

**Nicki:** It's time to make your health an act of rebellion. We're tackling personalized nutrition, metabolic flexibility, resilient aging, and answering your diet and lifestyle questions. This is the only show with the bold aim to help one million people liberate themselves from the sick care system. You're listening to the Healthy Rebellion Radio. The contents of this show are for entertainment and educational purposes only. Nothing in this podcast should be considered medical advice. Please consult your licensed and credentialed functional medicine practitioner before embarking on any health dietary or fitness change. Warning, when Robb gets passionate, he's been known to use the occasional expletive. If foundling which is not your thing, if it gets your britches in a bunch, well, there's always Disney plus.

**Robb:** And we are back.

**Nicki:** We are live, good morning. Fine people, fine listeners of the Healthy Rebellion Radio, hope you are all doing well on this, your Friday morning. Not ours. It's Wednesday. Good morning everyone. This is Episode 91.

**Robb:** You just keep doing. You keep going, being achieving.

**Nicki:** Go, be, achieve. Yes. So yeah, let's see, what do we got for today. I wanted to do a little bit of updates for what's going on inside the Healthy Rebellion community. We are in the final week of our 30 Day Reset, tackling the pillar of community which is so very important as a component of health. As humans, we need community and as most of us have felt over the past, what is it now? 18 months. 22 months maybe. It is October, 20 months. Community has been very much a challenge for many folks. So anyway, we tackle community inside the 30 Day Rebel Reset, so that is this week. We just had an AMA, an Asked Me Anything with our very own Robb Wolf.

**Robb:** And people actually showed up. I was shocked.

**Nicki:** Yeah, so that was cool. Lots of Healthy Rebellion member joined and asked Robb all manner of questions. It was anything goes kind of things. So that was a good time and we definitely will be having more of these inside the Healthy Rebellion with different community members. So if you're a member of the Healthy Rebellion, keep your eyes open for those.

**Nicki:** And then finally next Monday, October 18 we are starting our very next Rebel Book Club and this go around, we are going to be reading the Hunter Gatherers Guide to the 21st Century, the brand new book that just came out by Doctors Heather Heying and Bret Weinstein, the hosts of The DarkHorse Podcast which we've talked a lot about on this show and I know many of you are also listeners of theirs, so we're going to be doing a group read of that. So if that's something that interests you and you're not yet a member of the Healthy Rebellion, you can join us and participate. Just go to [join.thehealthyrebellion.com](http://join.thehealthyrebellion.com). What else?

**Robb:** Could you knocking this thing out.

**Nicki:** Am I missing anything?

**Robb:** No, no. You're getting it all. I'm just opening a link here for when I'm...

**Nicki:** When I pass the Bataan?

**Robb:** Yes, the Bataan Death March.

**Nicki:** Okay. Okay. Well, I think it is that time for the news topic.

**Robb:** News topic. This one's nothing super fancy. But in this age of follow the science and consensus and all of that type of horseshit. It's a New York Times piece, so clearly it's credible. And I say that, like I've tried to mainly pull things from MedPage, WebMD, New York Times because...

**Nicki:** If it's anything other than those, then you get the, what is it, appeal to authority...

**Robb:** You get pushback with it. Yeah, they appeal to authority that it's a bad...

**Nicki:** The publication is subpar. So how could you possibly be reading other things other than the most pristine.

**Robb:** The them things. The them are things. So this one is aspirin used to prevent first heart attack or stroke has been walked back, essentially. And this is something that in my understanding of say, like current cardiac treatment protocols, aspirin is sometimes used in certain situations as a bit of a clot buster. Although, I think that there are much more targeted, much better drugs in that. It's certainly been used in that direction. In the past, somebody ends up with an occlusive event be it heart attack or stroke and if you can chew through that clot in a timely fashion and good things can potentially happen. Some of these modern clot busters are nothing short of miraculous and what they can do.

**Robb:** But it's been 20 years maybe that the use of like a baby aspirin every day or every other day kind of permeated its way into the zeitgeist, the consciousness of medical practitioners and it is the standard of fucking care. It is what one does, until now, when it changed.

**Nicki:** So you're saying the science isn't settled. Wasn't settled for 20 years on this topic.

**Robb:** The science in fact was not settled. We went with what seemed to be the best information that we had at hand. And so this isn't like a finger pointing thing. Like it can turn into that. It's a finger pointing thing...

**Nicki:** Its illustrative thing, like it illustrates where we are.

**Robb:** It illustrates that this stuff changes. And again, I make the case that like, if we're talking about a pool table and billiard balls, and we know their mass and their direction, and it's a super simple system, then, okay, the science is fucken settled. But you get much beyond that, and we start getting error bars. It's like, well, it's most likely this within this known tolerance.

**Robb:** And for a long, long time, stroke and heart attack has been understood to, at least in some circumstances be related to clotting. And then it's been understood for a long time that things like fish oil and aspirin have effects on clotting. And so there were trials, there were epidemiological studies, there was information that suggested this may be of benefit. But over the course of time, it just didn't really pencil out. When we look at things like all cause mortality, and people doing the baby aspirin, there was no benefit. There might even be harm associated with it, which we don't really get to unless we can have a free equitable discussion around all of these topics. So, that's my point.

**Robb:** And this might have application in other areas of medicine and healthcare, I doubt it, because clearly these things are totally siloed. In there's no transferable element to this staff.

**Nicki:** There's nothing currently happening in our world, in the world of field of medicine and health that this could possibly apply to.

**Robb:** I don't think so. I don't think so. I doubt that there's even multiple situations where this could be applied to. I'm sure that this is the singular example within all of medicine in which, somebody had an idea, they had to push that idea forward, the data seem to support it. No, well, with upon 20 years of review of the data, maybe that wasn't the whole story. Maybe aspirin is good for some people and not other people. Maybe it's not just a uniform declaration one way or the other, that there might be some nuance to this. But again, that would ruffle feathers, that would really upset people. If we were to suggest that there might need to be a nuanced approach to these things. And it something that might be good for Person A might in fact, be deleterious for Person B, or at least those people should be able to make some sort of a risk analysis based off of their individual situation, the relationship they have with their healthcare providers and whatnot. That seems pretty dubious to suggest.

**Nicki:** Yeah. And none of that was sarcasm.

**Robb:** It was not Soren.

**Nicki:** Alright, that was kind of an interesting flow.

**Robb:** Yeah.

**Nicki:** Yeah. Okay. Let's see, it's time for our t-shirt winner. This week it goes to Tam at mom of seven. And first of all, I've got to say if you really are mom of seven hats to you.

**Robb:** All the hats.

**Nicki:** Being a mom of two is really, really hard. We were just commenting last night that parenting is so hard. So anyway, Tam. Kudos. Her review says, love it. It's entertaining and insightful with a bit of Robb's bitterness. Thank God he has Nicki, what a great team.

**Robb:** You say that multiple times every day, not just every day.

**Nicki:** Tam at mom of seven thank you for your review. Send us an email to [hello@rebels.com](mailto:hello@rebels.com) with your t-shirt size and your mailing address and we'll send you a Healthy Rebellion Radio t-shirt.

**Nicki:** And the Healthy Rebellion Radio is sponsored by our Salty AF electrolyte company LMNT and temperatures are definitely dropping in the Northern Hemisphere. And you might be wondering how salty do you need to be in the wintertime? So Robb, what do hydration needs look like in the colder months as compared to the heat of the summer?

**Robb:** Well, Nicki, it has always the dosing of electrolytes is maybe the most challenging question to answer. Big person, small person, high activity, low activity. So what's really important to keep in mind is the factors that increase or decrease hydration and electrolyte needs. Elevation increases hydration electrolyte needs. The cold interestingly makes staying on top of that whole story challenging because the normal thirst response is suppressed when people are cold ostensibly because you don't want to go

stick your face in an icy stream if you're already like borderline hypothermic. There's probably some evolutionary biology correlate there. So it can be challenging to keep people on top of hydration during, like winter sports and cold weather. I guess the summer months, people could just as easily find themselves at altitude as winter months but certainly skiing, snowboarding, those sorts of things like they really do take folks and move them from a pretty typically different elevation perspective and higher altitude, lower moisture content, like all those things increase water loss, electrolyte needs, physical activity.

**Robb:** So it's kind of the same rinse lather repeat as any other time of year with a few caveats understanding that your thirst receptors are going to be modified in the cold down regulated. So you could be overtly dehydrated or under electrolyted and you won't notice it is much from like the thirst perspective. And so one does need to put some extra effort into staying on top of that. I'm sipping on a Lipton iced tea, all you folks with your hippie little...

**Nicki:** It's not iced though.

**Robb:** It is not it. Well, it's a Lipton hot tea that I put, I've been finding either raspberry or orange go really nice in that and then I dilute. It's a brew one tea bag, put that in the 32 ounce container, fill it the rest of the way with water, heat that up a little bit, put the elements in, what have you in it and it's quite good. And I find that I do want to sip on it throughout the day even though it's getting cold around here and that's great.

**Nicki:** He doesn't like sipping on a warm beverage when it's cold outside.

**Robb:** Indeed, indeed.

**Nicki:** Alright folks, you can grab your LMNT Value Bundle, just buy three boxes, get the fourth box free when you go to [drinklmnt.com/Robb](https://drinklmnt.com/Robb) that's [drinklmnt.com/r-o-b-b](https://drinklmnt.com/r-o-b-b).

**Nicki:** And let's see. We're moving on to our questions for today. Just a quick reminder, if you have a question for the podcast, you can submit that by going to [Robbwolf.com](https://Robbwolf.com). That's Robb with two b's [wolf.com](https://Robbwolf.com) and then on the contact page, there's a drop down for submitting a podcast question.

**Nicki:** Okay. So our questions this week, our first one is from Andreas. He says, dear both, first, thank you for all that you do. I'm very grateful for your weekly courage sticking your neck out, there sharing your take on life while crushing mainstream dogma. Love it. Great job, please keep it up. Now could you please help me understand how all the so called beneficial peptides in animal foods ends up in the human body to deliver any biological function. The human digestive system is very good at breaking down peptide sequences long before they reach their destination to give any biological function both spontaneously, non enzymatically like stomach acid, and enzymatically by peptidase, etc.

**Nicki:** Nowadays I'm experimenting using my chicken eggs as a delivery vessel by which I delivered non palatable but highly nutrient dense organ foods to my family indirectly by actively changing the egg nutrient profile or so I think. The chickens free ranging get plenty of sunshine in the summer, eat bugs, greens, wild herbs and berries while I occasionally feed them organ meats, primarily beef liver and heart, beef tallow, etc. They get no plant oils, soy and so on. They love the organ meat and look and act very healthy.

**Nicki:** I know the fatty acid profile of the eggs will change to a higher percent for example stearic acid based on research literature, but I'm not sure about the other vitamins, minerals and peptides from their diet if it actually ends up in the eggs and so as passed on to my wife and kids. I have no problems eating meats like liver and heart, but they will not touch it let alone eat it. But they absolutely love my dishes that I prepare from those eggs like carnivora, waffles etc. But if humans are chickens do not absorb many of these nutrients peptides in a biological active form and increase the nutritional profile of the eggs. Well, then the story ends there. A little bit like some expensive skincare products that my wife uses that proclaim the price I justified with added water, soluble vitamins that should be so healthy but will not be absorbed unless you eat the damn thing. Best Andreas.

**Robb:** So I wish Andreas had provided something to flesh out this whole...

**Nicki:** I think he's wondering like, he's feeding his chickens these organ meats.

**Robb:** Yeah, and he kind of answered his own question in paragraph three of seven, which was human digestion is very good at breaking down peptides. And that's true. When it's not true, this is when we end up with some sort of leaky gut, intestinal dysbiosis, the only time in our life cycle that intestinal permeability is kind of a good thing is right around that breastfeeding infancy period when it's a feature not above that the infants have intestinal permeability because a bunch of these immunoglobulins and immune modulating proteins from the breast milk need to make their way through the gut intact. And this is also part of the reason why it's not the best idea to start throwing a ton of different foods at kids really, really early particularly. Some of the things that have the higher allergenic potential because the intestinal permeability is real and whatnot.

**Robb:** So Andreas, I think, like if you want to throw some chicken liver or some beef liver, whatever your chickens making them cannibal would probably not be cool. I don't know. But chickens aren't all that wildly, so probably doesn't matter. But like...

**Nicki:** They'll just attack, fight each other for the mice and whatever.

**Robb:** Yeah, yeah. I think providing food for the chickens that is broad and nutrient dense will certainly enhance the nutrient profile, mainly the yolk that we're talking about. Maybe to some degree, if any of those birds end up in a crock pot or something down the road, like their nutrient profile will be improved, like their iron content might be better, zinc, magnesium, things like that. But by and large, you're spot on. When we first were reading this, there were all these peptides like BPC 157, and stuff like that, that people are using for different, like injury recovery and stuff like that. So I thought that it was kind of going that direction. But then when we read through it, it's like okay, no, that's just more like, dietary peptides.

**Robb:** But he says, somewhere in here that the so called beneficial effects of peptides and animal foods. I think that's just the protein, the lysine, the anabolic signaling and the overall nutrient density. Like I'm not aware of there being any, like magical stuff being put forward above and beyond that, and it would be kind of goofy if there is a suggestion there. Because again, like ideally, our digestive system does a fantastic job of breaking all of the proteins that we consume down into individual amino acids or like dipeptides, like two amino acid sequences about the longest, and then that's what's absorbed, and it all gets Lego or Lincoln logged back together on the inside of the intestinal barrier, inside our bodies to be used for the stuff that we need.

**Nicki:** Okay, already. Our next question is from Mike on non carb processed food. He says, hi, I can't explain how important you guys have been in my life over the past 12 ish years. I've listened to everything and then implemented some. Realistically a lot, although I don't really have any health, nutrition, digestive issues. So it's more of a favorite subject slash interest of mine than a dire need to make sweeping changes sort of thing. My question, I know processed foods are worse for us for a number of reasons and that there are different levels of processing, highly processed factory food, steak versus ground meat, blending mainly unprocessed foods to make a smoothie, etc.

**Nicki:** But my question is, are these processed foods ever better for us than the and processed or maybe equivalent, mainly when it comes to processed fat and protein? I've wondered for a while if a quality liverwurst from US Wellness, for example, might be an ideal food despite the baggage it carries along with it as processed meat, the devil. But let's be realistic here. My understanding of this product is that it's a nose to tail tube of goodness from a healthy animal, all slept together with some spices, all good, right? Is there any benefit or detriment to this sort of thing? Does the protein fat being digested more quickly than if I chewed the component parts individually really matter? I know processed sugar becomes a blood sugar issue. But does processed fat and protein have a similar corollary?

**Robb:** It's funny, we sift through these questions and sometimes I'm like, this is so far out in the weeds. I don't know if it's worth it. But then also it's kind of interesting thought experiment in some ways too. In a way you could look at any, if we're talking about just animals, anything more processed than let's say you just threw your atlatl and you had a perfect shot and it pierces the aorta and the animal falls over and okay.

**Nicki:** You take out your flint knapped knife and...

**Robb:** Well, anything beyond that is processing.

**Nicki:** Right.

**Robb:** Technically. You're cutting some meat off the bone and anything but steaming vegetables technically is processing. So I remember still, I won't name him by name, but there was a doctor who was very, just about die from priapism, which is an erection that won't go away from the early, early in the censorship story. I mean, it's 2018. And he was advocating for the censorship of medical misinformation, which as the beginning of our podcast points out, that's really a slippery slope and a moving target and... Fuck it, I'll go ahead and say it, it kind of illustrates that the brightest and best are no longer going into medicine the way that they did when we grew up, like a person who was a doctor, they were the smartest like, that's what the smartest people did. Now, the smartest people go into tech and read a Wikipedia entry on topics and assume that they're right, because they've got a 200 IQ.

**Robb:** But all that stuff aside, this person was going on and on, about like, oh, people decry processed foods, but look at protein powder. It's wonderful. And detailed the fact that consuming some whey protein is satiating, it enhances glutathione production. Under certain chemotherapeutic protocols, people are fed whey protein because it's understood it increases the glutathione, which is kind of our central hub, antioxidant and detoxification, kind of molecule. So he was like, ha ha, gotcha, surprise, cock bags. And it's like, fuck, are you kidding? Like, really. This is where using terminology like this stuff. So now, people are starting to use the terminology ultra processed foods, and maybe this is valuable, like part of the problem.

**Robb:** And it's annoying to me, because I have the sense that people should be able to read between the lines of nuance and clearly people cannot, even physicians cannot, because this person really thought that they were striding around metaphorically on social media with like, ha ha, protein powder is a processed food and it's still good for you. And it's like, fuck, okay, so everything that comes like, when one goes to the store, I just noticed that even some of the refrigerated areas, it is just full of food like items, but it would really be a stretch to call any of it food. It just the vegetable oil mixed with sugar, mixed with colors.

**Robb:** On some intuitive level, I think people get to the spot where they're like, okay, protein powder probably has some utility in some circumstances. Although I'll admit that within the folks that we've worked with, it's been pretty rare that we don't find that chewing your food isn't a better solution. And so, I think that this is one of the problems and I forget what I was reading the other day, but they were really making the case that the way that things are defined is super important. And I had historically kind of push back on this but it's like, it makes sense. Because people will do stuff like this and I'm not saying, Mike's dumb here by any means it's interesting question but we do know that say like ground beef is easier to digest than a steak, and so is it good or bad?

**Robb:** Well, are you an elderly individual who maybe has dental issues and also has some lower digestive fire, then it's probably a really good thing. Are you feeding a kid who's maybe a little peckish about dealing with like the grisly fiddly bits of a steak and they don't have the eye hand coordination of cutting up a piece of meat quite yet and you're like, okay, hamburgers it is. And we're going to climb the mountain of teaching proper knife and fork skills in incremental bites. So I think so much of this is, is this relative story.

**Robb:** Super high output professional athletes, there is no way that Tour de France participants or even CrossFit Games type people support their energy output with a high fiber paleo approach. Like they will literally explode from fiber. These people at some point need so much energy that even doing things like yams and sweet potatoes, the fiber content of that diet will overwhelm their digestive system and they're belching and farting and bloated and they're literally better off from a performance perspective doing something, white rice or even more processed than that to some degrees. Now is that great for health?

**Robb:** Well, maybe, maybe not. I mean, if you win a couple million dollars with the CrossFit Games, and you have some endorsements and you spend three to five years of your life spinning that up, and then you retire and dial everything back down to a reasonable level, it's probably an inconsequential hit that your physiology took such that now you are financially set up and you can kind of call your own shots. So it's... Am I doing an okay job answering this like, I...

**Nicki:** Yeah, I mean, the main thing is a sausage or quality liverwurst or some... It's meat.

**Robb:** It's meat and I'm one of the folks that when I look at the damning literature on meat in general and processed meats, I'm super underwhelmed by it. When you compare this to like smoking, or radon exposure or driving, it's just like, this isn't the place to get one's britches bunched about things. I will say that, we'll throw in like some Teton Waters hot dogs and stuff like that. Everyone's well and they're really good.

**Robb:** But if I tried to do a whole meal of hot dogs. If I tried to get like 50 grams of protein from hot dogs, or for lunch meat, I don't feel great. And so I'll have some hamburger or a steak and a hot dog. So I find that its kind of an accompaniment, which is typically

what lunch meats and things like that are typically supposed to be. They're usually not like the central meal, although we do frequently turn our lunches into like cheese and lunch meat, like pepperoni and salami and stuff like that. Because we go to jujitsu, we come home, the kids have an hour, hour and a half window before they go to jujitsu, and cooking, cleanup.

**Nicki:** The turn around is tight. So, just kind of how the day works. But, Mike, I think you're safe with your quality liverwurst.

**Robb:** Yeah, for sure.

**Nicki:** Yeah. Oh, you know what, I didn't read this bottom part. And I thought it was kind of funny. So I'm going to read it anyway.

**Robb:** Do you want to do some of the side note? Side note!

**Nicki:** So he has, Thanks. Side note, I know you always say to your food, and I think this mostly refers to people who have weight control issues and need the chewing, eating fullness slow down to moderate their intake. Clearly, this is probably one way to answer the above question. But is there anything else. So, I don't know.

**Robb:** Chewing Your food is good. You stimulate the...

**Nicki:** Even if you don't have weight control issues, because it just makes the digestive process. It's part of the digestive process.

**Robb:** You get into more of a parasympathetic state, you breathe, inhale, exhale, chew. Yeah, it's good across the board. And the fact that some people are able to get away without doing it well doesn't mean that it's good. A lot of folks that have been in the military or like people who come from large families, and they're like, if I didn't stuff my food down, half eaten and somebody else would eat it off my plate, then that inevitably leads to other problems.

**Nicki:** And then his last thing you said, as a PS often, I've thought of getting a tattoo of the fraction one over six,  $1/6$  somewhere to signify that I was one of six listeners, with the added benefit that nobody else would know why the hell I had it. So thanks.

**Nicki:** All right, let's move on to questions three. And Mike, if we ever see somebody with a one over six tattoo, we will know it's you.

**Robb:** We'll buy you drinks.

**Nicki:** Okay, this question is from Tristan. He has a question about lifting with a slipped disc. Robb, Nicki, love the podcast. I'll make this short. My wife has had an operation on her back due to a slipped disc but she's curious to start lifting. What do you guys think? I'm no expert. However, it does seem a bit risky. That being said she knows her body and what her back can take more than anyone. Love to hear advice on whether lifting with slipped discs could be beneficial or downright dangerous. All the best. Keep up the good work.

**Robb:** Do you have any thoughts on this? So I mean, the real point, is it beneficial or dangerous?

**Nicki:** We don't know.



**Robb:** We don't know.

**Nicki:** It depends.

**Robb:** It depends. There's a risk analysis profile here that needs to be done and the individual needs some sovereignty to be able to make that decision.

**Nicki:** It seems to me like the, and I'm assuming with this question that your wife has a history of training so she's wanting to get back into training. It seems if she were to do this, to start with a dowel and of have extremely light load and go through the range of movement and...

**Robb:** Let's tackle this from even prior to that. Is your wife never going to lift a thing external to her person in her life again? Like are y'all never going groceries, kids, camping. So I mean at some point she's going to have to lift something. We know the benefits of resistance training as it relates to aging should she get in and pull a max deadlift or a max back squat or something. Almost certainly no, but I think maybe she does some machine work. Like I've been finding some benefit from doing a ton of really high rep back extensions. I'm doing some work with Sarah and Grayson Strange from Basis and then I was chatting with Coach Christopher Summer about my back issues, he's like, have you ever done just like try to get to three days a week of at least 100 back extensions and like you do like a curl up like a cobra. It's not just hinting at the hips, although I do hip hinge, kind of hip extension stuff as well. And like, no, I've never done that.

**Robb:** I started doing it. And I feel like it's helping. It's not perfect, we got a better bed. There's some things that are kind of coming into play that are making things better. But I do that to maintain muscle mass, to maintain health. And there's still some things I'm probably not going to do. I do some Romanian deadlifts, but I'm really careful with it. And I started off with bait to your point, basically a dowel, and then it was like five or 10 pound increments each week. And I make sure...

**Nicki:** Like a five pound ankle weight on the dowel. And so, it's really baby steps.

**Robb:** Yeah.

**Nicki:** So I think the answer is, if she wants to get back into lifting, I think that's probably a good thing. But the approach is very, very important. And if she doesn't have a lifting background, and I think definitely working with someone, like Sarah and Grayson from Basis Health and Performance in New York, they do remote calls and remote video programming and whatnot. So definitely having somebody who is familiar with this type of injury and knows how to program for it.

**Robb:** And assess current movements.

**Nicki:** And assess and programs specifically for your wife, I think would be very important. If she has a long history of training and clearly she knows her body, then one step at a time.

**Robb:** Yeah, yeah. But is there risk associated with this? Yeah, there's also risk associated with not doing.

**Nicki:** And you haven't done a max deadlift or squat or lifted heavy relative to your previous lifting years.

**Robb:** In 12 years. Yeah. Yeah.

**Nicki:** So she might never get back to what she had, who knows, I'm not saying that she couldn't, but like, maybe accepting that. But there's no reason why she couldn't get to a spot where she's maintaining her muscle mass and just enjoying, seems like she enjoys lifting. So, back in the game, but it's not.... I don't know, I don't know. That would be a good question for Sarah and Grayson. They've worked with so many people with such a variety of injuries. I'm sure they've probably do have somebody that was able to regain all of their proprietary capacity.

**Robb:** Sure. Just for me, the need to do that has never really come up and the risk reward thing just hasn't played out. But I have to say, also my back seems to be trending better than it's done in like the last 15 years. So who knows, maybe I go for like a frisky triple or something like that in six months on a deadlift or something. But the main thing is just finding some ability to progressively overload and strengthen things in as many different ways as you can. And I think that's a fantastic idea.

**Robb:** And, again, is the risk here? Yeah, but there's risk on both sides of this fence. And this, again, I don't know where else in the world we would find a comparable in which, well, you've got risk associated with A and you've also got risk associated with B and your individual circumstances probably going to dictate, in large part, what do you want to pick A or B or C in this circumstance. But it's so easy for people to forget that every decision has some sort of risk profile attached to it.

**Robb:** I always use the example that, hopping in your car is one of the most risky things that you can do. Not using a car is also risky in its own way. It's like well, now, if you live literally 20 minutes outside of town. Well, what do you do now? Do you ride your bike? Well, that's pretty goddamn risky too because you're writing on two lane roads where people are driving 80 miles an hour right next to you.

**Nicki:** What if it's snowing or icy?

**Robb:** What if it's snowing.

**Nicki:** Or maybe you just don't go anywhere and you stay in your house, there's risk to that too.

**Robb:** Well, that's the thing. Okay, so now you never leave the house because you're afraid of getting injured somewhere outside, what's going to happen to your physicality? Well, you're probably going to get sick, you're probably going to get depressed. And so, this is one of the things that I think is so dangerous with our current moment in the world is that people assume that they, whether you talk about the vaccine or a host of different things, like just do this, and everything's going to be fine. Or we just enact this government program and it's going to, \$18 an hour minimum wage. Okay. Well, what are the unintended consequences and just in complex dynamic systems, it's sometimes better to tread a little lightly and to understand that to really step back and do a Dave Dooley question and answer deal like, what am I not thinking about? What are the hidden costs of doing this or not doing this? And you don't want to overly complicate life.

**Robb:** But when we're talking about rehabbing somebody, there was a guy that I met at the gym the other day that had popped his bicep tendon because he was big, strong dude just got out of the military. He was in Barbados or something. He and his wife go doing kind of a late honeymoon and they had some sort of deal where like, they wanted men

and women to get up on stage and see how much they could curl and it was like a contest and the guy blew out his bicep tendon.

**Nicki:** Oh, shit. I saw him because we do this trade off thing where the girls swim and one of us watches the girls and the other one does the workout and we switch, and I saw him. I didn't speak to him or ask him what happened. But that is so unfortunate.

**Robb:** And the folks in the gym, I didn't know him but clearly he knew some of the people in the gym and they're like, what did you do there? And he would just like drop his head, oh, my God. So he's like, part of the problem is that I had way too many mojitos full of piss and vinegar and... But should he have gone to Barbados? Well, maybe, maybe not.

**Nicki:** He's a super jack dude. So you think he would have... He could have won that bicep curl competition.

**Robb:** Oh, he still won it even though he blew out. He's like I still won, but at what cost. And he's like, the way he popped it, it's a really long recovery. And so he's just getting in and doing what he do. He's doing leg presses and working every other thing. Yeah, so I know that's just like one tangent.

**Robb:** But just this thing of assessing risk is really important. And I know I'm being kind of an oblique turd with references to COVID and all that.

**Nicki:** Our listeners know what you're talking about.

**Robb:** They do. Six smartest people in the world. But this really is something that, if there was something to push back on, I think that drawing a line in the sand around simplistic risk analysis tropes is a pretty good place to push back on because it does hurt people, it injures things. Yeah, yeah.

**Nicki:** Okay. We'll leave that one there. It's time for the Healthy Rebellion Radio trivia. Our Healthy Rebellion Radio sponsor LMNT is giving a box of LMNT electrolytes to three lucky winners selected at random who answer the following question correctly. And Robb, I had this one question here. But I'm going to change it on the fly because you dropped a line from a movie that I'm not sure that everybody listening knows it's from, you said, "Surprise cock bags." So, those who heard that and were like, what the hell is he talking about? What the hell are you talking about?

**Robb:** That is from Team America.

**Nicki:** Team America. Yes. And I don't know. I feel like we've mentioned this movie before in the podcast, but I was in my early days with Robb, subjected to watching this movie with Greg Everett's many times when running the gym and early days of CrossFit NorCal. So anyway, just a wee bit of history.

**Robb:** It is. Depending on how you run your family. Probably not kid friendly but it is hilarious nonetheless.

**Nicki:** Yeah. All right, folks, that's the answer to this week's trivia. To play go to [Robbwolf.com/trivia](http://Robbwolf.com/trivia) and enter your answer. We'll randomly select three people with the correct answer to win a box of electrolytes from Drink LMNT. The cutoff to answer this week's trivia and be eligible to win is Thursday, I believe October 21.

**Robb:** Really.

**Nicki:** Is that right?

**Robb:** I don't know.

**Nicki:** Let's check because I am doing this on the fly but some... Yep, it is. Okay. Which happens to be my birthday.

**Robb:** Happy birthday wife.

**Nicki:** Thank you. Winners will be notified via email and announce the winners on Instagram as well. This is open to residents of the US only. Our next question was almost in the throw out bin, but we're including it. Jackson says, I would love to hear your opinion on cluster dextrin.

**Robb:** So I knew dextrin was a type of carbohydrate but wasn't really familiar with this but it's in this family of like waxy maize starch and I would say it's probably ultimately similar to like some products like UCAN which are these highly complex corn derived starch products. UCAN was developed for a glycogen storage insufficiency disease that can be very difficult for kids to manage their. They literally can't store glycogen and so it's really easy for their blood sugar to plummet and to have problems, because they're just not able to keep that buffering going on.

**Robb:** And so the complex nature of the carbohydrates allows at least some people to have a very nice consistent release of glucose and maintain consistent blood glucose levels. This seems to be a lot of what these things are used for. People use them as a low glycemic load carbohydrate source or something that hopefully minimally impacts blood glucose levels. I will say for a lot of people the complex nature of the carbohydrates ends up being kind of problematic from like a GI perspective, they get gas and bloating and all that type of stuff. So it has a ton of utility. And again, some people really thrive on it and some people are not.

**Nicki:** It depends on what are you looking to have it do for you. And if the rest of your health picture warrants trying to experiment with that.

**Robb:** Yeah.

**Nicki:** Okay, our last question for this week is from Garrett about nicotine adverse effects. Hi, Robb, Nicki, have been around since the Paleo Solution Podcast days. So while I'm not an OG six listener, OG 20 is not out of the question. So Garrett, for you, your tattoo needs to be a one over 20 or just OG dash 20.

**Robb:** Okay.

**Nicki:** If people are so inclined.

**Robb:** Please don't take that advice.

**Nicki:** No, no, no. I'm joking. He says, I heard a Q&A episode a while back where a listener asked about the caffeine nicotine protocol you suggested for Special Forces, or anyone working odd hours in graveyard shifts to stay moderately alert while still being able to unwind at the end of the day. In a similar vein on a recent Huberman Lab episode, he mentioned the potential benefits of nicotine in treating Alzheimer's disease. I believe it is universally agreed upon, nicotine is a nootropic slash cognitive enhancer. So now to my question. I'm Swedish and we have quite the snoozer snus.

**Robb:** Snus.

**Nicki:** Snus culture over there. Our spin of dry snuff tobacco pouches, but without the spitting you see with American dip. I've gravitated towards this as an alternative to drinking and I should note, I've moved to the tobacco free versions containing only nicotine. Zinn is a brand that is making its way in the US. However, one can't really drink on the job, whereas the only bad time for some snus is while eating and sleeping, leaving about 16 hours of consumption throughout the day. Is there to your knowledge, a healthy range to stay within? In the US they are sold in three and six milligram pouches. However, the good stuff that I can get in Sweden goes all the way up to 20 milligrams.

**Nicki:** According to a quick Google search only 10 to 20% of the content is actually absorbed, meaning the dose per hit is up to four milligrams. I could be on the high end consuming shy of 50 milligrams per day some days. I've gladly taken in your and Andrews notes as a compelling argument that I'm functioning better cognitively while staying off Alzheimer's disease. But I have a good feeling there's another side to this story I should heavily consider. As for all I know I'm doing damage equivalent to smoking a pack of day, just pack a day just wrapped in different packaging with different side effects. I appreciate all you do to keep us informed and entertained.

**Robb:** You do really interesting question and really the last part there, am I doing damage equivalent with smoking a pack a day. I think that is really at the crux of this. And it speaks to how powerfully we've all come to understand the hazards of tobacco products. And it makes it almost impossible to fully decouple the effects of tobacco consumption from the risk profile of just nicotine consumption.

**Robb:** And when you really get in and look at like the toxicology, the mutagenicity, and whatnot, it's remarkably benign. There's a remarkable therapeutic window relative to the... When we start getting into danger and it's a cool molecule in that case. And from person to person, we've talked a lot more about, say the spectrum of say dealing with caffeine in people. So the accepted half life for caffeine across like a human population is like eight hours. Takes eight hours to consume 100 milligrams of caffeine, on average, eight hours later, most folks will only have 50 milligrams of caffeine in their blood, and then eight hours later 25 and on and on and on.

**Robb:** For on an individual basis. So some people have a clearance rate of four hours and other people have a clearance rate of 36 hours. And that's going to really dramatically alter whether or not caffeine is beneficial or hazardous or problematic for you. And I'm sure that there are similar profiles here with nicotine consumption. Clearly Garrett's already habituated to some degree, I think some of the most dodgy stuff that people find is when they first tinker with it, because they'll take too much and we'll get horrifically nauseous and room spins and all that type of stuff. But it sounds kind of, I like Garrett how you're thinking here like, there are U-curves and biology like there's too little, there's too much, there's this Goldilocks Zone. I think it's hard to specifically define that.

**Robb:** But the window that you're talking about within this habituated daily usage seems totally reasonable when I look at what the toxicology looks like, and things like mutagenicity and whatnot. They're just really, really low with nicotine and most of it's in vitro versus in vivo, which I think that the potential negative downsides are even less when we're talking about like a full physiological system versus a Petri dish. So it's interesting thinking and I don't know, we may end up being long.

**Nicki:** I was just going to say, just like our aspirin story in the beginning, what we know now, it seems like there's not the side effects or that the benefits outweigh the risk. But who knows?

**Robb:** Famous last word.

**Nicki:** We got to leave the door open for some new research to come out in five years, 10 years, 20 years that contradicts that.

**Robb:** We do have a decent amount of data on long term gum and mint users and you don't see much there. The interesting things of note again, are that similar to smokers, we see these really curtailed rates of different neuro degenerative diseases. So there seems to be this neuroprotective element, which is just stunning to me that you see this among smokers. Like when you think about the oxidative stress, inherent in smoking, how incredibly sensitive the brain is to oxidative stress, but we still see a signal of benefit from the nicotine on top of that, it's kind of like holy smokes. So there really appears to be something powerful there. So, yeah.

**Nicki:** Excellent. Good question, Garrett. And that brings us to the end of this week's episode. And thank you all for listening. Remember to check out our show sponsor LMNT at [drinklmt.com/r-o-b-b](http://drinklmt.com/r-o-b-b). Get your winter hydration sorted away. And like I mentioned last time, we do have a special announcement coming up with our limited edition seasonal all flavor, will be coming out next month and we'll share more as that gets closer.

**Nicki:** Please share this episode if something in this show helped you or sparked some interesting thinking on your part, share it with a friend. Spread the word and as always, we'd love to see you inside the Healthy Rebellion and you can join us at [join.thehealthyrebellion.com](http://join.thehealthyrebellion.com). Any final closing words?

**Robb:** No, very nicely done wife.

**Nicki:** Okay, excellent. We'll see you all next week. Have a good weekend.

**Robb:** Bye, everybody.