

# Paleo Solution 147

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Rob Wolf: Hey folks, Robb Wolf here. Greg Everett in the house. This is episode 147 of the Paleo Solution podcast. Greg, what's going on men?

Greg Everett: Well, the end of the last episode we, at least I made plans to come back at this episode, re-energized, re-enthused and just aiming for the highest possible quality. And I don't think that's gonna happen.

Rob Wolf: Yeah. That's definitely not gonna happen.

[cross talk]

Greg Everett: We'll try to do that the next time.

Rob Wolf: We're traveling and so when folks get ready to complain about the sound quality, I am sitting in the floor of a room with my laptop on my lap so and I've got a bottle of fizzy water which is probably a tactical error given the propensity for burping so apologies up front.

Greg Everett: I like it. That's the way it should be.

Rob Wolf: I don't know.

Greg Everett: I like you're German grammar artifacts that you're like sitting in the floor.

Rob Wolf: It's true. It's true.

Greg Everett: Sitting on the floor [Chuckles] Oh boy. Alright. Well, so you have anything new and exciting to tell folks since last we spoke?

Rob Wolf: Oh men! There's all kinds of stuff going on but I just can't crack it open yet. There's all kinds of interesting stuff happening though but—

Greg Everett: You're starting to sound like me. [Chuckles] I assure you I have interesting things going on in my life. You just can't hear about it.

Rob Wolf: No! No! Really, I just have to keep it under wrap. It's a C.I.A things so we'll have some interesting stuff soon but some phone projects, interesting stuff going on. I'm trying to think of anything else. No. No. Just motoring along, all is good though.

Greg Everett: Sweet! I like it! I will say the exact same although I am not working for the C.I.A that I know of.

Rob Wolf: I think we all are.

Greg Everett: Probably. They're probably not getting much out of me though.

Rob Wolf: Definitely not as much as what they're paying in. That's for sure.

Greg Everett: Alright. We'll let's just get right to it since we seem to be remarkably short on witty banter today it's usually not a problem but the stars are not aligned for us.

Rob Wolf: No. Sorry.

Greg Everett: This first question, I'm sure we'll be quite upbeat and—

Rob Wolf: Squatchy picked some doosies today men. We have some goodies today. [Chuckles]

Greg Everett: We're just gonna go with it. Alright. So the first one, agricultural subsidies and food prices. We might as well talk about religion, abortion of nutrition. I guess we do that anyway.

Alright, Ben says, dear Robb and Greg, congratulation as always on your great podcast guys. You are pushing back the frontiers of human misery on many plains.

Robb Wolf: That's what we always definitely do man.

[Cross talk]

Greg Everett: This query might also double as one of the controversial truth podcast. I've downloaded but not yet listened to that one.

As an Australian, our standard meat is grass fed and neither do we have to pay extra if we want grain fed which is regarded as a luxury product. Obviously it's more expensive to make grain fed meat as you also need to grow grain and transport it and feed the cattle. This takes more labor, fuel and effort, and the cattle require more drugs and veterinary support.

Some people say that grain fed beef is to die for. I told them it is to die from. [Chuckels] However when I visit your fair land, I am always shocked

at the enormous price of meat and shocked further that grass fed meat is more expensive again. People tell me that this is related to agricultural subsidy systems where the farmers of corn and soy or sorghum and whatever cows are feed/poisoned with.

I'm really interested in what the breakdown is and for example when you buy a pound of beef, how much does it cost and how much agrisubsidy does that represent? And how much of that goes to the farmer and how much to big business? What would your meat cost without agrisubsidy; do farm workers in the USA get paid shitload from the amount you pay for beef, how do you expect the average cowpoke must be paid 40 bucks an hour?

I know that Jo Robinsons is an expert on many aspects of this in his website. It's eatwild.com. And I have not seen her name on your show but you totally need to get together as she is totally awesome just like you guys. Enough humping your leg. You're totally on the same page and she has done some very interesting stuff and you probably already know each other and are joined at the hip like Siamese triplets, etc.

Aside - every one knows what green feeding does to cow meat and pork, etc. why do they have such trouble accepting it destroys human tissue in the same manner. You'd also know that Confessions of an Economic Hit Man, why don't you interview Perkins, takes aim at agrosubsidies as USA or I believe in the USA that makes Mexican farmers—this sentence is killing me. Mexican farmers compete without tariffs on a level playing field which is he believes bullshit then wipes them out with subsidized produce. Regards, Ben."

I'm sorry for butching that the last paragraph. I don't even know what it says.

**[0:05:05]**

Rob Wolf: He is speaking Australian so you know there's a little translation.

Greg Everett: Oh that's why all the letters are upside down.

Robb Wolf: Honestly, this is a great question but I look at it almost more as a statement. I don't know too much to add in this.

I've actually done a little bit of tinkering and it's something that I asked Joel Salatin about if there was a decent breakdown on the what the cost of grass fed meat would be if there were no subsidies and you had to pay

the real price of the full accounting - all of the taxes that are collected and then IRS inefficiencies redistributing that money and giving it to farmers and oil and military and -

Because I mean really when you start doing the full accounting on this, it's a big big piece and even Joel is kinda like I'm not really sure on that. I will say this when we've travelled abroad, whether it's Central America or even Europe. Like Europe, the meat prices, I guess are reasonably expensive compared to the United States or on par in Central America, we ended up buying a literally like giant filet.

I mean it was a huge fillet and the stuff was like 2 dollars and 30 cents a pound and this was in Nicaragua and you know where the store was? It was in a reasonably developed area and because you have lot of travelers like that, the rest of the stuff that you bought in the store—if you bought a can of coconut milk or if you bought apples or oranges or whatever like—it was pretty similar to what we would be pay in the States.

And I think they were just kinda like of price matching because this is what people are used to paying and I'm sure if you bought this stuff elsewhere in a less developed area, it would be less but it was amazing to me that the basically the most expensive cut of meat in the place that you could buy was like \$2.30 a pound which I think some decent fillet whether grass fed or not, you could pay \$20-30 a pound for it.

You know like a Whole Foods or something like that so I mean the short answer on that is that it would just be remarkably less expensive. I made somewhat of a deal that I would try to keep more the politics out of this thing and more on the controversial truth so I won't talk a ton about this stuff.

The reality is that there is really some hanky stuff going on when you look at like what we did the whole math North America Free Trade Agreement and everything but yet we are subsidizing vast tracks of our agricultural products which really isn't fair in the whole thing but because we are kinda the big bully in the whole thing and the US kinda does that but it's not really fair.

It's certainly is not cheap. It doesn't create a level playing field. It doesn't create a legitimate market based kinda scenario-the meat is more expensive; it's less healthy. The animals are less healthy. The environment is more impacted.

There's all kinds of other hidden costs with like redistributing wealth and government inefficiencies and all that stuff. It's just not that great of an idea and you know hopefully for the love of God I hope as we export certain bad habits out of the US to other places like Australia, hopefully if people want to grain feed the meat then that's fine but it certainly should cost more because it is costing everybody and everything more so that should be reflected upfront in an obvious way instead of hiding the price so I don't know too much more to add to it than that but good commentary I guess.

Greg Everett: Alright. Emily says, "I try to see if you posted anything or podcasted about protandim so if you have and this is repetitive I apologize and delete this message.

Robb Wolf: We never get repetitions. [Crosstalk]

Greg: Everett: I am a competitive triathlete/crossfitter and have seen steady improvements since going paleo 8 months ago. My crossfit gym endorses simply pure nutrients as a supplement/ protein and I've been taking little recently and have been recovering better as a result since both of my volume and time dedicated in weight have been increasing due to the demands of competing.

I was approached by my coach he's just sitting for a webinar about protandim and he's gonna give a month's worth of samples to a few best athletes including me as he hopes to sell those product at the gym. Wonder if you have an opinion on this supplement as far as performance and recovery go. And if you know any side effects and more concerns I may have before taking it.

**[0:10:08]**

Robb Wolf: You know the protandim has some pretty interesting stuff in it. It has some antioxidants, like green tea polyphenolics. It has some adaptogens. I tinkered with the protandim and for me it's kinda funny. Green tea actually sits well with, less well with me than coffee. The main stimulant in coffee is just caffeine; tea has a mixture of theophylline and caffeine and some other alkaloid stimulants.

And for whatever reason the green tea just doesn't sit that well with me so I didn't really liked the product myself. One of the problems I have and unless I am mistaken but I'm pretty sure the protandim is kinda of a MLM multilevel marketing company and I'm just always hesitant about that stuff especially when you're running a business and everybody can run

their own business however they want to but for me I've had some reservations about getting in and selling products that are in an MLM.

It just seem like the propensity to go crazy in trying to get people under you on that is high and what's this stuff at Burg –they kinda support the USA.

Greg Everett: An AdvoCare?

Robb Wolf: AdvoCare has some cool stuff like they're totally they're solid, they have some cool stuff. I like some of the things that they have but just that the MLM thing, I just am little bit, little bit leery of it. It's just maybe a goofy deal on my own but I think a lot of different companies have some decent products.

These guys, a lot of folks like the protandim. I again I would do like the classic n=1 experiment. See if you like it better as you're doing with the protein supplements and stuff like that but for me personally my experience with the protandim, it didn't really spin my propellers all that much so.

Greg, have you tinkered with it at all?

Greg Everett: I have not. I generally feel the same way about MLM stuff. AdvoCare, definitely is an exemption. I do like some of their products but I will come out and say that the AdvoCare reps are super irritating because that's all it is. It's just that constant drive to get people selling the stuff under you and they are just relentless so needless to say I don't really enjoy dealing with them but I do like some of their products.

Robb Wolf: Yeah. If you're just selling a private labeled product on your website or whatever obviously, you're still selling it to make money. People making money isn't the problem.

The weird thing that I've seen pop-up and I think I was in high school when I working on a bookstore and some guy came in and started talking to me about like- It ended up like being Amway basically and the guy was like diamond direct and 10 grand a month and everything and we sat down and really looked at the income potential to either make or save \$10,000 a month and I was like okay the numbers worked but it just-

It seems like every person I met every day the rest of my life, I was gonna be fired up trying to sell shit to them. It was just rough for me. So that's a whole other side note. But yeah. [Crosstalk]

Greg Everett: Yeah. I would disagree with your suggestion and to try it out especially if you're getting free sample from him. Try it out. If you like it, use it. If you don't like it, don't let yourself get suckered into becoming a MLM salesperson for no good reason.

Simple as that.

Robb Wolf: And when you're running your gyms like folks running your gyms at Nor Cal, we've been really hesitant to get in and sell supplements and stuff and I know some gyms and I know some folks that you can sell a lot of stuff.

You can make a lot of money doing it but I've always preferred that what people are getting out from our gym was coaching and community and even though there's been an opportunity to sell some products, we've largely passed on that.

There's also some legal liability type things, too, like if you start vending supplements and then somebody has an allergic reaction whether it's to the supplement or not, you'd better make sure that you're liability and insurance for that gym -

**[0:15:00]**

And you as an individual covers selling supplement which I will almost guarantee you it does not unless you went in and paid extra for all that line of opportunity to sell supplements out of your gym and this is just the stuff that people do not fucking think through when they're running the gym and they are like "Oh I can make money off this."

And yeah you can make money of a variety of ways. I'm a chemist. I could go set up a fucking meth lab in the back of the gym and make all kinds of money but there's downside to some of these stuff and folks do not really think it through both on the credibility stand point and then are you really legitimately doing something that is beneficial for the people that you're serving.

Like at some point I'm probably gonna have some sort of a digestive aid supplement that I've been tinkering with and thinking about because I'm always recommending like Now Food's super enzymes and I like them a lot but there are some other stuff that I would like to do so someday I'll probably tinker with that but I feel pretty good about doing some stuff like that.

Whereas there's other things if you haven't really field tested it, if you don't really feel comfortable selling it and it's really not helping people, I mean that's your own moral quandary as a coach or a gym owner but we've been around almost ten years and we have really good respect.

Our clients trust us. If we recommend that they go to a chiropractor or an acupuncturist or like one of the docs in town or whatever it is we've just built a lot of trust and credibility off that and it's easy to undo that by overly turning your gym into a store front so I would just think about that stuff.

And if you feel really strongly that something benefits people and you've researched it and you feel like the benefits there then by all means knock yourself out then go for it but make sure that what you're vending is legit and also make sure your liability stuff is squared away because when you start selling people product like that you open up another layer of potential litigation and liability that I guarantee you all. Promise you that this guy does not have additional liability insurance to cover selling products out of this gym and that's dumb.

Greg Everett: Yeah. And that's the problem. Alright.

Tyler says, hey Greg and Robb, first of, you two are alright.

Robb Wolf: Oh thank you.

Greg Everett: You've provided me with countable hours of learning and laughter so thank you. Oh man, I think usually the expression is countless hours 'cause it's so many that you can't count. I like this though, countable hours. [Cross talk]

Robb Wolf: We are quite limited! [Chuckles]

Greg Everett: My question has to do with the perpetually thin skin and dark rings underneath my eyes. I've had this since I was a little kid and nothing seems to get rid of them. I lift a few times a week and I've been eating moderately carbed paleo for nearly two years. I sleep 8-9 hours a night and shy away from alcohol most evenings sufficiently close to sleep. I like that most evenings.

Whenever I get less than 7 hours of sleep however people ask if I got punched in the eye, not kidding. It happened at the store this week which made me make up the whole allergies bullshit response because I really



didn't know what else to say. Are there any nutrients I might be deficient in?

The sun helps but do I need to massage my face every 20 minutes to stimulate skin thickness there? I haven't bled/ donated blood in a while so maybe I have too much and it's pooling under my eyes or something.

Please tell me I'm doing something wrong and it's not just shitty genes. Also, if I do a hand stand or look in the mirror upside down [Laughs] the place underneath my eyes veins up and I wouldn't doubt if they would just blow up if I didn't stop and I'd be happy to send a picture if you wanna feel sorry for me. Thank you. [Laughs]

If I do a handstand or look in the mirror upside down - how and why are you looking in the mirror upside down that frequently?

Robb Wolf: It happens man. I mean folks are nimble these days. [Cross talk]

Greg Everett: Unless you have a full length mirror and you're doing a hand stands in front of it but then he makes it very two distinct activities here. Interesting.

Robb Wolf: I think the big deal here is that Tyler's parents never told him he was a racoon.

Greg Everett: [Chuckles] Problem solved.

Rob Wolf: I've seen this in people before. The only thing that I've seen any commentary were actually folks in the kinda Chinese medicine realm and it relates to kinda like some kidney deficiency which in Western terms the best I could say is probably like some sort of adrenaline sufficiency or something like that.

If you've ever tried like a consistent B vitamins supplementation, that might help but I would actually check out a good Chinese medicine doc and give that a whirl and see if you've got some sort of a constitutional issue that maybe causing some problems but I mean this is—

Dude, this is way outside the strike zone and I'm just swinging the bat with one hand in this. Fun [Chuckles].I really don't have anything good on this at all other than the other Chinese medicine courses that I took they talked about this phenomenon.

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You see it develop in people if they're living hard or constitutionally people can have this predisposition. They're just born with it and there is some stuff that they can do for that kind of teas and some tinctures and some needling and everything but again this is way outside the strike zones so I don't know.

Greg Everett: Feel free to do more upside down in front of the mirror experimentation.

Rob Wolf: Yeah I guess we could just time it and see if something catastrophic does happen.

Greg Everett: Okay. This is another good one here. Oil pulling - Brandy says Robb, while searching for other ways to use coconut oil I stumbled upon oil pulling. I've never heard of this before and wondered what your thoughts were on it. It sounds sort of crazy to me, but wondered what a pseudo scientist thought. Greg, feel free to make fun of my grammar or lack there of. Love listening to you guys each week!

And then she thoughtfully links to [oilpulling.com](http://oilpulling.com).

Rob Wolf: Which is funny and have you ever heard of this stuff?

Greg Everett: I have not.

Rob Wolf: So the idea is that you swish out your mouth with oil which is obviously a lipid and then if you have fat soluble toxins in your system you're going to extract non aqueous stuff out of your system and you're going to remove toxins that way and so the funny thing is this oil pulling thing it never really tells you what it is. It just tells you how to do it.

So you just arrive at this page oil pulling and have I not been familiar with it you still wouldn't really know what it's all about but that's the basic idea that you get this stuff in your mouth, you swish it around it's gonna extract toxins and then you spit the oil out and there you go.

Greg Everett: Are they selling an oil specifically for this purpose?

Rob Wolf: No. They'll recommend like sunflower oil or coconut oil or whatever. You just need a mouthful of oil. I guess you could grab some quaker state, 10W40 or something and do that but I really couldn't see this doing much of anything other than leaving a really greasy mouth. I would love to see somebody do it with duck fat because this stuff would just congeal to the

roof of your mouth and you wouldn't all the grease off your soft palette for a year

I would put this probably in the Madam Ruby palmistry astrology kind of category. Maybe some day if we ever get the Kraken back on we can revisit this one and ask the organic chemist extraordinaire what's his thoughts are.

Greg Everett: Well I mean it would be interesting to know what fraction of these fat soluble toxins in your whole body are actually even gonna be exposed in your saliva to be drawn out.

Rob Wolf: Yeah the only contact you have is with the mucosal membrane of your mouth and so I guess possibly you can make an argument that some stuff is circulating through on red blood cells or something but I just don't see the surface area really working. I guess if we filled up your lungs with oil then we might be in money but I think that would probably be a problem.

Greg Everett: Don't try that just so we're clear. Although if you've seen Abyss you know you can totally live with liquid in your lungs.

Rob Wolf: Totally.

Greg Everett: Effects of training after blood donation. Alexander says hi Robb and Greg, I've read that after donating blood it takes 2-3 days for blood volume to get back to normal, but around a month, give or take, for red blood cells to be completely replenished.

My question is would aerobic exercise in this recovery state once blood volume is up, of course, have essentially the same effect as altitude training given that not as much oxygen can be delivered to where it's needed because of a lack of red blood cells rather than a lack of oxygen in the environment?

If this is the case, would it be a way to rebuild red blood cells faster after donating blood?

Rob Wolf: No. It's an interesting idea but the stimulus for this is erythropoietin which is released in the kidneys and there's a whole complex signaling process that goes on. It actually is related to the partial pressure of oxygen dissolved in the blood which we circulate a tiny little bit of oxygen in a dissolved state.

**[0:25:02]**

The vast majority of the oxygen that gets transported through the body is associated with hemoglobin. It's an interesting idea but you're not really gonna goose production more. I guess you would a little bit because whenever we're training we're sending - if you were just cruising around doing no exercise you're gonna have a certain hematocrit, a certain red blood cell count and density and then if you start training that's gonna increase.

From that standpoint then yes you're sending more of a signal that if you were just sitting around on your backside but it's not working via at all the same mechanism as just simply going the altitude and changing the partial pressure of oxygen and the whole EPO signaling and all that.

Greg Everett: So you're saying I shouldn't do 100 snatches per time wearing a gas mask?

Rob Wolf: No you should because that would be amazing.

Greg Everett: All right. Don't dare me.

Building the primal gym - the Primalist says Greg and Robb, I am not a masochist and so I haven't listened to all of the podcasts, but I have listened to enough to know Greg used to call himself Andy Dees and you guys have not yet formally tackled the issue of developing your own primal gym.

I am sure there are many home warriors who are on a shoe string budget or who have limited time and cannot afford to attend a gym, but who nonetheless want to improve their overall fitness and take their game to the next level. With this in mind, what would the Robb and Greg think-tank develop for the at home enthusiast who wants to build a home gym?

To narrow the focus of this question down a bit, let's assume that this hypothetical paleo gym would be designed for someone who wants to equally train for strength, power and endurance in order to improve their overall general fitness. What inexpensive items and equipment would fill this gym and what types of routines should the at home enthusiast concentrate on so as to not get hurt due to lack of formal instruction? I'm guessing no Olympic lifts?

Personally I am thinking this gym would contain a collection of free weights, kettle bells, sand bags, Bulgarian training bags, sloss tubes, a

tractor tire or two, o-rings, a climbing rope and one large beard or mustache might look something like this and there's a link here. It looks like a blogpost from the [artofmanliness.com](http://artofmanliness.com) Those items alone would probably make a pretty formidable gym. Not sure what specific workout routines to employ with all these goodies though. What are your thoughts?

Rob Wolf: So what's the first question? Like what gear?

Greg Everett: What gear and then basically what to do with it?

Rob Wolf: Gosh I mean depending on what you're up to you could get a really cheap Olympic barbell set with metal plates for - you can get 300, 350 lbs for \$100 or something like that. The bar's not amazing, the plates are clunky and they probably have a 10% air on the actual weights but they're cheap and easy to use.

I think dumb bells are totally bad ass and for the non Olympic lifter or even just the recreational athlete/ even crossfit-esque type person I think that doing O lift variants with dumb bells are safe, easy to learn, super effective. Dumb bells are definitely a lot less expensive than kettle bells. Dave Warner and I we used to use saw horses for our squat racks so you started off in the bottom each time which was actually kind of cool.

We used them for dips. We used them for parallel bars, for doing swing to hang stands. Saw horses are pretty cheap and you can use them for a variety of things. We also threw a heavy bag over the saw horses and then you can do reverse hypers off of it. You have to get a little bit creative. Honestly I think that just like a set of gymnastics hung in the right spot so you can do pull ups, muscle ups, front levers, back levers, skin the cats, low room, forward dips, a variety of push ups working towards a handstand push up on the rings.

There's so much cool stuff with that and then if you've got any type of an inkling towards basic gymnastic skills like a planche, pseudo planche push up, hovering planche push ups, one armed chins dude you can get all kinds of seriously brutally upper body development with just a minimum amount of gear.

And then honestly on a minimalist program I'd be hard pressed to find anything better than just doing sprint intervals for conditioning. There was a great P Menu article that Scott Kustes did on you know it was a periodized sprint training program and it had some weight lifting days, some Met con days, some sprint days and depending on how you wanted

to slice and dice that you can do different stuff but the sprinting just seems to give so much with regards to physical development and great conditioning and if there ever is something that you could use in life or death situation like run is probably pretty good.

**[0:30:22]**

So that seems solid and all that stuff seems pretty fun too. The same stuff like the tractor tires, sledge hammer. Ross Enamait, if people haven't checked out [rosstraining.com](http://rosstraining.com) that guy's a savage and he has so much stuff related on a shoe string budget training type thing.

He has a phenomenal book. What is it? Infinite Intensity and the Never Gymless - the two books that Ross has, his main books. Those are phenomenal so I don't know. Could you think of anything else Greg? Basic gym and then Rutherford's stuff is great that max effort black box stuff is phenomenal for programming.

Greg Everett: Yeah I would definitely check out Ross Enamait's stuff and then also you might want to get that book Dinosaur Training by Brooks D. Kubi and he's got some good ideas for super low rent strength training. If you combine that with Ross Enamait's stuff that could be pretty set for the rest of your life.

Rob Wolf: Yeah you're never gonna be bored.

Greg Everett: And in terms of equipment I'm with Robb. Get a cheap barbell, get a bunch of iron plates. You can get that kind of stuff at like a plate against sports for dirt cheap and maybe a couple of kettle bells, a pair like adjustable dumb bell handles and some plates.

In that way you don't have to buy 40 different pairs of dumb bells. I'm not really into the slosh tube. Bulgarian training bag - if you have a sandbag that you can adjust the weight on and you can make it loose enough that you can just grab the ends you really don't need a separate Bulgarian bag.

And then one large beard or mustache I think that's a good plan although be careful with the mustache because sometimes that just comes out looking all wrong.

Rob Wolf: Yeah you end up CHP look instead of just cool 70s big look.

Greg Everett: Mike says Hi Robb, love the work that you're doing, very much appreciated. I ran into a guy by the name of Kiefer who is emerging as a big presence in what might seem to be a growing following known as Carb Back Loading. I just wanted your thoughts on this diet protocol and whether or not you think this growth will continue or if the science just doesn't add up and the broad masses will eventually figure that out.

Thanks for your feedback! Mike.

Why is it all about women? The broad masses.

Rob Wolf: Dude. So sexist.

Kiefer's a really sharp guy. He shot me some emails. We're gonna get him on the podcast at some point. We're gonna get Nate Miaki on the podcast pretty soon. I don't want to give too much of the carb back loading away. I've read the book. I was pretty impressed with.

Now Kiefer takes an approach that obviously is different than where I'm coming from in that when he recommends his carb feeds it's like apple turn over, the waffle house and destroy the place.

Greg Everett: I already like him.

Rob Wolf: He and Steve Pain would be a close -

Greg Everett: Steve is doing back loading, front loading, center loading, top and bottom loading.

Rob Wolf: Top and bottom loading yeah. So the idea here and the one thing that I will give away on this gig that I think is intriguing Kiefer recommends that you do your training in the afternoon or heading towards evening because we actually lose insulin sensitivity as the evening progresses.

In the morning we tend to be very insulin sensitive and then we lose insulin sensitivity as the evening goes on. Historically that's caused people to recommend that you should eat carbohydrates earlier in the day because you're more insulin sensitive -

Greg Everett: Is that increased sensitivity simply the product of having fasted for 8 hours or is there something else going on?

Rob Wolf: Part of it is the fact that you've fasted but there's some legit but I think some of it just is that we are typically more active and so the muscles and

the adipocytes are a little bit more primed towards receiving nutrients and also kind of the other side of that is that you can pull nutrients out a little bit better in an insulin sensitive state.

Burning off of fuel resources is in fact a little bit easier typically and the observation that he made though is that post workout particularly with resistance training we have a period of time in which we have non insulin mediated glucose transport.

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We have a period of time in which the muscles become - staying insulin sensitive is actually a misnomer. I tend to say that because it gets the same idea across but the point is that the ability for the muscles to uptake glucose is via a non insulin mediated route.

So he had this idea that you would lift weights late in the afternoon, early evening and then you start doing carb loading in that period and the idea would be that you your adipocytes, your fat cells would be insulin resistant because of the time of day but then you figure out a way of flying nutrients into your muscles by not using insulin by using this other method which circumvents the insulin mediated effects and it makes sense.

So what he recommends is basically an intermittent fasting, cyclic low carbohydrate where you eat sparingly if at all for breakfast and if you do eat it's protein and fat like a ketogenic mix and you do the same thing for lunch and then for your evening meals you put the vast majority of your calories in the evening post workout and eat a shit ton of carbs with it.

He likes the more insulin spiking the more refined, the better for him and part of the idea with that is that you want to shuttle all these nutrients into the cells as quickly as you can and then you want the blood sugar levels to come back down to normal.

If you were to eat slow releasing carbs like beans or something like that that you would end up with high blood glucose levels late in the evening that would suppress growth hormone production and that would be problematic and just looking at it from the outside it makes sense and he's got some pretty impressive testimonials.

There's just been a lot of stuff floating around out there like it doesn't look super far off like the warrior diet in some ways. Martin Berkhan has tinkered with the whole lean gains, intermittent fasting gig.



Greg Everett: Poliquin has recommended sort of a set up like that before too. It's super low carb throughout the day and then after your final workout doing a big carbohydrate load.

Rob Wolf: For your final gig yeah. Kiefer breaks some stuff down like if you workout early in the day then you do this protocol, if you workout mid day it's actually kind of least optimum for a variety of reasons which he goes into which is a bummer because that's when I tend to do jujitsu and stuff like that.

It's pretty interesting. Kiefer's got a masters in Physics and really knows his endocrinology quite well and I think you could easily find some high glycemic index paleo carb type stuff so that we're not dealing with the gut irritation side of this and I think that you could make a pretty good run at things. He also recommends some shakes which you basically put together on your own and you use some lysine and you do some hydrolyzed weight protein isolate and he has some specific reasons for why you want to do those both for anabolic signaling and also enhancing insulin release and stuff like that.

I think there's probably some pretty good science to it. He lays out a pretty convincing argument and for me because I'm training usually mid day doing jujitsu I haven't been able to tinker with this quite to the protocol that he likes. He just likes people lifting weights and if they do any aerobic type of activity just doing some anaerobic intervals like a 4 to 1, 5 to 1 work to rest ratio and basically just likes people lifting weights and getting big strong and jacked which I can't really argue with that.

That's my wheel house too if I had some preferences on it. The jujitsu being the only deviation from that. It's a little bit more on the aerobic pathway I guess, a non resistance training but I think it's really interesting stuff, definitely gonna get him on here, gonna be able to ask him a lot of questions and I think whether we're talking a health and longevity stand point -

I wrote some old stuff for the P Menu which I really feel like it's still some of my better writing on intermittent fasting and on hormesis and all that sort of stuff and I think there's a really great argument for nutrient cycling and this is the stuff that always made me just loose my mind about the zone.

Life seems to work in punctuated non equilibrium based endeavors. You don't train at the same rate everyday all the time. You fluctuate volume

and intensity and that's the way that people make the best progress and when we look at metabolic flexibility and the benefit of switching back and forth between carbohydrate and fat as a fuel source, intermittently going to ketosis, having a hormetic stressor of a large carbohydrate load in a punctuated fashion - all of these things make sense.

We still don't have enough information to say unequivocally that they are the best way that you can go about doing things but there's some good mechanistic science that we can make some educated guesses about and then do a little bit of n=1 tinkering and I think something that looks like the carb back loading or just simply throwing the bulkier carbs in your post workout period and making the carbohydrate feeding based on volume and intensity of exercise that just seems to make sense.

There's just a lot of good reason for that and then in other meals sticking a little bit more ketogenic even consuming modest amounts of protein in that period with large amounts of medium chain triglyceride products like coconut so it goes you into ketosis. There's good reasoning for that. It seems to make some sense. I think Kiefer had some insights as far as potential mechanisms that could improve these things like the observation about if you train in the evening your fat cells are still gonna be insulin resistant but we're gonna be able to shuttle nutrients into the muscles via non insulin mediated activity.

There's some interesting stuff with that. That was a perspective or an observation that I've seen all the same literature but didn't connect the dots in the same way so he's definitely a sharp dude and looking forward to having him on the show. I think that you could easily tinker the material to fit a little bit more paleo-esque.

I would certainly tinker with the shake recommendations he makes because he seems to put a lot of weight on the importance of the leucine, the mTOR signaling and then these hydrolyzed proteins for also insulin signaling. Greg any thoughts on that?

He's been really popular in the power lifting scene yeah lead FDIs and stuff like that.

Greg Everett:

The whole thing had been super popular with the power lifting crowd recently so I haven't paid a ton of attention to it mainly because when I first started hearing about it it didn't really strike me as being very different from basic stuff that a lot of people had been doing for a long time anyway which was putting the bulk of their carbohydrate intake immediately post workout.

I guess I really didn't see a huge distinction between what he's recommending and kind of what these other folks had been doing so it'll be interesting to get him on because I'm sure he can explain exactly why this is different and a little bit more effective. So that'll be good and also I want to talk to him about people who train in the morning unavoidably.

Rob Wolf: His deal with the ideal time to train and his scheme is afternoon or evening second best is morning and then what you do is some of the post workout shakes, one carb feeding that's not enormous but then you slip back into a ketogenic gig and then you do the larger carb meal that evening.

He made an interesting point too that the carb refeed is more based around what you will do for tomorrow's training not so much that you're specifically recovering from today's training because you know you're going to potentially have a fasted period then a ketogenic period so you want to stick enough muscle glycogen in so that you're looking ahead, looking at the next day's training which then actually necessitates some sort of planning and stuff like that.

He definitely wasn't a fan of randomized training crossfit type stuff in this template for a variety of reasons but part of it in my mind is just that if you really don't know what you're gonna be doing from day to day then it makes it hard to really anticipate how much carbs do I need to eat tonight to be ready to train for my stuff tomorrow.

**[0:45:02]**

Greg Everett: Yes it's very difficult to plan if you don't have a plan.

Rob Wolf: Indeed.

Greg Everett: Paleo solution for the dawn phenomenon. Louis says hi, Robb and Andy, Thank you for changing my life. I'm a - Squatchy does this stuff on purpose.

Rob Wolf: He does.

Greg Everett: I see what you're doing Squatchy.

Thank you for changing my life. I'm a medical doctor working in India, and your 8th listener. I work mainly with patients suffering from the metabolic syndrome, and after finding spectacular, effortless success for

myself (I lost 20kgs, and 8 inches off my waist), now, advise all my patients a low carb paleo diet as an initial step.

I do get a lot of motivated patients, who succeed in going off insulin. Some of them however seem to be suffering from the Dawn Phenomenon. I need to confirm that it is not the Somogyi - which I'm sure I'm totally butchering of that effect, but, that is relatively easily fixed by slightly upping the carbs at night.

I'd rather not put T2DM patients on insulin, which is what the standard therapy is, for a situation like this. I can't advise back squats or internal sprints to bump up their insulin sensitivity. Most of them also have severe knee and hip issues.

Do you have any suggestions as to how I can tackle this with minimal pharmaceutical intervention? I do have insulin and oral hypoglycaemics as backup, but I'd rather not use them if I have a choice.

I'd be grateful if you could help me out, even if it is by email. Cheers.

Rob Wolf:

It's a really good question. At some point down the road we're going to get Tara Dahl on the show and she has pretty some solid metabolic bench marks. If somebody has an A1c around 6.5 and their triglycerides above 200 there's a very high likelihood or virtually guaranteed that this person's probably lost greater than 50% of their pancreatic function.

So something that folks forget about I definitely didn't consider it early in the game is that when people are under severe metabolic stress as they're getting their blood sugars highs and lows there's a significant oxidative stress that is applied to the pancreatic beta cells and this can kill them.

At the end of the day it ends up looking not dissimilar from type 1 diabetes, the autoimmune version of diabetes because you effectively - It's not just simply that you are insulin resistant but you're still pumping out insulin and the body's not responding to it. At some point the people start failing to produce insulin. So you have that problem.

The Dawn effect I think for a lot of folks is still cortisol mediated in the mornings. You should have elevated cortisol levels and it should start bumping blood sugar level up a little bit because we're going to be active and do things and so you want a little bit higher blood glucose off of that. But if there's just this constant metabolic stress and insulin resistance the

likelihood of this problem being worse I think is just a greater likelihood heading down that road.

Actually doing some things like ASI test like the 4 point adrenal stress index test, looking at DHEA sulfate levels and trying to figure out like if the person has say low AM cortisol but high DHEA sulfate levels then we know that that person is early in the adrenal fatigue stage. If they have low AM cortisol low DHEA sulfate then we know that they are quite down the road and they could also have elevated AM cortisol high DHEA levels which would probably be like an acute stress state like somebody just started school, they just had a baby or something like that but they are otherwise pretty healthy in their adrenal function.

So I think getting in and looking at adrenal function would be really helpful to figure out where folks are on that continuum because when the adrenal start going south you could be eating a low carb diet but end up with chronically elevated blood glucose levels just from cortisol just because the adrenal signaling is not working properly.

And another layer to this is gut health. If you have chronically irritated intestinal lining that could be enough to keep you on a constantly adrenal fatigued state. So a lot of what goes into fixing these things at a very basic level is looking at adrenal function, looking at the overall hormonal profile and then also checking for gut pathogens and this is a reasonably long drawn out process.

Some people are sick and damaged enough that you really need to get back to basics and look at all these stuff but then in the interim I'm obviously not a physician but the stuff that I've read on glucophage I think that the cost benefit deal on that story if you have somebody that's not managing blood glucose well and you might suspect some sepsis, some systemic inflammation, some GI irritation it really looks like a reasonable dose of metformin could be really helpful for all that stuff.

**[0:50:40]**

You could use that while you are also doing the adrenal testing, doing the gut health testing and all that and trying to get these people moving forward. And for some people depending on how impacted they are on their pancreatic status like do they actually have functioning beta cells if they don't then they would probably need both a low carb diet and some metformin as a base line just to hopefully stave off losing the rest of their pancreas.

That's my understanding of that stuff to date but we're gonna get again Tara Dahl on. We also have a couple of other folks that I've come across recently that are super geeked out on the adrenal gut connection, testing for adrenal status, doing some fecal samples and having them tested for different types of gut pathogens and then getting in and getting all that addressed so that you really have the ability to heal from the innards out.

Greg Everett:

Last question. Garlic? I Hardly Knew Her! It's awkward. Rob says Hey Robb and Gregg, I'm a fan of using garlic supplementally as a blood cleaner/thinner. The common wisdom is that the more you cook it the less potent it becomes. I'm the same way.

The other day I peeled off a clove and thought "Hey, this is small like a pill", so I took a swig of water and downed it like a vitamin. Is there any benefit to doing it this way other than the lack of garlic breath? Is it bioavailable enough for the body to use or would I be better off crushing it and rubbing it on my steak?

Thanks a bunch. Insert requisite ass kissing here.

Rob Wolf:

The active compounds in garlic that both have antimicrobial activity and also some interesting effects on lipoproteins you need to crush it, oxidize it, expose it to the air and then consume it uncooked to really get the best effect out of it.

So you could crush it, add it to a steak and then the cooking is going to undo some of the beneficial effects, some of those cool oxidized compounds and I'm blanking on the names. I can't for the life of me remember the compounds that go from reduced to an oxidized state and that's when they become more bioavailable and bioactive.

But the basic deal here is that if you want the real legit bioactivity from garlic which it can actually be a pretty potent antimicrobial agent like if you're travelling and stuff like that you can crunch up some raw garlic and chew it down but you actually want to mash it, pump it through a garlic press, spread it out a little bit and get a little bit of surface area and then 5 or 10 minutes later actually consume it.

You'll actually see a little bit of browning occurring in the garlic, a little bit of the tyrosinase enzyme activity is gonna go on which that's not the enzyme that's facilitating the conversion in this case but it's telling you the little bit of oxidation is in fact occurring and that's gonna be the way that you get the most potency out of your garlic.

I will say this though. Garlic is a common allergen so I would be careful overdoing that and I would definitely be careful consuming garlic with other allergens like dairy or wheat and things of that nature which really makes a garlic pesto pizza like a tough deal but damn delicious.

Greg Everett: All right. We made it through another.

Rob Wolf: Did we motor through it?

Greg Everett: Yeah.

Rob Wolf: Sweet.

Greg Everett: Okay.

Rob Wolf: Well I don't think that sucked too bad considering I'm sitting in a floor of the room again with my laptop in my lap.

Greg Everett: Couldn't tell you I wasn't really listening. I'm sure it was fine.

Rob Wolf: Cool.

Greg Everett: It's nothing that people haven't come to expect. I'm sure.

Rob Wolf: That's true. We just keep standards low in that way we can meet the standards most of the time.

Greg Everett: Exactly. 50% of the time I guarantee we'll be at 100%.

Rob Wolf: Exactly.

Greg Everett: All right. Well let's get out of here. It's Friday.

Rob Wolf: All right man. Thanks for hanging in there and letting me get going.

Greg Everett: Enjoy your trip. I will talk to you next week.

Rob Wolf: All right G talk to you later.

Greg Everett: All right see you.

Rob Wolf: Bye.

**[0:55:10] End of Audio**