

Paleo Solution - 360

[0:00:00]

Robb: Hey, folks, six listeners can't be wrong. It's another edition of The Paleo Solution Podcast special edition today. It is the release day for Wired to Eat, which I'm very excited about. But I'm even more excited about the fact that my wife, my own Nicki Violetti is right here in the office with me. Wife, how are you doing?

Nicki: I'm doing great.

Robb: Awesome. She's even turning red. Wow. I can still make my wife blush occasionally. That's pretty cool. So, what are you doing here today? You didn't have anything else to occupy your time?

Nicki: There are other things to do but, I guess, hanging out with this husband is--

Robb: Yeah, the slum for one day. Part of your parole obligations. So, you've been helping me out with the seven day carb test, which has been awesome. How was going through all that stuff?

Nicki: It was really interesting. It was surprising. I've always known that I respond fairly well to carbohydrates especially relative to you but I've never done any kind of testing like that before, so that was definitely interesting. And then also we didn't find a carb of the seven that I tested or the six actually that I tested that I seem to not do well with. But it was interesting with the gluten free bread because I was testing at the one-hour mark, seeing that large spike there definitely made me think, "Aha!" So, this really refined piece of gluten bread is probably not, even though my blood sugar was back to normal after the two-hour mark, it definitely made me think maybe I don't want to eat this too frequently.

Robb: Yeah, we definitely saw an ordering there. So, just for you guys to get a sense of where we're going with today's show, we're going to answer as many questions as we can in a reasonable amount of time about Wired to Eat. We have a ton of them on social media but we'll probably start things off with a little bit about the seven-day carb test just because that's been something that we've really had out there and so we'll dig into some questions around that.

But the whole point of that seven-day carb test, it's a piece of an overall global plan that includes a 30-day reset. Prior to the 30-day reset, we're recommending both some subjective and objective kind of self-analysis that includes blood work and hip to waist ratio measurements, paying attention to how you feel between

meals, how you feel in response to meals so that we're really getting some pretty good data on how we're responding to things.

And also we're getting a sense of where we are on the insulin sensitivity, insulin resistance spectrum which tends to then influence the way that we deal with carbohydrates. And just as an aside, so you do well with a decent amount of carbohydrates which you've also eaten ketotic at various points and you do fine on that. Like you are just kind of like the tri fuel generator that Dave Duley and I recommended for the zombie apocalypse. You can basically run on anything and do reasonably well. But anything else that you're thinking about that or do you want to jump into the questions?

Nicki: Gosh. One thing that came up was people asked, after doing that test, did I notice that I had more cravings or did I crave anything in particular? And I didn't and I'm just guessing here but because it was still whole foods and relatively unpalatable foods, it didn't trigger that. Whereas, I guess, if I was testing almond toffee chunk ice cream or cinnamon rolls or stuff that is significantly more palatable, I probably would have--

Robb: You might have had some follow on with that?

Nicki: Had some more cravings.

Robb: Yeah, for sure. Before we jump in on the questions, I do want to throw one thing out there. We have some amazing questions. And when folks have questions, this is how I learn, this is how I figure out what aspects of my messaging are on point, what am I missing, and then also just what have I not even thought of? But there is a little caveat in that. There are a lot of folks out there, particularly in the kind of low carb camp, that cannot conceive that there are people running around in our midst who can eat a decent amount of carbs, even some decently refined or dense carbs, and it's not going to give them diabetes overnight. They just have this cognitive dissidence with it.

And again, I'm one of the biggest fans of low carbohydrate diets that you could ever find. I devote a whole chapter to ketosis and fasting in the book. Actually, I'm on the Board of Directors of a medical clinic that implements ketogenic diets for people ranging from cardiovascular disease to neurodegenerative disease. I'm a fan. But I'm also not a fan of just religious dogma attached to nutrition. So, there's going to be a lot of people that are just freaked out by this whole notion that there are people that can motor along fine and it's not this thing that's like, "Well, eventually, they're going to have Parkinson's." It's like, no, possibly not. They're just different.

Nicki: And it's not like you're recommending do this test and if you test well with rice, eat rice every single day in large quantity. You're not recommending that.

[0:05:03]

Robb: Again, this is part of the general bracketing of the book. The general guideline is somewhere between 75 and 150 grams of carbs for most people as kind of a starting point. And we give you a way of figuring out do you need to go lower than that, do you need to go higher than that? And we have comprehensive blood work in subjective measures and the seven-day carb test that helps to put it all into context. But I just want to throw that out there.

I saw some of the low carb folks that were painfully uncomfortable with this thing and really pretty freaked out by it. And if I ate the amount of carbs that you did for the test, and I kind of did when I did the glucometer, I kind of pushed the boundaries of that, my blood glucose levels looked terrible, I felt like shit. It was, "Oh, man, okay, I got it. Bug, windshield, check. I'm good." Yeah, I guess, I don't want to belabor that point too much.

If the low carb folks are going to argue that a high carb diet is not the appropriate thing for all humans at all times, we've got to also be able to put the same opposite head on and say a low carb diet is potentially not the end all and be all for all humans under all situations and that not everybody is from the South Park deal where gluten will make your dick fly off. Carbs are not going to make your dick fly off. There is some boundary with that.

Now, again, all that stuff said, we have an enormous number of people in westernized cultures that are insulin resistant, that would respond remarkably well, incredibly favorably to a reduced carbohydrate and glycemic load. I'm not saying that. But again, we've just got to have some degree of granularity and distinction on this. It's time to bag the religious dogma around this stuff and the right tool for the right job and move forward.

It won't be surprising if this degree of granularity and detail and making this customized instead of religious doctrine we may end up selling three total copies of the book but, whatever. We'll give it a shot. So, do you want to jump in to some questions now?

Nicki: Sure. Absolutely. Well, why don't we tackle one that came up? We did my seven-day carb test, we were posting those videos, and I believe it was day three where my, at my two-hour mark, my blood glucose -- I had actually tested my fasting blood glucose on that day and it was like 81. And then at the two-hour mark, my blood glucose was down to 77. So, it was lower than fasting level and people were saying, "Oh my gosh, Nicki is probably a--"

Robb: You're a Kraft pattern number three. You're a hyper secreter.

Nicki: Exactly.

Robb: So, one, great catch. Those Kraft patterns are an almost -- They were almost lost to history. I believe Kraft just recently died at a pretty advanced stage. He did amazing work in these Kraft patterns, really, really informative. But this is where good science and good clinical testing is pretty important. Folks were freaking out about the difference between a--

Nicki: It's like four points.

Robb: Like four points between the initial test and the follow up test. Let's say both of them are in the 80s. There's a 10% to 15% error rate built into blood glucose testing if you're doing the stuff at home. So, that means that they could have been -- With any three tests, it could have been as low as like 74 or as high as like 98. And this is where to some degree you need to do multiple tests although, again, we're trying to make this whole process not so onerous that nobody does it.

Keep in mind, the folks -- We do want to cater to the Paleo crazies like myself but there are a whole lot of people that need to do this process that if we bury them with a bunch of details then they're just not going to follow through on it. So, we recommended like the one test but we did start doing multiple tests to do a little bit of validation. But the main point there is that we've got to keep a little perspective. We had more error built into that reading than the difference between the two tests.

So, people seeing Kraft pattern responses there, on the one hand, for your geek Dakota ring, spot on, that's cool. But again, as part of the overall program within the book, we do some comprehensive blood work and we use some methodology that was developed out of the Reno Risk Assessment Program to go really deep and get very granular about what an individual's insulin resistance score is. And we do some NMR testing, some lipoprotein IR readings that give us a very good indicator of where the person is in that insulin resistance spectrum.

[0:10:03]

And it's much, much better than using a fasting insulin or a number of other methodologies. And I'm going to have a couple of the docs and then Shanti, one of the -- Actually, he is the head dietitian down there at Specialty Health, I'm going to have them on the show and we're going to go deep on that stuff and talk about it. But, yeah, just, again, like looking at this stuff, it's part of an overall

package, overall program, and also for the folks that are seeing potential Kraft patterns popping up in this stuff. Keep in mind that there's enormous variation in just the basic testing. So, you can't assign too much weight to that.

Nicki: Okay. So, another question that we got fairly frequently is what if I do my seven-day carb test and it turns out that I do tolerate beans or rice, does that mean I start including it regularly back in my diet?

Robb: Potentially, yeah. And the crazy recommendation that I'm making is that we probably for most people cap that carb intake at around 150 grams a day for most folks. And again, if you have a larger individual, if they're super athletic, if they just handle carbs really well, then this is going to be different. And then the flipside of that is if we have a small relatively small frame female who isn't super active and maybe is a little bit on the insulin resistant side, then she's going to be at the shorter end of that thing.

But we give a fairly lenient bracket of 75 to 150 grams of carbs a day. If we're talking about eating breakfast, lunch and dinner, and we're going to be somewhere between like 30 and 50 grams of carbs at each meal then we're going to fall out at that very modest carbohydrate intake. And if a couple of days a week that's rice instead of blueberries and sweet potatoes, that's probably not the end of the world. So, yeah.

And again, for some people, that's going to be a good fit. For me, that would be a terrible fit. But that's part of the reason why we look at the blood work and do these tests. We do both the subjective and objective measurements so that we get a really good sense of that.

Nicki: And so it's all context specific based on the person. 100% personalized.

Robb: Totally context specific. And again, this is where like the folks that are super geeked on low carb, there are going to be people who will not only do fine but will do better at a bit higher carbohydrate level. But there will be disproportionately more people who need to reduce carbohydrates. Again, I can't emphasize that enough.

Nicki: Okay. So, we had another question asking if there was any research to support the anecdotal wisdom that women tend to require more carbs. She says: I've heard coaches comment that female athletes rarely do well in ketosis. Is there a physiological basis to this like an evolutionary mechanism where women are more sensitive to nutrient deficiencies?

Robb: The question is fantastic and really she hit it at the end of the question. And I'm maybe a little bit controversial in this position but I think that there's more

individual to individual variation than there is gender variation on this. You're going to have males and females that do both better and worse on ketosis. And that's going to ruffle a lot of feathers but that's been my observation.

You could make an argument from a physiological perspective that women actually should do better on ketosis because during pregnancy they have a tendency to slide into ketosis. Neuronal development for the fetus is predicated on ketone body formation. Women tend to be better fat mobilizers but they also tend to be slightly better fat storers, but there's synergy with all that. But one thing that I will say is that I suspect that the wheels fall off the wagon for women quicker and easier when there is caloric deficiency.

So, if we starve a woman and we starve a man, both of them are going to suffer. Both of them are not going to be doing well. But we're going to see more onerous issues with the woman earlier than we are in the male just because of biology and reproduction. If a woman is not getting adequate nutrition to carry a developing baby then biology is going to say, "Okay, we're putting the brakes on that." And it shuts down thyroid, it elevates cortisol, because it's modulating the immune response.

But that may have nothing to do with ketosis specifically or low carb specifically. What it has to do is that low carb and ketosis can be incredibly satiating and it's super easy to under eat doing that. I've done it I don't know how many times where I just get in this mode where I'm eating just generally pretty low carb and the next thing I know I'm eating 1700 calories a day which is like half or less than half of what I need. So, I don't think that this is an issue of male versus female doing better or worse on carbs. And there's going to be a lot of people that are going to not enjoy that or not like it and that's fine.

[0:15:03]

They ask my opinion so I'm throwing out my opinion. But, I think, that both the strength and the challenge of low carbohydrate diet particularly ketosis is that they're incredibly satiating. They tend to modify the appetite in a way that people spontaneously reduce caloric intake. And it may work so well that it's very, very easy to under eat. And one thing that I will throw in that I think validates this to some degree is that when we look at a population that has been studied over decades, eating a ketogenic diet, folks who, typically children but can also adults, who are following a medically supervised ketogenic diet for epilepsy, we don't see massive amounts of hormonal dysregulation.

We don't see massive problems in thyroid output or anything like that. And this would be a population that we would see this in spades if that were an issue. But what these people are doing is they're being medically managed such that they

get adequate nutrition particularly calories so that they're not caloric deficient and carbohydrate compromised.

Nicki: Great. Let's see. We had a question whether or not the book was geared primarily towards weight loss or is there lots of good stuff in there for folks who are already at a healthy weight?

Robb: Again, a really good question. This is some of the insight into publishing a book in the modern world. Everything is about weight loss. You can do something that's kind of a science book and it will end up in the science section and it can be on a topic like anti aging or something like that but as soon as you put any type of an orientation towards weight loss and fat loss then it's going to get a lot more bandwidth, a lot more traction.

And also, even from a scientific perspective, you can make an argument that so many of the problems that we see have weight as a co-factor. So, tackling weight loss is a big deal. It can go in synergy with this. But this book really goes deep on the neuroregulation of appetite and it goes all the way from our gut microbiota and the way the sleep influences that to pro-inflammatory foods and the way that they can alter the neuroregulation of appetite. And it covers the ideology of autoimmune disease, neurodegenerative disease.

I do a little spackling, I mean, literally a couple of paragraphs but give people some decent guidance. If you're an athlete then you should do ABCD. It's definitely not an athlete oriented book but I throw a few bones with that within the greater context of the book, the neuroregulation of appetite, reduced inflammation, managing these lifestyle factors, then, yeah, there's a ton of information there. And clearly, that's super self-serving. I'm the greasy used car salesman now with the book to sell but I feel like I did a really good job on it. I think if most people read this, even pretty savvy folks that have a good handle on their health, they're going to get a lot of it.

Nicki: And what about people who already know the benefits of Paleo? They've maybe read your first book but they still struggle with food cravings.

Robb: Man. So, that was a specific question. And when I hear food craving, that makes me start thinking about dopamine and kind of addictive nature of foods. When I hear the food craving deal, almost inevitably, what we see is a frequency of exposure to a trigger food or trigger foods that at some threshold where this thing hasn't really been tapped into remission. People are still farting around with it and so I really look at that from kind of the going beyond just the neuroregulation of appetite.

When people are talking about cravings, they're either under eating at large and there maybe various reasons for that, and this is again a potential problem with the low carb deal. Like you may need to actually add more calories to it so that you're not low carb and hypocaloric. But if we legitimately have something that someone would characterize as craving and typically people will be like, "Man, I'd really like some bacon," or something like that. But inevitably, craving means carbs. I mean, it just always does.

And these carbs stimulate the dopamine release in the brain. It is very analogous to what we see with caffeine and nicotine and cocaine. And so we need to figure out for that person some frequency in which they can push those "cravings" into a remission state. And I don't know what the appropriate frequency is with that. It may be once a week, it maybe never. Or you may need to go through four months being really diligent about avoiding these trigger foods and then maybe once a week you can go out to eat and have a little bit of dessert.

[0:20:00]

I'm more of a salty crunchy guy so maybe you can do a salty crunchy thing. But again, you're probably going to eat it out. It's not going to be a situation where you have a cheesecake and three flavors of ice cream and a bunch of nachos hanging out in your pantry and you're going to avoid eating that stuff. That's ridiculous. Some of it, again, is like the self-defense technique. So, they talk about in the book, clean out the pantry. Like folks read *The Paleo Solution*, I emphasized that a lot. That's just basic self defense stuff around all this.

Nicki: And there's also some kind of psychology behind it too. Like you talk about this when you talk about a healthy relationship with food and whatnot. Folks, frequently, there's something underlying that with people.

Robb: Yeah. And this is definitely something that people get pissed off at me about. I haven't had too much backlash yet but we'll see how it goes. But I make a pretty strong case in the book that if folks are articulating something to the effect that they're like searching for a healthy relationship with food it's got nothing to do with food. Food has become the symptom. It's become the focus. It's become the distraction.

Almost inevitably the real issue is some sort of like hurt, abandonment, pain, you know what I mean, some traumatic event happened with a parent, a spouse, a significant other, something. And then food becomes a palliative approach to dealing with that, that stress or that pain, and then that process may have kind of a feed forward mechanism where the food happens to be hyperpalatable and it makes you feel good for a little while and then you feel bad without it and

then, oh man, I'm feeling bad about this hurt, the pain and hurt that I had. It becomes this feed forward kind of deal.

But, yeah, I mean, that emotional side of it, I get it. It's real. But it's real in that it almost inevitably has something to do other than food. Food becomes the distraction not the thing that needs to get dealt with.

Nicki: And then we had a somewhat related question. This says: Robb, as a person with depression and anxiety, I sometimes have difficulty staying true to my eating plan including Paleo. What is the best way to block sugar, carb, emotional eating signals when in a depressive or anxious state?

Robb: Man. So, that's not that long of a question but the answer could end up being really, really long. So, there's an interesting research recently that suggests that shifting the gut microbiome in -- It's mainly been done in mice but there's some human stuff also that suggests that it is shifting the kind of depressive episode. So, if you've got a pro-inflammatory gut microbiome then depending on your genetics then you may be prone towards depression and other people with inflammatory gut microbiome may be prone towards other things.

But they shifted the gut microbiome to what we would consider a more favorable profile and these depressive symptoms tended to resolve themselves. So, this becomes a little bit chicken and egg in that is it a process where the person starts loosening up in what they're eating and then it becomes kind of a feed forward mechanism where the once a week exposure to the bag of sea salt and vinegar potato chips which would be my preference, does that go from once every ten days to once every three days to once a day?

And then that shifts the gut microbiome in an unfavorable direction and then that makes you start feeling worse. And then when you're feeling worse you want a palliative solution to that which then starts spinning out the rest of the eating. So, it's another thing where I could make a pretty good argument -- And it's funny because it's almost like I'm talking out of both sides of my face here.

On the one hand, I'm saying we need to experiment and explore and kind of see what the boundaries are. But then a lot of these questions related to like cravings and trigger foods and stuff like that, for some people, there's just going to be stuff or situations that they're going to have to avoid. There are alcoholics, people who identify themselves as alcoholics, who can have a drink. There are alcoholics who can have a drink or two but it has to be in a social setting of certain parameters.

And then there's other people who identify as being an alcoholic, they can have a drink under any circumstances and there are certain social situations that

they're like, "I can't do it or it's going to trigger this event." And you make a decision about what's your quality life and what do you want to get out of it. I don't put a value judgment on any of this stuff. It's complex and emotional and personal. But what I do try to do is empower people to make a decision and be educated about that. And so for these folks that maybe they notice depression cycles with this food, I'm just curious are we seeing a drifting in the food first?

[0:25:00]

And then we see the depressive activity. And this depressive activity ramps up, then do we see more shifting in the food away from what we would generally consider to be kind of healthy and anti-inflammatory and whatnot? So, that would be my way to kind of deconstruct that.

Nicki: With so much of weight loss and digestive distress being specific to a particular person's make up -- this is a question, by the way, that came in via social media -- genetic predisposition, intestinal biome, organ and hormonal function, how does your book often approach that works across the board as opposed to only a subset of people struggling, making impactful dietary changes?

Robb: Oh, man. So, I mean, my real hope with this, and I think we have it in the cover of the book, say goodbye to one size fits all diets. And although I do start this whole story with the kind of launching pad of an anti-inflammatory Paleo type approach, I think that when people are armed with this general understanding of the neuroregulation of appetite, when they understand what the emotional significance of this whole story is, and instead of beating themselves up about the difficulty instead of continuing these self-destructive behaviors like the whole concept of cheating on food or like the personal or healthy relationship with food, if we can get foods beyond all that stuff, then we're un-patching the psychological hang ups that a lot of folks have.

We're getting them started at just a fresh baseline. Which doesn't mean it's going to be easy but it may be the only way to even make it possible. Like if folks are carrying that baggage around, it may not even be possible to get going forward. And then from there I have a pretty slick triage process where people can figure out where they are on the insulin sensitivity-insulin resistance spectrum.

They get a sense from both objective measurements like blood work and subjective kind of observations like how they feel between meals, what their energy level is. They get a really good sense of what they do best on. And I walk them through a whole process that encourages them to take that basic Paleo template and then start mapping the boundaries of it. What do they do well with? What do they not do well with? Particularly with regards to carbohydrate.

That seems to be, in my opinion, kind of the highest variability there, the amount of carbohydrate and conversely fat.

Protein seems to be reasonably stable across the board for folks. Yeah, that's how I'm hoping that this thing isn't a one size fits all approach, that it's able to get people very, very granular and we can address a much broader variety of individual needs.

Nicki: And you don't just talk about food, right? You have something that you refer to as the four pillars or health. Why don't you briefly mention the other three pillars?

Robb: Yeah. So, the other three pillars, the four pillars of health are sleep and photoperiod, which I lump together; food, which we talk a lot about food in the book, not surprisingly; movement, we also call it exercise, but nobody likes exercise. Everybody likes movement. And then, finally, community. And on that community piece, I lump in both our gut microbiome and the people that we have relationships with and relationship with nature and all that type of stuff.

All of these things synergistically feed forward to either support a healthy neuro-regulation of appetite and the good ability to kind of self-regulate what we're consuming. Or it can derail it. Just a little bit of disordered sleep can make you insulin resistant. A little bit of disordered sleep tends to make you seek out more processed hyper palatable foods. Stress tends to do that. Dysfunctional relationships tend to do that.

Interestingly, sedentism tends to makes you seek out a kind of more refined hyperpalatable foods. Because at the end of the day it's kind of a stress. There's this thing called feeding pen syndrome where animals that are kept inactive, they don't match activity to food intake. It drifts. And they have a tendency to overeat just due to sedentism. So, yeah, I mean, we definitely talk a ton about nutrition. We talk about insulin and all the other ghrelin and leptin and adiponectin and PYY and all these neuro hormones, neurotransmitters that are important in the neuroregulation of appetite.

But then all these other lifestyle factors feed back into this in a super synergistic fashion. And then, honestly, I could have probably made a strong case for the book to be 90% about sleep and photoperiod and 10% everything else. Like I think that sleep and photoperiod piece is super, super important. But I still feel like even though that information is getting out to folks, I think that it's still a little bit different, like people can't fully wrap their head around it. So, it ends up being kind of the support material instead of the foundational material.

[0:30:01]

But I could make a really credible argument that to properly weigh the importance of this stuff, that sleep and photoperiod piece is way more important than the food in general. If you get that dialed in, then the sleep or the food and everything else is not as critical a piece, yeah.

Nicki: Go you. Let's see. We had another question from a woman whose husband is type I diabetic and she says: I'm curious about things that have zero carbs and how they affect blood sugar. My husband is type I and from time to time certain things spike his sugar. Coffee, for instance, with no sugar and little cream causes a spike. And sometimes certain high fat low carb meals that I make can send his sugar soaring. How can this be?

Robb: So, really good question. The coffee, because it's an adrenal stimulant, basically, it's not surprising that that's going to pop up blood sugar. It doesn't do it in everybody. But it is a really common thing. The counter-intuitive part of maybe doing a large fat meal, high fat meal, and getting a positive blood glucose response on that, positive being that the blood glucose level goes up, some fats particularly saturated fats can enhance the translocation of lipopolysaccharide from the gut through the gut wall into the circulation and LPS is a very frisky stimulant of the immune response and a stress response.

And so, again, we can get elevated blood glucose levels from dietary sources and essentially from stress sources. And those stress sources are basically pinging the adrenals or pinging the nervous system to release glucose out of the liver and that glucose may have come from previously consumed carbs. It may be gluconeogenesis. It doesn't matter where it came from. But you can end up in situations in which you have elevated blood glucose levels despite a very low carbohydrate intake.

We'll actually share a quick story around that. Again, I don't want to be up overly on the fans of low carb and ketogenic diets. But some of these folks are just like zealots about this stuff. I was talking to Shanti Wolfe who is our head dietician down at the Specialty Health Clinic and he's kind of ordered people out into these different buckets. Are they insulin sensitive and good blood glucose response? Insulin resistant good blood glucose response, insulin resistance, bad blood glucose response? He's got all these different buckets.

And so he has people who are eating a ketogenic diet. They are insulin sensitive so they are not in a state of physiological insulin resistance but yet their A1C is high. And this just confounded him for a while and then he did some reading, did some research, kept tinkering with this. And basically, what he's arrived at is these are the same people that tend to have consistently elevated glucocorticoid response.

And frequently, these are people that are doing a lot of glycolytic base work like cross fit or jujitsu or something like that and are ketotic and so they're hitting a stress threshold which even though they're insulin sensitive, even though they're low carb, it keeps their blood glucose elevated from the liver consistently enough that they end up with elevated A1Cs. And so, again, this is also why -- So, there's a spectrum on this stuff and no one approach is going to address all this. This is also why the testing that we recommend is as comprehensive as it is.

You could argue that most people are going to fall into one of three or four buckets but if you happen to be in bucket five or six or seven, it'd be nice to get some help with it and not just get tossed aside because you don't fit what is typical. So, hopefully, that wasn't too much of a diversion from the original question but, again, stress responses can definitely elevate blood glucose levels, in folks. Food sensitivities can be a stress response.

That's why like gluten or corn or dairy or what have you can be a stress response for some people. This is part of why we test this. And then also that lipopolysaccharide is absolutely a stressor to the immune system. So, that could be why these higher fat meals are potentially a problem for this gal's husband. And so mitigating effects with that could be that we do more fiber with it, we do more veggies. That tends to mitigate some of this really pronounced effect of pulling lipopolysaccharide out of the gut and putting it into circulation.

Drinking liquid fat seems to be a problem. That's not to say that like putting some olive oil or something on your meals are going to be problematic but some of the things like Bulletproof coffee or just doing fat balms made out of coconut oil, you could have some problems with that because of the stress response from LPS.

Nicki: And other people do great with it which, again, it circles back to the whole personalized nutrition piece where it's really important to figure out what works for you.

[0:35:04]

Robb: Yeah. And even that said, what's working for you today may not work for you tomorrow. And this is where it's hard because you want to give people a general enough guideline that they just don't throw their hands up and they're like, "Fuck it, man. I'm done. I'm over. I'm out. I'm just going to hit Krispy Kreme and In and Out because they're in the same share property and we'll call it good."

But at the same time we can't make it so general that it only applies to 10% of the population and we feel like a superstar because the folks that are exactly like

us, for me, it's like, oh, insulin resistant, a little fast twitch, type A, wow, I do great with those people. Yeah, shocker. Because I have all those problems too. But then can I help anybody else? Not if I'm just trapped in this one size fits all methodology.

Nicki: Along the lines of that last question, would you say that the seven-day carb test is appropriate for a diabetic either type I or type II?

Robb: As written, no. And for the type I diabetic, I would recommend Dr. Bernstein's Diabetes Solution book, hands down. If you're a type I diabetic, you know someone who's a type I diabetic, you're like, "Man, should I get Robb's book or should I get the Dr. Bernstein book?" Get the Dr. Bernstein book. Like the type I diabetic who's not following that protocol, there's nothing better that you could do for that person.

They also need to check out Marty Kendall over at OptimisingNutrition.com. They need to get signed up for the Typeonegrit Facebook forum. It's run by RD Dikeman. You need to follow that. So, if you're a type I diabetic, get on that stuff. Follow it. Just get going with it. I mentioned type I diabetes in my book and there's some ways that you could do the ketogenic approach and everything but, man, that's such a difficult condition to manage. Get the book that's specific to it, run with that. And if you ever want to circle back around, get a used copy of this thing and understand the neuroregulation of appetite better, fine, but address the type I diabetes deal first.

If you're type II diabetic, I think that something like *Wired to Eat* is fantastic for you because it provides multiple entry points where you could jump in. One of the entry points where you don't jump in though is the full fledged seven-day carb test. And I explained why that is in the book. And the basic deal was that until we get your insulin resistance reversed, until we get your baseline blood glucose levels dealt with and you're looking generally healthy, we don't want to be jamming that many carbohydrates down on a consistent basis particularly things like white rice, white potatoes, although that said, there may still some variation in there.

Like I'm being a little bit conservative on that and goosing people more towards this lower carb approach when I know that they're insulin resistant but I think that that's a pretty safe spot to start.

Nicki: Great. Okay. I think we've got one more question and he wants to know if you can explain the concept of palate fatigue and its role in our society.

Robb: Oh, man, that's a really good question. And I have a pretty cool example in the book and also a link to an example of palate fatigue. But, basically, we have this

fundamental almost like thermodynamic explanation for how critters get energy out of their environment and it's called optimum foraging strategy. Anything that moves to get its dinner follows this pattern whether a grazer, carnivore, omnivore, and it's basically the story where you need to get more energy out of your environment than what you spend getting it or you're going to die. That's just non-arguable deal.

Humans don't really recognize this issue because for the past century or two, we've had technology and culture that generally provided an abundance of food at least for some sections of the world. So we don't really think about this in this naturalistic fashion. But our fundamental genetic wiring is such that we should eat more and move less. That's what got us here. That's what keeps everything else in nature alive.

But even though we're kind of wired as opportunistic omnivores to eat anything that's not nailed down, a counterpoint to optimum foraging strategy is this concept of palate fatigue where you will get bored of something. And the reason for that is that if you ate too much of one item you could either get toxicant problems, like there could be toxins in the food, or you end up with a nutrient deficiency. So, it tends to push you to eat a variety of different items.

And again, I mentioned a pretty interesting example of this in the book where a guy is trying to do an ice cream sundae challenge where he's eating like eight pounds of ice cream and he gets partly through it and he bugs down and he starts gagging, he's turning green, he's not going to finish. And so he's at palate fatigue. He is maxed out.

[0:40:02]

Nicki: On a hyperpalatable food.

Robb: On a hyperpalatable food. I mean, this is a pretty good looking ice cream sundae. It just happens to be eight pounds of it. And then he does something which just confounds doctors and dieticians when they run what they generally tell people do past this reality -- And this is Adam Richman. He had the show Man Versus Food. He orders a big plate of extra salty extra crunchy French fries. And he starts chewing a French fry and then having a bite of ice cream and chew in a French fry and eating a bite of ice cream.

And he's able to finish the whole sundae, finish it in the allotted time, but he's only able to do that because he's able to bypass that neuroregulation of appetite. He's able to turn off palate fatigue by using this food that is as different from the ice cream, this salty crunchy savory interesting texture that's juxtapose to the creamy cold sugary experience that is now like a tsunami on this

neurological wiring. And it just completely overwhelms it until he presses a reset button of sorts by eating these French fries.

And this is part of what I am talking about consistently through the book. How do we construct meals that are tasty and delicious and satisfying but not so complex or so hyperpalatable that we tend to eat everything that's not nailed down? And there's no, again, no one perfect route to that. There are some trends. Higher protein tends to be very satiating, lower glycemic load relative to the individual tends to be pretty satiating.

This is where we start seeing, where things like a low carb diet or even I'll throw out there some of the more successful vegan diets that are very high fiber and high satiety profile. This is a big part of why these things work. And I will say this. Whether it's Paleo or vegan or microbiotic, all of these things, when they're compared against standard dietetics recommendation of everything in moderation, eat less move more, that recommendation fails.

And it doesn't matter which other approach you compare it against but these other approaches, to some degree, limit palate options and they provide a little bit of lame lines that may be the degree of self defense that one needs to be able to basically navigate the modern world.

Nicki: It was interesting to me too just doing the seven-day carb test, I really could get a sense of how the preparation of foods can affect palatability because one of my tests I had 50 grams of effective carbs of sweet potato and it was like, gosh, I really wish I had some butter on this or a little bit of cinnamon. And then you imagine like the other ways that people make sweet potato with marshmallows and candy pecans and maple syrup. You can really see how as we move that food further and further away of its just sort of plain ordinary state, it becomes far more palatable and easier to eat at much larger quantities.

Robb: Yeah. And we're going to do some videos on this stuff to kind of illustrate it because, I think, it's pretty visually compelling and interesting. Nicki and I were talking about a marshmallow, just as an example. So, you take a marshmallow, you're like, "How many marshmallows could you eat?" I'm like, "I don't know, one, maybe two." I mean, they're okay. They're sweet. But it's like it's not that interesting. Okay, let's get a camp fire going, nice bed of coals and now we can take these marshmallows and get it roasted nice and toasty golden brown all the way around. Now, how many of those can you eat?

Nicki: I like mine burnt and on fire.

Robb: I was going to say. This is another thing. Nicki likes to almost set the house on fire with it. But if you just take a marshmallow and roast it over the fire, you've

now got a crispy exterior that's hot, it's really hot immediately blow but then it's a little bit cooler as you get down near the stick. So, now, you've taken something that was a uniform palate experience and now you have maybe three or four or five different palate experiences in this one food just by roasting it over a fire.

And then every single time you put that marshmallow over the flame, it's going to be a little bit different. It's not going to be exactly on point. So then there's more variation there. How much more of it you can eat? You're just sending enough of a different signal that that satiety thing, that satiety mechanism is kind of getting hip-faked, kind of trying to track it but it can't quite do it. Man, now let's take that toasted marshmallow and jam some Graham crackers around it. How many of those can you eat?

Now, let's put a little chocolate in it. How many of those can you eat? And, man, I bet if you took that whole thing out to some level, it's like, okay, we've got a marshmallow, Graham crackers, dark chocolate, now let's sprinkle a little sea salt on it. It's probably going to be like the penultimate deal.

Nicki: A little caramel sauce maybe too.

Robb: Maybe a little caramel sauce with some salt in it. I think if folks can think about that, it's these changes in palate experience that can be really powerful and can bypass neuroregulation of appetite.

[0:45:05]

But then conversely if we can wrap our heads around that fact -- And again, it's not to say that you never have dessert, you never kick your heels up, but you need to know yourself. You need to know what--

Nicki: It's an awareness thing. You mentioned this in one of the threads. You talked about helping people to understand spontaneous portion control. And if you really understand what preparation am I going to not have as much control or want to eat more then back up a step and remove that caramel sauce or whatever that extra layer is that's going to cause you to go off the deep end.

Robb: Right. Yeah. But we go super deep on that in the book. I'm very proud of the book now looking back at it. I'm very interested to see what you guys make of it, interested to hear your stories, interested to see you guys follow the 30-day reset and the seven-day carb test. We have some interesting options brewing that we're hoping to have rolling out soon where you can document all of these process, also some options for tracking your blood work and getting a very

granular sense of where you are in the health status. We'll update you guys as that rolls out. Anything else?

Nicki: I think that's it, yeah.

Robb: Well, thank you, wife.

Nicki: You're welcome, hubs.

Robb: Thank you, listeners. Looking forward to seeing you all out there. Hopefully see a lot of you at Paleo f(x), see some other folks if we do some whistle stops for the book. And thank you again for all the support that we've had.

[0:46:35] End of Audio