

Nicki: Hey, hubs.

Robb: Hello, wife.

Nicki: Blowing the steam off of your coffee.

Robb: Trying get it down to non-fusion levels to be able to drink it, but yeah, I'll just wait.

Nicki: You just have to wait a little bit.

Robb: Yeah.

Nicki: What's new?

Robb: Not too much. Another day above ground, which I call a win, you probably call a loss, because I'm worth more dead than alive. But yeah.

Nicki: No.

Robb: No?

Nicki: No.

Robb: You just don't want to be left with two kids and a dog and cats.

Nicki: Despite what it may look like, I do actually like you.

Robb: Oh, okay. Well, that's a plus. That's a plus. What's new with you?

Nicki: Let's see. Not too much, just-

Robb: How's your Jiu Jitsu going?

Nicki: Jiu Jitsu's going. Jiu Jitsu's going. Let's see, we were working ... Where were we working on Saturday?

Robb: Turtle Top.

Nicki: Turtle Top. Yeah. And this chinstrap thing. I don't think I'm really a fan of that. Kind of hurts.

Robb: Don't stick your head there, and you won't get chin strapped.

Nicki: I'm not planning on it, yeah. I'm planning on protecting.

Robb: Cool. Cool.

Nicki: Shall we jump in?

Robb: We should jump in, yeah, because people definitely don't come here for our play by play.

Nicki: This part, yeah.

Robb: For the most part.

Nicki: Okay. I need to go over here. Questions. Okay, our first question is from Pete on going in and out of ketosis. "Hey Robb, I've been on and off a keto diet for the past five years or so, and when in ketosis I feel fantastic. I train Muay Thai, and on days that I train, I tend to up my carb intake as I just feel better throughout training, similar to you with Jiu Jitsu. On Sundays, however, I do tend to go off the rails a bit, and find myself on Monday down around the 0.2 mmol/L level, and then by Tuesday night, Wednesday morning back up to anywhere between 1.0 to 2.4 mmol/L, where I stay for the rest of the week. I have in the past gone several months at a time on a 30 to 50 gram carb per day diet on multiple occasions, haven't done so in the past year and a half or so. I've been hearing a lot lately that this quick fluctuation between low carb to moderate high carb intake can be very bad for you. Can you help shed some light on this? Am I doing long-term damage to my body by fluctuating?"

Robb: It's a really good question. There have been some studies recently, Bill Lagako's posted a few of these where people on the ketogenic diet ... And, you know, I can't remember if it was actually human study or animal study. I'll have to dig around on that. But basically they had a keto-adapted organism, either human or rodent, given some carbs. Blood glucose levels went quite high, high enough that you would anticipate some damage to the vascular endothelium. And so the thought there was, low carb diets are dangerous because when people deviate off the low carb diet then there's problems.

Robb: And we definitely know that in the low carb state, people become physiologically insulin-resistant, or have a tendency to become physiologically insulin-resistant. What that means is, in general, the muscles and the adipose tissue don't really take up as much glucose as what they did previously, and the glucose is being spared for the brain and the red blood cells and the tissues that really have to have glucose. But in the context of something like this, the way that Tyler and Louise have recommended for keto gains and whatnot, a low glycemic load titration up in carbohydrates seems to be totally benign. Doing the targeted approach, in which you're putting 10, 15 grams of glucose into the mix immediately pre-training, we really don't have good studies on that. But I can't imagine that that is a net negative. Particularly when I see how well people perform on that, and they feel good.

Nicki: Does it have more to do with how his blood glucose is responding when he jumps to high carb? Because it seems like, with the metabolic flexibility stuff, one who is metabolically flexible should be able to go from one to the other, so-

Robb: You should, and the thing is, we're only seeing ketone levels here, we're not really seeing his blood glucose levels.

Nicki: But I guess my question is what he's at. Is this deviation that he's saying could be dangerous, is that if the person's blood glucose levels skyrocket?

Robb: Yes. That's where the concern is. And we just don't have enough information here to really know what's going on. You know, this is one of those tough things though, where is going on a complete hookers and cocaine carb binge while keto adapted a bad thing? Yeah. Is going on a complete hookers and cocaine carb binge a bad thing under-

Nicki: While eating a standard-

Robb: While eating whatever, yeah.

Nicki: -American diet.

Robb: And this is one of the things that I think is quite frustrating, and the vegans, as I'm calling them now, they will cite these studies where you eat a high-fat diet and you get disruption in vascular endothelial function. Any meal causes a disruption in vascular endothelial function. This is why we shouldn't fucking graze all day, and we should eat a meal here, a meal there, and then have periods of time where we're not putting calories into our system. Because every time you eat, there's a systemic inflammatory response, you get a little bit of lipopolysaccharide that goes through the gut barrier into systemic circulation.

Nicki: But not if you're just eating plants.

Robb: Well, of course, if you're not eating plants. I'm tired enough right now, that Nicki nearly got a spinning elbow off of that one. Yeah, of course, plants only don't cause any of these problems. But this is where ... And this is something, actually, now I'm thinking about it, would be worthwhile to look at what's the disruption in endothelial function when somebody's low carb and each a carb rich meal, versus just Joe Schmo is motoring along and then they eat a carb and/or a fat rich meal, and see what the vascular endothelial dysfunction is in that scenario.

Robb: This stuff, again, also it boils down to: are you overeating, both in amount and frequency? This is some stuff that's also really interesting, where they took people who were caloric restricted, and relatively few meals, like two or three, or calorie restricted and six or eight meals a day. And the calorie restricted plus six or eight meals per day had no real benefit with regards to systemic inflammatory function and a bunch of other biomarkers of aging and inflammation. So eating too frequently is a problem, even when we add in calorie restriction. So you can completely undo that.

Robb: So man, I don't know. It makes a case for just not being an asshole with your food. If you're kind of eating low carb, kind of stick with low carb. And particularly in this day and age, if you want some ice cream, get some Mammoth Creamery or some Killer Whey low-carb ice cream. If you want some cookies, get some Nui cookies or something. If you're generally eating low carb, then generally figure out a fucking way to eat low carb. If you're not, then kind of work within that.

Robb: But I do think it's a really good question. Pete raises a great question. And I don't think we have remotely all the answers on this. There's a lot of moving parts to it. But it is just kind of a reality. If we don't overeat, if we not eating at a ridiculous meal frequency, which ironically two or three meals per day seems to be a reasonable meal frequency, and you're getting enough [inaudible 00:08:04] activation that you don't totally wither away all your muscle mass and die from Sarcopenia, but you also are not eating so

frequently that we're getting a real, legit, upregulation systemic inflammatory signaling and whatnot.

Robb: So, Pete, I don't know if I've really answered your question there, but there's a lot going on with this.

Nicki: And also, how far off the rails are you going? Are you doing 800 grams of carbs, or are you doing 200? I think that can play into it too.

Robb: And if it's post workout or something, it's a really different story. Our weeks tend to be a little bit more sedentary on the front end. We're not even really making it to formal Jiu Jitsu class on Tuesday, Thursdays right now because of workload. We're lucky if we go out in the garage and do a little bit of drilling. So on the front end of the week, I'm not really eating much in the way of carbs. Whereas Friday and Saturday, those tend to be bigger training days, and so I'll have a couple of oranges for breakfast in addition to all my other stuff.

Robb: And then we'll do Jiu Jitsu, and then based off of how knackered I am from that Jiu Jitsu training session, I may do ... So the two oranges are 40 grams of carbs alone, and then after that I may have the equivalent of three or four more oranges. So I end up with that 100 to 120 grams per day of carbohydrate, but I feel good with that. I don't get a crazy blood sugar crash. I'm not tracking ketones, but I just kind of dose it appropriate to my activity level. Whereas if I'm just sitting working, I don't need it. I just don't need it. I don't need that many calories; I don't need that many carbs. And so I just don't throw it in.

Robb: So to your point, there's a lot of mitigating strategies that can be employed, like exercise and meal timing and stuff like that.

Nicki: Okay. Our next question is from Chris, about deficits below basal metabolic rate. "Hey guys, over the past seven months I've had great success following the keto masterclass. As far as weight loss goes, I've lost 42 pounds, lowered my body fat percentage from around 28% to about 19%. For the first 12 weeks I ate at a 20% deficit without a break. I weighed and measured all my food, and I made sure I had my electrolytes dialed in: eating lots of potassium- and magnesium-rich foods, supplementing sodium as well as magnesium too."

Nicki: "During that time, I was lifting four times per week, as well as a couple of 15 to 20 minute interval workouts per week. Other than that, I was doing some light walking and playing with my kids. Towards the end of that initial run, I started to get kind of bitchy. I'm a 45 year old male, and never really experienced the stable energy or deep solid sleep that a lot of people mention, two things I was really hoping for."

Nicki: "Recently I've been alternating four-week cuts followed with two-week full diet breaks a la Lyle McDonald at maintenance. During those, carb sources have been clean paleo foods. Coming off of each of these, I feel better and maintained a stable weight throughout. I was normally back in ketosis in 48 to 72 hours after switching my carb and fat macros back up. And both times, so far, it has re-started weight loss. Still not great sleep, but I attribute that to having young kids, two and six."

Nicki: "After a recent DEXA scan I was recalculating my macros with the keto gains calculator. I'm 162 pounds and 19% body fat. And it dawned on me that the deficit it was recommending, about 15%, was putting me below my basal metabolic rate by about 105 calories per day. For reference, I use the sedentary activity level, and don't add back in workout calories."

Nicki: "So to my questions. Understanding that the calculator is based off of the Katch-McArdle formula, basically giving a statistical norm, but BMR is the calories we need to maintain vital physiological functions, what are your thoughts on recommended deficits putting one below their BMR, and what are the longer-term implications of extended diets doing so? Would it be better to just eat at BMR on rest days and add back in some I'll apportion workout calories on training days while still being below TDEE?"

Nicki: "It seems to me that BMR should be an absolute floor when it comes to caloric intake. I'm wondering if the aggressive deficit's created some diet fatigue and hormonal disruption for me. Love the podcast and anything the Wolf Pack puts out. Thanks for everything."

Robb: Man. Really good stuff. We read these ahead of time, we actually do, and I was noodling on how to tackle this one, because it raises a lot of questions and is difficult to really ... So, we've talked about in the past ... I think we've talked about on here. This is where I'm feeling like an old man that just tells the same story again and again and again.

Nicki: Well, a lot of the questions have similar veins, and so.

Robb: They have similar veins. But also, coming off of FitCon and then paleo effects, I know I told this story several times, and so it's not like, okay, I think I've said this, but I can't remember. But anyway, the point beings is that I've noticed that I seem to motor along with probably about 20, 25% fewer calories than what you would expect based off weight and activity level and all that type of stuff. Louise has mentioned the same thing. We kind of see it within the keto gains community.

Robb: I remember ages ago, Coach Greg Glassman, founder of CrossFit, we were talking about the zone, which, interestingly, when you really look at it in its fully formed format, which Barry Sears did a shit job of explaining the athletic interpretation of the zone, which is about a 60 to 65% fat-fueled diet, mainly from monounsaturated fats, moderate carb, appropriate protein, ironically, I think I end up eating pretty close to what five X fat zone recommendations are, which is fucking ironic, considering all the past and all that stuff around that.

Robb: But what Greg Glassman mentioned is that when people get in, he called it a thermodynamically efficient state. Which can be all kinds of controversial, and I think we have a question later about the thermodynamics in the story calories in, calories out. But he just noticed that people seem to motor about 20 to 25% fewer calories than what you would otherwise expect when they're eating junk, or maybe not as nutrient-dense. And it's interesting, because people freak out about that. There's kind of the Ray Peat camp, and there's some people that are super geeked out on eating as much as you possibly can short of gaining body weight. And sometimes folks get some decent results off that, maybe they've [inaudible 00:14:53] their hormonal profiles.

Robb: But then what's always interesting about that, when you dig in, what was their training volume really like? Were they really supplementing sodium in an appropriate way? Were they a night shift worker? There's all these moving parts to it that the blame is always placed on the dietary intervention. Which, maybe it was, but there's all these other extenuating circumstances that we know can influence this stuff.

Robb: So I guess kind of the main question here is: is it a bad idea to eat below that basal metabolic rate which, is it Pete?

Nicki: Chris.

Robb: Chris pointed out is a guesstimation, it's kind of a normal distribution. It's entirely possible, and I think it's reasonable, that when people eat a more nutrient-dense diet they probably require generally fewer calories to get the same processing done. So I don't know that this one is really a scenario in which the ... People were surprised by how few calories they eat on keto gains. Again and again people are like, "I can't believe that this is what you guys are recommending." But when people get in and actually you relax into the process, then they get great results. We don't see thousands and thousands of people with HPTA access dysregulation, because they make sure to stay on point with the protein and with the sodium in particular, and stuff like that.

Robb: So I don't know if I'm fully ... Yeah, the not great sleep.

Nicki: He's not had the stable energy or anything.

Robb: And when I hear supplementing, up above he says supplementing sodium. Yeah, but how much? Exactly how much? And are you for sure getting at least five grams a day?

Nicki: Especially given the fact that you're lifting four times a week and doing interval workouts as well. There are people in the keto gains community doing 10 grams of sodium a day, if they're active.

Robb: And more.

Nicki: And more.

Robb: Yeah. We don't talk a lot about that, because as it is, people are all freaked out. But yeah. Yeah.

Nicki: But these individuals find that they perform better.

Robb: Much better. They feel better.

Nicki: Very active.

Robb: Their sleep is better.

Nicki: And that's where their set point is. So if you're only doing 1000 or 2000 milligrams of sodium, you might try-

Robb: No, you have to. You have to. And this is Phinney and Volek's original work, which gets ignored a lot. They mainly focused on adding bouillon cubes and stuff like that. But they recommended a minimum of five grams per day. And that was just for your run of the mill keto type person, and then you start adding in volume and intensity of training and all these other considerations, then we have some problems there.

Robb: So I guess the long and short of that is, I would definitely look at sodium and electrolyte intake as fastidiously as you have your macros, and I'm going to get burned at the stake on the interwebs, but I'm not as ... It's interesting in a time when people are so geeked out about fasting and caloric restriction and all these longevity hacks and everything. So on the one hand, that's real popular. But then on the other hand, people are concerned that a nutrient-dense diet may actually be a little more thermodynamically efficient. You just literally may not need quite as much food.

Robb: That's not saying that in Chris' scenario he doesn't necessarily need a few more calories. But if the goal is still leaning out, we still need a caloric deficit, and you've got to get that by hook or by crook. You could do a more modest caloric deficit; you could do a zig zag pattern, where on training days you do more calories and on non-training days you do fewer. There are ways of breaking that up. But I'm not as concerned about that as what I was in the past. Particularly if people are on point with electrolytes and the food is nutrient-dense and all that type of stuff. And again, the interwebs will crucify us, but that's okay.

Nicki: They did on the alcohol question.

Robb: Man. Man. Yeah, we're going to do some outtake stuff on that.

Nicki: We have to do an outtake on that one.

Nicki: Let's see. Next question is from Zach on energy balance: Gary Taubes versus Chris Kresser. "Hey Robb, long time follower, and really appreciate the work you're doing. I wish I had known about keto and paleo when I was younger. I feel my athletic performance could have propelled me to the next level. Either way, I'm happy to have it in my life today, as it keeps me thin and healthy. Your keto masterclass has been instrumental in guiding through my keto paleo journey, so thank you."

Nicki: "I've been very interested in a low carb diet for 10 plus years now, and it started with Gary Taubes. Gary Taubes is famous for saying that calories don't count, and in my anecdotal experience, they don't. I must stress that since it works for me, I'm completely happy with the results. However, when trying to speak intelligently about keto and low carb, I'm trying to bridge a gap from Gary to Chris Kresser's podcast with Joe Rogan last week. On Joe Rogan, Chris said that you must run a caloric deficit to lose weight. Now I'm really confused."

Nicki: "I'm an engineer and have taken several thermodynamics courses, so from an energy balance equation I understand that the human body cannot deny thermodynamic principles. But obviously our metabolism is much more complex than an energy in, energy out black box. Furthermore, energy in, energy out does not feel right for a number of reasons, such as, for instance, energy expended drinking cold water is not in this equation. That is, your body warming the cold water up. Energy that is never consumed but rather part of a defecation event, et cetera."

Nicki: "I've eaten what I perceive to be a major energy surplus on a ketogenic diet, and have still lost weight. My caveat there is that I wasn't weighing food, so I cannot really know. My apologies if you've already answered this question, but I could not find it on your blog or searching your website. I'm hoping you can point me to a study, a white paper, a text, or some reliable information that will answer the question of who's right: Gary Taubes or Chris Kresser? Thanks Robb, you're a legend."

Robb: Man. So, my initial foray into the whole low carb scene was just prior to Gary's first really popular paper, The Soft Science of Dietary Fat, and a couple of other papers. But this was around 2001 that Gary's first paper came out. And it was pretty powerful, because it received a lot of attention, a lot of bandwidth. And it was validating for the very nascent and early low carb paleo-

Nicki: Ancestral health.

Robb: -ancestral health scene. There was nobody out there fighting for this or advocating for it. It was really the dark ages of putting these ideas forward. And Gary's work was really a beacon of hope. And I've got to say that, for me, having been on a carbohydrate rollercoaster my whole life prior to this, I was kind of lean but not really lean, and then I went low carb, I would just pour olive oil on my food and eat it, and I was skeletal lean. I was also younger, and I was much more active, and there were all these other factors. But I could eat with pretty much reckless abandon and be as lean as I wanted to be, and I had rock solid energy levels.

Robb: And I think that that is a not uncommon experience for many people. And this is why part of Gary's idea that he threw out there, that it's not really the calories, it's just the insulin, had some stickiness. Because at a macro level, there were a lot of people that their personal experience matched up with that.

Robb: And then even working with clients, we had clients that would just change the qualitative nature of their food, and they were still eating a Costco container of almonds or cashews or whatever as part of their overall eating strategy, and they were still losing weight relative to what they were doing before. To Zach's point, they still may have been introducing some degree of a caloric deficit in this whole thing.

Robb: At the end of the day, there's a huge variation, and Zach, you touched on some of these things. Some people absorb more calories out of their diet than other folks do. Just tweaks in the gut microbiome can make people 10, 20% more efficient at harvesting calories out of the food that would otherwise just pass through. People with Coeliac disease, and this is where the gut microbiome gets really interesting, we're always like, "diversity, diversity, diversity", but folks with Coeliac disease tend to have a more diverse gut microbiome. And the thought there is it's kind of a response to the fact that the person is likely suffering nutrient deficiencies because of the gut damage, and so they're trying to prop up the microbial diversity so that there's more opportunity to actually harvest nutrients into the gut.

Robb: It's highly speculative. There's not a randomized control trial on this, so clearly the Nortons and Aragons of the world are going to take a shit down the back of the whole notion. But it's really interesting. And there's a remarkable spread and variation on that side.

Robb: There's a pretty good spread on just even the way that people manifest calories at the mitochondrial level. I've talked about that in my metabolic flexibility talk, where some people are really jammed up in that kind of carb-dependent mitochondrial complex. And those people, they kind of burn more energy inefficiently. They're producing a lot of reactive oxygen species, but it's more a more caloric intensive process.

Robb: It's not necessarily good, though. It's like, "Oh, I get to eat more food." It's like, "Yeah, and you're aging and oxidizing yourself at a faster rate." This is part of the benefit of being metabolically flexible and tending towards fat mobilization and fat utilization as a primary fuel source, going through that mitochondrial complex too, you tend to produce fewer reactive oxygen species. Which is arguably more thermodynamically efficient. But at the end of the day, the thermodynamics are legit, but what gets lost in this story is: one person's thyroid profile is X; another person's is Y. And depending on the delta between those, one may be far more efficient with calories than the other one. And there's pluses and minuses to both of those stories.

Robb: So what's unfortunate, in my opinion, with Gary, I really like the guy, I consider him a friend. But he got wrapped around the axle of proving the insulin hypothesis instead of having that be a potentiality. He really linked his whole wagon and existence to proving that. Versus I suggested ages ago, 10 years ago, when [inaudible 00:26:03] was in its infancy, "Let's focus on the outcomes and the fact that low carb diets really benefit people. And let's focus on the outcome driven element instead of being so wed to proving the mechanistic side."

Robb: Now, I understand the impetus there. In theory, if you can prove mechanism of causation, then we have in theory better control of what's going on. But this is just a nearly infinite process. At the end of the day, there's huge spectrums in variation. I was on a podcast yesterday where I was talking about this stuff. And just thinking about caffeine metabolism, there are some people that if you give them 100 milligrams of caffeine, in four hours they have metabolized half of it.

Nicki: Louise.

Robb: So the half-life. Louise, for example. There are other people that the half-life for caffeine for them is 30 hours. So we've got nearly a 10 X spread on just the ability to metabolize a common feature of our existence, caffeine. And so we have nearly a 10 X spread. And I don't think that there's remotely that big of a spread with regards to the way that calories impact people; but what if it's a 2 X spread, or a 25% spread? That ends up manifesting hugely over the course of a 2000 calorie diet. It could be the 400 calories plus or minus one way or the other. And I don't know what the real story is there.

Robb: But we do know that there's massive variation from person to person. And what is the guy's name, the Great Randy or whatever? There's this guy that's had a million dollar offer for people to prove psychic abilities and paranormal stuff, and it's been since the mid-80s. And nobody's been able to do it. So far, paranormal shit doesn't seem to exist. Everybody has failed to produce it. And so this notion that somehow there's a workaround thermodynamics in the body is kind of ridiculous, on the one hand. Or maybe not ridiculous, but it's not being supported over the course of time.

Robb: But then the thing that I think that it fits your macros, and the evidence-based nutrition folks kind of miss is that the complexity of that thermodynamic story is jaw-droppingly

complex. And the fact that people overeat due to complex food combinations and hyper-palatable food, stress, and all this other stuff, kind of gets dismissed, and it's not really woven into a holistic approach to helping people manifest change.

Robb: I know that was all over the place, Zach. It's just that it's a really interesting, big topic. But I would have to say that this is a situation in which Gary, in my opinion, got fooled by an observational element, which is that there are some people that just seem able to eat a ridiculous amount of calories on a low carb or ketogenic diet, and either maintain weight or lose weight. But at the end of the day, Kresser's a bit more on point with this stuff, in that you've got to introduce some sort of a caloric deficit to really lean people out.

Nicki: And we see this on keto all the time, because people will be like, "Oh, just eat all the fat and you'll lose weight." And for some people it works, and for other people, they gain weight on keto.

Robb: And what we find with that is that the folks that are focusing on fat are under eating protein, and because of the protein leverage hypothesis, we have a decent understanding that if we under eat protein we will be goosed to eat more of whatever is out there in an attempt to get appropriate nutrition. And that could be higher carb or lower carb, but there's a reality that if we hit that appropriate protein threshold, then people tend to spontaneously reduce caloric intake. And that's all I've got to say on that.

Nicki: Our next question is from Andrea. Has pre- and post-surgery nutrition buildup been covered? She says: "Hi kids and kiddies and squatchies. So, it's been a little while since I have been devouring each and every single podcast episode, and I apologize. My own business focus has put me more into the writing podcast genre recently, but I see Tim [inaudible 00:30:38] on your interview e-list."

Nicki: "So my question. Have you guys laid out a protocol for extreme nutrient buildup for before and after a scheduled surgery? This would be for someone who is not really paleo, still eats gluten, and mostly just avoids sugar and junky foods. So they are not yet on the rarr, sardines from Nom Nom bandwagon, sadly. But if they have a willingness to make some changes to ensure they are in a better place to prepare to recover from their surgery, jaw replacement if it matters, what would you prescribe to them? And family, so if this guidance comes from an outside authority, that could make the critical difference in their enthusiasm. P.S. love to all you guys, you're doing the chop wood, carry the water, and have been for so long. I bow and respect. Hope to see you again soon at some rando paleo conference. Andrea in Burbank."

Robb: That's awesome. Yeah, some days I feel like sticking my head under the chopping of wood, but-

Nicki: Or in the bucket of water?

Robb: Or in the bucket of water, yeah. Yeah. Man, this is an interesting question. It's going to be reasonably controversial, but hey, what isn't that we do at this point? But we noticed something when we moved to Reno. We had a couple of people reach out to us, and they were super excited the fact that we were here. And they ended up being plastic surgeons. And what we discovered was that, through processes that I still am not entirely aware of, people were coming into their program, and they want a boob job or

they want this or they want that, and somebody suggested, "Hey, why don't we do a lifestyle program for these people first?"

Robb: And what it was was a low carb, ketogenic, paleo type deal. And what they noticed that, one, people ended up losing shocking amounts of weight on this program. So people would go in frequently, tummy tucks were the big deal, that's what it was. Tummy tucks were the big deal, and/or liposuction. People would do this lifestyle deal of eight to 12 weeks of a paleo challenge type gig. They got done with that, and then they're like, "Wow, I don't need a tummy tuck anymore." And so then they're like, "Well, what about boobs and eyebrows?" And all this stuff.

Robb: And then when they would do the surgery on these people, they were just stunned with how well they recovered. I mean, shocked with how well they recovered. Scarring was virtually non-existent. And something that people don't really appreciate is that these big glucose spikes and crashes with regards to scar formation are really nasty. With regards to immune response, are really terrible. These big glucose deltas cause suppression in an immune response. So everything that you would want to go into effective healing is fucked up with bad diet.

Robb: I had LASIK done 2007?

Nicki: Or eight, yeah. It was eight, it was eight. It was after we went to Nicaragua. Because you had your glasses when you were trying to snorkel there.

Robb: That's right, that's right. Yeah. It sucked. So I went to this guy, he's one of the best LASIK surgeons on the West Coast. I was ketogenic at the time, because I had read a lot of stuff about wound healing. And it was very early, but in my mind, reduced glycemic load and all that stuff made a ton of sense. Did the surgery, it went great, I was ecstatic. Went back two weeks later, three weeks later, a month, whatever it was, to get checked up, and the doctor literally, so I'm sitting looking in this thing, and he looks, and then he looks around, and he looks in there, and he looks around, and he's like, "You aren't fucking with me, are you?" And I was like, "I don't know what you mean." And he was like, "It is you, you don't have a twin?" And I'm like, "No, I don't." And then he was like, "You have absolutely no scarring from the surgery. I mean, none." He could detect no scarring.

Robb: And what's interesting is, most people with LASIK, they talk about chromatic aberrations where when they drive at night they get these halo effects. And, "Oh, gee whizz, it's the downside of doing this." And knock on wood, but I have no problem with that. I get a little bit of dry eye, if the wind blows in my eyes after LASIK, that has been a little bit of a problem, where my eyes will water. But he said that I would need a tune-up on this stuff and/or would need reading glasses five years ago, six years ago. More than that.

Robb: But every once in a while, if I have really fine print, I will pull out some reading glasses. But I had no scarring. The LASIK has lasted way longer than it was supposed to. And we've heard similar reports from people.

Nicki: So as far as a prescription, this person's going into surgery, let's say three or four weeks from now. Beef, salmon, blueberries.

Robb: Low carb paleo type deal. Even just for the weeks leading up to and the weeks afterwards at a minimum. Again, knock on wood, but it's really interesting. Shawn Baker is a surgeon. Most of the people that were early to adopt low carb have been surgeons. Because they would see someone change their diet, and then it wasn't like, "Oh, well, I don't know. Their cholesterol went up." And an internal medicine person is like, "I don't know if it really did all that much." But a fucking surgeon, they're looking at suture lines and wound healing and complications, and they're keeping statistics on that.

Robb: And that's why the plastic surgeons that we've met and have become friends with in Reno, their complication rate just plummeted. It got to a point where they were like, "No, you need to do this lifestyle program first, before I'm going to do anything." And it became a little bit of a non-negotiable deal there.

Robb: So for this person, it sounds like they still kind of eat poorly. But just trying to get a little bit on top of a lower glycemic load paleo type approach. This might be an argument for an exogenous ketone deal, where they're using them before, during, and after this process. Because the ketogenic state is itself anti-inflammatory, it tends to promote a lowering in blood glucose levels and whatnot. So this is maybe one of those scenarios where an exogenous ketone-

Nicki: With eating as much nutrients as you can.

Robb: As clean as you can, yeah.

Nicki: As clean as you can.

Robb: Yeah.

Nicki: And sardines. To be on the Nom Nom bandwagon.

Robb: Yeah. Everybody wants to be on that bandwagon.

Nicki: Thanks, Andrea. Okay, our next question is from Matt. CrossFit versus five by five?

Robb: Do I have a phone call right now?

Nicki: I have one in two minutes.

Robb: You have one in two minutes, okay.

Nicki: But I can call him back.

Robb: Okay.

Nicki: Matt says: "Robb and Nicki, thanks for all that you do. You, your books, and podcasts have changed my life. I have done two days a week of CrossFit for just over two years, and in spite of the amount of rest I get, I still end up with knee, shoulder, wrist, and elbow injuries and pain. I recently decided to pause my CrossFit subscription and have replaced it with three days a week of five by five routine recommended by the keto gains guys."

Nicki: "I did your keto masterclass and I'm at 7.5% body fat, and try to keep my macros on point with the keto gains recommendations. What do you think about just doing the five by five home workout alone? I do like the group element of the CrossFit class, but at my age, 52, I can't seem to go for long without injury or constant pain. I feel like the five by five program at home is much more manageable, as I can control the velocity and intensity without so much emotional effort. What are your thoughts regarding this path?"

Robb: Yeah.

Nicki: Sounds like you're on a good path, Matt.

Robb: You're on a good path, yeah. You're doing largely what we've done. And a couple of thoughts on the community piece. You could look around for a gym like Sarah and Grayson with Basis in Chico. There are a lot of gyms that have shifted out of CrossFit, are still CrossFit but offer a barbell program. There are a few affiliates that Mark Rippetto has put out there where there are starting strength gyms. So you could poke around and try to find a gym that is more amenable-

Nicki: Lifting oriented.

Robb: -to just lifting, and maybe pushing a prowler, and doing some basic conditioning-

Nicki: Without the competitive piece.

Robb: Yeah. And this is the reason why we modified our programming early on. We just, for certain classes, ceased writing names on the board and all that stuff. Because people needed the community more than they needed the competition.

Robb: The other thought is to join a Jiu Jitsu school. Which itself can be problematic, because we're back into that quality control deal. You need to find a good school. If you live near a Straight Blast Gym affiliate, then that's great. There's not a ton of them around. So you would need to do some poking around, because you-

Nicki: One that has a lot of women and older folks, so it's not just 20 year old guys that want to somehow be in the UFC one day.

Robb: Right. Yeah. But otherwise, you're facing somewhat the same challenges as you do from CrossFit gym with Jiu Jitsu gyms, in that if they cater overly to the competition side of things, then you're going to be in the same kind of dinged up, broken scenario.

Nicki: But yeah. Lifting. Getting out, walking, doing things you enjoy.

Robb: Lift, walk, sprint.

Nicki: Be in the sun. Play.

Robb: Shoot [inaudible 00:40:04]. We've been talking, we did some salsa dancing years ago, because we were invited to a big hoity toity wedding where the-

Nicki: In Mexico.

Robb: Yeah, in Mexico, where the Gypsy Kings were going to be playing, and we didn't want to suck, and so we practiced like crazy. But that's something we want to get back into, just doing some salsa dancing or something like that, to have a little bit of community, learn a new skill set, and all that type of stuff. It's big, that community piece is huge, for sure.

Nicki: All right. Anything else you want to add?

Robb: That's it. I think we're done for this week.

Nicki: Thank you guys for your questions. As always, if you have questions, submit them at robbwolf.com via the Contact page.

Robb: @dasrobbwolf on Instagram.

Nicki: Yeah. These clips also go out on YouTube. And this episode is sponsored by Drink Element, so stay salty, folks.

Robb: Stay salty.

Robb: Just as an aside, we had Zoe's birthday party this past weekend, and somebody brought us Element Jello shots. Non boozy for the kids and boozy for the adults. And that was pretty legit, so we'll share that recipe with you guys at some point.

Nicki: All right. Thanks guys.

Robb: Bye.