

# Paleo Solution - 195

[0:00:00]

[Music playing]

Robb Wolf: Howdy folks, Robb Wolf here. Greg Everett in the house. Episode 195 of the Paleo Solution podcast. We are double bagging it just in case our primary recording record method with Garage Band does not work. So dude, what's going on?

Greg Everett: Fucking making movies.

Robb Wolf: Sweet.

Greg Everett: That's pretty much it these days.

Robb Wolf: Is this like the porn show that ended up in a crossfit gym?

Greg Everett: [Laughs] No, it probably won't be as popular as that. It's just a movie about weight lifting.

Robb Wolf: Okay. Oh well. Are there chicks in this weight lifting movie?

Greg Everett: There are but they do have clothes on. Not that that stops all the virgins on YouTube from leaving appropriate comments ever but you need to --

Robb Wolf: So true. Oh man. Every once in a while you know I --

Greg Everett: Does she have a boyfriend? Even if she didn't, it doesn't make a difference for you.

Robb Wolf: Yeah. Oh man, I had some sort of piffy remark but I'll just keep it to myself so. So what else is new? You're working on the movie what else is cranking along here?

Greg Everett: Oh, boy what else is cranking along. That's pretty much it right now. That's keeping my plate pretty full other than coaching some weight lifters and what have you and keeping up on the day to day.

Robb Wolf: Sweet, sweet. Well maybe that's a good lead-in for podcast sponsors which we'll talk about the paleo or the Performance Menu first, not the Paleo Solution. Performance Menu journal of nutrition athletic excellence, 30 bucks a year gets you the monthly subscription.

Greg Everett: It gets you in the door.

Robb Wolf: It gets you in the door. It's very, very good. You can download this stuff on a variety of different platforms but for the hundred dollar a year subscription, you get all of the back issues. You get a 15% discount at the Catalyst Athletics store?

Greg Everett: You bet you.

Robb Wolf: And what else? What else do you get? You get something extra.

Greg Everett: You get access to everything and you get a 15% discount.

Robb Wolf: Dude, there you go.

Greg Everett: That's all it is. And you know what we did just what is new over at the old PerformanceMenu.com is with this new site, we've always allowed you to send individual articles to your kindle but now you can send the whole damn issue in one click to your kindle.

Robb Wolf: Wow.

Greg Everett: If you so choose to use such a device, you may now use it even more efficiently.

Robb Wolf: Nice.

Greg Everett: Than ever before.

Robb Wolf: The Performance Menu making your lives easier folks. Keeping you educated on nutrition and athletic excellence so check that stuff out. We always have links on the download page on RobbWolf.com for the podcast. WellFoods.com or WellFoodCo.com even though the name of the company is actually Well Foods not dissimilar from FrontDeskHQ.com which is not really the name of the company but you know URLs are hard to come by these days folks so you do what you can. But Well Food is your solution for tracking down tasty snacks. We have some cool MRE replacements coming out with that. I think I mentioned on the last show Well Food has kind of drawn a line in the sand and we are only in the future going to offer grass-fed only GMO 100% certified GMO free, 100% organic. So we're moving the whole company that direction. Costs a little bit more but damn it you get what you pay for folks so --

Greg Everett: Indeed.

Robb Wolf: There you go. WellFoodCo.com, go buy some chow. I think they've got some sort of free shipping for over \$100 order or something like that going on right now so check those guys out. FrontDeskHQ.com, your mobile-based solution for service based businesses. There are all kinds of people using FrontDesk now, music teachers, dog walkers, yoga folks, hair stylists, Dennis even –god there was something really, really random. It was an adult knight court. So you know, like Judge Harold T. Stone like knight court kind of gig but apparently they need some

[Crosstalk]

Yeah they need some sort of scheduling software and so they, Front Desk received an inquiry from a knight court from a municipality and they said would this work for scheduling people to come in for court and they're like yeah, absolutely, you know, and it's mobile so they can send updates when you know if a slot opens up and stuff like that. So super cool to run a gym, yoga, Pilates, auto mechanic, anything you can think of where you're interfacing with the public service based deal, Front Desk might be for you.

[0:05:07]

And then finally the Bunny Ranch, BunnyRanch.com, Dennis Hoff, porn chicks, hookers, it's awesome. We've only got Dennis in there for a couple more weeks or so because we've got another sponsor coming online here before too long so.

Greg Everett: Nice.

Robb Wolf: You know, get whatever you're going to get for those gals and then get going.

Greg Everett: I think that's the idea.

Robb Wolf: That pretty much is the idea. Yeah.

Greg Everett: Okay.

Robb Wolf: And a nice transition from that...

Greg Everett: Yeah. Should we talk about offal now?

Robb Wolf: Yeah, absolutely.

Greg Everett:

What else will we want to talk about? Laura says:

"I am really enjoying my paleo lifestyle and I do have a question ...

Do I really have to eat "offal"?

I have been vomiting up liver since childhood and I really can't stomach even the thought of any other type of offal.

I have been talked at incessantly regarding my lack of full paleoness.

I recently read "The Seven Shades of Paleo" which I found very informative and I have decided that there is an 8th shade and that is those of us who are allergic/intolerant/can't stand certain paleo food.

Thanks again for being so brilliant at seeing the wood for the trees.

You are a very good writer. Thank you." She likes you Robb.

Robb Wolf:

I'm honored. Thank you. Thank you. Yeah. I was yeah going to do some sort of good, free Bunny Ranch analogy but I'll just let that one slide too.

Greg Everett:

No need.

Robb Wolf:

Yeah no need because I pretty much already did. Gosh, you know, the offal deal so if you check out some Chris Master John stuff he makes a really compelling argument for getting some things besides just organ meat. Like some of the integument you know, the skin, the guts and gizzards and all the rest of that stuff, it tends to have a different protein profile. You have more glycine. The glycine ends up being important in the recycling of glutathione. So I mean there is some argument for that but maybe you know instead of liver you just need to do some chicharones or something like that which are quite delicious honestly, you know, people are going to freak out even worse now than the fact that I recommend bacon. Tequila occasionally and it's not even that it's necessarily recommended but I just can't find any huge compelling reason not to have a drink once in a while and maybe have some bacon with breakfast occasionally so or daily as the case may be.

But at the end of the day I don't think you're going to keel over and die if you don't have heart, brain, kidneys, skin to balance all this stuff out. Could we find ourselves in a situation in which we have some minor issues that could go moderate like could you increase your oxidative

stress in this scenario, could you find some imbalances on your amino acid pool? Yeah maybe but in the grand scheme of things like I kind of look at this as kind of like peeling the onion kind of analogy. The first couple of layers of just generally avoiding refined foods, avoiding gluten, getting some good sleep, make sure your vitamin D level is good because you're out in the sun, eat some probiotic foods like just some low hanging fruit, some stuff that we know you know, pretty much across the board is going to be good for everybody and we don't have to get too out in the sticks with the whole thing. Then you start thinking about the offal deal it's like okay do I eat some heart, do I eat some liver, clearly you're not a fan of liver. Maybe you could make some bone broth even though I was just beaten on bone broth because it all it is is fucking soup stock. You know, I mean --

Greg Everett:

Which is delicious.

Robb Wolf:

Which is delicious. And you know, I use it constantly but part of the reason why it just makes me chuckle is I've always taken all the like veggie trimmings, all the bones that I've had for years and I just throw them in a big bucket in the freezer and then when the thing gets full, I pressure cook it and put just like a table spoon of vinegar in with it to help catalyze the breakdown of the collagen and dissolve a little bit of calcium into the matrix and the stuff comes out more like a sludge, a gel than it does any type of classical fluid in physics terms. So it's a non-Newtonian fluid is what it is folks but it's you know, that might be the soup stock bone broth deal might be your kind of get out of jail free card in this whole story because it definitely enhances the flavor of food. I think it's doing good by like you know eating the whole animal kind of gig and then you could leave all the tripe and liver.

I eat pretty much everything except the kidneys. I've tried and tried and tried to figure out the kidneys but something that filters urine oddly enough it's hard to get that urine smell out of it. It's actually easier to dress up intestine and stomach down the road than it is to fix the kidneys and if you have outstanding kidney recipes, you're welcome to keep them to yourself. I'm not interested so thank you. Gregg, any other thoughts on offal?

[0:10:16]

Greg Everett:

Not at all. I mean definitely I'm someone who's not a huge fan either and I'm not concerned about my premature death because of it.

Robb Wolf:

Oh and pate, turning liver into pate. Like you find a really good pate recipe and you can tweak it and modify it a little bit but that's a way that

I've found a lot of people are able to get a couple of good tablespoons of liver down the pie hole ever so often.

Greg Everett: Someone had a question a couple of weeks ago about liver tablets, didn't they?

Robb Wolf: Yeah. Yeah.

Greg Everett: Desiccated liver. So you can just go to old school builder route if you're dying to get some liver and you can't stand to eat it.

Robb Wolf: I think that was the episode that we ended up not successfully recording and we had like a super --

Greg Everett: That's a good chance of that.

Robb Wolf: We had a really detailed answer on that one too and then when we get back to that when we're going to be like desiccated liver tablets bad idea, next.

Greg Everett: Yeah. Oh, okay. Speaking of bad ideas Test Tube Meat. Chris B says:

"Just wanted to get your take on test tube meat that's in the news now. Do you think it could be a solution to people getting high quality meats with good nutrients?

Here is news story.

Robb Wolf: Lordy. You know...

Greg Everett: I'm just looking at the URL. Hold-monday-morning-lab-grown-beef-vegetarians-might-not-eat.

[Laughter]

Robb Wolf: Yeah the URL is pretty badass actually. Gosh, you know, when this came out, I was deluged on Facebook and Twatter and everything else about this and I just kind of hunkered in and went fetal and was hoping that I wouldn't get dragged into pissing away a day addressing this on a blog post so a podcast I guess is a better, more time efficient place to go with this. You know, so a couple of things are --

Gregg Everett: I don't think fishing is the right word to describe our podcast.

Robb Wolf:

Yeah, yeah maybe not, maybe not, yeah. We're actually increasing the entropy of the whole universe doing this thing but so like at a vastly accelerated rate. But you know, could you grow in a lab some protein source. Basically what they do they take some tissue culture from a live critter and then they start growing it in tissue culture. They've done stuff like this for burn patients and this is some of the kind of the direction of the technology of like regrowing organs which is actually very promising. There is some very promising like biomedical elements to this type of thing.

But then you know, so to answer the question could you grow some healthy beef type product out of this stuff, yeah I think it would probably be healthy enough. You could spike the nutrient matrix with things that would make the amino acid profile legit. It would have the fatty acid profile legit. You might even be able to get a situation where it's got some CLA so it looks like it was actually out fermenting cellulose and you know, producing some beneficial fats like CLA. But this whole thing, the funny thing in this to me and this is where the kind of like biohack hacker culture you know, that some sort of like sleek willy science better than nature thing, it just is hilarious to me because there were a lot of people who were pretty educated who look at this and like oh well that sounds like a great idea. Like we could just grow meat and fats and it would be great.

They forget all of the energetics that are involved with growing that meat in a vat. You know, it's like you need the electricity to heat it or cool it. You need to get the nutrients truck from point A to point B. Like I don't know if anybody has really done – the interesting thing is the news pieces are always kind of saying that this could be a solution for world hunger or something like that and there's not one single reference, not a talk with the physicist or like a chemical engineer, somebody who's an expert in thermodynamics that would, that gets in and says well yeah this actually makes sense. Because when we're talking about like grass-fed meat and pastured meat and kind of biodynamic raised protein sources, I wouldn't say that you get it for free but you know this is some of the stuff like the savory institute has talked about a bunch. We have vast tracks of land all over the globe that aren't really appropriate for agriculture even if you can truck water into the area. Like it just doesn't really work. There's still too much variability and the rainfall and it's too austere of an environment but it's huge tracks of land that does produce vegetation and is completely well suited to feeding herbivorous creatures ranging from like cattle to bison to deer to kangaroos. Like this is the biome that they evolved in.

[0:15:16]

This is a pretty efficient system because it again I wouldn't say that it's free but we're not really putting energetic inputs into that system other than if you need to harvest the meat, slaughter it, process it, ship it. Like there is clearly some element to that but I can't – I would – Greg, what would I do if the energetics actually ended up working out favorably for – well I was going to say I would eat like 200 pounds of road kill or something like that. But I mean if this is legit in that you could energetically grow meat in a test tube more efficiently then I guess that's kind of cool but there's some interesting stuff with regards to the grass-fed meat story and the savory institute and a bunch of stuff like that that I can't yet go into a lot of detail. I'm going to let some folks at the ancestral health symposium know about some of this stuff coming up actually like two days after this podcast. I've got to talk with Diana Rogers and we're going to be talking about a little bit of this stuff.

But there's a bigger biodynamic story here and that's all say for right now. So I think that this is kind of a you know, interesting newsie kind of gee whiz kind of thing. If there was something that this like tissue culture could be really, really cool for, and here's what I think it would be and you could – if people put their minds to it, they could probably completely halt the hunting of a variety of animals almost into extinction. Like if you could figure out how to tissue culture and create you know, elephant tusks, rhinoceros horns, all the stuff that ends up in the wacky Chinese medicine market, all the stuff that's in the kind of poacher's most wanted list, and you could tissue culture all that stuff and then flood the market with these things and they would be indistinguishable from the real deal then you could save a bunch of endangered species by doing this stuff. That actually makes a lot of sense and I'm still shocked that nobody Googling around looking, nobody has mentioned this as an option anywhere at all and that seems like a totally legit option and makes sense and I think the energetics would actually play out for that because once a species is gone, it's pretty much gone. So is there any other way I could beat that thing to death or you have any other thoughts on it?

Greg Everett: I don't think so.

Robb Wolf: You're like I just want you to stop man, please, please.

Greg Everett: I think you covered that one pretty well.

Robb Wolf: Sweet.



Greg Everett:

All right. Wholly Guacamole – High Pressure Processing and lipid oxidation. Jesse says:

“Hi Robb and Greg,

I was enjoying some guac squeezed from a pouch the other day, and realized that if I am eating a food from a pouch, I should probably question it. I dug around on their website and found Wholly Guacamole has an interesting preservation process based on high pressure cold water.

I found a more general description in Wikipedia including a reference to a paper from Japan that found the high pressure process increased lipid oxidation on fish products, apparently.

Do you think lipid oxidation is a concern with the fats in avocado going through this process? Any other concerns such as the plastic in the pouch it comes in? I’m sure making guac fresh with whole avocados is better and cheaper, but the Wholly guac stuff sure is delicious and convenient!

Robb Wolf:

So you know, I poked around on this a good bit and, oh man, I had like a really piffy way of introing this but now I’ve completely forgotten what that is so I’m just going to flail around here. I guess the big questions here are like is the potential for lipid oxidation is that like a big deal. One thing to keep in mind is fish typically has more polyunsaturated fats, which you’re going to find in avocado. Avocado is mainly monounsaturated fat and that can oxidize but it’s not like it’s not nearly as prone to that process as polyunsaturated fats are so that’s a thing to keep in mind.

Another thing to keep in mind is that whenever you process a food in any way drying, cooking, you know, whatever the case maybe just when you cut that rind off of the avocado, you’ve got the tyrosinase in somatic reaction that’s happening. It causes browning. You’ve got the potential for some degree of lipid peroxides to be formed and that’s just going to start happening whenever you expose the material, the air. So that’s happening to some degree. That’s not that big of a deal so long as we ourselves are not horribly inflamed and we’re not consuming a bunch of other proinflammatory products. So we tend to take these partially oxidized fats. We tend to process them metabolically preferentially. They basically get used in beta fatty acid oxidation and our body will do okay with that. Like you know, you just don’t want to like upend a bottle of linseed oil or fish our flax oil or something that’s been sitting out all day in the sun and you has clearly gone rancid.

[0:20:39]

I think in you know, the modern world kind of story like having some convenience items like this Wholy Guacamole stuff and we've certainly bought our fair share of stuff like that from Costco. I think that that's fine. I have just kind of whistled past the graveyard with regards to hoping that there's not like BPA or other nastiness in the plastic. I don't eat this stuff all the time. It seems like there's enough awareness and we've got a clone question later where I'll talk about BPA and some of its estrogenic effects here in just a bit. But I think that – you know, there's enough awareness about estrogenic plasticizers and stuff like that that we're going to see less and less of that stuff in our plastics.

Clearly if you can go, you know, if you live in Sta. Cruz and you can go pick a bunch of avocados off a tree and cut them up and throw some lime juice in it and some salt and some tomatoes and onions and dig in on that then that's kind of the optimum. But I think these other things when you start you know, weighing some convenience plus the fact that the potential downside is probably like small then I would side with the convenience story in this case so. Yeah.

Greg Everett: I would think if 100% of your diet is not coming out of pouches you could probably get away with it from time to time.

Robb Wolf: Right.

Greg Everett: Okay. Cologne's effect on body. Mike says:

"Hi guys,"

Robb Wolf: He's trying to be very thrifty with the use of additives I guess so.

Greg Everett: Indeed. "I just recently developed an interest in paleo/primal/whatever. I've listened to recent podcast episodes and I'm going back to catch up on older episodes.

I have a question that may not fall under the scope of the podcast, but I'll ask anyway. As far as I know".....

Robb Wolf: Any scope at all so.

Greg Everett: Yeah. "As far as I know, it has never been covered on the podcast. Does cologne affect bodily functions, such as the endocrine and nervous system? If so, would it only be through skin absorption, or inhalation also? Would applying it to certain areas on the body be less harmful than

others?" Yeah, it affects the reproductive system because it makes you far more appealing to the other sex.

Robb Wolf:

Yeah, yeah, exactly. You know, I thought that this one was actually a couple of questions further down but the, oh gosh, I'm trying to remember what the paper was that I read. There was a recommendation for women undergoing in vitro fertilization to avoid most skin care products because of the potential of both BPA and other estrogenic compounds. Now in in vitro fertilization you know, there's a whole bunch of process that goes on with that but the main point is that when they implant the egg, they start giving the mother progesterone capsules either orally or intravaginally to help encourage an environment for the fetus to implant. It's basically kind of goosing the normal cycle which occurs in which a woman early in the luteal phase of her cycle is estrogen dominant and then if an egg is available for implantation estrogen drops, progesterone has increased and becomes dominant and then it creates an environment in which the egg can implant and you get embryonic growth. If it's not there then you get shedding of lining the normal period and all that sort of stuff.

So a lot of what is being thought in women these days is an estrogen dominant situation. You know, we have lots of zenoestrogens in the environment, increased body fat leads to an estrogen dominant situation because aromatase activity on testosterone cascading the testosterone and the estrogen so we get an estrogen dominant effect and you know, all of that can then blunt some of the effects of progesterone. So this is a long-winded way of saying that there is some concern about the potential I guess pharmacological effects of some skin care products. You know, it's concerning enough that they send it up in a very mainstream medical journal talking about this.

[0:25:07]

So god knows what goes into most colognes and perfumes and all that. Like could they have some BPA, could they have some other estrogenic compounds in it, maybe. I think that you know there are lots of them these products that are mainly flower derivatives like they literally just do distillation, steam distillation of flowers and mix and match that stuff. A lot of them are more petroleum byproduct derivative. So I guess you know, if you're really concerned about this you could do a little bit of digging from the manufacturer to just see if they have any type of like BPA estrogenic type compounds in your like Axe cologne or Polo or whatever it is that you wear.

But you know, this hair care, body care stuff seems to be more and more of a problem as far as the potential estrogenic effects. A lot of these

products because they've got a lipid you know, kind of carrier, they're very, very good at moving things transdermally like moving things through the skin. There was a question –you know, he had a question about like are there better or worst places to put it if you pour stuff into your eye then clearly it's more absorbable than elsewhere, you know.

When people do transdermal testosterone and estrogen and stuff like that, they will put it in their armpit, they'll put it in their groin because the skin tends to be a little, both the skin tends to be thinner and we tend to have less adipose tissue there. So there's a little less problem with you know, like aromatase and you know, some problems with that. But you know, there's a well-established drug delivery methodology that utilizes this transdermal approach and it uses a lipid base carrier if you want to get all Dan Duchaine on it then you use like some DMSO and you can pull like a small car into your circulatory system using that stuff.

So yeah, I mean excuse me there is a potential for problems here. Whether or not it's a huge problem or a small problem I really have no idea but I just remember maybe a week ago reading this paper about in vitro fertilization and the recommendation for women that are going this process to avoid most skin care products because of the potential for BPA issues kind of befuddling the already challenged estrogen dominant situation so. A bit of an extrapolation but I mean it kind of makes sense to me.

Greg Everett:

All right. This one is about the book "An Epidemic of Absence." Rayn says:

"Just finished reading An Epidemic of Absence by Moises Velasquez-Manoff, which hypothesizes that most of our allergic and autoimmune issues stem from an immune system with nothing to do. He explains that we now that we live in such a clean environment that we no longer have constant low levels of infections from things like TB or intestinal worms, although our immune system is designed to constantly be dealing with these sorts of problems. It was a fascinating read, but I was stymied about the fact that he doesn't see much value in changing our eating patterns. He champions "worm therapy", the deliberate infection of parasitic worms, as the way to help get a dis-functioning immune system back on track." I'll skip that one.

"He also seems to feel that if we all had correctly functional immune systems, we could eat anything we wanted; that is, he sees things like celiac disease as a problem that comes from an incorrectly functioning immune system, and not something that can be caused just by eating

gluten. What do you say? If I get a thriving colony of hookworms going in my gut, can I dive face-first into a bathtub full of donuts? :)

Thanks for rocking!”

Robb Wolf:

You might be able to hit the bathtub full of donuts but I will not be inviting you to use my bathtub if that’s square. You know, seriously like I think that it sounds like have not read this book but I mean this is the hygiene hypothesis with this stuff, I think there’s a lot of merit to it and this is one of the ironic you know, features of the success that we’ve had with immunizations, antibiotics, public health, public sanitation. One of the ironic features of that is that we’ve probably traded a lot of the potential for a lot of things that could kill us quickly, you know, like or I guess things even not so quickly like intestinal worms, tuberculosis and stuff like that. But you know, we’ve had some pretty major infectious agents that we’ve struggled against throughout all of history and now we’ve put most of that into a low simmer.

[0:30:04]

So yeah our immune system is kind of in a little bit of a drifting state because it looks like the default mode has always been to have some degree of parasitic impairment and you know dealing with that situation. It’s interesting you know, the Celiac phenomena though seems to actually be an outgrowth of living in close proximity. It seems to be an adaptation towards agriculture and people with Celiac actually have a heightened immune response. So you know, could you get your way out of Celiac by having you know, some sort of parasitic infection. I don’t. I honestly don’t see how that works because we’ve got a situation where like the gliadin proteins end up attaching to the CFCR3 receptor in the enterosites and then that creates a whole downstream cascade of problems.

Maybe it would mitigate that. I don’t know and I mean this stuff gets really interesting. Like there are some good, there are some papers that indicate that the mom while breastfeeding if she consumes a little bit of gluten that it will tend to mitigate the likelihood of the child developing gluten intolerance but there’s also some indications in the literature that that can also increase the likelihood of type 1 diabetes in the child. So there’s another window of time that I think I posted a paper on this not too long ago where consumption on the part of the baby of grains from like six months to a year or something like that, you know, small amounts would decrease. Basically, it’s tuning the immune system to not overly respond to this stuff. At least that’s part of the theory.

But there's also clearly in the literature a documentation for increasing likelihood of type 1 diabetes and other autoimmune diseases. So I'm honestly like if I had read something like this or like if I was asked a question should parents give their kids grains as a way of like creating tolerance to the substance, if I was asked this five years ago, I would have been like no it seems like a bad idea. I think that it's a bit, it's way more murky now. I don't know that I can really confidently make that statement. We have seen a lot of people that you know their little ones are having all kinds of like GI upset while the mom is consuming grains. Mom drops the grains, GI upset in the little ones goes away. I mean you know, it's anecdotal but when you start getting literally thousands of people that are reporting the same thing it's kind of like okay it's really compelling.

But what I don't understand is like is that just kind of the tough luck, the knocks that the parents have to take because they're not going to sleep and the little one has to take because they're not feeling good to mitigate the likelihood of something worse occurring later. Or is there – you know, is the largely the avoidance of this stuff for as long as possible, is that a better argument because then hopefully we're able to dive through our childhood and adolescence and not develop type 1 diabetes or set in motion some of these vectors that lead to autoimmune disease. Like I just don't know. Like my default still is, you know, largely recommending this kind of paleo diet approach, making sure vitamin D levels are good. It would be interesting to see what his thoughts are on vitamin D and if he mentions D as a general topic and also the immunomodulatory effects of getting vitamin D from the sun. Like being out in the sunlight is good for autoimmune diseases not just because of the effects of the vitamin D but actually on the kind of opiate activity in modulating immune function. So you know, it's a little bit like the low dose naltrexone plus alpha-lipoic acid that's used in both cancer and autoimmune disease.

So there's just a lot of moving parts to it and I think that this book, this guy's book sounds great. I think that there's a lot of truth to this. I think that this is one of those – you know, typically in biology there's not just a cut and dry like winner, winner chicken dinner with something. Like there's always a downside, there's always kind of a gotcha element to anything that we do you know. Yeah, yeah I wish I could finish on a stronger note with that because I'm jabbering for so long but.

Greg Everett:

Yeah, I have absolutely no adequate steeping in the science of this stuff but like this makes sense to me to some degree but the idea that we should be able to eat anything if we were under you know, sufficient immune strain, it doesn't entirely make sense. Because I mean you look

at animals in the wild and there are certainly things that they can and cannot eat. You know what I mean? They don't have the interference of immunizations or Clorox wipes or whatever the fucking problem is.

[0:35:27]

So I guess I take issue with that idea and maybe he doesn't actually say that you actually can eat anything you want. But it seems to me there are certainly going to be limitations on what a human being can and cannot tolerate well that are not necessarily the product of --

Robb Wolf: Parasitic infection.

Greg Everett: Yeah.

Robb Wolf: Yeah.

Greg Everett: You know, and so I guess I don't know.

Robb Wolf: I think there's a lot of good there and if nothing else, I think it kind of shines a light on you know, being hyper vigilant about like you know, like they have these wipes you know, for your shopping cart and all that stuff like we're pretty --

Greg Everett: People need to calm down.

Robb Wolf: It's really --yeah Zoe has put some really random stuff at her mouth and it's kind of funny when we're out walking there will be rocks, there will be sticks, there will be twigs and then as soon as there's a lump of pigeon shit on the ground, she wants it. You know, I'm like are you kidding me. Like we'll walk by 15 interesting objects and then the first time there's like a lump of feces, she just wants to get her hand on it. But we're definitely not a hyper clean home. She scoots around on the ground. She scoots around outside and I mean I'm not having her lick doorknobs. If there's one place that I actually get pretty freaked about the germ factor is when we're traveling and we're in an airport because god knows what's in an airport like and just --

Greg Everett: Airports and hospitals.

Robb Wolf: Yeah. Yeah.

Greg Everett: Those are the places you got to keep wearing a biohazard suit.

Robb Wolf: Exactly. Exactly. But you know beyond that we're pretty carte blanche but I tell you if she starts shedding hookworms I'm definitely going to get her

deloused from that so. Yeah I don't know it's interesting stuff. If nothing else it's very interesting stuff and I think it just shines a light on you know, the fact that there's just not 100% free lunch with almost anything that we do. That there's always pluses and minuses that there are dose response curves, U shaped curves that describe like if you have too little of something then you have disease. If you have too much of something, you can have similar or even completely different types of disease and that there are oftentimes some medians or some sweet spots where we tend to minimize risk, maximize opportunity and return.

I've been reading Nassim Taleb's book, Antigragile and it's just really good with this stuff. I think it paints a really good picture of things like bacterial pathogen exposure, smart use of intermittent fasting like you know, exercise dosing. It's very, very interesting. To some degree the old adage what doesn't kill you makes you stronger. It's true but when we start layering on all the complexities of modern life and all the ways that we live very, very divergently from the way that our genome was kind of forged, I think we just increased the likelihood of having a problem. It's not to say that we guarantee problems but we've just –you know, we're spinning the roulette wheel a little bit more vigorously in that situation.

Greg Everett: Yeah.

Robb Wolf: Yeah.

Greg Everett: Okay. Sarcoidosis Recommendations. We recommend you don't get it.

Robb Wolf: Yeah.

Gregg Everett: Ken says:

"Hey guys!

I want you to know I love the show and have been listening for a while. A little background on me, I'm 41 years old, 5'5", 125ish pounds, and I got diagnosed with Sarcoidosis last year. I'm in the US Army as a combat medic and most of my workouts come from unit PT. I have been doing TRX on and off on my own and would like to start doing endurance events again. With this condition, I'd like to know if you have any particular dietary or exercise advice. Despite having more of an interest in endurance events, I'd like to bulk up a little just to look a little better and have some reserve for when I get sick. Please let me know your thoughts."



Robb Wolf:

Yeah you know this is an interesting condition and it can affect multiple organ systems and when I was researching this when I saw that I was kind of like hmm that sounds familiar and then I did some looking around on sarcoidosis and transglutaminase and gluten and there's lots and lots and lots of linkage there. It's a nodular manifestation of inflammatory immune cells. They can attack a variety of organ systems. The lungs and skin are common but I mean it can go a variety of places which again it starts – just reminding me of the ubiquity of transglutaminase mediated autoimmune problems which typically this is an innate adaptive or excuse me an adaptive immune system kind of issue with antibodies and proinflammatory type stuff going on. We've seen it with vitiligo and all kinds of dermatitis and psoriasis and all kinds of things.

**[0:40:18]**

Easy answer gluten free. It might be super hard to do if you're in the army. If you're not deployed then you might be able to navigate that a little bit easier. If you're deployed then that's going to be just a really big problem. You know, from there, it's just all of our standard stuff. You know, ideal situation you go on an autoimmune paleo protocol, no grains, no legumes, no dairy. Try to minimize nuts and seeds for a while and make sure your vitamin D is good, try to get that vitamin D from the sun. Eat some probiotic kimchi or sauerkraut type stuff to get your gut bacteria firing.

Just as an aside, backing up to the previous question, there seems to be more indication that consumption of probiotic foods actually has an immunomodulatory effect in that it's actually causing low level immune response. It's not so much repopulating the gut as it's tuning the immune system. Just as an aside from that previous question. So I got that from talking to Chris Kresser that's not my knowledgebase. But autoimmune paleo try to get this stuff in remission and then as far as bulking up a little bit you know lift some weights, prioritize that prior to your big deal endurance stuff or just don't hit a lot of lower body activity and wear long pants and never let anybody see your legs. You know, just get a big jacked upper body and you'll be good to go.

Greg Everett:

Cool. All right. Speaking of big jack upper body, Building shoulder size and strength. Ben says:

"First off awesome show. You provide great information, and the banter is priceless. Thanks guys!" Is priceless the same as free?

Robb Wolf:

Similar to worthless but yeah.

Greg Everett: No charge. "In very broad terms, my question is about building posterior shoulder (upper back if we want to call it that) size and strength.

A topic that I see pop up frequently on blogs and articles, and one that you guys inadvertently touched on recently, is the tendency of gym rats having all "show" muscles and no "go" muscles. I happen to be stricken with this shortcoming in physique. Though my "show" side isn't much to write home about, as I have skin flabby manboobs leftover from a ton of weight loss (thanks paleo).

Ok, so maybe it isn't so bad. In the past year and a half, I've had a sort of exercise renaissance. Where I've discovered the miracle of good squat and deadlift posture, kettle swings," kettle swings I assume, "hip flexor stretches, and so on. So I've developed some decent glutes, hams, and lower back in the "go" department. But I am very lacking in what must be the scapular contraction muscles, rear deltoids, and the muscles in that area (think all the ones that major league baseball pitchers have highly developed, rotators and such, and that's what I'm missing). So my question is how to build strength and size in this area? Robb once mentioned skin the cat as a good indicator of strength in this area- I'll tell you right off the bat, I'm not very close to pulling one of those off.

I am 23 years old, 6'3" 235lbs, only been very active for about 5 years now. I spent the prior years in my childhood drinking Mountain Dew, scarfing nachos, playing video games, and crying myself to sleep. Also spent a lot of -"

Robb Wolf: Us too brother, us too.

Gregg Everett: "Also spent a lot of time hunched over at a computer desk, which I'm think has contributed to my poor shoulder posture and subsequent shoulder weakness. I had a slight shoulder separation a few years back but have pretty much rehabbed that into working condition. I have a history of gym rat routines (6 days of chest-back-legs-shoulders-arms-abs). But in the last year have cut it down to 2-3 times per week max. Currently doing things like sprints, clean and thrusts, straight leg deadlift, light horizontal rows (thanks Greg), and some chest pressing just to treat my ailing skin boobs (any help on filling those out would also be great). That's about all I'll bother you with for now. Hope you get around to my question, thanks fellas!"

Robb Wolf: So we're mainly talking about like rhomboids, posterior delt, traps, is that what you're talking home from this but with also a little bit of chesticles to round it all out?

Greg Everett: Yeah. Yeah, I think so.

Robb Wolf: You know, one thing like it sounds like what was his name again? Did he put his name in here?

Greg Everett: Ben?

Robb Wolf: Ben. Ben.

Greg Everett: Yeah.

Robb Wolf: Sounds like a big dude in general, 6'3", 235. Like I'm not super surprised that skin the cat is kind of challenging for a initially. Like that will be you know, developing a skin the cat front lever, back lever on a dude. Let's assume that maybe you need to lean out just a little bit more and you know you'd be in that like 10 to 12% body fat level deal. But still like that's pretty a pretty big dude. Gymnastics is not typically like the place that bigger guys succeed at but it's not to say you can't get a lot of success.

**[0:45:15]**

Gosh, clean pulls, shrugs, chins with an emphasis of chin being a supinated grip, maybe a little bit on the narrow side and then trying to touch as low down your sternum as you can on the bar so that you're getting both lat but also rhomboid and posterior delt activation. I think handstands, handstand walking really thickens up the traps, the whole deltoid, you know, even though the delts is just one muscle, the different fibers do get activated with different emphasis. If all you did was bench your whole life, oddly enough you do not end up developing posterior delts. So Greg, can you think of other stuff? I mean Cubans.

Greg Everett: I think lots of bent row type stuff --

Robb Wolf: Right.

Greg Everett: -- is probably going to be the biggest bang for your buck and yeah lots of pull up variations too.

Robb Wolf: Again what the emphasis on the pull-up variation you actually want to start almost moving the lower body into a parallel to the floor kind of situation where you're effectively turning it into a bent row kind of scenario.

Greg Everett: Yeah.

Robb Wolf: But that stuff is really good. I don't know if there are any videos of this of doing scap pulls, Ido Portal but scap pulls are really, really good for that upper back rhomboids. Do some poking around on that and try to find a movement called scap pulls or just look on Ido Portal's Facebook page and try to find some people doing this movement. Basically you're hanging in a pull-up position and then the person ends up pushing the hips forward. The arms remain completely straight but the depression and retraction of the scapula, scapula goes down and back ends up elevating the trunk and this is a developmental exercise for the front lever and a lot of other stuff too this part of what Coach Chris Summer out of Gymnastics Bodies and Ido Portal would throw into what they would call a straight arm strength day and part of the pulling movement on that. Cool.

Greg Everett: And always more shrugs.

Robb Wolf: Yeah, more shrugs but for a bigger dude those scap pulls, bent rows and then I would start getting in and doing some handstand work. Especially since you have had a shoulder separation like just start off getting good bodyline position against the wall. Try to accumulate a minute at a time with that and then start pulling off of the wall and trying to do some shoulder walking. When I was doing a lot of Capoeira, like my upper back and traps and delts were really, really developed and I've never from just kind of lifting weights, I've never had an easy body weight press. Like I had to really work at it to get it and when I was doing Capoeira which was just a ton of being on my hands, handstand pushups, lots of one arm variants where I'm balancing on one arm. I did an easy 195 at 170, 172 pounds body weight and if I don't spend that time on my hands then I can press and press and press and press and I never get that same type of response that I get from walking around on my hands and my delts and everything definitely thickened up from doing that.

Greg Everett: Cool. Okay. Last question, Training for the "sport" of CrossFit. Adam Duggan says:

"Hey guys,

I won't try and suck up by telling you how awesome the show is. Everyone does that. So I'll just say that it's pretty good. Slightly better than Jillian Michaels podcast.

Robb Wolf: Thank you.

Greg Everett: As long as we edge around a little bit, I'm fine.

"Anyways, here goes my question.

I know Crossfit has issues. Injuries, cortisol, adrenal fatigue, poor programming (depending on coach and box), etc.

I also know there are MANY much easier (not to mention more efficient) ways to get big and lean.

But...I honestly love the actual sport of Crossfit. I am not someone who wants to use it to get lean, or big, or "healthy". I train in Crossfit because I genuinely want to excel at the sport.

So for someone who is training in Crossfit, for the sole reason to compete, what would your program look like?

Obviously not 30 metcons a week like most boxes prescribe...but a more structured, thought out, periodized, game plan. What would you suggest for "phases" of training? Would you drop all metcons during parts of the year and include more in others? Would you focus more on strength (please say yes) than conditioning?" Yes.

"What would you say in regards to staying as healthy as possible while embarking on such a program?

Sorry for the long question. And honestly, you guys are better than Jillian."

Robb Wolf: Thank you. I know we own dogs better than Jillian does. She's insane. Do you ever see the Dog Whisperer with her and her Chihuahua?

**[0:50:09]**

Greg Everett: No. It's not something I even want to think about seeing.

Robb Wolf: She's Looney tunes insane.

Greg Everett: Yeah.

Robb Wolf: Like it's yeah.

Greg Everett: That's a surprise.

Robb Wolf: Yeah.

Greg Everett: If you own a Chihuahua, you're already pretty much certifiable.

Robb Wolf: I would have to agree with that and send all hate mail to Squatchy.

Greg Everett: I won't read it.

Robb Wolf: Yeah. You know, I'll actually go and my thoughts a little bit in reverse on this how would you stay healthy and this thing like all of the periodization and all the rest of that stuff aside when you start getting up to the super high levels of competing in ever anything whether it's Olympic lifting, maybe table tennis doesn't apply to this. Because I don't know that overtraining would necessarily become a massive issue in that situation. Maybe some extensor, flexor compartment issues in the forearm but aside from that, I think that burnout is a real deal phenomenon in grabbing one of Joel Jameson's heart rate variability monitors. I'm putting more and more and more weight on stuff like that just because it will tell you earlier when you start you know, under ideal circumstances when you use that technology you get a baseline, you figure out when your green days, you can light it up pretty good. Your orange days you need to figure out of if you're in like an accumulation block or if in which case you could push it again but you know that you're going to be backing off soon or if you need to back off that day because it's not part of your peak yet. If you've got a red number that day then maybe you need to not train at all that day but it gives you some really concrete feedback that I think is earlier than looking at sleep disturbances and some stuff that I've typically used in the past to be able to figure out if people are overtraining. You know, like elevated hear rate and stuff like that. Like Joel is really beat me over the head and got me to believe that those things are happening after what the heart rate variability would indicate are problematic features that are already rising earlier in the training cycle.

So from there you know, the people that I've worked with, Greg's worked with a lot of people, I think people kind of forget but both Gregg and I have laid hands on, trained quite a number of people that have either top tened or top twentied at the crossfit games both male and female teams that we at Nor Cal had a top 3 team. We've had a sixth place individual finisher, 17<sup>th</sup> place individual finisher and Greg you've just had a boatload of people because of being there in the Bay Area and working with folks.

But I got to say that the key feature that you've got to shore up is technicality in all this stuff. If you are not super good at maintaining a false grip on a muscle up you know, even though you could maybe

initiate a muscle up without a false grip but if you don't have that skillset for maintaining the false grip, knowing what is enough kip versus too much kip like I see people kipping on pull-ups and on muscle ups and it looks like you've been bent into a pretzel or something. It's just a bunch of wasted energy.

But you need to get really, really technical and really, really efficient with everything you do. Because at the end of the day, you can only build so much engine and you need all of your efforts to go in as advantageous a direction as you can and what you see with a lot of people is not far off of like an epileptic seizure. Like they are supposed to be doing a snatch and they're doing something that involves a barbell and a human being but it's – the similarity to a snatch ends there.

Greg Everett: Yeah but you know what interestingly enough and this is one of these ongoing arguments, well technique doesn't matter which always just fucking baffled me. But especially these days you don't see shitty technique at the crossfit games.

Robb Wolf: Wow.

Greg Everett: These guys and girls are legit and they move well and so to continue with that argument like well I don't need to really refine my technique because it's not about style. No, it has nothing to do with style. If you want to be competitive, exactly what Robb said the more technically proficient you are, the less energy you're using on those movements, the less you're chasing shit around like some kind of spazz. We're not supposed to say spazz anymore. I forgot we offended the British listeners.

Robb Wolf: Spazz is bad in the UK?

Greg Everett: Because it refers to some kind of disability and it used to be a derogatory comment about some guy in a TV show at some point. I don't know.

Robb Wolf: Man it's as embarrassing as using fanny when we're interacting with people from the British commonwealth.

**[0:55:06]**

Greg Everett: Seriously. Now they still call cigarettes fags so I mean I don't know that they're really in a position to comment on our use of the word spazz.

Robb Wolf: We're keeping spazz folks, we're keeping spazz.

Greg Everett: Anyway. [Laughs] Point being you know, the less, the more proficient you are, the less energy you're using on every single rep you do. And like Robb said, your engine is only so big and even if you could infinitely build your engine, why not minimize the amount of energy you're using per rep and have more of that energy reserve for your next rep or your next workout.

Robb Wolf: Dude to say nothing of orthopedic wear and tear.

Greg Everett: Yeah exactly.

Robb Wolf: Yeah.

Greg Everett: So that yeah, that point just needs to be underscored.

Robb Wolf: Let me back up just a little bit here before we go forward. In the early days of Crossfit, a lot of what the programming was about and a lot of what to me Glassman's genius in this thing was talking about was a minimum effective dose. Like what's the minimum effort that we could put into something to get kind of the maximum return on investment. In that context, he made this argument that I think carried some merit which was that perfect technical proficiency wasn't necessary to get this like neuroendocrine response and to get your sweat on and all that stuff within the parameters of generally being safe and all that jibe. But I think that there was a lot of truth to that and in the early days of the certifications. Glassman used a guy Steven Seiler and there was a paper that this guy had written as a huge document time course of training adaptations and Seiler is a complete slapstick. He's just a professor of physiology who has coached the Norwegian rowing team for like 20 years and had a professorship at the university in Norway.

So clearly a guy who doesn't know anything about anything. This is the guy that really was early on in crossfit was used to some of the validation of the randomization of the training because the different phases of training adaptation what the third – the first and second phases were like increasing and oxidative and glycolytic enzymes, changes in vascular bed density. But then the third phase of training adaptation was efficiency. But in the efficiency phase, you tended to not see as much of a neuro-endocrine response which is a lot of what you know, growth hormone secretion all that sort of stuff which was very looked upon as being very favorable in the early crossfit days.

So there's always been a little bit of the schism that I just wish that crossfit would address a little bit and it's not that it makes one right or



one wrong but it's just that it depends on what you're up to. Like when you're using crossfit or mixed modal activity as a strength and conditioning modality then we can kind of orient the boat in one way and maybe we don't have to be as concerned about technical prowess but also then I would argue that we don't need to chase things like Olympic lifts and muscle ups quite as aggressively. Like we could stick what I would call dumber movements like sandbag cleans, prowler pushes and stuff like that.

But as we start heading into this area of the sport of fitness and you want to start turning in and do a sport then this technicality piece must be front and center. There's no fucking chucking and jiving. There's no dancing around this thing. It's got to be there. Sorry, dude, I didn't mean to interrupt you but I think so --

Greg Everett:

No, that was done.

Robb Wolf:

Okay. Okay. Some of the historical stuff with this. You know, it's just frustrating like this wouldn't invalidate anything about crossfit to give some airplay to this. To acknowledge that there are different ways of taking the technology and applying it. Why that's a contentious feature, I really don't know. But back to the question here like you really as an individual you would need to look at yourself and be very self-critical about what your movement is. Like can you snatch and clean and jerk on par with the, you know, like the videos that Gregg post of people who went to nationals? Can you find somebody height, weight and age matched that went to nationals and can you move like that individual? If you can't then you need to. Can you find somebody height, weight and age match that is bouncing around on like the gymnastics bodies videos are in Ido Portal's videos and you're doing handstands, hand stand walking, press the handstands, muscle ups, etc., and can you move like those people? If you can't then you've got to get the technical base in on that stuff.

**[1:00:05]**

While you're doing all that stuff, I would really recommend building a basic, a general aerobic base and this is the stuff the Joel Jameson has talked about in his roadwork 2.0 material I think would be really, really valuable in this situation. You could construct. You know, it could be either monostructural where you run or bike or swim or whatever or you could take something like a classic like a Helen workout, run, kettle bell, swing, pull-up and you could tackle that thing wearing a heart rate monitor which is you know, like the antithesis of general crossfit training. Like they say that the lactate threshold is the pussy rest stop when you looked at like Phil Maseton's work and all these people who've produced

a lot of elite level endurance athletes and even non-endurance athletes there's a good argument for these people to have like a base level aerobic nonglycolytic engine that is built before going into the glycolytic engine.

But you could take a bunch of these workouts like you know, Angie, Fran and all of them and you scale the loading such that you stay largely aerobic. Like you don't get –you know, you're like 125-145 beats per minute and you see these things in a consistent pattern. Like you're not so randomized that you don't see these movements infrequently and I think I've mentioned on here before there's an early crossfit journal article that say a beginner's template that I think is very, very good. It lays this stuff out in a progressive manner where you run a distance then you try to run that distance a little faster and then you get some progression with that and then you run a little bit longer distance and try to run the distance a little faster. And then they start layering in some deadlift and some press and I think maybe it's just deadlift and press, deadlift, press, pull-up, body row. Like I forget what it is. But it's the very progressive kind of undulating periodization where you push the volume and intensity up and then dial it back down and push it forward and dial it back down. I think that's a great way to build an aerobic base first while you're building a technical base.

Then you know you start looking towards your competition window which I guess now would be the open and you need to think about peaking for that. For peaking, you need to probably eight to twelve weeks out you need to start stringing this stuff together in classic crossfit singlet, couplet, triplet fashion where you're definitely hitting that glycolytic engine, you start doing lactate training to peak into your lactate testing. A lot of people talk about this stuff. Joel Jameson does, OPT does at his workshops and his clinics. Scotty Hagnis is very, very well versed in this stuff and so what you've got is then like a yearlong season and I think one of the challenges that people who compete in crossfit in this day and age phase is that there's always an opportunity to go do a competition. So then you are drawn into this desire to always compete. I think you end up in burnout and have a lot of problems really, really quickly with that. If you really want to take it seriously then you've got to kind of stick to your block periodization programming more or less and then really save your one or two shots for the times that you need them.

Greg Everett:

Yeah regarding the competition thing, I think that's a good point is that you know, the difference between training and competition and if you are competing full meal deal all the time, you are holding yourself back.

That said I think that competition experience is really important for most people and so --

Robb Wolf: For the jitters and all that.

Greg Everett: Yeah and just learning strategy and things like that because you do have to gain those workouts to some extent.

Robb Wolf: Right.

Greg Everett: You have to kind of learn your limitations and where your strength and weaknesses are and kind of set things up in your advantage. You really only learn how to do that in a competition situation. But you can't go full blast every single --you know, once a month all year round. So I think it's totally possible and reasonable to do a lot of these little local competitions.

Robb Wolf: But keep the ego in check and just use it as a diagnostic deal.

Greg Everett: Yeah, you know, 85%.

Robb Wolf: Okay.

Greg Everett: You know, because you can figure out a lot of the strategy and things like that and kind of get a sense of where you stand without totally blowing yourself out. Although you got to be smart about it because it's definitely easy to get caught up in that atmosphere and all of a sudden you're going 110% and totally shitting the bat on your long term plan. So I would keep that part in mind.

Robb Wolf: That's a great point and you know mixed into this, this is where you test all of your fueling, your preworkout situation, your post workout situation. Do you need foam rolls, what types of shoes do you need, what types of gloves potentially do you need, how does a thick, heavy Inzer lever belt work relative to like a -- what do you guys use like in a vanco --

**[1:05:23]**

Greg Everett: Valeo usually.

Robb Wolf: Valeo belt you know, like this is where you get to test out your gear and fueling. There are certain situations where like going into a really demanding metabolic burner, you might be best served. Like if the first workout is early in the morning like it starts at 8:00 a.m. you might be best served going into that fasted because you're going to have zero food

in your stomach and so you're not going to have any competition between digestion and your working muscles. Frequently, people will post like lactate intensive workouts like rowing or 800-meter runs will post records when they're in fasted state. But then you've got to keep in mind that then you know, if there's multiple sessions that day then you're going to have to refuel and rehydrate and maybe it's whey protein plus the targo or you know whatever but those are all your opportunities for getting some of that stuff fine-tuned.

So Greg, that's a really good point that doing some tune-ups workouts where it's used as a way to field test your gear, field test your pre and post workout nutrition see what your recovery is like after that, see how that stuff affects your sleep. Like just being in a competition increases cortisol and you know, puts greater demands and inroads in your recovery. Like those are all really good things. But I mean clearly it's a no joke deal now you know, when you're talking about people who are able to in total make probably an easy seven-figure income from being at the top of the food chain and this stuff between endorsements and you know, winning some prize packages and stuff like that. It's totally no joke and it's a fulltime event just like MMA is. If you want to be at the top of the food chain, you've got to have a game plan. I mean you're definitely I don't think people are going to randomize themselves to the top but maybe they do the west side barbell deal where it's like however much gear you've got that's how much you take. You want to squat 3000 pounds take 3000 IUs and you're good so yes.

Greg Everett:

Oh, boy.

Robb Wolf:

Hopefully that gives you some you know, I guess to review and maybe wrap it all up, really focus on in my opinion focus on technicality, build an aerobic base. Aerobic base could be built a variety of ways and also in that technicality in aerobic base building time, you can do sprints. You can working like your 0 to 60 meter sprints like you know, you just do this stuff on different days. It starts looking a whole heck of a lot like a classic track and field training. But you know, the difference being is that some of your strength and conditioning is gymnastics and other kind of technique type stuff like double unders and you know, whatever the soup du jour is that you want to tinker with.

And then slowly over time you start weaving this stuff together and I guess like Gregg's point if you're going to do some tune-up competitions which sound like a good idea then you can do mini peaks. Maybe you do like a three-week ramp up and start weaving things together in a lactate training format where you're not going 100% but you're definitely in that

lactate threshold range, 160, 180 beats per minute in the training and peak, mild peak for an event use it as a training run. Check all your gear, check the pre and post workout nutrition, try to game plan as many different variables and keep a lot of notes on stuff.

You know, when our competition team, the Nor Cal competition team when we did the games several years ago there was a workout that was find a heavy overhead squat. You could take it out of the rack, push circuit overhead, find a heavy triple and an overhead squat and then you add a period of time to do that. I forget what the format was. So maybe it was like 10 minutes to find heavy overhead squat and then three efforts of max pull-ups.

So what we did is I looked at what everybody's current maxes were in the overhead squat. Since we're going for a triple I was assuming that on a good day we might be able to get 90%, 95% of that and I actually went conservative and went for 90% and also because we had had a hell run workout prior to that. So I assumed that everybody was going to be gunning for 90% as their top. So I had them really quickly do as easy warm-up weight a diagnostic weight that was about 78% of what their perceived max was and then I had them jump right to that 90%. For all of them it was very, very quick. There was no randomness. There was no guessing. They knew exactly the loads that they were going to go for. We only had one missed lift in that whole thing.

[1:10:22]

Everybody got between 90 and 92% of their one rep max and nobody got heavier than that but after we –you know, after they hit that what we perceived to be their top end I had them ditch that then everybody started jumping into the pull-ups and I had looked into some sprint training stuff and you know, recovery to get like 70 to 80% of an all-out from an all-out effort was like five minutes or something like that. So we were going to be able to parse us out and have like three minutes of rest.

So the way that we structured it, we didn't dick around a lot on the overhead squats because trying to get five more pounds wasn't going to count in the points the same way that getting five more reps of pull-ups was going to count because it was a total on between the pull-ups and the overhead squat. We ended up completely running away with that thing. Like I forget what the spread was between Nor Cal and everybody else. But we really tackled that thing in a systematic way. You can't do that with all workouts like not everything is going to lend themselves to that. But I had a lot of data on all the people that we had, about what their 800 meter times were, about what their max pull-ups were, what their one rep max, five rep max that sort of stuff and then from that I was

able to sit down and have some base kind of rules of thumb that I from track and field and from power lifting and Olympic lifting and I was able to draw from that and instead of... On the coaching side, instead of dicking around and wasting a lot of time guessing about what we're going to do, we had a very concrete plan and we ended up running away on that event. I made kind of a miscalculation and swapped one person out on our hill run tag team part and we got smoked on that and had – I've not made that mistake, we would have won the affiliate cup that year. But we got so far behind on that.

Greg Everett: Bitch.

Robb Wolf: Yeah, so totally my fault, you know, one good call on coaching with the overhead squat and one bad call with the hill run. Because the person that I subbed in had been traveling and wasn't in shape at that time. So --

Greg Everett: Well there you go.

Robb Wolf: --what are you going to do?

Greg Everett: I'm not going to do anything.

Robb Wolf: I guess we'll wrap up the podcast. [Laughs]

Greg Wolf: Yes, podcast 195.

Robb Wolf: Donesky and hopefully recorded. If it didn't then we're just shutting down the podcast.

Greg Everett: Yeah. Yeah indeed.

Robb Wolf: Anything else dude? Anything that people need to know?

Gregg Everett: I don't think so. I think we covered it all in the beginning of the show and in the middle of the show.

Robb Wolf: Sweet. Okay. Well this was a long one so people so people excellent, they got bonus, bonus material.

Greg Everett: There you go.

Robb Wolf: All right, man, well thank you. We've got HS this week. We'll give folks a recap on that one when I get back and we'll talk to you soon.

Greg Everett:	Cool. All right.
Robb Wolf:	See you later G. Bye.
Greg Everett:	Bye.
<b>[1:13:18]</b>	<b>End of Audio</b>