

Paleo Solution - 185

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Robb Wolf: And like always it's a slow start up - episode 185 of the Paleo Solution Podcast. Greg Everett's in the house. Dude what's going on?

Greg Everett: Not much. Just happy little Monday morning here in Sunnyvale.

Robb Wolf: Seriously. It is Memorial Day. So thank you to all those who have served, have given the ultimate sacrifice. I always feel weird working on Memorial Day and dicking off doing stuff like this with all those thoughts going on obviously. This goes up Tuesday but thanks to everybody on all those counts. Dude what's new? What's exciting?

Greg Everett: I honestly genuinely wish I had answer for that because it's really nothing.

Robb Wolf: Absolutely nothing.

Greg Everett: No.

Robb Wolf: Say it again huh. Not too much new around here. Just we have a pretty big meeting with Especially Health folks just getting all the structure put together on that. Doc Parsley and I have an evolutionary medicine talk that's going to be happening at the Nevada Museum of Art June 7th at 6:30pm. I posted details to that on the blog. It also went out via the email deal-io. So definitely swing by and check that out if you can. I think it's \$20 or \$35 for the pre party before the talk but I promised to not get too schnakered so I can actually pull the talk off. So that's about all I've got that's new.

Somebody somewhere later they were in one of the either this podcast or the next one because Greg and I are going to try and back to back this stuff so that we've got a wee bit of an archive going but somebody was humping your knee for some info or an update on the movie. Got anything for us?

Greg Everett: Oh I didn't see that one. Well we'll cross that bridge when we get to it. In the meantime I'll formulate some kind of satisfactory answer.

Robb Wolf: Perfect that's works. So we can hammer out our sponsors. Performancemenu.com, the journal of nutrition and athletic excellence. We have issue 101 coming up soon right?

Greg Everett: Yeah. Issue 101 will be out next week but you can still get issue 100 for free.

Robb Wolf: Nice.

Greg Everett: There's like 12 articles or something in there including one from Mr. Robb Wolf himself.

Robb Wolf: Clearly no standards on this gig.

Greg Everett: A Robb Wolf cameo, Mark Sisson, me, Jen Sinclair, a couple of really good articles in there and like I said that's free. Check that out and if you love it so much you can't stand it then you can subscribe and get even more.

Robb Wolf: There's kind of two tiers for buying on the subscription price. What are those?

Greg Everett: Yeah standard subscription is only \$30 a year which is ridiculous. I feel like an idiot giving this stuff away for only that much but we've established pretty well that I am an idiot so I'm not going to fight it.

Robb Wolf: We went into health and fitness instead of selling something that actually makes a lot of money. So clearly we're idiots.

Greg Everett: Rookie mistake. So that will give you 12 issues a year for only \$30 and then a premium subscription is \$100 a year which is still pretty damn cheap and that will give you your 12 issues a year but also access to all of the back issues. So 550 articles or so at this point plus you get a 15% discount in the Catalyst Athletic Store just a standing discount. Anytime you go buy anything in there except for equipment unfortunately because we don't even make 15% on it you just type your little code in and you get that 15% knocked off.

Robb Wolf: Nice. Ride on. So sign up for performance menu. Go to performancemenu.com to check that out and of course cruise over to the new and improved Catalyst Athletics website because that's just bad ass and all the cool kids hang out over there.

Wellfoodco.com... Well Food Co. is your one stop shop for anything paleo primal food related well not really one stop shop. It's jerky and it's grass

fed whey protein and some really really tasty bars and some cookies. It's kind of snack food folks. Let's not put on airs and make this something that it's not but if you want to have something like that you've got a road trip like when I'm travelling I always get some of the Well Food meat sticks which are phenomenal.

I'll grab some of those. I'll grab a bag of coconut chips and I'm pretty good to go. Like if I get overbarrelled, don't have any food all day then that's a nice go to option. If you're doing some post work out protein and you like whey protein then you will love the Well Food Co grass fed whey protein which is also got an eye towards sustainability. So check all that stuff out. I will have a banner up on those dudes soon.

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And then we also have... What's my wife's damn company? Oh frontdeskhq.com. Your mobile solutions for service based businesses. We have capoeira, dog walkers, anime, jujitsu, hair stylist, basically anything where... the deal here is a service based where you are going to be interacting with folks, need to track some elements of their payments, their comings and goings, scheduling if you have employees.

You can deal with all of their... the fun of having employees. You can run the reports, send out the payroll through [frontdeskhq](http://frontdeskhq.com). It's [frontdesk](http://frontdeskhq.com) but the website is frontdeskhq.com and then finally we've got the [bunnyranch](http://bunnyranch.com) best for last bunnyranch.com. It's porn. It's hookers. It's great folks. I keep having some fun on Twitter with some of those people but check it out still. Incredibly honored to have the grand folks from the Bunny Ranch as show sponsors so thank you.

Greg Everett: All right. Let's move straight into beef protein isolate.

Robb Wolf: Yeah it's a nice transition from Bunny Ranch to beef protein isolate yes.

Greg Everett: Okay. Good morning the both of you, my question...

[Cross-talk]

Robb Wolf: Keep the black lights off of everything.

Greg Everett: My question is on beef protein isolate. If you want the specific brand I am looking at then the link is and I won't read that. You touched on it in episode 12 but a lot of time has passed and I was wondering if you have learned anymore about this or maybe Greg knows something about it

that Andy did not. When compared to whey isolate how does it stack up post workout. Could it also possibly be better for folk that cannot handle whey but still would like the advantages of liquid nutrition? Thank you for your time.

Robb Wolf:

You know I think that that final piece there is probably the best sell for using some sort of a beef protein isolate is folks who legitimately just have some sort of reactivity to whey, reactivity to dairy in the big picture. It's going to be a slower releasing protein so I think that the kind of kinetics are going to look a little bit more like casein and that it's going to breakdown and enter the system a little bit more slowly which theoretically that's great because it's keeping me in a positive nitrogen balance all the time and that's what T Nation tells us and everything.

Maybe it's because the sun's not out in Reno and so I'm having a low testosterone moment today or something like that but more and more with this stuff I'm just of the opinion like if you want to get big and be lean and jacked and everything eat a good solid paleo approach, don't forget your carbs if you're training hard, save your nickels and dimes and then go find Vinny at Planet Muscle and get some nandrolone and testosterone cypionate and go on a gram a week like the West side guys do and just get fucking huge and there you go.

I'm just throwing in the towel man. I don't know what else to do on this stuff.

There is little legitimate use for whey protein as far as... It's interesting people who have some systemic and inflammatory problems... they frequently... when these things start becoming chronic they have chronically depleted their glutathione stores and whey protein is actually a fantastic way to increase glutathione status and once we get glutathione status improved then we actually start putting a little bit of a cooling agent as it were on the systemic inflammatory processes and so it's funny.

On the one hand from paleo land orthodox paleo life perspective say that dairy could be pro inflammatory because of some gut irritating proteins or things like that but there's clearly research that shows that whey protein can be anti inflammatory specially if we are glutathione deficient. There are arguments there for that as well but again at the end of the day I think that the main draw for me on the beef protein would be if somebody just really really needs some post workout protein and they can't handle whey or similar kind of dairy derived proteins. So this would be a pretty good option. You got anything else?

[0:10:14]

Greg Everett: All I would say is that it's pretty clear that whey is going to be the absolute best at least kind of post work out supplementary protein for people who are trying to get big, jacked and strong. So yeah like Robb said at the very beginning of that the only reason I could see to not use it is if you genuinely could not handle dairy or had some kind weird moral objection to it but if you have a moral objection to dairy you probably have a moral objection to eating ground up cows too.

Robb Wolf: Craziiness. Versus just stealing their milk.

Greg Everett: Exactly. What's the saying? Why buy the cow when you can just grind it up?

Robb Wolf: Yeah exactly.

Greg Everett: Okay upper body versus lower body disparity. Hi Robb and Greg. I'm a fan and needless to say I love your show. I will try to make it...

Robb Wolf: We love it too man.

Greg Everett: I will try to make this quick and short.

I'm telling you every time someone says that it's the exact opposite of quick and short.

I'm 29 yrs old, been lifting for a little over a year now and I currently weigh 170 lbs at a height of 5'9 . I lift 4 times a week with one hit sprints session and may be a long run of 5 to 8 miles on some weeks. I follow carb back loading for diet.

I've had pretty good gains in my strength. I can do 230lbs for 4 sets of 6 reps on box squats, 265lbs for 4 sets of 5 reps on deadlifts but my upper body has always been weak. I can only bench 160lbs for 5 sets of 3 reps each. No matter how much I eat or sleep or vary my workouts: high reps low weights, low reps high weights, unilateral dumbbell routines, etc my upper body never keeps up with the strength gains I see in squats and deadlifts.

My trainer says the form on my bench is really good too. I have a theory that my lower body is stealing all the nutrition and I should be decreasing

the volume on my leg workouts and increasing the volume on my upper body workouts but my trainer doesn't really buy into this.

The fact remains that I just cannot gain strength or size on my chest, biceps, triceps but I have really strong and muscular legs. My trainer says I have to be able to bench 175 lbs and gain even more strength before starting a body building style of program which is what I really want to do.

That makes no sense at all.

Do you have any suggestions on how to balance out this disparity and actually look jacked?

Yeah Robb answered that question on the last one.

Hope you answer this question. Thanks a lot.

Robb Wolf: Vinny at Planet Muscle he can hook you up. Is there really a gym called Planet Muscle? It's not like a franchise is it?

Greg Everett: Planet Fitness, I think.

Robb Wolf: So if I say Planet Muscle somebody's probably not going to come.

Greg Everett: Planet Fitness is the one that doesn't let Vinny in, that whole ad campaign is the anti lunk alarm or some bullshit like that.

Robb Wolf: Oh that's right.

Greg Everett: If you're jacked and you grunt and you actually lift weights you're not allowed in the gym.

Robb Wolf: Right.

Greg Everett: Sounds cool.

Robb Wolf: Super cool. Yeah. Although just as on the side I had some sort of Twitter This gal pinged me and said "Hey have..." She had both Mark Sisson and I kind of twatted together but it was something like "Hey loved your books, was buying some for some friends and somebody in the bookstore said that the titles of your books contribute to fat bashing."

Greg Everett: What?

Robb Wolf: Apparently just the suggestion that there might be a healthy way to eat is somehow anti fat acceptance or something like that which I love just in the whole Planet Fitness kind of genre of like kicking out the long serve or whatever. It was amazing. It was totally amazing. I was like and my only response to her was I bet those people are ton of fun to play with.

Greg Everett: Dude. This is why we are all in this country a bunch of fucking pussies. Forgive my language but Jesus.

Robb Wolf: It's kind of amazing but yeah.

Greg Everett: So don't use words.

Robb Wolf: Don't use words just accept. Love, love, love. So a couple of things. I had a couple of ideas with this.

One is using that kind of Poliquin rep method to see whether or not this guy is fast twitch or slow twitch and I'm guessing that we're probably going to be potentially more on the slow twitch side on the upper body and I forget the specs. It's like you find a one rep max and then you rest ten minutes and then you back the weight off and this would be bench and maybe chin that you would do this.

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Then you do as many reps as you can at 80% or 85% of the one rep max and if you are fast twitch oriented then you tend to only get one or two reps. If you're more slow twitch oriented then you tend to get more 8, 9, 10 or more and if you are more slow twitch then you want higher reps, more volume to be able to get the growth stimulus that you're looking for.

So that was one thought on this and then the other thought is that you may just your anthropometry maybe such that... like I've never been a super good presser. It's interesting. I'm actually better at chinning and stuff than I am pressing. When I was doing a ton of capoeira I got to where I can do a lot of handstand push ups and actually had 195 lbs standing press at about 175 lbs body weight but I was doing ungodly amounts of volume on my hands whereas I've had a one arm chin before.

It's relatively easy for me to get that which I feel is a disparate strength deal but shot put and stuff like that had been pretty good. The long and short of that is that I think that my levers are pretty good for throwing

and punching and not actually that great for lifting things at least in the pressing range.

So you may be... there's multiple features here like neurologically you may not be wired up that well to get real strong in the upper body anthropometry. You may have some levers that are not advantageous. The connections of the muscles may not be not advantageous. I wouldn't imagine that the endocrine system is really that big of a factor but you may have some things that are just kind of really conspiring against you.

And you need to do a little bit of analysis on that and there's some stuff out there if you look at what your wing span is like how long your arm's relative to your height and stuff like that like there's some pretty good indicators about whether or not you're going to fall and do a solid strength athlete kind of realm.

Greg any thoughts along those lines or other thoughts?

[Cross-talk]

Greg Everett: Yeah well not along those lines. I mean that's all well and good but honestly looking at these numbers and kind of picking at my calculator here I guess I don't see that big of a disparity.

Robb Wolf: I'm thinking that too. I was kind of thinking that too.

Greg Everett: I just don't feel like it's that far off and I think that if you were doing real squats instead of back squat then that disparity would drop even more. I think back squat artificially inflate your sense of lower body strength because they're not real squats and I find it odd that your trainer insists that you have to be able to bench 175 in order to be eligible for a body building program but he'll have you do box squats.

It just doesn't make any sense to me. There's no reason you can't do hypertrophic work at any given strength level. There's not a threshold where you magically are going to be able to gain a bunch of size because you can bench a certain amount. I just don't get that.

So I would, number one, not worry about that disparity. I don't think it's that big of a deal. It doesn't really say here. If you're doing a ton of lower body work and relatively little upper body work then yeah maybe you can shift that emphasis to upper body a little body for a while and see what happens and then I mean I don't mean to be a dick but you're paying, presumably, your trainer to help you do what you want to do. If you want

to do a more building type of work then I feel it's his job to have you do that. I don't know.

Robb Wolf:

And we're talking about there is you stick with some compound movements like you're doing and in the last 10 minutes you do some shoulders and bis and tris and it's not that big of a deal to throw in a little bit of finisher work and suddenly we're doing some body building.

But you know that's a good point too. When I was looking at the numbers it's 265 for four sets of five on the deadlift; just going off my own numbers and I'm about the same size. I may be a buck 75. I think I can pull probably 365 for four sets of five or something like that. Granted I'm a little bit fast twitchy and I've been doing this stuff for a long time but there's probably just a lot of developmental potential here all the way along. So maybe not getting so hung up specifically on just the perceived disparity here but just chop wood, carry water and push forward.

[0:20:02]

I will say this. When I was competing in power lifting when I finally got up to 198lbs once when I competed in the 198 class just the fact that I was bigger and my chest was about 3 inches deeper benching became infinitely easy. It was miraculous how much stronger I was and it was kind of a non linear strength gain. It was just amazing because it was almost like I was doing a board press. I was taking significant range of movement out of the whole picture.

So I think Greg you're on to something there. I just don't see actually that big of a disparity when we run all these numbers and probably just some need for more developmental work and heavy lifting and little periodization and all that sort of stuff.

Greg Everett:

Indeed. Fire fighter protocol. I'm a fire fighter for a busy Bay Area fire dept and was interested in your thoughts about my career in regards to how it may affect my strength and conditioning? I suffer from two straight days of little to no sleep. Then I have 4 days rest in which I try and train all 4 days. I use my two days at work as my days off. I follow a pretty strict paleo diet, sleep a lot on my days off, supplement with whey, fish oil, and vitamin D. Have you worked with any fire fighters before? And what sorts of recommendations do you make for there diets and training?

And then he has his little stats here.

Thanks. And your podcast is amazing.

Robb Wolf:

So yeah. I've worked with a ton of fire fighters oddly enough and police and military and the sleep deprivation... it sounds like what you're doing is really really good as far as mitigating the damaging effects of the sleep deprivation as best as you can. Coming right off of a shift if you haven't been sleeping well usually I recommend being a little bit on the low carb side during that time and then as you...

The caveat with that is if you do manage to get in like a weight session or something then you could do a moderate carb meal post work out even in that sleep deprived period. We become very very insulin resistant with sleep deprivation. So even though I generally some sort of what I would call a tactical athlete or a warrior athlete I don't like them being low carb all the time just for performance reasons but putting some thought about where you're partitioning those carbs is probably smart. It seems like his number's pretty good - 315 bench, 345 squat, 365 dead. Seems like a reasonably big, strong dude.

I don't know that I've really got that much more to add to the whole thing other than sleep as much as you can, have some smart periodization, if you're feeling beat up go light from roll stretch, take it easy, don't go crazy on metabolic conditioning when you are in that really sleep deprived period and even within that I would lift some weights, do some cardio and metcon type stuff.

You didn't mention anything but crossfit type stuff. I would just be careful with that. You're already under a lot of stress and so if you do some sort of circuit based stuff I would keep the motor it like 80% effort like you know you could have gone a little faster but you don't so that you're not completely taxing and bombing out your system.

But I don't know that I've really got that much more to offer other than thinking about where you're dropping in your carbs and when you immediately get off shift maybe that's not the perfect time to have a giant carbohydrate meal although I could make an argument that doing a little workout and doing a carb meal so that you get that serotonin boost and you go to sleep better so there's actually kind of...

There is an argument for doing that but you want to be a little bit smart and plan that out. Any other thoughts, feelings, conjecture?

Greg Everett:

Interesting. Not really. That 48 96 schedule just... I get that people who commute really far to these jobs like it but man that just sucks.

Robb Wolf: It's a gut check man. We've talked a lot at Especially Health about that because we actually have the chief of police and the chief of fire completely on board with what we are doing so we've been trying to figure out what's a better schedule when you're both factoring in people coming and going off of shift and then also what's it doing to them metabolically and everything. It's not a simple answer.

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Ideally fires didn't happen, cars don't crash and shit bags don't shoot each other in the middle of the night so that people could get some damn sleep but unfortunately that's not the way it rolls out.

Greg Everett: Yeah. The only thing I would add to what you said already was that in those four days I would definitely not expect to have a great work out that first day off. I would have that as your light work out, almost like a primer, like you're coming off two days of rest, probably a lot of stress and no sleep. So I would have light and easy, more strength-oriented work out but not heavy and then those middle two days where you can really push it and then that final day maybe a moderately heavy day where it's not really tough because you don't want to have to recover from it on your first 24...

Robb Wolf: Sleep deprived deal yeah.

Greg Everett: But either way you slice it that's not... Like we said in a million of times of worth if you're a fire fighter, doctor, pretty much anything like that you're definitely swimming upstream.

Robb Wolf: When we were getting the gym going we had a 5 am class for about a year, a year and a half...

Greg Everett: That was just dumb.

Robb Wolf: It was just a fucking train wreck and you do what you need to do to get the gym going and all that stuff but I remember being so tired that I literally would fantasize about not a big accident but maybe I'll break a hand or break a foot and then I could be home just for a couple of days but I would have a legitimate excuse for not showing up because it was...

I was just so completely crushed and annihilated. Man, I would do a lot of other stuff besides stick myself in a really long term sleep deprived kind of scenario right now. So to our police, military, fire, medical personnel -

hats off to you seriously. God love you for doing that but I guess I gave it the office on that myself but man it's really hard. It is really really hard. It is no freaking joke.

Greg Everett: Yeah. At Nor Cal when I was realizing we were having 10 shots of espresso before 8 am it was kind of time to re evaluate.

Robb Wolf: That was blink twice and call the police yeah.

Greg Everett: You have a can of yerba mate right next to the coffee maker that's ready to go on top of that. Okay.

Robb Wolf: It is 50% cocaina, 50% coffee. It will light you up.

Greg Everett: Excellent. Okay. Oh shit, I have no tonsils.

That's a good one.

Stable Steve says dear Robb and Greg...

[0:28:03]

Robb Wolf: It's better than realizing you lost your kidneys like your weekend in the Philippines or something and you come back without a kidney.

Greg Everett: True.

Greetings from Ontario, Canada. Let me get right down to business. As a child I suffered from many painful/annoying throat infections. I even had 2 nasty abscesses on my tonsils and after clearing those up I took my doctors advice and had my tonsils removed. I was left with two big craters in the back of my throat which have now healed over.

So my question is as follows: are there any negative effects to having no tonsils? Am I one day going to spontaneously combust or spontaneously explode? I've always wanted to go out with a bang, but not in a literal sense.

If having no tonsils leaves me vulnerable to diseases and or exploding, then what foods/supplements do you recommend? I know you're going to recommend a Paleo approach with lots of sleep and adequate vitamin D, which I'm already all over but I was just curious to hear both of your thoughts on the no tonsils gig. Keep up the awesome work guys.

Does that mean he wants to hear all two of your thoughts or thoughts from both of us?

Robb Wolf: I'm guessing probably thoughts from both of us because I don't have two thoughts to rub together.

Greg Everett: Well let me put that thing to rest right now and tell you I don't have any thoughts on this. I don't know anything about tonsils.

[Cross-talk]

Robb Wolf: Oh man that's a frightening statement.

The tonsils end up a little bit like the appendix in that they play a very important supportive role in the immune system. The appendix is kind of a repository for beneficial bacterial so if you get a gut infection or something like that then you kind of dump out some bacteria out of the appendix and so they assumed it was a vestigial non functioning organ but in fact it does have a function. You can clearly leave without it.

Whether or not there are massive downsides without it doesn't appear so but I would assume that there is to some degree some downside without an appendix and similarly... the tonsils I see a little bit like a fire alarm or the canary in the coal mine. They're telling us that we're doing something wrong. I, as a kid, every year... I think you needed to have tonsillitis four times in a 12 month period to get the things inked out and I was always 3.8 times per year which is actually lucky because I managed to keep my tonsils.

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And then kind of grew out of it and then also figured out that a bunch of my upper respiratory congestion and head stuffiness and everything was mainly dairy and gluten related and now I've pulled those things out of diet I could do goat dairy fine. I have no problem with that and interestingly I can do raw grass fed cow's dairy without any real significant problem. I definitely notice it a little bit. I'm a little bit more phlegmy and all that stuff.

But the tonsils are a fire alarm. So when you yank them out you basically pulled the battery out of your fire alarm so that annoying beep stops but then you don't know what the other problem is. It's your immune system. The immune system deals with all kinds of stuff from clearing

cancer to clearing bacterial infection and viral infections and parasites and all the rest of that.

I don't know that there's really a massive down side to not having your tonsils but it's one of those things that typically if we can get people eating paleo before I just don't see people have problems with it but too late. So what do you do now? And Greg and I were talking about this before the show.

I wish I could dress something up more magically than what we do but it's basic paleo approach, getting your sunlight, exercise smart, get some sleep - I mean that's your gig. I guess if you want to do a salt water nasal rinse every once in a while so that the upper sinuses and everything which historically drain into the tonsils going in to the length and all that so that there's some sort of adjunctive support.

Without it I guess that's something that you could do but I got nothing beyond that but clearly lots and lots of people have had their tonsils out and clearly there's not some sort of huge epidemiological shift showing that this is a horrible event. I don't think it's a great event but again it's more just because in my opinion the tonsils are telling us that we're doing something wrong and they're getting inflamed and you get sick and we need to do something to fix that and then we don't really have that problem but that's what I got.

I wish I had something new but I don't. We're coming up on 200 episodes and it's just rinse, lather, and repeat.

Greg Everett: Chop wood, carry water as you like to say.

Robb Wolf: Exactly. All right.

Excessive sweating and gluten. Hello Robb and Greg. I love the podcast. I am 33 and a double amputee, above knee and below knee from birth defects. I have worn prosthesis since I was 6 months old. I have been very active for most of my life with periods of sedentary-ism. I did all sports as a kid, constantly destroying my prosthesis, weekly trips for repairs to the shop. I wrestled from 6 years old to freshman year in college, fractured my patella in 4 places, 3 surgeries.

Yikes.

I coached wrestling at all levels since college, part of my weight gain. Ever been to a coach's hospitality room? My whole life I have had excessive

sweating. I could cut 8-10 lbs of water weight in a 2 hour practice consistently. When I say excessive sweating I mean walking up stairs, cleaning the house, sitting in the car with the AC going I would sweat to the point of dripping onto my glasses, even as a 17 year old 140lb state qualifying wrestler.

I started crossfit and paleo about 2 years ago and actually with consistency for about a year. I have lost 60lbs over the last 2 years, started around 315. I assume that carrying probably 80-100lbs more than I should has had an effect on the excessive sweating and I have seen improvement but it seems that the removal of gluten has had more of an effect.

Not total elimination of the sweating but to the point it's not running down my face or the, not embarrassing at all, swamp ass mark down middle of khakis which is less ass sweat and more of just a collection point for my back.

If I have a burger and fries or a meal with gluten I return to the dripping in sweat from daily activities for a couple of days. I have found little research or literature on excessive sweating. I have read one or two papers that propose that an over active pituitary gland could be the cause.

What are your guys thoughts on gluten, pituitary gland, wearing prothesis heat contained on my thigh and calf or other factors that could be causing this really fun bullshit. Thanks for all you guys do.

[0:35:00]

Robb Wolf:

Holy smokes man. Unrelated to the gluten just if we carry excess weight, if we're over eating one of the ways that our body is trying to deal with that scenario is pumping as many calories as possible through the mitochondria and we get uncoupling proteins activated which just basically generates heat.

So this is where I always think about the big puffy red face dudes that drink a lot of booze and eat a really shitty diet and they look just damp even if you were to roll them in talcum powder or something. Part of what's going on there is the body is just trying to off load as much of the energy as possible without spontaneously combusting.

What was that stuff that Dan Duchaine taught the DNP the dinitro... oh man I forget. We actually talked about it on a podcast but it's similar to

the uncoupling protein deal, and so they're warm and so that may be a little bit of this but then you're describing that this was an issue even when you were a wee tyke of 140 lbs and youthful and all that.

One of interesting and frustrating things with the whole gluten story is that when we start looking at just one piece, even just the transglutaminase piece like the classic celiac piece, we've got a potential for 8 different isoforms of transglutaminase to get some sort of an autoimmune reaction and that can affect literally any tissue, any organ system. Transglutaminase is important in modifying damn near every protein in the body.

So if you have a problem with transglutaminase you're going to have a problem with just about anything and that's just the more autoimmune side to say nothing of the innate immunity, gluten intolerance, the non autoimmune kind of piece to this. It's not surprising at all. We know for a fact that gluten is a huge player in thyroid dysregulation. So you start thinking about the hypothalamus, pituitary, adrenal axis and how all that plays into thyroid function and everything.

You can dig around in the literature and you can find support for just about any argument you want to make along this line. There will be some paper, some anecdotal information that would support this stuff. I don't know that we've got a truckload of really strong research data at this point but just observationally we definitely have some stuff there.

And so as far as addressing this it seems pretty clear. The gluten free piece is big and is efficacious for you and then I think to the degree that you can stay lean and not over consume calories. I think that that's going to be a big piece. I don't know if you've ever had gotten in and worked with a functional medicine doc and had thyroid really thoroughly evaluated. You can even do some sleep studies and see if you're getting growth hormone signalling and make sure that to the degree that we can make sure that the pituitary is functioning properly and everything.

There's some other stuff that you can do to see what you've got going on within the endocrine axis but just for the super simple here's a potential solution then clearly gluten free, grain free paleo kind of gig, not over eating. There you go and I think you're going to get some pretty good results out of that which clearly you've had some improvement already tinkering with this stuff.

But I guess the long and short like the question was do I think that gluten can be a factor in this. Yeah. It's hard to find something that gluten

couldn't be a factor in and that is both kind of interesting and also a little bit tin foil hat. It would be nice if we actually found some stuff that gluten wasn't a factor in because you start sounding absolutely insane because it's like yup, it could affect this and this and this then you sound kind of crazy.

As always the greasy used car sales man pitch. Give it a shot. See what happens. So I'm not sure what to say beyond that.

Greg Everett: Give it the old college try.

Robb Wolf: Go college girl friends.

Greg Everett: Okay. Hashimoto's thyroiditis. Elaine says hi. My name is Elaine, and I've been eating Paleo for about a year and a half now. At first I was eating a 100 percent strict autoimmune protocol with great improvement in my symptoms. Then, eventually I relaxed a bit and ate healthy 90 percent of the time, but always avoiding gluten except for instances of cross contamination. I eventually allowed for nuts, eggs, tomatoes, alcohol, etc., and cheated occasionally with white rice, ice cream, and corn.

[0:40:06]

I hope those were not all mixed together.

Almost the entire time I took magnesium, selenium, probiotic, and raw adrenal and raw thyroid extract.

Oh man that adrenal powder is delicious.

I added turmeric water and bone broth later on. After some life changes in the last few months, I've probably been eating 80 percent paleo.

I'm seeing a pattern.

Most of my symptoms have remained nonexistent and others have greatly improved and I pretty much feel better than I have since I was 10 years old. I'm 24 now. So, I went to the doctor recently just to see where I am at with my thyroid antibodies. I was actually excited because I expected that after a year and a half they would have significantly decreased.

When I was first diagnosed when I was 14, my antibodies were greater than 3000 for one type of antibody, but they could not give me an exact

number. Well now that same antibodies is at 2995, which is very discouraging to me even though greater than 3000 could have meant 6000 for all I know, and my antibodies could have greatly decreased and so I have a few questions to ask.

Does occasional cheating really cause that severe of an immune reaction to most people with Hashimoto's even though they completely avoid gluten? And why are my symptoms so much better and my thyroid softer if my antibodies are so high? I am at a point where I am so discouraged and disappointed that I'm not sure whether I should just accept things the way they are or put my all into it and be 100 percent strict, not knowing if it will even bring down my antibody levels. And if so, would I have to completely cut out alcohol for life?

Before you give a real answer this reminds of people who are trying to lose weight and they'll come to you and they'll say god all my clothes are fitting super loosely. I look amazing but I've only lost five pounds and it's like everything they want to have happened has happened but they're so hung up on the number on the scale that they feel horrible failures and so I feel like this is really similar with the antibody memories.

All your symptoms have gotten so much better, you feel better than you have since you were 10 years old but you're super upset about this one number which like you said it could have been reduced by 50% or 100%. You have no idea but...

Robb Wolf: Again it doesn't seem like a crazy suggestion maybe you don't do it during a summer. We like to kick our heels up a little bit and have a little more fun, drink a little more booze and all that. I don't know. Everybody likes to get lean for the summer but actually think it's a horrible time to start flirting around with your diet because...

Greg Everett: Yeah you get lean during the winter so you look good when the summer comes and then you ruin it.

[Cross-talk]

Robb Wolf: And then you get to kick your heels up a little bit. Again the greasy used car sales man pitch is give it a shot, see what happens. If the first quantification of your antibodies was just basically like you would peg the test out and it was above 3000 and so there was no quantification beyond that then that's kind of... it's again similar last thing both tough and kind of interesting because we might have a shift here. The

difference between 2995 and 3000 from a lab value standpoint there is no difference.

But that's assuming that we really are getting some sort of quantification. I don't know exactly what type of test you're running. If it's completely a different test, completely different anti bodies, all these moving parts but we have a current base line. So in my mind you've got an option of potentially tightening things up really really well.

If you Google Chris Kresser and thyroid he has a whole monstrous series on managing thyroid and Hashimoto's like that dude has really encapsulated with the go to items of what to do to address all this stuff and this is why I've never written on the thyroid to any degree because Chris has already done it and he's done a very good job and there's no point in taking his material and rehashing it and calling it mine which seems to be the fucking soup du jour in paleo land these days.

But that aside I would give that a shot and just figure out a time when it seems good to give that a shot and would a really tight autoimmune protocol in doing some of the specific stuff that Chris details with the selenium and all the jive do you see a legitimate shift in the thyroid antibody number yes or no?

If you do do you feel any better? Maybe you feel even better than what you do now. If you were really really sick because your thyroid was even more greatly impacted previously then maybe you feel even better. You've had this stuff since you were ten so maybe you feel even better.

[0:45:00]

If you don't feel better but the number's changed then you're kind of I think that the cost benefit there is that whenever we have one autoimmune condition we have a higher likelihood of other autoimmune conditions. We have other potentiality for problems and so then you make a decision of is my increased likelihood of heath or sacrifices I'm making.

But it seems like a little bit of reasonable self experimentation is in order here because we don't have enough data from the lab work to really hang our hat on anyone thing but it seems like it would be worthwhile to just roll the dice and give it a shot and tinker for a couple of months, figure out a time in your life when cutting out the booze and doing the other stuff is going to be an acceptable risk or I guess an acceptable trade

off just to answer that question and then see what the results are. It doesn't seem that bad.

Greg Everett:

Yeah. All right. Gluten and gut flora - hi Robb and Greg. What do you think of the recent discoveries about the connection between gluten intolerance and gut flora?

When you Google the phrase gluten bacteria a bunch of interesting studies pop out. Some of the researches claim that the gluten-free diet is detrimental to gut flora and it actually reduces the amount of beneficial bacteria. The other part of all this is the theory that all gluten-related health issues are caused by insufficient amount of microorganisms that would normally break down the bad stuff. I'm curious what's your take on it?

Robb Wolf:

You know there's some interesting stuff and there are some bacteria that have prolyl endopeptidases which theoretically can break down gluten. I was talking to Mat Lalonde about this stuff and it doesn't seem like still that these bacteria really have all that much activity on the gliadin in our bodies in vivo. So I don't think we're really getting that much activity there.

I wouldn't be surprised that some shifting gut bacteria could heighten gluten sensitivity and again we've got a spectrum of this stuff. We have gluten sensitivity. We have out and out celiac disease. Celiac is still this interplay of the CXCR3 gene and it's interaction with the gliadin protein and the release of zonulin and all that sort of stuff.

So again we have multiple issues here. So are we talking specifically about celiac? Are we talking about this bigger picture deal of gluten sensitivity? And then within gluten sensitivity there seems to be a huge spectrum in the types of proteins and the type of reactivity that we experience.

I unfortunately do not... I don't know how to say this. I'll put a positive spin on this as I can. I think that eating fermented foods, I think that taking care of your gut health, I think that those things will help to mitigate potentially the negative effects of gluten exposure possibly to a significant degree. I think a healthy gut is probably going to generally be better than an unhealthy gut. The proposition that swapping out pasta for sweet potatoes or fruit is somehow massively negatively impacting the gut flora is just fucking ridiculous to me.

When you look at these studies frequently what they're doing is they're swapping out some sort of whole wheat muffin for some sort of a denuded gluten free muffin and so we're taking shitty food with shitty food. So I just don't know that I can really draw that many conclusions from it. I think the long and short for me is that if you are generally healthier then you're going to be more robust to this stuff.

I notice this with my self if I'm travelling and I suspect that I got a little gluten exposure cross contamination if I'm well rested and my digestion has generally been pretty good then it doesn't seem to affect me all that much. If I've been tired and beat down then it seems like everything is borderline going to kill me.

I will say this. I've been doing some research that I want to do like a series of posts on somewhere when I get some time to do it but people who end up with the giardia infection or some other kind of nasty gut bug which we know these things can change the gut flora it seems like these are common precipitators of heightened celiac expression and gluten intolerance expression.

So whether that damages the gut specifically, whether it damages the gut and then changes the flora and the change of flora ends up being the problem we're not really too sure. The FDA is actually sniffing around at regulating fecal transplants because these things seem to do really really beneficial for colitis and some other GI related issues.

There's a lot to this poop gut bacteria thing and I think that we're very very early in the early learning stages on this. I think 10 years from now we're going to have a much much better understanding of all this and we'll be able to give better recommendations as far as diagnostic medicine and prescriptions about what to do to address specific scenarios I don't think we're there yet but it's interesting.

[0:50:31]

Greg Everett: Interesting for sure. All right.

Salt water flush in the morning - hey Robb & Greg, you two are awesome. Thanks for pumping out this amazing podcast every week.

Recently my mother-in-law started drinking a glass of salt water in the morning. I have no idea where she heard of this, but she likes to meander around the internet at work and she believes everything she reads online — a dangerous combination for sure.

Seriously tell her to get to work.

A little Dr. Google only came up with questionable sites discussing colon cleansing and so forth. Dave Asprey's followers seem to be adopting it based on some comment he made on a podcast once. Me, I like to have some more evidence before I start doing something. Apparently Mr. Asprey said that and this a really horrible quote here that's paraphrased from a form "when you wake up your reptile part brain tells your adrenal glands that they need to change the potassium/sodium level, so to up the sodium they draw salt from the blood? So to help that process you can take a tablespoon of salt in the morning and save the adrenals some work. Is there anything to this? No one there seems to be able to provide any more evidence. Thanks in advance for any info you can share.

Robb Wolf: Yeah I mean the main deal that I've seen and we actually did a god back in the 10s or 20s of the podcast talking about salt water consumption and adrenal fatigue. When we start seeing adrenal fatigue we tend to see elevations in potassium and some problems in serum potassium and so people will notice that they feel better particularly in the morning like their morning energy tends to be better when they throw in some salt water but I see this more as a symptom of kind of adrenal fatigue issues than just some across the board...

I don't see this as being a bio hack and I've got to say and I know I'll be incredibly uncool by saying this like I love Tim Ferris, I love Dave Asprey, I love all those dudes. I like what they do but the whole notion of hacking you don't fucking hack this stuff. It's not a hack. You understand biochemistry and some shit's broken or some shit's not and you do stuff to fix it and there aren't really short cuts.

Greg Everett: That doesn't sound as cool as hacking.

Robb Wolf: It doesn't and there's not some sort of nebulous kind of... I don't know and again I'm just a simple dude. I'm not really into the huge quantified self stuff and I'm just way more experiential I guess. I just like people to fucking eat and exercise and get out and play with people and have a meaningful life and don't get retarded about the data collection that they're doing because it just makes them neurotic and they send in more podcast questions about it.

[Cross-talk]

Greg Everett: I quantify myself one.

Robb Wolf:

Again the bio hack that I recommend is Vinny at Planet Muscle. Pharmacology like there you go. That's the hack. There just aren't short cuts with things but again functional medicine. Yeah that's legit and one of the elements of functional medicine when we are talking about adrenal fatigue is that some salt water in the morning can definitely help with the energy levels. It helps with the whole aldosterone production and it mitigates aldosterone production which kind of takes a little bit of the pressure off the adrenals but that's a piece of the picture.

The bigger picture is what are you doing to damage your adrenals and being in this effed up state to start off with which again it circles back around to not eating gut irritating foods because that is an adrenal stress, not over training because that's an adrenal stress, making sure you sleep properly because that's an adrenal stress in a variety of ways both direct impact on the HPTA axis, down regulation of immune function, damage to the gut because we don't produce secretory IGF. There's layers and layers and layers to this.

So the hack is to basically look at this evolutionary biology picture and recognize that we don't sleep, eat, exercise, love or relax the way that we use to, the way that our genes are kind of expecting us to and to the degree that we moved away from this kind of ancestral norm I think that we start introducing the potentiality for problems and it's not a guarantee of problems.

Some people are wired up tougher than others and they can deal with this stuff to greater degrees than other people can. There's a big genetic spectrum on all this stuff but I don't... There's always cost benefit trade off.

[0:55:23]

This stuff is more like the economy. It's more like the stock market than it is a simplistic recipe book and thinking about it in that way, knowing that there are cost benefits scenarios with everything that we do, there are trade offs with everything that we do then you can, I think, make better informed not only decisions but also kind of analysis of stuff that's being presented. That's my take on the salt water deal.

I see that more as a therapeutic intervention for adrenal fatigue situation. I don't see that just being some sort of a short cut around waking up in the morning and sitting some of the effort of the adrenals because the adrenals are supposed to cycle through the day. We're

supposed to have a ramp up and a ramp down and there's benefit to that.

All right. This one is funny. The next one is funny.

[Cross-talk]

Greg Everett: UV tattoo ink. Barrett says Greg and Robb. Good day Sirs. I wanted to ask you all about UV tattoo ink and its effects on melatonin and circadian rhythms. Basically, there is a new form of tattoo ink that glows in the dark, links provided. Knowing that low level blue light can throw off your circadian rhythms at night I wanted to see if you had any concern or thoughts about this new kind of ink. Will it contribute to my long term demise, quicker, if I get this done to me? Is it toxic? Is normal tattoo ink toxic?

Then there's a bunch of links to pictures.

Robb Wolf: Oh man and the links are spectacular. I guess may be part of the question here is that if we have some sort of photo reactive substance tattooed to our dermal layer that this stuff is not only broadcasting out but also in and could there be some problem with that. I guess potentially I would be way more concerned about what's in that ink stuff spreading through your body. I know Greg you've got a couple of tattoos but you didn't go super wild on that.

[Cross-talk]

Greg Everett: I didn't get the kind with radiation in the ink.

Robb Wolf: Damn it. That's where you went wrong.

Ideally this stuff is inert as possible and ironically some of the really old, most ancient tattoos substance which would be basically charcoal is about inert as it gets. Some of the other stuff does have some lipid soluble substances that could make the way through the body.

If you've got something that is photo reactive like this then you've got some sort some sort of a porphyrin core which in organic chemistry everything typically that we see that has color like chlorophyll, haemoglobin and all these things usually there's some sort of like a six carbon ring and it usually has some sort of an ion associated with it and light interacting with that is what causes the color release and we have a

similar process typically in some sort of a UV photo reactive kind of effect with...

What it reminds me of is the glow in the dark toys that we use to get out of cereal boxes is basically what you're getting...

[Cross-talk]

Greg Everett: That's always sticky and weird.

Robb Wolf: Right and it must be some sort of a similar substance that they're using; if it's providing more analysis that's where I'm going to leave it. You're basically taking something chemically to what you would find in the glow in the dark toys in a fucking cereal box and you're potentially sticking it under your skin if you think that's a good idea roger up. Go for it.

Greg Everett: Yeah I personally don't get the appeal but I'm old and crotchety now so...

[Cross-talk]

Robb Wolf: Is that it for that one?

[Cross-talk]

Greg Everett: Yup.

Robb Wolf: Any other must haves before we have must haves before we wrap this one up.

Greg Everett: No. I'm good.

Robb Wolf: Okay. All right folks. Take care. We'll talk to you soon.

Greg Everett: We'll continue shortly.

Robb Wolf: If you've hated this podcast blame it on Squatchy. He's the one now picking the questions. So there you go. Now he's doing a great job.

Greg Everett: All right see you guys.

Robb Wolf: Talk to you soon man. Later bye.

[1:00:18] End of Audio