

# The Paleo Solution

## Episode 7

- Andy Deas: Robb, Andy Deas. We are back for Episode 7, Paleolithic Solution, and I think I might have fixed the levels this week, so hopefully, we sound the same.
- Robb Wolf: Well, we'll find something else to bitch at you about just to even things up if so.
- Andy Deas: Well, you know, we're on the path of incremental improvement forever, Robb.
- Robb Wolf: Absolutely! But I still want our '70s porn style intro music to make its way in here at some point.
- Andy Deas: Yeah. That's a good point. I got to follow up with DJ Greek and see what the status is on that.
- Robb Wolf: Awesome!
- Andy Deas: All right, great. Well, we got a bunch of good questions again. By the way, I saw today on your blog someone was nice enough to post the video of Super Mario's MMA debut.
- Robb Wolf: Yeah, that was scary. Mario basically kicked that guy like he was a glob of gum stuck to his shoe and just bludgeoned him. Yeah, that was pretty freaky.
- Andy Deas: I really need to see how big the guy is that he fought because like when you watch on World's Strongest Men like you realize that he is an enormous human being; but I think just relative to the other competitors, it's not so stunning how big he is.
- Robb Wolf: The other dude was pretty big. He was like 240 pounds.
- Andy Deas: Yeah, but sitting next to Mario, like you're realizing that guy is 240 and I just thought next to Mario, he was like wow, freaking big of a man he is.
- Robb Wolf: Yeah. The other dude definitely was not top of the food chain that day for sure.

Andy Deas: No. So we'll be interested to see where Mario's MMA career goes, but that was a very entertaining 40 seconds of my day.

Robb Wolf: Yeah, totally.

Andy Deas: All right, cool. So first question, we got this from a bunch of folks so I thought we'd let you kind of clarify this, and I think we're going to expand the question too. But starting off, why aren't eggs recommended for folks with autoimmune issues?

Robb Wolf: Okay. So what we're finding more and more and more is autoimmunity, the key element of it, the key causative factor is some sort of permeable gut situation. The gut lining, specifically, the intestinal villi, the little fingerlike projections in the small intestine get damaged, and when that area gets damaged, then intact food particles from our diet migrates or finds its way into our system and then we get some sort of an autoimmune reaction in which our body, instead of making antibodies against things like the H1N1 flu, it makes antibodies against pieces of protein, out of chicken and egg and beef and tomatoes and all kinds of stuff; and the potential then for that autoimmune reaction to make antibody to something that looks like a protein in us is very, very high.

And Loren Cordain has a great six-part video on the etiology of multiple sclerosis and he talks about some multiple sclerosis specific stuff but the underlying tenet is the same. There is a leaky gut issue that then leads into autoimmune response.

So now, usually we're focused on things like grains, very, very clearly gluten-containing grains, legumes. Some people are very into some of the nightshades like tomatoes, potatoes, eggplants being problematic, but the thing is that eggs, chicken eggs, duck eggs, all kinds of avian or reptile eggs are in fact very, very similar to grains in that they have a very dense nutrient-rich kind of reproductive element that needs to be protected; and part of that protection is antimicrobial activity; part of that protection is what's called anti-nutrient activity in which metal ions like calcium, zinc, magnesium and all that stuff are bound up so that they're not available for either the bacteria that may infest a grain or an egg; or if these metal ions are released, it can actually start germination of the organism. So that's kind of some of the background with it.

So eggs actually have a protein in them called lysozyme, which is designed to slice up or destroy bacteria and viruses that may find their way through the shell of the egg. It's very, very effective at preventing the spoilage of eggs, eggs getting infected by bacteria and going bad. It's

very, very potent in that regard. That lysozyme also can cause some significant gut damage, and I wouldn't say it's new but it's kind of out there on the edge of this stuff.

Like when you first start talking about this Paleolithic concept, we're talking kind of classic Greg Glassman deal: meat and vegetables, nuts and seeds, some fruit, a little starch, no sugar; and that covers like 90% of what we need to be concerned with. But then we start realizing that there's some nuance to it, like nuts and seeds are good but maybe not as the staple of the fat. Maybe we need to diversify the fat that we're getting because of Omega-3/Omega-6 balance, because of gut permeability issues with the nuts and seeds.

And this is somewhat of a similar deal with the eggs. Eggs are great. There's a ton of nutrients in the yolk and everything. It has fat-soluble antioxidants. If they're Omega-3 enriched they're awesome. But the main thing is that if somebody has some sort of an autoimmune disease, they really should limit their egg intake, you know, grains, legumes, dairy of course; but then also probably eggs also, and we just mentioned that because eggs are usually one of those standardly accepted things on a Paleo diet, but we want to limit that.

And it's that thing again where you limit it; hopefully, we see some positive improvement in the condition; and then you could reintroduce it and see if you get any response from them. And if you don't, then fine, keep them in the mix. If you do, then at least you understand that that maybe one of the causative factors for flares with an autoimmune condition, rheumatoid arthritis, lupus, multiple sclerosis, all that stuff.

Andy Deas: So when we're talking about removing it from the diet, I guess customarily we're thinking of for probably 30 days at least as a trial, right?

Robb Wolf: Yeah, yeah. And then from there, something that folks can do is just make sure that they cook the eggs thoroughly, scrambling it at low temperature with plenty of like olive oil or coconut oil so that the cholesterol doesn't oxidize. That's a good way to go. Boiled is a good way to go. Poached is a good way to go. A fried egg or like an over-medium egg is a little bit dodgy in this regard because you still have a soft yolk. I'm not really a fan of like these really well-done, chalky type yolks. I just don't like them. But if somebody had a problem, that's probably not the best way for them to cook that egg.

Andy Deas: Sure. Are there any other refinements to discuss other than possibly the egg removal that you can think of when we're dealing with an autoimmune disease outside of the kind of the standard Paleo approach?

Robb Wolf: Lifestyle things that are critical is sleep because any type of autoimmune condition is going to be exacerbated by lack of sleep, by stress, all that sort of stuff. So the lifestyle factors, making sure that stress is modulated, like you really rein in the stress as best you can. Obviously, that's challenging at times. Sleep is one of those things that in theory we should have a pretty good bit of control over. So standard lights out recommendations, pitch-black room, a little bit on the cool side. Honker in. Think about being it being like a cave. Sleep as much as you can without getting divorced or fired.

Vitamin D, 2000 to 5000 IUs of vitamin D3 per day, and that's kind of the goods on that. The main deal is trying to avoid those foods that are going to be irritating to the gut and then take those lifestyle factors that are feeding into inflammation either by insulin or insulin resistance like sleep disturbance. Hopefully, folks are getting familiar with the fact that sleep disturbance or lack of sleep impairs insulin sensitivity. That can feed into inflammation and then fix in the gut health. So those are all the things that can go into really helping to ameliorate these symptoms of an autoimmune disease.

Andy Deas: Cool! All right. Good answer.

Robb Wolf: Cool!

Andy Deas: Next question we got from Marie. She has been CrossFitting intensely for about a year. She has played around with many approaches through diet. Right now she is doing 11 blocks of protein, 40+ blocks of fat, 3 to 4 blocks of carbs. She has recently switched over to mostly Paleo and loves it except for 1-1/2 cups of raw goat's milk after the WOD. She is considering going unweighed and unmeasured, thanks to all the positive stories and info she's hearing on your site. She is 5'1, 128, and her goal is to qualify for the 2010 Games.

So back to her question, basically menstrual cycle. Hers can be patchy at times, maybe like once every two to three months. Do you think switching to an unweighed, unmeasured approach would help? Sometimes I worry that my food intake is a bit on the minimal side for the efforts I've put into the WODs.

However, back when she ate freely, she was powerlifting prior to CrossFit, she was still patchy at that time and she had a much higher body fat percentage. Could it be a hormone imbalance or some other disorder? Would Biosignature give me any insight to this?

Robb Wolf:

One thing, it's interesting as the podcast evolves and just as my blog has evolved, questions get really, really complex. This is a great question. There's a lot going on here. You have a woman who it sounds like she's probably a pretty tight athlete, wanting to qualify for the games. She is very fastidious with her food. It sounds like she might have a little bit of menstrual cycle irregularities. 5'1, 128, isn't really firing off any alarms for me like, "Oh, well, she sounds real underweight," or something like that.

The thing that I've seen, and we'll probably end up touching on this on actually question number 7 again, so we may come back to a little bit of this later. The thing that I've seen with this whole question of weigh and measure, don't weigh and measure is that people who are following the standard Zone prescription I've found do better at higher intake levels of protein and fat.

Now, she is already taking in a pretty good whack of fat here, but it's still adjusted at where she's at, probably about like a 3x fat level and then she has some carbohydrate blocks deleted, and so she's adding a little bit more fat with that. But it's definitely not a hypercaloric scenario. Like she is pretty much feeding right at what her needs are for what she is doing. But people that we've seen, Jolie Gentry, Laura DeMarco, several other people come to mind, they ended up kind of free eating and in the process of that free eating, they ended up eating dramatically more protein, more fat, usually kind of moderate on the carbs, and they ended up seeing a really dramatic uptick in their performance.

Andy and I talked about this I think maybe two podcasts back. The amount of protein that these folks start taking in starts looking a whole heck of a lot like about a gram of protein per pound of bodyweight, which is one of these -- there's lots of different benchmarks out there, but the kind of hardcore athlete crowd, Mauro DiPasquale, Poliquin, some people like that that are really training some very high-level athletes, they tend to migrate around that higher protein point, about a gram, gram and a half per pound of bodyweight.

When I was talking to James Fitzgerald about this, he was mentioning that yeah, these people may benefit from more protein, but some of the need for that additional protein may actually be some digestive

insufficiencies so people may need to do some support to help bring up their digestion.

But that's all just kind of some background on here. Like stuff that she can -- her name is Marie -- stuff that Marie can do to tinker with this is maybe she just generally needs to up her protein intake and maybe a little bit more fat, and just see how she does. If she's already weighing and measuring, maybe you continue weighing and measuring and just up your intakes, maybe add about five more blocks of protein, maybe up the fat a little bit and just see how you do with that.

The menstrual irregularity stuff that we've seen, definitely underfeeding is a biggie for females, like they're just hypocaloric. Not enough calories, not enough protein is a biggie; but where she's at, she's probably okay but maybe not optimum on that.

A couple of other things that we've seen with females are involving thyroid problems and females can end up testing normal on T3-T4 ratio, but for them from where they are wired up, they're actually running a little bit skinny on the thyroid, and so they can supplement with about 150 micrograms. 150 micrograms is the standard dose, standard RDA dose of iodine, so you could go get that from any health food store and just throw in that iodine supplement. And if that thyroid issue is kind of the underlying thing, then they should notice like an immediate alleviation of any of the menstrual cycle irregularities. We've just seen this in a number of females. So those are some kind of biggies.

And then from there, she asked about would Biosignature give any insight into this? And yeah, absolutely! I think a well-schooled Biosignature practitioner can really give you some good insight. She may have like a testosterone-estrogen imbalance or something like that that the Biosignature can kind of ferret out as a first line of diagnostics; and then if she wanted to go to a naturopath or she wanted to go an MD that really gets in and looks at this stuff, then it will give you some feedback on that.

So I think she could very, very safely increase her food intake. If she's had problems in the past not eating enough, then maybe she should keep weighing and measuring her food just so that she is accountable. The biggest benefit that I've seen in the past of people going from a standard Zone to an unweighed, unmeasured kind of Paleo shtick is that they just tend to eat more and they appear to have been underfed when they were just eating the Zone, and that's the biggest, biggest difference that I see.

Andy Deas: Yeah.

Robb Wolf: And she lives near Scotty Hagnas so I mean that's a slam dunk. She absolutely should go track down Scotty at CrossFit Portland.

Andy Deas: Scotty with his new beard.

Robb Wolf: Does he have a beard now?

Andy Deas: Yeah. His wife posted some pictures from their trip to Disneyworld so no hair and a beard.

Robb Wolf: Wow! It's very bike rider serial killer I think.

Andy Deas: I think it suits his area of the country and it suits his personality. I told him thumbs up from me for whatever that's worth.

Robb Wolf: Very cool! Very cool!

Andy Deas: All right, good. Good question. The next question -- I think we get a fair amount of questions about specific products so I think we can talk about this one generally and then we'll expand on it a little bit. We got a question about this product, So Delicious Coconut Milk, the unsweetened type. This person lives in Wisconsin and says it takes forever to get new products in our local health food store and came upon this product. Wants to know what's the skinny on this. She was reading up on it and it's loaded with 65% MCFAs. She is tired of getting all her fats from nuts and looking for a change.

Robb Wolf: It looks like great stuff. I mean usually, the coconut milks I ended up getting are kind of Asian market type things but this stuff looks good. I've never tried it, but by all accounts, it looks pretty legit. So I feel pretty good recommending it. Looking at the fat on it, yeah, I mean it looks like good stuff. Maybe I could hit them up and try to get a sample of it so that we could come back to this and say, "Yeah, I loved it" or "No, the Asian market stuff is better."

But in general, I think it's kind of hard to go wrong with coconut milk. I remember Mat Lalonde was going with a Thai Kitchen or something like that, like light coconut milk because he was actually shotgunning a can of it down with his post-workout meal. But I think short of that, you're pretty good to go with almost any of them.

Andy Deas: Yeah. And I think the only caveat that I would have on this stuff is once again encouraging people to make sure they look at the labels. I've had a bunch of these So Delicious products, and in general, they are legit; but it's also one of those things where they're thinking this idea of coconut is healthy and expanded it to encompass everything. So I know they have like a coconut milk coffee creamer, which sounds awesome until you look at what's in it and yes, it has some coconut milk, but they've put all types of whacky sweeteners and stuff in it, so probably not the best idea for daily usage and things like that.

So please look at the label. Probably once a week at the gym, I'll have talked to someone about some new, fancy product; and nine times out of ten it's new and fancy because they've put some probably ideally not consumable ingredients in there.

Robb Wolf: Right. You know, I've had an idea and maybe I shouldn't even say it on here, but I've been lazing with it so I'll just throw it out there. The reason why like whole whipping cream is nice in coffee is because it's homogenized and so like the fat molecules are kind of made very, very small and compact and it actually ends up dissolving in water, whereas I don't know if folks have ever really messed around too much with like coconut oil or coconut milk very much in coffee.

Usually, what it creates is a gelatinous layer of fat right on the surface, which even for me can be a little bit gnarly to get down, and so I've thought about some sort of a homogenized just coconut milk so that it would blend in coffee and just go. Maybe we'll see if we can add that to the Paleo Brands line of goodies.

Andy Deas: Yeah. That would be cool. I have not actually seen that. I may have seen something homogenized with coconut milk, but once again, it had a number of other items in there that I probably wouldn't consume.

Robb Wolf: Right, right.

Andy Deas: Cool! All right. There's somebody's million-dollar idea.

Robb Wolf: Yeah, totally! Somebody do it for us. Save us from ourselves.

Andy Deas: All right. Next we got an interesting question from Scott. I think we've touched on this a little bit in the past, but I'm not going to read the whole thing. I'll just kind of give a summary.

So basically, Scott is a 37-year-old male, 6'1-1/2, 212, currently body fat is around 10%. He used to play pro ice hockey in the minors and still play recreationally one or two times per week as well as one or two competitive tournaments per year. Been CrossFitting for just over a year. Back in April did an 8-week cycle of CrossFit Football to tailor his training for the World Police. What he found was that although he was eating Paleo with a weekly cheat, his weight went up, body fat going steady, and he basically found this had a pretty negative impact on his performance on the ice with the extra weight loss, some acceleration, agility and quickness. He didn't feel fast or quick.

So after some time off after the games for an injury and the holidays, he's gone up to about 219 at 14% body fat in and gotten back in to reasonable numbers using Main Site WODs and Paleo supplemented with one or two CrossFit Endurance workouts per week. He's been leaning out but his weight has not dropped like he had hoped. He's hoping to be around 205 or lower to help with on-ice performance as well as general sport and mountain biking. So basically, it seems as he gains strength, he tends to put on a lot of lean mass.

So long story short to sum it up, the main question is how can he maintain and increase strength without the obligatory weight gain so he can get down to about 8%? He might be close, but if he keeps putting on lean mass he doubts it. So I think this is one of those great questions because it's the total opposite of, I don't know, 85% of what we see, and I wish this was my problem.

Robb Wolf:

Yeah, yeah. Totally, totally. I remember talking to Ido one time and he was like, "Yes, I grow muscle like a weed," and I'm just like, "Okay, you're a bastard." So like Ido has to be very, very fastidious about how he manages his training. Otherwise, he'll put on way too much muscle for his liking and then it messes up his capoeira, which just makes me want to kill the guy.

So this sounds pretty legit. This guy, Scott, seems to be keeping pretty good track of what he's up to. CrossFit Football is designed, and I think Welbourn would definitely back this up, but it's designed with the idea that you have a potent growth stimulus hidden in there. There's enough volume thrown into that program that you should be gaining muscle mass, particularly if you're on the beginner or the collegiate program. The professional program on there is actually much more of a strength and maintenance kind of deal, and the volume ends up being less on the kind of strength WOD side.

So if this guy is really legitimately just wanting to be solid with his on-ice performance, I would go, if he wants to lean out, I would go low carb kind of Paleo gig, and that should take care of the bulk of his needs. If he needs to do a little weighing and measuring to tighten things up, then he certainly could do that, but I tend to find that if somebody simply restricts carbohydrates below 50 grams a day and they kind of eat free from there, they're good to go.

Then what we need to look are the types of workouts that he is doing, and the reality is that Main Page WODs and CrossFit Endurance -- typically, I mean if he is doing endurance WODs it's kind of a different deal, but if you're doing Main Page WODs and this guy is putting on muscle mass fairly easily, if you're doing a lot of volume and a lot of intensity, that's going to stimulate muscle growth versus something like a 10x1 strength orientation where like one day there might be a back squat and a press, another day maybe like a deadlift and a weighted pull-up or something, something akin to that.

And we're looking at like an 8x2, 10x1 for some cycles and then some half volume stuff, 5x1, 5x2, all of that stuff ranging between 85% and 95% of a one rep max. And kind of Pavel Tsatsouline stuff where you're shooting for wiry strength and not putting on muscle mass, and the way that you're accomplishing that is by really, really limiting the total amount of work that you're doing and focusing on neural characteristics instead of a muscular beat-down.

This is very similar to what we have used with Glen Cordoza to good effect, with him being an MMA fighter and walking around about 175-178 pounds but fighting at 155. We've managed to get him very, very strong but really not put that much more muscle mass on him; really, really some but not that much. We've just gotten him much, much stronger.

Andy Deas: Yeah. And I think your comment about the neural stuff. I mean this is just like treating this person like a weight class athlete, right? I mean basically, if we cannot add weight, that's fine, but we'll have to adjust the training. But obviously, we still want to add strength and you do not necessarily have to add weight to get stronger. So just most folks want to add weight, and one of the ways to do that is to help them get stronger.

Robb Wolf: Right, right. It's a slower go getting stronger without the specific attempt at weight gain, but it's still very much doable. And like you said, anybody - Eric Cressey is a good example of a world-caliber powerlifter who -- I forgot -- you would be more familiar with what his numbers are but still

weighing in -- still competing in the 165-pound class. He's added several hundred pounds to his total over the last couple of years by simply chipping away and becoming more and more efficient and more neurologically kind of turned on with regards to the squat, the deadlift, and the bench.

Andy Deas: Yeah. He's the guy that I don't remember his total but his deadlift, if not at 700 raw, it's at 690 or something raw at a bodyweight of 168 or something. So clearly, as you said, he's added several hundred pounds just to one lift alone and not put on a ton of mass.

Robb Wolf: Right, right.

Andy Deas: So it can be done once again. I wish this was my problem. I'm super jealous, but --

Robb Wolf: Exactly! Definitely not my problem.

Andy Deas: They're not the genetic cards I was dealt. All right, good question. I think it just goes back to once again your point always about thinking about what are the goals, what are the needs. Some folks I think a little bit get wrapped up in this CrossFit one size fits all, and I think for the generalist, it can meet a lot of needs, but there are certainly exceptions to that. And depending on what your specific goals and demands are, it may not fit well at all.

Robb Wolf: Yeah. And looking back at this thing too, I would be interested to know if some of the on-ice like lethargy and different stuff like that was simply just knackered by that one. These are really hard workouts and you really need to give some -- especially as you start getting 25 to 30, 30 to 35, stuff like that, like your recovery potential is different.

Was this dude simply knackered when he was out on the ice versus being fresh? Again, dropping back, we don't have a ton of really high-level athletes at NorCal but we have a few of them, and the ones that we work with, we've been very, very successful with, but it's just kind of a very simple recipe, whether we're dealing with an MMA fighter or a triathlete, which is they need to show up for practice and game day not dead. You need to really plan the SNC for these people around that.

And like you said, CrossFit is a ton of fun. Our CrossFit clientele loves CrossFit, loves the competitiveness of it and all that sort of stuff, but that is the arena in which they're competing. Whereas if you are trying to compete at that and wanting to go do another sport, you really need to

keep an eye on what your recovery is, and if it's something that is particularly strength and agility or agility and speed oriented, which hockey easily fits into that, and you're knackered, then you're not going to have good reaction time, you're not going to do that well out on the ice.

I just posted a blog deal a couple of days ago about sleep and the whole Lights Out deal and all that stuff, but the main link that was in there was actually referring to a trend in NBA basketball teams to cut out the morning practice and the let the dudes sleep in and make sure that they're rested, and they've found that these guys, their legs were more recovered, they had lots more pop, their free throws were better.

So that recovery issue is huge with that. That's another thing that I didn't really consider right up front, like what was the timing of this guy's training? Was he still doing CrossFit Football say like in the a.m. and trying to play hockey in the p.m.? Maybe it was too much. Maybe he needs to delete those days when he is playing hockey. So that's another factor right there that maybe he could use the same programming to a good effect but he just needs to manage his timing better.

Andy Deas:

Yeah. And I think the last thing I'll add, working our way afield I think at the original question and it seems from all indications this guy is a pretty good athlete obviously. We don't know what his straight numbers look like. But especially with the hockey, I always go back to the Mike Boyle question of how strong is strong enough, the point being for some sports, and I think you've felt this way a little bit with some like Lance training, after you reach a certain point, potentially your time could be better spent working on other physical attributes than just strength.

Robb Wolf:

Yeah, Glen at 175 pounds clean and jerk somewhere between 275 and 295, snatches 215 to 225 pounds, not kilograms. Kilograms would be absolutely insane. And he is a fighter and that's as strong as he ever needs to be. So now our deal then is he's very, very good on some basics like ring strength stuff, but it's pretty impressive what he can do even with that. But that's as far as we need to take his strength.

Then from there we worked more and more and more technical elements of his fight game, working rate of force development on his kicks and punches and all that sort of stuff, things that we haven't been able to go back through before we still had basic strength and conditioning issues that we're going to give a better return on investment versus coming back in and looking at other elements of his fight game. But now we get look back around and look at these other elements.

So yeah, I mean folks need to keep a really good eye on where they're at with all that stuff. And again, it's not a one size fits all sort of gig. You need to really give some thought to what the person, where they are at in their training cycle, where they're arriving in the sport, with what bag of tricks they have, what are their strengths, what are their deficiencies, are you going to be better off just trying to highlight their strengths versus like trying to shore up deficiencies. I mean it's a complex but fun question to ask. But oftentimes, when you get mixed up in this generalist strength and conditioning that is itself a sport, then that can really steer you down the wrong path I think.

Andy Deas: I could not agree more. Great question. That was a good question.

Robb Wolf: Yeah.

Andy Deas: Cool! Next we got an email question. First, the reader heard you say in the last podcast, which was number 4 based on when we got the question, that the brain reacts in the same way to artificial sweeteners as it does to sugar. He is curious as to what your opinion of this study from the LA Times was. Did you get a chance to take a look at that?

Robb Wolf: I did. I'll just pull this thing up to look at it again. Oh, yeah, yeah. We're saying that it may not be fooled by sugar substitutes. Yeah. So it's kind of a counterpoint to that.

Andy Deas: Yeah. Any thoughts on that based on your experience?

Robb Wolf: I think it's this thing again where we have likely a spectrum of people with a spectrum of response to this. So I think some people respond to it worse than others. Some people may be a little to not at all.

In my nutrition seminars I always use the point that some people literally have kind of a food porn sort thing. Like you flash them just a photo of chocolate cake or something and they don't get an erection. They get a blood insulin release. And so it's just all over the map on this. Some people are going to react very, very potently to tastes and even anticipatory elements of eating these foods, and other people, not as much.

Andy Deas: Cool! And then what are your thoughts on this practice of washing your mouth out with sugar water prior to workout in order to gain the supposed benefit?

Robb Wolf:

I've never played with this. The stuff that I've read on it is that people who essentially have been exercised into exhaustion then would rinse their mouths out with a sugar solution or even a sweet-tasting solution, and then they would see some additional ability for work output. And this is some of the proof or the beginnings of the proof of this real central governor theory of energy output in which instead of really our work output being determined by like how much substrate or fuel we have in our muscles, it's actually some elements of our brain, particularly the hypothalamus that regulates how much energy we have expended, and it's actually much more of our sense of fatigue and our ability to do or not do the work is actually a perceptual thing, and it's happening in the brain.

I've never really played with this stuff. It seems kind of -- I mean if you want to do it, go for it. It seems kind of goofy to me. I think so much of this stuff gets so gizmotronic, you know. It's like just get in and eat well and work out hard, and sleep. It's like if you want something to improve your performance beyond that, go to Mexico and get some steroids.

It's just the stuff is really, really, really simple, and then some of these things is kind of like, okay, yeah. Maybe a sugar solution to rinse out your mouth might give you a little more juice, but how often do you want to be driven into absolute exhaustion such that you could benefit from this? It's like I don't think very often in a training scenario. Again, occasionally, that's an appropriate place to take somebody but you need to again consider what they're up to. Now, if this is a benefit during a race or something, then yeah, maybe you could play with that, but I'm just not seeing a whole lot of application for it.

Andy Deas:

Yeah. And I think a lot of this stuff, I mean we find it very interesting and love talking about it; but I think for the majority of folks, 90% of it is kind of those basics that you laid out. There's some tinkering, but some of the stuff that I think we read in the press or see things about is really -- even if it didn't work as well as people claim, it's that one to two kind of percentile on the top of the cake as opposed to something that has a lot of application on a daily basis than most folks' training.

Robb Wolf:

Right, right.

Andy Deas:

Cool! All right. Then this person also asked about our thoughts on glucosamine for those who have joint problems. I know we're coming up with our supplement podcast soon so we'll let you answer your thoughts on glucosamine as a teaser since I let this question slide in.

Robb Wolf:

Slide through. I like glucosamine fine. This is going to gross some people out and other people will be like, "Oh, cool!" All the articular parts of like chicken bones and beef bones and all that cartilage and all that stuff, that's all like hyaluronic acid, glucosamine, chondroitin sulfate. That's the same matrix and I think that probably in the past we ended up ingesting a significant amount of that in those ways. I think making like soups out of chicken and turkey bones and beef bones and all that are a fantastic way of getting this stuff dietarily.

If you want to supplement with glucosamine, that's fine. I would just stick with like the glucosamine sulfate or the glucosamine hydrochloride. I forgot -- whichever one of those is the cheap one is fine, and the people who made the opposite one always say that theirs is better and it's just pretty much kind of BS all the way around. Find one that's inexpensive. Usually about a gram to five grams a day is a therapeutic dose.

Do keep in mind that glucosamine does register as glucose. It's a glucose molecule with an amino group attached to it, but it does produce an insulin response. So some people will get in there and start taking 20 or 30 grams of glucosamine and they're like, "Wow! I feel like I'm having some blood sugar issues and stuff," and you will. So I would just keep the dosage kind of moderate, take it with food and all that sort of stuff and you should be good to go.

Andy Deas:

Now, I think there are some supplements we recommend that folks really feel a difference with and don't. I guess my experience with glucosamine with folks is that if it is beneficial for them, they should feel a pretty significant improvement; and if not, my opinion is it's probably not worthwhile. What are your thoughts on that?

Robb Wolf:

Yeah, yeah, I would agree. You get a little bit like creatine and that you have responders and non-responders with it. Creatine, by contrast, I would still say even if it's not giving you a performance boost, there are some other health benefits by taking a teaspoon of it a day. But the glucosamine, yeah, if you don't feel like it's working for you, then I would ditch it.

And then that said, this starts getting a little bit far afield, but whenever I start hearing, "My knees hurt, my elbows hurt, my shoulders hurt," or whatever, it's like what are you doing orthopedically to be damaging these things? I know for myself I've spent the last three and a half, four years really, really trying to do the O-lifts, and every time I would get a little bit of progress with them, my knees, my hips, my back would just absolutely bugger me. I've been just powerlifting of late, squat, deadlift,

not with bench so much, a little bit of bench but more like press and weighted dips and stuff like that.

Orthopedically, I feel great. My shoulders don't hurt. My knees don't hurt when I stick that bar lower on my back and push my knees back, keep weight through my heels. I can squat loads of weight and have absolutely no problems. So like he mentioned in here that he had a knee injury before, you need to keep an eye on that but you also need to look at the orthopedic kind of strain that you're subjecting yourself to. If it's consistently something that is irritating your knee, then you need to reevaluate what you're up to.

Andy Deas: Yeah. And this is one of those sayings just as you said, I mean unless you're competing in something like O-lifting as a sport, perhaps the full variants aren't necessary to get the benefits that you're seeking.

Robb Wolf: Right, right.

Andy Deas: So maybe you look at the power variants or maybe you don't need them at all. But anyway, we're getting away afield today.

Robb Wolf: Yeah, totally.

Andy Deas: We were totally spaced. All right.

And then the last question he had was he's pretty new to Paleo. He's in the face of tuning in the diet. He's basically saying there's a lot of factors to consider. He talks about trying to get everything right on a working Joe's food budget which I think we addressed in Episode 6. You kind of gave your personal experience and thoughts on your experience as far as starting the gym, not making a lot of money, and still eating very Paleo.

But I did think his kind of question was pretty interesting. So he says, "Assuming you're on low carb, gluten-free, high protein, which of these factors, some of which you regularly preach," some of what he sees elsewhere take priority? So number one, he has anti-inflammatory. Some foods are at opposite ends and desirability; two, net negative PRAL; and three, Omega-3/Omega-6 balance.

Robb Wolf: Okay. That PRAL is potential renal acid load. So it's kind of like the acid-base balance deal. It's an interesting question, but I think in some ways it's almost answering a dumb question, and it's like if you're eating a lowish-carb, gluten-free, Paleo diet then you're really addressing most of the inflammation issues. If you eat plenty of veggies then you're taking

care of the potential renal acid load and so you're falling into a normal alkaline state.

And then I just don't see the Omega-3/Omega-6 balance being hard if you just hit like a Costco or something and get a jug of fish oil and take four to six fish oil capsules with a meal. Take a handful of fish oil caps breakfast, lunch, dinner, and you're pretty much done. So I may be oversimplifying this but I think that deals with inflammation, it deals with net renal acid load, it deals with Omega-3/Omega-6 and you don't have to overthink any of it.

Andy Deas: Yup.

Robb Wolf: So before I get sidetracked and head off down some other ramble, I think that's kind of the beauty of the whole kind of shooting from the whole Paleo approach is that it fixes 90% or 95% of everything that you need to worry about, and in that remaining 5%, it's pretty damn easy to dial in from there.

Andy Deas: Yeah. No. I totally agree. I mean I think everyone obviously within reason has some sort of budgetary restraints on food but I think we've seen most folks can make it work obviously. Not everyone is getting grass-fed beef at every meal as we would probably like to see and things like that, but I think we've seen most folks make it work within reason without breaking the bank.

Robb Wolf: Absolutely! Yeah.

Andy Deas: Yeah. Cool. All right. We got our next question from Bridgette and I think this is another really good question. One topic she would love to hear you cover and I'm sure a ton of chicks would love to hear about it is birth control pills and the effects of taking them. She does Paleo plus some dairy, and "I always wonder, while I was working out hard dieting to maintain hormonal balance, I was ingesting these synthetic hormones. I know after I turned 30 after years of being on a multitude of different pills, I started having some pretty weird side effects which eventually led me to recently getting off them. In addition to the side effects while on the pill, I'd love to hear about if there are known effects after coming off the pill."

Robb Wolf: You know, the experience that we've had with a ton and ton of people is just that being on the pill makes it very, very hard in general to reach the level of leanness that most females want to run at. It seems like it's like that last like 8 to 10 pounds of weight that they just can't shed and like

they're perfectly compliant on their diet and they're sleeping and they're taking ZMA and they're just dialed.

And then you ask them, "Well, are you on birth control?" and they're like, "Yeah." And you're like, "Okay. This is as good as it's going to get." Like it doesn't really matter if it's an estrogen-based birth control or progesterone-based or whatever, it ends up bugging their system enough and they end up retaining enough fluid and they end up just generally hanging on the body fat enough that it's hard to lean them down to the level that they or you typically would want to run them at. The main thing that we see when folks get off the pill is that they tend to lean out and they tend to again lose that like last 8 to 10 pounds of weight that they've been trying to get rid of.

Now, all that stuff said, we also like in our gym, we've noticed that people get pregnant real, real easy. And I have nothing to do with that I promise. They're eating well, which manages their insulin levels. We get on them about their sleep, they're exercising, they have good community, all that sort of stuff and it goes all together and it's very, very powerful on that kind of fertility side of things.

Most women are running around with too high of estrogen levels, both xenoestrogens that are in the environment, and then also because they're running a little bit too high of body fat and too high of insulin levels, they have consequence of that too high of estrogen. And when you have too high of estrogen, you end up with PMS and polycystic ovarian syndrome and uterine fibroids and all this stuff; but fundamentally, what it does is it dramatically impacts your fertility. So when we drop those estrogen levels, women are able to get pregnant.

So the pill tends to be not that healthy. It tends to have a lot of side effects, some of them being not being to lean out. People tend to lean out when they go off the pill. That's kind of the biggest thing that we see, but they also tend to get very, very pregnant occasionally.

Andy Deas: Yes. Well, I got nothing to add to that, Robb.

Robb Wolf: Okay.

Andy Deas: I was going to make you a smart aleck comment but I'm going to refrain.

Robb Wolf: Okay, perfect!

Andy Deas: It's just not appropriate. So anyway, that was a good question.

Robb Wolf: Yeah, yeah.

Andy Deas: The next question we got from Scott which I think is a pretty common question, we get a fair amount of these, and then he actually says, “I have a question I’m sure a lot of other men out there would love to hear your take on. What can be done to lose those last 10 pounds of body fat especially from the midsection?”

Scott has been eating cyclic ketogenic diet, Paleo for about six months with two cheat meals per week on average. Note that he does tend to have a serving of cheese almost daily as well as drank a few beers every week. He has dropped some body fat, currently around 14% and gained some lean muscle. He CrossFits and follows the Main Site 3 on, 1 off schedule.

“How in the world do I get rid of these last 10 pounds of body fat?” His goal is to get under 10, “but I find that even with my diet and exercise, I seem to have hit a plateau in terms of weight loss. Should I eliminate the cheese, fruit, and nuts? Do I need to consciously start eating less or counting calories? Any guidance is appreciated.”

Robb Wolf: Well, I mean you could tackle this a couple of different ways. You could get in and just start doing like a weighed and measured gig, which definitely can work. I think again we see consistently that the food quality issue is pretty big here. So we start off with a statement that he is doing a cyclic ketogenic, but then with a couple of cheat meals and then some beer and then some cheese, and then it’s going, “Okay. You’re not doing a cyclic ketogenic diet. That just is bullshit.”

So it’s like you can tackle this one of two ways. You could weigh and measure your food and do some overt calorie restriction like go get a Zone prescription and follow that, and you can eat beer and cheese whiz and peanuts and give that a shot and calorie restriction will absolutely peel body fat off you.

But also, he is mentioning here cheese, fruit, nuts, and beer. Why don’t you give that a shot for a month and pull all that stuff out of the mix? Which that is by necessity, it’s a food quality shift, but obviously, this is also a quantitative shift. We’re pulling a bunch of garbage out of there and a bunch is kind of relative obviously that this isn’t horrible; but if you’re still wanting to lean out, then that’s an obvious place to go.

If that doesn't work, I would also ask the question how was the sleep of course and all that sort of stuff. Make sure that they're supplementing with zinc and magnesium, fish oil, vitamin D, cover those bases. And then from there, if that's just not working, then I would do a Zone prescription, I would cut the carbohydrates in half, add three blocks of fat for every block of carbohydrate deleted so that they are calorie restricted, low carb, Paleo. That's the most effective thing I've ever seen for leaning somebody out in a very quick order.

That said though, your performance is not likely to be spectacular on that especially if you've been used to eating more carbohydrate or just generally more food all the way around, but if your bottom line is getting Brad Pitt Fight Club ripped then that's the way to do it. They're massively effective, very, very effective.

Andy Deas: And then the other dimension that I would consider on this that I've got some experience with and I've seen some folks is that I'm always curious of folks that kind of have these last 10 pounds, depending where exactly they're storing it and the volume of training that they're doing. And so for a lot of folks, when I hear this Main Site 3 on, 1 off schedule, I don't know what kind of athlete Scott is, but generally for most folks, that's just a crapload of volume of work unless they are the next Jason Khalipa hiding out somewhere training in their basement.

And so for a lot of folks, the Main Site WODs turn into these huge volume beat-downs. I think they start to add up week after week, and for some folks, I've seen fairly good success with some of the stress cortisol stuff. If they've started to drop the volume of their training, maybe so in the beginning you're just dropping a couple of days out of the week if you're not comfortable shortening some of those workouts.

Robb Wolf: Yeah. It's real counterintuitive that you exercise a little less and you might actually lean out, but when you understand cortisol and its role in body fatness and insulin sensitivity, then it absolutely makes sense. And this again is a great utility for that whole Biosignature technology to figure out very, very quickly are you storing fat in the insulin and the cortisol receptor sites, and if you are, then we've got some specific lifestyle, specific training, specific nutrition stuff that we can do to address that.

Andy Deas: Yeah. I just find that a lot of folks are always at the food and I think it is the food, but there are legitimately folks I think we've both seen that the volume of exercise is also causing problems related to some of their leanness goals.

Robb Wolf: Yeah, totally.

Andy Deas: All right, very good question. All right, so next question. This is like maybe the question of the week just because it's such a juicy topic.

Robb Wolf: Awesome!

Andy Deas: So we got an email from Lauren and this is pretty long so I'm just going to kind of jump around a little bit and let you kind of spin around in a circle. But the basic gist is she just finished watching the CrossFit Journal's Paleo versus Zone Chronicles with Dr. Barry Sears and wondered if you could talk more about what Dr. Sears is saying about how the Paleo standpoint of eating as much as Paleo foods as you want is bad and that even for normal people, not having quantity parameters is too vague. Lauren agrees and disagrees but thinks it's a good topic to talk about. So why don't we just start there?

Robb Wolf: You know, to some degree, that statement that Cordain originally had in his book, and I think that the CrossFit crowd has -- HQ crowd had just run wild with this in an effort to really draw a line between what's Paleo and what's Zone.

The whole thing, you know, you can eat as much as you want on the Paleo diet, there's some obvious caveats to that and like Cordain kind of back pedaled over the course of time and was like, "Yeah, eating a ream of bananas could be bad," stuff like that. So there are some obvious ways where you can definitely screw this thing up. You get to sit down and eat four pounds of grapes and you're going to have some problems there and all that.

So is that a problem? Yeah. But this is also the spot where like Poliquin is very much a kind of low carb Paleo diet supporter and this is his first line intervention with body composition people. He does not weigh and measure with these people. Chek doesn't weigh and measure with these people and very, very few people who run a clinical practice actually get their folks in weighing and measuring other than like if the individual is kind of like fitness competitor type deal where like the body composition is very, very important or a weight class athlete or something like that.

Because it makes people crazy and they don't want to do it, and what they generally find is that close enough is in fact close enough. And so Poliquin just makes the point that give them these general low carb Paleo foods and then educate them about the difference between what a

mouth and a vacuum cleaner is and you're pretty good to go. So I think that that's an easy way to do this stuff. That's where people can food journal and they can write down, "Well, I had a steak." "Okay. How much steak?" "Well, 30 ounces of steak." "Okay. Could you get by with the 16 ounces of steak?" "Yeah, I could get by with it." "Okay, let's cut that in half." It's like it doesn't have to be that precise to actually get you some pretty good mileage down the road.

Andy Deas: But based on your experience, I think what was interesting about that video a little bit is Barry Sears made that fairly absurd statement in my mind that he'd rather have you weigh and measure dingdongs rather than eat a plate of ribs because that way we know you're not overeating. I mean this your experience with most folks that they really are overeating on the Paleo side or is that not what you find?

Robb Wolf: That's just not what I find at all. I just find that position absolutely preposterous especially when we consider any of the leaky gut autoimmune response, gluten issues that we're talking about.

It was interesting when the molecular baking thing first came up, a bunch of folks asked me to look into that, and so I called the Sears hotline on that thing and talked to one of their tech people. And the proteins that they have in like the bagels and the baked goods and all that, the additional protein is whey protein and gluten and so these things are fortified with gluten.

And so I asked the woman and I asked her, I'm like, "So these things are fortified with gluten." She said yes, and she said, "Obviously, anybody with an intolerance to gluten shouldn't eat that." And I'm pretty much of the opinion that everybody has an intolerance to gluten and I think we could, with some lab work, make a pretty strong case for that. But you can buy into that or not buy into that. I don't really care.

But then she herself said, "Yeah. We do not recommend that you eat more than one serving of these foods a day." And it's kind of like, well, nobody is saying don't eat more than one serving of like meat a day or even ribs a day, and there's a reality here that if we looked at blood lipid parameters and muscle mass and all those different stuff, if you're eating ribs, you're going to finish off a lot better than if you're eating dingdongs, and that's fairly easily proven in a clinical setting and also on an intuitive level. I hope most people are able to like look at that and like kind of see through to what the real deal is.

I really dig a lot of Barry Sears stuff. I think he had some really cutting-edge information. When you get right down to the best elements of what he's got to say, it's ultimately all Paleo-based anyway. Like the main references he uses in Enter the Zone, in the Omega Rx Zone is worked from Boyd Eaton and Loren Cordain and stuff like that. So there's some good stuff in there, but I think when you start getting a baked goods company backing what you're up to, then it can definitely cloud what the message is.

Andy Deas:

Yeah. And I think the whole Zone thing, I mean it's fascinating just because it's sort of portrayed as this magic solution of the macronutrient ratios and this will do magical wonderful things. And we think your fascinating article, 42 Ways to Skin the Zone, and then it's like you look at some of the recommendations that you made, some of the wonderful results people get from that, and you look at the macronutrient ratios and it looks nothing like the Zone. It's not even close.

Robb Wolf:

No, no. And somebody had a talk in Boston or West Virginia or I forgot where it was. They asked Sears about what about the leading carbs and adding more fat a la the 42 Ways to Skin the Zone? And he said no, that just wouldn't work that it would throw everything into a tailspin and it wouldn't work. But yet, folks like Pat Sherwood and a number of kind of HQ staff and just a ton of people, that's exactly what they've done modifying the Zone and it ends up working much, much better.

So I don't know. I mean that's just stuff that I really encourage people to get in and experiment, try it for a month and see if you look, feel and perform better; and if you don't, then try something else. But generally, we're finding that controlling carbohydrate intake, sticking with more Paleo foods, you're good to go.

And then on that just kind of neurosis side, if you don't want to weigh and measure, then I don't think you have to, but you can still get some pretty damn good results. And then based on how good those results are versus how much better you want those results to be, then that's going to steer the boat as to whether or not you're going to weigh and measure your food. If you want more accuracy and precision, you get further down the road, then that's probably what you're going to need to do.

Andy Deas:

Yeah. And I think our experience is the base intervention is always food quality. I always joke with Robb that the battle has already been won, food quality by a landslide, and some of this arguing is sort of just posturing. And that yes, there are certain cases where weighing and

measuring can potentially enhance results, but we don't see that as the requirement and we see the quality as the requirement.

Robb Wolf:

Right. And I just have based this off of building a successful gym around this because to some degree, your gym grows based on the success of your clients and that success is predicated on whatever technology or systems you're bringing to bear on the scene there; and typically, people are wanting some body composition changes, they want to look better, they want to feel better and all that.

And so you've got to grab a bag of tricks that you can do, and if folks think that getting people in and educating them on what a block is and what their Zone prescription is, and then just letting them run willy-nilly with regards to the food quality, you knock yourselves out doing that, where we have played with that, it doesn't work, and in our clinical experience, we're going to keep doing what we're doing and then try to refine that and learn from people like Poliquin, James Fitzgerald, other people who have been doing the same thing that we're doing, only much, much longer, and look at them and find what they're doing and then try to take that and refine what we're up to. But by all means, if folks are wedded to some sort of numerical approach to their food, knock yourself out. You're good to go.

Andy Deas:

All right. And then I think Lauren kind of has a couple of other points that I think we can quickly touch on, and I know we've talked about this before, but I think it doesn't hurt to kind of mention it again. So she asked about, can we talk about some examples of top level athletes that have gone from Zone/Paleo to just Paleo and improved? So I know you've talked about Jolie and Laura before but maybe you just want to kind of touch on those folks again.

Robb Wolf:

Yeah, Jolie started off like 10 blocks of protein, 10 blocks of carbs, 33 blocks of fat, mixed diet, some bread, some oatmeal, some different stuff like that, really clean like good food by virtually anybody's standard. You would say, "Hey, that's a good solid diet. It's weighed and measured. It's dialed in."

Jolie is an ass kicker. She's first place at the first CrossFit Games, placed well at the second CrossFit Games. She started training with Greg Everett and Amy and I at the Catalyst Athletics and attended my nutrition cert and went unweighed, unmeasured Paleo and she just free ate, ate protein and fat for most meals with lots of veggies, protein and carbs post workout, and she put on muscle mass. She got bigger, stronger, faster. Every performance parameter she had improved, whether it was

strength, whether it was metabolic conditioning. There was not a single performance parameter that did not improve dramatically in her.

It's just shits and grins really to figure out what she was actually eating. We weighed and measured her food and consistently just eyeballing stuff. She was taking in about 26 blocks of protein, 6 to 8 blocks of carbs, and like 70 blocks of fat. And so this question came up when we were at the now infamous Black Box Summit and Russell Berger asked me with regards to Glen Cordoza, which we do a similar thing with him and a similar deal with Jolie, he said, "Why don't you weigh and measure their food?" And I said, "I don't want to mess it up." They're making progress. They're making spectacular progress and I don't currently know what I could do to their food that would make it work better than what they're doing, and it's easy.

And that's not trying to be an asshole. It's not trying to be oblique. That's just quite honest. I mean the way that they're eating is easy. They like doing it. They're able to stay consistent on it. And what I find with these people is that they make very, very good progress. If and when they end up hitting a logjam and they cease to make progress, then we absolutely will sit down and we will weigh and measure their food and figure out where they're at, and then we're going to try something new and see what it does with their performance.

But I just don't know. There's so much variation from person to person. And especially when I look at how much variation there is away from that central recommendation of the Zone, the Zone prescription that you would get out of like Enter the Zone or like out of CrossFit Journal 21, what I find is that people end up deviating so far away from that basic place.

I don't know where to take them until I just have them eat quality food, train, and then let's see where you go and then we'll get a sense of like, "Okay. I think you'd run a little better on some higher carbs. I think you'd run better on some higher protein." What I'm seeing pretty consistently with folks though is that they do better on more protein, more fat, and frequently a little bit less carbs and what the Zone is recommending and sometimes significantly less carbs.

Andy Deas:

Well put. And I think the last thing she talks about is also what we think works best for average Joe clients, and I think our experience with most clients is we never talk about portion size, measuring, weighing. It's food quality.

Robb Wolf:

Yeah. I mean we hit the food quality. We talk about some portion sizes in that we're like, "Okay. Try to stick with like a palm-sized piece of protein. Use your head." When we're educating people on the on-ramp, we give them some shopping and food guides, some recipes, some sample meal plans to give them some ideas that have some approximations on there, but we find that most people do well with a generalized approach to this and they do really, really well with like specific recipes, like here's a week of eat this, this, and this or choose one from this column, one from this column, and one from this column. Occasionally, you'll get somebody who is very, very geeked out on stuff and that you grade on a weighed, measured deal right out of the gate, but that is really, really rare.

And again, this isn't just my goofiness cooking this up. Going and checking out the way that Poliquin rolls, that's the same deal. The way that James Fitzgerald rolls with his folks, same deal. Like they start a qualitative thing first and then down the road, if and when it's necessary, then you crack open that technology of weighing and measuring, but you do it at the appropriate place at the appropriate time. And the only reason why you do this is that this is what works best for your practice, like this is what gets the best results for your people; and if you get good results for your folks, then you end up being successful, and that's kind of the only thing that I hang it on.

And we just did a post on CrossFit Seattle's spring leaning in which they did a Paleo challenge and we just have a ton of examples of different gyms doing a qualitative approach in a challenge format and then get stunning results out of this, and it has improved folks' business. Obviously, it has helped their clients a bunch. So I mean it seems like a win-win.

And doing the weighed, measured thing is always hanging out there. I'd fully recommend, try that or run half of the group. CrossFit Vancouver did that. Half the people did Paleo. Half the people did classic Zone, weigh and measure, but weigh and measure anything that you want. And the Paleo thing, Kelly Frankson rode it up; and the Paleo deal, they soundly trounced the other group. But again, the only thing I'm selling here is for folks to give it a shot and see how it works, and that's about it for that.

Andy Deas:

But I also think the same thing. If they get a Berardi Precision Nutrition, they're not weighing and measuring. I think we disagree with him on some of the food quality recommendations of what you can and can't eat, but they're focusing on the quality from their perspective. Very rarely are you weighing and measuring anything.

And I think to your point, periodically or infrequently, you may run into someone that overeats with the Paleo. I've seen a couple of very large men that have the ability to eat just ungodly amounts of food. I wish I could consume that much in a day but I don't think we see that as the norm, and I think it goes back to the Ido recommendation which is you start Paleo, you feel your performance, and then if you see the need where you're not making progress or there are some logjams, then you can start looking at quantities potentially as one of the variables that you can manipulate.

Robb Wolf: Totally! And I think that's a great, great way to tackle it.

Andy Deas: All right, Robb. Well, we have rambled. We're at a minute 5.

Robb Wolf: Let's bang through just a little bit more. I think we can.

Andy Deas: Okay, cool!

Robb Wolf: All right, a couple more here because we were getting backlogged. I won't wander too much.

Andy Deas: All right, so next question from Tom. He went to a CrossFit Endurance cert and Brian Mackenzie talked a little bit about alkaline water, AquaHydrate. He was sent a few boxes to try. What do you think of using this water or an alkaline ionizer system to help maintain the acid-base relationship in the body?

Robb Wolf: I think these things are legit, like there's Kangen Water and there's other waters. The thing is though, these things have to both plug in to the wall typically and they also need to have a rechargeable mineral packet or insert or something. There needs to be something that gets replaced with that and it's got like calcium, magnesium, zinc, all that stuff in it, and that is what is alkalinizing the water.

There are instruments that plug in but they don't ever have any type of a mineral added to it and those things do not alkalinize the water. The science that they try to sell is BS. It's bogus. So that's the thing. Whatever the flavor of it is, you need to make sure there's some sort of like a mineral thing that's being added to the water at some point.

Andy Deas: All right. We got a question from Brett. He wanted to do if you had any idea, guess, or substantive knowledge about whether a Paleo low carb diet would or might counter the progression symptoms of Parkinson's. A

good friend has been diagnosed and is progressing much faster than everyone hoped.

Robb Wolf: We worked with several clients up at Ridge Physical Therapy in Paradise, a little town just a little bit east of Chico; and unfortunately, these folks had Parkinson's. I've been doing a bunch of research on intermittent fasting, caloric restriction, ketogenic diets, and Parkinsonian type phenomena in mice, and I recommended to these folks, "Hey, are you willing to give this thing a shot essentially like a calorie-restricted, low carb, ketogenic diet?"

And then we did scale what very, very rigorous CrossFit style mixed modal activity on these people, and these are folks in their late 60s, 70s, and everything. And man, we worked the ridges off of these people but they saw some really, really remarkable improvement. So I would be definitely inclined to recommend that. It's certainly not going to hurt him and I think it really could help him.

Andy Deas: Cool! All right, let's hit the next question too. I think this one is good. So we got an email question from Ryan, a couple of different questions. I think we'll just start with number one and then kind of jump through. And so the first one is he said, "What's the relationship between insulin resistance and hypoglycemia?" He needs a working man's explanation. He has hypoglycemia along with celiac disease and narcolepsy.

Robb Wolf: Holy cats! Okay. So, hypoglycemia is the state after you've gone downhill. So the insulin resistance, you've got high insulin levels, the insulin receptor sites are shut off because you tend to have too much carbohydrate, you're not getting enough sleep, with other several factors. And then when your blood sugar crashes, normally, you would be able to access some body fat for some energy and be able to regulate your blood sugar better; but instead, you can't access that body fat and so the blood sugar crashes, you release adrenaline, you release cortisol, you start breaking down protein to make it into sugar to fix the hypoglycemia.

The celiac disease is a problem in this. The narcolepsy, obviously, there's still some autoimmunity going on in there. We've worked with some folks that have put the narcolepsy into remission by gluten-free, dairy-free Paleo diet. I just read something the other day too that gluten proteins end up inhibiting salivary amylase and so it actually prevents some of the breakdown of carbohydrate in a more effective way.

Andy Deas: All right. Ryan did a four-month very low carb diet. He felt good and became stronger, but he noticed a lack of want to compete. He would win and lose while competing at golf, volleyball, and other activities but wouldn't care. He didn't have the drive to really be competitive. And when I did, I'd say he lacked the mental clarity to focus on a task for more than a few seconds. Do you have any explanation for this?

Robb Wolf: Poliquin would probably hang this on like a low dopamine kind of scenario. So trying a supplement in the morning like our R-alpha-lipoic acid plus acetyl-L-carnitine and about a gram of R-alpha-lipoic acid, about 300 milligrams of acetyl-L-carnitine might really help that. And like if this dude just had the lights turned on with the addition of the acetyl-L-carnitine and R-alpha-lipoic acid, that would be a pretty good indicator the dude is running kind of low dopamine production. Obviously, coffee can boost that up, but he may need to up his calories a little bit and maybe just up his carbohydrate a little bit.

Andy Deas: And then the last question is during the very low carb diet, particularly towards the end, I would get extremely dizzy. Standing up from a chair or bed no matter the speed would have me leaning on something for support. Heavy efforts in the gym would be difficult sometimes to make it through. One time of doing a Max Effort workout for dips, I collapsed after the set. I was conscious the whole time but it felt like it took about 30 seconds before feeling in all my muscles to return.

Recently, I've added carbs back in, approaching some things I've learned from Cordain's Paleo Diet for Athletes book. Per his suggestion I saw in there somewhere I'm doing the Wendler 5-3-1, and one thing I find helps my dizziness is a good amount of mix-it-myself Gatorade/Powerade.

I'll cut to the chase. If I were to go back on a very low carb, high fat diet again, would I be negating my efforts by having a sports drink mixed before or during my workouts? I'm big, 6'7, 220, and find it takes at least 20 ounces to quell the dizziness.

Robb Wolf: Wow! A real common practice of people, bodybuilders who have followed cyclic ketogenic diets is actually eating like an orange or doing a little bit of like a carbohydrate drink right immediately prior to training. I think if that's what works for you, this is one of those things that we frequently get questions about pre-workout nutrition.

Pre-workout nutrition is a little bit dodgy in that I just don't see real strong consistencies here. What I see is a need to experiment and find what works best for you. Post-workout nutrition, I see much more

consistencies. So I don't think he really would be shooting himself in the foot here. I'd really rather see like an apple or an orange or something over like Gatorade, but that would certainly be doable too.

Andy Deas: Yeah. I think whole food would be our preference in general, but you know, tinker with it.

Robb Wolf: Yeah, yeah. It may just be that a real low carb deal is not a good fit for him.

Andy Deas: Yeah. And I think your other point to consider too would be that could be one consideration, and then also, you're looking at how much are you actually eating because my experience especially with some guys for the very low carb stuff is once they start looking at what they're actually eating, a lot of folks just don't get very hungry, and because they don't have some of the same hunger that they're normally used to, you start looking at what they're eating and I'm like, "Wow! You weigh -- you're a solid strapping 200-pound person and you're eating like my 115-pound mom does."

Robb Wolf: Right, right. Yeah. And they could just be chronically underfueled.

Andy Deas: Yeah, yeah, which could have a ton of effects as well.

All right, Robb. We're at 1:13 so we're sure we'll shut it down.

Robb Wolf: Okay. We'll wrap it up.

Andy Deas: So for Episode 7, Paleolithic Solution, Andy Deas with Robb Wolf. And we'll talk to you again later this week, Robb.

Robb Wolf: Awesome! And thanks everybody for sending in questions. We're getting a ton of great questions. That's what the whole show is about. So hope it helps and keep them coming in.

Andy Deas: Yeah. And last thing on the questions, if we haven't gotten through yours yet, it may just be in the queue. As Robb said, we have quite a lengthy queue building between email and blog questions. So we're trying to just crank our way through them slow but steady.

Robb Wolf: Yup.

Andy Deas: All right, man. I'll talk to you later.

Robb Wolf: Thanks, Andy.

Andy Deas: Okay, bye