

Speaker 1: Welcome to the Healthy Rebellion Radio. This is an episode of Salty Talk, a deep dive into popular and relevant health and performance news pieces mixed with the occasional salty conversation with movers and shakers in the world of research, performance, health and longevity. Healthy Rebellion Radio's Salty Talk episodes are brought to you by Drink Element, the only electrolyte drink mix that's salty enough to make a difference in how you look, feel, and perform. We co-founded this company to fill a void in the hydration space. We needed an electrolyte drink that actually met the sodium needs of active people, low carb, keto and carnivores adherence without any of the sugar, colors and fillers found in popular commercial products. Health rebels, this is Salty Talk.

Speaker 1: And now the thing our attorney advises. 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. And given that this is Salty Talk, you should expect the occasional expletive.

Nicki: You ready for another episode of Salty Talk?

Robb: Oh, wife, I'm as ready as I'm ever going to be.

Nicki: I won't go into my New Kids on the Block rendition of that, whatever that comes into it. You ready? Ready as I'll ever be. You know, Joey Joe's ready.

Robb: Oh man.

Nicki: Jordan and John. Yeah, come on.

Robb: Oh man.

Nicki: Got a funky, funky Christmas going on.

Robb: Somebody please intervene here. How are we doing wife?

Nicki: I'm a little tired. We've had three birthday parties for the youngest.

Robb: Our little weasel Sagan managed to pull down three parties that are...

Nicki: Yeah, we had planned... She wanted to go to Schlitterbahn on her birthday, which we did, and we had invited several people to join us. Many of whom could not make the during the day thing work. And my uncle was visiting from out of state and so my cousin and my uncle and her four kids came the night before. So we had party number one the night before, and then we had Schlitterbahn day of, and then the Welbourn's came down for dinner the evening of, and then we did a Saturday shindig with the neighbors and some people that Michael and his family from the gym.

Robb: It was good, but it's a lot.

Nicki: It was really good. But three. Yeah, it was a lot.

Robb: Yeah. First world problems. So what do we have cooking today?

Nicki: Goodness. You have a great interview that you did with Dr. Paul Saladino.

Robb: Dr. Paul Saladino, our new neighbor up in Austin.

Nicki: Yeah, yeah.

Robb: Yeah, it was good. So Paul is releasing his second edition of the Carnivore Code. I thought I had a book handy, but it's out of reach. But I really enjoyed the first book, it was really a remarkable effort in that he, and it's fascinating to me that... Again, I'm not in the position that I think Carnivore is the thing for all people, but so many of the baseline rules that set things up within the paleo diet like problems with certain types of plants, GI irritation, just genetic mismatch, it's really all the same stuff. Only kind of taken to another layer. He has three different layers of buy-in on doing the Carnivore approach, which I technically, I'm kind of Carnivore-ish.

Robb: I do some fruit, do a little bit of dairy here and there. Probably during the winter, I'll cycle the fruit out, but during the summer right now, I a little bit with most meals and I feel pretty darn good right now. And it definitely has been interesting, some of the final niggling GI problems that I've had are much improved. I'm still not super carb tolerant. Like if I pressure test stuff, I can end up kind of carb-headed and not feeling great, but it's better than what it used to be. And like a good thoughtful person, Paul continues to evolve his position on different topics. I opened up to the Healthy Rebellion, hey, I'm going to interview Dr. Saladino. Does anybody have questions?

Robb: Didn't really expect to get that much because it was only about 45 minutes prior to rolling with them, and then there were just a ton of questions. I only got through maybe about a third of them, but Paul's got the gift of gab, man. He does thorough answers and it was a really good time chatting with him.

Nicki: Awesome. And his updated book comes out tomorrow.

Robb: The day after this podcast release. Yeah.

Nicki: Okay.

Robb: The second edition I know is dramatically expanded and updated. If you haven't checked it out... And it's cool. Something I wanted to mention on that, it's one of the only books that did a really pretty damn good job of tackling the sustainability topic. He ended up, in a concise fashion, addressed the methane topic, the water usage topic, lot of the things that we ended up needing to devote a lot of time in Sacred Cow, he did a really nice job in a concise way to address that. It's one chapter so it's not as thorough a deep dive, but it's cool. I think at this point, if we're talking about any type of dietary approach and we're not really talking about the food production side and what the

implications are there for a host of social justice issues and climate change and all that stuff, then it's maybe a little bit misplaced. It's worthwhile having a conversation about that.

Nicki: It's also so great because so many people are finding Carnivore who might not otherwise be clued into what's going on in the regenerative agriculture space. So if their first introduction to this way of eating and ancestral health is his book, they'll also get a nice introduction to all that is regenerative agriculture.

Robb: Absolutely, yeah.

Nicki: Okay. Let's jump into the interview.

Robb: Let's do it.

Robb: Doc, we are live. We've been jabbering, we should have recorded some of that, but probably not all of what we've been doing. How are you doing?

Paul: I'm doing so good, man. Thanks for having me on, Rob.

Robb: Good to see you. Howdy, neighbor. How's Austin treating you?

Paul: I love it. The people here are fantastic, it's amazing. I love it so far. We're almost neighbors, too. We are neighbors, I can't wait to come hang out with you.

Robb: Yeah. Remind me again where you moved from?

Paul: San Diego, California.

Robb: Okay. Okay. So you had some good sun and good weather and all that.

Paul: Yeah.

Robb: Awesome. So we were jabbering about a million things before we recorded, book publishing and the shenanigans that go on with all that stuff. I posted in the Healthy Rebellion just about 30 minutes ago, hey, I'm interviewing Dr. Paul Saladino. If anybody has questions, ping them to me. And there's like 65 questions in there. So I'm going to try to sort through those and get the best ones. I will say that Tina Carlson asked if you're single. So I don't know. Any comment or no comment?

Paul: I can't comment.

Robb: Okay.

Paul: I'll side step, I'm going to slip that one.

Robb: I told her that that would be my first question. Doc, I'm actually not sure about what your origin story is in this kind of Carnivore and just general dietary path. I've been following your stuff virtually since day one but when I think... A lot of folks that have followed my work, they know, okay, Rob was vegan and then he got sick and he had ulcerative colitis and all these poop issues. I don't know what your origin story is with this. How did you find yourself on this path? I know you were a PA trained in cardiology first then shifted to general medical practice. But then where did all this stuff come in?

Paul: Yeah. So it's been a long journey for me. My dad's doc, he's an internist, my mom's a nurse practitioner. I grew up in this medical family and all throughout college, which was in Virginia at William and Mary, I was thinking, I'm going to go to medical school, I'm going to go to medical school. I was on the path. And then right before I graduated, I just got burned out, so burned out.

Paul: So after college I took six years off and just traveled around the world. I was in New Zealand, I was a ski bum in Jackson Hole, I through hiked the Pacific Crest Trail, I was downhill mountain biking in Wyoming and climbing mountains and all kinds of stuff. And at some point at the end of that six years, things started to kind of coalesce. And I remembered, oh yeah, I like science. I like chemistry, I'm going to go back to school. And so I went back to school to become a PA, so as a physician assistant, because I'd seen how my dad went through this really compassionate, kind man that got consumed by his medical profession. It was really tragic. And I thought, I want to find something with more balance. And I also saw him have this paradoxical existence where he's a doctor, but he's really unhealthy fundamentally.

Paul: He had sleep apnea, he was obese, he was on many medications. When I was in college, I remember getting a call, I'm in the molecular biology lab doing some kind of plasmin prep or something, my mom says your dad's in the cath lab. He's getting an angioplasty. And I was like, oh boy, this is bad news. My dad has early onset heart disease and at that time in my life, my dad was 45, 44.

Robb: Oh wow.

Paul: Yeah. A few years older than I am right now, because I'm 43. And so my dad had obstructive coronary disease at 44. And so fast forward six years after college, I want to go back to school and I want to do medicine. I don't really know much about medicine or the landscape, I just know I like chemistry, I like biology. But I want to do it in a way that gives me some balance and I want to lead a healthier life than my father was able to. I think it was his best intention, he just really struggled with it. So I did PA and I liked cardiology.

Paul: I liked running, I liked EKGs, I liked the medications, I thought I liked medications at the time. Beta blockers and these are cool. But it was funny, once I got into medicine, the landscape looked completely different than what I had anticipated. And this is what's so interesting is that once I started practicing, it was almost immediate that I felt unfulfilled. And I felt really frustrated with the paradigm that I was practicing in. These cardiologists were great people. They were incredibly intelligent and well-meaning, but

they literally would mime this to me, think in the box. Think in the heart, don't think about anything else. And I'm thinking, well, I don't agree with that. That's crazy.

Robb: Right.

Paul: We didn't ever actually sit around with Topo Chicos, I don't even think I knew what Topo Chico was then. We didn't sit around with mineral waters and ask each other, why do you think our patients get coronary disease? What is causing this? But in my mind, that's what I'm puzzling over. Why is this happening to people? Because I saw firsthand that I would give them a stat like I was told to, and lots of my patients would come back with memory deficits or muscle aches or sexual dysfunction. And the party line was, you're okay, it's in your head. You're okay, the studies with Lipitor showed that only 2% of people get myalgia, you can't actually have myalgia. Let's just switch it to another stat and-

Robb: Rub some kale on it and it'll go away.

Paul: Yeah, we'll just throw some more olive oil on the fire or throw some more canola oil. In fact, let's do that. Let's throw some canola oil on the fire, you're just not eating enough vegetable oil. But it never jived with me. I was thinking, what is wrong now?

Paul: Kind of interwoven throughout my history is this history of eczema and asthma. In my adult life it's been mostly eczema. So when I was in medical school, which came after the PA road, I had really bad eczema as I was doing jujitsu. I would get this impetigo on my knees and elbows, horrible. And then into my residency at the University of Washington, I had eczema so bad I joked about it as the eczema tramp stamp. It was literally this tramp stamp of eczema.

Robb: Tina may regret her request at your dating status.

Paul: Right? So I had this like lower back tattoo and it just went all over my whole back, it was horrible. And so that's what I'd been struggling with even before then in PA school. And for me, it was like, why can I not fix myself? So I left out the connecting piece there and I'll connect the dots now. So I'm working as a PA, not satisfied. I'm thinking, there is a root cause here, I need to understand it. I've been fascinated by the connections between food and auto-immunity for many years. And I've been iterating around my own diet because of this eczema. So I thought I'm going to go back to medical school and then in medical school, the eczema got really bad. To the point that I had sepsis a few times. I was septic and shivering and infected.

Paul: It was really frustrating and I thought, okay. So at that point in my life, in medical school and residency, I was eating a paleo diet and still having really bad eczema. But previously in my life, I had a similar vegan origin story where before I was a PA, and while I was a PA, I was a raw vegan and I'm not a bodybuilder. Right now, I'm five-ten, 170. But at that time in my life, I was 140 pounds. So I was 25 to 30 pounds less muscle than I am now when I was a raw vegan and I pooped multiple times a day and I had horrible gas. So the part I left out about working as a PA was that I feel so bad and I owe

remunerations infinitely to everyone that shared an office with me when I was a PA because of how bad my farts were, as it was so bad.

Paul: Anyway, anyone who's done lots of plants and had similar GI effects knows how bad this can be. So I'd have been iterating around my diet, originally for performance and for running, I did ultra running for a while. And then because of my eczema, when I was in medical school and then residency, and I thought, this a paleolithic diet, this makes a lot of sense. The stuff you've written about, I recently interviewed Loren Cordain on my podcast. And I know you and Loren don't agree on everything anymore, or maybe never did.

Paul: So I thought this makes a lot of sense. I've always been fascinated by these ideas of thinking about how our ancestors ate and how that information might inform the way we eat today. And this is something that's just, I think really one of the most interesting rabbit holes we can go down, whether it's the work of Wade Davis and other anthropologists, or the work of Mark Plotkin. These accounts have always fascinated me, these indigenous people, how are they eating? What was our life like before civilization?

Robb: Right.

Paul: And so I think this is really interesting, there's a lot of wisdom in that. Grains and beans, these don't make a whole lot of sense for humans to eat. I still think that for a lot of people, dairy is a really big immunologic trigger. But even cutting those things out and making my diet mostly romaine lettuce and avocado and berries and sweet potatoes and grass fed meat, I was having pretty bad eczema. And I thought, man.

Robb: Interesting.

Paul: There's got to be something else going on here for me. And so then I started to gradually tip toe into the realm of autoimmune paleo and think, okay, well maybe it's nuts and seeds also. And what's in those, is it oxalates? Is it histamine? Is it salicylates? Is it saponins?

Paul: And I thought, wow, there's a lot of toxins in plants. I've kind of opened the Pandora's box. You're like, what's in there. I'm going to close that back up, there's a lot of stuff in there. So that was really the beginning of the gradual dive into these plant toxins and my own personal journey toward a fully animal-based diet, which happened about two years ago. I thought, all right, I'm really tired of this eczema. At that point, it was horrible, all over my chest. I remember I'd go out to the coast and Washington and go surfing and I just had eczema everywhere. I'd peel off my wetsuit and it was just red and eczema all over my chest. All right, I'm just going to go straight meat-based. I thought it was crazy and I heard Jordan Peterson on Rogan and he said, it was really helpful for my sleep apnea and my autoimmune disease.

Paul: And I thought, this is different than everything I've ever heard. And at that time I was kind of steeped in the quote, functional medicine ideology and thinking about man,

plants are good for us, right? Fiber, good microbiome. And I'm kind of saying this raising my eyebrows.

Robb: Polyphenolics. Yeah, yeah.

Paul: Yeah, yeah. And I've come to think about it differently now. I wonder about these phytochemicals and these polyphenols, these are really good for us, we need these, right? But, okay, I'm going to give this a try. And it's been an interesting journey since then. Within the first few weeks, the eczema got 90% better, by two or three weeks, it was completely gone. And I've only had one recurrence in two years.

Paul: And that's when I reintroduced squash in my diet as part of a carbohydrate experiment. So the last two years I've been completely free of the eczema, which has been great in so many ways. I didn't expect this to happen, but I also had a pretty significant improvement in my, it's hard to describe, my psychological framework. The way that I viewed the world was different. And this is obviously difficult to quantify, you can't put a pin on it, you can't measure it in a lab, but it was my subjective experience. And I've heard it repeated a few times, many times now in the community so it's intriguing.

Paul: But just within the first few weeks I noticed, hey, I just feeling more calm, I just feel more centered, I just feel less likely to honk at somebody in traffic. There's something different, it was like seeing the world through different glasses. So I got really fascinated, it felt really good. And that was the beginning of this headlong dive into the world of animal based diets and just continuing to consider this ancestral idea of how do animals fit into our evolutionary framework? How do plants fit into our evolutionary framework? Is that different for different people? And are there places within this framework that I could contribute a few ideas to what's already been done?

Robb: That's awesome. It's funny looking back at my own evolution in this story, I remember people pinging me things like, hey, what about like Weston A Price? They soak and sprout and ferment their greens and they do all this stuff. Like in Switzerland it's a very, very common practice and there's some other areas that they do this. When they dug into it, what I was struck by was these folks always had significant animal product intake, too. It wasn't that they were living at the exclusion of that. And so a long time ago I arrived at this thing, I'm like, oh, you might be able to tolerate that stuff so long as you have enough animal products in your diet. But I wasn't smart enough to make the leap from there. That it was like, well, how many of those plant products do you really want to consume, within that context?

Robb: And I remember there was a talk that I gave in Chico, there was a whole wacky backstory. The cardiology folks wanted me to give a talk, the hospital blocked my ability to give a talk so the cardiology people opened up an offsite venue and we were there and there was a doctor associated with the hospital that was saying, well, that's that guy that just recommends the all meat diet. And at the time I took this as an affront, I'm like, no, look at all the vegetables that I eat. And I had all kinds of GI problems that following your lead. And when I first heard Jordan Peterson story, it was just what little hair I have was blown back. I'm like, holy smokes. Okay, this is starting to make some sense.

Robb: And for probably the better part of a year and a half, I've been very much in, I think what you would characterize, as that paleo-ish landscape. I do a little bit of fruit, we have some neighbors that have some fig trees. I love figs, I have like three of them with a meal here and there, seems to be fine. But it's just so chagrining in some ways that I was kind of budding up to this reality that plants are good for you, you got to have a balance or whatever was interesting. It was interesting, I had to have some other people get shot out of the cannon first and make sure that they landed in the net and everything worked.

Robb: And it's like, okay, I guess I'll give this stuff a shot. So going a little bit more up to date, I know that you've done some carbohydrate experiments. Like you mentioned, squash didn't work. Ironically, I had some squash for dinner last night and I got three bites down and then I literally was physically repulsed by it and just abandoned it entirely. I will admit that sometimes it's hard for me to eat the amount of fat I need to eat from just suet and stuff like that. I get satiated very quickly, bordering on nauseous. So I'm still trying to figure out some of the ways to navigate that. But what else have you been tinkering with? You reintroduced some carbs, like some honey and some different things. How has that played out and how has that informed where you are now?

Paul: Yeah. So like I said, I've been eating entirely animal-based for two years now, and that's really, I would say, Carnivore diet exclusively for two years. I did do a few plant reintroduction experiments, mostly because I had a continuous glucose monitor on from the folks at NutriSense. And I wanted to see how my body would react to certain carbohydrates. Now that was also fueled by a curiosity about macronutrient ratios, which we can get into. So for the first year and a half, it was zero carbohydrate animal-based carnivore, which is like nose to tail carnivore. And I was doing a lot of fat. I talk about how to do that in the book. And what I came to realize was, okay, I think I am very deeply in ketosis for a very long amount of time. Maybe it's time to have a summer again, and actually have some proverbial fruit on the trees or to stumble into a beehive and to see how my body feels if I change the biochemistry a little bit.

Paul: I was living in San Diego and I was feeling a little cold. San Diego is a little bit chilly, but I was like, I'm a young man, I'm muscular, I shouldn't be cold like this.

Robb: Right.

Paul: And I was getting cramps and a lot of people in ketogenic, low carb communities will experience cramps. I had some palpitations also when I thought this isn't right. And certainly the electrolytes helped me a lot, but as many as I did, I couldn't fix it. And in conversations with my friends, like Tommy Wood, I was like, I'm just going to reintroduce carbohydrates and see if this helps with some of these, what I perceived to be, mostly electrolyte and probably slightly thyroid related stuff without the carbohydrates.

Paul: Now the flip side of that was it, my gym performance was pretty good, my body comp remained good and I felt pretty good overall, it was just those little niggling things were bugging me and I want it to do the experiments. So I think I started with honey. And of

course in the back of my mind, it's very similar to the way that we were thinking about plants, before we let go of plants. When I reintroduced it, I thought this is pure sugar. I'm going to feel horrible, I can't do this. I can't eat pure sugar, my teeth are going to rot out.

Paul: Well, I can't do this. I can't eat pure sugar. My teeth are going to rot out. I like my teeth and it was quite the opposite. The first couple of days, maybe a little funky. Unfortunately I didn't have a CGM on right, for that original transition from zero carb to lots of carbs. I probably would have seen some pretty big postprandial glucose spikes as my physiologic insulin resistance was shifting back over to some degree of availability to dispose of the glucose.

Paul: But I did wear a CGM for a month in which I did honey and berries and some other fruit and the squash. And I did a whole episode of my podcast where I showed those and talked about it. But what I found was very interesting, within a few weeks that the cramps were noticeably better in my legs and the palpitations pretty much went away.

Paul: And so I thought, oh, this is interesting. And I did feel a little warmer. So I was like, okay, I'm going to be humbled a little bit here and think like, maybe for me at least, low carb, zero carb is not ideal, 100% of the time. Now I think that you may have experienced this, but I wrote the books, the second edition to The Carnivore Code, it's right there behind me, is out August the fourth.

Robb: It's still first edition.

Paul: First edition, you got the collector's edition.

Robb: Yep.

Paul: I'm going to get you one of these, don't you worry. But in the book, I talk a lot about ketogenic diets and I feel like so much of carnivore is ketogenic. So I felt like I had to defend ketosis and low carb diets. And that book was really written, I think from the perspective of like, hey, this is for people who are more sick. And since then, I've softened my perspective about macronutrients a little bit and thought, if people want to include carbohydrates, I think that fruit is very evolutionarily consistent. And we can get into the fructose stuff if you want. I'm not sure if it's something you've talked about, because there's a lot of fructophobia as well.

Robb: There's a ton of it. And it's fascinating because I would love to dig into this because if we do put on this evolutionary lens, there is this big chunk of time where our ancestors were likely frugivorous and then that was the transition then not long after that into homo habilis and then big game hunting. So you could make the case that there's probably some machinery, some genetics, some epigenetics that are maybe well-suited for dealing with that. So yeah, I would love for you to unpack that.

Paul: Yeah. And it's out there and you think, I can talk a little about the way that I think about plants and how they're going to partition defense chemicals, generally speaking, you can

imagine that, hey, the majority of the time, not across the board, but the majority of the time, if a plant is rooted in the ground, it doesn't want the stems, leaves, roots or seeds to get eaten because that's going to kill the plant. And we see that, things like cassava root are toxic. Many of these wild roots are toxic. A lot of wild seeds are toxic.

Paul: This is the whole idea with lectins and oxalates and grains, nuts, seeds and legumes are all seeds. We see this with plant leaves, like rhubarb. They're very toxic out there, but there's a lot of fewer toxic fruits. There are some, but most fruit is meant to be consumed by animals and then pooping out the seeds. So it's not really, if you can anthropomorphize plants, it's not really in the plant's best interest to put a ton of defense chemicals in the fruit, it will in the seeds and the leaves, in the roots or in the stems. And we can get into all of that.

Paul: But I thought, from my own personal experience, I thought, oh yeah, it probably makes sense for us to cycle in some of these carbs every once in a while. Now in a tongue in cheek way, I think I can say to the people who want to be dogmatically carnivore, that honey is a pretty animal-based carbohydrate.

Robb: Right. Right.

Paul: Because vegans won't eat it, so if vegans won't eat it.

Robb: Implicitly, it's good to go. Yeah.

Paul: I can eat it. Realistically speaking, I do eat honey every day now and I find it to be a positive addition to my own diet. Now, I did record the CGM for that. And what I'll show, what I've shown on that podcast is that my fasting blood sugar remains very low. It remains around 70 or 80. It spikes up to about 120, but then it comes down very quickly. So there's really good glucose disposal that did not get to be worse over the course of a month with honey every day. And now I've been eating honey for months and we see the same pattern over and over and nearly-

Robb: And doc, it's a pretty good whack. It's like 60 grams of effective carbohydrate from honey.

Paul: At least.

Robb: Wow. Wow. That's an aggressive bolus. Yeah.

Paul: Yeah, Yeah. I'm certainly bolusing the honey. And the reason I'm doing that is because I just have found that with my physiology, getting an insulin spike that's a little bigger than what I would normally get with just meat and fat is probably really helpful for me just in terms of maintaining those electrolytes, right at that moment. And I'll get it twice a day. I eat twice a day in the morning, in the afternoon, and then I have a large fasting window. I like to finish dinner by three or 4:00 PM. So I'm not much of a socialite, in that respect. If anybody wants to come over for dinner from my house, it's at 3:30.

Robb: It's going to be early. We're on the blue hair hour. Yeah.

Paul: We're eating dinner early.

Robb: Yeah.

Paul: But what's cool is that you can see over the course of the month that I did that, and even over the course of the months after, there's no increase in fasting glucose. And I just pulled labs, which we should talk about because they're fascinating. So my fasting insulin is three. My C-peptide is 0.5. So by all intents and purposes, I am just as insulin sensitive, if not more insulin sensitive now, than I was before. And there's some nuance in terms of how we actually say insulin sensitivity and what we mean by that.

Paul: But there's no evidence that any of these carbohydrates are causing me to become insulin resistant. And if you want to dive into some of the stuff I've been thinking about recently in terms of the biochemical mechanisms of that, we can talk about that too. But I also did my ketones. So I got a ketone meter from Keto Mojo. I did my ketones yesterday and this morning and I'm in ketosis in the morning. So it's this natural cycle.

Paul: And so what's interesting is I feel like part of the discussion in The Carnival Code was the first half the discussion and the other half is, the first half of that discussion was, hey, ketosis is natural for humans because there are a lot of people out there who would say, you should never be in ketosis. Ketosis is starvation. Ketosis is harmful for you. I'm thinking, man, I really need to defend that position.

Paul: And I think it's very defensible and I've done lots of debates with Chris Masterjohn about this. There's a lot of evidence that there are benefits. I'm sure all of your listeners will know the benefits too, probably intermittent or low carbohydrate diets, intermittent ketosis. This makes so much sense. This is fasting or the absence of carbohydrate in our diet does create different physiology with autophagy or broad strokes. So I think it's very healthy for humans. And I cannot imagine that our ancestors were not in ketosis a lot of the time. Carbohydrates are just not that prevalent in the natural world.

Paul: There are some indigenous people, the Tuki-senta. They're pastoralists now, and they eat mostly sweet potatoes. And sure, they might not be in ketosis whole lot, but most of our ancestors, I imagine we're getting carbohydrates occasionally cycling in and out of ketosis, getting more and less insulin spikes, which are not pathologic, completely physiologically, normal and, "healthy." And that's probably totally great for humans and being in ketosis, even eating 100 plus, 120, 130 grams of carbohydrates a day from honey is happening to me every single morning.

Robb: Interesting, wow. Wow.

Paul: Depleting my liver glycogen overnight, and then getting all those shifting gene mechanisms and then, you wake up, you eat the honey twice, or I do, and then I'll be back in ketosis by the morning. And this is not baby ketosis. Well, it's 0.5 millimolar, so it's official nutritional ketosis.

Robb: Right. Doc, if you had your iron and ferritin status checked because this is something that I had checked ages ago. I was on the higher side, Masterjohn suggested that this high iron status might contribute to some insulin resistance and might be some of the driver, like people will say when they reintroduce carbs, that they don't feel particularly good. Although inevitably, there are reintroducing things like sweet potatoes. So is it carbs or is it immunogenic response? So that's something, but do you know what your iron status or any thoughts around that?

Paul: Yeah. I have robust iron stores. My ferritin was 269.

Robb: Okay.

Paul: Yeah. So my transferrin sat is 26%. It doesn't look like I have too many of the polymorphisms along the hemochromatosis continuum, but I've watched it pretty carefully. And for me, and this is going to be different for every person listening, obviously based on your genetics and what you're eating. I eat a lot of things. I eat a lot of nose to tail. So I'm eating liver every day. I'm eating spleen, which is probably the richest source of heme iron. People are struggling anemia and obviously red meat is good, liver is better and spleen is the absolute superhero when it comes to heme iron.

Paul: There's so much heme iron in spleen, it's ridiculous. And that makes sense because it's one of these repositories of red blood cells and hemoglobin in general. But yeah, my iron is robust. My opinion without seeing your labs is just that you'd have to be pretty high on your ferritin to see insulin resistance because I'm at 270 and I'm extremely, I don't have any evidence of any issues with that.

Robb: I'll ping you the numbers. It was just at the high end of normal. So it was like, maybe that's a factor, and yeah, yeah.

Paul: Yeah. It depends. I mean, it depends. The lab ranges can change a lot too, right? You go to Cleveland Heart, they're going to say the upper end of ferritin is 170. Quest Labs says it's 280 or 300. I'm at 269 and I watch it. If my ferritin goes above 300 or 350, I'll just donate blood. But I haven't seen it go crazy. I have had clients who will go into the 400 or 500s and they usually have one or more polymorphism, predisposing them to avid iron absorption and I'll just have them save a life and donate some blood and all is well in the kingdom. Yeah.

Robb: Fantastic. We have a lot of questions from the folks in the healthy rebellion.

Paul: We didn't have a chance to talk about fructose.

Robb: Oh, yeah, yeah. Let's talk about fructose because for my own self, I'm super interested on that. So let's unpack that. Do you mind if we run a little long, are you okay?

Paul: I'm good. I'm good for at least another 50 minutes.

Robb: Okay. Okay. Well, you pull the rip cord when you're ready to jump off this plane? So yeah. Yeah.

Paul: And this is one of the humbling things of writing a book is I probably was a little bit too bought into the Robert Lustig ideas around fructose when I wrote the book. So even though I hope that your listeners will support this work and check out the second edition of The Carnivore Code. The little asterisk I will put on that is that there needs to be a third edition.

Paul: And in the third edition, I will be a little bit more clear about fructose and what we know about its effect on the human body. Now, if you go to the internet, you will find all sorts of mixed opinions about everything, from red meat causing cancer, to fructose being horrible for humans. And I guess, two of the main people that are championing the idea that fructose is really harmful for humans are Gary Taubes and Robert Lustig.

Paul: And Robert Lustig is this very smart physician, who can really rattle off about chemistry. And he talks about rates of de novo lipogenesis with fructose, which are in the realm of 10 to 20%, which means that if you eat ... He's suggesting that 10 to 20% of the fructose you eat is going to be turned into fat. Well, those are massively inflated and based on rodent studies.

Paul: So this is one of the challenging things is that we can't do all of the research we'd like to do in humans all the time. And so we have to do some in mice and rats. So sometimes, their physiology is pretty comparable to ours. And there's a lot of research that I talk about in the book that are wrote studies. And there are a lot of studies with polyunsaturated fatty acids that I think are very valid in rodents.

Paul: But for whatever reason, and this makes sense evolutionarily as well. Rodents don't tolerate fructose well at all. And their fructose biochemistry is very different than humans. And there have been radio labeling studies by people like Luke Tabby, that show that when you eat fructose, at least half of it becomes glucose. Part of it becomes lactate. Part of it becomes glycogen and maybe only one to 2% goes to De novo lipogenesis.

Paul: So there's no more fructose going to de novo lipogenesis than there is normal glucose consumption. It's basically more than half of it is turned into glucose in your body. And then people will point to other problems with fructose like, oh, it's going to raise your uric acid. And actually, it probably doesn't in the setting of a ... If you have the nutrients you need, which are the nutrients found in animal foods, things like choline and B6 to do these pathways, it's the biochemistry of fructose probably proceeds just very smoothly in the human body.

Robb: And if you're not hyperchloremic.

Paul: Exactly.

Robb: ... Which seems to be a major driver of that.

Paul: Yeah, yeah. So this is all couched and framed in the setting of normal physiologically plausible or evolutionarily plausible consumptions of fructose. Now, for instance, you can get 100 grams of fructose in a double, super big gulp, and that's really going to be hard to do in nature in any way, shape or form. And just so people know, honey is about 50% fructose. So even eating 100 plus grams of carbohydrates from honey, I'm barely even getting 50 grams of fructose in my diet in a day.

Robb: Well, and just to throw something in there, along this line, Peter Attis had a guy on that's a cancer expert and he's been looking at colon cancer and he made the case that when the sugars, specifically fructose are in the liquid form, it allows it to transit through the gut further than it should. And then this fructose interacts with the colon microbiota, the colon cells and that in his opinion, that is the driver. And so, it's something that's more viscous, medium, like honey or fruit or something like that. It seems like it would be a very different thing. And he actually said that spooning honey was a different scenario than drinking a soda in that context of the diffusion gradient and all that. Yeah.

Paul: It would make sense. And we see that repeatedly, that when we ultra process foods, both the incretin response sequentially and the gut is different. And yeah, that if you don't deliver foods properly to the gut and you don't get the GLP-1, you don't get all the incretins going down properly, that things can get messed up or that it could go further or not go as far. Yeah. Which is the problem with these ultra processed foods, they're just not evolutionarily consistent. And I'm sure you do the same thing, you just think, man, we think we're so smart, but it's all right in front of us. It's just all outside, we are evolutionarily contrived beings. We're created by our environment for the last 2 million years, 3 million years.

Paul: I don't know why we forget or think that this doesn't have a huge hand in what's going to be congruent with our biology when we stray from that, time and time again, we run into problems. Whether it's with vegetable oils or highly processed sugars or highly processed carbohydrates, and it's all really intuitive, right?

Paul: It all goes back to this very simple narrative that I think you were a big part of just really helping put out there, which is, hey, do what your ancestors did. And you'll, you'll be better than like 99% of people out there. So yeah, I agree. John Simon Piper is another person who's done a lot of really interesting studies with fructose. So they've done meta analysis and systemic reviews of the interventional trials of fructose with uric acid levels, blood pressure and weight gain.

Paul: And they look at all the trials and they'll take all the isocaloric trials. So if you don't overfeed, these are all the interventional trials that they're looking at. It's not epidemiologist. So they'll do isocaloric replacement of glucose with fructose. People don't gain weight, the uric acid doesn't go up and the blood pressure doesn't rise. So I'm happy to send you these references or I could screen share them now if you want.

Paul: But it's really pretty clear that isocaloric replacement of glucose with fructose does not lead to any of these problems. Now, if you give excess fructose, if you give excess

calories, then yes, you're going to gain weight. You may see a change in the blood pressure. You may see change in the uric acid, but that can happen with any caloric excess.

Robb: That happens with keto, yeah.

Paul: Is it the fructose molecule, which is actually something that occurs naturally in human biochemistry and is not toxic to humans, or is it the fact that you're overfeeding calories? And we know that basically, if you give someone processed food, the satiety mechanisms go out the window.

Paul: And if you over consume, especially over consuming polyunsaturated fatty acids, like linoleic acid and carbohydrates, that just breaks our satiety mechanisms. And the body has to put the brakes on at the molecular level with the mitochondria. And that's when we become insulin resistant at the mitochondrial level. And then at a cellular level saying, hey, you have stuffed me full of calories, stop feeding me. You get the reactive oxygen species, the differential phosphorylation of the insulin receptor at the cell surface and the cell shuts off.

Paul: And that's normal when we overfeed, so there's really not a whole lot of good evidence to suggest that biochemically, fructose is harmful for humans at all. And it makes sense because evolutionarily, we certainly would have encountered this. Would we have encountered it in a liquid form? No. Would we have encountered it in massive, massive doses? No, we would not have.

Paul: So within normal evolutionarily consistent ranges, there's not good evidence that it's harmful for humans. And the takeaway is just don't fear it, because when I'm talking about carbohydrates, probably I did this to myself because I got people all excited about the carnivore diet. And then I said, hey, you know what? It worked better for me to include carbohydrates from time to time. And some people lose their minds and they go, oh, no sugar is going to cause all these problems. I don't think it's the sugar.

Paul: So this leads us to the very interesting discussion, which is perhaps for today or another day, which is, do carbohydrates cause diabetes? And I don't think they do at all. I think there's something else because if we're going to look at the biochemistry, we need to help people understand, what is the real enemy? It's hard to chase two rabbits, right, or even three. So what's the real problem?

Paul: And my opinion is that it's actually linoleic acid and these vegetable oils. This evolutionarily inconsistent ratio of Omega-6 linoleic acid relative to saturated fats, like stearic acid that is giving us a signal, an evolutionary lipokine signal that is breaking our biochemistry. And in the setting of that insulin resistance or the setting of that pathologic insulin resistance or energy crisis, carbohydrates fan the flame, because you're putting an excess nutrients and so removing them can be very helpful if people are metabolically damaged. But often, it won't resolve the underlying problem unless the oils become evolutionarily consistent as well. Does that make sense?

Robb: Yeah. Yeah. I guess in general, I mean, unless people are doing a ketogenic diet with canola oil salad dressing. I mean, generally removing refined carbohydrates ends up removing the bulk of the seed oil inputs that we would experience. So I guess in some ways it would be a little hard to fully decouple all those things, but yeah, it totally makes sense. Totally makes sense.

Paul: Yeah. Yeah.

Robb: Let's take a quick break to hear from today's sponsor.

Nicki: Stress, pain, anxiety, insomnia. There seems to be a whole lot of this stuff going around these days, which is why I'm super excited to tell you about the sponsor of today's Healthy Rebellion Radio Salty Talk episode, Ned. Ned makes the highest quality full spectrum CBD, extracted from organically grown hemp plants, all sourced from an independent farm in Paonia, Colorado. And CBD has been shown to help alleviate stress, pain, anxiety, and insomnia. And I have been using it actually. I tweaked my shoulder recently in jujitsu. I'm not sure if it was exactly a jujitsu injury or also doing just some overuse stuff.

Robb: We just worked, your side control bottom escapes were very shoulder internal rotation intensive, and we're doing a great job on it, but we were doing that.

Nicki: Doing some training in the gym.

Robb: Some training in the gym and the combo seems to be a little bit-

Nicki: It's been cranky the last week, so I'm trying to heal it up. And I've been taking Ned's CBD oil every night before bed. I've also been using their hemp infused body butter, also contains arnica. I've been rubbing that into my shoulder and I definitely noticed a difference.

Robb: It seems to help, yep.

Nicki: Definitely seems to be helping. And the cool thing is that Ned full spectrum hemp oil only contains two ingredients, just full spectrum hemp extract and non-GMO organic MCT oil. That's it. And like I said, Ned also has their body butter. They make lip balms and they have a natural cycles line. I encourage you to check out Ned and try their CBD for yourself. There's a special offer for listeners of the Healthy Rebellion Radio, go to www.helloned.com/salty15 or enter code salty 15 at checkout for 15% off your first order.

Nicki: Listeners can also get 20% off their first subscription order and free shipping is unlocked for purchases of \$100 or more. That's helloned.com/salty15, to get 15% off your order. Give them a try. Now, back to this episode of Salty Talk.

Robb: Doc, have you noticed any difference with your lipoprotein levels since reintroducing carbs? Because you mentioned noticing, you're a little warmer. And we do know that

some mild hypothyroidism can really elevate lipoproteins, down-regulates the LDL receptor. And so have you seen a shift one way or the other? I know you just did your coronary calcium scan, that looked good. But have you seen any shift with the reintroduction of carbs?

Paul: So this is interesting. I was talking with Dave Feldman the other day, and we're probably going to do some experiments to see if we can show energy model in myself. It's a complex theory, Dave's theory. And I don't think we fully understand why LDL goes up and when it does and when it doesn't.

Paul: So one of the things I talk about in my book, *The Carnivores Code*, is that ketones and cholesterol share a common metabolic synthetic pathway, right? And the HMG-CoA reductase is really this branch point enzyme. And you can go one way to make mevalonate and you can go another way to make the precursor for ketones. And so when we are in ketosis, it does appear that you're going to make more cholesterol in general.

Paul: And there's good studies, which show that when we are fasting, LDL goes up, which is interesting to me. And I think these kinds of things argue very strongly against the lipid hypothesis because it doesn't make a whole lot of sense that the body would push itself toward atherosclerosis by raising LDL, if we believe that LDL is in and of itself enough to initiate an atheroma or endothelial injury during starvation, during fasting. Right?

Paul: So it makes sense that during a ketogenic physiology, our LDL goes up some. What's very interesting for me is that I've tracked my LDL throughout carnivore and it's gone up and up and up and up and it's very high now. And most people will hear-

Paul: Up and up, and it's very high now. And most people would hear this and they get a little scared, but it's so fun because I'm sure that your listeners are very savvy and they can separate sort of this conditioning like you and I have regarding plants, regarding fructose. And now it's regarding LDL. We have to just think about this with beginner's mind. So I got my LDL the other day. It was 533 milligrams per deciliter.

Robb: Holy smokes. Wow.

Paul: So yeah, so my particle count is greater than 3,500. Interestingly enough, and I'll post about all of this, my particle size is 24.7 nanometers. So it's very large particles, probably the biggest particles I've ever had and some of the biggest particles I've seen. And so when I got that, I thought, "All right, I've been on carnivore two years. I'm going to get a coronary artery calcium scan."

Paul: I was talking with my friend, Tommy Wood, and he was even sharing with me that most imaging cardiologists would say, if your LDL is that high, I mean, I am way above, or at the level or above, what most people with familial hypercholesterolemia would have. And I do not have FH. When I am not eating a carnivore diet, I have seen LDLs in my life that were 90, 110. I do not have familial hypercholesterolemia. So there was something about this carnivore diet that is causing my LDL to go up and up and up. And Dave

Feldman's idea is that it's an energy model and then I'm super lean and my body is using this to traffic energy. And so what's interesting is as I included carbs back in my diet, my LDL went even higher. The last one I had was in July of 2019, my LDL was 340.

Paul: And now this one with carbs for the last five to six months is 533. Now remember my fasting insulin is three. My C-peptide is 0.5. My hsCRP is low. My particles are very big. And my coronary artery calcium scan is zero. So the critiques would be, it's not enough time, but that's just arguing semantics at this point, because most would say that you could see lesions in children with FH, at similar levels of cholesterol within years. And there's cardiology imagers who would say, "Oh yeah, with an LDL of 300 to 500, you should see plaque in two years." So I think it's an interesting illustration. Now I'll just keep getting CACs and if they continue to be negative, the case will get stronger and stronger and stronger. As a quick aside for people, familial hypercholesterolemia is a different condition because it's a polymorphism in usually LDL receptor metabolism.

Paul: It's either a polymorphism in PCSK9, which is an enzyme that recycles the LDL receptor or the LDL receptor itself or LDL receptor trafficking. And so there is a total difference in LDL flux with the FH. It's not just an elevation of LDL. So that's the idea right now is that even those people with FH, some of them get accelerated atherosclerosis and some of them don't, and these LDL receptors actually occur on things like macrophages, et cetera. So having a high LDL in the setting of a ketogenic or carnivore diet is not the same as a high LDL in the setting of an LDL receptor metabolism, polymorphism like familial hypercholesterolemia. But you can use the similarity, and the fact that the LDL levels are similar or mine is even higher to say, "Hey, if LDL is really what is causing this, why don't I have plaque as a 43 year old man?"

Paul: Now remember at the beginning of my story, my father had an angiogram, had an angioplasty at the age of 44.

Robb: Right.

Paul: I have a very strong history of early coronary disease. If this LDL were going to be causing me problems, I should see it now. I should definitely see it now. If you gave my case to many cardiologists and you didn't tell them the result of my CAC, they would say, "Oh, that guy's going to have it. He's going to have atherosclerosis." Now is a coronary artery calcium scan perfect? No, but it's pretty darn good for calcified plaque. So the fact that my father had early coronary disease and had an angioplasty at 44, and now I'm 43 with an LDL that is probably five X what his was like, we should see something. Now I haven't lived the same life, but again, the argument here is, "Hey, LDL..." The LDL hypothesis leaves a lot to be desired.

Paul: I think we really need to question the idea that LDL in and of itself is enough to initiate or progress atherosclerosis. There are lots of people thinking this way, but I think, and I talk about this in my book *The Carnivore Code*, there are so many more issues at play here. I think again, insulin resistance is the main thing, driving this in terms of the subendothelial proteoglycans, the APOE C3, et cetera. So for me, you got to have fuel plus a spark. And if you don't have a spark, it doesn't matter how much LDL you have

around. And as we know, there's a lot of benefits to LDL. The testes and the ovaries have LDL receptors because they pull in that LDL to make hormones that give us glowing skin and libido and make our lives worth living, and muscles and allow us to have babies.

Paul: And these are hugely important roles. And then LDL is a key player in the immune system. That's really never talked about either, the fact that if you make mice sort of "LDL-penic", you take away their LDL, and then you inject them with staph aureus toxin, or lipopolysaccharide, they die much quicker. They die really fast, and you can give them extra LDL back and they live longer. So in this realm of coronavirus, in this realm of sort of this pandemic and viruses and infections, and what we're all worried about, LDL is an immune molecule as is HDL. And we never think about lipoproteins. And I think once we expand the lens and we think, "Oh, LDL, isn't just there to kill me? It's not just a bad cholesterol?" No, it's an immune particle. It's a bus that moves this precursor molecule for all the steroids or hormones in your body, you think, "Oh, that actually has some value. Doesn't it?"

Paul: And then everything upstream in the cholesterol pathway, dolichol and isoprenyl pyrophosphate and Coenzyme Q10, these all have valuable roles in human biochemistry. So this is not an evolutionary mistake. And it's so interesting to me to think... I mean this is what's so funny, when you talk about a carnivore diet or an animal based diet, you basically make enemies with everyone in medicine.

Robb: Right?

Paul: Because I am sort of denouncing every holy of holy. I'm saying you don't need fiber, plants are not good for you, LDL is not bad for you and meat doesn't cause cancer. Like my goodness, there could not be a more controversial set of statements.

Robb: When you manage to sneak into your book also that meat is not going to destroy the environment.

Paul: I did.

Robb: Then we've got that thing going or not going for us too. So yeah. Yeah.

Paul: There is another book that just talked about that too, that I really liked.

Robb: We're swimming upstream. Like we were talking before we recorded, we have massive job security in this space. Nobody's going to solve these problems out from under us. Remind me, I'm going to introduce you to a good friend of mine, Dr. William Cromwell, he's a lipidologist and he and I go back and forth on this stuff a lot. I'm more, I would say, in your camp, in the notion that a type two diabetic with X lipoprotein level and someone eating keto or carnivore with X lipoprotein level are two very different people. But Bill makes a hell of a case for, "Yeah, if you are insulin resistant, that that is going to accelerate the atherosclerotic process." But he also says that it's not a get out of jail free card, and he makes a hell of a case around it. He and I go around and around on that. So remind me, he would be an awesome person for your show.

Paul: That would be great to talk to him. The very good news is that insulin resistance is not contagious and it's highly avoidable.

Robb: Right? No masks necessary on that. Yeah.

Paul: I'm not sure that Western medicine has figured this out yet because, like I said earlier, I fear that we keep going round and round and we can't quite figure out what causes insulin resistance. But I do think that many would accept that insulin resistance is the common denominator for so many chronic diseases, whether it's Alzheimer's or stroke or cardiovascular disease, or pick your degenerative disease. Now that makes insulin resistance public enemy number one, I hope that we can really keep thinking about what the heck is causing this and I'm happy to talk about that. We can definitely dialogue about where we think that's coming from. I don't think it's carbs. And that should be, I think, public enemy number one in medicine. Because I think that you fix that you fix everything and then LDL becomes a hero from a villain because it's this valuable molecule.

Paul: But I think fortuitously or not, I've become this very interesting case study for myself, and perhaps some others. I mean, I have an LDL that would scare the pants off William Cromwell.

Robb: Right. Right.

Paul: It's funny because people will go back and forth. I've definitely talked to people in the last week and they say, "I wish I had your lipid panel." I said, "Really?" Just so you know, my HDL is 90, my triglycerides were 108 and I told you the other markers, but I'm insulin sensitive with an LDL of 533. Is that the same as a diabetic? No, because they have diabetic, they have metabolic dyslipidemia, their particles look different. Their particles are small. They have a low HDL. They have high triglycerides. Their insulin is through the roof. Completely different thing. And I just worry that people get so myopic with regard to LDL, there's so much LDL centric thinking in medicine. And it hurts people because we're not giving them the answer. This is right back to me as a PA saying, "take your statin, take your statin. You're getting muscle aches? I don't care. You're not having a libido? You can't remember things? I don't care. Take your statin," wait a minute, why don't we actually correct the cause or at least think about it.

Robb: Right. Totally agree. And it is interesting going around with Bill on this stuff. Yeah, maybe even like a three person podcast on your show would be cool, because the thing that I've bounced off of Bill is, I don't know how else I would eat at this point because every other road is... So let's just say that I'm fucked and I'm going to die at 55 or whatever from a coronary event. I don't know what else I would do when anything else that I do do, then my time that I've got until I do croak is going to be less good than what I'm doing currently, because I've fucking tried it. I've done it all.

Robb: And that's been something that I've kind of thrown back at him and he's like, "Well, maybe we just need to do a little bit of a statin or something like that." And I'm like, "That doesn't make sense either." I don't know about that. And I respond so poorly to

everything. I am the guy that literally, I would have like a 50% IQ drop in one day from taking statins. And I really can't accommodate that.

Paul: And then you can get into all of this nuance about what is the mechanism of the statin? Is it really the cholesterol? Is it just-

Robb: Right.

Paul: Because I mean, we can-

Robb: It appears to be everything except the cholesterol modification, which is why they no longer have a lipid lowering target associated with it. Yeah. Yeah.

Paul: Yeah. And I did a podcast with Malcolm Kendrick, and we talked about how, statins seem to affect the nitric oxide in the endothelial wall. It's not about LDL at all, or it's not about cholesterol at all or, it's about the endothelium and nitric oxide and the glycocalyx, and that's a completely different story. And yeah, you can give a drug that has an effect that may have a beneficial effect. And this is actually a great segway to the way that I think about plant toxins, if people are not familiar, but so often we give these drugs like a statin, and then we say, "Ha, look for secondary prevention for heart attacks, they do have a benefit." Yeah, sure, they do, but what's so often forgotten about, they have to say this in the studies, are all the side effects of the drug and is the dose worth the poison or is the risk worth the reward?

Paul: In the case of statins for some people, it may be, if they are absolutely not willing to change their life. But if someone is willing to change their lifestyle, I would argue the benefits are not, are far outweighed by the risks of these drugs, because we know we can change your risk radically with diet by affecting your insulin sensitivity. And if you give someone to you and I, we can change their insulin sensitivity, we can fix this real fast, and then you don't have to suffer all the risks. This is one of the things I fear with plant molecules, it's always forgotten. So if we kind of loop back to the earlier part of the podcast where we're talking about leaves or stems or roots, or any of these chemicals in plants, like isothiocyanates are a great example, sulforaphane [00:12:50], this is a very clear booby trap that's from these Brassica plants. And it's this glucosinolate that combines with myrosinase, boom, the trap is sprung. You get the isothiocyanate, which is sulforaphane.

Paul: Now people can look at sulforaphane and say, "Aha, there is studies that show it has benefits," but what is forgotten about? The side effects. The side effects. And that is what was so interesting to me as I was writing *The Carnivore Code*, and I found this time and time again with these plant molecules. And I think it makes sense. Why should we be surprised? These are sort of pharmaceuticals. They're not regulated by the FDA, but they are pharmaceutical molecules. Many of the prescription pharmaceuticals that we use are derived from plants. Paclitaxel, metformin, is similar to a molecule in French Lily. You know, so many, digoxin, aspirin, there are plant molecules that we use as pharmaceuticals today, but so many of the new plant molecules that are touted as being beneficial for humans, they may have a beneficial effect, but at what cost? At what cost?

Paul: And so that's been so interesting for me to kind of sound the alarm in a gentle way and just say, "Hey, are you sure you want to take sulforaphane, because it also has these negative effects, because it's actually a plant toxin." And if you can get the benefits of sulforaphane, specifically increasing your glutathione by doing things like cold, heat, exercise, ketosis, why wouldn't you just do that and not get the side effects? It's kind of like the statin argument. If you could improve your insulin resistance by changing what you eat, why would you take a statin that's going to affect your memory and other biochemistry, your libido, your muscle aches? It's not worth it. And so that's the argument that I advanced in *The Carnivore Code* is, humans can be optimal without plants. We don't need these plant molecules to be optimal.

Paul: This is the difference between environmental hormesis and molecular hormesis. And environmental hormesis is really where the concept came from, and it's the original idea that heat, cold, exercise, ketosis, sunlight, these are a little bit of a stress for the body and they make you stronger, right? But they don't have a molecular side effect. It's not a molecule circulating in your body. Beta-hydroxybutyrate is, that's a little different story, we can talk about that, but the other ones are not. They're just this sort of environmental pressure that's giving you a little bit, usually of oxidative stress, NRF2 gets turned on and you get more of this glutathione system. You get more superoxide dismutase. You become a stronger individual from an antioxidant quote perspective. Now sulforaphane can give you a little bump too, but it's going to give you lots of side effects.

Paul: And there's lots of studies that I talk about in the book that show, "Hey, if you are doing these things or living your life well, you don't need sulforaphane to be optimal." Just like you don't need a statin to be optimal or to fix your coronary disease, if you fix the underlying insulin resistance. This is the problem I have with molecular hormesis. The fact that we believe we can give a molecule... Resveratrol is a great example as well, and say, "Hey, this is a magical molecule." And I've had David Sinclair on my podcast and debated him about this. But you know what, if you want to turn on your sirtuins, you can just fast. I mean, my sirtuins are turned on every morning when I wake up with ketones of 0.5 millimolar because, and this has been shown, I talk about it on the podcast with David Sinclair, when you're in ketosis, the NAD to NADH ratio changes.

Paul: Sirtuins get turned on, and then they get turned off when I eat carbs, it's fine, and they get turned back on. Or you can get it through fasting. And what's the downside to Resveratrol? What are the side effects for Resveratrol? Well, if you look at the studies, it decreases androgen precursors. It acts as a xenoestrogen and actually worsens glycaemic control in a lot of people. So why are we doing this? It's like we're being sold this bill of goods. We're being led by this Pied Piper, and I'm thinking, "Okay, non-processed plant foods are better than processed food any day, but we shouldn't be sold an incorrect story that plants are magical or beneficial or going to help us live to 150 by a supplement manufacturer when it's not true." And you can get all those benefits just by living well.

Paul: And really what we're talking about here is the fact that animal foods are the super foods. Animal foods are the most nutrient rich foods. And if you eat animal foods, especially nose to tail, you don't need plant foods. And those of us, you and I included,

that really don't do well with plant foods, don't need to worry about avoiding them or leaving them out of our diet. Now, in the book, I talk about different tiers of a carnivore diet. If you want to include plant foods or you tolerate them and you think it's beneficial for color, variety, texture, et cetera, fine, totally great to include them. But if you're suffering like so many are with recalcitrant auto immune disease, or eczema like I had, or GI issues like you had, don't fear cutting them out. You don't necessarily need them, especially if you're eating nose to tail. So that's kind of the idea with the carnivore diet that I've ended up at. And you know, that was just a little monologue there.

Robb: No, I love it. I love it. That's incredible. Doc, let's jump into some of the questions here. You just kind of hit one of the first ones. What is a carnivore-ish diet? What are the least problematic veggies, herbs, and spices. And then also we snuck in, so this is actually three questions, what is carnivore-ish, what are the least potentially problematic herbs and spices, and where does coffee fit into this story? Of course the coffee topic has to come now.

Paul: I know. Coffee, coffee. So we talked about this a little bit earlier. Carnivore-ish is my take on this. It's not written in stone. It's just my sort of, it's my hypothesis. It's my suggestion to people, that when I think about this, I do think our ancestors favored animal food over plant food. And I do think they ate plant food during times of scarcity of animals. And I think that's... Probably ate some plants, mostly fruit. So carnivore-ish is mostly meat, and organs ideally, but mostly meat and animal products with some fruit in your diet, carbohydrates, honey, berries, avocado, squash, if you tolerate it olives. There's a lot of things in our diets that we think of as vegetables that are actually fruit. So the fruit like an avocado, so a lot of people, I think, appreciate this, because they say, "Oh, I can have avocado." And I say, "Yeah, try it."

Paul: It makes it so much more doable for people. I think that... And ultimately this is not my attempt to get everyone to stop eating plants. It's really just my thought [audio cut out] helps a few people I'll feel like I've done good work in the short time that I have on this planet. And I think that those are the foods that are going to be least likely to be harmful for us. Now, some of them still can be, I still react to squash. You didn't have a great reaction to squash. I do pretty good with berries. I just don't like the way... It's funny, I never thought I'd say this, I don't really love berries. I eat them sometimes. And I'm like, "Yeah, maybe, I suppose if I go hunting this fall and there's berries," or, "You know if I were up in Washington again in the spring or the summer and I were out surfing, I would maybe eat a thimble berry or two, or a raspberry," but I don't really seek them out. And I don't feel like I miss them in my diet right now.

Paul: But carnivore-ish is tier one carnivore, and it's focusing on these least toxic plant foods, which are mostly the fruits. And there's non sweet fruits and sweet fruits. People can expand that to be pretty big. Now in terms of everything else, that's where you start to get into parts of the plant that I think a lot more people are going to respond to. So leaves, stems, roots, and all the seeds. And also it's important to mention, like we did at the beginning, that even animal foods can trigger people. And I think the paleo ideas are very relevant here that, "Hey, if we didn't eat that animal food a whole lot, we might not be so good at doing it all the time." And the two biggest animal foods that I see causing problems are dairy and egg whites.

Paul: And that makes sense. Eggs are kind of seasonal and we probably didn't eat a whole lot of them. And dairy is definitely not something we got much of at all. Occasionally, perhaps, but very rarely, so those can trigger people too. But that's sort of the answer there. Now the coffee question is interesting for me. If you think about coffee, it's a seed, but it's not only a seed, it's a seed that's been roasted. And so you get all the potential issues with roasting and burning. Now, I don't think we fully understand how well the body is able to deal with these things. Like acrylamide, there are polycyclic aromatic hydrocarbons in both cooked meat and roasted coffee beans. Most people listening to this will probably opt for organic or mold free coffee beans, but mainstream coffee is, the beans are sitting, they're going to get moldy, are there mold toxins that are causing people problems? Are the coffee being sprayed?

Paul: It's a huge industry with lots of potential for contamination, with pesticides, et cetera. This is all sort of apart from the toxins that are in the coffee bean itself. So chlorogenic acid and caffeic acid are two of the polyphenols that I speak about in the book that have been shown in cell culture, at least, which is the best model we have to create clastogenesis, which is breaking of DNA. Now, at some point we get into this realm of, is it really going to change your quality of life? I can't say, I just think it's interesting to say, "Hey, some people probably don't tolerate these polyphenols very well." So they both might be able to detoxify these polyphenols, and yes, I believe that the phase one detoxification systems in your liver, these are the cytochrome P450 enzymes, these are meant to detoxify molecules like polyphenols.

Paul: So are there some people that are going to be better or worse at breaking down these polyphenols? Which are not meant for humans, they're not antioxidants guys. We talked about this a little bit earlier with Resveratrol. Isothiocyanates are technically not polyphenols, but that's neither here nor there. So I'm not a fan of coffee and that breaks a lot of hearts, but I'll just put it out there and speak my truth and say, also, if you're drinking coffee and you got to think like, "All right, this is stressful. Am I borrowing tomorrow's happiness today?" When I was in residency and we would talk about that with people with alcoholism, we would say that with alcohol, "Drinking alcohol is like borrowing tomorrow's happiness today." Is coffee like borrowing tomorrow's energy today?

Robb: Right.

Paul: Maybe I wonder. And again, it's all nuanced. And I really try not to be dogmatic about this. I try not to be too black and white. If you're thriving and you're drinking coffee, keep drinking coffee. Ultimately, and I say this in the beginning of the book, my purpose is not to keep... I'm not successful if everyone eats meat. As a person in this world, as a physician, or as just anyone trying to offer advice, the goal of all of us, is just to increase other people's quality of life and you get to define that, not me. So if your highest quality of life is eating cake with your daughter on her birthday, who am I to say? Right? I'm just going to tell you, you know this already, the gluten, the sugar, the oils in the cake may not make you feel good, but it's your choice. So if you want to drink coffee, if it increases the quality of your life, do it. But those are sort of my...

Paul: ... coffee. If it increases the quality of your life, do it. But those are sort of my thoughts about where it may stand on the good, bad, neutral spectrum for humans.

Robb: Love it. Nicki and I have largely abandoned coffee at this point. We do a little bit of decaf here and there, which doesn't really address some of the roasting considerations. But I've noticed that I just don't do well with caffeine anymore, so that's been a major improvement for us. It's kind of interesting.

Paul: And it's not surprising. I mean, caffeine is a phytoalexin. It is a plant toxin. The reason caffeine is in those coffee seeds is so that when insects get it, they're like, "Ooh ah." The LD50, the lethal dose 50, for a bug, eating a coffee cherry is way lower than this for a human, and they're like, "Oh my God, it's too much." You can kill yourself with caffeine, like many things.

Robb: Yes, you can. I think I've been close a time or two. Let's see here. Do you recommend eating organ meat sporadically, or rotating, and which should be consumed? And then also, there's a related question a little bit later. Do you have an ideal ratio of muscle meat versus the various organ meat potential blends?

Paul: Yeah, great question. Thank you. Basically, I try and eat as many organs as I can get my hands on at this point. I think that the limitations in the supply chain will prevent me from getting organ meat overload. You can usually get a lot of liver, so maybe you could eat too much liver. I don't think we know, right? There's this question, is vitamin A toxicity from real vitamin A, a thing, or is it the vitamin A palmitate that's used in studies?

Paul: Certainly, there are some, I believe, observational studies. I don't think anyone's done an interventional study that suggests that higher intakes of vitamin A in pregnant women sometimes lead to higher rates of birth defects. So pregnant women are cautioned against more than 10,000 IU of vitamin A a day, which is what's found in about two ounces of liver.

Paul: So in the book, I say, if you're pregnant, you want to be safe. An ounce of liver a day, an ounce and a half, totally fine, in my opinion. I'm not convinced that real liver is going to be problematic. I would take any client or anyone that I met who asked me for advice off vitamin A palmitate. In and of itself, I would never give someone a synthetic vitamin A, or really try and avoid all forms of synthetic vitamins.

Paul: But I do think the organ meats are crucial. And for people that aren't familiar with this idea, it's just that, hey, if you look at muscle meat, there are many nutrients in muscle meat, but there's a fascinatingly complimentary sort of cohort of nutrients in organ meats. If we just look at liver, there's riboflavin and folate, which are not well represented in the muscle meat, in addition to choline and zinc and copper, and so really starting to eat more organ meats really fills in those nutritional gaps.

Paul: And if you're eating things, the first one I recommend is liver, and I do about one to three ounces a day. And the ways that I like to do it are, I generally eat it raw, or I will do

desiccated organ supplements. So a super exciting thing for me is that I got so into the organs that I decided to build a supplement company that helps people get these organs. So when this podcast comes out, this is sort of the same week of launch of Heart & Soil, which-

Robb: Oh, nice.

Paul: ... is my... Yeah, which is my supplement company. People can go to heartandsoilsupplements.com if you are interested in getting these desiccated organs.

Paul: I think that the best thing to do is to eat it raw and fresh. But if you can't do that, if you won't do that, if you're traveling, we've got a lot of cool things that we're going to start offering in that respect, so that's one option. So I'll either do desiccated of the organs that I can't get, but if I can get the fresh liver, I will do one to three ounces of that per day, usually raw, as a shooter. But people can decide if they want to fry it, or sauté it, or do whatever with the liver.

Paul: The other organs I like are things like thymus, which is often included in sweetbreads. And if you cook the thymus, it's actually pretty darn good. It's fatty and rich. I eat a lot of thymus raw, or in the desiccated form. When I can get spleen, we talked about spleen earlier, with heme iron, I will eat spleen.

Paul: I think that there's just so many benefits, really to all of the organs. There are no organs that I would avoid, other than the adrenal, at this point. Maybe the thyroid. So the endocrine glands that are going to have active hormones, I would be very careful about those. Every once in a while, I show up at a party and somebody say, "Hey, I've got an adrenal. Do you want some?" I'm going, "Ah. I'm not going to eat an adrenal, but I'll eat the kidney." But there are benefits-

Robb: We had a kidney question. So how does one make kidney palatable and not taste like you're drinking out of a urinal, because I haven't cracked that nut?

Paul: Good question. You put in a desiccated organ supplement. That is what you do.

Robb: Okay, that's the only way I'm going to be consuming kidney anytime soon.

Paul: Kidney's a little rough. Kidney's a little rough.

Robb: Let's see here.

Paul: And I think they asked about ratios. I mean, I guess, just to get to the point. So I'll do about one to three ounces of all the organs I can get in a day. Right now, I've got spleen, thymus, liver, and testicle, and so I'll eat a couple of ounces of those per day.

Paul: And if you read my book, I'll talk about my recommendations for protein, which I think are pretty similar when we had our last conversation. I will aim for about one gram of protein per pound of goal body weight. So I'm 170. I like to be around that weight. So I'll

eat about a pound and three fourths of meat per day, and then I'll add the organs on top of that, so I'll have one to three ounces of two or three different types of organs.

Paul: Even if you just ate liver, that would be a huge improvement in most people's diets, so that's the place to start. Don't get overwhelmed. If you want to get exotic, you can call my friends at White Oak or any of these other farms that we all love, Del Campo. They'll get you some organs and you can play around with it, or you can do the desiccated organs.

Robb: And remind me to introduce you to some local folks, Augustus Ranch. That's where we've been getting our meat from. They do an organ blend, which is all the fiddly bits. They mince it all up. And when I do taco night for the family, I do two pounds of the grass-fed ground beef, one pound of the organ mix, cook that with the taco seasoning, and the girls-

Paul: Perfect.

Robb: ... crush it. Yeah, yeah. They just crush that.

Paul: Your girls are going to be geniuses. They're so lucky to have Robb Wolf as a dad.

Robb: Well, they're more lucky to have Nicki Violetti as a mom because-

Paul: That's true, both of you.

Robb: ... her genetics balance mine out very, very well.

Paul: Both of you. The other thing I'll say is Force of Nature, because I know you've been to Roam, and Force of Nature is another great company here. They're connected with Roam Ranch, and they do an organ grind as well. So if you guys are in Texas, or even throughout the country, I think Force of Nature is doing elk, buffalo, organ grind, all kinds of good stuff.

Robb: Yep, yep. So speaking of Texas, Eva B, who's one of our super active folks in the Rebellion, she said, "Why are y'all moving to Texas? Is there an insidious plan in the works?" She said, "Just joking. But I know that Dr. Saladino recommends moving to a sunnier climate if possible or tanning bed, otherwise I'm a Canadian, so my option to move within the country are limited. So why'd you move to Texas?"

Paul: Good question. So I think about this a lot, Robb, because I do think about the sun. And with the whole COVID thing, there was so much data about the importance of vitamin D, and at least at an observational level, that 30 nanogram per ml level was a huge cutoff.

Paul: And we think, "Ah, but is supplementing with vitamin D going to be the same as real sunlight?" I suspect not. And we've seen that repeatedly with interventional trials for heart disease and blood pressure and psychiatric illness, that you can look at observational cohorts and say, "Hey, the people with more vitamin D do better, but you

give them vitamin D and you don't really see an improvement in the end point, so is it... What's going on here? Is it something else from the sun, or is it things that people are doing in the sun?"

Paul: Evolutionarily was what we always come back to. I think being in the sun is the way we're supposed to get vitamin D. So what our ancestors in Canada do, I'm not sure. I think they were definitely outside a whole heck of a lot in the summer and just got tons of it. The problem today is that we've got this persistent evolutionary mismatch where most of us have to work in the summer and can't run around in our underwear all the time, and just top off the vitamin D stores for the whole winter.

Paul: So my personal opinion is that if you can live in a place that is south of that 37th parallel where you're going to get a lot of sun, at a safe level, that's going to be ideal. If you don't do that, like when I was in Seattle... I think the tanning beds are safe and reasonable, as long as you don't overdo them. There's such taboo.

Paul: But you can go to the Nordic countries. There's this company called Sperti, I have no affiliation, S-P-E-R-T-I, you get these vitamin D lamps. And they're just little tanning beds. It's the exact same lamps, exactly the same wave lengths, it's UVA, UVB. It's just a smaller unit. It's a unit that's the size of a large cereal box, for lack of a better comparison. Everybody's forgotten what a cereal box looks like because nobody eats that anymore, because we're all so rebellious. But-

Robb: So it's like a large side of ribs, is what you're saying.

Paul: Exactly. It's the size of one of those ribeyes. Yeah, size of a large ribeye rack or something.

Paul: It's the same thing. It's UVA, it's UVB light. I think the real problem with tanning beds is, yeah, you're going to get exposed to EMF for a short amount of time and you can overdo it too much. But within reason, I think if I were living in Canada, I would strongly consider that. Obviously, if you have a history of any type of skin cancer, keep an eye on it.

Paul: But that's sort of the segue to the very interesting rabbit hole about polyunsaturated fatty acids and potential for worsening of skin cancer. Is that a problem? Is it the fact that we know that these polyunsaturated fatty acids get stored in our cells, especially in our skin? Is it that we're now full of these? We are eating 10 to 15 X what we ate in 1900 or even hundred X, in terms of this linoleic acid. There's too much linoleic acid in the membranes of our epidermis, causing problems when we're in the sun. Who knows? Very interesting question.

Paul: But I do think tanning beds are the way to do it, and if I lived in British Columbia or somewhere beautiful like that, I would just do a tanning bed in the winter and get sunlight in the summer.

Paul: So the answer to the question was, I moved to Texas because of the people. You're here, Kyle Kingsbury's here, Anthony Gustin's here. So many of my good friends are here in Texas, and I wanted to start this company, Heart & Soil, from a space where I had community and mentors and people to collaborate with. It turns out that more and more cool people are moving to Texas.

Paul: And perhaps there was just the slightest bit of frustration with California, and the politics there, and how crowded it felt, and I thought, "Well, Texas is pretty cool. I can go out to Roam and hunt or..." I want a little more space, a little more freedom, so that's why.

Robb: Love it. That was much of what brought us here. And we were already in a no income tax state in Nevada, but things had changed enough. I had noticed that every time we went somewhere more equatorial, my health improved. Digestion improved, my outlook improved.

Robb: And it's been kind of crazy since moving here. It's been an absolute game changer for me. I get outside virtually every day. The kids got to go swimming basically at Christmas, this last year. The water was cold, but the day itself was 85 degrees. And I was able to get a tan on Christmas, and so it's-

Paul: It's hard to beat.

Robb: ... a big deal. But you do trade that off with them. We have every freaking bug imaginable. We had a tarantula that big on our house the other day and stuff like that, so yeah, it's exciting.

Robb: Let's see here. Oh, and you know what? I completely agree on the polyunsaturated fat in general, but particularly as it relates to dermal issues. We can get a sunburn, the kids can get a sunburn, but it's not like the way I sunburned as a kid, which was like I had been thrown into an oven and just blistered. It's an entirely different experience now than what it was in the past.

Robb: And again, very anecdotal, but there's a few million people running around with that same anecdote. So this is one of these things that, for a dermatology study, should be out there, although I don't know the IRB, like giving people a UV dose and then checking reactive oxygen species or something, but-

Paul: And we didn't really have a chance to get into all of that today, and I got to run in a couple minutes. But I did a podcast on my show, Fundamental Health, with Tommy Wood. If people are curious about polyunsaturated fatty acids, the podcast of mine, which will be out on July-

Robb: Did you-

Paul: ... 26th or 7th, will-

Robb: You've-

Paul: ... be-

Robb: ... already got episode one up with him-

Paul: Episode one.

Robb: ... right? Yeah, yeah.

Paul: And episode two is coming on July 27th. Listen to that one, because we really get into some of the biochemistry around what is happening with polyunsaturated fatty acids. It's been one of the most fascinating rabbit holes I've been down in a while. And it actually gets so granular that we're looking at FADH₂ to NADH ratios, and where in the electron transport chain these intermediates are delivering electrons, and how that's affecting reverse electron transport.

Paul: But what the very fascinating idea here is that the difference between a polyunsaturated fat and a saturated fat at the level of the mitochondria is a completely different metabolic signal, and this kind of goes back to what we were saying earlier. The very high level is that, I think that in 2020, and really for the last hundred years, since 1911 with Crisco, humans have been eating way too much polyunsaturated fat. And that is giving us a very strange evolutionary signal, because in nature, polyunsaturated fats are very rare. They only occur in seeds and a few other places. They're just not that prevalent.

Paul: And today, we're eating animals that are fed corn and soy, which have fat which is enriched in linoleic acid. And we're eating lots of grains, and we're eating purified vegetable oil and getting doses of these that are way higher than we ever would have gotten. Evolutionary hunter-gatherers, whether it's the Tuki-senta, or the Maasai, or whoever, the Tokelau, one to three percent linoleic acid of total calories.

Paul: And today, we're upwards of 10 to 15%, and it's really wreaking havoc on our biology at all levels. My suspicion is that this is really the key crux of what's causing insulin resistance for a lot of people by allowing the visceral adipose tissue to expand, because what happens is, the polyunsaturated fatty acids allow the visceral adipose tissue to expand when it shouldn't be. When the visceral adipose tissue gets too big, it just starts spewing out free fatty acids, triacylglycerols, to the rest of the body, and then you get this funny biochemical signaling, but yeah.

Robb: And it's super proinflammatory.

Paul: Yes, it is, probably for that sort of reason. It has different kinds from the VATs, so people are not familiar with this.

Paul: Two of the coolest tests would be a coronary artery calcium scan, and a DEXA or an MRI, to look at your visceral adipose tissue. And whenever I get called out by a vegan, I

always say, "Yeah, let's debate. And bring your VAT score, because I'm pretty sure mine will crush yours."

Robb: The Ketogains guys, I know you have to go really quickly, but they've had about 50 of their clients go through the visceral adiposity test, the DEXA scan, and it was lower than what the people have ever, ever seen. And we started digging, and the only people that you see visceral adiposity that low are hunter-gatherers. It does not exist in Westernized societies, other than this kind of keto carnivore world. It's really fascinating.

Paul: To me, it's a great metric because it's very hard to argue with the connection between insulin resistance, or metabolic dysfunction, or the tendency toward it, and VAT.

Paul: And so, yep, I'll put my VAT up against Michael Greger, Garth Davis, any of these guys, Joel Fuhrman, any of these vegan proponents, any day of the week, really against Mark Hymans or any omnivores too. Let's see how much visceral adipose tissue you got, because we can argue all day long about this epidemiology or that interventional study. And I'll say, "Minnesota Coronary," and they'll come back with, "Oslo Diet-Heart." Just nobody really gets any benefit, which is why I want to have the whole... just the absolute spartan race between vegans.

Robb: Oh, I've advocated for close to 20 years. If we had 20 different American medical associations, all with their own kind of payer systems, and they were all competing against one another, this shit would be a hundred percent sorted out. There would be no confusion. It'd be like VHS and Betamax.

Robb: But Doc, I know you need to go. Let's remind folks. So The Carnivore Code, edition one, has been out. Carnivore Code, second edition, is coming August 4th.

Paul: August 4th, yep. You can go the-

Robb: Available everywhere books are sold.

Paul: Mm-hmm (affirmative). Thecarnivorecodebook.com will get you the book. You can pre-order. I guess this will hopefully come out the week that it's released. The book may even be released when this podcast comes out, but yeah. And then, my website is carnivoremd.com, and-

Robb: Do you want this one to go the week before, or the week of?

Paul: What do you think is best? You tell me.

Robb: You call it, but I'll-

Paul: The week of.

Robb: Week of. Okay, we'll do week of. And then, Doc, remind folks where else they can track you down on the interwebs. I think almost everybody in The Healthy Rebellion posted a question, so we're going to have to do a part two of this because I-

Paul: I would love to. I would love to.

Robb: ... did a terrible job getting through it. But where else can they find you?

Paul: Carnivoremd.com is the place to find me, and I'm going to be posting more stuff at heartandsoilsupplements.com as well.

Robb: Outstanding. Awesome, Doc. Well, thank you for moving to Texas. Can't wait to get you down to Straight Blast Gym in Texas, and we'll do some training, and that'll be awesome.

Paul: I can't wait. Thanks for having me on. I'm sorry, you guys, that I'm so long-winded. I get super excited. And we'll get to all of your questions in the future, I promise.

Robb: I've never answered a concise question in my life, so you and I are brothers from a different mother on that, yeah. Awesome, Doc. Take care.

Paul: Thank you, my friend. I'll see you soon.

Robb: I'll see you soon. Bye-bye.

Paul: Take care, Robb.

Nicki: Dr. Saladino is always a good interview.

Robb: Super fun time, and what we're going to do, because I only got through a paltry number of the questions... But this, it's funny. I didn't fully know his kind of genesis story and everything, so I wanted to dig into that.

Robb: But we're going to get him back on maybe a month down the road, and then we're just going to try to do Andy Stumpf full-auto Friday style, maybe set a five-minute timer on each one of the questions and really try to hammer through that, because folks had some really good... some of them, some very pithy questions, that we didn't get to, one of them being, which we kind of skirted it a little bit, but does Dr. Saladino regret calling himself the carnivore MD? Should it have been the animal-centric MD, or something along that line, because it is always interesting to me when I see somebody's Instagram handle and it's like, keto carnivore mama for life, 867-5309. And it's kind of like, okay-

Nicki: 867-

Robb: ... that's cool. You're-

Nicki: ... 5309.

Robb: Yeah, everybody gets the song, Nicki. Everybody gets the song. Thank you. I always wonder a little bit about that, where if you so identify with a tribe and then your situation changes, are you kind of painted into a corner, does it make you less adaptable?

Nicki: Like if you're The Extreme Vegan Girl, @theextremevegangirl. I don't know, that might be a real handle. I'm not-

Robb: That is an incredibly redundant just-

Nicki: I'm not-

Robb: ... name, to start off with, but-

Nicki: ... targeting anybody. I just made that up, but I'm sure it's real.

Robb: But that, among many other questions, were posed, that I think would be very interesting to unpack. And so we'll connect with Dr. Saladino here in the near future.

Nicki: Excellent. Thanks everyone for joining us. Remember to check out our show sponsor, Ned, for all your CBD needs. Go to helloned.com/salty15, or enter code SALTY15 at checkout for 15% off your order. And we'll catch you all next time.

Robb: Bye, everybody. Take care.

Nicki: Bye. As always, Salty Talk episodes are brought to you by Drink Element, the only electrolyte drink mix that's salty enough to make a difference in how you look, feel, and perform. Get salty at drinkmnt.com. That's drinkL-M-N-T.com.