

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 folks.

Nicki: Hello, hello. This is episode 122 of The Healthy Rebellion Radio, and it is mere hours away from September.

Robb: It is.

Nicki: We're recording this on the final day of August. August 31st, Wednesday. And...

Robb: My goodness the year has gone by fast.

Nicki: It is kind of crazy. It was kind of crazy. We're already in September. Speaking of September, we have our Fall Rebel Reset coming up.

Robb: What a nice segue.

Nicki: Next Friday, a week from this Friday, we have our kickoff call and then we'll be doing our seven day carb test that we always do. That comes right before the actual 30 Day Rebel Reset, which begins this year on September 19th. So this is our... What do you call it? Just announcement. So anybody who is eager to join in this round, you can jump in, join us at join.thehealthyrebellion.com. If you're already a member, obviously resets are included in your membership. So join this reset. Lots of good stuff coming for this. What else, hubs, any other-

Robb: What did you learn today?

Nicki: I learned a few things, actually. I learned about the importance... I learned some jujitsu cause we did go to jujitsu, but the most... I think the thing that you're referring to that you want me to disclose is -

Robb: It was an open ended question, but-

Nicki: Okay.

Robb: Yeah.

Nicki: It's not a leading question?

Robb: Somewhat open ended. I mean, I suspected you might mention jujitsu and I suspected you might mention other things too.

Nicki: Okay. Well, in jujitsu we worked on guard pulling and I was able to really perfect... I kind of struggled with this, when you pull guard in jujitsu, which for folks that don't do jujitsu,

it's a way of going from standing to getting on the ground that's not a take down and when you do it, if your opponent, if you pull guard on your opponent and they go to put their hand on your knee, there's a great arm bar there. And I've known that, but I haven't been able to do it very well. And I learned, I figured it out today.

Robb: So if I put my hand on your knee, you're going to arm bar me in the future.

Nicki: I'm going to arm bar you. If my other foot's on your hip and yeah.

Robb: Wow.

Nicki: And I'm on the ground and you're standing. Yes. And then I also learned, Robb started singing this song just minutes before we pushed record on this, we were kind of in the kitchen just getting ready. And he started singing. He started singing this song. And I did not know that that was Paul McCartney and Michael Jackson. I mean, I hadn't heard it, to be fair in like... I don't think I've heard that song in over 10, 15 years. So I heard your voice singing it. And if somebody had a gun to my head and said, "Who sings this song?" I would've been killed.

Robb: So many thoughts there. I mentioned-

Nicki: Speaking of which, we got to circle back. We had somebody write in and said that they didn't know what Between Two Ferns referred to. And I actually got a text from a mutual friend of ours, also, Marcy, who said she didn't know what it was. And this guy that emailed in, apparently when you said, "If you don't know what Between Two Ferns means you can email support@..." Which we don't have a support@ email at Reble.com.

Robb: It works.

Nicki: It's hello@. And so then it bounced back. And so then he writes in, he's like, "Make sure that Robb knows exactly what email to speak so that people can submit their complaints."

Robb: I knew what I was doing.

Nicki: Did you? So what did you learn today?

Robb: What did I learn today?

Nicki: That your wife doesn't have very good musical history knowledge? You already knew that.

Robb: Yeah, we already knew that. And that's of any of the things that I will impart to our children easily the most important is at least a good sense of musical taste and historical perspective.

Nicki: So Robb introduced the girls to Pink Floyd the other night. And so now the girls like to sing, "Hey, teachers, leave us kids alone." And so he's doing a good job teaching them all the things they ought to know.

Robb: Doing what I can. I've been having a profound sense of mortality lately. Zoe's 10 and Sagan is eight and I'm like, shit, I've got a lot of ground to cover here. So yeah.

Nicki: You've been helping them learn how to adjust their bike seats and things that we knew how to do at 10, but somehow our kids don't know how to do it.

Robb: They go through cycles, they'll ride their bikes, then they'll not ride their bikes. And the other day they got a wild hair that they wanted to ride their bikes. And because the bikes had been sitting, both tires were flat and I was like, "You guys air up the bikes." And I came back 15 minutes later. And if I had put a couple of Vervet monkeys on the task, the monkeys would not have been further along there. And I'm like, okay, I've clearly been hamstringing our kids in some ways, by doing too much stuff for them and not making them struggle and suffer a little bit. And so Nicki and I were talking about that. And then on the walk to move the hounds a little bit, Sagan's bike, the chain fell off fortunately. And I was like, here's a great learning opportunity. And we had to figure out, well, what's the best way to get this chain back on.

Nicki: Well, first of all, do you see what happened?

Robb: Do you know what happened?

Nicki: Because she's like, "My bike won't work. The pedals are spinning, but nothing's happening." And so Robb was like, "Well, let's look at it. What do you think happened here?" And so then she was able to see that the chain was not in the right spot.

Robb: And it's kind of funny because we prattle on and on about resilience this and that and the other, it is interesting that I think that maybe one of the failings that I've had is because we are busy, there's a sense that sometimes just doing something for them is more time efficient so we can move on to something I'm realizing that no, whatever the task is at hand, if it needs doing, that's probably what needs to be done and they need to do more of it. And it was just kind of a wake up call for me. It was just kind of interesting. Yeah.

Nicki: Okay. We can-

Robb: Don't know how we got on all that.

Nicki: I know. That was kind of a tangent, but all right, what do we have for a news topic?

Robb: The title is Physical Activity and COVID Risk. And this is a Medpage Today piece, which was actually a podcast that Medpage does. And they talked about this and several other topics and the long and short is that people who are physically active, Nicki. They are much, much less likely to catch COVID, to have severe COVID, to die from COVID and are less likely to spread COVID.

Nicki: Wow.

Robb: But yet we locked down gyms-

Nicki: We closed gyms, we closed beaches.

Robb: We closed beaches.

Nicki: And parks.

Robb: And parks.

Nicki: And playgrounds.

Robb: We locked people the fuck in their houses. We made children not go to school where they could do recess.

Nicki: We increased sedentism, which was already at a decent clip.

Robb: Yeah.

Nicki: Worldwide.

Robb: I guess if folks are still listening to us at this point, you're probably largely on board with this stuff. It is fascinating though, that this was stuff, I don't know that suggesting that physical activity would mitigate COVID risk was a platforming no no at any point during this thing. But it was one of those things that was like, yeah but... Yeah but. And it's not a yeah but. It's this is front line, first step intervention for any of this stuff and God damn it-

Nicki: Not just COVID, for everything-

Robb: Everything.

Nicki: Just the more-

Robb: And even, that was exactly my point. Even if we just draw a bubble around infectious disease, if we take a step back to this crazy thing called influenza, which we've been dealing with for quite some time, when you look at the morbidity, mortality, severity of influenza, in active versus inactive populations, it's staggering, this is nothing new. It is nothing new. And one could make the case that early in COVID we didn't have data specific to what they were citing here because COVID was novel, but we've had other airborne infectious agents. Clearly there will be some things I don't know... I would go out on a limb and probably say that a physically fit, metabolically, healthy person probably navigates Ebola better than a sedentary ill person. Maybe not. There might be some exception out there to it. There was the 1918 pandemic of flu seemed to disproportionately target young, healthy people.

Robb: There are exceptions to just about any rule that one would care to contemplate, but we had data from the Crown Princess cruise ship and some natural experiments like that, that were really suggestive that this would be beneficial. And even circling around back to vaccination strategies. It is crystal clear that metabolically healthy, active people have better responses to vaccination schedules. So there it is. It's just another one of these things that was verboten to talk about. And this was not shit that was on the table. And now it's being presented as gee whiz, who would've thought that physical activity and COVID risk have some interesting relationships there. So we've got a link to that. Bludgeon people about the head and shoulders with it, at you please. I'm not historically one of the folks that would go out actively... Like the work that Layne Norton does. I appreciate Layne on different levels.

Robb: He really goes after people. And in some ways I think it's almost become this possibly dangerous self-reinforcing thing where he feels like that's the only thing that he's got is just hammering on people, but he does a good job and he calls bullshit on a lot of situations. I've historically not done that. I've historically been the person that's like, I'll let my work stand for itself. I don't necessarily need to run some other people down, but my goodness, there were a lot of jokers, shall we say in the ancestral health space that I

am going to be taking some scalps in the future because the lack of nuance and dexterity and the virtue signaling, I had to stuff that stuff for so long and it will be bubbling to the surface over time. And this is kind of the beginning salvo of doing that, but there will start to be names and faces and old screen grasps.

Nicki: Were people in the ancestral health... So correct me, so there were people in the ancestral health community that were decrying physical activity-

Robb: Not necessarily but they-

Nicki: But they were just so party line. So CDC, and because the CDC didn't say that people should be metabolically healthy and active, then they didn't-

Robb: Yeah it was-

Nicki: Promote that-

Robb: A number of these people have jumped on the healthy at any size bandwagon and the diet culture bandwagon. And I'm working on a Substack piece about that. And these are folks that have made ostensibly millions of dollars selling diets to people. And now all of a sudden diets are the worst thing in the world. And I get it that most diets don't work because people don't comply. They don't stick with them. I can lean into my message, which has been the same for... Since I don't know, 2005, 2006, before I even wrote a book, try it for 30 days, see how you look, feel, and perform, do some biomarkers of health and disease before, do some biomarkers of health and disease afterwards. If you're already rocking the world and you're got the world by the short hairs, you don't need me.

Robb: I'm trying to help the other people that like all of medicine has failed in a autoimmune diseases and gut issues and maybe difficulties navigating the modern hyper palatable food environment and just telling people to moderate their intake doesn't generally work. It works for some people through a cross-section of folks out there, but we need a wide variety of tools, a wide variety of perspectives on this. And there's just... What's been interesting to me is that the people who have really gone headlong into the diet culture is evil thing have also been the folks that were really toeing a party line around COVID. In my opinion, they really got onto the weird edge or end of some of this social justice stuff. And I have a red ass about it, and we'll be visiting that in the future as I get closer and closer to committing career suicide and just leaving this space entirely.

Nicki: Okay. We all have that to look forward to I guess.

Robb: Yes. Yeah. Nicki's like, great.

Nicki: Okay. The Healthy Rebellion Radio, as you all know, is sponsored by our salty AF electrolyte company, LMNT. And Robb, I know you've seen some of these come through to our inbox, but it's been pretty cool the past couple weeks we've heard from several LMNT customers who have had self-reported "energy drink addictions" tell us that LMNT has made it possible for them to ditch their energy drink. So I don't know. I just find that really cool. I actually was curious, and I looked up one of the more popular brands and in one of the 16 ounce cans, which is a two serving per can, each serving was 27 grams of carbs. So basically 50, what's that? 54 grams of sugar in one can.

Robb: Yeah, they consider a 16 ounce can two servings, which is ridiculous, but whatever.

Nicki: Yeah. So I think it's amazing when people can swap out energy drinks or other sugary beverages, Gatorade, whatever it might be for something that doesn't have all the crap in it, because-

Robb: Absolutely.

Nicki: It's just helping people move further in their direction of health. So if you or someone you love has an energy drink addiction, show them you care, give them some LMNT, zero sugar, none of the crap only real electrolytes that actually do improve your energy levels.

Robb: Like it.

Nicki: And you can grab those at drinkLMNT.com/Robb, that's drinkL-M-N-T.com/R-O-B-B.

Robb: Cool.

Nicki: Cool. We've got three questions for you all today. This first one is from Anthony on the subject of Kratom. "Hello, Robb, I've heard a few of the guys at jujitsu talking about Kratom. The reviews online are all over the place. What are your thoughts?"

Robb: Kratom is interesting. It is a subtropical vine, weed type item that interestingly has some opiate properties to it. The constituents in it are opiates. Saying that the reviews online are all over the place is accurate and kind of understating the situation. It ranges from people who have legitimate opiate addictions claiming that they're able to get off of their heroin or Oxycontin or whatever it is that they're on by using Kratom. There's some not great stories of people... There are some death in illness that has occurred from taking large amounts of Kratom. It's worth mentioning that some number of people each year end up killing themselves, taking loperamide the antidiarrhea drug, because it is an opiate. It has absolutely, or virtually no physiological effects of a high, but if you take enough of it will suppress respiratory function, which is what opiates are remarkably good at doing.

Robb: So it makes me think a little bit about a Ephedra, which was in all these kind of fat burning products. And I think it was abused and people were not using it in a smart way, but there were three deaths associated with it, four deaths, which any death is terrible, not excusing that. But I forgot before we rolled, I meant to look up, I want to say there's 4,000, 8,000 deaths per year from acetaminophen poisoning. And there's like all these liver transplant that occur and all this stuff. So I think it's always valuable to put these things into a relative risk perspective. Kratom, seems to... The opiate properties seem to be weak binding on things like the respiratory suppression. So as I understand the pharmacology, it is kind of benign in that regard. It does seem to have some legitimate pain reliever, which we would ascribe to opiates. Seems to have a non-trivial kind of euphoria experience to it.

Robb: It can really mess with sexual function in both men and women, because it causes a profound prolactin release, which can be good or bad, but it's almost like chemical castration for some people because that giant bolus of prolactin that is released in response to the Kratom can make it really difficult to have normal sexual function. And this is another one of the things that people on opiates oftentimes notice that they have all kinds of problems, not the least of which is the inability to have and experience normal sexual function. So I don't think it's one of these things that is... Ironically, I don't think it's as dangerous as a whole host of over the counter medications. The margin of

error, even in overdosing on it is larger than the margin of error for overdosing on acetaminophen, Tylenol.

Nicki: And I did look, it's 450 deaths per year.

Robb: Okay, okay.

Nicki: From acetaminophen.

Robb: So order of magnitude less, but I mean it's a lot and that's the people who die from acetaminophen. I want to say that-

Nicki: 2000 cases-

Robb: Liver-

Nicki: Of liver failure.

Robb: Liver failure, which leads into liver transplant. So let's say 3000 deaths and/or dramatic life changes. And that's just the surface level. It's not really addressing all the other morbidity and mortality that's associated with long term acetaminophen use, which causes these problems, all of the host of liver problems and other kind of inflammatory problems, because it's an NSAID and although NSAID's are amazing in a lot of ways, they're powerful medicine. And so in the risk reward thing, I would just be really smart if you were going to use the Kratom and I think that lower doses are always better. I think if you're really trying to use it recreationally, I think that that's where folks potentially get into some serious danger. If you're doing multi gram doses of the stuff you're playing with fire.

Nicki: And he's mentioning that jujitsu people are talking about it, is this something that people are using because they're sore or-

Robb: Some people use it before workouts. There's different... It's a great question. There's different strains and I don't really get this because people will claim some of them are stimulating and some of them are sedating. People claim the same thing around cannabis products. I just don't get how that's the case, because THC and then the other cannabinoids and whatnot. And I just don't get... I don't see how these different strains are really that much different in their pharmacological action. Maybe there's some truth to that. I think that personal opinion, I think that has as much to do with suggestions like, oh, this one's going to make you horny and this one will make you sleepy. And maybe it caters to that. But some people do use it as kind of a pre-workout aid because it gives them some focus and you get a little bit euphoric and whatnot.

Robb: I have used it when my back was really hurt. I didn't want to use NSAIDs constantly. And this is one of these kind of ironic things, opiates we've co-evolved with and we make our own opiates in our body as part of our pain management and euphoric process and whatnot. And when I look at the kind of toxicology, particularly with regards to the liver, I think if you can navigate the use in a smart way, there's potentially fewer downsides, but then lots and lots and lots of people get addicted to it. And so-

Nicki: They get addicted to Kratom? It's addictive?

Robb: Well, they can get addicted to opiates in general and there are folks that get addicted to Kratom for sure, yeah. There's risks associated with it, but I guess there was a move by

the FDA a couple of years ago to ban its sale and I guess I'm still more in that kind of libertarian.... I kind of think more open access with better education and resources provided to people to manage. Why is it that you want to use the Kratom? If you feel like it's giving you a performance boost in the gym, that's probably a different thing than you're a depressed teenager and we need to do something for the rest of your world to address that stuff. But there are non-trivial risks. I think though, when we think about the things that we could go by over the counter, whether as a 12 year old kid from a pharmacy, I don't find it personally to be that risky, but there are risks associated with it. And I don't know if that's just a mealy mouthed-

Nicki: No.

Robb: Meandering answer, but it's just, it's complex and it's very situational. And I think that when information gets suppressed and you can't have people talk about it and particularly if you make... Was it Malcolm Gladwell talked about this in *The Tipping Point* or *Blink*, it was like, if you don't want kids to smoke cigarettes, don't have the cool people in movies and rock stars, smoking cigarettes. If you flipped it around and you had the square nerdy people as the people who were smokers and people, well, why would I want to do that? The nerdy people do it. And so I think that this is something too, that-

Nicki: Nerds are cool too, babe.

Robb: No, they're not, they're nerds, hence the name. But again, I think it's something that if we make it this scary thing where we don't have information and then it just intrigues people and then you're more curious. Yeah.

Nicki: The glamor, the sex, all of that pulls you in. All right.

Robb: It's what brought me here.

Nicki: Okay. Question number two from Emily on clean meat, she says, "Hi, I'm actually brand new to listening to your podcast. A friend who runs a regenerative farm in Virginia wrote about your podcast in a recent newsletter and I had to check it out. I recently read a book called *Clean Meat* about lab created meat from stem cells and how this industry, as of the 2016 publishing is getting ready to boom. I've recently also seen notice of China perfecting a lab meatball that will hit the market shelves by the end of 2022 and FDA approval in 2023 for the US market. While I won't claim to know much, my concern lies with the individuals investing in this research and products that are also buying farmland. Some of these same individuals are also involved in vaccination research and implementation. Their agenda and intentions are concerning at the least. That aside, where can we go to find research on how this lab grown meat actually impacts the body?"

Nicki: "There's obviously no blood flow in the bath that this has grown in and my guess is that many of the nutrients are synthetic. The questions that keep rolling around are the impacts on our own cellular growth and reproduction as well as how our bodies metabolize this stuff. Secondly, the researchers have admitted that they are able to create structures that don't even exist naturally, of course. At any rate, I can't be the only person thinking about this would love direction and ideas to learn more. With gratitude, Emily."

Robb: How do you want to tackle this one? I have a couple of different thoughts, but Emily one, thank you for being the newest of the six listeners to the podcast. I'm way less

concerned about that there might be some weird health consideration of growing this stuff in a lab. Honestly, not concerned about that. It's still going to be-

Nicki: Mainly because you're going to choose not to eat it.

Robb: No, no, no, no. I don't think, like they're growing tissue in a culture in a lab. I don't see it potentially being that much different than the tissue that's grown in an animal anywhere else. Other than conjugated... There will be constituents that are not part of this product because when a cow in particular is out grazing on grass, the cellulosic fermentation makes all these cool elongated fatty acids that become things like conjugated linoleic acid. And maybe there's a certain amount of phytonutrients that get imbued into the matrix of the fat. You get magnesium, you get iron, I mean so long as... And this is one of these things that goes around and around about pastured meat versus conventional meat. Conventional meat is finished on not grass. It can be a mix, sometimes it is, but usually there's some grain or some grain byproducts. The after effects of ethanol production and whatnot, and people will really lose their minds about, well, there's lesser nutrition in the conventional meat versus the pastured meat.

Robb: And that's true, but it's a tiny difference. And it's not really in my opinion, the place to really be concerned. And what is most concerning to me and Emily actually touched on this. This is right in the purview of all the Bill and Melinda Gates Foundation stuff. And Bill Gates being the largest owner of farmland in the United States now and pushing that all westernized countries should not use grazing animals as part of their food system. And this all justified because these animals produce methane which is a greenhouse gas. And it ignores the whole fact that there is a carbon cycle that exists there. It ignores the fact that properly utilized grazing animals, restore grasslands and pasture lands that they are...

Robb: In the last show that we did... Or no, this was the show that I talked with Diana Rogers about the director for... James Cameron, he's couple of hundred million dollars invested in the pea protein markets and stuff like that. And he's super anti-animal husbandry. He bought a bunch of land in New Zealand and spun up these organic farms. And they started failing because they have no nitrogen inputs. And his choice was to use synthetic nitrogen fertilizer, which he didn't want to do or to catch and harvest fish, turn them into fish meal, and then put that on the land, which just seems crazy to me. That's organic fertilizer. When you talk about carbon footprint and everything, you've got-

Nicki: Just the cost of-

Robb: The cost-

Nicki: Doing that. The-

Robb: And how many people could you feed with-

Nicki: With those fish.

Robb: The fish and how nutrient dense is that fish? And there's a different story there. Fish byproducts, let's say you're canning fish and there's some stuff left over that could be utilized. And great, that's super smart, it's integrated-

Nicki: Taking the whole fish, the edible parts and all just disposing of it for fertilizer.

Robb: As fertilizer seems kind of crazy. Although I have to say the pre-Columbian Indian populations did that. They actually were wealthy enough and sophisticated enough to go catch fish to use this fertilizer on their crop. So maybe it's not so crazy. But the thing that really concerns me here is the loss of perspective that grazing animals are a major hedge against potentially climate change. Salud.

Nicki: Excuse me.

Robb: That it is generally a food product that the intellectual property can't really be owned in the way that these IP driven...

Nicki: Chinese lab meatballs.

Robb: Well, the Chinese lab meatballs, and also just row crops. These row crops can be... The seeds are owned and everything. And there is IP around some animal husbandry stuff like that, that's not 100% clean thing, but there are also plenty of animals that are just out in the wild. And if I want to go buy a couple of cows and start spinning up my own herd, I can do it. And I don't have to pay Monsanto serially to do all that stuff. So what's most concerning to me is that there's claims around sustainability here, which are bullshit because when you grow this meat in a lab, and this is one of the things that just is so frustrating, and if you cruise YouTube or Instagram and you have people that will go out and interview the public, and they're like, "How many states are in the United States?"

Robb: And people have no idea. And so it makes you lose hope for humanity entirely. And you're like, fuck, we really need to pull our weight because nobody else knows what the hell is going on. And this is one of these things, but I've talked to people who are smart, sophisticated, but have never thought a moment about what the implications are of this lab meat. We're like, "Yeah, that's great. I mean, it just grows in a lab." And I'm like, "Okay, well what do you feed the meat so that the tissue grows." And they just look at me blankly. And they're like, "Oh yeah, I guess you need to put something in there. It's like a culture medium." Yeah, you do. And that stuff comes from industrial row crop processes and you have to take it, you grow corn and soybeans and you have to extract minerals out of the soil and you have to process all that stuff. And then you have to stick it in this nutrient bath. And the nutrient bath is in a building that needs heating and cooling.

Nicki: And the lights.

Robb: And the lights and the scale. Do you scale that? We have two thirds of the Earth's land mass is mainly, most amenable for grazing animals because you don't necessarily want to pave all of it over to turn it into a strip mall. It's not amenable for farming. And we talked about all this stuff, Emily, our book and film Sacred Cow would be a great place to jump in on this. So her main question was who's looked into what the health impacts are of eating this stuff. Nobody's really looked into that, but I don't really think that that's the place to look because if you look there, I don't think that you're going to see a particularly negative health impact from eating this stuff.

Nicki: Well, and it's all so new, they haven't done randomized control trials on people eating exclusively this lab grown meat and nothing else. And so there the data isn't-

Robb: So maybe 20 years-

Nicki: Even there, yeah.

Robb: There isn't the data. At this stage of the game we'd have to really question the data, whether or not it was accurate and whatnot. But my gut sense is that isn't the place to look. That's not really the place to be concerned. The place to be concerned is that this is being hung out there as a sustainability option and an ethically superior option. And I don't think it's any of those things. And that's really the problem is that on the surface it looks like kind of a juicy little tidbit in that this could solve all manner of problems, but I just don't think that that's the case.

Robb: Satellite imaging with drones to help ranchers figure out which part of their pasture is ready to be grazed, but then the grazing process, it looks more like a late 18th century ranch and farm with chickens and horses and cows and rotational grazing and rotational application of agriculture within these areas that have been grazed. And after your corn crop goes through, then the cows and goats are allowed to go through there and eat all the remaining stuff. I think that that's the future of food. That should be a major feature of the future of food. And there's nothing sexy about it. There's nothing that gets tech nerds excited because it doesn't look like intellectual, property-

Nicki: Nothing that raises a bunch of-

Robb: Venture capital.

Nicki: Venture capital.

Robb: Yeah.

Nicki: Financing.

Robb: Yeah. I'm not sure what more to say on that, but yeah, that's my thought. So Emily, great question. Really appreciate the question. Hopefully you are still listening to the podcast when this one goes through, would love to hear your thoughts back. What do my thoughts help you process all this stuff, would really recommend checking out Sacred Cow. If you want a copy, reach back out, I'll send you a book, I'll get you a link to the film. It's really important that people check that stuff out. I think Diana and I are right about that. And I don't say I'm right about this very often, but I think that we got that more right than not.

Robb: I think I got it more right than any other piece that I've done. And it's one of the interesting things, there've been so much money dumped into these synthetic meat alternatives. And ironically, they're failing. They're not scaling, they're not going... The market isn't working. We point out in the book that the Beyond Meat is more than twice as expensive as grass finished meat. And this is supposed to be a sustainability issue. This is something that-

Nicki: Wasn't there also some label claim issue recently-

Robb: Oh yeah.

Nicki: Where they don't even have the amount of protein that they originally claimed.

Robb: They have 40% less protein than what the label claimed. And the protein is less digestible than what they were claiming. And so they're getting sued for that. And there were some securities and exchange issues around that because they're now a publicly traded company and there were some really non-trivial issues around their sustainability claims. They just say it's sustainable. And then some people were saying,

"Well, where's your proof that it's sustainable." Well, it just is. And you can't actually do that. You actually need to show your homework on some stuff in some areas, still.

Nicki: Okay. All right. Our third question this week is from Hans on vaccine trust and supplements. He says, "I just finished a recent Cleared Hot podcast in which you were a guest and two questions come to mind. One, with a lot of concerns and speculation around the COVID vaccine, do you think the public's general trust of the vaccine would've been more well received had it been offered for free or at cost to governments? Adding the disclaimer that yes COVID could be bad, but as serious as the problem has been made out to be, we are offering the vaccine not to make money, but to ensure the health and safety of the population." And then do you want the second-

Robb: If you want me to jump into that one first?

Nicki: I'll just read the second one and then we can circle back.

Robb: Do you have any thoughts on that? I have a bunch of thoughts.

Nicki: Yeah. I mean the first one is okay, clearly a lot of people think, okay, let's follow the money. And there could have been some people maybe that would've been... We're talking about the skeptical person. The member of the public that was skeptical about this vaccine. And Hans is wondering if there wasn't a big profit motive for Pfizer or Moderna, would that skeptical person in the public have been more willing to take it? And I think maybe that's a small component. I think the concern has always been that this technology is brand new and people wanted to see data. What is the effect of this on health over two years, five years.

Nicki: And I know in the middle of a pandemic, sometimes that data doesn't exist, it didn't exist, but then you also have to weigh that with, okay, what's really happening with this pandemic, what are the numbers? Are people dropping down in the street? How many people around you are getting severely ill and dying? And what other measures are being put forth as alternative to the vaccine. Here's this vaccine, if you don't want to get the vaccine, here's these other things that we recommend, other existing pharmaceuticals that can mitigate severity, mitigate you catch... And none of-

Robb: Exercise, diet.

Nicki: Exercise, activity, sunshine, vitamin D3, and none of those... I think the biggest issue for the person that was maybe more hesitant to take it was not necessarily profit motive for these big pharmaceutical companies. But instead the fact, and we've talked about this a ton, that it was like the sole, singular route-

Robb: That was when my-

Nicki: To COVID salvation.

Robb: My hound dog years went up. And again, I'm grateful in a way that we have these podcasts. So I can go back and be like, well, April 6th, 2020, when it was said that the vaccine was our sole answer to this thing, I was like, "Really? In a class of viruses that have never had a successful vaccine." So again, backing that up a little bit, SARS-CoV-1 and MERS, folks have been looking at trying to develop vaccines for those two issues for 20 plus years, because they're really nasty. Fortunately, they're difficult to transmit unless you do some Jack assitic thing like gain of function research in which you serially passage them through animals and humanized animal tissues to make them easier to

passage. But all of those had failed. We still don't... The HIV became an issue in the 1980s and we still don't have an HIV vaccine.

Robb: And so the fact that, the thing that really made me become profoundly suspicious of the vaccines was the fact that they were presented as the one and only solution in a completely novel delivery system. The mRNA delivery system was completely novel in a class of viruses that have been historically very difficult to get any type of successful vaccine in. And so that was for me, and I think a lot of people, particularly if you had any type of scientific chops, you looked at that and you're like this doesn't add up. And there's something about, we should do this for a lack of profit motive that I'm not a socialist and I'll just throw that out there. And I don't think socialism really does good for people. And there's a balance between taking care of the people who aren't given a fair shake in this world versus there is kind of a reality that monopolies are kind of the rule of nature. And so one of the roles of government is to go in and break monopolies up, which governments haven't been doing that since fucking Microsoft or something like that.

Nicki: Google.

Robb: Google. Yeah. I mean, there's so many examples where that should happen, but here's something that we all, and particularly in the United States, we will be dealing with this and it's example of fucking up the profit motive. We've had huge inflation, we had massive spikes in energy costs, particularly transportation fuel like diesel and gasoline. And so the current administration has been on the paper side of this. There has been manipulation of the markets to bring down prices. And Chris Martinson of Peak Prosperity has done an amazing analysis of this. So I'm kind of parroting his material, but if you want brass tacks information around that, don't believe me, but at least file in your head the possibility that there have been manipulations of the market for political gain to bring down prices.

Robb: And Chris has some great data to support that. Maybe he's wrong, but I would recommend looking into that, but something that we know for sure that is happening is the release of gasoline and fuel out of the national strategic reserves. And this is being done to bring down fuel prices. This is completely the way not to do this if you want long term stability in the market. Because what's happened, and you can find news pieces talking about this, the price for a barrel of oil is now low enough that it's no longer worthwhile for oil producers to expand production. So we're going to end up in six months, nine months, a year, somewhere down the road where we're going to be in an even worse situation where we have neither our strategic reserves topped off to the degree that we need-

Nicki: And we don't have the time to play catch up on-

Robb: And we have no time to play catch up. And we got in and we started doing socialist activity in the markets. We were trying to manipulate the markets to political gain instead of letting profit, motive, activity, drive things that drive innovation and people can hate fracking and they can hate all that type of stuff. But there's a reality that it was shockingly effective at getting more cheap energy out of the ground. And if we want... And that I'm trying to keep this fairly germane to this and not get off on too much of a political soapbox. But if we want some sort of a reasonable transition into a mixed energy economy that I think nuclear energy needs to be a major piece of and some solar and maybe some wind and some stuff like that, we have to use fossil fuels right now with some really steely eyed focus on the shit that really works.

Robb: And I would put out there that nuclear energy, particularly looking into thorium reactors and some of these small modular reactors, there's so much potential upside there. There was just a piece that made a big splash on Twitter today in California, they're trying to decommission the Diablo Canyon nuclear power plant and the assessment that was done on that plant. It appears that folks made the cost to continue running it appear to be three to five times more than what it really is.

Nicki: Just from a political motive, because they want to close it down.

Robb: Exactly. And so that's just screwing everything up. This politicization of our food systems, energy, medicine, we don't have transparency. And the profit motive is the only reason why people get out of bed. I'm going to say something that probably will get us down to three listeners, if you work for the government and you have no feedback loop that is attached to the real world and you're more or less guaranteed a spot no matter what, you don't give two shits how things work. But if everybody else who gets up in the morning and goes and works for a living and they're competing in a market, you've got to be on point. You've got to do your shit right. Even if you're an eye surgeon or something like that.

Robb: When I had LASIK, I shopped around and found this dude that amazing reviews and he had a good price and I had met some people that had worked with him. And there were 13 other options around this guy that were not that big of a difference, but he seemed to do really good work. And I went with that guy and I'm very grateful that he's an amazing surgeon and he's invested a bunch of money into developing the technology to do this shit and everything. And I had an amazing response to that. If there's no profit motive, there-

Nicki: Here's the thing too, that just occurred to me. If there was no profit motive, the governments wouldn't have pushed it this hard because there were tendrils-

Robb: That's a whole-

Nicki: Leaking into all-

Robb: Other thing.

Nicki: Of the... Whether it's the CDC or all of these organizations are benefiting from the promotion and the heavy promotion that was done. So without the profit motive, it wouldn't have even been... It might not have even been developed because there would've been no guarantee that it would've been pushed as hard or purchased by all these companies. Didn't Justin Trudeau purchase like nine doses per person, per Canadian?

Robb: Yeah.

Nicki: So there are all these-

Robb: In perpetuity.

Nicki: Backdoor deals going on that kind of... Yeah.

Robb: Yeah. So Hans, I guess the short answer, Nicki did a great job answering. I don't think that the background thought that people were profiteering on this thing.

Nicki: I don't think that was-

Robb: Dissuaded-

Nicki: The biggest thing-

Robb: I don't think that that was a one per-

Nicki: That made people hesitant.

Robb: I don't think one percent of people were hesitant with that. I think that there were a ton of other factors that were in this. And even from a game theory perspective, the powers that be could have done a way better job, if they really wanted everybody vaccinated or more people vaccinated, there was a host of ways that didn't involve coercion-

Nicki: bribery.

Robb: And damaging their jobs and that they could have done.

Nicki: Come get a donut. Joints for jobs.

Robb: Holy shit. Yeah, yeah, any other thoughts on that? I don't think so.

Nicki: I don't think on one. So I'll jump to Hans' second question. He says, "As an athlete, I've experimented with almost every supplement on the market. After years of experimenting, protein, creatine and salts, LMNT have become really the only three supplements I use regularly. Fish oils, vitamins, brain boosters, et cetera, I really don't feel I notice a difference. Outside of any real lacking deficiencies are supplements as a whole really that necessary or just good marketing?"

Robb: Yeah. I think Hans probably hit it, creatine, fish oil, sodium. There's a few things out there. If you have some specific issues, ubiquinone, CoQ10 seems to be really helpful for different cardiac situations. I've noticed a huge improvement using Lion's Mane with my essential tremor syndrome. I mean, it is shockingly improved it. And we have a couple of friends who have an elderly parent who has Alzheimer's and was at a point where he couldn't drink liquids out of a cup because of the hand tremor. And he started using Lion's Mane and just had an amazing response to that. But I think those are pretty targeted. I think if you don't have some sort of neuro inflammation or neurological issue, I don't know that Lion's Mane is going to do a damn thing for you above and beyond that. Maybe it would be beneficial as a hedge or something, but probably not.

Robb: But yeah, I think it's interesting when you look at the just ubiquity of supplements that are out there, things like alpha lipoic acid, it helps reduce blood sugar that might be good or bad, depending on what situation you have. Taking some alpha lipoic acid with meals might mitigate the total magnitude of blood sugar released during a meal, but it can also cause rebound hypoglycemia, which will cause people to go in and start eating more food. So maybe that's not a good thing. N-acetyl cysteine, the thing that almost got banned during COVID because it's actually really beneficial for liver function and mitigating systemic inflammatory issues, lots of specific use cases, N-acetyl cysteine is used in hospital settings for funny enough, toxic doses exposures to Tylenol acetaminophen. It's one of the recovery things that are administered IV to people. So there are things out there that are really valuable, but I think it's in more a specific use case scenario than it is this broad ranging thing.

Nicki: The general here's my 10 vitamins I take it kind of a thing.

Robb: If you tolerate... I think I've mentioned to people that I figured out that cow dairy seems to cause some sort of an autoimmune reaction, seems to be consistent with rheumatoid arthritis. And so I can't really use whey protein and it sucks because whey protein tastes good. You can use it in a host of different mediums. It has great anabolic profile. It improves glutathione production. So I would say a good whey protein or good protein like that would be really valuable. Creatine and then being on point with electrolytes is probably like 95% of what's beneficial within supplements if we're talking about a population level, but then there's probably a lot of different things that could be valuable in an individual use case.

Nicki: Perfect. Good questions this episode. Thank you all for listening. Robb, any closing thoughts?

Robb: Nope. All my thoughts are done.

Nicki: Okay. All right, folks. Thank you again for tuning in. Please check out our show sponsor LMNT at drinkL-M-N-T.com/R-O-B-B. And I hope you all have a very safe, fun labor day weekend, and we'll catch you next week.

Robb: Bye everybody.