

*Nicki: It is time to make your health an act of rebellion. We're tackling personalized nutrition, metabolic flexibility, resilient aging, and answering your diet and lifestyle questions. This is the only show with the bold aim to help 1 million people liberate themselves from the sick care system. You're listening to this Healthy Rebellion Radio. The contents of this show are for entertainment and educational purposes only. Nothing in this podcast should be considered medical advice. Please consult your licensed and credentialed functional medicine practitioner before embarking on any health dietary or fitness change. Warning, when Robb gets passionate, he's been known to use the occasional expletive. If foul language is not your thing, if it gets your britches in a bunch, well, there's always Disney Plus.*

*Robb: You were saying.*

*Nicki: I was going to say, I never claimed to be a knower of all lyrics. In fact, I claimed to have forgotten most all the lyrics of many songs. And so frequently I insert the wrong word into a song like I just did.*

*Robb: And what's amazing is the word that you insert makes no sense whatsoever.*

*Nicki: It does. It does, actually. It makes sense to me. Anyway. Sorry, this was-*

*Robb: This is more the clear spousal abuse in episode 162.*

*Nicki: So sorry, this is not how we normally start our episode, but before we record, we do a test record and we kind of say whatever. And I was singing a song that was just playing and I was singing it with an incorrect lyric, apparently. So anyway, that was... And then Robb just goes and pushes record for the real thing before we really finalized our... Anyway, welcome back to the Healthy Rebellion Radio. This is episode 162.*

*Robb: There will likely not be an episode 163.*

*Nicki: He told me it was too embarrassing to share the lyric that I got wrong because it would just be too humiliating.*

*Robb: I would love to throw Nicki under the bus on this one, it was so bad. But it's so bad that it would still reflect poorly on me. And I'm a person with virtually no-*

*Nicki: I mean, I don't think it's that bad because I can make an argument for why it's the word I think it is.*

*Robb: Babe, you're Italian. You can make an argument for anything.*

*Nicki: All right, we should probably just move this show along.*

*Robb: Sashay. Promenade left.*

*Nicki: Promenade left. We have a nine-year-old now.*

*Robb: We do.*

*Nicki: It's kind of crazy.*

*Robb: A nine and an 11-year-old.*

*Nicki: A nine and 11-year-old. Yep. So Sagan celebrated her seventh birthday this last weekend.*

*Robb: Ninth.*

*Nicki: Or sorry, ninth. Why did I say seventh?*

*Robb: I don't know.*

*Nicki: Anyway.*

*Robb: This is similar to your substitution of song lyrics just fucking willy-nilly.*

*Nicki: Mm-hmm. Well, anyway, we do have to get over this if we're going to do this show properly.*

*Robb: I'm over it, man.*

*Nicki: You're over it?*

*Robb: I'm good.*

*Nicki: Okay.*

*Robb: I'm good.*

*Nicki: All right. I'm trying to think of any other things we wanted to mention upfront before we just jump into news topic, et cetera. I think that's it.*

*Robb: I don't think so, yeah.*

*Nicki: Yep, yep. We had a bird hit the window this morning really, really hard. And I thought it was-*

*Robb: I can't believe it didn't break the window, it hit so hard.*

*Nicki: I thought maybe it was just stunned and would come around, but it turns out it... I don't know if it broke its neck or what, but it was sort of an instant death. So we had more-*

*Robb: More bird death.*

*Nicki: ... Bird tears. Bird tears and bird death. Anyway, never a dull moment. All right, news topic. Let's just move out of this intro.*

*Robb: Oh, man.*

*Nicki: We're failing.*

*Robb: We should do a mercy kill and just shut this thing down.*

*Nicki: All right, news topic.*

*Robb: News topic. This isn't going to be anything new for the folks that have been listening to this podcast, it's a type one diabetes and low-carb diet defining the degree of nutritional ketosis. And basically, it was some researchers who wanted to make sure that standard nutritional ketosis did not produce keto acidosis in type one diabetics. There's a lot of concern around ketoacidosis in type one diabetics. It's a legitimate concern, but it tends to occur in poorly managed type ones. When we start getting in that, I don't know what the best analogy is, the icy road or the drunk driving simulator where there's this delayed response between consuming food, exogenous insulin. I think I've mentioned it on the show before, but it's one of these things that you can throw out there and kind of stump the chump thing. What's the first action of insulin in the body?*

*And arguably, and I think this is very credible, insulin is produced in the beta cells of the pancreas. Their adjacent cells are alpha cells which produce glucagon, and the glucagon is not suppressed unless insulin is active. And this is one of the things that just makes managing type one diabetes such a bastard. And the mismanagement of glucagon via insulin is what leads into really high blood sugar levels combined with ketoacidosis. It basically puts the on switch to liberating energy out of the liver and out of the body, and it can kill people. So in some ways you could say that there's some rightful concern. And you can just imagine the thousands of sleep-deprived ER docs and residents that have... Trying to catch a five-minute nap and they get woken up and somebody's unconscious and they wheel into the ER and then they're in deep diabetic ketoacidosis and they have to move heaven and earth to save the person.*

*And then they hear this thing called a ketogenic diet and they're like, "What the fuck? Why would we do anything that sounds like this state that's going to kill people?" Only it might be the thing that really, really saves people has been the long-standing problem. And I remember, this is one of the interesting things, I guess, of being in this over 25 years really, when I first started monkeying around with this stuff, it was heresy in the late '90s for someone to recommend a low-carb or ketogenic diet for the management of type one diabetes. Type two diabetes, a little bit more latitude with that, although still big pushback and still big concern around diabetic ketoacidosis.*

*And you can get ketoacidosis and type two's also, but it's really a much*

*more challenging thing to do. But it's been interesting to see this long arc of history kind of play itself out when there was a potentially viable therapeutic that was so anxiety provoking in medical practitioners and IRB boards that you couldn't even get somebody to study this stuff, couldn't even get them to kick the tires on it. And I would argue that this is one of the most difficult metabolic conditions to manage. There clearly might be worse ones, but there are a lot of people with type one diabetes.*

*Historically, type one was the childhood diabetes. Now kids end up with type one and type two diabetes, sometimes concurrently because in large part because of the mismanagement. So that's a bunch of background on this stuff. But again, for people that have been following our work at all for any length of time, the idea of recommending a carbohydrate restricted approach to eating for a condition that is defined as a mismanagement of carbohydrate shouldn't be that crazy. The PKU, Phenyl Keto Urea where people lack an enzyme to break down phenylalanine, it's a real concern and you have to do a nutritional therapy approach to manage it. And not surprisingly, you limit phenylalanine in the diet.*

*Nicki: The offensive item.*

*Robb: Yeah, the difficult to metabolize item. And there's a good number of examples of different inborn errors of metabolism that you manage it by trying to limit the amount of the item there. This piece basically answered the question that a well-formulated ketogenic diet does not remotely produce beta-hydroxybutyrate levels on par with diabetic ketoacidosis. And I like looking at this a little bit like even somebody on a purely carnivore diet or a very, very deep ketogenic diet, they don't stop producing glucose, we still produce some glucose. It just happens to be a very stable, steady state affair. And that's probably a good thing in poorly managed diabetes. We have super high blood glucose levels, whether it's type one or type two. And then in the story of ketosis versus ketoacidosis, there is a level of ketones that is too high and it becomes maladaptive and dangerous and whatnot. Further down this paper... Was it up a little bit? I don't think it was that far down. Go down just a little bit here. Sorry, down. The other... I think you're-*

*Nicki: The other down?*

*Robb: Yeah, yeah. Carbohydrate restriction may offer therapeutic benefit in a much needed alternative approach to management of type one diabetes. Folks might remember that several years ago now, the type one grit community in conjunction with Dr. Bernstein and Harvard University published in intervention using the Bernstein Diabetes Solution, which isn't specifically a ketogenic diet, it is a high protein, low-carb, moderate fat diet. And the goal there actually isn't ketosis, it's just managing glucose levels. And in the writeup on that piece, the researchers went out of their way to comment that the intervention offered unparalleled blood glucose control, and that these type one diabetics who usually they're lucky if... You're doing great if your A1C is below six, which is a rather*

high, I forget the conversion of what the moment to moment blood glucose levels the average is for that, but routinely people will log a 4.7, a 4.8 A1C, which is outstanding in general and unheard of for type one diabetics.

And that paper was published six years ago, eight years ago now, quite a while. And [inaudible 00:11:02] is just slow-going, slowly things change. I forgot to put a link in this, but if you look at diabetes UK ketogenic or low-carb diet, glowing endorsement of a lower carb approach. And I think in some ways it's because of the burden on the NHS healthcare system that at some point reality smacks you over the head like a wet fish and you can throw all manner of drugs and pharmaceuticals at this stuff, metformin and different things to try to manage the blood glucose levels, but if you are still just chasing your tail on that, if the response time is so slow injecting insulin from outside, even using a insulin pump, you're introducing insulin to the peripheral system that then has to circulate through the whole body and make its way to the alpha cells of the pancreas, which will then start modifying the activity of the alpha cells and their production of glucagon and curtail the production of glucose out of the liver.

And one of the ways that you can really get out ahead of that and mitigate that lag time is just not introducing a bunch of dietary carbohydrate, like you're already dealing with this significant lag time compared to the way that biology is wired up. Anyway, that's a lot of electrons devoted to something that I think y'all are probably pretty familiar with. But again, this is just one of these low-carb ancestral health things that some people like the eids have been beating this drum since the early '90s for 30 going on 40 years, and it's slowly changing, but man, we cannot have enough endocrinologists die and get replaced quick enough to get this information out there. And it still is a slow, laborious process.

Nicki: They don't have to die, they can also just convert.

Robb: They can, but then as, I forget which one of the Manhattan Project physicists said that, and this is paraphrasing, this isn't an exact quote, but that science progresses one funeral at a time because people are so-

Nicki: So wed to their-

Robb: ... Wed to their beliefs that you kind of have to wait for the next generation to come in.

Nicki: All right, well, I have a link to that paper in the show notes for anybody who wants to check that out. I do want to... We had an update come in from Carrie, if y'all remember, I think it was two episodes ago, she was the one with the question regarding the intestinal methane overgrowth, and she wrote in with an update. So she says, "Hi, Robb and Nikki. I wanted to give an update on my diagnosed IMO/bloating in hopes that it may help others who are suffering. After a response to my question, I tried a few things that seemed to have made a big difference. I went back to carnivore with no dairy and make sure that I'm getting at least between 100 and 130 grams of protein. Before when I did carnivore, my

*protein was too low and my fat percentage was higher. Within two days of doing this, my bloat was considerably less and I feel so much better.*

*I also started Ziva meditation twice a day after listening to your podcast with Emily Fletcher. I can't get over the way I feel from this practice. I have suffered from chronic migraines for 40 years, having to take rescue meds at least five days a month when the pain was unbearable. Since starting the meditation at the beginning of June, I have taken zero meds. I haven't done that in years. I had an aura on one side of my vision yesterday and thought, 'Oh no, here it comes,' but the migraine never presented itself. That's never happened after an aura. I know it sounds crazy, but I really feel it's the meditation that has made the difference. You have mentioned massage for constipation, which I now do every night. This has also helped and is very relaxing to me. Thank you so much for all the informative podcasts. I'm just one of many that you've helped in the process. I feel like myself. Actually, better than myself. Keep fighting the good fight."*

*Robb: I guess we won't shut the podcast down quite yet.*

*Nicki: No. Carrie, awesome, awesome. Thank you so much for writing in. I just wanted to touch on that meditation piece. I know a lot of folks, if you're newer to the podcast, I think we did that episode with Emily Fletcher in, I think it was early days of Covid maybe, but she has a book called Stress Less, Accomplish More. And we've talked about it a lot in the podcast and our listeners know how much we believe in meditation, whether it's Ziva or some other type of meditative practice. And I'll be honest, I have kind of slipped a little bit sometimes, mainly getting barely getting one in, but this past week I've been two a day and it really matters, that two. It's hard. I feel like it's easy to get one in. Most people can get one in and then it's like, "Oh, do I really need the second one?"*

*But that second one, you don't know what it is about the second one, but the second one kind of, I think, brings everything together. Anyway. Carrie, really glad that you found that and that that's helping you and the fact that you're able to... You haven't had a migraine, that's pretty amazing.*

*Robb: Yeah.*

*Nicki: So thank you for sharing that. Our sponsor, the Healthy Rebellion Radio is sponsored by our salty AF electrolyte company, LMNT. Folks, it's hot outside. If you're hiking or working in the summer heat, if it's humid where you are, make sure you're staying salty and getting the electrolytes you need. Same goes for if you eat low-carb or keto, if you're an athlete, if you have muscle cramps, if you're a breastfeeding mom, if you have POTS, or even if you're just feeling a little tired and need a natural energy boost without caffeine, LMNT is for you. When you buy three boxes, you get the fourth box free at [drinkLMNT.com/robb](https://drinkLMNT.com/robb). That's [drinkL-M-N-T.com/R-O-B-B](https://drinkL-M-N-T.com/R-O-B-B). And some salty good news, if you haven't heard, grapefruit salt is making a permanent comeback in September. So in just a few short weeks, we will have grapefruit salt year round.*

*Robb: Hallelujah.*

*Nicki: Hallelujah. All right. Three questions this week. This first one is from a brand new listener named Andrew on diet and digestion. And I like getting these where the person writes in that they're new because sometimes we feel like we answer... We're always talking about the same thing, and that folks already know some of the things that we're talking about, but getting this question from Andrew makes me think there are new people coming in, new people that have questions that they haven't heard the answer to before and still making a difference.*

*Robb: Indeed.*

*Nicki: Andrew says, "Hi, Robb. I'm loving the podcast. I just started listening and got your information from the lady who started the Debug Your Health blog, which goes over diet and parasite elimination. She recommended for diet just doing grass-fed meat and veggies. I did that for a few days, but had severe leg cramps and sleep disturbances. Also, I've been constipated for a while now and just can't seem to find the right diet for addressing this issue. I will go to the bathroom once every three days and my gut just doesn't feel right whatsoever. Also, I have A blood type, so I should be having more frequent bowel movements, but that is not the case. I'm only 21 years old and I want to live my life. My suspicion is that it may be related to parasites, heavy metals, and maybe nutritional deficiencies. Any suggestions on how to get rid of this constipation with diet, parasite cleansing, or even enemas? Keep up the great work and I'm excited to hear your response."*

*Robb: Hey, Andrew. So great question. And this is a lot to unpack, and I will say that there are absolutely folks who end up with parasites, who end up with heavy metal toxicity. But I've seen this become a little bit of a cottage industry of, "Oh, everything's a parasite issue." And then there's complex protocols for unwinding this stuff. If you dig back through the archives, you will find that if you go way, way back like old paleo solution days, when the gut microbiome testing first hit the scene, what was the big one that was there and then it flamed out? uBiome? Was that it?*

*Nicki: I think there might've been one before that.*

*Robb: Might've been one even before uBiome. But I was super excited about this stuff. Oh man, we're going to have this deep insight into what's going on with the gut. Then it turns out the microbiome changes hour by hour, day by day, when you sneeze, when you watch a scary movie, when you watch a happy movie. I mean, it's just this constant shift, which then raises some questions about how much stock can you put in any just given snapshot? That said, there are some pretty standard parasite screens, like a ova and parasite, which you would get from kind of a standard medical screen. But I would, at a minimum, go get some gut screening to see if you legitimately have some sort of a identifiable parasite.*

*Sometimes they will come back that there's something that looks parasite in nature but doesn't fit any of their standard criteria.*

*And then at least you've got something to work with there before we start heading down that route. Because it oftentimes entails either pharmaceutical or nutraceutical, some stuff that can be kind of gnarly, like olive leaf extract is remarkably powerful in dealing with different types of parasites, in dealing with certain types of gut dysbiosis, but it can kind of strafe bomb good bacteria as well, as can standard antibiotics. And this is where I think just being better informed on what is your real situation instead of kind of guessing there. The frequency of bowel movement, it's kind of interesting if we dig around in the literature, the kind of wacky thing with that is that normal can exist anything from multiple times per day, all the way to once every three days. But the big deal there is if something has changed.*

*Nicki: So what's normal for you?*

*Robb: Yeah, what's normal for you? So if you went from two or three times a day to once every three days, that can be a big change and that can be uncomfortable. It is worth noting that a number of people in the carnivore space, I know Dr. Sean Baker, he has mentioned this, and he's really carnivore. He doesn't get any plant material at all. About every three days, he has this little pelletized turd, apparently, and it's the indigestible fibrous-type material that's made up of the meat that he eats and that's it. That's his jam, and he otherwise feels really good.*

*And I personally don't put any stock in the blood types. Or not any, but really selective application of the blood type stuff. I'm an A blood type, in theory, I should be eating wheat and be a vegetarian and all this stuff. And I really tried to go down that path and gave it a good kicking of the tires. And what was interesting when Diod Damo had a really active forum, and it was back when the interwebs had active forums, there was six to one, eight to one people in the O blood type on the forum relative to everybody else, and the O blood type is the paleo diet. And so I think that it was just that was actually the most efficacious way of eating broadly, and then it kind of looked like it was serving them disproportionately well. So I would recommend just getting some screening.*

*Nicki: I'm curious what... If anything stressful happened or anything... Like a life change happened that kind of initiated this constipation? I know the most constipated I have ever been in my life was when I was 18, and then I left home and moved... I went to community college before I transferred to a four-year school, and I was living with my aunt and uncle and I played volleyball at the community college. And that first week of tryouts and practice, I was living in a new city with my aunt and uncle doing new stuff, and I was so terribly constipated. I had to tell my coach, I had to call her and say I couldn't show up for practice. And she actually went with me to the health center at Santa Rosa JC, and then I had to have my grandma give me an enema. Thankfully, she lived in*



*the same town and she used to be a nurse, and it was so embarrassing, but it was so painful and so uncomfortable. But again, big life change. And so sometimes constipation can be brought on from stress and life circumstances.*

*Robb: Yeah, so I want to help you, but this just feels bigger than what we're able to do, just pinpoint.*

*Nicki: I want to comment on the... He did say he tried the grass-fed meat and veggies and had leg cramps and sleep disturbances, and I'm thinking this could be an electrolyte issue.*

*Robb: Yeah, absolutely. And I mean, the electrolytes can be an issue both with the cramping, the sleep disturbance, and also the constipation because GI motility is really tightly tied into that. And as we've mentioned in other... It's a shameless plug for LMNT, but you can get your electrolytes wherever you want to. We have our home brew guide if you want to make them up your own, but anybody that shifts into a lower carb way of eating, your electrolyte needs double, triple compared to what your baseline was, particularly if you were eating a pretty carb rich diet. So that's a great catch there. So I feel like you need to do a little bit of work with someone else, maybe one of the primal health coaches, one of the adapt health coaches. I feel like you need to do some screening, some of this stuff of just kind of looking at, did you have a stressful life event? Did you travel abroad and eat some potentially dodgy food, and then things change.*

*But you need a little bit of help zeroing in on was there a precipitating event? What was it? What can we learn about that? Is there actually something that we can find in a legitimate ova and parasite screen or something like that? And then we can start thinking about a way forward. And again, if you felt generally better with this kind of meat and veggies, other than the cramps and the sleep disturbance, I think that electrolytes being at least five grams of sodium a day, make sure you're getting plenty of veggies and whatnot so that you're balancing the potassium and magnesium and all that good stuff, that could really right the ship pretty quickly.*

*Nicki: Mm-hmm. Please let us know what you find out and how things go. Okay, our next question is from Alan on Immune Thrombocytopenia. "Hello. My wife has an immune system disorder called Immune Thrombocytopenia, ITP. It is triggered by pregnancy. Her platelet count drops, which means she is at greater risk for hemorrhaging. The underlying cause of ITP is unknown, according to our doctors and what I've read. For her first pregnancy, the doctors prescribed two treatments to ameliorate the platelet count, prednisone and IVG. This is standard treatment as far as I can tell, but these treatments had minimal to no effect. As the disease is evidently related to immune system health, I wondered if there are any dietary or environmental things we might look at, which could help. Any advice getting pointed in the right direction would be much appreciated."*

*Robb: Yeah, so I mean, our usual thing of minimally processed whole food diet,*

*photo period, community, some good movement. But it's funny how things kind of go in cycles, and I kind of feel like for a number of years now, I've kind of drifted away from being so adamant about the gluten and kind of celiac-type relationships. There was a time there whenever anybody popped up with kind of an issue, I would search for the issue, hyperinsulinemia, and see what type of linkages were there. And then the other search was this immune thrombocytopenia and tissue transglutaminase. Because tissue transglutaminase is the enzyme that is primarily targeted when we get the autoimmune response associated with celiac disease.*

*Nicki: And you were searching this in PubMed?*

*Robb: I do a basic PubMed search. This was Paula, one of our clients who had the porphyria. And if folks don't remember the story, there was a gal that we were training and Chico was hot as hell in the summer, and this gal would show up to train, big brimmed hat, long sleeved shirt and even kind of gloves sometimes. And we would just do... She was in her late 50s, early 60s, something like that.*

*Nicki: I think mid 50s, yeah.*

*Robb: Mid 50s something. But it didn't take a lot to warm her up because it's already hot out. But one day I just asked her, I'm like, "Paula, what's the deal with the hat and the shirt and everything?" And she said, "I have porphyria cutanea tarda." And I looked at her, I'm like, "Is that contagious?" And she said, "No." And so, "Okay, well what is that?" "It's an autoimmune..." Or she didn't say autoimmune. She said, "It's a condition where when I get a burn, it's not just like a sunburn, it burns all the way down to the periosteum of the bone. It's kind of like in my head, I was thinking about vampires when they get exposed to sunlight and their limb just incinerates right there. So I did my usual jam, which was porphyria cutanea tarda, hyperinsulinemia. And I didn't really find anything there. There didn't seem to be any good linkages, porphyria cutaneous tarda, transglutaminase. And it was all over the place, linkages to celiac, this high autoimmune reactivity around tissue transglutaminase and porphyria.*

*So we went back to Paula and we're like, "Hey, I think you've got... This thing's an autoimmune condition," even though they call it a genetic disease. This was one of the beginning things of so many of these conditions that clearly have a genetic underpinning that genes load the gun, but then epigenetics, the environment pulls the trigger. I said, "I think this thing's autoimmune in nature." And so she cut out bread and wheat and within a couple of weeks she was cruising around with a tank top on, and she had not done that in 20 years. She couldn't run around with her grandkids with reasonable summer clothing and hadn't been able to for quite some time. And then not ironically, it was maybe about six months later, she was showing up with a big brimmed hat and a long sleeve shirt, and I'm like, "What are you doing again?"*

*She's like, "I just really like bread and I'm willing to deal with this to have*

*the bread," which was a long arc story of how blasted hard it is to, one, I will pat myself on the back a little bit. That's some good investigative work to figure all that shit out. And then the person's like, "Huh, it's not worth it to me, so I'm not going to do it." But Alan, this is an area I would look at is this specifically Celiac related stuff. So a real come to Jesus, 100% gluten avoidance, making sure that you are not getting any type of cross reactivity, like if you eat out and you get a hamburger, asking them to cook the hamburger in a separate pan. I mean, it gets really detailed. What, soy sauce, you got to make sure that it's gluten-free tamari.*

*Nicki: And you order a salad, make sure they don't put bread crumbs on it or croutons.*

*Robb: Well, and we've discovered that lots of places, because it's not a microbial contamination, they will cut up salad stuff on the same cutting boards that they cut up their bread because not an issue from a microbial contamination. That'd be a terrible idea if you're cutting up chicken or meat and then putting salad or something on it. But the bread isn't a big deal from microbial contamination, but you basically make it inedible for anybody with gluten issues. So legit gluten avoidance is quite hard and fairly onerous. It's easier than it's ever been, I will say, at least in the 20 years I've been dealing with this stuff. But I would really, really get in and check that out. And I put a link to a study here, Association of Immune Thrombocytopenia and Celiac Disease in Children, a retrospective case control study. So they're looking at the association here and it's quite high.*

*It's a real thing. So I would get in and look at this. And honestly, the gluten avoidance is kind of layer one to this. There may be a need for broader autoimmune protocol, autoimmune paleo, and that starts getting into things like potential nightshade avoidance and dairy and different things like that. A1 bovine dairy, which is the standard stuff that we get from most of the milk that we consume, even raw milk. This is one of the things that makes me pull my hair out about the West Nate price folks, it can be raw dairy, but if it's A1 dairy and you are gluten reactive, there are moities of the milk proteins, which are similar enough to the things that are reacted to in gliadin and gluten that it can be a cross reactor. And so you have to be careful with that too. But this is the stuff that I think is really worth digging into and kicking the tires on because if it is the issue, you should notice almost immediate improvement with this kind of elimination.*

*Nicki: I wonder, since this thing is triggered by pregnancy when she's... Let's assume that she's not pregnant right now, I wonder if she feels any... Would she notice any kind of improvement? It's not like she's got joint pain or something that you would notice immediately by changing the diet, or if there's some sort of blood marker, maybe like C-reactive protein, I don't know if that is elevated with something like this.*

*Robb: So Cyrex Labs can do some testing. It is really good question. Cyrex Labs*

*can do some testing that can dig up some of these other more latent immune responses. What's really interesting about this, and again, I'm really glad you brought this up, this is really paradoxical because usually when women become pregnant, if they have an autoimmune condition, they get a reprieve from it.*

*Nicki: Yeah, I was going to mention that. My mom had rheumatoid arthritis and with her pregnancy with me and my sister, it's like she's completely disease-free and she could go snow skiing, which when she wasn't pregnant, she was pretty debilitated.*

*Robb: Right, right. So that's interesting. That's a confounder there that is interesting, and I'm honestly not super familiar with it. Somebody smarter than me probably would understand the mechanism there, but usually what we see in these situations is the mom's immune system gets tuned down a little bit so that it's less likely to reject the fetus.*

*Nicki: Mm-hmm. Okay. Well, hopefully that gives some guidance, Alan, and maybe she gives that a try and eliminates the gluten and the wheat.*

*Robb: And again, like always, whatever you do, whether it works or doesn't work, we'd love to hear a follow-up. It really means a lot when folks follow up with this, even if we get a strike.*

*Nicki: Even if it doesn't work.*

*Robb: Yeah, it's another data point and helps us kind of refine the messaging.*

*Nicki: Mm-hmm. Okay, final question this week is from Richard on EGFR results while on a high protein diet. He writes, "I went to the doctor for a full feeling in my throat that was affecting my voice. Nothing was found, but some of the blood work results have me a little worried. My creatinine was 1.3, total bilirubin 2.1. GFR, which is glomerular filtration rate of 60. Should I be concerned with high meat intake? I follow a ketovore diet that averages less than 20 grams of carbs per day. Protein falls between 150 and 250 grams per day. The day of the test, I had about a pound of meat for breakfast at 6:00 AM and nothing else before the blood work at 2:00 PM. The doctor didn't express any concern over the results, but a GFR of 60 is kidney disease, according to all the charts on the web. I'm going to get retested, but I'm wondering if my diet makes these tests unreliable. How would you prepare for the second test to ensure that the results are accurate?"*

*Robb: Man, I think this is... Richard, I think that you're spot on that that really significant protein bolus can affect GFR, but it's worth noting it's this transient effect because the kidneys are tasked with reabsorbing this protein instead of ideally not excreting it in the urine. And this is one of the signs of overt kidney disease that we get protein spill over into the urine. This has been really well studied, and Loren Cordain did a lot of good work on this stuff. High protein diets actually improving kidney function, broadly speaking. And in this situation of a*

*overt kidney disease state, lower protein can kind of kick the can on that situation. But here again, this is where a modest, possibly even lower protein diet, which I don't know how big Richard is, so that would've been helpful to know.*

*Nicki: I'm assuming he's maybe around... He would eat 150 to 250 grams of protein per day, so he's probably maybe 200 pounds, like 180.*

*Robb: Maybe. Yeah, yeah, yeah.*

*Nicki: Somewhere in there if he's-*

*Robb: We're guessing, though, but there are good studies both in humans and animals showing improved kidney function in diseased kidney patients using a ketogenic diet. There were first theory papers and then actual clinical interventions. So this is something that, again, one of the kind of weird hip fakes of medicine, because in diseased kidneys we see protein spillover become a problem, and also the potassium ironically, which you get a lot of potassium out of protein-rich foods, both of those end up being problematic in the diseased kidney, then there was an assumption that just high protein intake caused that situation. It's just simply not the case.*

*The literature's quite good on that, and there's probably been later stuff, but if you look up Loren Cordain protein kidney function, he did some remarkable research on that, and it's going to be 10, maybe even 15 years old at this point, but very well done, very well cited. So I do think, though, that when we think about the kinetics of protein digestion, absorption, reabsorption at the kidney level, that could easily skew that GFR into a direction that makes it look kind of pathological. But again, we're seeing kind of a snapshot of something that should be best viewed over days, weeks, and months.*

*Nicki: So if he was to get retested, would you not-*

*Robb: I would just fast that day.*

*Nicki: Fast that day. Okay.*

*Robb: I would just fast that day.*

*Nicki: So just have his last meal by 7:00 PM.*

*Robb: Previous evening.*

*Nicki: And then...*

*Robb: Yep. And then if you don't want to fast that long, get the blood... He got his blood taken at 2:00, try to make it 8:00 in the morning or something.*

*Nicki: At 2:00 PM. Make your appointment in the morning. Yeah, yeah. Okay.*

*Cool. All right. I think that is our final question for this week. Any closing thoughts, hubs?*

*Robb: Nope. I wish I had something pithy and knowledgeable. I guess two things, this ketogenic diet as it relates to type one diabetics, and again, high protein diets and kidney disease, it's totally reasonable for folks to raise questions about this. But then when you've got answer after answer after answer, that's like, "This is not only not a cause, this may be a solution to the problem that you're concerned about," we got to step our game up. And I try not to be too evangelical about this stuff, but people die from this mismanagement. There was... I just posted on Instagram an article, there was a drug that made it through all the way through all of the FDA approvals, and it was supposed to be treating this certain type of degenerative eye disease. And in a number of people who were taking it, it caused them to become blind.*

*Nicki: Wow.*

*Robb: And there's a whole interesting story to unpack with all of that, like how did this drug make it through the gauntlet of FDA regulations? Which there's actually a great book, oh gosh, it's from the Cato Institute. Healthy Competition. Kind of takes a little bit of a market-based orientation on healthcare and suggests that the FDA should be done away with, and there's much more direct and reasonable ways to vet different drugs, but there could be a lot going on with that drug. Maybe it works really, really, really well in some people and significantly less well in other people. Well, we need to screen for that, and we need to know what that story is. It's also possible like we saw with a lot of the Covid stuff, and then you start digging in deeper into general pharmaceutical trials. The pharma folks, when people start having adverse events, they just kick them out of the trial to get this thing rammed through. And this is just bullshit. It's like, how can you allow for this stuff? There should not be the ability to select-*

*Nicki: Once you're in the trial, you're in the trial, no matter what.*

*Robb: Yeah, and if-*

*Nicki: I mean, if you have an adversary event, you don't need to continue taking the medication, but you are documented as having an adverse event. And that data is... It needs to be on the blockchain so nobody can-*

*Robb: Exactly.*

*Nicki: ...Nobody can... It's visible to everybody.*

*Robb: Yeah. So it's interesting in that this drug made it through all the way through all the vetting, and then it got out to the broader audience and it's really hurting some people. And so now I think that they're pulling it. But I think back to my... I think I've talked about this in previous episodes, my dad used Vioxx, which was this anti-inflammatory. It was terrible for people with regards to*

*cardiovascular disease, but he had been on it for years. And again, you never know. My dad was diabetic. He had had multiple amputations. He was a smoker. I mean, the last 20 years of his life, every day was like borrowed time. In my mind, he could've gone at literally any time. He was on a laundry list of different medications. But the family doctor was out of town, my dad went in for some reason. The guy saw that he was on Vioxx, took him off Vioxx, put him on a different "safer anti-inflammatory." My dad was dead two days later from a heart attack.*

*No idea if that was the cause, but my dad ended up obtaining remarkable benefit with regards to pain relief being on Vioxx. And I think for him, it was kind of one of these things where he's like, "I'm a smoker. I'm a diabetic. I'm probably going to die of a heart attack. But I'm not in constant pain, so this thing's kind of a win for me." And I think that he and our family docket actually had some conversations around that. But you change these things up, and I'm not too sure what my point is now, other than, again, I'm just beating the ketogenic diet bandwagon here, for this type of degenerative eye disease, this type of retinopathy, haven't been human trials, but there have been mouse trials that show remarkable reversal and prevention of this type of retinopathy with a lower carb ketogenic diet.*

*So we've got a nutritional intervention that works. It has some very well-mapped and understood risk profiles. It's not 100% the right thing for everybody, but God damn. It does not cause blindness, overtly. And we still have that challenge of getting people to change their diets and lifestyle. It's a non-trivial thing. But the point that I made in the Instagram post is just that the main products that come out of pharma right now, other than vaccines, and that's a whole other topic, but they address metabolic issues. But metabolic issues are fundamentally so complex.*

*Nicki: It's like Whac-a-Mole.*

*Robb: It is completely Whac-A-Mole. You will never address things... And man, I'm as optimistic about the future and all this stuff, but these complex systems of biology and economics and ecology and everything, and you think that you're just going to go in and do this one little targeted intervention and you're just going to get this magic is foolhardy.*

*It's simply not going to work. And so it's this thing again, where we really do have to just knuckle down and push for these comprehensive diet and lifestyle changes. And again, not everybody's going to be willing to do it.*

*Nicki: But some will be.*

*Robb: But some will be, and that's what we've got to push for because they are, in fact, safe and effective. And we have millions of patient years of data of people doing it. And now, you mentioned the blockchain and stuff like that. We could be aggregating so much and equals one data around this stuff to further prove the*

*safety and efficacy of these interventions in dealing with different things like autoimmune disease, like we mentioned, two or three different autoimmune conditions here, degenerative eye disease, kidney issues. We have a really powerful tool there with lower carb, paleo, nutrient-dense type diets.*

*And it's still a fucking uphill slog to get this stuff out there. I do, in the long run, as the world broadly gets more unhealthy, as unhealthy as the United States, these other healthcare systems are not going to be able to fart around the way that the US does. They can't print money. They can't just kick the can in the same way. Before Covid, right before Covid, we were talking with a small nation state in the Caribbean that their health minister, I had a direct call with, was wanting to try to spin something up like what we did with the renal risk assessment program and some of the work we had done with the Chickasaw, because they are going to be crushed with metabolic disease.*

*The rates of type two diabetes in this Indigenous population is just exploding and they cannot deal with it. There's no way possible that they can deal with this stuff. And so they were really looking to try to get out ahead of that, and I might try to circle back with this person and get something going on. But yeah, that was way more of a thought than what I thought I had on this, but I guess it's kind of validating because, again, I still have some of the echoes and PTSD of... You remember the doctor in Chico, I was invited to speak at-*

*Nicki: The cardiologist?*

*Robb: The cardiologist that was like, "That's the guy that just recommends the all-meat diet," which is kind of funny. At the time I didn't, and more so now I do. But that guy was so unrelenting in this notion that anything... A protein forward approach to eating, minimizing rice and beans and stuff like that, and really paying attention to the glycemic load, that that was just going to be murdering these people. Even though this other cardiologist who had invited me to speak was seeing remarkable improvements in his patients and wanted me to speak there, but the hospital and the nutritional sciences department shut the whole thing down. And I still... I have the Aria Stark list in the back of my head. I'm like, "Those motherfuckers. Someday."*

*Anyway, this is why we keep doing this because there are new people entering the scene all the time. These health issues pop up at every stage of the life cycle. And there are people that are actually willing to do the work necessary to make this change. And it doesn't have to be perfect. Just little incremental changes add up and really matter, and it can save or alter your life.*

*Nicki: Just for today.*

*Robb: Just for today.*

*Nicki: Every day. Yep. All right, folks, thanks for joining us for another episode. We will be back next week. Be sure to check out our show sponsor, LMNT for all*



*your electrolyte needs and pack an extra on a hike that you go on. We've been hearing a lot of accounts of people going on big hikes in national parks and heat stroke, and just lots of cramping and serious situations can occur in those-*

*Robb: Along finding people on the trail that are about ready to get medevaced out.*

*Nicki: Right, right. So it can definitely be handy to have an extra pack on you if you encounter something like that. Stay safe out there. Have a great weekend and we'll be back next week.*

*Robb: Bye, everybody.*

*Nicki: Bye.*