

- Nicki:** It's time to make your health an act of rebellion. We're tackling personalized nutrition, metabolic flexibility, resilient aging, and answering your diet and lifestyle questions. This is the only show with the bold aim to help one million people liberate themselves from the sick care system. You're listening to The Healthy Rebellion Radio.
- Nicki:** 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.
- Nicki:** 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:** Maybe we should just look at each other in the video on the screen instead of at each other.
- Nicki:** That's how you want to kick this show off today?
- Robb:** Yes. New year, new us.
- Nicki:** New year, new us. Here we go. The Healthy Rebellion Radio.
- Robb:** I think I still have pecans in my teeth.
- Nicki:** Do I?
- Robb:** You do.
- Nicki:** Excellent, thanks. You're supposed to let me know that before we push record.
- Robb:** We try not to look at each other before that. You're good now.
- Nicki:** I'm good?
- Robb:** You're good now.
- Nicki:** Okay. Hey, everyone.
- Robb:** Howdy, folks.
- Nicki:** Good morning.
- Robb:** Welcome to 2021.
- Nicki:** '21. Yes.
- Robb:** Literally never thought I would live this long. And then here I am.
- Nicki:** You're going to turn 49 in a few weeks.
- Robb:** I'm going to turn 49 soon.
- Nicki:** Yeah.

- Robb:** I'm working on my yearly training and chow update and that will be exclusive to The Healthy Rebellion. So if you want to know if I'm on TRT and if I am, how much and when and how, then you got to sign up. No more freebies. Fucking Freddie Freeloaders.
- Nicki:** This isn't a salty talk, hubs.
- Robb:** That's usually pretty popular. We have a Rebel Reset rolling.
- Nicki:** Well, we just are wrapping up our seven-day cold shower challenge. So that has been super fun. A lot of people with some revelations and aha moments standing under the cold showers.
- Robb:** My aha is cold shower suck.
- Nicki:** It was kind of funny though. We had one member of The Health Rebellion community which I thought this was kind of genius, Nick, he said, "Day three done. I took my meat probe into the shower with me. My wife had some funny looks for me. It was 61 degrees and I made it for two minutes and 29 seconds. Much easier today, I found my mind wandering with thoughts instead of #UCK today. That was pretty funny.
- Robb:** Pretty smart.
- Nicki:** And then in the live chat that we had for the cold shower reset, Sybil mentioned that she was singing Amazing Grace while doing her cold shower and then there was this long stream of chats about which songs would be better, Nirvana, Coldplay. Squachi I think said that he thinks the best song to sing during a cold shower would be The Lion King theme song which...
- Robb:** That could work.
- Nicki:** (singing) Something like that. Or Hakuna Matata. Everybody loves that one.
- Robb:** I don't.
- Nicki:** You don't?
- Robb:** I'm just channeling our youngest who's a contrarian about everything.
- Nicki:** Yes, she is indeed.
- Robb:** Yeah.
- Nicki:** Yeah. Let's see. What else? Our Rebel Reset kicks off next Friday on January 15th. We have our kickoff call then we start the seven day carb test which starts on the 18th. That's optional for folks who want to see how they respond to certain sources of carbohydrates and amounts.
- Robb:** And again, we're kind of orienting that at the front because many people enter the these things eating more of a standard mixed diet. So let's just test your carb tolerance then instead of typically people go low carb and then we've got to increase their carbs to then test it.
- Nicki:** You have to test it.

- Robb:** In the last two times or the last-
- Nicki:** Last time was the first time that we did it.
- Robb:** Was the first time we did this. And it was really slick. I don't know why I didn't do it this way with the book and why we didn't do it previously, but there were pluses and minuses on both sides. It was really eye opening where a good number of people were like, "Damn, I do not do well with carbs." And then other people were kind of like, "I seem to do better than what I thought and they actually ended up doing more of a modest high carb lower fat Paleo-ish type thing."
- Robb:** I think that that's cool because clearly, I don't know, 70, 80% of people likely do better on the lower carb side of things, but not everybody. Instead of making it a one size fit all, let's do a little bit of testing and look into that.
- Nicki:** Yeah.
- Robb:** What are you grinning about?
- Nicki:** No.
- Robb:** I think you're about ready to lose your shit. Is there something particularly hilarious about me this morning?
- Nicki:** No, no.
- Robb:** Do I have like a giant booger hanging out of my nose?
- Nicki:** Not today.
- Robb:** Today?
- Nicki:** In other days you have. Let's see here. Okay. So after the seven day carb test, we jump into the 30-day reset and we've got folks who have been with us since the beginning since the inception of The Healthy Rebellion. They've done all of the resets with us. They look forward to them every time. Sometimes they shift their focus. Folks, usually choose a primary commitment or primary area of their health and lifestyle that they're working on, be that food or body recomposition or sleep, and whatnot eliminating problematic foods, that kind of thing. I'm definitely cutting out dairy. The holiday keto cheesecake that I made, it has not done wonders for my skin. So that's definitely on my-
- Robb:** Fair story.
- Nicki:** ... list. So that's a ton of fun. So if you want to get in on that, make sure you join before the kickoff. Well, you can join that week of the carb test. You can still join but you have to join before, I think it's the 24th. I don't have the calendar up in front of me, but I believe that's the date. So jump in, join us. Anything else before we kick this show off?
- Robb:** I don't think so.
- Nicki:** Okay. What do you have for our news topic today?
- Robb:** My good friend, Pedro Bastos forwarded this to me. Over 100 scientists, doctors and leading authorities call for increased vitamin D use to combat COVID-19. The scientific

evidence indicates that vitamin D reduces infections and deaths. So we've got a link to that. I'm not sure...

**Nicki:** That title sums it up.

**Robb:** That title kind of sums it up. We are in very interesting times so it'll see if this thing gets censored or suppressed. This is just such a fascinating time where even... This is totally evidence-based, although evidence-based doesn't mean that it's the truth because evidence-based, you can have two different bases of evidence vegan and paleo with being primary examples and have people citing references and studies and drawing different conclusions.

**Robb:** Not infrequently people will look at the same data and draw different conclusions. But the point being here is that there is a growing body of folks who are making the case that adequate vitamin D levels could really be a game changer in this and maybe we should ducking do something about it. We have these-

**Nicki:** It's a pretty simple intervention.

**Robb:** It's as easy as it could be. It is well established to improve all kinds of other disease potentialities. And heck, let's maybe encourage people to lose that extra 20, 50, 100 pounds that they have and really actually make that a public health poll.

**Nicki:** Call to action.

**Robb:** Call to action JFK style. Like in 10 years we will send people to the moon and bring them back type thing.

**Nicki:** In 10 years, America will be the healthiest country on the planet.

**Robb:** Whatever side of the political divide you live on, if you have a leadership that doesn't make that a priority one because if you think that the vaccine is going to come in and make everything 100% perfect, you're a fool. I will mince no words around that. It's probably going to have great efficacy, great benefit. In some circumstances, it will be an abject failure. In other circumstances, it will not be a one-size-fits-all fix for this stuff. As much as we just love in kind for those... In this world where everything gets fixed immediately and you have shit delivered to your doorstep within 24 hours of ordering it, we have this expectation that complex problems just get solved immediately.

**Nicki:** And imagine all of the other good and positive knock-on effects that would come from if we were... And I don't even want to just say the United States, but if we were the healthiest we have ever been in the last 50 years as people on this planet. If people got significantly more metabolically healthy, like mental health would improve.

**Robb:** Did I do a salty talk on the Medicare?

**Nicki:** Yes.

**Robb:** I did do one. I mean, the implosion of medicare and the destruction of the economic and financial systems of the US will be caused by our healthcare system or not if we decide to change tack on this. In this time where we've got all kinds of social and political upheaval and whatnot, some people are feeling smug. Some people are feeling bugged. But if the powers that be like if Dr. Fauci, and Big Daddy, Joe and Kamala, and everybody

else doesn't get in and make our public health a number one priority, and hopefully not try to turn everybody into planet of the vegans in the process or maybe create some-

**Nicki:** That's probably the direction it's going.

**Robb:** Even if they did that, even if they said everybody's got to be vegan, but we have to do it for public health for COVID, for all these other things, at least there's enough truth there that people are like, "Oh, well, I can not ignore this anymore. I mean, people still can, but the fact that there's not a message around that is as... Well, that silence is violence."

**Nicki:** I don't know. You might get what you wish for and it might not be...

**Robb:** I would just be impressed if public health was actually framing just like this solution.

**Nicki:** They're not doing it for public health though. It'll be framed for the solution to climate change is the problem.

**Robb:** Could be, could be.

**Nicki:** And then everybody who does not thrive on a plant-based diet will be sicker than ever. There'll be another reason for people to fight the streets.

**Robb:** It'll just accelerate the implosion of things, so that'll be good. But anyway, it's a great paper. It just came out and I'm intrigued to see what type of censorship it actually experiences. Is this thing going to be allowed to be broadly distributed.

**Nicki:** Shared widely.

**Robb:** Or is this thing going to be ratcheted down from some pimple faced half-geek.

**Nicki:** Fact checked. This has been checked as false.

**Robb:** Right.

**Nicki:** All right. And we'll link to that in the show notes obviously for anybody who wants to check out that full paper.

**Robb:** It's very accessible. It has tons of citations in it. If you're more on to research or public health side, if you're just kind of John Q Public, Jane Q Public, Juana Q. Public, then it's very accessible in that regard.

**Nicki:** Okay. I started thinking about other names in Italian that could start with J, I could throw in there but that's my literal stream of consciousness. But we'll skip that part. We'll go on to our T-shirt review winner this week. It goes to Steven Cann. Courage. Thank you very much. He says, "It's so disturbing. It seems as though we have entered the age of anti-science. The Great Barrington Declaration is a great example of this and thank you for having the courage to speak out. John Ioannidis, perhaps the world's most cited and credible scientist was censored from the World Health Organization website. Despicable."

**Nicki:** "He authored a study that was peer reviewed and showed a very low mortality rate for people under 70, .05% less than the seasonal flu. Ivor Cummings censored begging for an open debate. Your reputation is strengthened by this, not weakened. Truth is

survival. Please keep telling the truth on all the topics you discuss. Thank you very much."

**Robb:** Thank you.

**Nicki:** So Steven Cann, thank you. Send us an email to hello@robbwolf.com with your T-shirt size and your mailing address and we'll send you a Healthy Rebellion Radio T-shirt.

**Robb:** And I'm telling everybody in 2021 to order one size too small so that we all look jacked.

**Nicki:** There we go.

**Robb:** There you go.

**Nicki:** All righty. The Healthy Rebellion Radio sponsored by our salty AF electrolyte company, LMNT. That's spelled L-M-N-T. We just had one of our Healthy Rebellion community members, Christy post in the Rebellion what I think is just about a perfect ad. So I figured I would read it here.

**Nicki:** She says, "Did LMNT just ruin my marriage?" Okay, so that was clickbait and I'm a terrible human being for that, but here is the story. "My husband of 15 years and I are very competitive. It's really stupid, but it is what it is. I started using LMNT about six months ago. He decided he was going to find some better electrolytes. I have watched him go through about eight different types. He keeps searching and searching, but I didn't see him sticking to any one type."

**Nicki:** "The other day, I noticed almost all my LMNT packets were gone. He confessed to me that there just isn't any other brand out there that is tastier, easier to use or cleaner than LMNT. And I know it wasn't easy for him to admit defeat. But he drank all my packets and I ran out for the first time. I was so not happy and I felt so lost. Thank goodness my order came in only three days from the time I put it in. So the moral? Don't mess with my electrolytes and now he knows they are the best."

**Robb:** So this was unsolicited.

**Nicki:** Unsolicited.

**Robb:** We were just tickled to get it.

**Nicki:** Yeah. It was really funny. So if you haven't tried LMNT, listen to what Christy just said. Her husband has searched and searched and searched. So now is the time to try it. Now through January 31st of 2021, you can get a free eight-count sample pack. Just pay shipping which comes to just \$5 for folks in the United States and you'll get to try two sticks of each citrus salt, raspberry salt, orange salt and raw unflavored. Robb, of those four, which is your favorite?

**Robb:** I love orange, second raspberry, and at this point I only do the citrus in margarita bases. And then the-

**Nicki:** You like to mix the... You've been doing... We have like a big... How many ounces is that pitcher thing?

**Robb:** It's like 80 ounces total.

- Nicki:** Okay. And you're mixing a raspberry and orange plus the raw.
- Robb:** Orange and the raw. And that turns out great for me.
- Nicki:** So that's also a thing you can do. You can mix them and play with the flavor combinations.
- Robb:** Yup.
- Nicki:** Just go to drinklmnt.com/robb. That will take you directly to the page with a sample pack and free plus shipping offer. That's D-R-I-N-K-L-M-N-T .com/ R-O-B-B. And remember, that offer is good through January 31st of this month.
- Robb:** Awesome.
- Nicki:** Cool. All right. Questions. Our first one is from Valerie on coffee and electrolytes. She says, "Hey, Robb and Nicki. I read on the web that coffee depletes or can deplete electrolytes. Is this accurate and if so is it because it's a diuretic? Thanks for all you do. I've been following you since 2013 when I first read the paleo solution and it cured my Crohn's disease. Have a good one."
- Robb:** That's awesome. With any type of habituation to caffeine intake, that diuretic effect basically goes away. The body adapts to it very quickly. So if you're not used to consuming caffeine and then you consume it, you will get a pretty potent diuretic effect, but I don't know how many days. Three, four, five days of use and that diuretic effect largely goes away.
- Robb:** I do think that the way that we generally consume beverages can lead to electrolyte deficiencies though. My cup of coffee like whenever I read the studies that people were consuming eight cups of coffee a day and they were having all these benefits, I was like, "Damn, that's a lot of coffee." But I've taken any container that I have regardless of size to be a cup and it's in fact like a eight ounce cup and my cups are typically 16 ounces.
- Robb:** So the way that folks consume liquids and beverages in general, I do think could be contributing to this kind of electrolyte imbalance particularly in inadequate sodium. So I do think it could be a problem from that perspective, but if you drink coffee or tea or what have you with any frequency, that's not the driver on this stuff.
- Nicki:** Okay. Cool. Our next question is from Levi on cancer and things. He says, "Good day dream team, Robb and Nicki. I was recently informed through several CT scans, PET scans and MRI scans that my cancer has returned, spreading into my brain and into my lungs. In 2015, I was diagnosed with a stage 3 melanoma cancer reaching into my lymph nodes and in my neck. The tissue site and the lymph nodes were removed and I was cancer free."
- Nicki:** "However, last week after days of excruciating headaches, I was led to the ER by my better half my wife. I'm about to embark on several biopsies of my lungs, more scans to view my bone marrow, the beginning of radiation and immunotherapy and a ton of prescriptions, narcotics, steroids, anti-seizure, et cetera. Though I'm going to take the advice and opinions of the team of doctors on my case, I've already become overwhelmed with the amount of information presented by them and other friends and family."

- Nicki:** "My question is really centered on general recommendations for diet and pain management. I hear to take CBD and turmeric, and DHA, to eat no sugar, to try juicing, et cetera. I'm skeptical of any friend advice, but also do not want to blindly walk into radiation and immunotherapy with only Norco and steroids to get by. I'm usually very active working out five days per week, keeping a largely animal based diet, staying low carb. However, since this has begun, I'm lethargic, easily off balance and sedentary. Thus my movement has been limited to couchsurfing. Also, I am 31 and plan to have a long life. So any recommendations that you can provide that are short-term and long-term will be appreciated and implemented. Sorry for the rambling, but I think you get the gist. You're rock stars and I will keep being one of the six listeners every week."
- Robb:** Oh, Levi, really sorry to hear this. And please keep us updated. This is such an unknown area and it's kind of frustrating because I think... So I'm sharing a link here from Peter Attia's website where he reviewed a study on fasting cancer. Now this was in rodents and it's a really worthwhile thing to read because the mice were fasted overnight, which in human analog could be a week to two weeks of fasting. So like a 24-hour fasting in a mouse is a very different thing than in a human.
- Robb:** And then these mice were exposed to what normally would have been easily a lethal dose of radiation. They had a control group which was not fasted than the fasted group. The control group all died in pretty quick order as would be expected with the radiation dose they received. None of the fasted mice died from the event and lived on to reasonably normal existence.
- Robb:** There was no over tissue damage to... I believe they were looking at colon cancer, intestinal mucosa and whatnot. It was also I believe in a separate study just looked at what the effect of that radiation dose was on abnormal cells, cancer cells and what fasting and/or ketosis seem to do is make more resilient the normal cells and make less resilient, the cancer cells.
- Robb:** This is not a 100% uniform story or at least oftentimes ketosis and fasting is presented from the whole glucose management story and like the Warburg Effect. There's certain circumstances where it appears that ketosis and or fasting can embolden certain types of cancers. The thing that in my mind that isn't very well understood is even if fasting or ketosis ramps up a certain type of cancer like melanomas tend to be the types of cancer that can be emboldened by fasting, it also though does appear to make the individual more...
- Robb:** The parts of the individual we want to keep versus the parts that we would like to move along seems to make it more resilient. So some types of cancer seem to be directly negatively impacted by fasting or ketosis. It makes it harder for them to survive. Some are neutral, some are actually emboldened, but then mixed into that whole story is the reality that it does appear to make organisms more resilient.
- Robb:** So what does that do in this treatment story? It appears that fasting or ketosis mitigates the nausea associated with chemotherapy in particular. It seems to improve the resilience of people to the chemotherapy effects. Man, it's a really unknown thing right now and the thing that really freaks out doctors and I think rightfully so is that one of the hallmarks of cancer is cachexia, this massive wasting of muscle mass but tissue in general and people lose their appetite. So they really don't like ketosis.
- Nicki:** Don't want to encourage fasting.

- Robb:** And they don't like fasting. Man, it's such a quagmire and I think that within five years or 10 years, we're going to have some really good answers to this. I suspect that fasting and hyperbaric oxygen therapy and some things that naturally... I don't want to say naturally, but that are well regulated within our physiology to promote apoptosis and the destruction of abnormal cells.
- Robb:** I think that we're going to understand a lot more about that, about how to roll that stuff out. Things like turmeric and high-dose antioxidants can be hit and miss because some of the things that these chemotherapies and also what radiation therapy is trying to do is increase reactive oxygen species because cancer doesn't deal with reactive oxygen species as well as normal tissues. And the danger with turmeric is it's a potent antioxidant.
- Robb:** But then the flip side of that, so taking vitamin C, high dose vitamin C in the context of normal chemotherapy could be problematic or radiation therapy because it may minimize the amount of reactive oxygen species. But then the flip side of that is doing IV vitamin C in a hyperbaric oxygen scenario increases reactive oxygen species because something as an antioxidant or a pro-oxidant depending on the situation, it's all relative to everything else.
- Robb:** So this is where this stuff gets really complex and I am not an expert on it, but I follow it reasonably closely. But it's where under one circumstance vitamin C could be a great adjunctive therapy, but it needs to be used properly. And you cannot get effective doses orally. You don't absorb it. You end up with a diarrhea and gastrointestinal issues and so it has to be intravenous.
- Robb:** Usually in a hyperbaric oxygen environment tends to kind of prime this thing to make it work better. So Levi, I would read this piece and I think that the notion of fasting in this context and like how many podcasts have we done where I'm beating up on fasting where I'm really not a big fan of it? I think that this is an area where like a medical intervention specific to this for a really you know unique and delineated purpose. This is where I think that fasting could have some real utility. But we just don't know and like as with everything. There will be trade-offs if Levi is experiencing huge decreases in appetite and he's just having a hard time eating, do you just run with that and try to really get as much juice out of those gnarly chemotherapy radiation therapy interventions as you can? It's like I don't want to eat anyway, so you just don't. Instead of sticking in just enough to keep you out of that fasted state and avoid potentially getting some of the benefit, I don't know.
- Nicki:** You did a podcast last year I think with Scotty Nelson.
- Robb:** Yes.
- Nicki:** That might be a good one to listen to.
- Robb:** Yeah. We could definitely put that one in. That's the CHPSA hospitals. And they do some really interesting stuff. It happens outside the United States and some people think that that's horrible because it doesn't have oversight. Some people think it's great because it doesn't have oversight. It kind of is cutting edges as you want to be. They're more willing to entertain those types of things. It empowers the individual and those people, they're in a business predicated on their success. And in the day of the internet, it's kind of hard to hide bad results. It's actually pretty easy to hide good results now because you don't have to get censored off of it. But that's a really good point and

so we can put a link to that in the show notes as well just as an option to kind of look around that stuff.

**Nicki:** Go down that rabbit hole.

**Robb:** And also I do appreciate it like people just get absolutely buried with information around this and at the end of the day, I would maybe set aside a couple of days, a week to do some research, pick your path and then just stick with it. It's like looking at houses or something you want to buy them. You can just keep looking and looking and looking and-

**Nicki:** There's no end.

**Robb:** There's no end.

**Nicki:** And you've got to live your life too.

**Robb:** Yeah. You have to live your life. So I could make the case to carve out some time, do some research, pick a path that makes sense to you. And clearly you need to communicate all this with your docs and hopefully everybody's on that same page with this.

**Nicki:** Because he asks also about taking CBD for pain management.

**Robb:** So CBD seems to have some benefit both from an anti-cancer perspective and also from a pain management perspective. I don't see it as being problematic from that antioxidant unlike turmeric or like high-dose vitamin C, but again, this is some stuff that I would run by your doc. I think CBD has been used enough now that there might be some data that in this suite of chemotherapeutics, it works better and this one it may not be as beneficial.

**Robb:** So I mean just have really good communication and advocate for yourself. At the end of the day, those folks are there for you and so if you feel really strongly. And again, try to make it as evidence-based as you can, but this is your process. So I would definitely advocate for yourself strongly even though sometimes the docs really want to push back because they want to do right by people clearly. And also, they're terrified by litigation. As soon as they take one step outside of standard of care, it is their ass on the line.

**Robb:** Any doctor that's willing to do a little entertaining of non-formulaic treatments of any kind, they're being pretty ballsy in this day and age because it just gets worse and worse and worse where people willing to take a little bit of risk or entertain things that have not yet become part of the mainstream canon, CBD is a good example. It's becoming much more mainstream. 10 years ago fish oil was still this hocus-pocus thing and now there's an FDA approved variety of it because it ended up bearing itself out that it had legit medical therapeutic benefits.

**Nicki:** Levi, please keep us posted. Let us know how you're doing.

**Robb:** Yeah, please do.

**Nicki:** Okay. Our next question is from Felipa on lipids in black people. She says, "Can you talk a bit about the differences in interpretation of lipid panels for black people? I understand that triglycerides are normally lower than white people and so the triglyceride HDL ratio is not a good estimate of insulin resistance. Is the LPIR score still as

valid as a health measure in the black population? What are the most useful markers on a standard lipid panel if you cannot get an LPIR? Thanks for all your wisdom."

- Robb:** Really a good question and the research that I've done, the LPIR when it was developed, it was based off of the mesa data which is this massive and ongoing study. They did do a good job including different ethnicities. They had some gender differences with it and that largely gets adjusted within the context of the LPIR score. So I do think that that's a really solid benchmark to use in this case. In the clinic in Reno that we were a part of when we lived there, they definitely adjusted different benchmarks, different cut points for African-Americans differently than they did for Caucasian or even Hispanic populations.
- Robb:** It was evidence-based, but the case was made that for a northern European Caucasian with a blood glucose of X and then African-American same blood glucose, same body mass index, same gender, same age that they were still at a higher likelihood of say type-2 diabetes or cardiovascular disease complications at the same blood glucose level.
- Robb:** So that's what we based a lot of our information on. Then the link that I have here is, are there clinical implications of racial differences in A1C. Yes, to not consider that is to do great harm and then I'm going to read a bit out of this. Studies that have compared A1C levels by race have consistently demonstrated higher A1C levels than African-Americans versus whites. These racial differences in A1C have not been explained by measured differences in glycemia, socio-demographic factors, clinical factors, access to care or quality of care.
- Robb:** Recently a number of non-glycemic factors and several genetic polymorphisms that operate through non-glycemic mechanisms have been associated with A1C. Their distributions across racial groups and their impact on hemoglobin glycation need to be systematically explored. Thus on the basis of evidence for racial differences for A1C, current clinical guidelines from the American Diabetes Association state is important to take race ethnicity into consideration when using the A1C to diagnose diabetes. However, it is not clear from the guidelines how this recommendation might be actualized. So the critical question is not whether racial differences in A1C exist between African-Americans and whites. The important question is whether the observed differences in A1C's level are clinically meaningful.
- Robb:** And what this paper does, the reason why I linked to this one, it discusses a lot of the science but then it has a counterpoint back and forth between two scientists one arguing that the A1C deltas, the differences are clinically relevant and need to be treated to and another person arguing, "No, they're not." So as an example for some people their hemoglobin A1C may be elevated simply because they're eating a low-carb diet and their red blood cells tend to live longer on a low-carb diet. And this is why we will sometimes recommend that people use fructosamine as a way to look at total... Not glycemic load but glycation load in a way that's separate from A1C.
- Robb:** So what the case that some of these folks are making is that within African-American populations, there are reasons outside of blood sugar control that are leading to the elevated A1C. So maybe we shouldn't read too deeply into that. I think the important thing here is that we need to be able to have discussions around this topic. I think I mentioned this on a previous podcast and maybe this is what spurred this question, but we were presenting our material to a company and we there was a question raised about, "Will our racial and ethnic considerations be factored in?" And we said, "Yes, we have different cut points for African-Americans in particular and also there are some differences within the cut points used in Hispanic populations."

**Robb:** And this really upset some of the people that I was presenting this to. They said, "Well, why do you do that?" I said, "Because at those same levels from the evidence-based material that we are looking at, if an African-American has certain numbers that they may be at a higher risk than a Caucasian individual. So we need to adjust those so that our treatment goals reflect the increased risk there. And this person was still very unhappy with this. It was presented almost as if there was some racist intent here that I was being a meanie suggesting that we needed more more stringent treatment guidelines.

**Robb:** I asked the person, "Would you prefer that we not address this and these people get sick and die?" Because I'm right very smooth with that. So anyway, we are in this kind of crazy world where I think we are far more similar than we are different on so many levels, but there are differences. This is why when you do any type of a health intake form, they ask do you have a family history of, because that is a massive factor. When folks go through the precision health reports testing that we've been recommending, if you have a family history of cardiovascular disease, you are immediately assumed to be high risk.

**Robb:** Then you may work your way out of high risk with other scrutinizing, but it is such a high correlation because there are some major genetic factors that play into this. And clearly diet and lifestyle are the big modifiers in this whole story, but this is where if we get ourselves into a situation where we can no longer have safe, reasonable discussions. And if every single thing is couched that you're being racist because you're trying to flush out some distinctions that actually are relevant to this situation. And the paper that I linked to here is actually contrary to the position that we've taken in a clinical setting, at least part of it.

**Robb:** So I'm presenting something that both supports what we are doing clinically and it offers a counterpoint that's like, "No, you maybe don't need to adjust those things quite the way that you're doing." I don't know entirely what the story is and by golly, that's what scientists... But again, I really appreciate Felipa asking this question and hopefully this is valuable. Again, to circle back, I think the LPIR score is a very solid benchmark because racial, ethnic, gender-based information has been baked into the cake of that algorithm, the way that it's generated.

**Robb:** Then I would also encourage people to read this piece, this counterpoint and see how these scientists go through what is just monumental amounts of information trying to sort this out. And again, nobody in this story wants to see people sicker and more harmed. Who benefits from that, at this point? But it's also not entirely clear all the time what the real story is in this. It just tends to get more and more nuanced, the more granular you get into it.

**Nicki:** Okay.

**Robb:** I'm sure that will make somebody mad.

**Nicki:** Let's see. I was going to ask one other thing because she asked if you cannot get an LPIR, what are the most useful markers on a standard panel? I mean, we could link to the ones that you recommend in Wired to Eat.

**Robb:** We could definitely do that, but this is a good example of where the A1C is an important. And she mentions the triglyceride levels. There are differences there that haven't been well adjusted for...

- Nicki:** Gotcha.
- Robb:** So I would encourage folks to get the LPIR if this is of concern. Because a bunch of this stuff is up in the air whereas the LPIR score has been addressed with these racial and ethnic considerations baked in the cake.
- Nicki:** Gotcha. Okay.
- Robb:** So I'm not ignoring. I guess I kind of did, but it's just we go right back to this counterpoint here with the A1C where it needs...
- Nicki:** Gotcha. Okay. I just wanted to flush that out. Okay. Let's see here. It's time for The Healthy Rebellion Radio trivia. Our episode sponsor drink, LMNT is giving a box of LMNT recharge electrolytes to three lucky winners selected at random who answer the following question correctly and you can potentially even save your marriage, if you're married just like Christy. Robb, so you said earlier that The Lion King is not a movie that you enjoy. So I'm curious which of the animated kids movies from either Disney or Pixar is your favorite?
- Robb:** Well, there's some good latitude on that. I mean, there's like The Clone Wars.
- Nicki:** Now, the Disney pop Star Wars?
- Robb:** Yeah.
- Nicki:** Let's go in like the '90s and/or 2000s, early 2000s. Like Lion King era-esque.
- Robb:** Mulan.
- Nicki:** I don't know when that came out.
- Robb:** Well, it's still like pen and paper animated. It's pre Frozen even. I'll go with Mulan.
- Nicki:** Okay. That is the answer to this week's trivia. To play, go to [robbwolf.com/trivia](http://robbwolf.com/trivia) and enter your answer and we'll randomly select three people with the correct answer to win a box of electrolytes from drink LMNT. The cut off to answer this week's trivia and be eligible to win is Thursday, January 14th at midnight and winners will be notified via email and also on Instagram. This is open to residents of the US only.
- Nicki:** Our next question comes from Aidan on carb intake. He says, "Hey, Robb, I just read Wired to Eat and loved it. I'm pretty active and I've been doing a ketogenic diet for the past six months and felt great at first and then fell into some electrolyte issues. I then started to implement a targeted approach with 50 grams of carbs around my workouts with a mix of glucose and fructose. However, I still feel low in energy. I've recently upped my carbs to 150 to 200 grams of carbs and I feel a little bit better. I listened to Chris Masterjohn recently and he said that even a sedentary person needs 200 grams of carbs to fuel the brain. So I'm a bit confused how I should tackle this and whether I should change to high carb as you have said in previous videos where people go wrong is where they're in the middle, not high carb or high fat and it would be beneficial."
- Nicki:** I just have to interrupt. There is no punctuation in this whole thing like no period so I'm reading it as if there is punctuation. Okay. He said, "You've said in previous videos where people go wrong is where they're in the middle, not high carb or high fat and if it would

be beneficial to specialize in one fuel source. However, I know how important fats are for health. Thanks."

**Robb:** That is a lot, huh? Aidan... Man, there's a... Fats are important for health, but it doesn't mean that you have to have a completely fat-based metabolism to be healthy. We need enough to be able to better absorb our fat soluble vitamins and improve on that side. The point that Chris makes is interesting. We know that under a ketogenic state people shift a significant amount of the brain's energy needs to ketosis. Doing something more along the lines of... Well, I mean keto gains the way that we recommend things. The Bernstein approach, the way that Ted Naiman recommends this. The way that Mike Eades has been recommending this since the early '90s which is eat a lot of protein, let the protein get trickled out via the liver based off of need and then bypass.

**Robb:** So you're still kind of glucose fueled, but you're not relying on the carbohydrate ups and downs. And the insulin kind of story that goes along with that. So there's just a lot of different ways to slice and dice this stuff. Some people do well in that middle ground of a balanced 33 and a third ratio across the board or something close to that. So I would just have to say you've got to get in and tinker and fiddle with this stuff. Definitely as carbohydrate intake increases, folks do need to decrease fat. They need to be a little bit wary of the amount of saturated fat because saturated fat will compromise insulin sensitivity.

**Robb:** Again, this is where doing a base level of some blood work, doing some photos, some hip and waist measurements and whatnot and then trying something for a good three months, rechecking, how do you look? How do you feel? How do you perform? How do the biomarkers under the hood look, the precision health reports people would be a great way to tackle this because it looks at exactly the stuff that I think is germane to this story.

**Robb:** I mean, that's the way I would tackle this. When I see like I got into some electrolyte issues. Well, what does that mean? Were you not taking enough? Did you get some GI problems from trying to be at the electrolyte level that you needed? What electrolytes were you using? Was it mainly potassium based? Were you focusing on sodium?

**Nicki:** And how many are you doing now because if you still feel low energy, that could still be an issue.

**Robb:** It could still be a problem. Yeah, absolutely. It's kind of funny. We co-founded an electrolyte company two days ago. You lay down in bed and you're like, "I feel awful. I didn't have any electrolytes today. I mean, like none."

**Nicki:** I had one. I had a chocolate salt in my coffee, and then normally I would have at least one throughout the day and I didn't-

**Robb:** I don't even think that it was particularly salted food day either.

**Nicki:** No wonder I feel like crap.

**Robb:** So we could [*indiscernible*] with that. I mean, there's a lot of different ways to tackle this. If you want to go back and tinker with lower carb, you just really need to make sure that the electrolytes are on point, then beyond that you may do fine at a mixed level. To Nicki's point, low electrolytes or inadequate electrolytes likely sodium could still be a factor. And if you want to tinker with going higher, by all means do that, but I would

recommend a little bit of blood work and taking some metrics as a baseline to just see how you do.

**Nicki:** All righty. Our final question this week is from Katie on water before bed. "Hi, Robb and Nicki. Thank you so much for all you do in your relentless quest to uncover the truth. Stay on top of science and deliver it in an easily digestible way. Here's what I'm pondering. I've read that it's ideal to stop drinking water after dinner and late into the evening in order to allow the kidneys to rest during sleep as well as to avoid middle of the night bathroom breaks which obviously disrupts sleep. I've also read that needing to pee in the middle of the night can mean that the kidneys are being overly stimulated by their neighbors, the adrenal glands, but that might be another topic altogether."

**Nicki:** "Anyways, in trying to make sure that I'm getting adequate sodium, I salt my food with a pretty heavy hand, but I find it makes me really thirsty in the late evening. I drink one to two LMNTs earlier in the day and I'm wondering should I dial back on the salt at dinner or drink more before bed or just deal with a little thirst. As a side note, if I get thirsty in the evening and go to bed without water I wake up without feeling thirsty. Overall, I feel like my hydration levels are pretty good. Thanks for all you do."

**Robb:** It's funny. There's always so many interesting things in this. One thing is that the kidneys don't rest due to decreased water intake. When you pump blood through your circulation, the blood is getting filtered via the kidneys. I don't know if I need to belabor that point. I mean, part of me is just maybe do a tiny swizzle of water before bed. Peeing before bed can be a sign of prostate issues. If you've got a prostate, it could be a sign of adrenalized state and inadequate electrolytes. Chris Masterjohn did a great piece on that and recommended a salt shot and just a bare minimum of water to get the sodium down.

**Nicki:** We've had a lot of people in The Healthy Rebellion-

**Robb:** Really benefit from that.

**Nicki:** ... benefit from that and say that that stopped their middle of the night bathroom breaks.

**Robb:** And then you have situations like our youngest where they just insist on drinking a lot of water right before bed and then-

**Nicki:** "I'm so thirsty. I don't think I drink any enough water during the day." It's like don't drink a lot because I don't want you to pee the bed. Then her little sip turns into guzzling like half of a glass.

**Robb:** I guess the recommendation here-

**Nicki:** So just from observations of people inside the Health Rebellion community, the salt shot which Chris Masterjohn recommends and we've talked about it on the podcast before, what is it, like a half teaspoon. Some people put a little bit of lemon juice and just two tablespoons of water.

**Robb:** Just the bare minimum to get it dissolved.

**Nicki:** Just dissolve that and shoot it down. So that has worked for some people. Sybil said that that didn't work for her, but she has an LMNT right before bed and that works for her. I don't know if that's because of the-

- Robb:** Well, it's a full gram for one thing.
- Nicki:** Right. And maybe some of the magnesium and whatnot too. "As a side note, if I get thirsty and go to bed without water I wake up without feeling thirsty."
- Robb:** Again, I was thinking just do a little swizzle of water just kind of wet palette.
- Nicki:** Just wet your mouth and then slap on some mouth tape and put the head on the pillow.
- Robb:** Do people remember that?
- Nicki:** The mouth taping?
- Robb:** We talked about it.
- Nicki:** We talked about mouth taping, yeah. We've talked about it in a couple episodes.
- Robb:** But Katie, if you tinker, let us know. It'd be great to hear back on it.
- Nicki:** Yep. Okay, I think that is all for this week's episode. Thank you guys for joining us. Please check out our show sponsor LMNT for your electrolyte needs. Go to [drinkLMNT.com/robb](http://drinkLMNT.com/robb) and grab your LMNT electrolyte sample pack just for the cost of shipping. Again, that's two sticks of citrus salt, raspberry salt, orange salt and raw unflavored. And that's at [D-R-I-N-K-L-M-N-T.com/R-O-B-B](http://D-R-I-N-K-L-M-N-T.com/R-O-B-B) and that offer is good through January 31st of this year 2021. And finally, what are you waiting for if you're not yet a member of The Healthy Rebellion? Our next Rebel Reset starts on the 15th, kicks off on the 15th with the seven-day carb test on the 18th. And the 24th or 25th, whatever that following Monday is the start of the actual 30-day reset. So get in now. We've got a lot of great stuff lined up this year.
- Robb:** People sign up for the resets and they stay for the chats.
- Nicki:** Yeah. They stay for the chats. So join us. Just go to [join.thehealthyrebellion.com](http://join.thehealthyrebellion.com) and we'll see you in there and we'll see you all next week.
- Robb:** Awesome. Bye, everybody.
- Nicki:** Bye, everyone.