

## The Paleo Solution Podcast - Episode114

Robb Wolf: Hey folks! Robb Wolf here. Episode 114 of the Paleo Solution Podcast. Greg Everett large and in charge and Greg do you have a déjà vu kind of feel to this. I mean more so than normal?

Greg Everett: These questions do look remarkably familiar

Robb Wolf: This podcast - this particular one - it should have been 113 but the podcast from hell apparently was 114 because my computer kept shutting down and then when Greg was trying to edit out all of my complete goofballery he ended up deleting pretty much the whole thing.

So we're back again folks and our answers - these maybe a 20 minute podcast.

[Laughter]

Greg Everett: Just trust us that the original one was really good.

Robb Wolf: Yeah. It was good other than -

[Cross-talk]

Greg Everett: The parts that actually got recorded at least. The technical parts kind of blew.

Robb Wolf: Greg anything new you've got a sold out seminar rolling up. What else is happening?

Greg Everett: We have two sold out seminars. One here and one in Fairfield, Connecticut so seriously guys when you call and ask if the seminar's gonna sell out because you want to wait til the last minute believe us when we tell you it is going to sell out and sign up for it cuz you can't call us a week before and beg us to let you in cuz we already did that to too many people.

Robb Wolf: Okay.

Greg Everett: That's it.

Robb Wolf: No super you basically.

[Laughter]

Greg Everett: There's only so many people we can accommodate and actually give good coaching to.

Robb Wolf: I don't know that I agree with that man. You and I and Ruth who we're gonna have on next week - we were at the 162 person sorta palooza there in Santa Cruz.

Greg Everett: The Crossfit Warehouse.

Robb Wolf: Yeah the Crossfit Warehouse - I think one of the last of the really really big surge.

Greg Everett: I think that was the last - I think it was the one.

Robb Wolf: Yeah. It might've been the capper but that was 162 people and there was the great idea of it's people started showing poor form and failing that you don't count the repetition.

Greg Everett: Well yeah.

[Cross-talk]

Robb Wolf: Which I thought was genius because if the person's already augering into a wall and potentially gonna have some sort of systemic meltdown and shit their pants then for sure don't call them. Don't count the reps. So they do twice as many of them.

Greg Everett: I definitely didn't see two dozen people running out the dorm and vomiting their spleens out everywhere.

Robb Wolf: No. That definitely didn't happen.

So anyway I say over book that thing like crazy.

Greg Everett: Actually the most fascinating injury I remember from that particular cert is a dog induced ACL tear.

Robb Wolf: I remember that. I totally remember that.

Greg Everett: So when you're at a high class certification and there are feral dogs just running around the place unchecked stand with your knees bent.

[Laughter]

Be ready at all times.

Robb Wolf: You don't know where the fall's going to come from. So we've completely devolved into something - I don't know probably standard operating procedures but -

Greg Everett: We should probably not repeat podcast very often.

Robb Wolf: No. This is even more punchy than usual.

[Laughter]

We'll go right into seborrheic dermatitis.

Greg Everett: John says "Hey Rob and Greg and greetings from the Nordics. Many thanks for your great work educating the masses in ever so entertaining way." You know I laugh the first time I read that but now I'm laughing even more.

Robb Wolf: This is good stuff the ESL plus northern European flair is good stuff.

Greg Everett: I just meant the fact that we just spent 5 minutes talking about things that probably aren't that funny to anybody except us.

[Laughter]

Robb Wolf: - to people that were at that gig.

Greg Everett: Yeah seriously. Oh. I remember who was there. I helped coach him and then embarrass him in a work out in front of everybody. We don't even name names.

Robb Wolf: Don't you still have video on that?

Greg Everett: I'm sure it's somewhere. Pero Jay is the one who gave it to me.

Robb Wolf: Oh that's right. Okay.

Greg Everett: It's just funny too because no one had any idea who he was at the time so it's kind of fun looking back in history.

Robb Wolf: Again the book needs to be a multimedia affair.

Greg Everett: Oh definitely.

Robb Wolf: Like when we do the tell all deal on the cross fit scene it's got to be multimedia. We've got to have embedded video and interviews and the whole deal. It can't be just a simple print gig because cross fit doesn't really translate so well when we're talking just print.

Greg Everett: That's right.

Robb Wolf: But again I digress.

Greg Everett: We'll have to do something pretty jiggy.

Robb Wolf: We'll do something fun yeah.

Greg Everett: John would be very interested in hearing your views on seborrheic dermatitis. This subject has been touched upon in previous podcasts but I am probably a bunch of other people with similar conditions would be grateful if you would dedicate some of your brain power fully to the topic.

I've had dandruff and/or seborrheic dermatitis on my scalp since the age of 8 to 10. I'm today 27 and developed what I believe is seborrheic dermatitis on my face over the last 2 to 3 years. Eliminating gluten did not improve the symptoms at all but I noticed an improvement if completely staying away from sugar.

I found some articles linking probiotics to reducing dandruff see links below and I was wondering if you have any additional suggestions on how to deal with this.

At the moment I'm using antifungal dandruff shampoo on my face with pretty good results but would like to eliminate the symptoms completely. I'm a 27 year old male following a Paleo plus butter diet pretty strictly, perhaps an ice cream once or twice a month otherwise feeling great.

Kind regards and many thanks for your help guys.

Robb Wolf: So hopefully I make up the same answer on this than I made up the first time although never heard it.

Greg Everett: Doesn't matter. No one's gonna know.

Robb Wolf: My gut sense on this with this dermatitis and psoriasis and what not - we definitely see some kind of auto immune elements to it. We definitely see some elevated growth factor from insulin resistance. Those are really common background causative elements to all kinds of different dermatological conditions.

But this guy seems pretty dialed and the only other thing that I could think of like I like the probiotic recommendation. We definitely know that the gut if there's any type of damage to the gut that that could even take a good diet and still cause some inflammation for us - that next layer of kind of dealing with the inflammation that I would really look at would probably be vitamin D status.

The fact the he is in the great north of the beyond it wouldn't be surprising to me at all if his vitamin D status was low. We did this thing twice and I had an opportunity to look up the European units on this and I failed to do it.

[Laughter]

[Cross-talk]

Greg Everett: Well I didn't tell you we were going to do it twice.

Robb Wolf: Well we found out last night so. You're typically above 50 nanograms per deciliter in the US terms and so for folks that actually live in civilized locales that use international units you guys can do the conversion and hopefully your Mars rover doesn't crash into the planet cuz you forgot to do an English to metric conversion or something like that.

Greg Everett: That would never happen.

Robb Wolf: That would never happen. That's the place that I would look with this. Maybe a little bit additional fish oil but I'm suspecting that the food that you're eating is probably providing enough omega 3.

My gut sense on this is probably inadequate vitamin D and the fact that it started when you were 8 or 9 that's probably when you started doing more intensive school. You probably weren't outside as much.

You start growing and getting a little bigger, it starts getting more difficult for the amount of vitamin D that you're getting dietarily to really add up to all of it that you need.

So that would be my pitch cross to plate on that.

Greg Everett: Excellent and just to throw in the Swedish trivia from last time - Dolph Lundgren.

Robb Wolf: Oh that's right.

Greg Everett: For those of you who don't know who Dolph Lundgren is you haven't watching enough Rocky movies. He played the Russian -

Robb Wolf: Rocky 4.

Greg Everett: Yeah antagonist in Rocky 4 that Rocky of course beats and unites the Russia and the US during the Cold War, takes care of the problem but anyway he went to MIT for chemical engineering.

So pretty impressive. I heard that's a good school.

Robb Wolf: I've heard it is.

Greg Everett: It's no chico state, must be real but it does okay.

Robb Wolf: I always like it when I'm hanging out with Matt Lelonde or even Welbourn. These guys have gone to Berkley and Harvard and we get like a Dan party from Stanford and stuff like that.

It's like "Yeah I think I finished Chico. They gave me a degree. I don't know if it was just to encourage me to leave or what."

Greg Everett: All right. Well my whole family went to Stanford and my dad went to MIT and Stanford so I'm just the asshole who went to Chico State.

Robb Wolf: See you have potential.

Greg Everett: For an English student of all thing.

Robb Wolf: You have potential at least.

Greg Everett: I had potential and I completely threw it all away and I decided to do this podcast instead.

Robb Wolf: This is Skidrow for where you're getting that.

[Laughter]

Greg Everett: It's cool cuz I get to read this next question which doesn't make Robb and I uncomfortable at all.

Hey there Robb and Mark just kidding Greg (winking smiley face). Now that I've got your attention I'd like to stroke your egos a bit and say what a huge fan I am of you both.

[Laughter]

I've got such a huge man crush on you guys that if I could combine you both into a single person preferably a woman - I like that clarification there - I'd actually contemplate leaving my wife who I might add is ridiculously hot.

That being said if I had the ability to combine two people I'm not sure what would stop me from adding my wife into the mix. You know. Theoretically speaking.

Anyway enough homoerotic subtext let's get down to business.

[Laughter]

Jeez.

Robb Wolf: This is one of the things where I just - it's funny but I just feel slightly violated; just a little bit not a lot. Just a little bit.

Greg Everett: Oh god. You just got to learn how to take a complement Robb.

Robb Wolf: That's true.

Greg Everett: That's true.

Robb Wolf: But that's all I want to take. I'm good from there.

Greg Everett: I've been living in Japan for about a decade but only started Paleo and cross fit recently. After finishing the proverbial 30 day trial of Paleo that is I felt absolutely and quite literally fudgetastic and was thus immediately sold on the whole deal.

However leaving with a family of Japanese rice farmers I often find myself being offered and partaking a no holds barred white rice debauchery that surrounds me.

Thanks to your podcast I realized many Paleo peeps are incorporating carb rich food like sweet potato and white rice after working out to replenish glucose and glycogen levels.

So my first question bear with me gents there's only two is this assuming I'm only doing three work outs a week seasonally sporadic but sometimes quite labor intensive farming along with the post perennial bog walk how much rice munching can I get away with and is it better to eat carbs in the morning than at night?

Body stats. I'm 6'3", 210 with some minor gut fat which will no doubt soon be all steel. Mark my words. Age 35. Blood type A which I mention here merely as a joke.

I don't know why but the Japanese seem to think everything boils down to blood type and how many siblings you have. Seriously but I digress.

[Laughter]

Robb Wolf: Didn't we talk about their affinity for David Hasselhoff in the first thing also?

Greg Everett: I think so. Yeah.

[Laughter]

My next question has to do with the difference I spotted between you and Cordain and in his book The Paleo Diet Loren Cordain basically recommends avoiding all salt like it's the plague or something. Over in your podcast you recommended supplementing your salt to various people for various reasons.

I'm particularly curious about this matter because here in Japan we consume John Welbourn size portions of salt and it's crack headed soy sauce on a daily basis.

Thus my second and final question. Where is one to draw the line with sodium? What is too much and how would one know? Is soy sauce going to asplode my heart? No. That was not a typo. Give me stomach cancer, causes stroke or otherwise fudge the sheesh out of my health.

You have to excuse my language. I'm living in a country where it's perfectly acceptable to cuss in public assuming you do it in English. Whilst

I'm at it and he very considerably capitalized whilst so I didn't make the egregious error of mispronouncing it - whilst.

Robb Wolf: Of whilsting.

Greg Everett: Horribly offending our British listeners. Actually I should probably mention that I have severe rhinitis which seems to be doing a lot better on the Paleo diet. Although I'm not cured yet by any means I've been able to reduce my medications by over 50%.

I really appreciate all you guys do. Let me know if you want to come in Japan and open a gym. I need an exit strategy from this rice farming gig.

Yours Trully,

Salty Balls

Robb Wolf: We need an option after the podcast.

[Cross-talk]

At some point so -

Greg Everett: I think I might get into rice farming.

Robb Wolf: That sounds good although I still lean more towards the coconut farming.

Greg Everett: Speaking of Ruby Ridge have you seen that movie Red State yet?

Robb Wolf: No.

Greg Everett: Oh my god. You gotta watch that.

Robb Wolf: Is it crazy?

Greg Everett: It's fantastic. It's not at all what I expected. It's Kevin Smith. The guy who did Clerks so not at all the kind of movie - it's not Mall Rats for sure.

[Laughter]

But it was pretty incredible and it's John Goodman in who I love cuz he was Dan over Rosan.

Robb Wolf: And then the other prime appearances.

Greg Everett: Awesome.

Robb Wolf: So we're somewhat in the same spot that we were the last time we - discussion.

[Laughter]

Greg Everett: You mean not talking at all about the topic on hand?

Robb Wolf: Yeah not talking a bit. I'm almost not even sure where to jump in. So originally we had questions about how much carbs and is rice okay. It's still that.

Greg Everett: Basically it's how much rice can you get away with and is it better to eat them in the morning than at night. That's question one.

Robb Wolf: Yeah and if I recall from last time part of my point that I knead with that is this green deal is kind of a subjective gig. Some people tolerate different stuff differently. There are conditions that are very very similar to celiac that are caused by rice.

So basically the proline rich protein in rice causes the same type of enteropathy in the gut. I don't think it's nearly as prevalent. I don't think it's as common but it does happen and I just consistently see little kids when their parents start feeding them rice relative to eating Paleo type stuff the little kid start ending up with GI problems.

So how much can you eat? I don't know. I probably end up getting rice a couple of times a month. We'll do some sushi. We'll bring a little bit of gluten free soy sauce with us and I don't feel it really causes me all that much problem.

The sodium was the other thing on here and typically most people who have hypertension - the main issue here is really actually the chloride ion. Sodium chloride is what makes up table salt and sea salt and the main thing in soy sauce and all that.

The chloride ion actually ends up more as the sensitive issue more so than the sodium ion but the spectrum that we see here is typically if people start eating lower carb, if they start eating Paleo inflammation goes down, insulin goes down and they tend to have a diuretic process.

They excrete sodium. It pulls water out. Their blood pressure goes down. Edema goes down. Some people though they are very very sensitive to salt and even though they're eating a low carb, you're eating Paleo they'll notice that if they consume salt their blood pressure goes up.

So the long and short of that is that if you notice that you've got some blood pressure regulation issues and you're otherwise eating well but you're taking in a ton of salt then that would be something that I would definitely minimize.

Cordain talked about this largely from the context of the acid base balance but I just don't - that one just talked about this. We've talked about it. The science on that acid base deal isn't nearly as robust as what we'd like.

I think you can build a very solid case for acid base issues and net acid load being a problem when people are metabolically broken and they start heading into a metabolic acidosis. I think that that's an absolute problem.

But looking at this from a dietary causative factor with regards to sodium or protein and stuff like that I think that that's barking up the wrong tree.

Greg Everett: And what about salt intake and salt levels for someone who is super stressed, adrenal glands are blown out.

Robb Wolf: Good point on that which is some of what we've talked about. You've got a tendency for folks to excrete sodium and retain potassium and you can have some problems with that in the adrenal fatigue state and so that's where a lot of people - they'll tend to just crave salt.

They seem to feel better like they tend to have a little more energy and pop when they put a little salt in. People have some fairly significant adrenal fatigue say like they ate a piece of fruit or they do their nice Paleo meal and they eat a bunch of veggies or something like that they may get really wonked out and lethargic afterwards and they say it's actually because of the potassium issue.

They're hyponeutrimic. They're a little low on the sodium side of that equation. But then that begs the question how did you find yourself in this adrenal fatigue state. I think that we've got a lot of different factors going into that.

Overtraining, overtraining with too little carbs, trying to both lean out and have high level performance at the same time and you're not a beginner - there's a bunch of stuff with that.

I just had a Twitter back and forth with this gal who - it's kind of weird. Folks will say just a couple of words and you just zero in on it and you know that something squirly is going on and she was trying to get ready for an RTC certification while also trying to loose body fat.

I was like "You need to focus on one thing." And this is that deal that we talked about again and again. Pick a goal and really right now and the woman had a profile photo and she's not over weight. She's pretty lean, pretty jacked already.

So I think it was more narcissistic, aesthetic kind of deal than anything else but this is. I think one of these things that is driving people into the overtraining realm is that they're not really figuring out how to prioritize what to do like if you want to be a Cross Fit games competitor then there are certain stuff you need to do with that and eating real low carb all the time is not one of them.

Greg Everett: Indeed.

Robb Wolf: Good catch on that.

Greg Everett: All right. Susan says "Hi Robb and Greg. My boyfriend recently decided to start eating Paleo even though I was a vegan. In the interest of keeping meal time simple I'm keeping on a goal as well. I'm still not eating meat although I have added in eggs and fish.

As much as I hate to admit it I'm feeling terrific and I've lost 10 lbs. I'm not strictly following the rules. I'm still eating tampae and occasionally tofu. I've gotten rid of all grains but hope eventually I could add back in - hold on.

[Laughter]

I'm scheduled to have a fibroid embolization at the end of the year." I don't know why I can never read that word the first time. "I'm wondering if you think if it's possible that a Paleo approach could shrink the fibroids.

They're quite painful but I would be willing to hold off on the procedure if it was a possibility. I'm guessing I would have to follow the autoimmune protocol.

Here are some background: 47 years old, endometriosis, hypothyroid, renaulds and of course the fibroids. In the past I have struggled with anxiety although it's much improved since the change in diet. 5'8", 150 lbs. I'm taking primrose oil, omega 3 and vitamin D supplements.

I would appreciate hearing your thoughts. Many thanks for all you do. I love the podcast."

Robb Wolf: So we had a pretty good food on this one. It's just ironic to me that somebody who's got some serious health problems, they tweak their course, they start feeling better and then they want to eventually get to a spot where you can reintroduce these stuff that was probably getting you there in the first place.

I'm not sure what the disconnect is with this. It's like you go solicit a hooker, you go to jail that just tends to happen again and again and again.

Greg Everett: Can't wait for you to get out, you get another hooker.

Robb Wolf: Yeah. So I'm not sure what the idea here is with the quinoa and amaranth you know you've... Obviously it's great. Give it a shot and introduce it and see how you will feel and perform. There's nothing speaks more strongly than doing that but it's still kind of ironic to me.

To the actual question of the fibroid we know for sure that things like elevated insulin levels stemming largely from systemic inflammation, bad sleep, low vitamin D levels all those standard stuff that's an element of this.

Auto immune elements are also an underpinning of this and it starts getting all woven together because of your autoimmune then you tend to have systemic inflammation, the systemic inflammation tends to push towards this insulin resistant state and then you end up not metabolizing carbohydrates appropriately.

You get some liver dysfunction, elevated growth factors are a consequence of the dysregulated liver function. So there are a lot of different ways to this stuff can pop up. I think it's all kind of happening at the same time.

Matt Lalonde just shot me a number of papers on a better understanding of the autoimmune elements of fibroids. I've always been pretty aware of

the hyperinsulinemic underpinnings and suspected that there was some autoimmune stuff but Matt just shot me a bunch of 6 or 8 papers on that.

So I would still look at this as kind of a multidimensional thing though: vitamin D levels, activity, sleep, insulin sensitivity, autoimmune issues and we've definitely had a ton of people benefit from standard autoimmune Paleo type protocol.

Some people do okay on less of an intervention but I think that that autoimmune spot is a good place to jump in, get real healthy and then you can see where you can tinker from there but these are some pretty serious stuff.

You're 47 years old if you get healthy I would not ride that pony til the legs fall off of it but that's just me.

Greg Everett: I'm gonna repeat what I said the first time we recorded this which is you have a perfect opportunity right now to get on board. You have your boyfriend doing it also. You already know you feel good. You lost some weight so why not just keep going instead of sitting there, tapping the table, waiting until you can get done and go back to what you were doing before which caused or at least exacerbated these problems in the first place.

Robb Wolf: I'm gonna give pretty good odds on probably recurring the problem so yeah.

Greg Everett: Ken says "My boss works out is a slave to chronic cardio and a personal trainer however she hasn't been losing any weight. I tell her that she needs to give Paleo a try and she refuses stating that she needs to eat carbs because she can't eat a lot of protein and she only has one good kidney.

I think that is a BS answer attributed to years of bad advice from conventional wisdom. Is there any truth to this and if so where can I find literature to support the fact she's been misinformed and I can get her on the right path.

On a side note I've been able to give up tobacco but not ice cream. What the fudge?

[Laughter]

Robb Wolf: So I think we both agreed last time that that just indicates that ice cream is better than tobacco.

Greg Everett: Yes.

Robb Wolf: Again we're having a nostalgia fest here because Greg and I were just at this conversation a couple of days ago but there's this perception out there that protein causes kidney damage which is absolutely false.

We've talked about a number of podcast there's a number of great blogs from different folks who had tackled this. I've tackled this. We talked about the intervention. What we had - they guy was basically 30 years old, type 2 diabetic and came into the gym with 10 or 15% of renal function.

He was a mess and we had aiming cue ball put him on a low protein because he was experiencing kidney failure basically. When the kidneys are damaged then we're talking a different story but the protein intake can accelerate further the process of renal failure.

But it's a different story then eating protein under a normal healthy parameter. So we had this guy with real low kidney function. His doctor wanted to put him on dialysis. He asked the doctor if he had a good enough window of time to try a dietary intervention.

The doctor said yeah. We'll give it a month. So Aimee cue ball put together like a low protein, low carb and higher fat ketogenic diet and within a month the guy ended having 85 or 90% of normal renal function or something like that.

Greg Everett: Holy smokes.

Robb Wolf: Shocking - the difference. So it went from basically needing dialysis to having almost normal renal function and intervention -

Greg Everett: 85 to 90% is probably average for your normal college town or so. So that's pretty good.

Robb Wolf: Totally and the dude lost a bunch of weight, the type 2 diabetes ended up obviously all the signs and symptoms of that improving dramatically in everything.

So if you were going to make an argument for a way to eat for somebody that's had a nephrectomy and they've only got one kidney I would be of the opinion maybe lowish protein, lowish carb, ketogenic diet.

You've mentioned right at the outset that this gal was a chronic cardio person. Elevated cortisol levels are gonna elevate blood glucose levels and that's going to be problematic on the kidney.

If you do want to damage the kidney having chronically elevated blood glucose levels that will absolutely do it. We don't have a mechanism of causation of high protein diet causing kidney damage in healthy individuals.

We absolutely do have mechanism of causation in the advanced glycation in products damaging the glomureli and the little delicate diffusion tubes that make up our kidneys.

That stuff definitely gets damaged due to high blood glucose levels and high blood pressure for that matter. Anything diastolic over 80 is causing some low grade kidney damage. So that's something that I would definitely get looked at on both sides.

But this gal I think is definitely misinformed on this but if you wanted to do an intervention and you had one kidney or you had some kidney damage personally I would do something that was lowish protein, low carb ketogenic diet just because we're really hedging our bets all the way across with that.

But that said I think that if you're otherwise eating a low inflammation diet I don't know that a normal protein intake is really gonna be at all that damaging for somebody even with one kidney but it'd be pretty easy to track.

Greg Everett:

Okay. Let's see. We figured this out the first time so let's see if we could do it again.

[Laughter]

Amy says "Thanks for the great podcast. I would be interested if you have some thoughts concerning the fact that many studies have found correlation between high protein intake and lower testosterone and the ratio of higher protein and lower carb intake and low testosterone." And then he links to studies here.

“Thanks in advance.”

Robb Wolf: So what was the long and short of this one? We ended up just there’s still this reality that in the end of the day if you know people who consume more protein tend to be more lean and more muscular.

Greg Everett: Yeah I think we just came to the consensus that you can find studies showing pretty much anything with the right situation but the anecdotal evidence pretty consistently points to the fact that eating more protein to a certain point helps you to be muscular.

Robb Wolf: If you look at the classic body building diet it’s high protein and high carb and so you’ve got lots of stuff straight there. You’ve got enough carbohydrate that you’re gonna volumize cells and do that all that stuff.

You’re gonna have plenty of fuel to glycolitically demanding training. You’re gonna suppress cortisol production. So there’s probably smart stuff within that. I still think there are some argument for some cyclically carbo approaches and everything.

But there’s a growing number of people in the fitness competitor and body building scene that are just taking the old micronutrient ratios of pretty high protein, pretty high carb, reasonably low fat, just good quality fats and just swapping out the brown rice, whole wheat pasta and everything and just eating yam and sweet potatoes and stuff like that and they seem to do pretty well on that.

It’s easier for them to run leaner. They have lower inflammation. They tend to retain less water and so again I think that this is something that for me I definitely snuck up on this from a perspective at looking at all of this mainly from a reversing pathology standpoint where so many people have elevated blood glucose levels, they have hyperinsulinemia, some sort of low carb intervention seems to really really help with that.

Then depending on what type of glycolitic damage or damage to the pancreas they have or even brain signaling like leptin and cholella level and stuff like that they may or may not be able to handle significant amounts of carbs.

But then when we start going around on the other side of the equation really looking at the performance side of stuff there’s a lot of latitude there like if it’s a more strength oriented individual then something like an anabolic diet or a metabolic diet like cyclical carb seems to work pretty damn well for people.

But they're not tapping into the glycolytic pathway everyday. Again like the crowd that we are kind of delving deep in is cross fit as a crowd where people are always heading down this road of glycogen demanding activities and if you don't have enough glycogen then you're going to release cortisol and start metabolizing protein.

I think you get into a pattern where that pathway gets highly up regulated and it's easy to go down that road but this is where it's not the one size fits all and really got to be clear on about the goals and all that.

Greg Everett: Yep. Goals.

[Laughter]

Okay. Let's see here. Josh says:

Robb and Greg the knowledge and insights you both drop on this podcast and your respective websites is greatly appreciated. Please keep it coming. I'll keep this brief.

Lately I've been coming across the concept of measuring heart rate variability in order to assess sympathetic versus parasympathetic dominance and therefore an athlete's readiness to train/compete.

Now that technology is relatively affordable it appears to be a legitimate way to keep an eye on one's stress levels and therefore more effectively prescribe training loads.

Have either of you come across this or looked into this much. Any thoughts on the technology and how you may go out implementing this in the training of an athlete? I do tend to geek out of this stuff.

Thanks in advance.

Robb Wolf: So we actually did a pretty good job on this on the first time.

[Laughter]

Greg Everett: I know it's -

Robb Wolf: I'm bummed that that one got lost. The rest of it was a cluster because my computer kept freezing up and everything but we actually did a pretty nice -

You were left off on this one last time didn't you?

Greg Everett: I think I did and I think I probably got a little more upset than I should have.

Robb Wolf: **[0:33:53] [Phonetic]**

Greg Everett: I'll try being more diplomatic this go around.

Robb Wolf: Here we go.

Greg Everett: Yes. Both of us have come across this and looked into it somewhat and I think I recall saying that the whole resting heart rate thing has been very popular like in the endurance community for probably decades.

It's not anything new by any means. It sounds like there's some kind of new tracking technology out there for the iPhone or something like that but I'm not familiar with. Apparently you can track everything with the iPhone now. I just make phone calls and text people with it.

Robb Wolf: Silly you. It's almost worthless as a phone.

Greg Everett: Seriously it is freaking worthless as a phone but I hate talking on the phone anyway.

So I think there's certainly some merit to monitoring your resting heart rate in the mornings and I think that there's certainly some degree of correlation between an elevated resting heart rate and elevated stress levels.

But I think really what it came down to is the fact that having that information really doesn't prepare you much better to adjust training in a real practical sense.

For example if you have your training plan, you have a 12 week cycle whatever it is. You wake up week 3 and your heart rate is through the roof what do you do?

Do you say "Okay my heart rate is elevated 5% more than normal so that means I need to reduce my training volume by 15%, reduce my training intensity by 20%." How do you determine that stuff?

I think day to day coming into the gym as a coach or an athlete you can really see an athlete's preparedness on that given day or that given week based on how they're moving, how they're warming up.

I think I made the point before that to a large extent you can see how they're feeling before they even start doing much of anything. When they're putting their shoes on you can see if they're dragging. You can see how enthusiastic they are to train whether or not they're talking with the other athletes or they're sitting there in the corner moping.

So there's a lot of things like that that are gonna give you I think better feedback, a much broader feedback than the heart rate itself. That being said I think we also talked about the fact that there are certainly days when someone's gonna come in the door looking like crap, feeling terrible, warming up real slowly, the bar itself feels like a million pounds and then go on to have one of the best training days they've had in three months.

So the point to that is sometimes all those predictors are not enough to really genuinely tell you what an athlete is capable of on that given day and so the art of coaching and training as an athlete really comes I think in adjusting on the fly as needed as appropriate.

Not saying "Okay when I woke up this morning my hear rate was elevated so I'm gonna take the day off or I needed to cut my work way way down." I think that's potentially robbing you of a lot of really effective training.

Now at the same time you need to know when you come in and it's going really poorly that you can and need to be flexible and not say "Okay well I wrote this perfect 12 week plan."

But by week 4 if you're augering into the mountainside clearly you didn't plan that well and you do need to adjust. So I'm pretty sure that's what I said the first time.

Robb Wolf:

Yeah and I think that that stuff is legit. This is coming from the 8 weeks out and I like of all of that stuff. I think is it Joel Davison. He's the guy that did that. Really smart dude, super talented. I really like his stuff.

All of that said though I think that folks can get a little bit geeked out on the QS, the quantified self stuff and you can just be awashed in information but it's not really doing you any benefit and this is where if you keep it real simple.

So if you get some sort of correlation here where the heart rate starts going up and you would plan on doing a metabolic section that day I think that where he's coming from it's more anime training and jits and stuff like that so we're working multiple metabolic pathways versus with lifting we're pretty much ATP, Claritin, phosphate.

Greg Everett: Isn't a metabolic pathway.

[Laughter]

Robb Wolf: Totally having a cigarette is more metabolic.

I think what they're trying to do is find some early indicators of when you start pushing too far into the over reaching, over training thing and even within that if you're a really good coach you need to keep that in some context of where people are in their training cycle like you have a period of over reaching, over training pull them back.

You get a super compensation hopefully that coordinates somewhere around that they compete and they completely kick ass or at least they show up as physically and mentally prepared as they possibly can be but I'm not as much in say like the four hour body Tim Farris uber QS everything.

I find that a lot of people just go a little bit nuts. This is some of my aversion to the zone like I really tried implementing the zone. That's what I was told to do. I was told that it was the bee's knees and one I found that the macronutrient prescription was a mile off of what people actually needed for athletic performance.

Then the other side of that was that the uber scrutinization of weighing and measuring your food I never ever had people become bulimic or anorexic if I say just eat Paleo and you lay out what it is and I actually had people comment that it ends up cooling those fires.

People coming out of the body building figure community they're so used to weighing and measuring their food that when they don't have to do it's for the first time in their life they're actually in a good spot with their food.

I think that there's a little bit of truth of that with your training also. You do need to keep records unless you just want to have a random access training deal and that's totally fine. You just make it fun and Art Devany - esk and you just show up in the gym and do whatever.

There's certainly some argument for that and just keeping it more play based and really structured but if you're really trying to get somewhere you need some structure. You need to keep some records but I think there's a return on investment story where you start to quantifying too many things, tracking too many variables and you become a complete neurotic nutcase.

If you're an Olympic athlete or professional athlete then maybe that's what you need to do to be there. That's kind of a one story but for so many people I think they're spending a bunch of time on QS when they could actually be out and interacting with human beings and living on the planet and stuff like that instead of quantifying a bunch of stuff that I don't know is really all that important at the end of the day.

Greg Everett:

Yeah. Josh I would say you say you like geeking out on this stuff. I would say knock your self out if you're curious. Start tracking your resting heart rate but the thing is you really need to keep really detailed notes about how you're feeling that day, how your training went that day, how much water you drink, when you drink that water, what you ate, when you ate, whether or not you got into a fight with your girlfriend that morning.

All that stuff because if you don't have that information you're gonna look back in two months to try to figure out a pattern and it's just gonna be a bunch of nonsense and so you run that risk of making correlations that really aren't there.

For example you might attribute that elevated heart rate to poor training plan when really it could have been that you're stressed out because of work or whatever else that ended up really not having an effect on your training in a practical sense.

So if you're gonna do it you really need to do it up.

Robb Wolf:

Oh and you know when we did this before I think I made the point - we both did that it's just rare that I see people who have their sleep, their food, their training prehab and rehab stuff so dialed in a basic level that a bunch of QS stuff really makes sense.

Inevitably the person is still working late at night and stuff like that then there's no point in tracking things cuz I know that the layer of the biggest return on investment that we're going to get is getting your sleep dialed in.

For ages we went back and forth with Glen on that where he would try to be getting ready for an MMA fight and then also writing books and you'd be up until 4 in the morning and then theoretically in the gym at 7 to train and the wheels fell off the wagon a couple of times.

So when you face situations like that it's rare that I even see people have all of those really obvious pieces dialed in to a degree where it's like "Okay. We can start tracking more information and try to eek a little bit more performance out of this stuff."

But it's a very long read but if you read Zen and the Art of Motorcycle Maintenance and see how a dude lost his mind from being a researcher and basically figuring out that he answered one problem and it creates two more questions and to some degree that's the quantification deal.

That's the point that Greg was making. If you start tracking heart rate then you need to track everything else so that you know what those little minute variables are and how they might be influencing things and it starts getting kind of nutso.

So really tackle the big macro picture first. Make sure your sleep, your food, GI integrity is dealt with, vitamin D levels are good. You've got some wherewithal and a periodized program of modulating volume and intensity - those things have huge return on investment and are not hugely neurotic inducing.

And I guess just tracking waking heart rate is probably a good thing to do from there.

Greg Everett:

Yes.

Robb Wolf:

Is that it? Did we survive 114?

Greg Everett:

We did.

Robb Wolf:

That should be 228.

Greg Everett:

Did you want to talk about the whole Alzheimer's, MCT, coconut oil situation.

Robb Wolf:

Oh gosh. There was that thing that had popped up. Obviously I have Alzheimer's at this point.

[Laughter]

Just 30 or 40 minutes before we jumped on the last podcast I had pulled up a video that my friend Patrick sent to me and it was basically talking about this woman.

She's a doctor. She's an MD. The husband - they're both probably in their mid to late 70s. The husband was developing Alzheimer's - is it Alzheimer's or Parkinson's? I forget.

Greg Everett: I think it was Alzheimer's.

Robb Wolf: Yeah. I think it was Alzheimer's. No it was Parkinson's. It was Parkinson's actually because he was talking about the tremor and all that stuff. So I'm pretty sure it was Parkinson's.

Greg Everett: Well good thing we redid this because I'm pretty sure you said Alzheimer's on the first one.

Robb Wolf: Ah well. It tends to apply to both. Both of them ended up seeing a neurological damage from insulin resistance, subsequent inflammation like neural death because you can't get glucose into the cell because glucose is the preferred fuel for the brain.

But lots of the brain can run on ketone bodies. So this woman - God love her - she actually got in and did some research on this stuff, looked at the etiology of what was going on in this condition - whichever the heck one it is and figured out that ketones were a completely viable alternative fuel source for these neurons that are typically dying in Parkinson's or Alzheimer's. I now forget which one it was obviously.

So what they did is started introducing coconut oil to each one of her husband's meals and it was kind of ironic. In this video they're putting basically a glob of coconut oil over canned corn or over rolled oats or something like that like a bowl of oatmeal.

The interesting thing is that because of the MCT, MCT is a medium chained triglycerides, they can associate with the albumin. They don't need a coat transporter to get them into the mitochondria so you don't need carnitine coat transporter and all that.

So these things can really pump into the mitochondria and produce a lot of ketone bodies pretty easily even if you're otherwise eating relatively high levels of carbohydrate.

My comment was that it's cool that there's some awareness out there on this stuff. It's a little bit unfortunate that these folks don't understand the importance of the food quality and that also maybe just goosing things closer to a legitimate ketogenic diet - not eating canned corn and oatmeal might be additionally beneficial.

But it's cool. I will give you this though - it's a very very simple intervention. This cure doesn't appear to be changing anything to his diet. He simply added in coconut oil and had shocking improvements in his cognitive testing in a week.

I would argue for maybe going a little further down the rabbit hole and eating a little closer to ketogenic and obviously low inflammation Paleo but just a very interesting thing. It was actually a video on CBN, Christian Broadcasting Network, that had this which they had a remarkably hot chick reporting on this thing.

I have to check that thing more often. I'll have to migrate away from Univision and all of the hot Hispanic newscasters.

[Laughter]

Greg Everett: Oh boy.

[Laughter]

I'm not even going to get involved in that one.

Robb Wolf: Seriously it's nowhere good. All right man. This one goes up. We're actually recording it a day before it goes up so y'all will be hearing this and then next we should have the infamous and quasi mystical coach Michael Rutherford, founder of the Max Effort, Black Box and generally bad ass dude. So we'll have him on next week.

Greg Everett: Sweet.

Robb Wolf: Assuming we don't have further computer issues.

Greg Everett: Hopefully I can actually figure this one out.

Robb Wolf: Cool. But we didn't have all the stops and starts so hopefully a little better.

Greg Everett: Hopefully my microphone was plugged in this whole time.

[Laughter]

Robb Wolf: Sweet. All right man. Will talk to you soon.

Greg Everett: All right.

Robb Wolf: Later

**[0:49:40] End of Audio**