

## Paleo Solution Episode 116

Robb Wolf: Hey folks, Robb Wolf here with Greg Everett. This is the uber banal Paleo Solution podcast, Episode 116. Greg, what's going on?

Greg Everett: Just my usual low-level stuff.

Robb Wolf: Sweet! Me too, so that's cool. So we've got a big beefy one here today so we'll try not to spin our wheels too long. But I wanted to touch on the heart rate variability thing a little bit because we had some people that were kind of panty twisted on episode 114 on that.

Greg and I actually spend a lot of time researching this but both of us, and I don't know if it's indicative that we are in fact morons or what the story is, but we looked at that heart rate variability question and I saw heart rate, over training and I was done, like as far as I investigated that one because I've just been down that road so many darn times.

But then the kind of ironic thing was that when you spin this thing around, our basic answer on that was still pretty consistent with what we had originally said and we're actually both pretty familiar with the heart rate variability question and I'm actually going to throw a challenge out to the smarty-pants on there that were kind of buzzing our balls on that thing.

The first person chronologically that can correctly answer this, I'll send you a signed copy of the book, and so here's what you need to address. What happens to heart rate variability under a dress if the individual is healthy? That's one. And then two, what is the major hormone that is highly correlated with heart rate variability stability?

So all you guys that were super smarty-pants on this thing answer fully that one Batman. And if all you guys that commented don't have the right answer then you guys can go screw a knot hole on the tree. So there you go.

Greg Everett: Oh, off to a totally unprofessional start.

Robb Wolf: Totally! Dude, we've never been professional. Yeah, when is this ever been professional?

Greg Everett: It's kind of like buying a Honda and then calling Honda and complaining to them that it's not a Mercedes.

Robb Wolf: Yeah. And how often do we comment that we're still shocked that anybody has ever listened to this thing which I still am.

Greg Everett: Yeah, if you happen to figured it out after 115 episodes we can't help you.

Robb Wolf: We're complete morons. Okay, so that's part 1 and part 2 which wasn't one of the questions that were submitted, that Chris Triage, but it's just kind of an interesting piece and I was just talking to Greg about it really quickly which is Hostess Snack foods appears to be filling for chapter 11. They're filling through bankruptcy protection. There's something like \$800 million in the red and the kind of -- some people have kind of joked, they're kind of like "Ah, it's not that big a deal. Twinkies lasts forever so we'll have this stuff forever."

But the interesting thing for me because I'm working on the second book is that the primary thing that they're talking about, the Hostess is talking about with regards to their situation is medical cost for their employees. And this is just kind of interesting. So how much of like the factory seconds are these people taking home and eating, like what's the body mass index on the average Hostess cupcake employee as kind of a baseline.

But even when you step away from that fact, typically the number one cost increase the employers are facing is health care insurance for people and it's just throwing some stuff out there that I've been working on with the book. If you look at elective surgeries like Lasix or plastic surgery and stuff like that, which do not -- they don't have a third-party payer involved, these things if you look at the cost of say like Lasix overtime, the cost is plummeted. It follows a Moore's Law distribution, which Moore's Law is basically this idea that every 18 months processing speed is going approximately double in computers and what we tend to find is that the speed goes up, the cost goes down and that's been something that's been consistent since the 1960s.

Virtually anything that is open to market influences follow this kind of trend, like TVs, hammers and microwave ovens are in general cheaper today than what they were 20 years ago, unless you happen to be in the military which are more expensive, but again you have a third-party system. It's not really a market-based system. So that's a bunch of the stuff that I'm kind of looking at in the book and we'll probably start doing some blogging on it, but I just thought it was kind of interesting.

You would think that Hostess Snack foods would be about as insulated as hookers, cocaine, the Mafia or whatever, like that should be an inflation proof or obsession proof kind of endeavor and apparently it's not so...

Greg Everett:

All right. Well, let's step up our game from Twinkies to green beans. Dora says, "I was recently diagnosed with Hashimoto's Thyroiditis, after 5 years of no one being able to tell me what was wrong with me. I do take responsibility, however, for not finding the smart ones. I am also 99% confident that it was triggered by the other idiot I went to for IVF who over stimulated me and sent my estrogen levels through the roof for a very long time."

"Anyway, as it turns out I have lived my life almost Paleo without even knowing it (don't like bread, pasta, beans or even ate processed foods). Since I learned I have Hashimoto's I immediately began to follow a very strict Paleo Diet with Autoimmune Protocol, per your book and Dr. Cordain. Although I never eat beans I do enjoy green beans. For my situation, can I eat green beans if I remove the actual bean and only eat the shells? I do cook them."

"Lastly, I do thank you and Dr. Cordain for this protocol as it has been the only way that I have been able to even begin to recover and I almost feel like my old self after 5 years. Thanks."

Robb Wolf:

Cool. With this thing, the autoimmune protocol at least my kind of understanding of it, we don't what stuff -- I mean what foods are problematic for people. Like we have a pretty good idea that some sort of like intestinal permeability, gut permeability leading to systemic inflammation and then the potential for molecular mimicry and autoimmune reaction, like we have some pretty good mechanisms and some pretty good ideas about the causation with that but we don't know what is causing problems in who, and there's genetic variabilities both with the individual, there's genetic variabilities with the -- kind of almost genetic or epigenetic features depending on what type of gut microbiota you have.

Different types of gut bacteria, I think we are going to discover are hugely important and whether or not you do or don't develop autoimmune disease regardless of the type of food that you're eating, although now we also understand that the type of food that you're eating can modify the type of gut bacteria that you have. So there's a lot of moving parts with this thing and really what this autoimmune protocol is, is just kind of looking at as many features as we can in trying to get those things scored away.

And so with all that said, green beans I suspect are probably pretty low on the kind of pro-inflammatory list the potential problem list. If you are feeling better, then I would say cook them well, reintroduce them, maybe don't eat them every single day or maybe you do eat them every day. Eat them every day for a week or for two weeks and see if you have any changes and that's just the thing that I would check with this stuff, like we still are a long ways away from being able to look at genetics, gut microbiota and a bunch of other kind of epigenetic features and be able to say "Okay, corn is 99% a bad idea for you. Green beans are like a 2% bad idea for you."

Like being able to do some sort of risk triage; we're miles away from that. So the best thing that we have is just kind of low-hung shotgun approach, Vitamin D, smart training, avoiding gut irritants of every variety that we can think of, that includes different over-the-counter medications and alcohol and stuff like that. And that's kind of about the best that we could do at this point; smart supplementation with probiotics and whatnot.

It's a good question and really I don't have a tighter answer other than give it a shot and see how you do with it and keep in mind that this is a big kind of shotgun approach to dealing with autoimmunity. But the cool thing is that if people will get in and deal with it seems to be really helping folks, like Dora seems to be getting some benefit from this a lot of other people have. So that's the main thing that I would hang your hat on, get healthy and then modify from there.

Greg Everett:

All right. Meg says, "Hi! I hope you guys are doing well! I just wanted to get your thoughts on Dr. Jack Kruse's leptin reset protocol." Well, it's tough to say. "I'm intrigued and eager to try it as I have Hashimoto's and suspected adrenal issues and anything to help get my hormones back in line seems good to me! From browsing various boards, people seem to say it's life changing although many tend to drop it as it can be difficult to take in that amount of protein first thing in the morning and resist snacking."

"However, those that can stick it out are true believers and say it's changed their life and their relationship with food; helped to reset hunger signals, drop fat, sleep better etc. Dr Kruse advocates a primal/Paleo diet in conjunction with this system. Apparently the reset lasts approx 6 to 8 weeks and you must adhere to it 100% or start all over again. He gives markers to know when you are truly leptin sensitive, (working out without being sore, better skin, better sleep, can skip lunch, et cetera) to know when to stop the protocol.

“The main ideas: (1) Eat a big ass breakfast, minimum of 50 grams of protein with little to no carbs. (2) No snacking, stick to 2-3 meals a day. (3) Eat primal/Paleo. (4) Make sleep a huge priority. (5) No working out during the reset until you begin to show signs of being leptin sensitive again. Thoughts? I assume it can’t hurt to try it, but am curious if I have a shot in hell in getting optimized hormone-wise this way.”

“For the record, I am on Armour/Cytomel, eat Paleo, have Hashimoto’s and celiac, and walk/do yoga for the time being (until I get the adrenals sorted out). His blog is very science heavy. I can’t always follow it but thought that someone with a big brain like yours will be able to analyze it. Keep up the great work. I love your book and podcast!”

“By the way, Instead of preaching to everybody about how they should go Paleo, I find that my results speak for themselves. My husband and now even parents are starting to dip their toes in the water (cutting out gluten) after seeing symptoms that kept me sick for about 2 years going away. Now I just have to stay on top of my Hashimoto’s and adrenals. Thanks!”

Robb Wolf:

Yeah. I mean, should you give this a shot? Absolutely. I think you absolutely should give this a shot and hopefully -- what’s this gal’s name? This is Meg. Meg, read Dora’s story here too. This is what I call like kind of transferrable job skills. It’s kind of hilarious. We’ll constantly get questions like, “Have you guys talked about Hashimoto’s Thyroiditis?” And I’ll do like Google Robb Wolf Hashimoto’s and then like just give them the Google search returns and I guess to some degree the lack of doing that is good job security although we don’t make any money off of doing the podcast, but that’s kind another here and there.

It’s kind of fun to hang out with Greg and spin some people up occasionally. So we know that this kind of autoimmune kind of Paleo protocol works and it works for a ton of people and Hashimoto’s seems to be one of the most -- I think maybe one of the most profound things that we have seen some good benefit on this. Chris Kresser has some really great blog post on the whole Hashimoto’s management and whatnot.

It’s interesting, I’ve seen a lot of different coaches, like Poliquin, I believe Czech and a couple other people recommend this like big whack of protein first thing in the morning and try to get it down within like 30 minutes of waking. Now, it’s interesting to me and a little bit funny, you’ll frequently have people who -- they’re having some weight issues or

having some health issues, frequently they'll complain of being hungry and different stuff like that and then you'll give them this protocol where it's like, "Okay. Get up and eat 50 grams of protein," and then they'll complain about like "I don't want to eat that much."

And it's like "Dude, really? You're killing me." You won't be hungry, it will get you healthier. And Meg actually mentioned that some of the people peel out of this protocol because they find it too hard to teed that whack of protein in the morning. But I've seen some -- it's only 8 or 9 eggs. Yeah, I mean it's not that big of a deal. I can do that before I'd even gotten out of bed, probably I -- yeah, yeah. So I've seen some people kind of take Dr. Kruse to task on some of the details of what he's putting forward. Like he puts some ideas forward that he's kind of like bypassing the leptin receptor in some different ways.

I'm not sure if all of that is 100% accurate or not. We'll figure that out over time, but I can tell you this, as a basic protocol I think this stuff is spot on and it's not anything different than 99% of what we've been talking about. Don't work yourself out into -- in adrenal fatigue state. We know for a fact that elevated Cortisol levels are going to be antagonistic towards thyroid production, and seems to have some neuro regulatory problems with regards to carbohydrate and all the rest of that stuff, just chronic stress. You get that HPTA access bugged and we've got all kind of problems.

So I would absolutely jump in and do this. I would do it in the autoimmune protocol like what Dora mentioned just a couple of minutes ago. I like the fact that you're on Armour instead of Synthroid, you get a broader spectrum of the thyroid derivative versus just that T3. So I think that that's a smart thing to do. And to some degree, it's kind of that thing, what have you got to lose?

So I think that you probably have some good success with it. It would be nice to hear back from you how this stuff goes. And I'm not sure what other pushing or cajoling I could throw out here, like this seems very, very consistent with what we've seen too -- what we've experience to be successful intervention for a variety of problems, autoimmune issues, metabolic derangement et cetera so...

And I think it's cool that Dr. Kruse is a neurosurgeon, he's elbow-deep in peoples' basal ganglia and stuff like that, and then he has kind of shifted gears and headed into this kind of metabolic derangement leptin management kind of gig and has shown some pretty impressive results with it. And he's pushing this thing in his hospital setting. He's kind of at

the top of the food chain where he is and he doesn't really have to answer to too many other people.

And so we started tinkering with this stuff, and got some good results and because he's a little bit insulated with where his position is, he didn't have to deal with the hammer of somebody, the fact that he was going to undermine like the bariatric's department or something like that because he's actually giving people shit that works, so I think it's cool. I know he's got a book cooking here so I'm interested to see what the book looks like when it comes out too.

Greg Everett:

Okay. I think this is officially the longest question we've ever had, so I'll try not to stumble my way through it too badly. The subject line is I Want to Be Batman: A Training Question. Josh says, "Hi Greg and Robb. The podcast is great. I wish there was a Catalyst or Nor Cal to train at where I live. Sounds awesome."

"Okay, I'm confused about this "CrossFit" thing. Don't worry I'm not trying to get you guys riled up about unsafe training methods doled out by under-qualified trainers. What I'm confused about is how to approach "general fitness" as opposed to sport-specific fitness. So I'm curious about your approach general fitness. I can't quote it exactly, but in an earlier podcast I heard Greg say something like "if you train to be good at everything, you'll just suck," or something to that effect. The point being, it is better pick one thing to be awesome at, and focus specifically on that (be it weightlifting, running, gymnastics, or whatever)." I don't think that's an exact quote. There was probably some important context regarding whatever I said but we'll get to that later.

"That said, I know a little about you all's history with CrossFit, and I also know that the main attraction of CrossFit and the general physical preparedness-scene in the first place, is the promise of training to ultimately become an all-around general-purpose badass. And that's why people train to be great across all these different "fitness modalities," and all of that stuff, which seems to contradict Greg's "don't over generalize lest ye suck" dictum (unless I misunderstood the context). What if a person doesn't want to be a champion power lifter, but does want to be damn strong; doesn't want to be a champion sprinter, but does want to be damn fast, and so on? What to do?"

"So, my question is this: let's take a hypothetical person and let's say that this hypothetical person's goal is to train to become an all-around beast of an all-around super-fit ass-kicker, strong, fast, powerful, flexible, coordinated, enduring, nimble, skilled; everything. Not the best at

everything, but really damned good at everything (and at least respectable amongst the specialists, albeit not placing in any elite contests or anything of course). Basically, this guy wants to before he gets too old for it, train to become Batman. So, if general wicked all-around badassery is a person's ultimate goal, and assuming that the way to general badassery is to train a bit of everything, and assuming that time-to-train is very limited," that's the key here in this whole question -- "given the need to hold a job and whatnot, then which would be the better approach to attaining said GPP goal?"

"Approach Robb Wolf: Train CrossFit-style consistently, forever, hitting at least two of the three major metabolic pathways hard each time, as much as sleep, eating, and recovery will allow, repeat, repeat, repeat. Leave out the really stupid stuff so to avoid injury. This would be the simpler approach: hit the CrossFit website, or whatever cousin site looks good, and do the workout of the day, every day. Track progress on "Helen," brag about my "Fran" time, or whatever. Spend the rest of my time defending kipping pull-ups to passers-by. Wear toe shoes all the time. Done."

"Approach Greg Everett: Break down fitness goals into 3-4 month "chunks" and, while maintaining a baseline 'maintenance' program in the background of general lifting, running and what not, create a laser-like focus for the main body of work for each period of time on crushing out one specific short-term goal. I hope that makes sense. So, for example, let's say I broke down a year's training into four "focus blocks" by season, to make it simple. Winter: strength focus (heavy compound lifts, eating, GOMAD, and beard growth) Spring: metabolic conditioning focus (sprints, wall balls, jumping, throwing things, and yelling) Summer: endurance focus (running, swimming, panting, sweating, VO2 max and wanting to die) Fall: power/explosiveness focus (Olympic lifts: because it makes me feel cool to waltz into a normal gym during bro-curl-in-the-squat-rack hour and pop out some snatches – it freaks their shit out)."

"This approach meaning: at least two or three sessions per week would be spent doing focus work, and the remaining two or three days would be spent doing the baseline maintenance stuff (bro curls, chin-ups, squats and cardio to keep things in check). Set a goal. Meet it. Switch goals. Repeat every few months. Would my hypothetical Batman-in-training get better results doing the "focus blocks" method this way, or just trying to do everything all at once each workout, as per CrossFit? Phrased another way, which approach would make one suck less?"



“Right now I’m doing a strength-focused routine (compound lifts), and I’m making good progress (I’ll do some cardio and MetCon, but it’s kept to a minimum for now). I am getting stronger, so what I’m doing is working. However, would me switching over to MetCon focus in the spring destroy all my awesome beardedly winter progress? I hope my question wasn’t too stupid! As far as training goes, I know some stuff, and now I’m getting just smart enough to be dangerous. Help! Thanks!”

Robb Wolf:

Dude, do you want to take a stab out of it or --

Greg Everett:

Sure. Let’s see, this is a lot of stuff here so let me try to go in order to make sure I don’t miss anything. First of all, regarding the quote “If you train to be good at everything, you’ll just suck,” I don’t think that’s exactly what I say and if it is I probably didn’t mean that to be used as a “without context.” So yes, if you train things specially you can get better at them than if you train things generally. That’s pretty straight forward. I don’t know that anyone argues with that. Well, there’s a couple who argue with it but we don’t listen to them anyway.

With that being said, yes, you can do a lot of things at once but I do think that if you focus on certain elements at certain times or even certain elements more so than other, you’re going to be better overall in the long run, maybe not immediately but at the long-term. So if you look at who the best CrossFitters are these days, they tend to be people who have pretty extensive athletic in training backgrounds. In other words, they’re people who arrived at CrossFit with an already established strength-base, often times pretty good stamina and endurance-base also.

They learn to CrossFit, they learn to do that movements that are specific to CrossFit that no one else in the world does like a sumo deadlift high pole for example or the dreaded medicine ball clean, and they’re able to do that stuff very quickly and very easily because they do have that established base. So if you’re considering trying to be overall bad-ass with regards to kind of a CrossFit style approach to things, I would say that having that base and developing that base, if you don’t already have it, is what you want to do.

So with regard to your two approaches, approach number 1, trainingcrossfit.com, you can probably guess how I feel about that, so I won’t go into detail. Approach 2, this is where I would lean towards although I don’t know that you need to have your blocks be as long as 4 months. That might be a little bit too long. I will probably stick more in the kind of 4 to 8 week range. And I might change the order here. So you have strength, metabolic conditioning endurance and then power. I

would just probably put the power after strength or more likely I think I would combine the power and strength into a single block. And that way, you're just rotating through these things a little more quickly so you don't have to be in a maintenance phase with your other stuff as long.

So, I think this is pretty straight forward periodization and I think if it's done well this is going to produce far better results for you than trying to do everything at once. A lot of times that's just going to result in you spinning your wheels. Because you have so little time to train apparently, that's going to make it a little tougher, but I think if you take more of a long-term approach and you look at this as athletic development over a period of year or more and I know that doesn't sound cool, I know you probably want to do this next week, you're going to be a lot more successful if you have a long-term plan rather than saying, "Okay, by the end of the month I'm going to win the CrossFit games."

Robb Wolf:

Yeah. Yeah, I totally agree. And I think when you look at this stuff, when you're thinking about just basic ideas of training adaptation and stuff like that, the biggest impediment -- the largest single impediment to this whole thing -- the thing that's going to be most antagonistic singularly towards everything is not strength and power towards endurance but it's endurance towards everything else whether it's skill acquisition of gymnastics and Olympic lifting, or power and strength development or whatever.

And so I think that's where I've always just kind of geeked and gravitated towards this more kind of power oriented individual, the more kind of sprint-based individual, a good 400-meter runner, maybe an 800-meter runner and being strong and lean and jacked and have a good tumbling in gymnastic skills and everything, underneath that banner, then if you want to jump in and do an endurance block, that endurance block could be literally 8 weeks. And this again, when Greg and I have talked about peaking people for like the CrossFit games, in my opinion the main thing is making people as technically proficient as you possibly can.

Now, obviously it's in a ton of different modalities so you've got kind of the basic Olympic lifts, you've got a wee spackling of gymnastic stuff which is even hard to call handstand, pushups, gymnastics at this point or what passage for muscles ups gymnastics, but we'll give it the caveat that, okay, that that's that stuff. But it doesn't -- from person to person there is such relatively little variability in like mitochondrial density, the ability to store carbohydrate, glycogen and utilize it for energy and everything.

The training adaptations are very, very similar. The main difference for the most part ends up being efficiency. And so like people need to spend a huge amount of time becoming efficient in the movements and then this is something that Arwan Lakur would move Mat, like he likes looking at the conditioning being an outgrowth of just trying to be highly, highly technical in this stuff that we're doing.

There's a quote floating around on the CrossFit message board where Glassman was actually extolling the virtues of bad movement because it was more metabolically demanding. And it's an interesting insight. It's kind of like, okay yeah, you do get some greater metabolic output with that but epileptic seizure is kind of the ultimate in metabolic work with absolutely nothing production coming out of the whole thing. So, over the course of -- they start looking that way and when you have people painting yourself during a workout then there's something -- oh-oh.

So that's where -- for me, I still think that I would agree strongly with Greg on this thing that if really are trying to optimize this stuff, the bulk of your time is still kind of spins on that technicality, on the strength and power production and like we do a lot of work with like Naval Special Warfare and some different folks in the military that when you really break down the demands of the work, they are not moving -- they're never running 6 miles. They're never running 2 miles. It's rare, rare that they end up running 400 meters.

But the number of times that they move, 5 to 10 meters, the number of times that they have to generate a huge amount of force to breach a door or carry a significant of load of short distance and stuff like that, that is constant. And that's where like I think within the military scene. We've seen this kind of evolution where initially say like it buds all that these guys were doing were like flutter kicks and 6-mile runs and some pull-ups and some pushups and stuff like that. And obviously that generated some level of fitness but there was a huge amount of over training, a lot of orthopedic issues and all that sort of stuff.

CrossFit kind of hit the scene and these guys had never done a deadlift, they had never done a back squat frequently, they had never power clean, and you say these guys improve as a consequence of that. Like, you got some more intelligent programming out of the gig but now you see these guys gravitating more towards like a max effort black box, CrossFit football kind of gig. And what they do is the strength and power oriented type stuff, short metabolic sessions but really like basically training more like a Rugby player or football -- American football player, and then

occasionally because they have these PT standards they need to meet with like times runs and long rook. Rook march isn't stuff like that.

They will then do some sport specific activity that will allow them to do these longer efforts but you can do this in kind of a concurrent format throughout a week, and that's because these guys are literally -- I call them soldier athletes or warrior athletes and they've got to have all of these characteristics all the time but I still think though I am sure their time needs to be spent more on that strength and power band if they need to bring up some attributes in the endurance side, then they just shift gears a little bit and focus on that. So that's kind of -- I think that that's a really remarkably good template to kind of look at and emulate this stuff.

And there was a point that was made in here about the time element, and that's where -- to some degree I'll give a hat tip to like the CrossFit kind of methodology although obviously I lean more towards like the catalyst slots in CrossFit football and stuff like that. But you are able to get a lot of stuff done in a reasonably short period of time, but that adaptation window is kind of limited, that Glassman was kind of famous early on for this one quote that was basically, "We do your stuff almost as good as you. You can't do our stuff at all and we do stuff neither of us does way better than you can."

And I was kind of like "Ah!" There were all kinds of piffy things like that that I found to false in the final analysis like the needs of our grandparents differ by degree not kind. Like that thing just spun my propellers because I'm into fractals and self-similarity on all levels and everything, but even though things were piffy occasionally they're not always correct. And the first exposure that I had to that whole thing about like "We can do your shit almost as well as you," was running across Ido Portal and that I don't know if folks have followed Ido but has an amazing Capoeira background, has trained with gymnast.

He has developed a good professional boxing kind of background now. Really strong, really flexible; he's into the hand balancing, equilibrate type stuff and you're just basically exploring movement, but Ido sent one of his top students to hang out with us for summer and this was while Nicki and I were still living in a one-bedroom apartment with no air conditioning and Chico gets like 110 degrees, so it was pretty miserable for Sherra. But when she showed up, she was able to do workouts that included 120 standing back flips for time.

She could do everything that we did and then there was a bunch of stuff that we couldn't even dream of doing with the capacity that they had. The first time that Ido tried doing fran, he got like a 303 on the thing and that was his first exposure. And there's a mountain of stuff that he can do that if you were to go to CrossFit games and be like "Okay, 120 back flips for a time, go." Oh, he wins. Nobody else can even do it. So there's shit that he can do that other people can't even sit down at the table with him on. But yet in the amount of like keeping pull-ups and handstand pushups and stuff like that, he can turn that stuff over with the best of them.

And so that's where I -- the reality on this stuff is that if you really want depth of development you've got to go down that rabbit hole of gymnastics to some degree. You've got to go down the rabbit whole of Olympic lifting and power lifting to a fairly significant degree, but once you have movement efficiency, the ability to develop endurance is not that damn hard on a relative scale. Now, I'm not talking about being the best runner or cyclist in the world but a lot of what goes into that type of stuff is from this guy, Steven Siler, he talked about three ways of training adaptations.

The third weight of training adaptation is not just like neurological efficiency, it's orthopedic efficiency in which your body literally riddles away all of the non-essential tissue and that can include parts of your brain, that can include parts of your digestive track and it definitely means skeletal and muscle mass that is non-essential. And I'm not saying do or don't do that stuff but people just need to understand that in long range endurance activity, like that's a part of that, the end goal is that you should be a heart and lungs with as minimal muscle mass to move you along as you possibly can, and that's just kind of the reality of the gig.

But getting back to this kind of Ido Portal thing, like they had amazing capacity that they could generate but they would also train sometimes 3 to 4 times a day, it might accrue 3 to 6 hours in training a day because they owned Capoeira scene and they had allocated and prioritized their time to be an effectively, in my opinion, professional athletes. And so that's where if you flip this back around and you're like, "Okay I'm going to do an hour of training a day. Can I develop that capacity?"

And it's like if you don't have a gymnastics background or an O-lifting background or a power lifting background, I would say no. Or it's going to take hell of a long time in which you're going to have to go down each one of those modalities and spend say like 2 years doing each one of those and then circle back around. But what we're still talking about is

like a 3 to 5 year developmental process to be Batman basically, to be this kind of top of the food chain athlete within the parameters of your genetics and all that sort of jive.

Greg Everett:

Okay. Cortisol and Morning People is the subject of this next question which is probably one of the shortest on record. Ben Says, "You may have heard that people are either a "morning person" or they are not. However, given the realities of Cortisol – high in the morning and lowering throughout the day – does that mean if someone is not a "morning person" something is simply off, perhaps diet, exercise, sleep? Naturally speaking, are we all born to be morning persons?"

Robb Wolf:

I don't think we are all wired up to be morning persons. I think that you could look at -- like I look at Nicki and I and I know that Nicki probably has better adrenal functioning than I do. But even when I've been pretty ass-kicked I just wake up easier and fresher and kind of more clear headed than Nicki does. And the flip side of that is that you start getting around like 8:00 or 9:00 in the evening and I'm done, like I am drooling on myself, I'm non-functional, it's a horrible time for me to work on projects and stuff like that. I ogle into the deck and I'm done.

And there has been a little bit of discussion about this stuff around the anthropology circles that you would have even though -- typically we're looking at like having a good amount of sleep and circadian rhythms and light dark times and all that sort of stuff. Even within that context, you could still have people who have different kind of levels of alertness at different times.

So like you might have people who are a little more alert in the evening even though it's dark, they're still getting that benefit like being in the hunker down I-Caveman style shelter with your fellow cave people and not getting that suppression of melatonin production and what not. But they're just -- bile rhythm wise, a little bit more awake whereas other people would wake up a little bit more fresh and alert in the morning. I think it make sense that you would have some variability within a population with that. It doesn't make a lot of sense that you would have complete homogeneity throughout a population that like everybody is very, very sleepy at night and everybody is very, very alert in the morning.

So I think that there's probably some variability on that. I think that the way our lifestyle is, we can tweak elements of that so that we start getting some adrenal fatigue and we really don't have that normal elevation of Cortisol in the morning and then suppression of Cortisol in the afternoon and evening, doing an ASI test we can kind of track that

stuff and see if we have something legitimately kind of pathological there. But I think that there's probably some variability within that. But it's a -- I would say that the science on it is soft that's way more opinion than something I could like -- 6 or 7 studies and like build a solid case on, definitely way more observational but it kind of make sense to me.

Greg Everett:

Okay. Katy says, "Hi Robb and Greg, I've been really enjoying your podcasts and listen to them all the time." Thanks Katy. "My question for you is concerning varicose veins in the back of my legs, something I've unfortunately inherited from both grandmothers. During my second pregnancy ten years ago the bulging started to appear and it has slowly been getting more prominent. The two disadvantages to having them are the ugly look and the dull pain I sometimes experience when I've been on my feet a lot."

"I would really like to have the veins treated and not feel self-conscious at the gym or at the beach but I'm concerned that there may be long-lasting negative impact on my legs from a training perspective. I'm 5'3", 41 years old, 130 pounds and do CrossFit about 3 times per week. I've been eating Paleo for about 4 months now and it's had a positive impact in many areas of my health which is excellent."

"Since the typical treatments for varicose veins entail shutting down veins to redirect circulation or stripping them out of my legs altogether (yes, really), I'm worried that the problem will either reoccur or there will be increased pain when I'm deadlifting or doing box jumps. Do you have any advice on how to proceed? Thanks for all your great work."

Robb Wolf:

Well, as much as Greg and I would like to perform back alley surgeries -- definitely outside of our scope of practice which we actually have no scope of practice but I'd be willing to bet -- and we've seen a lot of people with varicose veins see dramatic improvement in the progression of that whole problem when they start eating Paleo and they get the inflammation down, they're getting more bioflavonoids into their body which are these kind of anti-inflammatory plant constituents that help with the cell wall integrity and the tissue integrity and what not.

And so, it tends to slow the progression of the varicose veins. I'm willing to bet that had you eaten more along in this Paleo kind of line sit from like being a kid, that you probably wouldn't have developed and I could be wrong but I would go out on a limb and probably say that. This circles back around the same deal like, eating kind of Paleo autoimmune type, type Paleo kind of gig. If you're healthier you're going to do better. If you

have lower inflammation, you're going to do better. What you would do them from a treatment standpoint, I really don't know.

Like, maybe you do need to go in and get some surgery to deal with the worst of these things because they're just going to continue to progress, maybe you need to wear some compression socks to give a little bit of support and help improve that venous return, maybe when you're at home in the evening, you should flip your TV upside down and flop yourself on the floor with your feet against the wall with feet over your head to help with the venous return and stuff like that.

Like there's a lot of things that you can do that can kind of help that stuff that don't involve surgery, but I don't know -- I don't know. Again, I'm not a vascular surgeon so I can't comment too much on that. I do think that you have options to tinker with beyond surgery but there might be some limited intervention that you need to do to fix that stuff. But I definitely think that eating a bioflavonoid rich diet, getting some fruit and vegetables, eating the rinds out of a citrus -- actually the interior rind is actually very dense in different bioflavonoids and what not, you might supplement with some Quercetin as a standalone item but you get a lot of that out of the food so you might be good to go with that.

But I would definitely give that stuff a shot as the first intervention and then kind of see how you go and make sure your Vitamin D levels are good, sleep is good, et cetera, et cetera, all those other things. Get all those standard lifestyle things that we talk about again and again. Get all that stuff in order. Get it tightened up to like that 95% level and then see how you do. I would definitely do that before doing a surgery.

Greg Everett:

All right. Good luck with that. Alexander says, "Hi Robb. I turned to a Paleo lifestyle back in February 2011 after reading a little blurb about it in Joe Friel's Triathlon Training Bible and then reading your book subsequently. I haven't looked back. I performed fantastically in my first triathlon and looked and felt great."

"About a month after the triathlon, however, I developed an array of strange symptoms: eye floaters and blurriness, chronic tension headaches, low frequency hearing loss, sleep fragmentation, no bowel regularity, tingling and numbness all over my body. I don't blame the diet: I still adhere to it, and in an even stricter sense (cutting out a lot of fruits, et cetera, to lower insulin and promote immune response), since all this started afflicting me. It's been a rough couple months of misdiagnoses."



"I recently had a spinal tap (already had the brain MRI and tons of blood work) to try to rule out MS (haven't received the results yet). All of this to say: in my own research, people suffering from chronic neurological illnesses on Paleo who are not seeing improvement, in my opinion, shouldn't be barring phytic acid from their diet. Studies have linked cases in several chronic illnesses (like MS) to iron overload, and when phytic acid is taken in supplemental form (IP-6) on an empty stomach, it bypasses digestion and is able to chelate the excess iron, as well as other heavy metals, in the directly in the bloodstream of the suffering person."

"I'm pretty sure I've listened to all the podcasts and haven't heard this specific positive property of supplemental (not dietary) phytic acid addressed, and Paleo diet autoimmune/chronic disease sufferers should be aware of it. Have you read up on this, and what are your thoughts? Thanks."

Robb Wolf: Gosh! One thing I would remind people that Greg wrote, a fantastic article on donating blood --

Greg Everett: Oh, that's kind of you.

Robb Wolf: -- back in like, 2005. So, like the chelation deal is a way to tackle this and it's interesting, IP6 has been used a lot in some kind of alternative medicine therapies for cancer. So, I mean there are some interesting some there. And in the phytic acid deal, it is interesting like it does seem to have some interesting potential therapeutic effects. Like, Phytic acids were always kind of bemoaning it in the Paleosphere because it tends to bind to calcium, magnesium, zinc, iron, et cetera with the potential of causing some sort of malabsorption kind of issue.

I kind of wonder about that if you're eating -- and there are things that have a pretty high Phytic acid content in Paleo land. If I'm not mistaken, sweet potatoes actually have a fair amount of phytic acid. So, they can be kind of problematic in that regard. What I'm wondering though is, with -- say like, grain consumption specifically, o we have the problem of phytate added to the problem of gut irritation, added to the problem that -- as cultures would look at agricultural type scenarios as grain consumption typically increase, typically meat and fruit and vegetable consumption decreased because you had to really focus as much energy you could on just simply getting adequate calories in, and so adequate nutritional content may have been compromised in that regard.

And so like, if you had a scenario in which you -- yeah, grain consumption plus plenty of fat soluble vitamins, Vitamin A, Vitamin D, Vitamin K,

plenty of protein and all the rest of that stuff, can you bypass this problem? Can that be dealt with? I was just reading a paper the other day that was looking at mineral absorption from rice-eating individuals and it was a pretty well designed study and it was interesting, it was very similar to what we see with calcium absorption when we increase protein intake.

So normally, the refrain is that when you increase protein intake you have calcium excretion because protein is a net acidifying food, but in fact what we find is that the body more than compensates for that and we get a net calcium accretion because we start pulling more calcium out of the food that we're eating, out of the GI transit. And so we see a little bit of adaptation like this in high phytic acid content meals in which minerals are even better absorbed than normal.

So I think that all -- kind of interesting stuff. If you were to tackle this in a more direct route though, you know it's like, "Okay, so we have excess iron that's causing some oxidative stress and causing some downstream problems." I still think blood donation is probably a more direct route towards getting this. Then on the other side of this when we're talking about like phytates and stuff like that -- I won't say any type of phenolic but lots and lots of phenolics that we find in things like coffee and green tea and dark chocolate and stuff like that. If you eat a protein rich meal but you want to blunt iron absorption a little bit, you have a little bit of coffee, you have a little of green tea, have a wedge of really good quality dark chocolate, you needed a decent dose of these phenolics but they will compete with iron absorption, they will prevent iron absorption.

So that's an easy way to kind of deal with this stuff. But, yeah, I think phytic acid, there's more to it than simply it steals calcium, magnesium, zinc, iron, et cetera and causes problems. There are some potential therapeutic benefits to it when we're looking at phytic acid in the context of grains. I think that we have some other problems that are arising there. And I'm going to piss off our endurance athletes but I'm just going to point out that this problem arose after a marathon. Like, if you folks like endurance activity, cool. But you don't see Olympic weightlifters developing multiple sclerosis and autoimmunity after an event.

This is say, endemic in like the triathlon, marathon, ultra endurance kind of scene. So if you guys like that, that's cool. But we don't hear this type of shit from strength and power athletes. We can consistently see this type of stuff out of endurance athletes. So if you think that the stuff is -- that level of aerobic activity is benign on your person, it's not. So, you can send hate mail to Greg because he's really good with all that stuff so...

Greg Everett: Yes, I'll provide some measured mature responses I'm sure.

Robb Wolf: Because we're all about measured maturity.

Greg Everett: Okay, cravings versus nutrition. George says, "Gentlemen, I have been doing Whole30's program for about a week now. I usually have a sweet tooth but during this time I have sworn off sugar. I stopped eating dark chocolate and even fruit. Now, other than the typical cravings I have for pizza and crap like that I have also been getting cravings for sugary stuff. My question is, how do I know if this is my body telling me that it wants some carbs via fruit or this is just a wicked craving?"

"I CrossFit 4 to 6 times a week. 29 years old, 185 to 190 pounds. After a WOD (at 6:00 am) I usually have a Progenix shake. That is the most sweet thing I usually eat during the day. When my sweet hunger pangs were in full effect I had to drive to whole foods and pick up some pineapple chunks and mango slices just so I don't go batty and order cinnamon sticks from the pizza joint below my apartment. Now that I ate some fruit my cravings aren't as fierce. Is this just sugar withdrawal or is this my body's way of telling me it wants fruit?"

Robb Wolf: I don't really know. I don't know if like -- without really having a full understand of how good or bad your diet was before -- like if you were eating sodas all the time and you're eating pizza once a day and stuff like that, then you might legitimately just be going through kind of a detox kind of gig. The fact that you're CrossFitting 4 to 6 times a week, tells me that you're probably doing a ton of high metabolic output type stuff which then makes me really nervous about you being on a super low-carb diet, the wadding is stressful, the super low carb is -- it could be benign if you're at a low work output like, lifting weights and just kind of walking around doing that stuff.

The fact that you're probably doing some severely glycogen depleting type activity that is concerning for me. And so as with all of the stuff -- I like these interventions, people get in, they do 30 days but it's just really important that you know what the fuck you're doing. It's like why are you doing this and what is your primary goal? Are you wanting to lean out? Are you wanting get off of sugar? And all the rest of this stuff.

So if you are just -- like, if you're trying to detox from sugar but yet, you're hammering your body with glycogen demanding workout, then it's kind of tough like, that might be good or it might completely spin you out into another here. So that's where like maybe going with yam and sweet potatoes so it's not like sugar I guess might be a good thing but the thing

that is frustrating within all these is I have no clear sense of what is the god damn goal. And that just -- who are you? What are you trying to do?

And that is critical in understanding where and how to drive the boat. And like I say this stuff again and again -- there again, it's I guess job security in a way but it's just critical that folks understand, why they are doing any particular thing. Okay, this Whole30 thing is legit, awesome. Why exactly are you pulling out all fruit? Are you already lean? So what is the guy? He's like a -- he doesn't say his height. He just says he's 185 to 190 pounds. He could be 4'5" and look like Hervé Villechaize or something like that like this -- that doesn't tell me anything either.

So, I'm not trying to be a dick here but I'm getting the sense. I bet, it's almost like this mummy hearing kind of gig. It's like -- it's just like, "zing!" you get on it. I bet you're trying to do 3 or 4 or 5 things at once here. And that's a lot of what the problem is. And so I don't know if you're getting out of sugar detox. I don't know. I don't know enough of what's going on here. I will almost guarantee you that you are not clear about what your primary goal is and you are not making decisions that support what that goal is. And I delineate all that stuff in my Frequently Asked Questions, in the 30-day shopping guide and like the, what to do if you are trying to lean out? What to do if you're trying to optimize performance? What to do if you're trying to optimize muscle mass?

And you get one thing to do unless you are a raw beginner, you can tackle multiple things at once. Once you're no longer a raw beginner and that's basically like 6 to 8 weeks down the road you're not a raw beginner anymore then you need to start thinking about where you want to drive the boat. And if you're not, then you're shooting the bed. So that's probably way more scaving of a response in what George was gunning for, but this is just -- this is critical for people understand this.

This is doubly critical for coaches to understand this stuff. And when you're ministering over people and helping them to try to get where they're going. I understand, clients can be kind of knuckleheads but you've got to hold their feet to the fire about what exactly is it that you're trying to do. And the "trying to do multiple things at once" is going to really blunt the efficacy of what you get out of any of it. So that's the point that I would make is, be really clear about what you want to do. And then that will tell me and tell you how you need to eat and that will probably kind of delineate also whether or not you're off of sugar detox or whatever.

If you're trying to lose a bunch of weight then you need to follow the protocol that I actually lay out in the Frequently Asked Questions gig. That's the answer to that. If you're trying to optimize performance then that's a different story. But those things will each kind of lead you down the different path.

Greg Everett: Sorry George.

Robb Wolf: We're really not dicks but we get angry because we care.

Greg Everett: So if you are lean, maybe try adding some more carbs with that post workout Progenix shake.

Robb Wolf: Yeah, for sure. For sure, yeah, some yams, some of sweet potato, et cetera, et cetera, yeah. We really will be down to 6 listeners after the heart rate variability pieces and that one so...

Greg Everett: Yeah, but it will be the 6 that appreciate us.

Robb Wolf: That's true. And that's really all we need. So this thing -- like your seminar will be done by the time this thing goes up. So that will already be some sort of Ruby Ridge like catastrophe or something amazing, one or the other so...

Greg Everett: I go through the exact same cycle every single time I do one of these things like when we first book it, I'm kind of interested in doing it. And then as it approaches, I start dreading it. I start freaking out about all the work I have to do and if I have to travel, just all the work that I'm going to miss. And then when it actually comes, I have a really good time and I'm really glad I did it. And I seem to forget that that's the outcome of every single one while I'm sitting there dreading it in the 2 months leading up to it.

Robb Wolf: I do the same damn thing like, when I look at going out on the road and doing stuff I'm like, "Ugh, I need to be home working. I need to massage the blog and then do this and that," and then you actually get to the event and it's pretty cool. And at least you don't have to travel for this one.

Greg Everett: Yes, that helps a lot.

Robb Wolf: Have fun with that and thank you for another grand time. And again, the folks who want to comment on my questions to the heart rate variability, you need to answer both of those question and you need to get them

accurate. If you get one of them right, that doesn't count. You need to get both of them right. And whoever -- basically the comments go up in order whoever gets that one first gets a signed copy of the book.

Greg Everett: I want to add a bonus question for a signed copy of my book. And I realized the value of that is not nearly as great as Robb's but it's what I have to offer. And so my question is pretty simple, if you have this data from your little heart rate variability monitor, what are you going to do with it with regard to adjusting your training, making changes from the training plan you have? How are you going to actually put that data to good use?

Robb Wolf: So the best answer on that will -- you know what? We could make that one a separate deal. Let's make that -- answering that question a separate deal. So we've got the two original questions I've asked. Let's make this one a separate question and I'll throw in a book, Greg is throwing in a book on that one. So whoever answers that the best, so you've got this information and now, what type of athlete do we want to apply this to? Let's apply it to a weightlifter, an MMA athlete and an endurance athlete.

So then give us a block of how you would modify their upcoming programming in response to that. Is that what you had in mind Greg?

Greg Everett: Yeah. That will work.

Robb Wolf: Cool. Well, and the funny thing with that it will be interesting to see how people answer that because I've got some -- well, part of my question is going to actually trap the people on the backend of this thing and we'll crack all that out either in the comments or if it's a complete catastrophe then we'll spend some more time on this on Episode 117.

Greg Everett: All right. We're done.

Robb Wolf: Whoo hoo! All right dude! Well, thanks again and we'll talk to you soon.

Greg Everett: All right. See you later.

Robb Wolf: Later G.