodybuilding circles and whatnot, will recommend a good size casein feeding before bed because then in theory, you're bathing your body in amino acids while you sleep.

It's this slow release deal, which again, the mTOR pearl clutchers are going to be aghast at that, but it shouldn't really be the anabolic response to protein. It should be the anabolic response to an 80/20 mix of casein whey. That should be a piece to it. It's interesting, Don Layman made the point that because there's such a gap in this thing, we don't really know that the anabolic response is dramatically different, 50 grams versus 100 grams because we didn't check it in previous research. It kind of suggested that there is kind of a consistent dose response curve.

At a minimum, it points out some interesting stuff, which was, and this was administered in novice strength trainers that they basically did 10 different exercises to failure. They really kicked their ass and then fed them 100 gram bolus of protein.

This stuff was radio labeled and it was radio labeled in a really slick way. They put radio labeling or isotopic labeling into the feed of cows and then that was incorporated into the milk and then that stuff was able to be tracked in blood and urine and feces and all over the place. It was really a very interestingly done study.

One of the important takeaways is that autophagy and cellular turnover was not negatively affected at all. Again, for the mTOR pearl clutchers, which I just can't, I have anger towards some of these people similar to some of the folks that backstabbed us around COVID and stuff like that, just in that they were so insufferable for so many years around this and there was no amount of talking reason to them. No matter how they looked and how much muscle mass they lost, they were still terrified of mTOR.

The basic takeaway was that while there was anabolic signaling, there was also protein turnover and autophagy and it was unmitigated by this protein feeding, which has been a point that I've made for a long time, that these things are not decoupled from, you can have both anabolism and catabolism happening at the same time.

The real bugger about mTOR overactivation and growth signaling overactivation is completely an outgrowth of just being overfed. It's non-trivial to be overfed in this day and age because we're a wash and hyperpalatable, easily accessible foods and all that. I don't want to make light of that, but for the people who are generally following some sort of an ancestral health approach, adequate protein, lifting some weights, doing some zone two cardio. If you're worrying about fucking mTOR, there's 99 other problems you should be worrying about and put it to Jay-Z. That's what I've got on that.

Nicki: That's what you got?

Robb: We have a link to that study.

Nicki: Yes.

Robb: Again, if you want to really like much more thorough breakdown and play-by-play piece, look for Dr. Gabrielle Lyon's podcast, Lyon podcast with Don Layman that she did around this paper.

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

Robb: In the show notes? Okay.

Nicki: The Healthy Rebellion Radio is sponsored by our salty AF electrolyte company LMNT. Everyone needs electrolytes and if you are an active person and/or on a low-carb diet, you really need electrolytes to feel and perform your best. Unfortunately, most electrolyte products on the market are filled with sugar, making them counterproductive for health.

This is why we helped create LMNT, with all of the electrolytes you need and none of the crap you don't. Whether you're training for strength, endurance or just trying to make it through a grueling workday, make it a point to add LMNT to your water. Your body and your brain will thank you.

Remember, the new limited time LMNT chocolate medley is available. It's chilly outside folks, but you can still get your electrolytes with a cozy hot beverage. The LMNT chocolate medley this year is a 30-count box that contains 10 each of chocolate chai, chocolate mint and chocolate raspberry.

Again, this is a limited time offering, so will be available as long as supplies last. Grab your box of chocolate medley along with any of our other

flavors at drinklmnt.com/robb, that's drink L-M-N-T dot com slash R-O-B-B. With the LMNT insider bundle, you buy three boxes, get the fourth box free, drinklmnt.com/robb.

Robb: Nicely done.

Nicki: Thank you. We have three questions for you all today. This first one is from Eric on collagen type. He says, "Hi. I've seen some recent research indicating collagen supplementation doesn't help with joint repair." He links to two different studies on examine.com, which these will be in the show notes as well with this question. Then, he says, "However, they were testing types one and three, perhaps type two is required." Then, there's another link.

"Types one and three can be purchased in bulk powder form, but type two appears to be only easily available in small doses via capsules or mixed in with types one and three in unknown, probably small amounts. I suffered a massive ankle injury from a bike accident, so I'm looking for as much extra help healing as I can get. I'm already getting one gram of protein per pound of body weight and eating paleo plus lots of homemade bone broth. Maybe the extra collagen isn't necessary. What are your thoughts?"

Robb: Yeah, there's been a lot around this for years that if you provide these substrates that look a lot like the matrix, that joint and synovial fluid surfaces are made of that, that's going to facilitate the regeneration of these areas, but I think it's one of these things where these Lincoln Logs, Lego of the body, the different amino acids, they can get interchanged in a really remarkable way. You don't want whole intact proteins going into your circulatory system. Hopefully, all this stuff gets broken down into single amino acids, maybe dipeptides, and then, it gets reconfigured on the back end of the gut.

From there, I think that the things that you really want to be concerned about are doing some active range of movement type stuff like some CARs and FRC and Kinstretch and getting as much mobility on the affected damaged area as you possibly can. I had a little bit of a knee tweak and also as we mentioned, a good bit of an elbow tweak recently and that CARs, and if you're not familiar with it, the controlled articular range...

Nicki: Rotations?

Robb: ... rotation, you poke around on YouTube and you'll find people that they'll show you ankle CARs and knee CARs, which would probably be the stuff that you want to do for your ankle.

Nicki: I'll make a note to link to some of those in the show notes also.

Robb: It's Sarah and Grayson Strange are our kind of go-to people. Hunter Fitness, also another fave. I would put a lot of thought around heat, heat-cold, doing the contrast hydrotherapy and an interesting way you can do that is a

bucket of hot water, bucket of cold water. Put each foot in one and then don't give yourself frostbite.

Don't scald yourself, but have them kind of at your tolerance and then just rotate those back and forth and you get this kind of countercurrent process of vasodilation, vasoconstriction, flushing blood through there. Then, just be as active as possible. Walk on that ankle as much as you possibly can...

Nicki: Through your normal gait as possible.

Robb: ... through normal gait, if at all possible. Again, don't reinjure it, but we just were understanding. The Bret Weinstein, Heather Heying in their book, 20-

Nicki: 21st Century Guide to Hunter-Gatherers?

Robb: Yeah, something to that effect, but they really made this fascinating case around even fractures that they made an interesting case that they probably shouldn't be immobilized to the degree that they are and that they would heal faster. They had some anecdotal, but compelling stuff around that because you think about an ancestral kind of template with that and maybe people would certainly take it easy on a broken limb, but they're not going to just complete immobilization short of a splint, which even a splint is very different than a hard cast. There's still just more blood flow. There's the loading of the different tissues.

Bone is piezoelectric. When you flex it and load it, it creates an electrical current. I'm not a muscle or tendon physiologist. That stuff is long in my rearview mirror, but I can't help but think that any amount of loading, blood flowing creates tissue turnover, systemic signaling, just doing general workouts.

We now understand pretty clearly that one of the benefits of exercise broadly for cancer treatment is that the myokines that are released during exercise have these really awesome immune modulatory effects. I would be shocked if they didn't have systemic effects that enhance recovery. Being generally active, you're already eating well.

Nicki: So even if he's unable to train on his ankle, he could be doing upper body, he could do a circuit that excludes the ankle from direct training.

Robb: Yeah.

Nicki: Obviously, we want the range of motion and all of that, but I view that as sort of separate range of motion work, but he could get a great upper body kind of stimulus that would transfer down to...

Robb: Yeah. I mean...

Nicki: ... all parts of the body.

Robb: ... you can get all kinds of creative, like when we had a gym, we had people that had one bum leg and we would rig up basically like a skateboard on the one leg and then the other leg went into the strap on a concept two rower and they would just kind of scoot back and forth on that thing and it was kind of a clunky mess, but you'd still get a really good workout. Be as active as you can, do as much stuff as you can. If you can get into a pool and do normal gait activity while buoyant, the contrast hydrotherapy, I would just like shotgun this stuff.

Nicki: Red light therapy.

Robb: Red light therapy, absolutely. Yeah. Yeah.

Nicki: Cool.

Robb: I didn't give a great bullet point on that, so you'll have to sort back through my stuff there, but really far afield from the original question, which is are any of these collagens going to specifically benefit like tendon or joint healing? I don't really think so. Maybe, I think general sound nutrition and then it's all this other stuff, the contrast hydrotherapies, training, range of movement maintenance, all that type of stuff.

Nicki: Cool. Next question from Nate on diatomaceous earth for silica and heavy metal detox. "Hey Robb and Nicki, appreciate all you do, longtime reader and listener. Have you dug into or tinkered around with diatomaceous earth as a supplement? I've been hearing about how consuming a food grade version of this at low doses, approximately a teaspoon a day, can detox heavy metals from your body and that it is high in silica, which has been claimed to have health benefits of its own.

As more and more metals are discovered in our food, our foods packaging such as aluminum cans, our water supply, and really in our environment all around us, do you see the consumption of diatomaceous earth as an effective and also safe way to help rid your body of some or any of these metals?" Then, he talks about, he came across this idea from a podcast from Dr. Shawn Baker.

Robb: This was news to me. I did a fair amount of poking around. Just my initial reaction to this was pretty good skepticism and mainly for the reason that diatomaceous earth, it's the diatoms, these little microorganisms, when they die, their skeletons basically accumulate in different areas and it's effectively blacks for all intents and purposes. It's used as a pest-mediating process with chickens and stuff like that. If they have fleas and-

Nicki: Ants and bugs, any kind of bug. People put it around their garden to kill bugs.

Robb: Yean, and it's because small critters interface with this stuff and the glass cuts them up. It's literally like us trying to walk through a 12-foot wall of broken

bottles. There may be, I didn't get a sense that the "food grade diatomaceous earth" was really qualitatively any different than what you would get from a feed store. Maybe it is, but I wasn't... People make all kinds of claims around stuff and I just don't really see how it's particularly different.

If it's acting as a detox method, I'm perplexed. One of the things proposed as a legitimate detox process is sodium EDTA. It's this bidentate organic acid that you use in chemistry a lot for different processes of sequestering different types of metal because it has, it'll bond to lead differently than it does iron differently than it does copper and pH and different things can change that. You can use these things like EDTA to remove different types of metal.

You can administer the EDTA intravenously and in theory, it might be helpful for some degree of chelation therapy. Some people have put it forward as a way of removing calcium out of like calcified structures in the vascular bed and whatnot. There's not great research on any of it. It's pretty fringy. That doesn't mean it doesn't work.

It's just a cheap non-patentable therapy. Maybe it works great, but the thing with that though is that this EDTA goes systemically through the body and there's kind of an obvious mechanism, whereby this stuff would get exposed to a metal, attached to it, and then the kidneys, in theory, would then excrete this stuff. I don't see how consuming effectively ground-glass in the gut is going to remove anything.

Now, it might be an interesting antiparasitic, like if you had worms or something like that, in super appropriate dose, maybe it would be irritating enough to the worms that it might reduce worm burden, but I could also see it being really, really irritating to the gut lining itself.

Again, unless I'm really missing something and just couldn't find it in the research that I did for this, diatomaceous earth is effectively tiny little beads of glass and those things kind of fracture and break and for a lot of the application for diatomaceous earth, that's the benefit there.

I know that diatomaceous earth is occasionally used in water filtration systems and whatnot, and some things can associate with it in that format like this just occurred to me, but the water is flowing over the diatomaceous earth and so constituents in the water are going to interface with the diatomaceous earth, whereas just cruising through the intestinal tract, I don't see how that is going to be effective in any type of a detox regimen.

Nicki: Alrighty, our last question is from another Eric on exercise and blood pressure as a T10 paraplegic, "Robb and Nicki, thanks so much for your balanced approach to all the questions you answer and thanks for the wisdom you dispensed. Truly appreciate it. A rundown on myself, I am a 35-year-old male, five foot ten, 155 pounds. I've been a T10 paraplegic for 20 years. I had a motor vehicle accident when I was 15, which resulted in my spinal cord injury.

I've been eating paleo for about three years now with great success. I've never felt better and I've never been more regular. Being regular, can be a very difficult thing when you have a neurogenic bowel. I recently had blood work done, cholesterol 215, triglycerides 34, HDL 69, LDL 136, non-HDL 146, coronary risk ratio, 3.12, hemoglobin, A1c 5.2, mean glucose 103, insulin 5.3. Every man in my family seems destined to have a heart attack or need a stint at age 50. I've really tried to be as healthy as possible. I feel like I'm doing pretty good. If not, please tell me.

I work 40 hours a week and try to be as active as possible. I also have an 18-month-old, so she keeps me moving, but I have a couple of concerns. First, exercise. It feels like damned if you do and damned if you don't. I know it's important, but every single time I try to exercise regularly, I always end up pulling something.

Every day is arm day and when that's the case, it takes forever for things to heal up. I'll inevitably have to take two or three entire weekends where I do nothing but sit on the couch and watch movies all day trying to rest the injury as much as possible. This is on top of regular wheelchair life, repetitive stress injuries. I can't help but feeling like the juice just isn't worth the squeeze. I'm probably better off staying as generally active as possible. I'd love to hear your thoughts. Maybe one just inevitably has a shorter lifespan as a paraplegic. If so, I'm okay with that. It'd just be nice to know.

Second question is about blood pressure. Coffee and tea seem to raise my top number between 130 to 150 and it typically stays elevated within that range throughout the day. The bottom number will get up to about 80. When off caffeine, my blood pressure is typically 120/70. Should I be worried about this? Also, what the heck, this is from one 12-ounce cup of black coffee a day. Doesn't mess with my sleep or anything else, just blood pressure. Could there be a way to counteract it? Please don't tell me I need to give up the nectar of the Gods?"

Robb: Man, Eric on the first one. Man, I would defer to your wisdom on that. You've got way more experience in what you can and can't do. I could maybe make the case that 90% of what you did from a exercise perspective would be like FRC Kinstretch, mobility and joint tendon maintenance. Instead of getting in and doing buys and tries, back and buys, maybe you do a little bit of that, but like you said, you get a lot of work every day just wheeling yourself around in a wheelchair.

I remember this was way early in the CrossFit days where the difference between endurance and stamina was actually talked about. People in CrossFit actually talked about other people's work. This is before it was like a religion was set into stone and nobody else could have any input, but I'm forgetting the guy's name, but he's an exercise scientist, American guy that was doing work in Norway for the rowing team.

He had a phenomenal paper that was the three phases of training adaptations. He was talking about phase one, phase two, phase three, neurological, different things, but he made a big distinction between endurance, which is largely a systemic story and then the localized muscular stamina.

For people who do wheelchair racing, even though it's a lot of work, these people are going for miles and miles and miles, because of the amount of work that's done by these people, these wheelchair like triathletes, end up yoked. They end up with huge arms, giant triceps, big delts and everything, because their body is kind of like, okay, we need a bigger engine to be able to do this thing.

It's just kind of an aside, basically making the case that tasks of daily living, absent legs is probably tasking the musculature that you've got pretty significantly. Again, if I had [inaudible 00:27:45], it would be, again, checking out the FRC Kinstretch type stuff to make sure that your elbows, wrists, shoulders, scapula, thoracic...

Nicki: Neck.

Robb: ... neck, all of that stuff is as dialed as it can be. Then, maybe you do a little bit of selective strength training with that or I would...

Nicki: Swimming if that's-

Robb: ... yeah, maybe swimming, but even then the swimming, the impingement syndromes...

Nicki: Yeah, that's true.

Robb: ... from swimming just kill me.

Nicki: That's true.

Robb: Yeah. I don't know. I don't know, but you're more the expert on that than I am. My main point about mentioning the paraplegic athletes is that activities of daily living, if they're reasonably significant, could probably be a good stimulus. Maybe all the stimulus that you want, maybe the dose response curve of anything in addition to that should be like 80% joint integrity and maintenance, mobility maintenance, and maybe just a peppering of some smart strength work.

Again, can't recommend Sarah and Grayson Strange enough. Those folks have figured out so, just thrown it out there. My back has not gone out in a year and a half now. Before I started working with them, it was every fucking three weeks. I mean, it was, I'd sneeze and it would go out, I'd do this and I go out, and it took time, but they just did assessments on where I was, what I could do, what I couldn't do, and then kept iterating on the recommendation and knock on

wood, like some days my back's a little sore from and I changed a lot of stuff. I don't sit hardly at all.

I'm like a shark, but that's just one of the things. That's the deal I get to make. If I don't want my back to go out, I don't sit much and when I do, I have to kind of break it up and everything, but you might consider doing a consult with those guys or maybe Hunter or one of the other rock stars in that FRC Kinstretch world.

Then, on the blood pressure, I pulled up a paper. This was completely news to me, so please don't even think that I was an expert on this. Acute effects of caffeine and heart rate variability, blood pressure and tidal volume, sorry, my thing's loading kind of wacky, in paraplegic and tetraplegic compared to able-bodied individuals, a randomized blinded trial and they basically, just different groups of people, tetraplegics, paraplegics, able-bodied folks and administered different boluses of caffeine.

Tetraplegic participants showed an increase of 19 to 27 millimeter in systolic and diastolic blood pressure. In contrast, blood pressure did not increase significantly in paraplegic participants. Nevertheless, the mean systolic blood pressure was higher in these folks by 11 millimeters after the ingestion of caffeine. There seems to be something going on there. When you think about caffeine, it has both localized and systemic effects.

It is a vasoconstrictor. I think caffeine is best consumed when we're active, not everybody does. This is one of the challenges of you want to pick me up and you're sitting at a desk and you drink caffeine, and biologically, you should be out moving and physiologically, you're just sitting there. I'm wondering if there's not something going on here that because of the limited innervation to the lower body, that we're not getting some of the compensatory, parasympathetic activity to the lower body.

You're getting a disproportionate vasoconstriction throughout more of the body than what you would in say an able-bodied individual. Maybe that's just because of sitting and standing and stuff like that, and so you get more of that vascular activity.

I know that for folks with say wheelchair bound or just inactive in general for a host of reasons, venous return is compromise because a lot of the activity of venous return is engineered around the idea that you're walking and you're moving, your calves are pumping, in the way that the valves are set up, the muscles push blood up and then the valves close so it doesn't backflow back down. There may be a couple of different mechanistic things that are going on there that are making that challenging.

There's clearly something there. You're experiencing it clinically, even if we didn't find this study and other studies like it, it still appears to be happening with you. What do you do about that? I'm not totally sure. You might look at

some magnesium, you might look at some sort of meditation or breath work as a means of improving parasympathetic tone.

One of these interesting things for all of this stuff when we're thinking about peripheral heart activity and sparing your joints and all that stuff, would be a really good sauna in 7 days a week and 20 or 25 minutes in there, because you're going to get that 120, 130 beat per minute type deal. You get a really nice vasodilation systemically, I would assume. It'd be interesting to know if paraplegics don't get that same vasodilated response in the lower body. I would be surprised if they didn't, but maybe they don't.

That seems like an interesting thing to drop into the mix that is at least kind of, when we're thinking about performance, health, longevity, like you're getting some heart activity, it's sparing your already taxed joints and whatnot, and then it should be-

Nicki: Well, he said everybody in his family tends to have a heart attack or...

Robb: [inaudible 00:34:10].

Nicki: ... that runs in his family. Sauna seems like a great...

Robb: It seemed like such a win to me.

Nicki: ... adjunctive to add to the mix.

Robb: Yeah, that seems like such an absolute win to me. Those are my thoughts, man. It's an interesting nut to crack for sure. I don't know. This is one of those things where if it brings you some nominal joy, I get it.

Nicki: Would decaf, I mean, I know people, I don't know. I drink mostly decaf and for me-

Robb: You do half and half.

Nicki: I do half and half.

Robb: I got to say when, and I've talked about this a little bit, but have been off coffee and doing black tea, I feel like that's been an important boon for my gut. The difference in flavor for me of a half caff versus a straight decaf is like shocking. Really, at the end of the day for you, you could do straight caff and it wouldn't really affect you one way or the other.

Nicki: I know, but for me, the it's holding the, it's like the hot cup and the smell and the, I don't notice much of a caffeinated boost of energy or anything. It's just the...

Robb: I know. I get that.

Nicki: ... ritual aspect of it.

Robb: Maybe, we're just different here, but the flavor quality improvement of caffeinated coffee versus decaf.

Nicki: Yeah, I know people who are diehard coffee, pure coffee always bulk at decaf.

Robb: Yeah, I mean, he could try. He could try.

Nicki: You don't have to try that Eric, if you love your cup of Joe.

Robb: In recap, I would really recommend exploring some of the FRC Kinstretch type stuff. Maybe get a couple of sessions where they can do a zoom deal and do an assessment on you and see what you've got going on and get a program, put together around that. Maybe you check in once every couple of months and get some feedback on it.

Then, on the blood pressure front, there's clearly something here in the literature, clearly something there clinically for you, and my best thoughts around that, there are different things, shoot, even as I'm thinking about it, in addition to what I said, like the sauna like five to seven days a week, magnesium, there are things like tadalafil, some of the erectile dysfunction medications, agmatine, which is kind of a modified form of arginine, all of these things really enhanced nitric oxide signaling in the blood.

Man, it's interesting the literature on the atherosclerotic protective properties of things like tadalafil because it really improves vascular elasticity and the nitric oxide signaling and all that type of stuff. Maybe explore doing that too. There seems to be virtually no downside to that stuff other than occasionally people having some lightheadedness going from seated to standing, which isn't going to be an issue here.

Nicki: Keep us posted, Eric.

Robb: Yeah, I would love to hear more. Definitely keep us posted.

Nicki: Yup. That was our third and final question for this week. If you have a question for the podcast, you can submit that at robbwolf.com. Then, in the upper right-hand corner, you can click on the contact page and submit a question for the podcast. Please check out our show sponsor, LMNT, for all of your electrolyte needs. You can grab that at drinklmnt.com/robb. That's drink L-M-N-T dot com slash R-O-B-B. Robb, any final closing thoughts for this episode?

Robb: Nope. No closing angle pain here.

Nicki: No closing angle pain.

Robb: No.

Nicki: All right, folks. Wish you a very lovely weekend. Get outside if you can. Wish us luck in our skate skiing adventure.

Robb: Hopefully, there are no bilateral fractured knees in our future.

Nicki: Yes. All right folks, we'll see you next week.

Robb: Bye everybody.

Nicki: Take care.