

**Robb:** See, Nicki, when the red light turns on, that means it's rolling. Hey folks, we are back. Robb Wolf here and Nicki Violetti, my beautiful and illustrious wife.

**Nicki:** Illustrious, wow.

**Robb:** We're flying with ...

**Nicki:** That's an adjective I haven't had applied to me before.

**Robb:** ... with my receding hairline, which looks amazing today.

**Nicki:** Better than my staples, staple line, as my dad likes to say. When my hair color grows out, it looks like I have a line of staples down the middle of my head.

**Robb:** You have a reverse Cruella de Vil thing going on for sure.

**Nicki:** Yeah.

**Robb:** Yeah. Aging sucks is pretty much what I came to, but I don't know that that's what anybody else came to for this podcast.

**Nicki:** Nope. We're here for Q&A.

**Robb:** If anybody does still come to this podcast.

**Nicki:** Q&A, Q&A. You want to dig in?

**Robb:** Sure. Shall we? Surely.

**Nicki:** Surely. Okay. We shall.

**Robb:** Is there anything else we need to update people on?

**Nicki:** Hmm.

**Robb:** Not really?

**Nicki:** I don't think so.

**Robb:** Okay.

**Nicki:** Yeah.

**Robb:** Cool.

**Nicki:** I think we're ready to dig in.

**Robb:** I'm going to make sure I have this thing turned up. Yeah, we're good. We're good.

**Nicki:** I think our audio is better, so that's good. Oh, you're wearing headphones.

**Robb:** Oh, you know what? I don't actually need headphones.

**Nicki:** You don't need headphones. Okay.

**Robb:** I'm good.

**Nicki:** Put those down.

**Robb:** So, I'll just set them down. Sorry, folks. Getting the hang of this thing. But we did have a few people report that our sound quality was much improved, and it will improve over time. We're chipping away at it. We have other things to do, but one day at a time, Sweet Jesus.

**Nicki:** All right, let's jump into the first question from Troels on chocolate-covered peanuts.

**Robb:** And I believe that's pronounced "Truhhls".

**Nicki:** Chocolate-covered peanuts.

**Robb:** Chocolate-covered what? Excuse me?

**Nicki:** Okay. He said-

**Robb:** You minx, you. Man.

**Nicki:** I normally base my diet on paleo principles, but for the past month I've been eating roughly 400 grams of sugar and chocolate-coated peanuts a day.

**Robb:** Hey, I just have to pause here. 400 grams for all of us dirty Americans. This is one thing, I just have to divert here. The fact that we do not use the metric system is a embarrassment to me. I just have to say that as an aside, but 454 grams, if I recall correctly, is a pound in the old English system, so he's eating damn near about three quarters of pound of chocolate-covered peanuts.

**Nicki:** A pound of chocolate-covered peanuts. That's a lot.

**Robb:** What are you saying?

**Nicki:** Peanuts.

**Robb:** Peanuts.

**Nicki:** Peanuts.

**Robb:** All right. Just want to be-

**Nicki:** Do you need your ears cleaned? Do we need to some of the ... what do they call that? Like-

**Robb:** Waxing.

**Nicki:** Waxing.

**Robb:** Candling.

**Nicki:** The candling, yeah.

**Robb:** Yeah, yeah.

**Nicki:** Okay. Okay, so he says, "This should be unhealthy, but my digestion has improved after having been out of whack for months because of SSRIs. And I have consistent morning wood, which mainly due to SSRIs, has been rare.

**Robb:** So maybe you were saying chocolate covered penis.

**Nicki:** The peanuts.

**Robb:** Okay. Hmm. Freudian slip, Fraulein? Hmm.

**Nicki:** No, I swear. I swear. We'll get it transcribed. I never said it. Despite eating more than 2,000 calories just in candy each day, half of which is sugar. I still look lean, almost too lean, and if anything, I'm adding muscle.

**Nicki:** Most people are going to be hating this guy when they hear this.

**Nicki:** Let's see. I noticed a small sugar high and subsequent low, but that's pretty much the negative effects. Also, by doing this, I'm ingesting good amounts of magnesium and zinc, about 400 milligrams and 10 milligrams, respectively. I'm male and 32 years old. Two questions. Am I doing too much latent damage for this to be a good thing, or could it be that this could work for some people at least for some period? And how do I make sense of obesity epidemics, the grocery shoppings of fat people, and energy balance when I can consume much more than 2,700 calories a day and stay lean? I don't think I work out much, and many days, I also eat an energy rich evening meal.

**Robb:** Those are good questions. This is actually a really good ... There's a lot of stuff going on here, including peanuts and penis, apparently. So am I doing too much latent damage? I mean, that's so hard to really know. I mean-

**Nicki:** Blood work. I mean, really.

**Robb:** Blood work would be the thing to look at. We would look at some lipoprotein profiles to really get a sense of what's going on there. A1C, LPIR score, lipoprotein insulin resistance score. Again, we're working on some stuff, so you folks will have some great resources in that regard. But, generally if your sleep is good, if morning wood is good, or in the case of females, like just good libido, and you're generally feeling good, I mean, the fact that you get a little high, a little low after this, I don't know that that's that concerning. I'm not really a huge Ray Peat fan, but, I mean, he makes the case that sometimes some sugar, or some additional carbs, or there's some magic between fructose and sucrose, and stuff like that. And maybe some of that's going on here. And although low carbon ketogenic diets are the bee's knees for some people, they're not great for everybody.

**Nicki:** So he's been doing this for a month. Is a month long .. I mean, for some people, certainly, even like a day of this, they would notice adverse effects. But, I mean, if he continues this for three months, six months, like-

**Robb:** It could just be something ... The simplest thing to maybe track is A1C because he is consuming a lot of sugar. So, we could go get a A1C test kit at any pharmacy. I think

even in Europe, you can still get that. They make up lot of stuff, prescription only, but I think you can still buy those over the counter. And I would just track that.

**Robb:** And then also, body composition seems to be good, so long as body composition, performance, leanness, sexual function, all that stuff seems good, then it seems hard to really vilify this thing. And as an aside, if this stuff is dark chocolate, which it's probably not like 85% dark chocolate, they just seem to not do that when they do like chocolate-covered nuts and stuff like that. But still, cocoa has a lot of interesting, good stuff in it, so from the kind of phytonutrient perspective.

**Robb:** I know in carnivore land, there are no phytonutrients, these hormetic stress things, but for some people it's of benefit. And then, how do you make sense of this with regards to the obesity epidemic, grocery shopping of fat people, overweight people? Troels, be kind to folks.

**Robb:** Energy balance, when you consume more than 2,700 calories a day and stay lean, and he doesn't workout a ton, and he has an energy rich evening meal.

**Nicki:** Well, this goes back to the fact that not everybody is the same, right?

**Robb:** Exactly, yeah.

**Nicki:** What he's doing could put many people in a diabetic ...

**Robb:** Yeah, a big problem.

**Nicki:** ... state.

**Robb:** And you know, do we have a moment for a diversion?

**Nicki:** Sure. Of course.

**Robb:** I don't know why, but something popped into my head, and it's around, just like, so ... Oh, man. Spit it out, Robb. Talk. Ruff, ruff, ruff.

**Robb:** So the evidence-based nutrition folks really like to ... They'll spend a ton of time saying, "Sugar really isn't a problem." And they're citing these metabolic ward studies, and nobody lives in a metabolic ward. This is an interesting example where you could make the case that it's probably a hyper-palatable food, or at least damn tasty, and it certainly is, it's probably the largest contribution calorically to his diet, currently. So it's kind of ... But again, within the constraints of what Troels has going on, it seems to be working for him.

**Robb:** But I was thinking back about my mom's kind of health journey. And I think I've related it in books and podcasts, as far as I can remember, she always had health problems. And then she really ... She and my grandmother joined this thing, TOPS, Taking Off Pounds Sensibly. And it was like this calorie-counting deal, and they went each week, and they had these meetings and everything. And I remember my mom was eating super low fat, super high carb. This is when we bought our first air pop popcorn popper and all this stuff. And she got the lightest that she ever was that I can remember in her adult life.

**Robb:** And then she got super fucking sick. It was like one day she got up, and she was wrecked. And this is where it took another 10 plus years, maybe 15 years, to get the celiac diagnosis, and the rheumatoid arthritis diagnosis, and all these other things. But generally, if people lose weight, we see improvements in health. And I don't know if, say, like maybe her cardiovascular disease profile improved, but for some reason, her autoimmune stuff took off. I don't know if she caught a virus that kicked it over. I just don't remember any of that stuff.

**Robb:** But it is interesting that, at some point, the food quality stuff does add up, and it does matter. And just losing weight isn't always the route to ultimate health. Again, I don't know why this stuff happened with my mom, but for some reason it's been popping up in my head a lot because of some of the stuff that's gone on where it's held up as, so long as you lose weight, everything's going to be good.

**Robb:** And this was not the fucking case for her. Now, N Equals One, and there's all kinds of other circumstances, but we've also had a number of people mention things like this, like they'll do some of the flexible dieting stuff, and they get super lean. Like we had a number of people in Reno that, when we did talks, they would come up to us and be like, "Yeah, I was at 4% body fat, and then, I've been broken ever since, and now I'm on thyroid meds and all this other stuff."

**Nicki:** And also just from an aging perspective, as much sugar as he's eating is also not great.

**Robb:** Could be a problem. Could be a problem. But-

**Nicki:** With regards to that, how do I make sense of obesity epidemics? He says he's eating 2,700 calories a day and staying lean, but there are a lot of people eating a lot more than 2,700 calories.

**Robb:** Right. And I'm wondering if he's not talking about that just from ... He said he's eating 2,000 calories in just candy a day. So I'm assuming he's eating more than 700 calories of other food.

**Nicki:** I think he's eating just chocolate-covered peanuts and, "I also eat an energy-rich evening meal."

**Robb:** Okay.

**Nicki:** So he's eating chocolate-covered peanuts all day long and then having dinner.

**Robb:** Oh, I didn't get that. Huh.

**Nicki:** That's how I'm reading it.

**Robb:** Well, then some of what's going on there is some otherwise caloric causation from everything else. So, I mean, if this was layered onto three meals a day, there might be some serious problems. So, okay. Have we beat that one to death?

**Nicki:** I think so.

**Robb:** Yeah. It's a really interesting question. And there's a lot of moving parts there. And there's just, honestly, a ton of unknowns when you get right down to it.

**Nicki:** Okay. Our second question for this week is from Jason on DHEA and pregnenolone supplementation.

**Nicki:** Robb, I'm a 45-year-old male. Job is sometimes stressful, but for the most part, I get eight hours of sleep and follow a lower carb, paleo diet, six days out of seven. Been doing this for close to a decade. I've been experimenting for a year or more with pregnenolone and DHEA in varying amounts. When I take pregnenolone alone in doses of 200 to 400 milligrams before bed, I feel great, and everything works really well. Focused, focused mind, and man things. Same if I take 100 milligrams or so DHEA. I'll use these on weekends mainly and not so much during the week. I notice during the week without them, I tend to be bitchy and emotional with low sex drive. If I take pregnenolone or DHEA, would these issues go away? I'm afraid I'm taking too much or somehow dependent on these supplements now. What should I be looking out for or the downsides to these substances? I feel like I'm playing with fire.

**Robb:** Man, it's an interesting topic. I would view this approach like on the HRT spectrum to be like one of the really minimally invasive approaches because what we're doing is providing some substrate, both on the pregnenolone side and also on the DHEA side, which can mitigate cortisol issues that can augment testosterone, potentially. But also, specifically with DHEA, it can cascade into testosterone and be converted into estrogen. And this is some of the problem with folks taking really high amounts of DHEA, which these amounts are pretty high. Most people seem to get ... What I would recommend is tinkering with fractions of these doses, like the DHEA, starting off at like 25 milligrams a day, and see how you do, and try to find a minimum effective dose.

**Robb:** Sometimes you need to find a compounding pharmacy to get that done because some people will notice, in men's specifically, prostate issues and some problems related to this stuff, converting in a not great way.

**Robb:** As to the dependency thing, we've talked about this on other podcasts when we've talked with our good friend Dr. Kirk Parsley. He's cited research that ... like the average 40, 45-year-old male has testosterone levels about three times lower than what our grandparents did. And we don't ... Is it the xenoestrogens? Is it sleep? Is it radio frequency? We don't know. Maybe it's all the above. We don't really know exactly what it is. Clearly mitigating the cause would be great, but it's oftentimes hard to pin down.

**Robb:** But what we do seem to find is whatever diet, lifestyle, and kind of medical intervention that fixes that stuff and makes people feel better seems to generally be a good thing. And the whole HRT topic is really controversial both from the Lance Armstrong, drug testing, cheating thing, which, I mean, Jason's probably like me, like a middle-aged has-been athlete who just wants to not like-

**Nicki:** Wants to feel good.

**Robb:** Wants to feel good. And this stuff will definitely help. And so it's interesting how people moralize that. But the advice I would give is to actually tinker with much lower doses on this, maybe closer to like 50 milligrams on the pregnenolone and more like 25 milligrams on the DHEA. And then just tinker with ratcheting those up and down. And certainly you could do like one day on, one day off, would be one way to to cycle this stuff.

**Robb:** And I would go in and, whatever protocol, figure out a protocol, whether it's one day on, one day off, I would get some levels checked. You can do either saliva, but I would honestly probably do blood levels of both DHEA sulfate and pregnenolone, and just see

where you are. I was tinkering with this a little bit. And I had DHEA levels ... I was taking 100 milligrams every third day or something, and my DHEA levels were honestly too high, and so I had to go to like every fifth or sixth day. So, that's what I would tinker with.

**Nicki:** Okay. Let's see. Our next question is from Radu. How does one decide if the ketogenic diet is beneficial or not?

**Robb:** This one's long. We will fill in some details at the end, but there's some really good stuff here, but this is-

**Nicki:** And we'll post all that. He includes a lot of his blood work, so we'll share that in the show notes.

**Robb:** This is definitely something that, if you want to cruise by and check out the show notes, that would probably be helpful.

**Nicki:** Okay, so he says, "Hi Robb. I would like your opinion regarding how somebody would decide if the ketogenic diet is beneficial or not, or if you have recommendations for tailoring a ketogenic diet to people with an increased cholesterol reaction to the diet. Are there relevant tests that can help in deciding in this regard? In my family history, there are lots of cancers, some heart disease and some neurodegenerative disease like Alzheimer's. I'm 48 years old, Caucasian, in very good health and decent physical shape. My diet is a loose paleo type with occasional milk and grains, and I have no allergies. I would like to have some periods of ketosis as I feel some benefits from it, but I do not know how concerned I should be."

**Nicki:** And then he includes some before and after blood work. So before he went keto, his total cholesterol was 194, triglycerides were 254. In the nine months after keto, total cholesterol down to 178, triglycerides down to 44, which is great. And then, he repeated this experiment a year later, and his total cholesterol started going up, up to a high of 321. So he is concerned about cholesterol.

**Robb:** Yeah. And so, again, we'll put the specific numbers on here. So, what I'm taking from this also is that he tested ... the blood test after nine months, so he was done with the ketogenic diet in the first one.

**Nicki:** It's been an intermittent thing.

**Robb:** Yeah, yeah.

**Nicki:** So he did it, tested his blood work nine months later, and then a year later did keto again.

**Robb:** Did keto again.

**Nicki:** And did his blood work throughout.

**Robb:** So, a couple of things here. So, this is why I hate standard blood testing because it does not tell us at all what's going on. Just on the cholesterol side, frequently, if you see the LDL cholesterol fraction, it will say, calculated. What's going on in these scenarios, or can occur, depending on what type of test is used, the chylomicrons, which are moving fat out of the gut, can be about the same size as some of the lipoproteins that we're looking

for with regards to cholesterol testing. So, you could misidentify the chylomicrons as, say, like LDL cholesterol or cholesterol at large, and so that could give us a really squirrely reading.

**Robb:** The calculated, like the Friedewald equation to calculate this stuff was helpful for its day when we had no other options. But what I would really encourage is getting an LDL-P particle count via LabCorp. You can order that through Specialty Health in Reno.

**Nicki:** We could put that link in the show notes too.

**Robb:** Yeah, we'll put a link in the show notes. If you're outside the United States, then nobody is really doing the LDL-P. What you could do is an Apo B, which I think he has an Apo B in there.

**Nicki:** Yep. He did Apo A and Apo B.

**Robb:** Which can be kind of a proxy for ... And the Apo B doesn't look crazy, so I'm almost thinking that some of the cholesterol issues are kind of like an artifact of just poor cholesterol testing. But this is again where the type of testing is really important, can be really helpful. We have a question coming up next here about ... I don't know if it's the next one, but one of them, the frequency of carbohydrate intake and what the effect would be on ketosis.

**Robb:** I think intermittent ketosis is going to be great for a lot of people. There have been some interesting mouse studies where they used an intermittent ketogenic diet, basically one week on, one week off, and we have to remember that a day in mouse metabolic terms is about a week in human metabolic terms. So, it's very, very different.

**Robb:** But, there was a consistent group of mice that was on a ketogenic diet, and they were tracked over time. And their health and performance improved, and they had great longevity, and health span stuff, but they had to limit the food for these mice so that they didn't gain weight.

**Robb:** And then there was another group that, the way that they ... because this particular strain of mice has a tendency of gaining weight. Well, in ketosis, the other group did one week on, one week off. And they had pretty similar results, although the longevity, lifespan, physical performance pieces, so they were roughly equal in longevity and lifespan, but the purely ketogenic mice showed dramatically better physical performance late in life relative to the cyclic group. So, they don't know if that's like an energy substrate story, if it's some HDAC inhibition due to ketone bodies, but they have some ideas about how to test this stuff so that we can get some further information.

**Robb:** So, there's probably an assumption here that there is a gradient. Reducing carbohydrate in general probably has some performance health and longevity benefits. And again, that's going to be incredibly relative from person to person. Some people are much more carb-tolerant and some people are much less, and so there's going to be a gradation there. But then beyond that, intermittent ketosis probably offers benefits above and beyond no ketosis. And then consistent ketosis may have the greatest benefit with regards to this longevity and health span stuff.

**Robb:** Now that's all within the caveat that we aren't worsening an atherogenic environment and our cardiovascular system, which for some people, they do seem to, with high saturated fat intake, they tend to see dramatically elevated lipoproteins. And we've

seen people on both sides of this spectrum. Like we met a guy at Paleo f(x) who has positive coronary calcium scores and has being kind of paleo low carb, and it's seemingly either not working for him, or you don't know, maybe it is. You don't really know what else could have been worse.

**Robb:** But then, we have people that have much higher lipoprotein counts than this gentleman has, and they are zero on their coronary calcium. They appear to have no overt disease process going on.

**Robb:** So, this is where, ideally, all this stuff plays out, like the way that Luis Villasenor does this. His blood work's fucking beautiful. It looks great, he has great performance, he definitely doesn't look 42 years old, or whatever he is at this point. He's been doing this stuff 20 years. I think he's really banking the maximum benefit of doing something like this.

**Robb:** And then you have other folks that, the blood work isn't quite as nice as what we would like, and then it gets a little murky. We need to do some additional testing to see what's going on. And that's kind of the way that I would parse this stuff out.

**Robb:** But at a minimum, I think that some amount of intermittency around ketosis could certainly be helpful. And that could be time-restricted feeding. It could be time-restricted feeding plus adding MCT oil to the mix. This is where there's lots and lots of different ways to tackle this other than just specifically a ketogenic diet.

**Robb:** And then even within that ... I'll add one other caveat and then shut up on this. More of a Bernstein-esque, Dr. Bernstein's Diabetes Solution, or a Ketogains, like a more protein-centric approach, where we're not driving ketosis at the expense of protein intake. There are some people that that whole HMG-CoA reductase enzyme system, which synthesizes cholesterol, it can convert ketones into cholesterol, and therefore, lipoproteins. This can and does happen pretty much in everybody, but for some people that spigot is just like wide open, and so their ketones go up and their cholesterol goes up immediately.

**Robb:** Now again, there's a question. Is that meaningful from a cardiovascular disease perspective? And we don't really know. I like Peter Attia's kind of takedown on this, which is that lipoproteins are necessary, but likely not sufficient for cardiovascular disease process. And there may in fact not be any singular thing that is sufficient for the cardiovascular disease process.

**Robb:** I think we've mentioned on other shows that we only see atherosclerotic plaquing on the arterial side of the vascular system. You don't see any on the venous side, where it's at much lower pressure, and there's no non-laminar flow. It's all non-turbulent flow. So there's clearly a big factor of this whole story is hypertension, non-laminar flow, damage or disruption to the vascular endothelium that's a piece of this thing.

**Robb:** So, if you have high blood pressure and high cholesterol, then it's game on. And then like elevated ... and you're eating a pound of sugar-

**Nicki:** Troel's diet.

**Robb:** Salted penis and all that, then we're stacking the deck in a very unfavorable way. But this is where just one size fits all broad brushstroke stuff just doesn't fucking cut it any more. We have some general guidelines. And again, if you're the lucky person, then all

your stuff looks good, and we don't have to do any other digging, but not everybody falls into these typical patterns. And even within the maybe atypical pattern, or like the Dave Feldman, like the lean mass hyper-responder, we don't really know what the exact story is with these people.

**Robb:** I think he had mentioned that he has some cancer-

**Nicki:** Heart disease and neurodegenerative ... yeah.

**Robb:** And Alzheimer's Disease. Cancer, Alzheimer's, neurodegenerative disease.

**Nicki:** It's family.

**Robb:** So there's a really a pretty good case to be made that from the cancer and the neurodegenerative disease perspective, a low glycemic load, ketogenic type diet is probably beneficial. So maybe you're reducing disease potential in those areas, but possibly elevating disease potential in the cardiovascular disease side.

**Robb:** We don't know that for sure, but there's good material suggesting that. If you don't follow the [Apo4E 00:26:36] group on Facebook, there's a great, great group of people that really stay on top of the research, really sharp folks over there. And this is some of the dueling banjos that they play with. But there's been some speculation, particularly there are some people in the paleo scene that had been very, very critical of ketogenic diets, and I think in a completely unfair way. And they've made some claims around Apo4E folks should avoid ketosis just like the plague.

**Robb:** And there was just some ... And the two pieces that seem to be at play here is cardiovascular disease risk versus neurodegenerative disease risk. So on the one hand, again, you can make the case that the ketone state might be beneficial for neurodegenerative issues, but might be problematic from a cardiovascular disease perspective. And I'm blanking on the paper right now, but with just a really solid kind of linchpin paper that was like no, some sort of low carb intervention including a ketogenic diet is probably broadly beneficial for Apo4E carriers at large, both for cardiovascular disease and neurodegenerative disease, which has kind of been my gut sense all the way along, but you never know, you never really know. And again, as always good until further notice as the science develops.

**Nicki:** Alrighty.

**Robb:** Damn, I'm a chatty Cathy today.

**Nicki:** You were. You were on a roll.

**Robb:** See, this is what happens when we ...

**Nicki:** When we move away, and we-

**Robb:** ... move, and we have no social interaction. Then I just fucking talk to the podcast people ad-nauseum and Nicki's ready to shoot me.

**Nicki:** All right. Let's ... You can talk to Sarah next.

**Robb:** Okay, awesome.

**Nicki:** Sarah says, her question's on genetics and body composition, "I know genetics have a large part in how our bodies form and react to foods, the environment, and et cetera, but how much do we have control of it when it comes to body composition? I'm in my mid-thirties, and have always been athletic, and focus on healthy eating, now paleo focused. However, my weight, while I'm still in a healthy range, doesn't budge easily despite my efforts, and it's been like this ever since my teens. I don't want to compare myself to others, but it is frustrating when I eat so clean, I'm active with weights and cardio, and the person next to me has a slimmer waistline, and eats fast food, and rarely exercises. I know I can become slimmer with extreme effort, but those extreme efforts are not good to my body, and I don't want to add additional stress. Should I just give up, and not fight my body, and just focus on my healthy living, or do you think I can lose some extra fat without extreme measures?"

**Nicki:** She's female, 37 years old, 5 foot 7, 147 to 155 pounds with body fat around 18%. She says she has an athletic build, muscular legs and upper body, chubby midsection that rarely firms up. She does have SIBO and gut issues, follows paleo, low FODMAP diet, some intermittent fasting, lifts weights, heavy two times a week, also does some HIT and Orange Theory fitness two times a week. She says if she breathes on peanut butter or eats too much paleo granola, she gains instantly and has to go back on a strict IF keto, but her midsection is never firm.

**Robb:** Hmm. Hmm. So, I mean, one of the questions, I guess, straight out of the gate here are kind of the broader questions is, where ... how much fiddling do we have with genetics?

**Robb:** And I think that in general we have quite a bit, but there's kind of a caveat on that. I'll use myself as an example. If I were to overeat a processed Western diet, I would never be the person that gets to 300 pounds because I would die before that. My blood pressure skyrockets, I get hypertensive, I get dyslipidemic, my blood sugars go crazy. So, I don't know if this makes a 100% sense, but I'm trying to tackle it from the other direction. I only have so much control over my body composition in the negative direction because I'll literally die before I got really overweight for my size and frame, which is kind of interesting.

**Robb:** And this relates to this whole notion of a personal fat threshold. Some people, they can stick enormous amounts of fat into their fat cells, and the fat cells can split, go through hyperplasia, and you get more and more fat cells. And from avoiding the end-stage problems of overeating, that's actually a good thing. It buys you more time in general.

**Robb:** So, the flip side of this is that, yeah, I mean, we can have some degree of kind of limitations on where we can go with this stuff. It's interesting, we're it not for Sarah mentioning the SIBO gut issues, I would almost steer her towards kind of like paleo, but more Kitava paleo, so lower fat, higher carb, maybe some of the 16-8 eating schedule. I think early time-restricted eating, like making breakfast your biggest meals is kind of ... it seems to be one of these just gimmes. This just seems to be a freebie. Like if it works for you, make your breakfast huge, and then you can kind of plug in from there based off the rest of your day. And so you could be really consistent with that, stack the calories early.

**Robb:** But the problem with the SIBO and gut issues is that if you start feeding it a lot of carbohydrate, then that tends to feed all that stuff forward. I'm still in some sort of a gut flare right now. I'm basically a carnivore right now because any plant material right now

sends me running to the can. And that's a ton of fun. So, I feel pretty good as long as I don't-

**Nicki:** Makes it hard to leave the house.

**Robb:** Yeah. Well, it's hard to ... well yeah, yeah. It's hard to do a lot of things. Any other thoughts on this? I mean-

**Nicki:** She doesn't mention like sleep and stress.

**Robb:** Sleep and stress. Also just her hormonal status.

**Nicki:** Sleep can be such a big one for body composition.

**Robb:** That's a good point.

**Nicki:** So, making sure that she's in bed early, lights are out, really good sleep hygiene with regards to all of that, because we've seen people who exercise all the time even though they're eating clean, but they are up late and have a lot of stress in their lives, and they just cannot lean out ...

**Robb:** They cannot lean out.

**Nicki:** ... around the mid-section in particular. So that could be something.

**Robb:** That's a good call. Probably pretty good on that. So yeah, the places ... The takeaways, we should have some takeaways.

**Nicki:** And protein. Like really focus ... I mean, paleo can mean a lot of things to a lot of people. It can mean, I'm eating sweet potatoes and obviously protein, but really focusing on the protein can be ...

**Robb:** Can be huge.

**Nicki:** ... really good for body composition.

**Robb:** Yeah, yeah. It can be incredible. So really-

**Nicki:** If you're not getting enough protein at each of your meals, then there's a tendency to overeat everything else.

**Robb:** Yeah. So, track where you are currently and figure out where the protein intake is. And then, maybe shoot for like about a gram of protein per pound of body weight, which is going to be a good amount. But shoot for that, mainly lean proteins, and then whatever vegetable matter works for you in between, particularly to support your activity levels. I would probably ... And then look at your sleep, like what time are you going to bed, what time do you get up, what's the sleep quality like? This is a situation where the Oura Ring or some sort of a sleep tracker can be helpful, but I have to say, I like these things on short-term interventions. I'm not a big fan of them over the long haul.

**Robb:** And then I would get hormones checked, thyroid, androgens, just so you've got a baseline so that, if it all looks good that's great, but then we can look at this years down

the road and see if things are changing. So protein, sleep and hormones would be what I would look at.

**Nicki:** Yup. And then, ping us back, Sarah, in like two months. Let us know how you're doing.

**Robb:** Yeah.

**Nicki:** Okay. Last question, Robb. You get to talk to Ryan next.

**Robb:** Sweet, more talking.

**Nicki:** Ketosis and carbohydrate timing. Hi Robb. I don't know if this will reach you, but while listening to your podcast and reading your first book, a hundred questions pop into my head, and this is one of them. Thought about asking my doctor, but I knew a blank stare and a sweaty forehead would be his answer. So here goes. Does frequency of carb intake play a role in disrupting ketosis? For example, if I'm going to eat 150 grams in total of carbohydrates today, will eating all 150 grams of carbs at the same meal knock me out of ketosis for an equal amount of time as eating 15 grams every hour for 10 hours? My theory is, eating 15 grams of carbs an hour for 10 hours will be just enough to keep a person out of ketosis for a longer period of time than eating all 150 grams in one meal, while carb fasting for the rest of the day. I could be wrong, but that's why I'm asking you. Thank you in advance. Have a great day.

**Robb:** Yeah. And there are actually some studies, they don't do exactly this, but they compare singular carbohydrate meals versus more spaced out carbohydrate meals in equal caloric on that. And partitioning the carbs to a singular meal will bump you out for a period of time, but then again, you will tend to get back in. And again, if the individual is already kind of keto-adapted ... Peter Attia did all kinds of work around this in kind of self-experimentation, where ... he was doing one meal a day for a while, so he had what he called, intermittent fasting plus intermittent ketosis, because even though he was eating mainly a ketogenic diet, the amount of protein he had to eat at that meal would bump him out of ketosis. But it was for three hours or something like that, and then he was back in and typically at a even deeper level because he wasn't eating for really extended periods of time.

**Nicki:** Okay. Anything else?

**Robb:** Simplest answer of the whole day. Yeah.

**Nicki:** I know.

**Robb:** So, check us out on the Gram @dasRobbWolf. What else? Do we have anything else we need to update people on, or are we good?

**Nicki:** I don't think so. Submit your questions with the contact page at robbwolf.com. What else? There has to be something else. You're going to the Spartan World Championships doing their Media Fest thing.

**Robb:** I'll be at the Spartan World Championship in-

**Nicki:** End of September.

**Robb:** Yeah, like September 26, 27, 28, I believe.

**Nicki:** Yeah.

**Robb:** So, if you're going to be there, look forward to seeing you there.

**Nicki:** Yeah. I guess that's it.

**Robb:** And again, we are chipping away at some options around delivering content and value to you people that steps outside of the standard social media, Google-controlled world. So we're still chipping away at that. And ostensibly, you guys can still find us, so that's good. So, but we are trying to put some things together on that, so we'll keep you updated.

**Nicki:** Cool. Thanks, guys.

**Robb:** Awesome, folks. Take care.