

Paleo Solution - 170

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Robb: Hey, folks. Rob Wolf here, Greg Everett in the house. This is episode 170 of the Paleo Solution podcast. Greg, what's going on?

Greg: I just can't believe we're up to 170.

Robb: I can't believe anybody is still listening to this crap. I'm so shocked man.

Greg: Well we don't know for sure that they are but its safe to assume.

Robb: That's true. We're talking to each other. There may in fact be nobody on the other end of this thing.

Greg: That's okay. I still has value to me. I still get to talk to you buddy.

Robb: That's true. That's true. It's kind of a weekly coffee talk between Greg and Robb so it's worth that if nothing else. I was trying to think of some sort of analogy for the show and it's kind of like SETI in reverse. Because the listeners are actually searching for intelligence and finding none so it's kind of interesting.

Greg: Yes, it's a lot easier for them they just hit a button on their favorite web browser.

Robb: It's true.

Greg: I think SETI has a bit more daunting of a task.

Robb: Yeah but more likelihood of finding something worthwhile versus...

Greg: Possible. Although, in all likelihood it would be already dead by the tine they get the message.

Robb: It's true. So what do we have here, pimping products. The performance menu, sign up for the performancemenu.com if you're interested in nutrition, training, athletic performance, strong man Olympic lifting. Just generally being a bad ass.

Greg: Anything good. It's going to be...

Robb: Really anything good. I mean it's cooking. It's philosophy. It's training. It's the performance menu. You guys should sign up and when you sign up you get 12 of their most smacktacular back issues when you sign for the performance menu. Greg, anything else about the performance menu you should tell us about.

Greg: Yeah. We got issue 100 coming up. That comes out May 1 and we got some big stuff that we're going to announce at that time. So you know stick around, keep your eyes peeled and possibly even subscribe.

Robb: Nice. Nice. I like it. So performancemenu.com go there get sign up. Frontdeskhq.com Front Desk HQ is your mobile solution for running any type of service base business. You could be a guitar teacher, a dog walker, run a gym. Shoot I don't know. Maybe you bury bodies for the mafia or something and you got a really tight schedule. I don't know whatever it is you know service based deal. You can do point of sale. You can run payroll, deal with all of your incredibly wonderful employees because they're always fantastic but you can run all that stuff from...

Greg: They're always fantastic and they always do exactly what you need them to do at the time you need them to do it.

Robb: Yeah. Completely. Yeah.

Greg: These guys, they can't even keep track of their time to get themselves paid.

Robb: We still, kiss-assing aside, I'm always on the Nor-Cal email chain with the trainers. So we've told the trainers numerous times. I love our trainers. They're great. But we told them numerous times. Hey you guys you need out all your clients or you will not get paid. Now I'm a dick and I would actually follow through on this in which in a given pay period if somebody didn't sign up their clients, they wouldn't get paid for it. They would get paid eventually but they just wouldn't get paid that round. But Shawn Gower who's the guy running the gym now and much more kind and probably why the gym is even more successful now. Weekly there's an email that goes out hey guys, check out your client so you can get paid blah, blah, blah. So anyway so that's an interesting thing.

With Front Desk HQ this thing is in its soft launch period right now when it comes out and it's hard launch and is actually available to the masses. There is a feature in there that is going to make sure that your employees actually do sign out their clients. So there's some redundancy built in this thing that's going to save you the gym owner

from either being a dick like me or a run rugged nice guy like Shawn. So, check out FrontDeskHQ.com for your mobile solution, for your service based business. Who else do we have? Evolve Foods. We can't forget Evolve Foods. That would be silly. How do you have snacks if we forget Evolve Foods? Go to evolvefoods.com buy some snacks if you feel like big and burly. Use some of our grass-fed whey protein that is John Welbourn endorsed of course. So evolvefoods.com. That's all of our pimping and promoting for right now. Although...

Greg: The booze is coming.

Robb: The booze is coming. And I have made official contact with the Bunny Ranch.

[0:05:03]

Greg: I bet you have.

Robb: I am doing a seminar out there in fact.

Greg: What.

Robb: It is my consorted goal that the Paleo Solution podcast becomes the source of critical nutrition and training information for the Bunny Ranch. So we'll see how that goes. I'm going to hit off Dennis Hof to see if we can get some sort of official sponsorship on that. So I am no joke endeavoring to have hookers and booze as sponsors for...

Greg: Oh man. I'm so proud to be involved with this Robb.

Robb: It is doing god's work man.

Greg: Well nowhere to go but down after that announcement.

Robb: Exactly. So we go from there to sitting basically to kick this thing off.

Greg: Okay. It's a good question but it's going to pale in comparison to this talk of prostitutes and alcohol.

Robb: Indeed.

Greg: Escort or temporary girlfriends. We don't want to be negative about it.

Robb: Can't be derogatory to our potential advertiser.

Greg: I've imagine its hard work.

Robb: I have no doubt man. You have some old codger come in in a walker or something like okay.

Greg: Oh man, seriously. I have a hard enough time pretending I like people with our clothes on so you know what I mean like a tip of the hats to you ladies. Okay. Emma says dear Robb and Greg, is sitting really that bad. There's a lot of buzz about how bad it is for you. Sitting is the new smoking and sitting will make you die now, etc. I understand that if all one does is sit without any activity then he or she will likely encounter health issues. However, it seems overly simplistic to me to suggest that sitting in general is deadly. I, for instance, am very active but also spend a good amount of time sitting on the couch. I'm lean and fit but I also like to relax.

I remember somewhere hearing that hunter gatherers did not necessarily have an energy output greater than that of Americans. Sitting seems like a pretty Paleo thing to do you know once you were done hunting mammoth and shit. I get that if you sit too much your hip plexor get tight. But really guys how bad can sitting be. I've been listening since literally episode 1. Hopefully, you will address my question while I continue to sit on my ass.

Robb: God loves you, Emma, for hanging with us this long.

Greg: It's been she's been sitting down. It wasn't that difficult.

Robb: If she's been sitting down. Yeah. Otherwise, she could have gotten away from us and escape and gone on and done something. You know the epidemiology on this, which epidemiology at its best it can provide kind of a direction where we need to look for research at its worst. It's not worth lining a bird cage with. So just with those bracketed caveats of the potential quality of this stuff. The epidemiology seems to indicate that sitting is really really bad for us. And I know like some of that work on the Hadza, you know, looking at their energy output it wasn't massively different than the way that kind of modern western people live which is honestly pretty surprising to me.

I can tell you this. The best that I can pull out of some of the epidemiology is that it looks like extended period of sitting are really bad. And this isn't to say that downtime isn't important which I'll try to remember to circle back to that in a second. But the epidemiology on that seems to indicate that it's pretty bad. I know for myself, you know, a couple of things that I did were the worst things that I ever did for my health and fitness. One of them was opening a gym and the other one is writing a book that it was actually successful on the health and fitness thing and then everything that's involved like

massaging and promoting that traveling and all that sort of jive sleep deprivation, time zone changes. The gym was rough in that you get up real easy. It's kind of stressful.

You don't know what you're doing in the first couple of years. You're living hand to mouth and that definitely isn't good for your health and wellness. But I'm up on my feet. I'm moving stuff around. I'm going on walks with people when I'm warming them up. I'm demoing activities. Maybe I jump up on a bar and do some grease to groove like pull up and stuff like that. Like my activity level was pretty good in the gym. And then as I've transitioned more and more to blogging and writing and research and stuff like that, I just sit on my ass a lot. And I've got to tell you it is just my basal metabolic rate seems like it's so much slower. Like I eat a lot less food than what I used to be able to maintain like sub 10% body fat level. Whereas before I had to really try to work to eat enough food to actually maintain kind of strength and muscle mass and stuff like that just because I was always running around. And so just personally, I feel like sitting down all the time is horrible for my health.

[0:10:03] Like I don't feel good. My body doesn't feel good. My brain doesn't fire on all cylinders the way that it should. Would a quick walk or like a 20-minute jog in the morning or lifting some weights in the morning and then breaking them up with activity throughout the day would that offset it, I don't know. I think it probably would. The research that was really interesting on this seemed to indicate that an hour of exercise per day was completely undone by 8 hours of sitting was kind of the thing. You know like your typical disc jockey kind of a gig. That's kind of the best information that we have on this stuff right now. And so harkening back to some sort of Paleo times kind of gig. If you could imagine maybe one day of really heavy duty activity and then a day of lounging around and then a day of kind of moderate activity and then another day of like high activity in the whole hunter gatherer stick, that make sense to me.

Like that kind of make sense. But I think it's, you know, Art De Vany has talked about this stuff. Nassim Taleb has talked about this the fragile versus anti-fragile type of system. I think when we get into a really narrow frequency band, when we never get cold, when we never get hot. You know for me if I'm working on a big project, my day might look like get out of bed, make some food and some now decaf coffee cause I've actually got my cooking tools recovered.

Greg: Bo.

Robb: I know. It's horrible but I actually feel pretty good. And then I'll go sit down and I'll work for 8 or 10 hours on the computer. And I'll try to

get up and stretch and do a little something. But like if I got a deadline I just have a deadline. And then I would be mentally exhausted by the end of the day. Just feel like crap and I don't really feel like doing much exercise or maybe it's got really cold. It started snowing. You know it's 50 miles an hour winds and rain or whatever the deal is. So then I just bag it and I don't really do anything that day. And I think that my physical activity is probably barely above what somebody would be in intensive care unit. Like I'm sitting up but it's not much more than that.

And I think that doing that very often crushes a person and I'm really trying to engineer my lifestyle so that I get up early, I get up with Zoey. She and I hang out. I feed her breakfast. And then I try to get a block of work done and then I'm out of the house. Either I'll take care of shopping. We go look at guns at Cabela's and stuff like that. Like that one is really good for killing coyotes. You know we'll just try to get out of the house. If the weather is good, I'll stick her in a kid backpack and I'll bust up some of the trails that we have right next to the house. But I'm really really trying to not just sit and spin and there's always something I could be doing.

I could be working on the gym. I could be working on the next book. I could be researching or whatever. So there's always something to do but I'm just like enough is enough. I get up. I go do some stuff. And since I've been doing that, I feel a lot better. And it's totally [N=1] observational nothing real scientific about it. But for me it's a real deal like I'm leaner. I have better body comp. I feel better. Life just seems better when I break that stuff up more. Man that was a long answer for a pretty simple question.

Greg: That was pretty epic. But I'll give you N=2. I would say I have a similar experience. I don't know that it's sitting itself that is like the death nail to the healthy human being. But I think it's more that like you said the lifestyle, the habit. So if you're a super active person 6 days out of the week and then say Sunday for example which is usually how it works for me if I'm in town. I don't want to do anything. Honestly, I want to either sit outside if the sun is out because I don't see the sun for six days straight. Usually I'll go like a month without seeing the sun cause I'm locked inside all day long.

So that's like I mean that's like the most amazing thing in the world if I can actually get out there and sit in the sun for 20 minutes. But other than that I pretty much want to sit on the couch and watch like a Law and Order marathon for 10 hours straight. You know what I mean. I don't even give a shit if I've seen all the episodes. Like I'm so brain dead by that point of my week that I just don't want to do anything. Now that being said I think if the rest of my week was arranged in a

bit more of a healthy manner like I wasn't working myself to the point of like insanity then I probably wouldn't do that. I wouldn't want to do that.

[0:14:59] But usually I'm just so exhausted mentally that I literally just want to sit on the couch and drool for 8 hours. And TV is obviously the best way to do that because as I recall I think you burn fewer calories watching TV than you do sleeping. That's how inactive it is.

Robb: Looking at a blank wall earns more cognitive points than TV.

Greg: But that's exactly what I need at that point. But that being said I can't always do that. If I haven't had that much horrible of a week, I get antsy after an hour of no activity like I've got to do something. Even if I have nothing to actively work on, I'll find myself like walking back out to the garage and just like looking for shit that needs to be fixed, because I can't stand just sitting around doing nothing which is probably why I work all day long everyday. Yeah. Just don't sit in the exact same position. You know what I mean. Like move around. Get up. Even if you're watching TV or you're sitting on the couch like get up every few minutes, do a little stretching, do a little foam rolling. And I think even just that really minimal change is going to really minimize of the negative effects of this whole sitting problem.

Robb: Yeah, even in the evening when Nikki and I, we've got Zoey down. We're just kind of winding down. We had dinner. We've got Zoey to bed. I don't know how we miss it maybe because we didn't have a TV for 8 years. But somehow we never saw the dog whisperer and Nikki is all fired up to get a Vizsla and we'll probably going to get one at some point. God help us. It's already won on us the puppy deal. But instead of just flopping on the couch, I'll put the form roller down on the floor and I'll foam roll stretching my hip flexors, do some weighted assistive stretching. You know hanging on to a kettlebell and stuff like that. And if I get tired I'll just kind of flap and relax. But even that I'm making it a little bit more active and a little bit more kind of pre-habby and I feel better. It's kind of interesting so yeah.

Greg: And getting up from the couch to walk over to the freezer to get ice cream and coming back doesn't count. Just so we're clear.

Robb: Damn it.

Greg: Although, maybe you can do some goblet squats with that galloon of ice cream and then you're good to do.

Robb: Instead of it being like what is it Milo where the thing gets heavier it gets lighter as it goes.

Greg: And you just get chubbier and chubbier. Oh boy. Okay. Let's talk about squat speed. Joss says hi Robb and Greg. Greg, in your Catalyst Athletic blog post on 1/10 you post several videos of your student squatting. Most were performing very fast squats. Was that a light/speed focus day or is it how you always train for squats. If the latter, do you find that training for a fast squat at give weight translates smoothly to slower and heavier e.g. during a meet. Anything else you'd like to add on squat speed. Thanks.

Yeah. We always trained squats at full speed. We trained everything at full speed with the exception of occasional slow eccentric movement. But that's really rare for us. The thing with weight lifting you have to understand is that the speed is a huge part of it. There's no such thing as like a slow or a moderate tempo snatch or clean or jerk. The only time that you'll ever see a slow grinding movement is with an extremely heavy squat or clean recovery and that's usually a mistake. You know what I mean. It's not that someone is trying to go slowly it's just the weight is just too damn heavy for them to go fast. And even when you see a slow movement like that you have to understand that that athlete is attempting to still move the weight as fast as possible. And so there's a big difference between going slow because you're going slow and going slow while trying to go fast but the weight is very very heavy.

I think Robb has talked about this a lot with regard to Dr. Hatfield and his compensatory acceleration sort of stuff. And it's the same idea. So does that transfer? Yeah. It's fairly common knowledge in the strength world although it seems to get ignored at all that training fast explosive strength movements transfer very well to slow fast grinding movements. But the opposite is not true at all. If you always train slow, you will not be able to move fast and explosively. But if you always move fast and explosively with reasonably heavy weights, you will also be able to handle those heavy loads. So unless you're working on very specific kind of postural strength issues in a squat for example, you pretty much want to be going full speed. You know one of the cue is you'll hear me say in the gym when people are squatting is accelerate up through it, accelerate through that sticking point.

[0:20:00] They're always trying to go like a fucking rocket coming out of the bottom. It doesn't mean they're going full speed down. That's a different story. But they're trying to go as quickly as they can on the way up and that what's going to help train that speed and that explosiveness, that power that you need for the sport of weight lifting.

Robb: And I think that's a lot of why even though there's much hullabaloo around the utility of the Olympic lift for athletics but I think again and

again and again we see, I just like looking at eastern block, former eastern block where Olympic lift were endemic to every athletic endeavor. Everybody did some sort of Olympic lifted derivative because how beneficial they were because of the rate of force development. And other than power lifting or maybe strong man, all other athletic endeavors you need a large load to be able to develop maximum speed or increase muscle mass like Ben Johnson used to do squat 600 pounds for like five reps and stuff like that.

You know I mean the dude was massively strong and obviously very very fast and had a pharmacist that I would definitely like to have on speed dial at some point but totally different deal. A couple of thoughts on this. We want to be fast and explosive or even big the best way to do that is to activate the biggest motoneurons that we have and you need either a large weight or you need to try to move the weight quickly. And if you do a relatively heavy weight and try to move it quickly then we're getting kind of both those things going on. And that's where I really like the Fred Hatfield thing that was just basically like it doesn't matter what weight you have, move it fast. Always move it fast. And that's all I ever did. And this is where I knew the Westside Barbell stuff is very successful and they do some speed work and that's all legit.

But for me it gets really nebulous like bands and chains and all those stuff versus you just have a load and you try it move it quickly. And I've talked to Welbourn about this stuff and he's like yeah that's all I ever did. It was just take a weight and try to move it quickly. And just on the side on the programming thing this was something that was interesting when I was talking to Welbourn see like as part of his CrossFit Football template with a five rep max or something like that. When he performed the five rep max, it was always with the idea that the weight was still moving pretty quickly. Like it still have a good bit of velocity on it. And so it wasn't a grinder. I think that from a programming and coaching standpoint, this is something to really look at your folks. If somebody is unable to complete a lift relatively explosively and quickly unless you're going for a legitimate limit max then it might slow down.

But if you can keep people an area where the weight is still moving relatively quickly it is much less fatiguing on the nervous system. So this is one of those things as a coach if you look at how people are moving, if they're grinding really slowly you need to lighten the weight. Because they're going to burn themselves out. They're going to blow themselves out. So it's beneficial both as kind of a coaching tool but it's also think it's really beneficial for athletic development.

Greg: One more thing to keep in mind too for example when you're watching videos of weight lifters especially elite weight lifters. These guys trained their whole lives to be fast. They are naturally fast which is why they gravitated toward the sport and had been successful. And so an athlete like that will be able to maintain lifts speed much much longer along the spectrum of weight as well as that spectrum of recovery. So for example, a more novice lifter who is not particularly well suited for weight lifting, you'll see a much pronounced gradient of speed as the weight increases as they get more tired.

You know their earlier lifts are going to be fast. Their later lifts are going to be much slower. A more advanced weight lifter that speed is almost never going to change. So it's very difficult to gauge the effort they're putting into a certain lift because that speed doesn't decrease and that's one of the most visually obvious things to look for. So you got to keep all that stuff in mind when you're watching this stuff. And it's not always what it appears to be I would say.

Robb: Cool.

Greg: Okay. Grip strength as a weak link. Paul says greeting Robb and Greg. I started listening to the podcast this past December. I started around 140 to current then went back and then listen to numbers 1 through 15 or so. If you cover this in an episode that I haven't gotten to then I apologize.

[0:25:00] I'm a 29-year-old, 6'2 tall male whose been eating Paleo plus some dairy and peanut butter for about 8 months and drop 30 pounds. I'm currently around 200 pounds with my final leanness goal around 90. My main goal has been to lean out and get more mobile and agile. What about hostile?

Robb: I like it.

Greg: I recently added more strength specific training to my regular activity. I have found that my grip strength has a quick point in doing deadlifts. My general goal is to be all around functionally strong. For this reason I stop using straps about a year ago. I've noticed an improvement in my grip strength but I still could not get above a 200-lb. deadlift with just my grip whereas in the past I got up to 350 using straps. I seemed to have conflicting goals now being improve grip strength and working on general strength. I feel like using strap would be counter productive to improving grip strength but at the same time I feel that I would benefit from pushing my deadlift higher. Any advice you could offer would be awesome. Thanks.

Well if you're talking about deadlifts specifically that's easy. If you're going to for really heavy deadlifts beyond the point where you can hold your grip, do it without straps until you can't do it without straps anymore and then add the strap and keep continually pushing that threshold. But you also need to add more grip specific work here if it's that much of a difference there.

Robb: I wonder if he's doing a misguided, yeah, not doing a mixed grip. I wonder if he's doing a mixed grip.

Greg: I don't know but training without a mixed grip there's a double pro. A grip is probably a good idea to get...

Robb: To develop it.

Greg: Yeah.

Robb: You know some things that you could do if you have a power rack that you can work out. Actually you don't even need that. You can just pull it off the deck. But even just doing some, you know get 135, 155 something like that, deadlift it up to lock out position. And then just do isometrics on the bar. Squeeze, relax. Squeeze, relax. So you're always going to be holding on to the bar but you increase the tension massive and like Greg said actually doing the double overhand grip would be really good for this just to develop grip strength. And then I've been playing around because we're doing a lot of jujitsu. Taking a hammer and then rotating, getting my elbow at my side so that my arms are at a 90 degree angle and then just rotating a hammer to bring it frontward, backwards, all that sort of stuff.

And I've got a couple of different size sledge hammers and I've been doing a lot of work with that. And it's interesting like I've never really sat up and have done dedicated grip work. I have kind of small hands but my grip strength has always been decent. But doing the grip work I feel like everything else does better. Like it's kind of remarkable and I've heard people talked about it and I've been too much of a weenie to actually do something about it. Like getting some of the captain of crush gripper from...

Greg: IronMind.

Robb: IronMind. Yeah. If you do a little bit of googling on grip development, there's a zillion different ways to do it. Getting a bucket of white rice and sticking your hands in it and squeezing the rice and extending them. Cause its also smart to work the extensor in your grip just for some balance on that so you don't walk around with hooks like some sort of serial killer so. It definitely makes sense to do more grip

training. And I'm surprised like a 200 deadlift should be inconsequential on your grip. That's curious for me. Yeah.

Greg: Yeah. I would add in. Do some farmers walks. Try to do deadlifts with different diameter bars. Do double pronated grip, thumb-less grip from time to time. You can even do finger curls on it. So like Robb was saying doing the isometric stuff. But you can also uncurl your fingers a little bit to let that bar roll down to the tips of your fingers, roll it back up, hanging from a bar especially with one arm. You can even do your kind of crush grip isometrics with that. The spring gripper things are great. Those are all simple. You can just leave them in your office wherever you're sitting around and doing nothing and work on those. Yeah. Like Robb said there's a billion things you can do and it's pretty much all out there on the interwebs for the picking.

Robb: Okay. Coder Rock says I've just started on your book and was wondering if there's anything in there that you've since found to be incorrect or just not the best information on that subject in the 3-ish years since it's been published. I'm trudging my way through the backlog of podcast 2, somewhere in the 60s now. Thanks to you, Andy and Greg for all the work you've done to help people get healthy.

Greg: Our honor.

Robb: You know it's funny. Writing a book was way harder than what I thought it was going to be like way way more difficult. And I had some good help. Greg was some good support.

[0:30:00] Actually Andy back in the day was really support on getting the book just like outlining it and stuff like that. But it ended up being way more difficult than what I thought which is part of the reason why I've been seriously nervous about doing another book. It's like literally for me getting locked in jail. But it was fascinating like literally the day; so at some point in the writing of the book you just have to cease looking at other research. I outlined all the chapters I was going to do. I have the supportive research for each one of the chapters and that was in. And all of the new research that comes into my inbox daily, it just went into a folder and that was it. Because you just have to draw a line in the sand at some point otherwise the project will never get done. But you know as the book was being put to bed and it was off to the printer, I started looking at things I'm like oh wow that's interesting. I would like to include that.

So I mean literally within days of the book being put to bed I was like I would probably tweak this a little bit and add that. So out and out error I would say that my recommendation originally for very high fish oil was wrong and I was pulling some information from Barry Sears,

from Charles Poliquin. And I had not ever stopped and thought about okay how does the body actually accrete this long chain omega-3 fats into cells. And that's really the important thing here is that these long chain fats need to actually make their way into the cell membranes of all of your cells potentially so that they can actually have some effect at a local level. This thing doesn't have like an antiinflammatory effect necessarily on like a systemic level until you have populated all of these cells and they're actually producing eicosanoids and cytokines and leukotrienes and everything in a more kind of favorable pattern.

So the idea was that people and you know it's interesting we have a question about fish oil here in a little bit and the link actually ties in to this very well. The assumption was that we know that people had too much omega-6 in their system. It was pro-inflammatory. It was causing problems. We dose them really heavy with fish oil and it would drop the inflammation and it would make the transition to Paleo easier. People will lose weight more effectively and stuff like that. But at some point I forget if it was Chris Masterjohn or if it was Stephen Phinney but somebody got in and look at the rate limiting step of actually adding these fats to our cells and it was on the order of maybe like 2g to 5g a day was the most that you can consume orally and then expect that to in some reasonable fashion make its way into the cells of your body and taking in more fish oil than that or just omega-3 in general.

What that did is it introduced some additional oxidative stress on the body. This stuff had to be processed by the liver. It was burn preferentially. There's a lot of reactive oxygen species generated with that. So I would say that that was an unfortunate swing in the mist but a lot of people who are reasonably bright got that one wrong as well. Kiss-assing aside. There are some serious dicks out in the interwebs that do not a fucking thing other than snipe from the peanut gallery. They've never generated anything. They've never created a manifesto and said this is what I believe. You know sitting down and actually putting together even if it's just a long e-book or something like that it's fairly involved. And at the end of the day you'll probably going to end up making a couple of mistakes or some of the assumptions that you've made are going to become out of date and is going to require some updating. And I've always been pretty forgiving on this stuff so long as the person like Mike Eades, like he's always have this caveat in his books.

You know if we get better information then I reserve the right to change my opinion on stuff and that all seems pretty reasonable. But there are some people that are just fucking dicks. And they would never ever say the stuff that they say to my face or other people face that they would say on the internet. Because I would embed as many

of their teeth in my hand as I could with some of the shit they say. So that's thing. The vitamin D recommendations and there's been a bunch of drama and gnashing of teeth around that. I'm still dead certain that vitamin D is really really important, really really critical for some situations. I think that supplementations maybe like the bestest or the way to get it for some people. But I'm leaning more and more towards this idea maybe even some sort tanning exposure with a mix of UVA and UVB lights three or four times a week, maybe 2 to 5 minute a shot could be a better way to get your vitamin D.

[0:35:02]

Because we make all of the intermediary secosteroid that are produced as part of vitamin D production. We produce nitric oxide. We produce endorphins. So if I were to modify that I would maybe explore the potential that safe reasonable sun exploration and possibly safe reasonable tanning exposure could be a better way to get that stuff. And this thing I'm really, I'm really pulling a huge caveat like I don't know for sure than any amount of tanning is safe. I've talked to a lot of different people and some of the docs that I really really respect they make the point that the damaging effect of UV exposure is burning not ramping up in a reasonable fashion. And there's great epidemiology for this. There's good mechanistic data that support this. And everything that we see in the tanning literature I have never been able to find any attempt for the researchers to quantify how long people in tanning booths.

It's just they went or they didn't go and that could be like a 5 minute exposure or 40 minute exposure. You know the person could come out with a slight bit of tan with the intention of just generating vitamin D and feeling better or they could look like a leather handbag at the end of the whole thing. So it seems like there's a huge gap in our knowledge there and I'm leaning towards that. But it's with the caveat that I don't know for sure. There's a lot of unknown. I mean obviously melanoma is not the most benign thing in the world. So I do all that with a caveat in that regard. If I had something that I would modify today with the book I talked about the neuro regulation of appetite but I would make that a much larger central feature of the book. Like I talked about it but I would expand on it dramatically and actually make that much, actually when I think about it, I did a reasonably good job especially when you consider it's almost four years ago that the whole thing was being written.

But you know if I did a second edition of the book I would really expand on my greater knowledge of the neuroregulation of appetite and how important that it. Explaining to people like if you have weight problems part of the reason is that your eating foods or you have a lifestyle that is damaging the neuroregulation of appetite otherwise you wouldn't overeat. Like our bodies are usually well attuned to the

amount of calories going in and out and the activity levels and all that stuff. And we will eat to meet that. And there's an additional piece to that. The work that Matt Malone has been doing it would seem to indicate that nutrient deficiencies definitely lead into greater calorie consumption because if the body senses that it's deficient in zinc or selenium or whatever we will tend to not feel full.

So it's not just the protein, carb, fat. It's not just essential amino acids. It's another layer of this over nutrient deficiency or eating food that are devoid of nutrients like highly refined carbohydrates and stuff like that. They actually remove nutrients out of the body. And so you actually want to eat more. And they affect insulin and they affect Leptin which all those things end up, deep impact on all those things. All those things affect the neuroregulation of appetite. So I think I would integrate like nutrient density neuroregulation of appetite in a much larger way if I ever did write a second edition on the book.

Greg: All right.

Robb: Now I talked about I don't need to do it.

Greg: Exactly. Okay. Here we go. We got fish oil question.

Robb: Yeah.

Greg: Yeah. Damien says hey guys love the podcast. I struggle with staying 100% Paleo but like the results when I do. I do CrossFit 4 days a week and I found that I had to add regular potatoes to the mix to have enough energy to complete the workout. I'm not sure how much harm I'm doing by doing that but found it works. Anyways, I'm not sure if you have considered this or cover this on the podcast because I haven't listened to every episode. I started using the omega-3 from stronger, faster, healthier and I was wondering if you could address this article for me and of course there is a link.

Robb: And you know it's good article and ass kissing aside again as always if you're a lean hard charging not metabolically broken athlete potato, sweet potatoes, plant teams. You want to do some white rice, do some white rice if it sits well with you. Hard training athletes need carbs. And send hate mails to greg@catalyst, no, I'm just kidding.

Greg: I'll tell you. I'll give you an opinion. Go ahead and send it.

Robb: So this link is a Global BC, it's a kind of a news gig. And fish oil supplements may do harm than good, UBC researcher find.

[0:40:00] It sucks because it's actually a well written article; it's just the title blows. What they boil the whole thing down to is that people are so

sick, inflamed, and full of vegetable oil both omega-3s and omega-6s that the addition of more polyunsaturated fat via fish oil instead of it having an antiinflammatory effect because of the pro-oxidative nature of fish oil under the best of circumstances but this is undoing any potential benefit. And so instead of saying we need to change our diet and get the shitty oils out of our diet then they say fish oil is bad. It's just typical news stuff. Again, I would be happy to pull some teeth with my knuckles on some of these people. But there are some great lines in here. There's no magic pill to fix a bad idea maybe they're talking to one of the researchers.

Let's see here. In fact, recent researches link excessive levels of omega-6 to colitis, insulin resistant, diabetes and obesity. People intent to balance omega-6 levels with omega-3 supplements may be damaging their health. Again it's more of what I talked about before. There was a time where we thought okay if somebody is inflamed and we know that part of the inflammation is a bunch of refined vegetable oils if we can counter that with some supplemental fish oil then that would be good. Unfortunately that didn't work. It's just potentially introducing a great oxidative stress. They even mentioned in here that over the course of time, we've decreased saturated fat typically from animal products things like lard and bacon and butter and we've increased polyunsaturated fats particularly short chain omega-3 and omega-6s by eating more vegetable oils. So, it's actually a pretty damn good article. It's just the title is just annoyingly stupid. It's red. Its red I tell you.

So gosh I had one other thought but, oh Matt Malone has been talking to me about it looks a lot like just making sure that you get enough DHA and arachidonic acid like that's really what the body wants. And it's easier to retro convert DHA to EPA and arachidonic acid to its shorter intermediaries which I forget which those are right now. But focusing on things like organ meats you know grass fed meat, grass fed butter all that sort of stuff. Things that are rich in especially DHA seems to be a lot better. And that can actually offset to some degree a little bit of this oxidative stress because you need less of the DHA to kind of do the things that we need to do within our body. But again it looks like a pro-oxidative state, bad diet, lots of short chain omega-3 and omega-6s, inadequate sleep, high insulin levels, lots of refined carbs. That is a bad combination to just throw more highly oxidizable products into the mix, shocker, especially fish oil. Yeah.

Greg: Shocker. That they had to write an article about that.

Robb: Yes. Yes. Again it's a good article. It's actually a good worthwhile article to ship around. But what's unfortunate is the focus really

shouldn't be especially on fish oil doesn't work. It should be our diet isn't working. Let's fix the diet and maybe have a little supplement fish oil and we should be good to go.

Greg: Yeah. Okay. Well maybe we can add seal oil instead. Ross said.

Robb: Yes.

Greg: Hey, Robb, I just recently started listening to your podcast. Really digging it. As a biology major and biochem minor I appreciate your scientific approach and the lack of cultist creepiness that I've seen from other Paleo blogs. We just have non-cultist creepiness.

Robb: Exactly.

Greg: I've been eating Paleo for a year now for body recomp and health purposes. I've had asthma, eczema, etc. The whole atopic march. I've also had chronic insomnia and numerous nagging injuries from high school football. Well many of these issues improve when I started eating largely Paleo. I could hardly call them fixed. About a month ago I discovered seal oil as an alternative source of omega-3. I've been taking fish oils already but I decided to try it based on mainly Canadian testimonials and about four studies I've found demonstrating its superior absorption to cod liver oil, tuna and I think salmon oil.

Within the week I was sleeping through the night and all my other issues are now all but gone. I've been taking this supplement about a month. I take 2 tablespoons a day same as I did for the Carlson fish oil I used to take. This gives me less total omega-3 but I'm finding it to be much more effective against inflammation which is basically the recurring theme for all my symptoms. My understanding is that seal oil is more effective either due to the higher DVA content or more likely I think because the omega-3 fatty acids occur on the SN1 and SN3 position of the triglycerides same as they do in humans.

[0:45:00] Apparently, in fish they occur in SN2 and this makes them harder to assimilate or so the seal oil company say. Either way I've seen great results from this supplement and don't intent to stop using it. I'm still curious to hear your opinion though and whether you've had any experiences with the supplement as an alternative to fish oil. Maybe some people who don't absorb omega-3 to fish oil as well would do better on this. What are your thoughts on seal oil Robb?

Robb: Hmm.

Greg: I just have to say I love "I don't intent to stop using. I'm still curious your opinion though." That pretty much sums up almost everybody's

request for advice. I've already made up my mind but I like to hear what you have to say.

Robb: And hopefully it supports what I'm up to. This is really interesting. I've always been under the assumption that most of these triglycerides are a bit of a random mix. So a triglyceride is the glyceride back bone and then fatty acids get attached to the three carbons on the glycerol backbone. And I've always been in the assumption that it's somewhat of a randomized mix as it comes out. And what's his name Ross. Ross said that there's something that indicates that fish versus mammals maybe have different amount. That's intriguing to me.

So I did some poking around on that but I didn't find anything specific. It could definitely have a higher DHA content. I mean to some degree I guess the fact that you really legitimately feel like its working better like that's intriguing. It's really hard to argue with stuff like that just as a baseline like I'm not sure what else to say about this. Right now, I'm suspicious that there's really that much of a difference in the actual triglyceride makeup of seal oil versus fish oil versus cod liver oil or whatever.

Again, I'll reserve my right to be wrong on that and not be publicly crucified for it. So I'll do some poking around on that. But I'm honestly a little surprise and I think seals weren't doing all that well ecologically but maybe they're doing fine. I don't know. So I guess just from that. It seems like a harder sell. Like seals were actually pretty cute. I don't know.

Greg: Is it clubbed free seal oil or is it all freshly clubbed baby seals that they're extracting the oil from.

Robb: Yeah. As long as its baby harp seal then I guess it's fine.

Greg: Michael says Robb, Greg I was watching a YouTube clip of Dr. John Crisler, sorry I don't know what your name is, speaking about growth hormone. And he mentioned that high fat intake around bedtime inhibits growth hormone production. Is there much merit to his statement? I reason I asked because I have found that eating a fatty meal with protein ear bedtime helps me avoid waking up at 3 a.m. due to blood sugar crashes. Is there is some potential for a worthwhile improvement via an adjustment in macronutrients, would I be better off with eating a half a pound of lean meat as my bedtime snack and he's got a link to the video.

Robb: So if you have elevated branched chain amino acid, elevated glucose or elevated free fatty acids, which is basely protein, carbs, fat, all of those suppress growth hormone. Growth hormone is released under

intense exercise. You can get some growth hormone release from strength work but it's primarily from lactate driven exercise and that is most potent when the exercises of a noble variety once you've acclimated to a particular type of exercise and you tend to get less hormone signaling. And another spot that we see a lot of growth hormone released is fasting. So it's not particularly surprising that a high fat meal is problematic here.

This is something that Kiefer talks about a little bit with a whole carb back-loading gig in that he recommends a more actually a higher glycemic index, higher insulin index type of carbohydrate eaten as last meal because it actually clears out of the system. Blood sugars go down to a base level. Triglycerides go down to a base level and then we enter kind of a little bit of fasting state then you should be able to get a little bit of that growth hormones signaling in the evening. There's a lot of back and forth as to whether or not how potent or important that growth hormone signaling is for a variety of things. But I do tend to lean a little bit towards the notion that it is important for a number of processes and part of that is just like the growth hormone production is so damn high in puberty.

[0:49:58]

And it seems like as people age high DHEA sulfate, high growth hormones and that's true whether male or female so we'll just look at that. We won't even consider like testosterone or estrogen. But people who aged well tend to have high relative releases or amount of DHEA sulfate precursor for androgens and also a good growth hormone signaling. So I think some thought given to how you could enhance growth hormone signaling 2g to 4g of arginine before bed seems to have some decent effect on growth hormone. If you're having blood sugar crashes in the middle of the night, I would not eat just a hunk of meat particularly lean meat. You produce some insulin. You produce some glucagon. The glucagon releases some hepatic glucose but the net effect of just simply eating only lean meat can actually be even lower like blood sugar levels, not always but it definitely can be.

I look more towards partitioning the bulk of carbs towards that evening meal, try to eat that meal three maybe four hours before bed and then your hepatic glycogen is top off. It won't be really stressful event for the liver to kick a little bit of glucose into the blood stream to keep things at a nice level while you're sleeping and should help you sleep too. Since I've really been actively doing this I definitely sleep better. Like I used to partition carbs earlier in the day, I'd been partitioning later in the day and I definitely feel like I sleep better.

Greg:

Cool. Okay. What's next? Counteracting lead exposure. Jen says I have consistent exposure to lead solder fumes in my current occupation.

My exhaust fan merely vent the smoke away from my face and further out into the room. And like a dummy I do eat and drink while working since there is really no practical way not to. I picked up a selenium supplement after some recent dental work, removing a cracked mercury amalgam filling and sadly replacing it with more mercury. I've continued to take it because you mentioned in passing on a previous podcast that the selenium could also bind lead. Could this be helpful? If so, how much selenium should I take?

I'm currently taking the "bottle dose" 50mg as high selenium yeast in a tablet which also contains 51mg of dicalcium phosphate. I take it in the morning on an empty stomach since I don't really know what the protocol should be. Also on a related note I'm still carrying quite a bit of excess fat. I'm 5'2 woman and weigh 165 lbs. The changes that I've made in my diet and lifestyle had not led to fat loss and I have some next step in line. However, should I actually be avoiding rapid fat loss because of lead stored in my body fat? If I ever do start losing fat, should my protocol for lead management change. How long do I need to continue to be weary of this once I ultimately change jobs? Other info, my diet is supermarket source Paleo plus very rare dairy with probably too many nuts.

I do eat some cane sugar. I also typically drink about 8oz. of red wine on days I don't have training in the evening. I play roller derby and play do sports specific training 3 to 4 days a week plus foam rolling stretching and yoga for mobility. I also try to take a daily walk at moderate pace. On addition to the selenium, I supplement with 5000 IU of vitamin D. I sleep 7 to 9 hours a night leaning towards 9 but sleeping after practice is a challenge. I did really try to search your site and also doctor Google until I realized, remembered that the word lead is also homograph for the common verb. Yes, that didn't work out too well. Thank you so much for everything you do. Okay.

Robb: Holy smokes. Let's see here. So the main activity of selenium is that it mitigates absorption typically on the gastrointestinal side but really largest effect of selenium is that it minimizes the oxidative stress which lead tends to cause both in the liver and the kidneys. So that's the big feature which is really really good. And then our body does have some natural detox pathways which if you're getting adequate protein, it does excrete lead. It's just you know it's a rate limited step. So the question there is are you taking in more lead than what you're excreting.

This is something like getting a hair sample, some other testing that really get a baseline of do you legitimately have some lead exposure, some lead accumulation going on. And if you do, I would get some sort of like when I was doing a [gross] anatomy I would wear the

reasonably expensive \$750 for a super good filter, you know, face painter. I could make a pretty strong argument for using that. I'm actually shocked that you're working with lead fumes and the fume hood just vent it back into the environment there instead of pumping it out of the building.

[0:55:03] That's actually pretty surprising. But the question about fat loss this similar when people typically vegetarian get their panty bunch taking fish oil because of their perception of lead or mercury in the fish oil. Lead and mercury associate with proteins and associate with proteins in a wickedly strong fashion. They don't associate fat really at all. You have to be a really good organic chemist to grow some way to get lead and mercury associated with fat. So if you want to tackle a good fat loss protocol I don't see a concern from there.

There is some indication in literature that we can store some other soluble toxins like dioxin and stuff like that in the adipose tissue so doing some liver support milk thistle extract Silymarin, Alpha Lipoic Acid. All that stuff makes some sense if you're going to do that and all those things are actually very helpful in general like kind of liver detox, so not a bad idea there.

Greg: Seriously dude. Do you work for union carbide or something like what is going on?

Robb: In India no less. Yeah. Yeah.

Greg: Okay. Cortisol adaptation from combat. Jack says Robb and Greg praised be to John Moses Browning that you two are willing, able to help the rest of us. Thanks for the continued great information. In recent years I've experienced some super happy fun times in Iran as infantryman and designated marksman in the army. I saw the effects or cortisol daily and I'm sure it helped me somehow but it also helped me get fat up to 260 lbs. I seemed to do well on a Paleo diet and feel better than I ever have. I'm 28 years old, 6'5", 220 and trying to get full blood panels and body fat tested all in good time.

I also have a very high level of stress in my life but to sleep a lot and supplement as well as I know how. I seemed to handle that stress very well. My question is this, does continuous exposure to intense stress such as kicking in doors or being showered with bullets, not sleeping well, poor diet, etc. yield any long term side effects or possible adaptation. I know many of your clients are bigger, bad asses than I ever was so I hope this is a worthwhile topic. Thanks for everything and I hope to figure out whether I am lucky, normal, broken or what have you.

Robb: From Rainy Pass Washington no less. Well I got to say training people in the gym no matter how much the beat down is I would say is probably significantly less important than breaching a door and potentially getting shot. So props to you for doing what you did or do for us. You know I would check out a website and a guy the website is killology.com. This is Lieutenant Colonel Dave Grossman website. He's written a ton of books like the psychology of stress in killing on combat on killing. He's been nominated for a Pulitzer Prize on this stuff. I had a really huge honor of speaking with him at a couple of military gigs that I've done and the guy is amazing, amazing. And he makes a point that stress is very different depending on the individual. Like the kind of mental attitude that people take into it.

A situation can be critical in how they deal with things and people. He's made the point that you can have somebody who is mentally tough but also in touch with their feelings. They're not stuffing and repressing. They see some sort of horrific event; they go through a horrific event. It's going to affect them but a lot of what's important with that is the support structure that's around people in allowing a person to just kind of process and vent in the way that they need to do that and to make the process okay. And so it's really important to have both mental toughness and the knowledge that you will get through whatever it is that you're exposed to. It may be some dark times. It may be some rough stuff. It may be a little bit of counselling and therapy and what not.

But most people if they are given the tools going into event and the tools out of the event are able to go through things. Some people and you know Poliquin talked about this a little bit. Some people and I think that these are the folks that really make it through the special operations selection processes. They actually select someone who is a complete [pud] like me would go through, you know a seal training go through BUD/S and my testosterone would crash, my cortisol would plummet. I would be a wrecked at the end of this thing. But a lot of these people at least in the early stages their testosterone actually goes up. They actually get kind of enlivened by the stress. I mean in a legitimate adaptive physiological way. But there is a breaking point for anybody.

[1:00:00] So depending on what the situation is, even if you are very very adaptable to stress there is some dose that is going to break you. And it can cause HPTA axis problem, hypothalamus, pituitary adrenal axis issue. It's really interesting and hopefully in the next couple of years I'll be able to talk about this stuff in a little bit more depth. Right now the big picture piece is that we know that stress whether its sleep deprivation, whether its bad food and gut irritation or whether it's over exercising that can cause some problems on the HPTA axis and

can cause hormonal deregulation and you just feel bad. Your immune system doesn't function well, all that stuff. But then there's a head trauma element to this.

In the military you can have head trauma so many different ways. Really high acceleration parachute deployment can cause snapping around the head that basically cause head trauma. Firing a 50 caliber gun, the German anti tank gun I'm forgetting the name of it right now. But you're only supposed to be able to fire one of those as week or something. They'll go out and practice and fire two or three of those in a day. But when you fire those things it is like being a ground zero of an explosion like you just launch something that required a large explosion to launch this huge shell just from like a shoulder launch deal.

This thing causes a bunch of head trauma. And what we're seeing is a clear hormonal dysregulation because with that head trauma then we get a break in the normal signaling with the brain and the rest of the endocrine and neuroendocrine system. So there's a lot of stuff that can go haywire. So depending on the degree of physical trauma, the degree of psychological trauma, the degree of sleep deprivation and everything there are things that can definitely mount and create a problem that is very difficult to overcome unless you can track down a good functioning medicine doc.

And check your thyroid, can check your cortisol levels, maybe even some brain imaging to kind of see what's lighting up and what's not lighting up in the old noggin. And then there are some strategies for dealing with that and antiinflammatory Paleo diet, some supplements like, gosh Greg what's the one that you use for cortisol, holy basil?

Greg: Holy basil.

Robb: Some holy basil, phosphatidylserine. Those things are really helpful and also just having a good functional medicine doc that say like you've got a flipped cortisol pattern. Like finding an individual that knows how to treat cortisol and also thyroid dysregulation, but treating it in adaptive way and not just a suppressive way. Like those things are really really helpful. And might buddy who is an expert on this stuff he finally is out in the military and we're going to have him on the podcast soon and we'll be able to talk about this stuff a ton. You know check out killology and the references that Lieutenant Colonel Grossman has on there. He's a brilliant guy, really accessible information.

It sounds like you're doing some good stuff already but thinking about some holy basil. Getting baseline test like your ASI test and getting an

adrenal or thyroid panel with that. Make sure the ASI is very comprehensive. So the 3 or 4 point cortisol throughout the day, androgens including testosterone and estrogen, DHEA sulfate, and really about as big a picture as you can get on that. And then a thyroid panel, TSH, T4, T3, reverse T3 really thorough on that. And use that as a baseline. And if you see anything squirrely then we'll know a good direction to go to start modifying some things with that. If it's not squirrely, its just nice to have a baseline and then you check that maybe every year or two years or if you sleep gets squirrely, if you start getting cold and lethargic, you start getting body weight or whatever then you got that baseline in your medical history to be able to make some informed decisions about okay for some reason the thyroid is a dysregulated and cortisol is high so we need to start dealing with that.

Greg: Sweet.

Robb: Is that everything?

Greg: That's it.

Robb: I do it all.

Greg: That was a pretty big one.

Robb: That's a biggie. It was action packed.

Greg: It was.

Robb: There was a lot of fluff on that.

Greg: Okay. Well any final thoughts?

Robb: I don't think so. I don't think so. We've got some guest brewing. We won't say who just because a number of these had fallen through. But we have some cool guest waiting in the wings so we'll have some cool stuff with that. Greg got his projects that I'm sure is screaming towards completion and we'll learn about those soon.

Greg: Yes. One of them I announced we're putting on a documentary on weight lifting in the US.

[1:05:04]

Robb: Right.

Greg: So that's definitely circling towards completion. Although, you never know how many rotation you can get out that. So we'll see.

Robb: Sweet. We'll talk to you soon and I guess that's it.

Greg: All right, dude.

Robb: All right G. Take care man.

Greg: See you.

Robb: Bye.

[1:05:26] End of Audio