

Robb: Top of the morning wife.

Nicki: Welcome back.

Robb: So apparently we've entered our goth phase.

Nicki: Because we're wearing black?

Robb: We're all in black, yeah.

Nicki: I don't think that means anything, other than we have a lot of black.

Robb: So it's correlation, not causation, or something like that? We're getting along great today, by the way.

Nicki: Robb almost tripped and spilled my coffee all over me, it was a near ginormous disaster.

Robb: Just catastrophic. I don't know if I'd call it ginormous, catastrophic.

Nicki: Burning your wife with hot coffee?

Robb: That's catastrophic, not ginormous.

Nicki: All right.

Robb: Shall we sashay from there.

Nicki: Let's jump right into our first question, this week, from Gordon on ATP. He says, do you deal with or see anybody taking the new ATP supplements, Peak ATP. I have seen them a pre workout supplement and also for use with chronic fatigue patients. They also use NADH as an ATP precursor, thanks.

Robb: Yeah, man there's a lot of interesting stuff around this. So different metabolic issues that folks develop like the shifting of the NADH ratios is kind of indicative of kind of the cellular machinery, almost kind of like grinding down. Like they're not producing the same levels of energy that they once did. Interestingly, ketogenic diets seem to help that. Fasting to some degree seems to help kind of reset that whole process. Chris Master John, has a great piece talking about how you don't necessarily want to just throw some of these NAD products down the pie hole because it's all part of an overall process in just supplementing one particular item doesn't always address things.

Robb: There's not a ton of research. Like I poked around examine.com, a couple of other places trying to get a sense of if they've really vetted this stuff out. There's not a ton of material on that. And so in this kind of like precursor, energy story, I would still kind of default to just cheap, good, well researched creatine monohydrate as a beneficial item to use. Even if somebody's a non responder, where they don't really get the performance boost with creatine monohydrate. There's great examples of it improving, lipid levels, of it being neuro protective under hypoxic scenarios. So I could be really comfortable recommending something like creatine monohydrate.

Robb: Some of this other stuff, like the PKTP is basically, they're providing ATP, and I just don't know if it's really going to help that much. I don't know if the ATP survives going through

the gut and then gets put back together on the other side of the gut lumen, does all that stuff get used by microbes in the gut? There's just a lot of different layers to that. So I have very little experience with it. I think it's very early in the story. I think that people are largely chasing symptoms trying to address symptoms instead of underlying issue.

Nicki: Okay. Let's see our next question is from Micheal on multivitamins. He's asking, powder or pill? Micheal says, "If a person chooses to have a multivitamin, is it better in pill form or powder? To drink with water? I ask because fat soluble vitamins are absorbed in the presence of fat? And it would seem drinking a powder, for example, in a liter of water, over several hours, might mean that the vitamins might not be absorbed as well? No fatty meals in between to help absorb said vitamins. Where a pill could be taken with a meal or with a little fat." Thoughts?

Robb: Yeah, I think, there's some ... again quite a few things to consider there. Loren Cordain had an interesting paper, that I don't know that he ever finished, or what happened with it. But he was actually working with some mathematicians trying to catalog every food imaginable, basically whole foods, in kind of like a 3D mapping of the amounts and distribution of vitamins and minerals in these foods. And so it would be like a 3D grid, and vitamin D in liver would be real big, and vitamin A in liver would be really big. But all these things kind of get mapped out. And what the preliminary work suggested that there was this kind of distribution within food, that is just really not well represented within supplements. Supplements tend to have far more of various things like B vitamins. They tend to occur in ratios that are not physiologically represented within food, again. And there was some thought around, in particular, these vitamins involved, the B vitamins in particular, specifically in the methylation pathways, there was some concern there that doing super physiological doses of vitamins that turn on and off methylation pathways could be problematic. These are some of the things that maybe are negative influences of cancer. So now, that's a piece.

Robb: And then another piece of this story, is that although people are maybe overly geeked out fasting currently, I think that there's a little bit of hype associated with that. If we could just figure out how to not over eat, eat two or three meals per day, that's probably doing pretty well. But one of the key features of just not eating all the time, of not snacking all the time, of not drinking sugary beverages all the time, is that there are periods of rest for our whole system, the digestion, our vascular bed, all that type of stuff. So that's kind of problematic in my mind from the prospective of drinking a vitamin concoction.

Robb: I think that Micheal's spot on with the notion that there are some fat soluble vitamins that need some fat to be well absorbed. There is a company called New Chapter that has a ... What they end up doing is they give, it's kind of funny, the end up giving synthetic vitamins, because this is basically where most these things come from. Feed them to different yeast strains, then these things get kind of biocomplexed into the structures that we would see within food. And then they've created supplements that are really right at that kind of RDA recommendation, which there's all kinds of hoopla around recommended daily allowance. And I know they changed it, like the minimum daily. I forget what they changed it to.

Robb: But the basic idea is, that they're not off the charts, super high. In theory, they may be represent a little bit more what we would see with food. And so if I were to pick one or the other, and I would really ask the question, why do you need a multivitamin? The research, and it's mainly epidemiological, but people taking multivitamins don't live particularly longer, they don't live longer than anybody else. There's some suggestion

they may not do as well as people not taking multivitamins. And this is within the healthy user bias scenario which in theory, people taking vitamins are overall more health conscious and whatnot. There was some really interesting stuff, people were taking. I forget if it was vitamin E or beta carotene supplements, or maybe a combination, but they were smokers. So they noticed from epidemiology people who ate a vitamin E rich diet with carotenoids tended to have fewer problems if they were smokers.

Robb: So they supplemented the stuff, and they had to stop the trial because these people started developing cancer at much higher rates than what they saw from the baseline. So you I'm a big fan of the right types of supplements under the right circumstances, but a lot of these trying to replace poor diet with supplements, it's a tough thing. And people will probably rightfully point out that our soils are depleted, and food is harvested early, so it's not as nutrient dense. There's a lot of different layers and nuance to all that stuff. So I can appreciate that there are maybe compelling reasons to supplement. But I think it's something that folks want to be a little bit careful with too. I wouldn't run willy nilly into this.

Robb: So first thing, I would try to find something light, the new chapter product where it's not a super physiological dose of these different nutrients. And then I would definitely take it with a meal, so that at a minimum these vitamins and minerals that would otherwise only be consumed with food, because it should be coming from food, that it's actually available with that.

Nicki: Actually with food.

Robb: Yeah.

Nicki: Okay, let's see, our next question is from Nathan on individualizing your diet. I have watched the change in dietary recommendations over the years, and have tried paleo, keto, and higher carb diets. I've seen really good results on low carb diets, but they seem hard to sustain due to high activity at work. I've also heard Robb say he has good results eating beans and legumes. I am considering trying to eat a diet that focuses on whole foods rather than macros. My question related to this is, have you found that the quality of food is more important than the macronutrients for overall health? Not that macros aren't important, but you can manipulate the macros to a keto style diet with low quality food, but it seems that would be counterproductive.

Robb: Yeah, that's a good question.

Nicki: So he's asking for overall health, not necessarily weight loss.

Robb: Yeah, so it was interesting, this is where the nuances is interesting. From a blood sugar regulation standpoint, things like lentils, things like soak them, sprout them, do all that stuff. I have pretty good blood sugar regulation with that. I feel pretty good in that regard, but I start getting kind of almost feels like rheumatoid arthritis or something. My joints hurt, my feet hurt. I get this weird deal in my toes, and I really tried to play with that stuff, and probably tinkered on and off with it for the better part of a year, year and a half. And it's interesting because historically I focused mainly on the blood sugar regulation problems that I've had, which is why I tend to gravitate towards a lower carb way of eating, keto, whatever.

Robb: But some of these legumes like lentils in particular, I seem to do fine from a blood sugar regulation, but then I got kind of a systemic inflammatory response. So I think the question is individualizing your diet, and so this is where I think in general yeah, focusing on whole foods at a three thousand foot level.

Nicki: Whether you're following a macro prescription or not.

Robb: Yeah.

Nicki: Try to get whole foods.

Robb: Yeah, but then we have people that have oxalate issues, and histamine issues, and I've been noodling on some pieces that I want to write, or maybe do a video blog around this stuff. We should in theory be able to eat just about anything. So I'm going to say two different stories here, and they're going to be somewhat contradictory. So on the one hand, I kind of have this notion that healthy humans should be able to drop into just about any environment, eat just about anything from this kind of whole largely unprocessed food story, and they should be able to motor along and do pretty well. The counter point that I have to that, and I'm still trying to track this thing down. I know I've got the paper somewhere, but it's a historical account of explorers, and kind of their dietary misery when they go to new places.

Robb: So these Europeans that ended up in the Caribbean, and in Florida, these folks just reported having horrible GI problems, and they couldn't wait to get home to be able to eat the food that they were raised on. And it was really interesting, and I read this other paper man, like five, six years ago, and I do know I've got it somewhere, I just haven't been able to find it. But these are kind of the two things, the dueling banjos here. So we look at the story around the Hudsa, which they eat like 100 grams of fiber a day. They have these oxalate metabolizing bacteria. They're super healthy, they seem real robust. But then what's interesting, and this is some of the stuff I want to talk about at a deeper level, it does appear as people start eating any amount of westernized foods, they start losing some of that gut microbiota diversity, and so they start being forced into a little bit more limited of food options.

Robb: And then that may ultimately end up with someone like me, or like Mikhaila Peterson, Jordan Peterson, where I'm not in as big a cul de sac as those guys are, but they're in the one cut carnivore deal. And for them, the only way that they can eat, and be healthy, is basically carnivore diet. And not just carnivore diet, but they seem to have largely gravitated towards one or two specific cuts of meat. So this is where when we really do put on this individualization hat, and I guess you could argue that eating ribeyes is still like they're eating a largely whole unprocessed diet. It's not like they're eating protein powder or something like that.

Robb: But it's interesting I think, that we can use these big picture guidelines, to kind of set some lane lines. But then this is where we need to have a ton of respect for what each individual needs. Like you and I have documented these differences ad nauseum, and it was funny, even before writing *Wired to Eat*, we would go out to some Mexican food. And I always would do something like a fajita platter, skip the tortillas, skip the beans and rice generally, get some extra guacamole and that would go fine. And you would have some beans, some rice, some tortillas. I'd ask you, "How do you feel after that?" You're like, "Oh, I'm fine." And then a couple of times I would try doing the same meal that you had, and I was smashed. And I felt like shit then.

Nicki: For a while.

Robb: And I felt like shit for a couple of days, whereas you were like, just totally shook it off. And that was some of the stuff that in addition to the Whitesman Institute research, and some of the personalized glycemic response really got me thinking about that. So there's the individual glycemic response, there's the potential immunogenic response to foods, which is the problem that I think I have with lentils in particular. I think that from a blood glucose regulation perspective, I do fine with them. But there's something about the immunogenic element that I don't do well with. And again, I know I've soaked them, I've sprouted them, I've had the Dali Lama bless them. I've fucking done everything with that, so I appreciate the suggestions. But I've done due diligence on trying to make that shit work. I would like to eat as varied a diet as I can.

Robb: This is kind of a funny thing, that I do advocate paleo, low carb, keto type diets. It is definitely what has worked best for me. 15 years ago I was much more of the opinion that this was the way that everybody should eat. At this point I think that it's a great starting point, and then we see what type of latitude there is with that. But I'll completely honest, if I could wave a magic wand, and I could go out and eat a gluten containing pizza, or just not get poisoned from gluten cross contamination and stuff like that, I would be pretty fucking happy about that. So I still push and endeavor to try to get more variety in my diet, but I've honestly been finding that something kind of lower vegetable matter to the degree I'm doing. A plant material, it's more like fruit and stuff like that. I seem to do better, and I know that's all over the map. But it's an interesting topic.

Nicki: Nathan.

Robb: And so getting back to Nathan, are macros important versus whole foods? I would say in general focusing on the whole food piece of that is probably the most important. But again, if we have somebody, so whole food could be lots of sweet potato, and lots of yams, stuff like that. And for one person that may be great, and for another person it's going to be a disaster, yeah.

Nicki: Okay. Our next question is on collagen from Andrew. Hey Robb, I have a question on a point you made in the keto masterclass module four. You said that collagen, specifically collagen protein powders are great supplements, and could have many benefits, but that the protein content should not count towards your daily protein intake. I have been making and eating a collagen concoction, a great lakes collagen hydrolysate for years.

Robb: Hydrolysate.

Nicki: Hydrolysate for years as a second meal in between lunch and dinner. And I've been counting as a third of my protein intake. I understand that collagen protein is not the same as animal protein, but can you expand on this a bit? I remember reading something along the lines of it lacking completeness, not having optimal ratios of amino acids, and having some that are unessential. But have I really been short changing myself on protein, and should I replace this with animal protein?

Robb: So collagen typically is animal protein. It's just not rich in the branch chain amino acids, and the essential amino acids, particularly leucine which causes an anabolic response. Now there is an argument for getting more collagen rich protein sources, and this is where eating [inaudible 00:18:23] and things like chicharones, and bone broth, and stuff like that are valuable, because we have an issue with the amount of glycine. We're

probably deficient in glycine, and overly abundant in methionine. And methionine comes from more like muscle meats, elevated levels of methionine relative to glycine can be pro inflammatory, that can lead into homocystine production. So there's good argument, and again Chris Master John does a really nice job of unpacking this stuff. He does a deep dive as only the Master John can do on this.

Robb: So I would do a little poking around collagen, Chris Master John, he just does an amazing job with that. But are you short changing yourself by basically a third. Let's say you're eating 150 grams of protein a day, and you're doing a 50 gram wack of collagen based protein that day. The thing that I think you're probably doing well, is that you're probably getting a nice balance of glycine to methionine. That's probably a good thing, so long as you're ... And again, not knowing how big Andrew is, if he's 175 pounds like 100 grams of non-collagen based protein is probably at the low end of what's going to be enough anabolic signaling for him to maintain muscle mass, have good recovery, and all that type of stuff. So I don't know that this would necessarily be the worst idea in the world. But you definitely want to make sure that those other protein feedings are of adequate protein amounts so that you get that anabolic signaling, and all of that stuff.

Robb: So on the one hand I think that it's probably good, because again that glycine methionine ratio is probably being addressed effectively. Sounds like a super fucking easy meal too, it's pretty quick. Makes up some sort of pudding type thing, and jam that down, and it probably tastes great in five minutes and no dramas with that. And it probably doesn't have a lot of other gnarly not good ingredients. But at the same time, particularly from an aging and longevity perspective, you want a couple of anabolic pulses a day. We don't want to eat seven meals a day, and constantly titrate that stuff in. But at the same time, if you're going to eat fewer protein rich meals, which technically the collagen really doesn't tick that box because of the lack of anabolic signaling. Then the two pulses, the breakfast, and the late dinner pulse, need to be significant. And so that's the way that I would kind of noodle on that stuff. I would just make sure that the breakfast and the dinner pulses are really on point.

Nicki: So would you say that ideally he changes this out to some actual animal protein for the mid day meal, and then uses this when he's in a jam and needs a quick fix?

Robb: We are the crazy people that recommend that folks eat, chew, real food. I would love to see something like a can of sardines or something like this. But again, this is where maybe within his overall lifestyle, this is just super easy, and it's enjoyable. And again, because of is he eating offal or other bone broth sources? Is he getting other collagen sources? And so if not, that could be, in a lot of ways he's doing a good job of getting that balance. I guess you could make an argument for maybe in addition to the collagen protein adding something like a whey protein isolate or something like that. Some sort of a protein source that does have those branch chain amino acids. Like if he wanted to fill that gap, so he's still getting the balanced glycine methionine ratio from the collagen, but then maybe propping up the anabolic signaling from a different source.

Nicki: Okay. All right, our last question this week is from Jenika. She says her body refuses ketosis in her high stress work environment. Hello Robb, I have a question regarding the body naturally kicking itself out of ketosis in high stress work environments. I have been a fat burner now for over a year, and have been immensely successful. I've lost 15 pounds, gained muscle, rid myself of candida. My vision has improved, my alopecia hair loss has gone away, and I feel like I'm functioning the way I should. I also run faster, jump higher, and train better than I ever have in my life, I'm 29 years old.

Nicki: I work as a stewardess on private luxury yachts, so I live and work onboard. With no guests onboard I maintain a healthy balanced routine. When we have guests onboard, I'm working 14 to 16 hour days on my feet, running around, up and down stairs constantly. This can go from one week up to five weeks with no days off. I certainly don't exercise during this time apart from light stretching and [inaudible 00:23:20] yoga. It is a high stress environment both mentally and physically. It seems that my body just refuses to stay in ketosis despite my dietary efforts. I crave fruit, I gain weight, I gain water weight, and I don't feel satiated ever. I'm assuming this is because my body goes into fight or flight mode.

Nicki: My question is if there is anything I can do to trick the system into staying in ketosis, or should I just give into the body's desire for glucose, and introduce fruit and perhaps sweet potato into the diet, and lower my fat intake? I guess I don't want to be pumping myself full of fat if my body doesn't want to use it for fuel. This is a constant occurrence in my job, given I haven't worked full time in the last eight months, and I'm potentially going into a busy Mediterranean season and would like to maintain my physique and be gentle to my body considering the circumstances. Any insight you have is greatly appreciated.

Robb: Any thoughts on this?

Nicki: I mean.

Robb: I'm noodling, and so I'm assuming, luxury yacht, she mentioned Mediterranean, or was it Mediterranean?

Nicki: Mediterranean.

Robb: Yeah, so probably going to be warm, probably humid, super high activity, low carb.

Nicki: Need sodium.

Robb: Need sodium, yeah. So I'm curious Jenika, this is a great question. What you suggest here of just swapping out some fruit and sweet potatoes, and decreasing the fat, that's totally doable, and honestly when I travel, particularly when we get more equatorial, that's largely what I do unless I've got a stash of avocados. It's just not as easy for me to keep the protein sources tend to be leaner, and so it's just kind of easier to loosen that stuff up. And so that seems a natural place to go with that. But I guarantee you that inadequate sodium under any of these circumstances, is going to be a nasty problem.

Robb: And so of course we will plug element in that scenario, but if you need something like chicken bullion, you need some pretty aggressive sodium supplementation. So given your activity, and assuming, even though I'm sure that the ships are air conditioned to some degree, I suspect that you're going to be in warm, humid environments, and you're go, go, go all the time. And so what's interesting is you're describing even some water retention and what not. But if you get into that hyponatremic state, what I would be really curious about, is do you have any problems going from seated to standing, and getting a little bit kind of-

Nicki: Dizzy.

Robb: Kind of dizzy going up and down stairs, particularly the up, not so much the down. If there's anything like that, as a baseline if you're wanting to maintain a little bit more of

the keto side of things, I would try to get that minimum of five grams of sodium a day, and get the bulk of your nutrition from whole unprocessed foods, and hopefully we're really addressing the potassium and magnesium for the most part in that regard. I had one other thought. I would tinker with that, and then if it's not working, then adjust the carbs a bit.

Robb: But you probably still need some more sodium. It's interesting, again going back to American Council of Sports Medicine guidelines, active people in hot humid environments, their recommendation is 7 to 10 grams of sodium a day. And this is for a population that they're assuming is eating like 800 grams of carbs a day. So if you're eating significantly less than that, even if you go full on [inaudible 00:26:55] paleo, you're not going to eat that many carbs. So I suspect that inadequate sodium is probably a big factor in this one, yeah.

Nicki: And then given the stress levels, it might be if you're not already maybe considering something like a meditation practice. Just because it just can help.

Robb: She's so busy though, that's going to be a tough one.

Nicki: Yeah, 14 to 16 hour days, so she's barely getting eight hours of sleep.

Robb: Yeah I haven't done this, but I've done something similar to this. Where I was taking care of some super hoity toity people in sailing environments. And they're fucking demanding, and they're billionaire babies basically. And so right here, right now, all the time.

Nicki: But maybe just when you're drifting off to sleep, right when you first wake up, she can fit in a little bit.

Robb: Try to.

Nicki: She could try to fit in a little bit, I think it would help.

Robb: Or you have some GI distress.

Nicki: Meditate on the toilet.

Robb: Yep. But that is a great recommendation. A podcast or two back, we mentioned the meditation stuff that we've been doing. And it's been hugely helpful for us, you want to plug that again?

Nicki: Yeah it's Emily Fletcher's book, Stress Less, Accomplish More.

Robb: No financial ties, just recommending it because it fucking works.

Nicki: It worked for us, yeah.

Robb: So yeah.

Nicki: Okay, I think that was our last question for this week.

Robb: Okay, cool. You're looking good goth, I like it, I like this. Maybe we'll do some black eye shadow and stuff next time and really go for it.

Nicki: Oh babe, I don't know.

Robb: Okay.

Nicki: Let's see, as always if you guys have questions submit them at robbwolf.com to the contact page. We love answering your questions.

Robb: We probably enjoy answering them more than you guys enjoy listening to them, but we do appreciate you or we wouldn't be doing this. You guys ask great questions, and we continue to learn all the time from what you guys are trying to discover, so thank you.

Nicki: All right, we'll see you next time.

Robb: Take care.