

# The Paleo Solution

## Episode73

Robb Wolf: Hey folks, Robb Wolf here, episode 73, I think. Greg Everett, how the heck are you doing man?

Greg Everett: I'm doing great, we're pretty much just getting poured on here but at least we're not in Toronto getting snowed on.

Robb Wolf: You know, we had a sort of snow on the runway when we landed and I've had a lot of dodgy landing situations but, actually, feeling the plane like slide around like it's some sort of a Buick skylark or something, that's not super cool.

Greg Everett: Oh, man.

Robb Wolf: But Toronto's awesome. We got to hang out with a bunch of folks from Posit, Toronto, from Academy of Lions, and also from strength box, great cagers [00:00:42] [Inaudible] strength box and we'd shot a piece in the Great [00:00:48] [Inaudible] Place for Wylde on Health, we did some working out type of stuff and that is supposed to run tonight, and then we have to go down to the studio and do the in-studio piece.

It's in front of like 6 million viewers, so hopefully I don't screw anything up. Canadian listeners should actually see that before this podcast goes out and then everybody else should be able to track it down on the internet. We'll post some links on that, but...

Greg Everett: And so what's this TV show? What are you guys doing?

Robb Wolf: Basically covering everything Paleo like nutrition, exercise, lifestyle. We're going to look it to them before and after stuff. We're going to talk about a gal that I've worked with who had multiple sclerosis and she managed to put it into remission.

We have some before and after MRI brain scans. It shows actually the pre -- you know while the disease activity was going, the inflammation around the myelinated areas of the brain, and then post-intervention normal healthy brain tissue and all that fun stuff.

And actually Gary Tubbs is going to be in on the show via Skype talking about his book in kind of the carb element and stuff and his position that exercise doesn't really contribute to fat loss which oddly enough being at gym and I actually agree with that. It's 99% nutrition but you know, exercise is helpful for other things like health and being able to do things. So -- and it should be interesting.

Greg Everett: Yes, cool.

Robb Wolf: Yes. What's new is...

Greg Everett: You're so famous, I feel like I don't even know you anymore.

Robb Wolf: I don't know me. So, I think that's senility setting in though so, but that's a whole...

Greg Everett: Awesome.

Robb Wolf: Yes.

Greg Everett: Yes. Well, Paleo should fix that too.

Robb Wolf: I think it fixes everything except what it doesn't fix. So, what's new with you?

Greg Everett: That's right. Not a whole lot. Our good friend Sage Burgener's here for a few days, come train, so right after this she's going to get her pumped on. We're going to help her get better. And that's about it.

Robb Wolf: Cool. And then Amber, the whiz OF whizzes, like internet, website whiz of doom, what does she have cooking? We have that podcast transcripts coming out here soon.

Greg Everett: Yes, so from now on, there's going to be transcripts to the podcasts giving postage shortly after the podcast go up. And right now the transcriber is working her way back through all the previous episodes, so keep an eye after that stuff. And if you can't stay listening to us then you can read us.

Robb Wolf: I didn't even think about it the way actually have a pretty big pool of listening impaired folks who really like the blog but haven't been able really benefit from the podcast. So that's just...

Greg Everett: Excellent.

Robb Wolf: Yes, that was something that folks asked for and so we're going to try to get that going. We're working on the flowcharts stuff and a bunch of other goodies for the website. So, chipping away at the things that, you know, we kind of asked folks what they wanted is follow support material and just kind of chipping away at that. So we should have more goodies rolling out soon.

Greg Everett: Awesome.

Robb Wolf: Indeed.

Greg Everett: Alright, well, you ready to talk some Paleo?

Robb Wolf: Sure.

Greg Everett: We got a bit of that training out of at least my system last time.

Robb Wolf: I think we just had a little training in here the last time too but more about the food, yes.

Greg Everett: But before we get to actual questions, I wanted to bring up this study that was, actually I think it was published primarily in the Wall Street Journal's where I saw it, where a number of people saw it. And it was -- I'm trying to pull it up now, which of course is not working -- there we go. And...

Robb Wolf: It's actually a really well done piece in the Wall Street Journal I was kind of shocked.

Greg Everett: But yes, so why don't we talk a bit about that because it's a really important thing here because we have a lot of people kind of poopoo the whole group and sensitivity thing by saying "well, I'm not celiac" and if you're not celiac then it doesn't matter. So what are your thoughts on that?

Robb Wolf: You know, it's funny because this is that Jackass, Bryan Dinning, who popped his head up maybe about 6 months ago, the skeptoid died and he did like this, about 6th grade level of analysis trying to, you know, commentate on gluten sensitivity and all the rest of that stuff, and he basically went to, like, Wikipedia and to the powers that be and asked them what they believed in and then regurgitated that, and didn't actually look at any of the current immunological studies, nothing from Fasano.

And it's just kind of funny, like if you're going to commentate on something, you should actually do some homework about it. And there's a band of information coming out of the different groups the Fasano Research Group being, kind of, one of the primary folks but we're getting this understanding of grain intolerances that is much more complete, much more complex, and it's not, you know, some people have elements of an immune reaction in which they release histamine and we will put it in to, kind of, an allergy, kind of, gig.

Other people end up with an autoimmune response to gluten and gluten-like proteins. It's just what we characterize as classic Celiac. Interesting feature of that is that we get a celiac type response in some people to corn and rice. It's almost identical kind of enteropathy but we did damaging destruction of the enterocytes.

And so that's another piece which is an immune response that actually turns autoimmune, the gliadin protein bonds to the CXR-3 receptor site in the enterocyte's poles that gliadin protein into the cell, we get a release of zonulin breakdown of the tight junctions, we get a cascade of pro-inflammatory cytokines like interleukin-15 and then kind of all hell breaks loose and we actually get a primeval gut kind of scenario.

And then the other piece to this is that we get gliadin proteins brought through the intestinal lining. They don't elicit an autoimmune response, like in Celiac, they don't elicit a histamine response like what we would see in a classic allergy. But what they do is they kind of piss off and annoy the innate immune response, the macrophages, neutrophils, this very ancient form of immune system which can serve all the way back and to like mold and, you know, like slime mold and stuff like that.

They have similar type of immune system. This immune system is inadaptive but is very very important as a frontline defense against bacteria and viruses, and parasites. And the gliadin proteins and similar grain type proteins and certain supponents and glycoalkaloids and what not, they have a tendency to kind of get the innate immune system mad.

So we got 3 different features of immune response that all can be triggered by 1 basic food group which is, you know, the -- let's just say, a grain because all these grains have proamines, this protein-rich proteins which are difficult to digest unless you have a kind of endopeptidases in your gut lining.

You're not able to break these things down. Some people have a little more than others, but the bottom line here is that we have 1 kind of food

input that can manifest in a multitude of different disease states. And as they attract this stuff forward, they're finding that people are able to develop Celiac later in life, they can develop gluten intolerances later in life.

Talking to some guys in Stanford who are actually in some neurobiological research, what their finding is that a lot of the adaptations that we get to Neolithic foods, like people will kind of poopoo the evolutionary arguments about evolutionarily novel foods like grains, legumes, and dairy.

And they say "hey we've got populations that have adapted to these foods" and it's true that certain populations have expressed some adaptations like to the ability to metabolize lactose and higher amylase density in certain, say like, Asian populations and what not. But what we find is that these adaptations are specific to essentially bringing in nutrient density, bringing calories into the body which is a selective advantage early in life.

But then what we find is that later in life, when longevity and health starts becoming an issue longer down the road, then these evolutionarily novel foods still cause problems. So, although certain people are better adapted to deal with these foods in a short term, as we get older, that evolutionarily conserved diet, the ancestral type diet, becomes more and more important if you want to age well.

So this is kind of the distinction between, you know, where these certain adaptations have occurred. Different populations can handle different things a little bit better than others. But this was a really well done paper in that they're talking about the increasing rates of not just Celiac but also gluten sensitivity which obviously, you know, we're talking of different types of immune responses here.

And then, yes, we'll do a link to the write up that the Wall Street Journal did. I'm looking through the paper here, there was another point I wanted to make about it but I'm kind of missing it right now. Greg, did you...

Greg Everett:

While you're thinking, yes, I think it brings up a good point that's a really common misconception about gluten sensitivity in general is that people tend to believe that if they don't see or feel some kind of immediate dramatic reaction when exposed to gluten, then it's not doing anything.

Robb Wolf:

Right.

Greg Everett: It's not causing a problem. You know, they do expect this classic notion of food allergies where their face is going to swell up, they're going to have some kind of anaphylactic reaction and die.

Robb Wolf: Right.

Greg Everett: And it's just not the case. I mean you have such a huge range of magnitudes of reactivity and, you know, from the full blown Celiac who's going to get extremely sick, to someone who may have, you know, something a lot more minor but persistent but they've never actually attributed to gluten sensitivity to say, you know, like sinus problems or you know, kind of chronic nasal congestion something like that, that may actually clear up with an elimination of gluten.

But, again, if you don't make that connection, I mean it's not an immediate and a real significant issue, it just never crosses your mind.

Robb Wolf: Yes.

Greg Everett: It's easy to dismiss.

Robb Wolf: Yes, and you know, the piece that I was fishing around for -- on here, they've mentioned -- I'll just read the paragraph here that says "indeed Mario's **[00:11:48] [Inaudible]**" or something like that, neurologist that shift to old England says he found deposits of antibodies to gluten and autopsies and brain scans of some patients with ataxia, a condition of impaired balance.

You know, more and more the research that we're finding, like we found that link to a transglutaminase antibodies and Huntington's disease. I also tracked down what I believe is a link to antibodies to transglutaminase and actually being -- potentially being the propagative elements of a melanoma going from a stable encapsulated melanoma form to malignant melanoma in which it starts infiltrating the tissues around itself and making its way into the body, was a different isoforms of transglutaminase.

Transglutaminase is a ubiquitous enzyme which is involved in post-translational modification of proteins. When our proteins are made, there are different functional groups that are then added to these proteins to make them specific to different cells in the body.

Transglutaminase does this. So, if you get an antibody to transglutaminase, which is what happens in this immune response to

gluten, if you get a response to transglutaminase gets antibodies to it, you can affect literally any tissue in the body.

You can affect any organ system in the body. And so we're finding effects all the way from the reproductive tissues to dermal issues, you know, dermatitis herpetiformis, where people are losing skin pigmentation, all the way up to a host of different neurological conditions.

I talked to a woman who came to one of my seminars who said she's a head of a governmental agency who is tightly involved with looking at different neurological diseases and deterrents. And she said that we can't come and say specifically that gluten causes schizophrenia but she said it is everything but that.

She said that the evidence is so compelling, both observationally and mechanistically, that, you know, gluten and gluten reactivity is a cause in things like, you know, schizophrenia, ADHD, most of different conditions but, again, part of the problem with all this stuff is that it affects so many different things as if you start sounding a little bit crazy. Its like "oh, this is the cure for everything" but, in fact, it might actually kind of, sort of, be the cure for everything.

You know, if you look at what exercise does, it's kind of a cure or in some ways too, as in sleep. So if you really take care of your basics, which in this case really minimizing those Neolithic foods.

At least some sort of a rotation basis, like I can get away with a little corn of rice, talk about this at a time, gluten exposure just crushes me, but, again, it just goes back to trying to encourage people do a hundred percent grain, legume, dairy free diet for 30 days and then reevaluate and see how they do if they've got some sort of over inflammatory condition, autoimmune condition then taking care of the additional details of like also removing tomatoes, potatoes, eggplants, making sure that there are no food emulsifiers and like their coconut milks and stuff like that.

And we're finding some pretty amazing results for that stuff. And with, you know, the only level of buy-in not being 6 easy installments 29.95 of gravel's nutrition in a box, but in fact just people giving this stuff a shot, and then telling us what the heck happens. And pretty interesting stuff and a really well done piece that's written **[00:15:36] [Inaudible]** populist but I think it could appeal to anybody. But we'll have links to that in the show notes.

Greg Everett: Yes, so definitely, check that out when posted and we'll be right there. So speaking of individual sensitivities and reactions, our first question is a gentleman from Canada actually, imagine that.

Jason says "thanks for making my commute so much more interesting, at least for one day of the week. Love the podcast, love your humor, hate that you get way more sun than we do here in the Great White North". Right now it doesn't seem like it **[00:16:07] [Inaudible]**.

Robb Wolf: Northern California actually gets piece poor sun in the winter and the spring. We're pretty cloudy.

Greg Everett: Yes. The question for you guys is this. Have either of you worked with or know of folks that have sensitivity to certain vegetables, and can these sensitivities resolve as your system resets itself after diligently following the Paleo diet?

My wife has always had issues with digesting various veggies. Spinach and broccoli being some of the major culprits. It doesn't seem to us that they're allergies in the traditional sense. She doesn't break out or swell up or anything, but instead she'll get stomach cramping, gas pains etc., often lasting all day, sometimes even a couple of days.

It doesn't seem to matter if it's cooked or not but she definitely reacts harder if they're eaten raw. Some background. Until reading the Paleo solutions, she was a stall worth lever of breads and all things carby".

Robb Wolf: Dude, who isn't?

Greg Everett: Yes, seriously, if she wishes. "We haven't made the switch yet but as of writing this question we cleaned out our pantry and are going to the grocery -- and going grocery shopping tonight or tomorrow to get started.

She'd be willing to try the problematic veggies again after going Paleo for a while. But to be fair, she's leary of trying after having too many bad experiences. I thought a good interim option would be to pick the brains of the experts and you guys to forget your thoughts.

Could resetting a system with Paleo help with veggies sensitivity? Coming from 1 Canadian listener, thanks so much, keep up the great work".

Robb Wolf: Are we lumped in to experts or just like dudes on the corner like, so, I don't really know you, but I wonder if you have an opinion on vegetable intolerance. So, that's hilarious.

Greg Everett: We're just the most convenient.

Robb Wolf: That's true. We're free, so...

Greg Everett: Yes.

Robb Wolf: ...that works. You know, if the basic like 30-day elimination of grains, legumes, and dairy has not occurred yet, then it seems almost silly to nullify vegetables at this point because we know that the, you know, just from the previous piece about the Wall Street Journal, we have a multitude of different gastrointestinal problems of these grains can cause.

And as long as the GI tract is irritated, almost any food can be problematic. There are some people who will rule in, who are so inflamed, it doesn't matter what the food is. It doesn't matter how it's prepared, it's going to be massively pro-inflammatory. And there are people, that really the appropriate course of action is for them to go on essentially like an IV drip for a number of days to let the intestines heal.

And this is obviously where you got to work with your doctor, and you don't do this in a damn gym or something like that, but -- like you are so inflamed, the gastrointestinal lining is in such horrible condition that it's beyond just a -- well, you can rehab the whole thing with food but the problem is that even when you introduce something, say like a non-reactive meat, like lamb or something like that, and you puree it and cook it really well, you are still so inflamed in the gastrointestinal lining that those proteins are simply not digesting, not breaking down properly.

So they end up making it through the intestinal lining intact, and you end up creating antibodies and reactivity to a type of protein that you normally should be able to digest and not be reactive to.

So, as with all the stuff like the first step here is hundred percent grain, legume, dairy free. Reestablish your normal, you know, GI integrity, get some probiotics going, make sure your vitamin D levels are good. Definitely add in some digestive support, like the natural fruit super enzymes, which I wish I bought some sort of stock and that stuff I think I'm still the heck out of it, make absolutely no money off of it, but I guess that's fine but that stuff is great.

And then, just carefully reintroduce various vegetables, cook them for sure, that will make them easier to digest. And it could be that you just

have a sensitivity reactivity to these things and you you're not really going to tolerate them that well.

I don't really do that well with fruit. I just, together with like yams and sweet potatoes for my veggies, from my carb sources. So you just have to play with that stuff and see what works but it totally makes sense that she would have problems, it absolutely doesn't make sense that she worried about this to a large degree before removing the grains, legumes and dairy and really tackling that stuff like, that's just leaving money on the table.

Greg Everett: Yes. Take care of that first step.

Robb Wolf: What's the 12th step, 1st step deal anyway?

Greg Everett: I think it's like admitting you have a problem or something.

Robb Wolf: Ok. Yes, something like that.

Greg Everett: And then eventually you have to go and apologize to broccoli and spinach. I think that's step 4, make amends.

Robb Wolf: That could take a while.

Greg Everett: Yes.

Robb Wolf: That could take a while.

Greg Everett: Alright. I don't know what the other steps are.

Robb Wolf: I've just heard about them so, cool. Ok.

Greg Everett: Alright, we won't pry into that one.

Robb Wolf: No.

Greg Everett: Next question. And this one has actually come up with the number of my clients and so to me this is fairly common issue here, not the specific point but kind of where it's going to go.

Paul says, "My wife's gallbladder has been removed and she has some form of autoimmunity problem. Doctors don't want to call it Lupus but don't know what to call it. I know the gallbladder plays a crucial role in the digestion of fats so my question is this, what should we do with her

diet, are there any specific steps that we should take or things we should or should not do?

Robb Wolf:

So, some deal here, you know, the autoimmune approach to this whole kind of Paleo concept, grain, legume, dairy free also adding in the additional caveat of removing most nuts and seeds, with the exception of probably coconut and coconut products.

Tomatoes, potatoes, eggplants, most vegetables that have kind of a tough fibrous skin, remove that stuff, you know, like cucumbers and what not because of there's going to be any type of a gut irritating constituent in a fruit or vegetable, it's going to be in the skin. So this is where you go and then you make sure that the vitamin D levels are at that like 60 to 80 nanograms per deciliter.

So he's got to go get that checked and you could be on a good probiotic. Unfortunately she's have the gallbladder removed and so now you're going to have to really aggressively support fat digestion by something like the natural fruit super enzymes, or if she's getting normal pancreatic production of digestive enzymes which you can check that either by is her food digested or not or by doing a pancreatic enzyme test which is not super expensive and it's kind of helpful to do.

That aside, she's going to need some sort of like ox bile possible ox bile plus lipase to help digest fats. And so...

Greg Everett:

And then the ox bile or the purpose of that is to emulsify the fat, correct?

Robb Wolf:

Exactly. The way that pancreatic enzymes work, because fat doesn't dissolve in water, you know, the whole oil and water don't mix kind of gig. Bile salts act like a soap, it's an emulsifier, and it dissolves the fatty constituents in such a way that it then makes them available for the pancreatic enzymes, the lipases, to actually cleave the triglycerides, break them into fatty acids and glycerol, and then that stuff can actually make their way through the intestinal lining.

But without that emulsification step, you cannot absorb these fats, particularly the long-chain fats. This is where the really short-chain fats like, or medium-chain fats like coconut products, even shorter-chain fats like what we would find in pastured dairy, could be very very helpful because they actually can be brought through the intestinal lining intact and actually transported through the system without the aid of being associated with albumin, and it can be metabolized differently.

So they're gut-healing and they can pass through the intestinal lining a little bit easier than things like stearic acid like we would find in meat or monolauric acid like we would find in olive oil. But all that stuff is detailed in the frequently asked questions part of the blog. You go to **[0:24:20]** **[Inaudible]**.com frequently asked questions. You find the autoimmune profile, and then you can get that out of a book too. I mean, this is, again, kind of standard.

Start off with the basics and then start working away forward. Vitamin D, probiotics, digestive support. And then obviously avoiding like the plague all of these irritating foods. There's a serious problem here. The gallbladder dysfunction is a reflection of irritation which happens to the intestinal lining that irritation causes a problem in signaling a CCK cholecystokinin.

Cholecystokinin normally causes the release of bile salts into the gallbladder. When that ceases to happen, then we get the accumulation of cholesterol particles in the gallbladder and the formation of gallstones. And so the best analogy I have for this, it's another canary in a coal mine. It's kind of like when your tonsils swell up in response to different foods, it's because there's a problem there. There's an inflammatory response.

In this case, it's not specifically an inflammatory response in the gallbladder, it's actually an inflammatory response in the intestinal lining. But then that is leading into a miss-signaling in the gallbladder and it leads to lifetime problems. And I think I've mentioned in previous podcasts, this is just the beginning.

This gastrointestinal irritation that starts with gallbladder dysfunction is just the beginning. Dysfunction works its way north and eventually the individual starts having problems swallowing. You have a smooth tissue disruption like with the esophageal muscles and what not. And so it doesn't stop with just the gallbladder.

You've got to aggressively tackle this thing and I would avoid all grains on this protocol. I wouldn't even mess around with like corn and rice, personally, but, you know, it's up to you to do what you want to do. But it's a no joke deal. This is a serious kind of a long response in the body and if you aggressively tackle it, the ending could be pretty good. If you don't, it's going to slide downhill, and that's just the way it is.

Greg Everett:

I don't think you took one breath for that entire answer. That was incredible.

Robb Wolf: I'm finally waking up. I've been jet-lagged the whole day and walking around like a zombie. Hopefully I don't crash again before we go on national television.

Greg Everett: All right, so let's talk about...

Robb Wolf: Greg is passing out and drooling on himself. He's like "god, why did I agree to doing this?"

Greg Everett: Wait, I have a gym full of people right now. So it's super distracting because I'm behind these windows right here and I can see in here everything. And I'm really trying to focus and be interested in what you're saying even when I'm not, while these guys are banging around out there. Just kidding. I'm fascinated.

Robb Wolf: I have no doubt you are.

Greg Everett: Nicole says, "Hi Robb, I'm a newbie, just 2 months on the paleo diet. Have blood work done after 6 weeks and just got the results. All my numbers are better than my previous good numbers. The one problem is the A1C, minus (-) 5.3. All my other numbers, cholesterol 130, triglycerides 28, LDL 65, HDL 59, C-reactive protein 0.1, glucose 82. As far as I can tell, I'm doing great except in the glucose and A1C areas. What am I doing wrong and what do I need to eat / not eat to fix it? Thank you." Smiley face.

Robb Wolf: So Chris Kresser actually came to the rescue on this. Maybe we can drag is a blog link to this topic. The long and short of it is that when people are actually eating a lower glycemic load diet, the red blood cells live longer than normally eating people.

Like when people eating higher glucose intake, the red blood cells do not live as long and so they accumulate less to dense glycation end products and so they have a lower A1C number. I've seen this kind of wacky things where like nobody was showing up with good A1C's and I was like "man, I don't know if it's stress, I don't know what the problem is but what's happening is that the red blood cells are actually living longer than normal.

And so the A1C as a diagnostic criteria, I used to just love that thing but Chris Kresser of really great blog post on just basically you can't trust the A1C in populations that are eating the way we were eating. So, we need to look at some other markers of systemic inflammation. But when we're looking at the numbers here, glucose isn't bad, triglycerides are amazing, HDL, LDL all that stuff looks great.

So that's where I would go with this stuff. She looks amazing with this. And so we have to, kind of, unload A1C from our, you know, unfortunately from our diagnostic criteria for making assessments on folks. But there's some other things that we'll be ruling out and talking about that we can use in place of that to gauge what type of reactivity we have going on, what type of systemic inflammation we have going on.

Greg Everett: Well, I mean in any case though, the A1C test for those of you who don't know it, it's essentially attempting to provide an idea of kind of what your average blood sugar levels are...

Robb Wolf: Right.

Greg Everett: ...over a period of time, in a sense. But even with a person eating some kind of poor diet whose not having this extended red blood cell life spans, it's still a long turn over time, as I understand it. We're still talking about like 2 or 3 months really. And so after 6 weeks, I wouldn't really expect to see a huge change anyway.

Robb Wolf: That's true. You know, it's just -- I didn't know that a change in nutrient intake could change the length of red blood cell life. And so, that's a which had to really interesting thing from a anti aging perspective that we're not brought into from, you know, stem cell pool trying to generate more red blood cells so that's just kind of an interesting gig.

But the 6-week cut off might have been a little bit short and so we might have some artifact from that but there's just kind of even a bigger reality that I thought the A1C was like just a really juicy blood measure that could tell us a lot and unfortunately there's some other artifacts floating around there that kind of invalidates it.

Greg Everett: Yes.

Robb Wolf: Yes.

Greg Everett: But for those of you are diabetic and whose doctors are checking into that all the time, just keep that in mind.

Robb Wolf: Yes. Different story if you've got high blood glucose levels, if you're prediabetic, type 2 diabetic. But if you are prediabetic, or type 2 diabetic, we need to just get you eating the way you should eat and then you won't have those problems like that. It's like having a sunburn, we need

to address the environmental insult that you're experiencing and then we can reverse that stuff.

Greg Everett: But how am I supposed to get tan? I want an insulin tan.

Robb Wolf: Insulin tan? Yes, we'll brown you from the inside out, yes. Greg, what is that, it's the tyrosinate's reaction. That's the browning reaction like liver spots and all that. So we'll just get you all liver spotted up and look great.

Greg Everett: Awesome.

Robb Wolf: Yes.

Greg Everett: Speaking of liver spots, this next one is about cross fit. Belinda says, "hi Robb, I've only just discovered your podcast and I am very glad I did. You have a wealth of knowledge and it's great that you are so willing to share.

That is great Robb. I believe in Paleo pretty strictly most of the time. For the past 4 and a half months, I've also been doing a cross fit style work out with my trainer 3 times a week with other cardio exercise in between. I've been battling with weight problems my life and I'm hoping that this new regime will..." I think she means regimen...

Robb Wolf: Yes.

Greg Everett: ...Regime is like **[00:32:13] [Inaudible]**. "...will get me to where i want to be."

Robb Wolf: Now, really it applies here, I believe this is why.

Greg Everett: It's true. You want to read into that.

Robb Wolf: Yes.

Greg Everett: It's actually quite an ironic choice of words there. "In the past 4 months, I've only managed to lose 10 kilos. I need to lose 20 more to be at my goal. However, the weight loss has been extremely slow and I'm starting to get very frustrated.

I know that I'm getting fit and healthy and building muscle etc., but when you see TV programs like the Biggest Loser, which I know isn't realistic, it makes me wonder if I'm doing anything wrong. I'm also having crazy Ethanol caps, mood swings, and lightheaded episodes rather frequently.

I'm prone to high stress. Could this be a cortisol issue, if so, how do I deal with it and lower my cortisol levels? Thanks for your help."

Robb Wolf: Oh man. You know, 10 kilograms in 4 months is not a bad rate of weight loss. It's...

Greg Everett: Not at all.

Robb Wolf: ...It is interesting you watch so many shows like Nikki and I have been kind of following the Biggest Loser, I've never watched even 1 show until the season and we'll watch a couple of people and I think in like 4 months, there was some really heavy folks that lost 48 kilos, like hundred pounds kind of gig, which is like "holy cats".

But they also have a lot of weight to lose, so I think 1 thing is just kind of steady as she goes, don't freak out about this thing and really focus on the long term goal here.

And that the other piece to this there are some, you know, sounds like compliance is pretty strict according to your words, and so, you know, depending on how important it is, I would try to be really strict and really looking at those problematic issues like, are you eating too much fruit, are you eating too many nuts, like calorie intake does matter at some point.

The lightheadedness may be a need of little bit of salt brought in the mix. How much are you sleeping? If you're not sleeping, you're going to have a hell of a time losing body fat. So, there's some other issues mixed in this and also, you know, for the fat loss scenario, working out is great, eating well and sleeping well are the most important features, and then even within that tight intensity exercise, it's good.

I like doing some but if you do too much or you're going to release cortisol and it's going to blunt your ability to lose fat. So this is more like, in some cases, like just classical body building. Lift some weights and do some low level -- and I'm going to say fasted cardio here, but this is like walking on a treadmill, you wake up, go to the gym, walk on a treadmill, drink a little bit of green tea to get some lipolytic action from the ECG's and the green tea.

But that's not going in and doing Fran, followed by Dan, followed by Helen in a fasted state and you've been fasting for 28 hours. Like so I say that with a huge caveat here. But there's a lot of really good stuff that you can pull out like kind of classic body building and fitness type stuff.

You know, lift some weights, don't stress your body too much, be active but don't elicit too much of a cortisol problem. Make sure your sleep is really good. Those are the other things to look at with this. If you, again -- Robb will frequently ask questions kind of the fat loss flabs, yeah but ton of dairy as your main protein or you're doing too much fruit, are you eating too many nuts. But you're making some progress.

I would just keep that in mind and make sure your sleep is good, make sure your training is actually not of excessive intensity grade now.

Greg Everett: Yes. And I think the weight loss relative to total body weight is a really important point too. If you have someone who weighs a hundred and thirty kilos, losing 30 kilos is not as big of a deal as someone who weighs 75 kilos. You know, losing that 20 kilos. I mean that's a huge difference.

Robb Wolf: Yes.

Greg Everett: And so, you know, I'd avoid the question as much as possible. What would people ask me "hey, what should I expect to be losing?" It's always a percentage of body weight that I tell them. And it's usually one I'm just making up, but, you know, I kid about that, mostly.

But, you know, you can't look at it the absolute numbers and you certainly can't compare yourself to Biggest Loser people. I mean, those guys are basically under wraps 24 hours a day, getting their asses handed to them nonstop. You know, on a starvation diet -- I mean.

Haven't there been a couple of those guys who've come out after the show and gone on crying on Good Morning America or something about how awful the experience was?

Robb Wolf: Yes. I mean, they get an ass kicking on there. There is no doubt about it. So, it's remarkable, I mean, it's kind of illustrative. But if you are super motivated, there are some pretty amazing transformations that can happen, but then you also have to ask like how much of a rebound are you going to have, is this thing going to be long term sustainable and all kinds of silly stuff like that. So...

Greg Everett: Yes.

Robb Wolf: Yes.

Greg Everett: Yes, if you just get annihilated for a couple of months, you are going to bounce back and it's going to be ugly.

Robb Wolf: Yes.

Greg Everett: I mean, you're going to be burned out physically but mentally also. I mean, that's a rough transition from basically being babysat to being on your own saying "alright", you know, figure out because they're not maintainable lifestyle changes. No one can actually live like that long term. So...

Robb Wolf: Yes, that's why fat firms are always very successful while you are in the scene and then when you peel out, and you're living real life then that's a whole other gig. And that's why I've just always been really – write us in to recommend a weighed, measured approach like this own calorie counting, even weight watchers recently came out with a big statement basically saying counting calories doesn't work.

You know, with a shocker and, you know, the idea kind of makes sense on the one hand and, like in a way, when we, you know, if we sit down and we look at somebody's meal plan and it says almonds and you ask them how many almonds and then like "oh you know, like a Cosco container of almonds. I eat one of those every afternoon. And it's like, ok, calories do count there but, you know..."

Greg Everett: When there's 10,000 of them?

Robb Wolf: If there's 10,000 of them, yes...

Greg Everett: Yes, that counts.

Robb Wolf :...you do need to keep track of that but what we start doing, we need to think about what's wired into our DNA, and there's just neurophysiology of appetite, this neuro regulation of appetite, it is worried about a starving, you know, there's a bunch of different kind of survival mechanisms going on with that.

Grains, legumes, and dairy tend to trigger the appetite centers, they hit the opiate centers, they're addictive. So there's pieces of that, it's broken into standard model. And also when you have people starts scrutinizing their food, when they don't eat to satiety, you stimulate a stress response, you elicit a stress response and it makes them high in after food these and more.

And so this is where like if you want something that really sticks long term, you've got to insist upon lifestyle changes and start from the beginning. This is why we, you know, most of the Paleo challenges and the way that we do our interventions.

We, you know, got the house clean out the pantry, change everything from day 1 and then try on that sweater, run with it for 30 days and then you can make a decision about whether or not you want to live with it. But then you've really lived it and you've lived it in a way that is legitimately sustainable.

Whether or not you want to stick with it, that's your choice, but we'll get you healthy at least once and then if you're too neurotic or too broken to stick with it or it's just not your gig, fine, that's cool. But then you also know that it's always there to go back to.

But it's a guarantee of failure when you start having people calorie count for the most part. Like there are a few people who are very detail oriented and little neurotic, and that will work for them, but that's the exception really not the rule.

Greg Everett: Yes. Most people just turns them into absolutely psychos.

Robb Wolf: Yes, and I won't believe the zone stuff much more than that. You know, I had really good success with folks doing kind of a cyclic glue-card Paleo.

Early in my coaching experience that I got involved cross fit cross stitch stick was the zone, telling the party line, I started putting folks on the zone and that would -- I'd people go completely food neurotic like where they had formerly had anorexia, bulimia type stuff and it pop it back up. And I'd never had that problem just recommending an unweighed, unmeasured, you know, qualitative approach to Paleo eating. So, yes.

Greg Everett: Yes.

Robb Wolf: What we got in pretty far field from our original. **[0:40:57] [Inaudible]**

Greg Everett: I don't even remember what we were talking about. So let's move on before we get...

Robb Wolf: Ok, good call.

Greg Everett: ...anymore distracted.

Robb Wolf: Good call.

Greg Everett: So Greg asks, "if phytic acid is such a problem in grains, why aren't they a problem in nuts?" From what I've read, the concentrations are higher.

Robb Wolf: Yes. This is totally legit. We've talked about this a ton in previous podcasts and this is also, if you track the evolution of what our recommendations are, you know, 4, 5 years ago, we're recommending a ton of almonds and almond butter and all that sort of stuff.

And now it shifted, you know, the main fat I think we're kind of recommending is more along the lines like coconut oil because the low phytate low leptin content that we get in coconut products and actually some of the gut healing characteristics.

People have some GI problems with nuts if they're consumed in large amounts. The way I recommend people consume nuts at this point is you have to shell them yourself.

And that limits your consumption to such a miniscule level that's really not that big a deal, and you end up using them the way that they should be used which is pretty much as a condiment because in addition to the phytic acid load and some of the other leptin issues, you also have typically a pretty high omega 6 intake with most nuts, which is kind of pushing the boat in the wrong direction.

So, we've covered this a ton in other past podcasts but yes this is a legit concern, that's why we kind of stirred the boat away from nuts and more of sorts like coconut and maybe pastured butter. Definitely if you can get a hold of any type of a class fed lard or you know, pastured pork and all that sort of stuff then that's totally legit.

Greg Everett: Awesome, alright. So yes, just spend several thousand dollars listening to the past 70 podcasts. It'll be in there somewhere, I'm sure.

Robb Wolf: Or maybe I'm just making it all up, so...

Greg Everett: Alright, so this next one is a bit long so bare with me as I try to read through this with inadequate amounts of caffeine. "Hate to do the anonymous thing but I'm skipping a couple of details because I don't want to make it obvious who this is".

We understand completely. "In her sport, she's well known and would like to make a comeback and I wouldn't want this part of her personal life

in the public. History: My wife is a 36 year old female, ex pro-athlete. Has struggled with depression all her life.

Sports / physical culture has been a major coping mechanism. In my opinion, she was dealing with massive overtraining / adrenal burn out towards the end of her career. The last couple of years her strength conditioning was predominantly long mega beat down cross fir microns.

This is in addition to a very intense sport specific training / competition schedule. in addition to this, she was a vegetarian, and have been for 15 or so years. A few years ago she has dealt several serious injuries and several personal tragedies at the same time. This resulted in a spiral down into a deep depression.

This was a serious crippling depression not a down in the dumps thing. Therapy and several medications didn't touch it. Then her doctor tried some bolt up. Within a week she had the first glimpse of hope and possibility of pulling herself out, and went away after a few days but gave us hope for the first time in a couple of years.

I read up on this stuff. It's a norepinephrine reuptake inhibitor, it also works on serotonin but she's been on other serotonin based meds with no effect. Seems like they are essentially describing adrenal fatigue but from chronic emotional stress as a possibly typical metcon physical overload.

I feel like the puzzle pieces fall like this: Born with a low norepinephrine level, medicates this by doing more and more intense competitive sports which helped but will catch her eventually. Gets in the beat down metcons and brutally intense sports. Suffers adrenal burn out. over the average as correctly called.

Gets injured and can't use sports to help manage her already failing norepinephrine levels. Suffers personal tragedies that compound these issues, stuck. So, if I'm right and low norepinephrine levels are the main problem as suggested via [00:44:55] [Inaudible] temporarily alleviating symptoms, what would you prescribe? I'm suggesting that she do your typical strict Paleo, vitamin D, and magnesium, and a focus on sleep quality.

Hasn't made the jump yet although she will now have local pasture animal products and follow the adrenal fatigue recovery protocols you suggest. No metcons. Focus on strength and lots of walking. But is there

anything else you would add or do differently? Supplements, activities, am I way off and desperately grasping help.

All the doctors want to do is give her scripts. There has to be a better way. Thank you so much for any help with this and for you've already done. You maybe don't answer this one, you've already helped so many people including me, so thank you either way.

Robb Wolf: Wow, this...

Greg Everett: That's the most I've ever read in my entire life.

Robb Wolf: And you're English major too.

Greg Everett: Yes, well, I just read the back of all those stupid books.

Robb Wolf: The clips note, you read the back at the clips note. You know, this is actually like a very remarkably well put together thought process on this. I think, you know, the answer to questions "are you off based?" No, I think you're really tightly on based here. I think different people are born with different kind of neurotransmitters status.

This is where some people will try a little alcohol, try a little cocaine, and they're hammered, they're hooked or shot because for the first time kind of right, some neurotransmitters squirming this that it just never been quite right before.

I know for myself I've had that type A kind of personality that led into wanting, you know, doing med school. When I was finishing my undergrad, I had 23 units of Chemistry, Physics, Calculus, withstood Pre-med club vice president, Chemistry club president, you know, blah blah blah all this stuff, million different things, keeping a million different plate spinning and it's all to kind of spin the neurotransmitters.

You're just keeping this constantly agitated state, and it's interesting you look at my family history, both parents had some pretty severe depression, both parents had pretty severe kind of chemical dependency type stuff. I have no doubt that I have a lot of those tendencies too which I largely avoided because I didn't want to do a repeat of a lot of the stuff that I saw with family, but a lot of the same attraction to like super high intensity sportive type stuff.

This is just a hard rewiring to do. I found acupuncture to be really really helpful with this stuff. Sunlight is critical for this like, again, living in

Northern California, I used to live a little bit North in Redding which is actually a lot more sunny than Chico is.

Chico is in this weird kind of micro climate where it gets god awful cloudy for like months at a time and when I'm talking about like I'm feeling a little Kurt Cobain because of the weather, I'm not kidding.

Like when I lived in Seattle, I had what I now understand to be pretty much like an almost crippling degree of depression, and I was getting some counseling for it. But I probably should have had some meds with it and when I look back at it now, like those are really dodgy elements to it.

So all that background with me is to say I think what your doing is thought on, I think you need to just keep tinkering, finding someone like a functional medicine doc to do some work with regards to some herbal meds that can also do some tinkering the neurotransmitter levels, acupuncture, I find really helpful being in a sunny climate is just so much more helpful.

I just can't even describe how critical that is like vitamin D levels and what not. And then also, if her depression is that severe, using some pharmaceuticals to the degree that it helps. Those things are really dodgy too like when you really get in and read like the side effect type things like increased rates of suicides and all the rest to that with any depressive sort of really common.

So it's kind of a double edged sword. You have to really, you know, approach it with some caution, keeping eye on things. I think what you're doing is great. You know, it's kind of steady as she goes and keep chipping away at this stuff.

You have to figure out ways of resetting a baseline level of activity in the brain so that you feel alive enough to make life worth living. And like even, for me, I get some good mileage out of the C, L carnitine, alpha lipoic acid combo that I do in the morning.

I think I described it in a book. I Learned that one from a Charles Poliquin like doing a very dopamine enhancing protocol's been very helpful for me. Dopamine is interesting in that it also helps you deal norepi, stress, adrenal fatigue, all that stuff.

So, I mean, it's a multi-prompt deal but I think you're on the right road, and you just have to keep tinkering with it because you never really know exactly what's going on with the neurotransmitters. For sure though, too

low of a carbohydrate diet can be problematic because it burns your serotonin.

Too much exercise, lack of sleep, etc etc. can be problematic because it burns your serotonin. So, just being very conscious about like cortisol management effects, serotonin sparing effects, plenty of sleep, plenty of sunlight, exercise that makes you feel good but not exhausted, and that stuff. It's a big lifestyle change but it's critical and it takes some time to get to a spot where that feels worth living, frankly. It can be done.

Greg Everett: Yes, that's, I mean, this whole history here is incredible in the sense that if I wanted to just bury someone in horrible depression with, you know, physical symptoms, this is all the stuff I would do.

Robb Wolf: Yes.

Greg Everett: You know what I mean, it's like it's a checklist of all these contributing factors. So...

Robb Wolf: You could take somebody...

Greg Everett: ...it's a big hill to climb.

Robb Wolf: Yes, because you could take somebody whose generally pretty upbeat and not prone to depression and throw this type of training regimen at him or her and you could create this depressive type state.

And then the fact that you're starting with that, and then it was used somewhat as a self medicative kind of approach, it's just interesting, you had it, you start on with that. And if they end up doing anything here, definitely paying us back like let us know what to do, let us know how things go.

Greg Everett: Alright. Bloody noses

Robb Wolf: Speaking of cocaine.

Greg Everett: Yes. Spencer says, "hello Robb, I have been having seemingly random bloody noses since high school. 23 now." I believe he means 23 years old not 23 total bloody noses. "Every 6 months or so will start up and I'll get at least one a day sometimes more. I tried nasal sprays for dry air before. Could it be a vitamin K2 deficiency.

I eat plenty of butter, not grass fed, meat, eggs and a bit of liver. Could I still be deficient, with any malabsorption issues be suspect?

Robb Wolf:

I would really doubt it. Like you can get vitamin K levels checked pretty easily. So, like you could check that out. I remember actually being similar age and whenever I would do wrestling or kickboxing or anything, I would just get really easy nose bleeds.

Those seem to have alleviated now that I have tweet my diet. But I don't know if it's also something that I just kind of grew out of. So, I would be shocked if you had a, you know, vitamin K deficiency given the way you're eating.

It's possible and maybe you need a little bit more elevated levels to run normally for you, but I wouldn't think that that's it. Like the trends in nature also makes me think about like some seasonal allergies which is kind of inflames the nasal passages and makes it easier to get a bloody nose.

So I would lean a little bit more towards that. And I just noticed like if I'm doing any level of dairy -- like I'll do a little bit of pastured butter here and there but, again, I notice a little bit of kind of sinus inflammation from that. You know, even though it's very small amount of case seen in that, I just get a little reaction from it.

So I would just be aware of when you start experiencing those. You can go on like weather.com and just, you know, like check out the weather in your area. That will describe what type of mold and pollen counts, what they are, whether it's high and what things are high.

And I would do a little bit of tracking with that on some environmental inputs like mold and pollen. I'd lean more towards of being something like that versus like a K2 deficiency.

Greg Everett:

Yes, I would definitely approach that pretty directly. I mean, as someone who's had quite a bit of nose bleeds which may or may not be linked to previous indiscretions in my misguided youth.

And, you know, there's a number of things that nasal sprays in general are bad news. A lot of times you have a really bad rebound effect from them. They end up causing way more problems than they correct. But there's like a sinus rinse out there by Neo Med, I think it's just called Neo Meds Sinus Rinse or something like that.

Robb Wolf: Yes.

Greg Everett: But it's basically like an isotonic solution, you warm water, you basically shove that thing up your nose and blast it. And that has been very helpful for me just keeping my sinuses all clear and keeping my nasal passages a little more moisturized and that makes a huge difference for me at night. When I'm sleeping I can breathe through my nose much better and it cares if it's keeping it moisturized, there's a better chance of avoiding those nose bleeds. So...

Robb Wolf: Yes.

Greg Everett: Check that out.

Robb Wolf: It's kind of a neti pot idea but a lot easier to use and...

Greg Everett: A lot easier.

Robb Wolf: I travel with those and, you know, almost every single trip I took in the past, and I've taken a lot of trips, I will get some sort of a little minor upper respiratory gig like sinus infection. And now that I like religiously travel with that thing, I don't get to the cracked nose, keep my sinuses much more moist, and I have a fraction of problem. So, yes, those are legit.

Greg Everett: Cool.

Robb Wolf: Did we make it?

Greg Everett: I think we did.

Robb Wolf: Cool dude.

Greg Everett: And I was worried we were going to lose you up there in Toronto.

Robb Wolf: That was still good, no body cavities going searches going across the border, so, so far so good.

Greg Everett: That's too bad.

Robb Wolf: Yes, well, that would mean seeing the size of the hands on somebody's **[00:55:51] [Inaudible]** so...

Greg Everett: All right. Those stilt we built Canadians.

Robb Wolf: Exactly.

Greg Everett: Well, enjoy your trip and I hope do not fall asleep or otherwise embarrass yourself on television. I'm sure you'll be great.

Robb Wolf: It's only 6 million viewers, so how bad can it go?

Greg Everett: Yes.

Robb Wolf: Cool.

Greg Everett: All right. We'll talk to you soon.

Robb Wolf: Thanks man. Bye.

Greg Everett: See you.