

## Paleo Solution - 184

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Robb Wolf: Hey folks. It's the ever slow ramp up of my iMac. And it's episode 184 of the Paleo Solution podcast. Greg, what's going on dude?

Greg Everett: Not much, just sitting here on a lovely sunny Friday morning inside.

Robb Wolf: Sweet.

Greg Everett: Yeah.

Robb Wolf: Yeah, me too, that blows. We need to start doing this stuff outside when the weather gets a little bit more amenable to that.

Greg Everett: Seriously. Once you're not gonna get blown away.

Robb Wolf: Exactly. Yeah, the low gusting wind around Reno recently has been like 32 mph with peaks up to like 60 and we live up at the top of these hills. So it's yeah, we get a little windblown. I can't take Zoey outside.

Greg Everett: I don't mind rains so much, I don't mind snow but wind annoys the crap out of me.

[Crosstalk]

Robb Wolf: Yeah wind is kind of annoying, like I can't take Zoey out some days coz she literally won't get like tumble weeded down the hill. So yeah, that's fun.

So, what else is new? What's exciting?

Greg Everett: Performance Menu issue 100 is out. It's free. You can go check that out [performancemenu.com](http://performancemenu.com). Check out that extra big issue, read all the articles, no cost. Get it on a subscription though because for the rest of this month we're doing a bunch of giveaways and you could if you are smart and lucky, you could win a \$500 gift card to the Catalyst Athletic Store. That's a lot of stuff.

Robb Wolf: Nice. That is a lot of stuff. Dude, I could have wrists wraps and knees sleeves galore man.

Greg Everett: Yeah. Although, we don't sell either one of those.

Robb Wolf: I thought you did.

Greg Everett: But you could buy bunch of stuff from us, sell it and then buy a bunch of wrists wraps and knees sleeves?

Robb Wolf: That sounds like right up the alley of my brother in-law actually, like that dude is the consummate horse trader. Every time he buys me something, he's like "I can turn around and sell it for even more on Craigslist" and I'm just like once you factor in the amount of time you spend dicking around with that activity it seems like it's not really worth it anymore but he's much more excited about that type of thing. I think most people are more excited about that type of thing. I'm just lazy I guess. I don't know.

Performance Menu issue 100, if folks have blogs or websites and they want to become a Performance Menu affiliate? They can do that. They can sign up on the front page, right? They get a 20% slice of all the action that comes through their affiliate page?

Greg Everett: Yeah, any subscriptions that are sold that links generate from your site or your email or whatever you posted that affiliate link, yeah, you get 20% which if you sell a premium subscription, that's \$20, for one link.

Robb Wolf: I like it. And so like if you're doing some article say like on, "Intermittent fasting or Hormesis" you could link to my outstanding, trendsetting articles.

Greg Everett: Indeed.

Robb Wolf: Well, they're not really that good, but I did what I could on them.

What else do we have?

[Crosstalk]

Greg Everett: They're above average.

Robb Wolf: They're above average, they're slightly above average, yes.

Let's see here, we have Well Foods, go to [wellfoods.com](http://wellfoods.com), actually, it's [wellfoodshq.com](http://wellfoodshq.com). Everybody is a freaking hq I think these days or [wellfoodscompany.com](http://wellfoodscompany.com). We'll have a banner link in there, I'm sorry I'm a

moron, I'm a part owner in the business. I'm not even too sure what the url is?

But check it out, you can definitely buy it off of John Welbourn's website. He has his banners up so you can go check that out but everything from grass-fed whey protein, grass-fed jerky. We have some Wolfs' Snacks coming out. We're gonna have a kiddo pack and a post work out pack that is pretty legit. We have some other snazzy little items rolling out with Well Foods.

We also have frontdeskHQ.com. FrontdeskHQ is your service based business solution. You can take payments, manage all of your staff. They're gonna have a skill tracking feature here before too long which should be really jim-dandy for anything from like martial arts studio to a cross fit gym so that you can track and stratify people's progress. Keep them in the lane that they need to be in. FrontdeskHQ starts off at a very reasonable pricing level. I think it's 1% of revenue. So like if you're making \$20 a month. You're paying like 20 cents or \$2 or some such shenanigan. And what else?

The Bunny Ranch, go to bunnyranch.com, Dennis Hoff's outstanding brothel out in Carson city, still stoked that they are podcast sponsor. It is porn and brothels and naked chicks and stuff like that. So just keep that in mind if you do happen to cruise to the Bunny Ranch website and check them out. Cool.

**[0:05:14]**

Any other sponsors? Did we forget anybody? I feel like we're forgetting something.

Greg Everett: No, but I just checked and it's wellfoodco.com.

Robb Wolf: Wellfoodco.com, there we go, sweet. Wellfoodcompany.com. Awesome.

So we jump in with this intermittent fasting driving up a fasting blood sugar?

Greg Everett: Let's jump in head first.

Erik says, I've been Paleo for 5 years and a 100% compliant. A year ago I switched to the Lean Gains protocol with only paleo foods. I went from 15% body fat to maintaining less than 8% body fat year round with no effort, this is validated through hydrostatic body fat testing. As you can

see I'm extremely lean and I hold a lot of muscle mass but my only worry is my fasting blood glucose level. I keep track of my blood glucose and what I have started to notice is my fasting blood glucose has started to move up with no change in diet. Should I be worried?

My average morning fasting glucose level is 100 to 110 and this will sometimes get up to 124 throughout the morning. Once I eat it falls to high 80's to high 90's. On work out days my blood glucose post work out is high 70's to low 80's.

What should I do? Should I abandon the intermittent fasting and eat breakfast? I thought intermittent fasting is supposed to make you insulin sensitive and not resistant. I would love your input as this is worrying me. My eating schedule is as follows. Workout days.

Robb Wolf: I wouldn't even read all this. I mean there's just a zillion, I mean if you want to read it. Do you want to read all that?

Greg Everett: No, I'm good.

Robb Wolf: Okay. He details his eating and it's very detailed and props to you for doing all that stuff.

Greg Everett: Very detailed details.

Robb Wolf: Yes, very highly detailed in the details.

Art Devany has talked about some elements of this and once you get down to a leaner although there was one direct questioning here which is I thought that element in fasting is supposed to improve your insulin sensitivity? And it does up to a point but when you start getting very very lean thin and if you are fasting then one of the things had happened is we get some peripheral insulin resistance which is sparing glucose for the brain.

If you're in ketosis, like really really burning ketosis then we will tend to see lower glucose levels because the brain and other tissues are running off of ketones instead of blood glucose. But some of the cool things about intermittent fasting is that it's particularly if you're doing some carb cycling is it's one of these things that is really forcing some cellular stress adaptation. You're shifting gears between different substrates as a fuel.

And I think there's some really big metabolic benefit to that. I talked about in my thoughts on low carb on paleo the 3 part series that I don't

unfortunately think that intermittent fasting or ketosis is going to dramatically increase life span but it might improve health span like you might be healthier throughout the course of the life that you're gonna live and who knows maybe it will stick a couple of years on the back end as well.

But the problem with any of this stuff always is in the dose response curb and at some point the thing that worked for you previously may not worked for you now and the fasting blood glucose of above a 100 is definitely concerning.

So this is where maybe circling back around and dropping some food in in the am. It'd be interesting to just do that as a base line test and maybe you only do intermittent fasting like 2 days a week or on non-training days or something like that. I don't know that it necessarily has to be an all or nothing kind of approach.

But because you are in this intermediate thing like you're not a 100% ketotic but yet you're not just like doing the standard like 3 meals a day, whacked carbs at each meal. You kind of in this between land and it looks like we're getting kind of a stress response that cortisol, probably driving up your blood glucose and that could be problematic over the long haul.

So I would definitely play with how to get the blood glucose back down to normal levels and then you'll just have to see how that plays with your body composition. Again having mentioned the Performance Menu deal like I wrote a piece back in 2005 talking about intermittent fasting and some really really interesting stuff very exciting.

If nothing else what it told me is that contrary to what the body building magazines tell us we don't need the 8-meal a day and avoid going into negative nitrogen balance so we're going to lose every scrap of our muscle mass; 3 meals and a snack is probably more than enough for the vast majority people unless you're really in a hardcore mass game deal or something like that.

**[0:10:17]**

So if nothing else intermittent fasting can just simply make your life simpler because you don't have to feel so neurotic about eating all the time but my experience because we were catering to a largely cross fit kind of crowd because of the intensity and the volume of training I was

seeing about a 50/50 rate in which intermittent fasting would help some people and it would hurt other people.

And then over the long haul I think it ends up shifting upwards many many more people having problems. Just because if you're really getting after cross fit like the volume and intensity is such that you need to have all your other life parameters dialled in, your sleep, your food, your de-stressing and everything. And intermittent fasting is supposed to be like a planned hormetic stressor but you're already getting a plan hormetic stressor via your exercise.

That's why I kind of stepped back from the intermittent fasting scene. I was actually going to do a book on it and I know a lot of people still run with it and kind of popularize it and everything and that's great. I think for body builders and for fitness competitor type folks like I think there's certainly some efficacy there but the volume and intensity of the training is just not the same. And then again when we circle background do a little bit of quantified self testing, if you're seeing problems like this then I think you need to address it.

So, Greg does that make sense to that seemly kind of answer the whole thing, get some route through the forest?

Greg Everett: Rob, that makes perfect sense.

Robb Wolf: Thank you, thank you. You're very kind.

Greg Everett: Okay. I'm assuming gals name is Pink Frankenstein, although I don't want to pass early judgement. Okay, sleep after exercise.

Hi Robb and Greg, one of the things that going paleo has done for me is that at age 48 I'm playing ultimate frisbee like I'm 28. Serious speed and not so sore afterward benefits. Awesome.

The problem I'm having is getting some good sleep after playing. I usually play at night in various pick-up and league games since it's an after work kind of thing. This means stopping play at either 8 pm or 10 pm. As a result, I find it difficult to go to sleep and stay asleep later that night. So I end up staying up later than I like and getting sketchy, twitchy sleep.

Are there things that I can do to combat this phenomena either through drugs, food or supplements or some other means like, I don't know, stretching? Do I need to concentrate on a cool down? In case you don't know the physicality of ultimate is similar to soccer, lots of sprints and

running. The podcast is a great resource and actually entertaining. Thanks!

And actually entertaining.

[Laughter]

Robb Wolf: It's actually entertaining.

Greg Everett: Wait. She asked about drugs. Aren't you smoking a bunch of weed? It's ultimate?

Robb Wolf: Yeah. I figured it that would be kind of part and parcels.

Greg, you could probably comment on this coz you played around with the am and pm training. I know for myself I tend to probably have my best performance on most things in the early afternoon, maybe about 3 pm or 4 pm. And it's still early enough in the day that it doesn't seem to affect my sleep even if I do some jujitsu or something like that. I don't have problems on winding going to sleep.

My problem for ages, and this is part of the reason why I've been doing jujitsu for almost 20 years intermittently and haven't gotten all that far until the last 6 months when I've found the class that actually either noon or before noon is that all the time when I was doing capoeira when I want to do Brazilian jujitsu.

These things and possibly because of Brazilian run, I don't know and not all of that organized most of the time is that they would start it like 10 or I mean 8 pm and then they would wrapped up at 10 unless Mestre Curisco was having one of his meltdown moments in which case the thing would wrap up at like midnight.

And then I inevitably had some sort of a job that would get me up and Adam like at 5 or 5:30 and it just wouldn't work. I couldn't fall asleep. I couldn't stay asleep, my heart rate was up, my body temperature was up. So I personally have found night time exercise to really really problematic with sleep.

And the things that I've tinkered with include doing a cold bath after training and sometimes it sucks miserably but one of the key things if you remember from the Doc Parsley podcast that we had, like if you want to do a nap during the day then being a little warm is actually better for enhancing that productivity of that sleep.

But if we want to go to sleep at night then our body temperature needs to drop.

**[0:15:00]**

And so doing a cold bath get your body temperature down, some magnesium, maybe a little bit of melatonin like... Or I've been tinkering instead of doing melatonin directly like doing tryptophan or 5-hydroxytryptophan and there's a couple of moving parts with this so you could also throw in rather large carb meal in the evening which can help with serotonin production.

You could throw some, like a gram of... Or actually start smaller than that maybe like 200mg or tryptophan and then titrate up but take some tryptophan with a large carb meal in the evening, have some of your natural calm, take a cold bath, and that might be a good way to go, the phosphatidylserine, holy basil stuff is always helpful for reducing cortisol levels. But depending on how hard my training session was in the evening even though those things are helpful they're not as good as me training earlier in the day. Greg, thoughts.

Greg Everett:

Yeah, I mean I haven't really noticed that much of a difference honestly but just 'cause my sleep is shitty no matter what. Definitely, it takes me a little longer to wind down if I trained in the evening. It just doesn't affect my ultimate sleep a whole lot and I prefer training in the afternoon. But usually that means about 4 to 6 or 4 to 7 or so, so it's not super late. I think if it were more like 8 o'clock then it would be a much bigger problem.



But if I train in the morning, it's usually around 10 or 11 and so I'm more wound down but the problem is that I coach the lifting team from about 4 to 7, too. And so if I do train after I'm training with them but even if I don't train, then I'm coaching them, so I'm all amped up from that anyway so it's lose-lose for me.

And so Pink's situation here is that obviously she can't ask these guys to rearrange the game schedules to 7 am so I think it's just about trying to have a good routine and I do think that having a pre-bed routine like doing a little stretching and foam rolling, reading instead of TV, computer, phone – any of that stuff...

Robb Wolf: Low lights.

Greg Everett: Yeah, but where you have... You do have a routine and so it's this thing that your body is accustomed to you like, "Okay I'll go play ultimate and then when I get home I eat, I stretch, I read this book, and then I go to sleep." And I think the... I should be asleep at this point but I'm not. But I think the more of a routine you have, the easier it is for you to fall asleep and sleep better consistently.

So stuff like holy basil or phosphatidylserine – anything that's theoretically gonna help lower cortisol and just help you wind down. GABA's another one that can... and helps sometimes, I think. That's helped me in the past. Just throwing those in in your pre-bed supplements, you might find some help from that, too.

Robb Wolf: Cool.

Greg Everett: All right.

Robb Wolf: I like it.

Greg Everett: Let's see here. Jay says you guys are great. I finally caught up to all your episodes. Thank you so much for your time and solid work. I've been slowly trying to get my diet close to perfect paleo but I still crack on pizza and beer from time to time. Okay, beer daily."

Robb Wolf: I would if I could.

Greg Everett: "As UPS driver in Phoenix, my job consists of doing 160 to 185 stops per day, carrying packages from anywhere from 1 to 150 lbs. I'm 6 feet, 175 lbs, athletic build. I never feel too exhausted toward the end of the day but I'm still looking to optimize my diet and energy with your expertise.

Keeping in mind 110 degrees summer heat with no air conditioning, the grilled steak doesn't exactly sit well in my gut during the Phoenix summer heat. What are some of the most ideal foods for all-day sustained energy?

I currently eat about 30 grams of protein every morning through bacon and eggs. Throughout the day, I drink tons of water and snack on raw broccoli and celery taking sips of coconut oil and handfuls of almonds, another 30 grams of protein from beef jerky and finish off the afternoon with one banana. Then at dinner I usually get not so paleo and have another 1500 to 2500 calories. Also, what workouts would help my work performance?

I currently box and do a Muay Thai 2 to 3 times per week but I've been feeling a little too worn down from these intense workouts. Maybe I'm looking for something a little less intense. What are some of the injuries or problems I should keep a close watch for that might be related to this type of work.

Lastly – sorry for the length. Please don't hate me – does ZMA have any benefits? I've noticed some deeper dreams and better sleep, I think. Thanks guys. P.S. Just think you would be doing the world a service when I pass the word on to all the other drivers. Everyone will get their packages quicker from all the healthy and energy charged drivers.

**[0:20:09]**

Robb Wolf: I'll tell you what, Jay, in exchange for us answering this question then you need to get us an audience with UPS headquarters for the risk assessment program.

Greg Everett: There you go.

Robb Wolf: That'll be the deal. Just contact Squatchy and get us the hook up. But let's work our way backwards. ZMA beneficial. We think so. It seems to help. I mean it's one of these things that... I mean the zinc magnesium combo seems to help a ton of people. Sleep seems to be a little bit more deep and intense. I've shifted to just using natural calm and I eat a lot of liver and organ meats and stuff like that and I feel like I'm getting plenty of zinc from that. So I'm probably squared away there.

What are the injuries and problems I should keep a close watch on? I would say low back and knees. Greg, thoughts?

Greg Everett: Yeah, probably.

Robb Wolf: And we see these with cops even more so I think because of the way that seat is with a UPS truck. You're sitting up a little bit higher like your hips are a little more open and everything so I don't think it's as gnarly a situation but we see with this cops where they'll go in and out of the car and they'll go from a scrunch position to an opened up position or hip flexors get tight, hamstrings get tight and then we start reefing on the low back.

And our pelvis, if it's mobile, if our hips are properly mobile, if we were to put those motion sensor dots when they're doing like a CGI stuff, if we were to put one right on the sacrum and then right on the hips, the sacrum should really maintain its elevation and whereas the hips are the ones that are processing up and down for the most part. But when the low back gets tight, when the hips and... When the hip flexors and the hamstrings get tight, the low back actually starts getting a lot more movement. The spine starts getting a lot more movement.

And this has almost a mortar and pestle type activity on the L4/L5 disks and on the vertebra themselves and we see a lot of problems arise for folks with this. So I mean maintaining hamstring and hip flexor mobility, lots of death stretches, lots of probably weighted hamstrings stretches would be in order with that. Some of the IT band, foam rolling... Ido has some cool stuff where he will stand with his feet together.

And then let's imagine that you are standing with... Your feet are together, you're standing next to a bench and the bench is maybe about knee high or maybe a little bit lower than knee high but the bench would be next to your right knee, you're facing the length of the bench and then Ido will corkscrew and sit down on the bench carefully and basically what you're doing is you're loading the connective tissue in a generally what would be regarded as not orthopedically sound way but you're doing it in a progressive safe manner.

And so he will load this over time and so you're... it's always great to work on perfect form and everything but there's some argument to be made for doing some activities and again, a safe, reasonable, controlled manner that is not our orthopaedic optimum to get some soft tissue integrity like Ido does some pretty cool stuff where he walks around what his feet completely pronated, I guess or supinated, I guess and walking on the outer edges of his feet to protect against tendon and ligament damage.

So there's some cool stuff out there with that regards. Greg, did you think of anything else for the bullet proofing of a UPS driver?

Greg Everett: Yeah, I would definitely be doing some basic strength training instead of just boxing and Muay Thai. I don't know that you need a ton of conditioning. I mean it's good to be able to fight people off who were trying to steal your packages, I guess but...

Robb Wolf: That's what a gun is for.

Greg Everett: Yeah. I think that doing the basic barbell lift so you are developing as much strength as possible around the joints like the knees, the lower back, the shoulders – all that kind of stuff that is gonna take a pounding. I think the more of that you can do the better off you're gonna be. And obviously you don't wanna gain that much of weight 'cause want to be 6 feet, 220 running around all day in 110 degree weather.

But I think if you can... You probably would put on 5 lbs or so. I think that could be a lot of some helpful muscle tissue around those joints and give you a little bit of a body armour effect.

**[0:25:00]**

And I think also being very good at squatting and dead lifting and pressing and even power cleans – things like that – is gonna help you move a little bit more effectively and safely while you're actually working. So I think it'll be protective all around.

Robb Wolf: I think probably like a 3 to 4 days a week, 150 med ball cleans for a time and certainly not to exceed a 6 lb weight and the med ball would be possibly the most beneficial thing you could do.

Greg Everett: So there's this... I think I've mentioned this before but there's this gym in the same... The back of their place is in the same parking lot as us.

[Cross talk]

Robb Wolf: Right, right.

[Cross-talk]

Greg Everett: Just goof balls. They were doing walla balls but bringing the ball down behind the neck and they already don't know how to squat or anything and so it was basically just like ballistic... It's like you know what hockey

sack? It's like catching the hockey sack behind your head but with a 20 lb ball just as hard as possible in a horrible round back good morning position. It was fucking incredible. And someone's over there paying for that.

Robb Wolf: You silly kids.

Greg Everett: It's not just Crossfit gyms that have this problem.

Robb Wolf: You silly kids.

Greg Everett: Oh, boy.

Robb Wolf: Oh, man. What else here?

[Cross talk]

Yeah, you know the food... The only thing that I would see with... I definitely get you're physically active throughout the day and don't want a big hunk of wood weighting you down especially when it's hot enough to cook your food on the asphalt. The only thing, like he says, that in the evening he has 1500 to 25000 calories which I'm assuming is a pretty good hoss fest of food. My only thought with is that when he was just describing everything, it's really low carb.

And so maybe some more fruit or yams or sweet potatoes, somewhere in there, but he doesn't really described the composition of that final meal.

[Cross talk]

Greg Everett: So that's good carbs.

Robb Wolf: Yeah. So maybe he squared away on that. That's the only other thought that I would have is particularly if doing the fight training is really leaving you knackered, then you just maybe a little too low carb throughout the whole process. So that's probably the only other thought that I would have in there. I definitely get it that when you're on your feet and you're really active and it's hot like you don't wanna eat a lot of food and as much as I...

I forget if I mentioned this on a podcast already or if I was just talking to Greg or talking to somebody else but I like all the carb back loading stuff. I dig all of it but it'll be interesting to see how people do with that. Like we had the question about the sleep quality earlier regarding the frisbee

but I've noticed that if it's warm outside and I have a large meal, I have a hell of a time falling asleep if I have that meal really late in the evening because your metabolic rate goes up and your body temperature goes up after you eat a meal to say nothing of a larger meal and then if it's already warm outside, that's problematic.

And I think that that's some of the reason why we see more of a siesta type of phenomena in locations that are more equatorial where you eat that larger meal early in the day which interestingly Doc Parsley mentioned that you actually sleep better during the day when you take nap when the body temperature is higher but we need the body temperature to go down.

So all that stuff – the whole point of that is it'll be interesting to see if people doing a carb back loading in the warmer times of the year, if they have any type of sleep problems with that, it'll be interesting to see that.

Greg Everett: Well, all right.

Robb Wolf: Largely unrelated to that question but that's where my random access brain went so there we go.

Greg Everett: That's okay. All right. Paleo and Addison's disease/shift work. That's a tricky one. Hi Robb and/or staff. Bought your book and enjoying it so far. This is a question about how Paleo might affect Addison's disease. Basically my adrenal glands are raisins and have been for many years. They produce nothing. I suspect autoimmune was the cause as I've had on and off bizarre things happening to my health all my life.

These things come and usually go. About 10 years ago, my strange symptoms got so bad I began to search out an answer for what was going on since the docs were mystified and just wanted to throw pills at me which was basically occasional small seizures of unknown origin and horrid digestive problems.

During a seizure I could not even keep to my feet but had to drop and do a squat and belch, belch, belch. Great for socializing. After I've tried a good probiotic, the seizures went away but I still felt pretty lousy a lot of the time. Then I stumbled upon The Paleo Diet by Cordain. The ideas in the book made perfect sense to me and my health and vitality improved greatly over time.

**[0:30:09]**

I sort of drifted off course over the last few years eating all sorts of bad things especially while on the road. But I'm back to the Paleo way now. I'm a locomotive engineer on-call 24/7. Not even shift work. Just get called for a train whenever it shows up. One day it'll be noon, the next 2AM, then 3PM and so on. Once in while you get cut short with no sleep when no one shows up that is not on the line up for whatever reason and you can be awake for 30 to 35 hours straight.

I do have ridging in my nails even though I'm eating Paleo again. So I'm really interested in your ideas about hypoacidity in shift workers. This is probably not the best job for someone with Addison's to have but I have stood the Gaff so far for 19 years. Of course I have to take cortisol steroid as replacement therapy for missing adrenalin and I'm currently mucking about my bloodstream with my endocrine doc to see if I can get rid of my mineral corticoid replacement for missing aldosterone which we think is giving me high blood pressure.

Anyhow, obviously, a non-healthy lifestyle which I try to manage as best I can. Interested in your thoughts since you know so much about biochemistry. I bet I'm the only Addisonian who ever contacted you. Just interested in your thoughts if you can spare it a time. Thank you for what you're doing with your work. It's helping a lot of people.

Robb Wolf:

Gosh. It's a great question and I fear I'm not gonna have a whole lot to offer because the Addison's is a really complex disease to manage and – gosh. What do I wanna say? I mean clearly, whenever we feed and water ourselves better then we're generally gonna be healthier. And so I mean I think that you've already experienced that. When your food was more dialled, you were feeling better.

As you get older, the sleep deprivation is gonna become more and more of an issue. The titrating off the aldosterone, see if you're just not producing any that seems almost impossible like you might be able to titrate down lower particularly if you're having some high blood pressure issues but it seems unlikely that you're gonna be able to go off the stuff entirely, the ridging might be from a mal-absorption issue.

The deal with the Addison's is the cortisol modulates immune function and all of that immune function, we start with secretory IGA and then start working towards other elements of the innate immune system and then the adaptive immune system and if we get a breakdown in that line, then we add some gut permeability potentiality.

When we're under stress, we tend to see some hypochloridity in people so something like a Now Foods Super Enzyme or like a Paleologix AdaptaGest might be helpful in that regard to help you just digest your food better.

But this is just a complex situation under the best of circumstances like if you had – gosh. What's an analogy here because the shift work is so such a gnarly impact on adrenal function, just as a base line. So this is like a situation like if we had a type 1 diabetic that your job was to convert glucose into CO<sub>2</sub>. It's like literally we just... You showed up for your 8 or 10 hour shift and we plugged a line into your jugular and we just started pumping glucose through your body and your job was to use your metabolism to convert that glucose into CO<sub>2</sub> and water, like run it through the metabolic process.

That would be horrible because you don't endogenously produce insulin and so we're going to have to manage that situation with some sort exogenous source and even things like insulin pump like we're getting closer where... Some of these blood glucose sensors tied to an insulin pump are actually getting fairly dynamic.

So they start seeing the blood glucose go up and they'll titrate that a little bit of insulin and the blood glucose goes down and they suppress the insulin production. So it starts looking more and more like a legitimate pancreas. But let's assume that we don't have that and we just have to rely on dosing this stuff like a once a day or a two-times a day insulin bolus this would be a horrible job for this person.

Sounds like a horrible job no matter what unless, I guess, you could just eat all the glucose in the form of Twinkies or something like that. But the sleep deprivation plus Addison's fudge like that is really, really, hard and I don't know if you've got a pension option at your 20 like you said in your notes that you've been on the Gaff for 19 years. If you've got even a marginal pension at your 20 and you've got your finances in order and can withstand going into a different line of work and doing something else, I – damn, I would do that because I don't...

**[0:35:03]**

You seem to have potentially the two worst kind of flavors of two things that you can bring together - the Addison's which is this adrenal dysfunction, the adrenal insufficiency plus highly disordered sleep and that just seems like a gnarly bugger to deal with but as always whenever we're facing challenges - sleeping to the best of your ability, getting out



and getting some sun trying to keep your vitamin D levels high via sun exposure if you can at all do that, be active to the degree that it seems to make you feel better but doesn't cause end roads to your recovery and then to the degree you do sleep sleep as well and as often as best as you can. But I don't have much beyond that other than plan an exit strategy man. Quit.

Greg Everett: Okay. I'm glad you had something on that one because I have absolutely nothing to offer other than trains are cool.

Robb Wolf: Sweet.

Greg Everett: Some good old old school engineering stuff. It makes me feel good inside. Okay. Lactose in Now Foods Super Enzymes. Rebekka says hi. I recently discovered your amazing podcasts, have listened to about 50 of the first episodes plus the new ones that come out once a week. So I'm sorry if this has been covered before.

First question: I ordered the Now Foods Super Enzymes capsules from Amazon UK because they have been warmly recommended by both you and the Whole9. When I received them this was written on the label, below the other ingredients list - contains sulfites, may contain lactose, milk, as a processing aid.

I emailed the company regarding this because I am pretty sure I have lactose intolerance. I used to get 7 month pregnant-bloated after drinking a small latte and I also have psoriasis – so I'm completely avoiding dairy. This was their reply: "It is a tiny amount of lactose used as a processing aid for the pancreatin and the sulfites come natural as part of the pineapple. Both are small and well tolerated by most but your concerns would indicate that a milk and sulfite free formula such as the following would be a better choice."

And there's a link to that product.

Checking out the label on those vegan enzymes I could see that they don't contain Betaine hydrochloride nor pepsin or papsain – is that what she's trying to say?

Robb Wolf: No papain is right.

Greg Everett: But added lactase and a bunch of other enzymes not included in the Super Enzymes. So I replied that this blend would work better for vegans rather than paleo folks. Why would I need lactase when I don't consume

any dairy and they said I could try their Betaine hydrochloride with pepsin capsules instead.

Do you think I should avoid the Super Enzymes because of the lactose? And if so should I buy their hydrochloride plus pepsin capsules plus separate supplements to add in bromelain and papain? Would become 3 bottles of supplements in total or could you recommend any other broad spectrum enzymes that are lactose free?

Just a quick update got a reply from Now Foods after asking why the milk and sulfites aren't listed on their website. "Hello. That is older information. We'll get this over and update that. Thanks for catching it."

So it seems like they'll be changing the info on the label in the US as well.

Man.

Robb Wolf:

My gut sense on this is that the lactose content is going to be tiny like even far far far less than what you would get from a latte but here it is. It's not my potential bloat that I'm dealing with so I guess it's a little bit easy for me to say well just give it a shot. I think that probably the biggest thing that you're going to want out of any of this stuff is the Betaine hydrochloride plus pepsin papain, however they go with that.

Usually it's Betaine hydrochloride plus pepsin so I would just give that a shot and start with that and if somewhere down the road or if you have a bottle of it the Now Foods and you just want to give those a shot and see if you'll react to them then I guess you could take them back or you could give them away or save them for a zombie apocalypse when you have to eat zombie meat and really want some digestive support with that.

I would maybe start the safe simple one first and then if you want to experiment like I really really doubt that the amount of lactose that you would experience in the Now Foods Super Enzymes would be problematic but I could be wrong. Clearly I'm mega mega gluten intolerant and so maybe there's something similar going on there with the lactose although usually even people who legitimately produce no lactase at all...

**[0:40:00]**

A really really small amount of lactose like they just are processed by the gut bacteria and they don't produce enough gasses to create that

bloating and the discomfort and everything. So I don't know. It should be okay but...

[Cross-talk]

Greg Everett: Yeah. I just can't imagine that there's enough in there to cause any problem. Unless you take the entire bottle in which case you're going to have other problems.

Robb Wolf: Right.

Greg Everett: Personally I would give it a shot.

Robb Wolf: Sweet.

Greg Everett: Okay. Probiotics for babies. Rachele says I wanted to check your thoughts on probiotics for babies and if you gave you darling girl any? We have a 6 week old girl and she had to be on antibiotics in hospital for a few days when born. We did not want this, but hard to argue when doctors are pushing it and scaring us on what ifs if we didn't get her on them. We eat paleo about 80% strict and are gluten free 100% and dairy free about 90% if any of that matters.

Dairy is just some hard cheese and Greek yogurt on occasion. We do baby vitamin D drops too. Just wondering what would Robb do as always and couldn't find anything on it when I looked online. Thanks in advance and hope you are all well and enjoying spring!

Robb Wolf: Yeah you know our experience with Zoey has been a pretty good eye opener like for whatever reason the little bugger really did not latch very well. So Nicki probably 80% or 90% of the time ended up pumping and she pumped for 9 months which was a party and then Nicki started having some problems with that and then we started looking around for some alternatives and we found a goat milk protein formula that was recommended online and there's some turbinado sugar and coconut oil and a couple of other things that are in it.

So we gave that a shot and Zoey liked it and she had zero GI upset, didn't bat an eye transitioning to it. She seems to do great and this was right at the time when she started doing some solid foods so I was not super concerned about not getting enough DHA, folate and stuff like that because luckily one of the first things that she really really liked was meat so that was legit.

But one of the things that was in the formula was a powdered baby probiotic and I can't for the life of me remember what it was. It was like a Nature's Way, this stuff is refrigerated. It's specifically for kids. I'm sure it's got some sort of a dairy base to it. It seems like it did but she seem to do great on that. Knock on wood.

Every kid is different and I'm just learning that you can only ascribe so much to what you're doing with regards to the diet and how good or bad the kids are doing and then some to genetics like we've just been really lucky with Zoey in that her teething has been a bugger. She really has a lot of discomfort with her teething but she's never, knock on wood, never had GI problems, never really had colic, poops are bountiful and seemed easy with her.

So we've been really lucky with that whereas my sister in law Chrissy, she has fed herself, breast fed her little one, Riley and Riley's had a little bit of GI problems and we don't really know what the deal is. Definitely Riley's has been more reactive like if Chrissy has had some dairy in her diet or something. Nicki rarely has any dairy but if she does Zoey doesn't seem to react to it.

You see two kids that are reasonably tightly linked genetically and reasonably similar dietary approaches and one of them is working really well for one and the other one's having a bit of a problem. That's all just interesting kind of off the reservation compared to the original question but yeah we did use a little bit of probiotics.

If the kid's breastfeeding though the kid is getting probiotics from the mom all the time. You could throw some probiotics in but I think that the wee one is probably fine just doing some regular breast feeding and just full steam ahead with that.

Greg Everett: Cool. All right. This subject line could be interpreted in two different ways.

[Cross-talk]

Robb Wolf: In a variety of ways yes.

Greg Everett: Getting my swole on while nursing. Lindsay says hi Robb and Greg.

Robb Wolf: The booby fairy has arrived.

Greg Everett: I've read that nursing can perhaps counter intuitively be a good time for strength training since a woman's body is producing a lot of some kind of growth hormone for the breast milk. Some disagree, saying that other hormones produced during this time negatively impact training. Do you have any thoughts, assuming adequate sleep and nutrition — granted, a big assumption after the arrival of a baby. Thanks, and thanks for the podcast.

**[0:45:26]**

Robb Wolf: You know I did a lot of digging around on this and it's kind of funny. The primary literature on this topic or I wouldn't even call it literature but commentary on this topic is that breast feeding is like doing exercise because you burn 500 calories a day doing it. So that's kind of the main thing that I track down unlike the first trimester of pregnancy where women get a legitimate performance bump I haven't seen anything that indicates that breastfeeding is like being on performance enhancing drugs because of the change in hormones.

So I would put a negative on this. I wouldn't say that it's going to be bad to train during breastfeeding, not by any means but I don't think you're going to get any of that performance boost like what you see in early pregnancy.

Greg Everett: Yeah I guess I don't really understand the question because if you're not going to have some huge performance boost does that mean you're not going to train?

Robb Wolf: I guess sometimes people will really get after it when they get pregnant because they know that they're going to get a performance bump and they just try to ride that hormonal boost a little bit I guess. So I don't know.

Greg Everett: Okay well I would just try to get swole regardless.

Robb Wolf: Seriously. Get your pump on sisters.

Greg Everett: Yeah. Leslie says hi Robb. For the last two and a half months I've been eating a grain free, dairy free, legume free diet. I do still drink black coffee and tea and on rare occasion have a glass of red wine. I eat at least 3 meals a day which include protein, vegetable or sweet potato and healthy fat however when I snack I don't always have protein and usually stick to fruit and almonds.

I've been working out on my own regularly at the gym for at least 6 months. I take 2 spin classes a week and I also do machine weights 2 to 3 days a week. My fiancé works out at a crossfit gym where they do Olympic lifts and metcons and he recently set up a gym in the garage so I asked him if he could start training me.

Yeah good luck with that. Oh boy. If you want to actually get married probably don't have that relationship.

I told him my goal is to become stronger and he says I should not be taking spin 2 times a week if I want to become stronger and crossfit train. Is this true? Do you think I need to eliminate spin to become stronger? He thinks I need to eliminate my 45 minute spin classes and start crossfit football.

He claims he knows exactly what your response is going to be. He's very certain that you will agree with him because he "listens to enough podcasts." I'm not sure if this matters but I am lean.

Robb Wolf: I never know what I'm going to say so.

Greg Everett: I'm not working out or taking spin to lose weight. I'm 5'9 and weigh 130lbs, 32 yrs old. I've notice that over several months I have put on a little muscle weight and lost some of the little fat I did have and I know I've become more toned over time. I also want to add that I feel fantastic after my spin class. I really enjoy it but I'm willing to eliminate it if necessary. Thanks in advance and I hope to hear from you.

Robb Wolf: I guess the basic deal here is just what do you want to do and what seems like the most fun. Even if you're doing a ton of cardio you'll get stronger doing a strength program. You may not get as strong ultimately. You may not get as strong as fast because we've got competing signaling going between the strength training and the endurance work but it's not to say that you're not going to get stronger.

I think that just being really clear about what you want to do and what the goals are and everything and the fact that you say that you really like the spin class and there's probably some good socialization there and you like doing that and the connectivity and everything, I would be remiss to give up the spin class.

If you start some doing O lifts and that bug really bites you and you start doing some crossfit and that bug really bites you and you really want to go deep on that then maybe you cut down to one day a week of the spin

or maybe every other week that you drop in so you still have that connectivity and the socialization and everything.

For cross fit doing 30 to 40 minute cardio class once a week is great. Just hitting a monostructural element for a chunk of time doesn't seem like a bad idea at all. So really this should be up to you. What do you want to do. I think in your gut it should be crystal clear what the decision is here and it's just based exclusively off of what seems like a lot of fun and what do you want to do.

Greg Everett: Yeah I just went back and re read this and she said "I told him my goal is to become stronger." So yeah there's definitely a little confusion there. You like the spin stuff which is fine. If you like it you should be doing it. If you want to get stronger like Robb said you can still get stronger...

**[0:50:00]**

But rather than... so you're doing spin, you're doing machine weights and now possibly you're going to do some cross fit with your fiance. I would say that keep up with the spin if you really enjoy it. Drop the machine stuff and do some crossfit/strength training with your future hubby and I think that will kind of push you in that right direction without having to eliminate the stuff that you like doing.

And like Robb said 45 minutes two times a week - unless you're trying to break some world records it's really not going to be a problem especially if you like it.

Robb Wolf: But if you reach a point where you're really getting excited about the Olympic lifting and you want to take it to another level then that's where really assessing the spin and you might be like "Okay. I'm going to do a contest, an O lifting contest so I'm going to drop the spin for six weeks to peak for this Olympic lifting contest."

So that's where the thing could become important to need to make a decision one versus the other but right now if the goal is just simply get stronger and it's kind of nebulous what exactly that is then like Greg said if you drop the less efficient machine based stuff, do your spin, lift some weights, get pumped then you should be good.

Greg Everett: Yeah. All right. Let's wrap it up talking about butts. Paleo booty. Ear 13 & Ear 14 says... That's funny. Is it because he's the 7th listener?

Robb Wolf: The 7th listener yes.

Greg Everett: But my question is how are the ears talking.

Robb Wolf: You know if you take enough psychedelics then you can hear sights and see sounds and all kinds of stuff. Who knows?

Greg Everett: True enough. Robb & Greg, I have been following your nutritional and fitness suggestions for a few years; thanks for all the information you put out there. My background is as a competitive water polo player and swimmer. I've always had big gluts, thighs, shoulders, and a well developed V shaped body, which all make it pretty tough to find fitting clothes. I am able to find the occasional shirt that fits my body shape, but I'm completely stumped when it comes to pants.

Just don't wear pants.

Robb Wolf: Exactly.

Greg Everett: Here's what happens. If a pair of pants fits my waist, they end up being extremely tight through the upper legs and groin. Any pants that fit comfortably through the upper legs are extremely loose to the waist and/or in the lower leg. I've gone to premium stores like Nordstroms, and various jean company outlets, and none of the products they offer seem to fit me.

The salesmen literally don't know where to start. Having the waist taken in a few inches makes them fit, but they look really funny because of how it changes the wear pattern and pulls the pockets relatively more towards the side of the pants by removing fabric from the side seams.

I've lost a bunch of weight and improved body comp following your advice... but it comes at the cost of not looking so great in a pair of jeans. Since I injured my knee last fall and was only able to do RDLs and stiff-legged deadlifts for 6 months, things got worse. What's a single guy to do? Any fashion advice or other ideas are appreciated.

Regards, your 7th listener.

I feel your pain.

Robb Wolf: Yeah and I learned this one off a NPR like a fashion show or something like that where they had this very very entertaining gay fashion dude on there and basically his gig was for athletic built and it sounds like you've tried this but maybe you just need a better seamstress or tailor but you



find the fabric that you like, you find the thing that's going to fit the part of you that is non negotiable which is basically your legs and butt to some degree and then you need to take in the waist and maybe utilize some belts.

If my ass wasn't as big as what it is then my pants would literally fall right to my knees. Once I shimmied off my quads it'd be gone and so I usually have to wear a belt with my jeans, kind of similar problem but I have taken a few nicer pairs of pants. I've even done this with my jeans but I'll take a few nicer dress pants and I would get the waist taken in and they end up looking pretty solid and basically I just have to buy them for my legs and butt and make sure that that works and typically if it works there then literally it's...

Say if I'm 28 to 30 waist but if these things fit me in the legs and butt then it's literally like a 36 to 38 waist that I'm buying and so there's a pretty good chunk of fabric like you said that needs to be brought in off of that but the folks that I've gone to have been pretty good and they seem to look well. My wife still sleeps with me and everything. So it can't be too horrible.

That's about all I've got. Maybe stepping up to a better seamstress or tailor.

Greg Everett: You just need to get pleated jeans.

**[0:55:00]**

Robb Wolf: Oh.

Greg Everett: And a braided leather belt.

Robb Wolf: I'm just waiting for those to come back.

Greg Everett: With a polished silver....like AC Slater. Yeah I had the same problem. I can't find jeans to save my life and it drives me crazy because part of the problem now is that clothes are made for either really fat people or really skinny like emo people and so like there's nothing in between for athletically shaped people especially in the large legs and butt department.

So yeah like you said you either end up with these giant freaking baggy jeans and you look like a houser or something or you end up with jeans

that you can't even get pass your quads and so the best that I found is... oh god what's the company? Lucky? I think Lucky brand...

Robb Wolf: Yeah that's what I have.

Greg Everett: ...have been decent but it's still hard because all these jean companies now make... It used to be Levi's that was 501s and that was it. Now there's like every single model number between 0 and a thousand and then each one has either loose fit or baggy fit or boot cut or like all these different names. It's fucking impossible to find out what's going on and none of them fit anyway.

My wife finally went to Nordstrom one day where she's like "I'm just going to get you some jeans and we'll get them tailored." And so of course jeans are like \$8000 so I tried to talk her out of it. She did it anyway. So out of 6 pairs there were two that even had any potential to work and so I got those tailored and they still don't really fit right. I still have to wear a belt and they're still not quite big enough to fit my ass but it's about as good as it's going to get.

So I've kind of resigned myself to just not really enjoying wearing jeans which fortunately I work for myself and I wear just like Adidas shorts and t shirts everyday all day long. So it's a rare occasion. Like I was joking with my friend Mike he's like "Man you either wear gym clothes or court clothes." And I said "Yes. It's pretty true."

I can get a suit tailored perfectly fine. It works no problem and then obviously the Adidas shorts are pretty easy to work with but anything in between is tricky. So you need to change... you just need to look for girls who have the same problem. Look for other athletic girls instead of skinny model kind of girls and then you can commiserate and you have that connection and then you could build a relationship on that.

See? You just got to change your...

[Cross-talk]

Robb Wolf: Nikki was a volleyball and had clods for days. So yeah.

Greg Everett: Perfect. All right is that it?

Robb Wolf: Is that it?

Greg Everett: That is it.

Robb Wolf: Yeah I've got to be jujitsu in 30 minutes and I've got about a 28 minute drive ahead of me. So anything else Greg? Anything folks can't live without for a wee bit longer?

Greg Everett: Nope. Go get your jits on.

Robb Wolf: All right man. Thank you. Thanks everybody for listening and we'll talk to y'all soon.

Greg Everett: All right see you.

Robb Wolf: Later.

**[0:58:26] End of Audio**