

The Paleo Solution

Episode 17

Andy Deas: Robb Wolf, Andy Deas, episode 17, Paleolithic Solution. What's going on?

Robb Wolf: Dude, haven't been kicked off the airwaves yet so we're barnstorming. I am not medicated this week though, so it's guaranteed to be way less fun than previously.

Andy Deas: And I only have a coffee. So there's not like a lot of excitement going on other than the fact that it's raining again in Chico. So once again my mood is low, Robb.

Robb Wolf: Yeah, yeah. I definitely was considering a Kurt Cobain exit after this episode. So I'll wrap up the book and then, you know. I regret nothing and launch myself off the cliff so....

Andy Deas: Well, you survived medication. You survived comments around women's hormones. I don't know. There's much left for you to survive, Robb.

Robb Wolf: I don't know. I don't know. And then why are you -- you're going to do Ohio? What do you have cooking in Ohio?

Andy Deas: Oh, yeah, going to visit the folks this weekend, so we're recording this a couple of days earlier. Recently put grandma in the nursing home, so I'm going to check that all out and spend time with the family. And then my best friend just had the first baby a couple of weeks ago, a baby boy. He was hoping that it was born on Super Bowl because he told me if your son is born on the day of the Super Bowl he will play in the Super Bowl. And I told him, "I don't think that's how it works." And I wanted to know what his 40 time was and et cetera. He said, well, his 40 time is kind of to be determined. It's probably seven or eight hours at this point. And his squat form sucks right now, but he said they're going to work on it. He's only like five weeks old so....

Robb Wolf: His spine is still more gelatinous than actually calcified so....

Andy Deas: Exactly. So in a year he's expecting scholarship offers to come in, but he's got a little time of development to go before we actually test his 40.

Robb Wolf: Right on. We're never too early to start planning I guess so....

Andy Deas: We're dreaming, you know.

Robb Wolf: Yeah, yeah.

Andy Deas: So that's it, man. That's excitement. Hopefully, there won't be too much snow in Ohio, and the farther I move west the longer it takes to go back east or even the Midwest as you well know. So I'm like, you know, just longer trips than I prefer.

Robb Wolf: You need to start having kids so the parents come and see you.

Andy Deas: We'll see what we can do on that, man. Patience, Robb. Patience.

Robb Wolf: Well, it's all in the trying anyway.

Andy Deas: That's for sure. All right. So we're going to see how we do with the questions there, Robb. I think as you said there are some nice overlaps on a couple of them. I think we have some good questions as always so we're going to roll.

Robb Wolf: Cool.

Andy Deas: Actually, the first question is from one of my friends. I'm not going to name her name, but she'll figure out who it is. So I got an email from her recently, and she said, "I started my Paleo diet cold turkey and tried to keep it minimal on the fruit intake." So I'm just going to pause there and say for this young lady who probably weighs 115 pounds, her food intake is amazing, and you're talking about like a girl that could have like, you know – she'd go to lunch and get like a foot long sub and a six-inch sub, and she could just eat a tremendous amount of food, although very carb intensive, low on the protein side. And she's one of the lucky ones that would then still weigh 115 pounds.

Robb Wolf: Got you. Got you.

Andy Deas: So even though her boyfriend is super strict, she is just starting. So "I started my Paleo diet cold turkey and tried to keep it minimal on the fruit intake." So by day 3 she felt so sick that she couldn't do anything. She wants to know, "Is there a reason or did I do something wrong? Just wanted to see if you have run into this before or you have any article you could maybe send my way. Thanks."

Robb Wolf: Oh, man, do we have articles? I did a piece awhile back. I think the title is the Zone and Athletic Performance and that was actually a rebuttal piece

to this guy, Mike Caviston, who is kind of a SEAL trainer and coordinator, and I was just kind of making the point in there that a properly planned Paleo - Paleo Zone kind of approach can not only be like -- not injurious to performance but should actually augment it and make it better, and there's a whole list of reasons for that. And one of the things that he had listed in this kind of slam piece on the Zone was one or two clinical trials in which they looked at the Zone and it was very, very short duration where they took a calorie restricted lower carbohydrate diet and put it into hard training athletes and these athletes absolutely exploded.

And so it's not really too surprising if you think about it, (1) they used like a basic Zone approach out of the recommended by, like, Enter the Zone. And then also when we look at some of the references that I had in there, there's a paper from the Journal of Nutrition and Metabolism on ketosis and athletic performance. We find that there's an adaptation period that takes about a month in which people shift over from a primarily carbohydrate base metabolism to a fat and ketone base metabolism. And during that transition you can feel rough, like really, really bad particularly like you're seen to have laid a picture here in which this girl was eating really carbohydrate dense foods particularly some grain-based stuff.

So her metabolism was just wickedly attuned to running on carbohydrate, very, very dense, very refined carbohydrate. You pull that stuff out, and then it's funny you mentioned day 3 she felt so sick. Day 3, 72 hours is about the point at which you've completely depleted your liver glycogen, and your body starts looking around for some other nutrients to run off of, and it starts shifting into ketosis a little bit, but there's a rough transition point there because all of the metabolic machinery to use fat as a fuel source and ketones as a fuel source have not been ramped up.

So she's in this kind of no man's land in which one fuel tank is empty, the carbohydrate fuel tank. The fat fuel tank is full, but the ability to access the body fat or even a dietary fat are very, very limited. And so this is a large part of why she's having such a problem with this. Now, one good question to ask her or something to really point out with this, occasionally folks will get this notion that Paleo means low carb as in like only non-starchy, non-dense carbohydrate sources, no fruits, no yams, no sweet potatoes. But really from my perspective, the whole Paleo gig is mainly focusing on quality proteins, quality fat and quality carbohydrates that are not grain and legume based for a whole variety of reasons -- gut integrity and glycemic load and all that.

But certainly having some fruit in the mix for this girl would make her transition much, much easier. In that article that I wrote, the Zone and Athletic Performance, there's a link to I think chapter 9 of the Paleo Diet for Athletes in which Joe Friel who is the USA Olympic triathlon coach; he's made a bet by Loren Cordain. Cordain bets him that if he starts eating a Paleo diet, Friel will feel better and will perform better. And so Friel takes the bet. He has a three-week period where he feels like complete hell, and then he ends up ramping up and doing better, and he kind of lists all these performance improvements and all that. But Joe was not limiting his carbohydrate intake. He was eating fruit. He was eating squash and all that sort of stuff. But even then he would still have a rough period of transition changing over to the kind of more Paleo approach.

So there's kind of graded steps here. She could jump in on this and keep fruit and yams and sweet potatoes in the mix because it doesn't sound like she had -- she's maybe tackling this from a performance perspective and a health perspective, so she doesn't necessarily have a lot of body composition issues. There's probably some metabolic derangement lurking in there but she may be asymptomatic from the standpoint of weight gain, but she would probably still benefit from a [0:08:22][Audio gap] because most people do. But you don't necessarily have to tackle this thing from a super low carb approach. It's not entirely necessarily.

So she could jump in and have some more carbohydrate or she can recognize that there definitely is a transition period even if she had more carbohydrate in which she's probably not going to feel great anywhere from a couple of weeks close to a month. But then she should adapt. Everything will ramp up and she should be good to go from there.

Andy Deas: Nice. And now that her boyfriend doesn't count almonds anymore, they'll be like one perfect happy family.

Robb Wolf: Awesome. And she will be even hotter than she is now.

Andy Deas: Good. I thought that was a very good question, so I thought I would throw that in there.

Robb Wolf: Yeah.

Andy Deas: Cool. All right. Next, we got a question from Jeremy. I don't think we have a perfect answer to this, but I think this is interesting question to consider how we might work through a problem like this kind of in our gym, kind of how we see the world. "Hi Robb, my name is Jeremy. I have a client who would like to start strength training in preparation for a fitness test

conducted by her employer. She is a police officer who has been diagnosed with degenerative bone disorder. I'm waiting for a list of parameters from her doctor as far as exercise goes but wanted to address her nutrition in the meantime. Any advice? Would this be considered an autoimmunity? Do think it is possible to reverse this condition or just prevent further degeneration through proper coaching of strength training and nutrition?"

Robb Wolf:

Definitely a goodie. For me I would need a little bit more information from this person. So a degenerative bone disorder like what exactly is that? Is it for sure like a degenerative bone deal? Sometimes people will mistake this stuff, and there's a very common situation of degenerative disc disease or degenerative joint disease. Degenerative disc disease can happen in the cervical spine of the neck or in the lumbar spine, low back. You can get some degenerative joint disease which Andy Deas can actually commentate on with regards to hips and stuff like that.

So you have to be really specific about what she has going on. Is this just kind of run-of-the-mill osteoporosis? Is this rheumatoid arthritis? Is this degenerative disc disease? Is this degenerative joint disease? So let's tackle each one of those maybe from easiest to fix to a little more difficult to fix. If this is just run-of-the-mill osteoporosis, this is just kind of classic; probably not enough weight bearing activity, probably not enough vitamin D, and then definitely I would almost bet money that she has some sort of an acid-base imbalance in her diet, probably a lot of dairy, a lot of grains, possibly some soda because of the kind of phosphorus load from soda, and that in the net acid load format can end up leaching calcium out of the bones.

And so our solution to that is lean protein which causes an increased uptake in calcium, magnesium, zinc out of the intestines contrary to the whole vegetarian kind of approach to meat. It actually ends up creating a net calcium retention environment despite the fact that meat is definitely net acidifying at the kidneys. It ends up producing an acid load so you can actually fix it with that, and then add in fruits and vegetables and you get the calcium cofactor which is magnesium which ends up balancing so much of the metabolism that we would normally use calcium for when we're in a magnesium deficient state. It ends up relaxing smooth muscles, you know, like a vascular bed so that brings down blood pressure.

There's a ton of things that we end up using calcium instead of magnesium for because we don't get enough magnesium in the diet. So there's an article from Loren Cordain. It's in his Frequently Asked Questions section. If you just Google acid-base Paleo, then you'll find that

paper and maybe we can drop this into the show notes. But that really explains the whole acid-base balance and how a Paleo diet tackles the acid-base problem and how we end up with a net base or net alkalizing diet, and it's very, very beneficial for bone health.

So if her situation is osteoporosis, that would be the thing to do. Have her take in some vitamin D, maybe 2000 IUs of vitamin D3. Start strength bearing exercise, load bearing exercise, squat, deadlift press, push press, body row, pull-up, all of that, just standard strength training stuff working a little bit of metabolic conditioning as you see fit but really focus on the strength work.

If she has an autoimmune condition like rheumatoid arthritis, then we need to immediately start looking at grains, legumes, and dairy because if we're thinking autoimmune then we're thinking leaky gut autoimmune response. I think we've talked about that quite a bit. I have a huge extensive chapter on all that stuff in my book. Basically, to deal with that you remove all of these gut irritating foods, primary ones being grains, legumes, dairy. You might also look at nightshades like tomatoes, potatoes, eggplants, peppers, red peppers, and all that sort of jive too. Just an initial intervention, you pull all that stuff out of the diet. Make sure that she's getting plenty of fish oil like about that half a gram per 10 pounds of body weight, and then see how she's doing a month later.

Like these -- Pedro Bastos, our good friend who is at the University of Lisbon in Portugal, they are right now running another rheumatoid arthritis intervention in which they stick these people on a grain-free, dairy-free Paleo diet, and they've had stunning, like 10 out of 10 people get resolution of their rheumatoid arthritis. Like it essentially goes into remission, and it's a very aggressive, you know, gluten-free, dairy-free Paleo diet but with stunning results.

So I can really -- I feel like anything autoimmune related we can really hang our hat on removing any of the gut irritating foods and seeing some remarkable benefit with that. And then from there if she does have an autoimmune disease, you want to be particularly careful of the ramp up on metabolic conditioning. Rhabdomyolysis is greatly increased risk because her tissue is already inflamed; her immune system is already kind of hyperactive, so you want to really gingerly carefully ramp this person up. You do not want to beat the dog piss out of them right from day one. You need to give some thought to scalability and all that sort of stuff. So that's osteoporosis.

Rheumatoid arthritis, if we're talking degenerative disc disease, I'll mainly look at the lumbar spine because that's the much more common one, even the cervical spine. Most of it will -- actually I'll look at cervical spine first. I was going to bypass that. Largely a postural issue which can emanate from cross syndrome like tight chest, weak scapular retractors, tight hamstrings, weak belly in which the person -- it's kind of the belly sticks out, the chin sticks forward, the butt is kind of ramped back, and it's just a horrible postural position which puts an anterior kind of slide, kind of anterior impingement on the cervical discs. And what will happen over time, these discs will get loaded because they're best designed -- it's like a column. They're best designed to distribute load when they're in an even plane, but when we push them forward then we start compressing the anterior aspect of that disc and at some point that compression will then start impinging on a nerve.

And so I don't know if that's what this woman has, but if that is what it is then you need to really, really address everything related to cross syndrome. So you need to do some Google searching. Coach Michael Rutherford is a guru on that stuff, both in addressing it and -- or kind of recognizing it and addressing it in a mixed modal strength coach format. Obviously, people like Dallas Hartwig and Kelly Starrett from rehab perspective are going to be excellent on that. But you need to address just the basic postural set-up. And then in the lumbar spine, if you hear about degenerative disc disease L4-L5 kind of degenerative disc disease, in my opinion, it is like 99.9% hamstring tightness, hamstring piriformis, hip mobility tightness.

Normally, when we walk the hips precess. They raise right to left. It's almost like the Marilyn Monroe walks kind of thing. The right hip goes up, left hip goes up, but the spine essentially stays neutral in its orientation because the hips are precessing side to side. When we have super tight hamstring, super tight hips, instead of the hips raising and falling side to side, it becomes like a mortar and pestle action on the L4-L5 discs and you end up with disc rupture at some point because it kind of wears them down. And then also you add to that any type of loading, sprinting, jumping, landing, lifting when the lumbar spine is not in a solid position is also going to expose the discs to potential problem.

So that whole gig and then if you have something like a degenerative joint issue, like a hip or a shoulder, there can be various issues with that. Usually, there's some sort of a movement or recruitment issue, either tightness or impingement that starts wearing out the joint prematurely, and then there again you just need to be on top of that with proper mobility work and somebody like a Kelly Starrett or a Dallas or somebody

like that who is well-versed in manual therapy to help open up the joint capsule, re-establish normal mobility so that you can cease damaging the joint. So that's hitting like every stinking thing under the sun. We still don't know for sure what this woman had going on, but that's like the -- that's like everything it could be as far as I can understand. Maybe we'll get Dallas to chime in on that. I doubt if Kelly would be game for that because it would probably get him fired so there you have it.

Andy Deas: Oh, Robb.

Robb Wolf: Any thoughts on that, Andy? I mean given your --

Andy Deas: No, I'm on board with you. The only other thing on the -- especially on that lower disc stuff and that's part of some of the -- I got some wacky hip stuff, it's just also same thing, teaching folks how to use their stabilizers -- to properly stabilize their spine, under load, and not use some of the emergency stabilizers like the psoas and rectus to do some of those jobs and then kind of mess up the whole system. In other words, as Kelly says, "Andy, get a freaking plan before you pick up that weight tear your spine in half."

Robb Wolf: Yeah. And I don't want to get too far a field because this was already kind of a long answer, but this is again some of my problems with the lack of a directed entry point for people doing various types of strength and conditioning. The simple statement of like, "I'm going to scale something," when you start looking at it from a perspective of dealing with a mixed population of people is nothing short of preposterous because we still have people -- we were working with some folks last night who are overall pretty good movers, pretty good athletes, but they absolutely do not use their core stabilizers the way that they should. They're still using psoas as an anterior stabilizer of their midline, and they have low back issues as a consequence of that.

And it just- takes some time to teach people how to properly engage all the muscular -- how to shut off the stuff they don't want to fire, how to turn on the stuff they do want to fire. And if all that they're being exposed to are deadlifts under like a 2159 format for a time, it's not a great -- you're drilling in thousands of repetitions of shitty form instead of building a base that is built on sound strength building movements and then doing metabolic conditioning type stuff with movements that people have aptitude with that are more safe and then layering in that complexity over time.

And there's no 100% perfect answer to that, but I think just an orientation towards perfection in the compound movements, squat, deadlift press, push press, and really gingerly, hesitantly introducing that stuff in the metabolic conditioning format for the sake of producing a better athlete in the long run. There's still plenty of things you can do with people to beat the dog piss out of them that are not reinforcing poor technique.

Andy Deas: Yeah. And I think that's one of the things I do like -- really like about how we use very long slow linear progression at NorCal just because now you can start folks that have reasonable amount of weight make sure we groove all those patterns that we want, and they get better as the weight slowly but surely increases. And then by the time they've gotten to the point where they're lifting a substantial amount of weight, they're entirely comfortable with their set-up, their stabilization strategy, and all they got to worry about is picking up the weight.

Robb Wolf: Right, right. And you can do it in a way where people are still getting the shiny object, the metcon, the kind of cardio dose that they're looking for. But just do it in a smart way so that you're not undermining that really important foundational strength work.

Andy Deas: Yup. All right. Good. Long answer, good question.

Robb Wolf: Cool. Really long answer, yeah.

Andy Deas: All right. Next, we got a question from Jay. He says, "I don't want to be a nag." Jay, you're not a nag, probably in the question queue somewhere but anyway....

Robb Wolf: Now, Derek might be a nag but not --

Andy Deas: Poor Derek.

Robb Wolf: We love you, Derek. We love you, dude.

Andy Deas: Yeah, 593 questions from Derek but we'll get to them.

Robb Wolf: We love Derek.

Andy Deas: As long as no one kicks us off the air.

Robb Wolf: Exactly.

Andy Deas:

"Robb, I don't want to be a nag but I had asked earlier about training for health/longevity vs. sport/performance and never got a reply so I just wanted to ask again in a way that doesn't require a detailed answer unless you want to give me one. My goal with fitness is very much about health and longevity and maintaining a high quality of life (i.e. no nursing homes). I have no desire to compete in the CrossFit games or have a sub 3min Fran. Given this I have the impression that training for my goals may be different than most in the CrossFit world. My inkling is that training for my goals might look more like 2-3 times/week lifting heavy and 2-3 times week doing short but intense metcons or sprints. Is this a correct assumption and if not could you point me in the right direction?"

Robb Wolf:

I think the short answer sort of gig is yeah, that looks good like some sort of lift some heavy stuff. Have a plan behind that so that you've got -- ramp up in loading, some unloading weeks and all that and then some smart time index metcons and then we -- I forget, was it two shows ago, three shows ago, Andy and I talked a little bit about the need for some kind of long slow distance kind of volume type stuff. Like I just had surgery, so I had been limited in what I can do. But I've been setting up some things where I'll have a clock countdown for 45 minutes, and I'll just have a very long kind of circuit that I'm working.

I'll do some parallel bar passes where I jump up on the gymnastics parallel bars to do some passes, do some sled drag, but it's all at a conversational kind of pace. I could maintain a conversation with somebody so it's at that, like, kind of 70% relative perceived effort. And I think a day or two of that in there -- I don't know what the perfect thing is. One week you've got three days of strength work, two days of metcon, one day of long slow distance, and then you kind of rotate that template. So like another week, three days of long slow distance -- and long slow distance is being pretty relative I think doing strong man type stuff throwing a med ball, hiking with a vest. There's just a bunch of different stuff.

If you have some aptitude with boxing or kickboxing just basically setting a timer and just kind of doing combinations on the bag, there's a lot of different stuff that you could do for that, and you could rotate that template very, very easily. I think that that's a really nice way to have kind of a health and longevity orientation within all the stuff but keep some pretty damn good performance too. You're not going to win the CrossFit games. You're probably not going to win no lifting meet or powerlifting meet, but I think it's kind of that classic some breadth and depth and like the 10 physical characteristics of Jim and then the

Glassman derived broad general inclusive fitness I think are pretty good. I think there is some good stuff with that.

I think when you really -- early on he asked the difference between the sports performance and the health and longevity orientation, this is a point of departure that I have from the current CrossFit model which is increase work capacity across broad time modal domains and then the health and longevity orientation. I don't really see that. When we present a model, the model should actually have some predictive value, and that model actually does not have the predictive value for either health, longevity, or optimum performance because we know, like Barry Sears even in his original book, he makes a strong argument for really limited exercise because the studies of exercise are pretty clear that above a certain level you start getting a decrease in longevity. We start getting enough oxidative damage and wear and tear on our body that it actually is driving us back the opposite direction.

And this is something that -- I think it was July of 2004 that I wrote an article -- when I wrote the first intermittent fasting article for the Performance Menu, I touched on this. And since 2001 in talking with Dan John, I had this idea in my head of performance, health, and longevity. Performance being basically whatever it is you want to do. It's more all-encompassing than just simply like work capacity. Work capacity may in fact be a performance parameter if you're a CrossFit athlete. But performance is way more specific of a deal if you are a shot putter or an 800-meter sprinter or a golfer or whatever; it's performance within your chosen field. And it's kind of interesting when you start digging around in some other definitions or looks at fitness, you get much more of an orientation on performance specificity. You are fit for x, y, or z, you know, golfing, football, or the luge or whatever it is that you're going for.

And so I was looking at this performance kind of thing, and then health is just your moment to moment measure of health like blood lipids, hormonal state, anti-oxidant status, all that sort of stuff, and then [0:28:16] [Audio garble] over time. And then there are certain [0:28:18] [Audio garble] with all that, and then I cooked up a model that ended up looking very, very similar to triple point of water in which you have inflection points or deviation points in which if you want better performance in a given activity you are probably going to compromise both health on a short term and longevity on a long term. And then vice versa if you really want to optimize health and longevity, health in the momentary format and then longevity in the long term format, there is no doubt that your overall performance most likely, whether your thing is CrossFit or Jiu-Jitsu or whatever, is going to be a compromise.

And this is that kind of Art DeVany economics kind of based view of training and lifestyle in which there are tradeoffs and the tradeoffs are inherent. We actually have some predictive value built around that. And I'm working on a paper with a little bit with Matt, a little bit with Professor Cordain looking at integrating some of the energy expenditure of hunter-gatherers, food intake, hepatic glycogen repletion and all that to try to model some legitimate inflection points and then see if this stuff fits the data that we have out there. Can we support this with some data?

So produce a model. See if there's some data that supports it, and that's way farther afield from where this thing started from. But I think the health and longevity piece can be complementary to performance, but the greater that performance orientation gets away from our ancestral activity levels, like if you want to get really, really big and muscular, it's probably going to move you away from a health and longevity bias at some point. If you really, really want to orient on health and longevity bias then you would probably drop in some sort of pretty severe caloric restriction, maybe some intermittent fasting, but that's also probably going to limit your performance at any type of super high level in those things. There are some tradeoffs with all that.

Andy Deas: So what you're arguing, Robb, is that if I get 120 kipping pull-ups I may have negatively impacted my long-term shoulder health?

Robb Wolf: Well, we may see some downside to that. We'll see. We'll see. I think the kipping pull-up is therapeutic to the shoulder up until people cease to recruit properly on it, and then we start seeing some downside to it. So that will be interesting to see how the greatest end of physical experimentation history has ever seen. See how that plays out.

Andy Deas: Yeah. It's a super interesting question, Robb. That is my favorite Robb Wolf piece ever, by the way.

Robb Wolf: Which one is that?

Andy Deas: The triple point, health, longevity, and performance. It's a genius.

Robb Wolf: Well, thank you.

Andy Deas: Yeah, I like it.

Robb Wolf: Thank you. Thank you.

Andy Deas: I like it, Robb.

Robb Wolf: We'll see if it's genius if it actually offers some predictive value and is not just some hyperbolic flapping of my gums, and it might actually be valuable. So we'll see. Otherwise, it's just crap so....

Andy Deas: Well, no comment. All right. Cool. Good question. Next, we got a question from Ed. I like this one. "Robb, been reading some of Cordain's papers. In the one on Hyperinsulinemia (More than syndrome X?) he did with Dr. Eades, they say hyperinsulinemia causes increased growth. Yet, in the Paleo diet he states at the advent of agriculture people got shorter. What's going on here?"

Robb Wolf: Great question. Really, really good question. Also, just to toot my own horn I'm going to mention that in that paper one of the key points that are mentioned is this -- in the hyperinsulinemia just the tip of the -- syndrome X, just the tip of the hyperinsulinemic iceberg there's a section in there on epithelial growth factor in relation to hyperinsulinism, and I actually contributed all of the research work based around that. So there has been some statements from certain health and fitness gurus that I have not contributed anything to any papers, and in fact that's inaccurate and there are a few others floating around out there if they had taken the time to really research it. So that's one of them.

And it's going to be important later because there's a subsequent question that talks about a skin condition that we will link back to hyperinsulinism and epithelial growth factor. So just keep that stuff in mind. So the question here is about the Paleo diet. When we're recommending a Paleolithic diet, usually we're seeing ancestral growth patterns in which people were much taller than agriculturalist. And so that's one piece that we're seeing. But then also we're saying that with our now highly refined diet, we're seeing people with hyperinsulinism, and so what the heck is going on with all that stuff?

So basically when we -- if you look at the difference between the Okinawans and Japanese, the Okinawans get a pretty high protein diet. They get -- actually ancestrally a low amount of rice, but the main carbohydrate source was kind of a dense starchy tuber like a yam or a sweet potato, very high carotenoid intake. But it basically was very, very low anti-nutrient content. And that's one of the main differences between the Okinawans and the Japanese is that the Okinawans end up with a low anti-nutrient intake and therefore tend to be relatively tall. When you see first generation, second generation Japanese-Americans, they tend to get much normal, normal being kind of relative, but normal

within the Western pop -- westernized populations, the height distribution. So they end up taller because they end up with less rice in the diet, typically more dairy which is also a growth promoter but more protein overall.

And so that's kind of the interesting thing that we're seeing here that the Paleo diet is growth promoting in that it's adequate protein, good mineral balance, and no GI damage due to lectins and whatnot, but also it's very, very low in anti-nutrient so you're not binding up like the calcium, magnesium, zinc, and all that sort of jive.

Andy Deas:

Good.

Robb Wolf:

Great question though.

Andy Deas:

Yeah. I like that one. And you actually contributed to a scientific paper, Robb. Well done.

Robb Wolf:

Hey, you know. Pseudoscience reigns supreme so there you go.

Andy Deas:

Your entire life is based on pseudoscience.

Robb Wolf:

You know what? To tie back in when they mentioned the hyperinsulinemia a good example of this is the early dairy introduction and even greater than normal height distributions. And so we see that pretty consistently with early introduction of cow's milk, goat's milk, whatever. You tend to see kids being taller which has some goods, but then also we see some interesting long term epidemiology related to cancer rate. So there are some ancestral norms that we either approach and then surpass, and then some potential collateral damage with that.

Andy Deas:

Are you trying to say something about my height, dude?

Robb Wolf:

You've taken care of everything. You will live to be 200. No problem.

Andy Deas:

Yeah, minus my hip.

Robb Wolf:

Minus your hip. Your hip will maybe make it to 40.

Andy Deas:

All right. Enough Tom Foolery, Robb. We're focused.

Robb Wolf:

Indeed. Indeed.

Andy Deas: A question from David. "I've recently been doing a mass gain and have essentially been running on Paleo + milk. I've noticed a slew of sinus issues and congestion taking in so much milk so I am wondering if switching to Paleo plus a whey shake may be of benefit. I've read that you get less issues with just whey. Can you comment on that?"

Robb Wolf: This was from David. I actually did a brief little answer to David, and I said certainly give it a shot and then let us know how it goes. It makes sense to a whey only post-workout shake would be a good option. You're still getting some really potent growth promotion out of the way, but it's the casein that seems to be a little bit more inflammatory. The casein seems to be a little bit more, for me, quite a bit worse with regards to things like acne and some of the other collateral damage associated with inflammation, definitely kind of sinus reactivity in all that too. A couple of thoughts on this though. Can you track down a grass-fed milk source, raw, unpasteurized? I personally have not really played around with it a lot but there are a lot of people who claim that the raw, unpasteurized, grass-fed milk is orders of magnitude less problematic with regards to whole inflammation, sinus problems, and all that sort of jive.

And then the other thing is tracking down some goat's milk which is usually grass-fed anyway. They may throw a little bit of grains in it, but it's usually grass-fed anyway. And I've noticed for myself, I can tolerate goat's milk much, much better than I can any type of cow's milk even like goat yogurt versus cow yogurt which I love yogurt, but I occasionally will treat myself to a big jug of plain goat yogurt and I dig it. The goaty goodness is awesome. But that would be my thought. Definitely give the whey a shot if you want to. Other potentials are tracking down either goat's milk or grass-fed, ideally unpasteurized and homogenized milk. And in each of those maybe give each one a month and see how you run with it; a week, a month, something like that, and see how you run with it.

Andy Deas: So here's a question for you, Robb. So obviously, generally this Paleo + milk is sort of a short-term solution trying to reach some type of goal generally for most folks.

Robb Wolf: Right.

Andy Deas: What are your thoughts on the whey or the casein, as far as the effectiveness, related to bulking, adding strength, mass, et cetera? Any perspective on that?

Robb Wolf: Like one versus the other, I really -- I don't know. Somebody like Berardi could probably answer a question like that more. I have not really looked at the anabolic potentials of all those things. Actually, Pedro Bastos might be able to -- we might be able to hit him and see if he knows. All of these things increase a variety of growth factors -- insulin, insulin-like growth factor, epithelial growth factor like I mentioned earlier. There's a ton of different things that they stimulate. I don't know what whey hits, what casein hits. A lot of -- the growth potential of dairy is a direct -- I'm trying to remember all this stuff. It's a direct activity of like insulin-like growth factor in the gut lining.

So there's intact insulin like growth factor or proteins in the dairy which interacts with IGF receptors in the gut which then stimulates IGF activity throughout the body, and IGF, insulin-like growth factor, is pretty damn anabolic. It has a really potent potential. Dairy also can potentiate the action of growth hormone. Insulin-like growth factor and growth hormone and testosterone all work in a really beautiful synergy and promoting all of them is a huge benefit. When you stimulate the release of insulin you decrease a hormone called sex hormone binding protein which effectively increases free testosterone.

So there's a bunch of different angles in which dairy is growth promoting, and it is just growth promoting above and beyond the caloric content. Not only does it have big caloric content. Not only can you slug down a quart or a half gallon or a gallon comparatively easy as compared to like a gallon is 3,800 calories. It's comparatively easy to drink 3,800 calories versus eat 3,800 calories. So it's very, very calorically dense in that regard, but there's growth promotion above and beyond that. And the synergy does seem to work better. But to what degree they separate out, I don't know.

Andy Deas: All right. Well, it's worth the shot, Robb.

Robb Wolf: Yeah. We can try to do -- that's just outside my wheelhouse. We could try to do a little research on that, maybe see if Pedro Bastos can comment on that because he put together a hugely well researched paper on the, kind of the totality of the known endocrine response to ingesting dairy.

Andy Deas: All right. Cool. That may be worth a look.

Robb Wolf: Yeah, totally.

Andy Deas: Good. Here we go. Next, we got a question from Kim. "I've just started listening but I'm already a huge fan." So this is like fan 9, Robb, whatever number you're making up.

Robb Wolf: Sweet. I think people are dropping off the front end though. We're still around six. I know it so....

Andy Deas: "This podcast you mentioned sleep quite a bit. I am just starting to really dial in my food and have progressively been getting better at going totally strict. This last week I have done strict Paleo and cut out fruits and nuts, getting my carbs to about 30 g from veggies. But now I've been sleeping quite a bit more (going on about 10 hours a night)," well done, "and still feeling pretty exhausted at different points throughout the day. Is this typical? When you talk about sleeping enough what is the range you're thinking of because 10 hours is kind of cutting into my schedule."

Robb Wolf: Seriously. Two thoughts here, just bouncing right back to that original blog post or question here. You might be going too low carb. This is all in the context of like what Kim is wanting to accomplish, and maybe this is too low carb. Some of the lethargy may just be adaptation to a more fat base metabolism. So I mean maybe she needs a little more fruit, and she would feel better. If she's not trying to lean out, that seems like a totally appropriate way to go. If she is trying to lean out, this may just be kind of the way it's going to be until she adapts to the higher fat, lower carbohydrate intake.

So just need to think about what Kim's goals are overall. And then something to keep in mind too if you're in the Northern Hemisphere where kind of midwinter, there's niggling hint of spring looming out there, but we're still more winter than not, and people tend to sleep a little bit longer in the winter, anywhere from a half hour to one hour. And I think it's normal to be a little bit slower to wake, a little bit lower energy. I know Andy and I already commented, you know it's rainy and cold again in Chico, and you're just less energetic.

So I don't know if she has some environmental factors going on there. But I would just think about does she need to lean out? If not, maybe she can reintroduce a little bit more fruit because otherwise I mean I'm not super compelling that she'd be super duper low carb on this thing. If she is trying to lean out, then maybe just keep goose stepping along with this and just know that three to four weeks end she's going to feel better. And then also keep in mind that her -- if she's in the Northern Hemisphere a pretty high likelihood that her sleep requirements may be

a little bit higher right now and then when the summer rolls around. It will probably drop almost two hours.

Andy Deas: Robb, if you slept that much every night, you could not goof off on the internet and start arguments.

Robb Wolf: I haven't really argued that much.

Andy Deas: I know.

Robb Wolf: Well, I could. I just wouldn't get any of my book done, and then my wife would kill me.

Andy Deas: There would be a long line behind your wife I suspect, Robb.

Robb Wolf: That's good to know.

Andy Deas: You chase through the streets.

Robb Wolf: Perfect. Perfect.

Andy Deas: People have been plugging for like a year I feel like so....

Robb Wolf: Actually, it's about five years.

Andy Deas: That's right. Okay. But hard to sell it for a year, anyway.

Robb Wolf: Yeah, yeah.

Andy Deas: All right. Next, we got a question from Vinnie. When we get to the hard part, Robb, I'm going to let you pronounce this because I --

Robb Wolf: Oh, man. Okay.

Andy Deas: "Robb, I have an issue that I think would be a good discussion for the podcast. I have been an on and off primal eater for about eight months now. My original motivations were to achieve the all encompassing 'look good naked' status, but as I read more and find more research, my motives are also pointing me towards some serious health benefits I may receive as a result of eating primal.

So here's my question: I was diagnosed with ulcerative colitis when I was 17. The disease has been a constant struggle for me, and up until that point I had always been overweight and my diet was ridiculously poor.

Even now, fat loss is a struggle (constantly yo-yoing and getting derailed for weeks after even the slightest deterrence from a strict Paleo routine). As far as my colitis goes, my symptoms practically disappear when eating a gluten-free Paleo diet, while extra fat also seems to melt away within a month or so of good eating habits and CrossFit WODs 5 times a week. Recently, I've also been displaying symptoms of..."

Robb Wolf: Hidradenitis suppurativa.

Andy Deas: Nice. "...a skin disorder resulting in big pustules..." what --

Robb Wolf: Pustules.

Andy Deas: Pustules, thank you. You can tell you're the scientist. I'm not. I'm just a hack. "...around my inner thigh and pubic area. After much reading on the subject, I've found that this skin disease can also be traced back to a gluten-laden diet. In my constant reading, I've also found that celiac disease can closely mimic the symptoms of ulcerative colitis and is often misdiagnosed as such. I was hoping that your science background could help shed some light on this. It all adds up too easily. It's hard for me to lose weight unless I cut out the gluten. My ulcerative colitis symptoms disappear when I do, and I now show signs of a skin disorder when I eat gluten-rich foods. I'd like to hear some of the physiology behind these occurrences and hear whether you think I may have been misdiagnosed and why or why not this would be possible. Also, you get this a lot, but I'd like to also thank you for all the work you do. Keep it up, and thanks again."

Robb Wolf: Big, big question. So I mean on the whole deal of the diagnosis/misdiagnosis, something to keep in mind with all this stuff when we're talking about any type of like GI problem, leaky gut and autoimmune response, what we're finding is that a significant factor of the autoimmune response and we've said this thing a bunch of times as the transglutaminase enzyme. Transglutaminase modifies proteins. It modifies every protein that comes out of our body. And so we can see effects of gluten on literally every tissue and organ system in the body.

And so whether or not this thing is diagnosed correctly or incorrectly, you know like ulcerative colitis or is it gluten intolerance or is it actually irritable bowel syndrome, it all kind of boils down to the same stuff. And what we find is that you remove the gluten out of the diet and you see an alleviation, essentially a restitution of these symptoms. They go away. You introduce it, and then you have problems. And this hidradenitis suppurativa -- let's see here.

Andy Deas: Suppurativa.

Robb Wolf: Suppurativa, had not seen this one before when I started researching for this thing. It was kind of the first go around at it. You see some linkage not only with autoimmunity and this condition, but you see a really, really high linkage with insulin sensitivity. It actually is a wickedly high in type 2 diabetics and then also particularly in women with polycystic ovarian syndrome which also underlying linkage in that situation is hyperinsulinism. It's high insulin.

So when we start trying to drag all this stuff together, when we consider some of the information from like the Kitavans we start seeing this distinction between elevated insulin levels and autoimmunity, in my opinion, starts becoming very, very gray because I think that there is a -- the leptin resistance, the body becomes non-responsive to leptin which may be precipitating the lion share of what we see as hyperinsulinism. The leptin sensitivity disappears. Leptin really strongly regulates our uptake of fats and carbohydrates and our sense of hunger. That cascades into insulin.

Our insulin is our primary storage hormone. We start becoming resistant to the actions of insulin, and we start getting some of these hyperproliferative growth situations like acne and like this condition. This condition is like a really, really wickedly bad case of acne. And so we see some very common linkage here, and it's really not surprising and the solution still boils down essentially to that same thing, this gluten-free, dairy-free kind of Paleo diet. It's funny, James Kreiger -- was that the guy's name?

Andy Deas: Uh-huh.

Robb Wolf: He was posting some stuff, like he really took Gary Taubes to task and was -- I think he's probably a pretty good dude. He's definitely in the camp with Alan Aragon and Lyle McDonald and all those guys who are very much not Paleo fans and that's fine. Whatever. State your case. Run with it. That's fun. I respect those guys for where they're at. But James was trying to make this point that obesity was a problem with NEAT like basically fidgeting. It's like -- I forget what the acronym for NEAT was. It's -- let me pull it up here really quick. It's non-exercise activity something another. But it's basically -- one second, one second. But he's making this argument --

Andy Deas: Thermogenesis.

Robb Wolf: Thermogenesis. Non-exercise something another thermogenesis. Okay. that's it. That's the stuff. So James is making this point that "No, no, no, it's not insulin. It's not insulin. It's NEAT. That's how much you fidget." And I was kind of like, well, you start doing a little bit of digging around on NEAT and there's massive disparity from one person to another and like if you overfeed them 1,000 calories, one person will fritter away all thousand extra calories by being fidgety, and their body temperature will go up and then somebody else they won't -- they'll only further away like 100 calories.

So there's some obvious difference there. And then when you do a little bit of digging, it looks like there's an autoimmune component to the NEAT deal. And so it loops back again to like, okay, Neolithic foods are probably at cause here. The thermodynamic deal. It's calories in, it's calories out. It's like yeah, kind of, sort of, but not really because we still have these really complex non-linear mechanisms going on. And until we see one uniform response across pretty much everybody, then it's kind of hard to hang your hat on it, and the thing that I'm finding nearly across the board is that if you remove these gut irritating foods then we see seemingly complete alleviation of these autoimmune conditions just across the board. So that's where I'm really, really hanging my hat more than anything is just on that gut irritation and everything that comes out of that.

So this is for sure an example of this in which he's got some obvious ulcerative colitis type stuff, some obvious gluten intolerance, and then some collateral things that look like insulin resistance. And it may be overt insulin resistance from grains, legumes, dairy; it could be insulin resistance plus autoimmunity out of those things, and we really don't know for sure what the total story is on that. But the fundamental thing is, you know, if he pulls this stuff out he ends up going symptom free. He doesn't have a problem then.

Andy Deas: Yeah. So this is why I think for us words like -- I don't know that it matters long term. It may matter to him, but I think the solution is still the same either way.

Robb Wolf: Yeah, yeah. If you want to be asymptomatic, you got to pull the grains, legumes, dairy out of the mix, and then experiment and see to what degree you can or can't reintroduce that stuff. And I think again stuff like corn and rice you can usually get away with on infrequent exposure. Gluten seems to be kind of a nasty one under any circumstance.

Andy Deas: For sure. All right. Good. Good question.

Robb Wolf: Cool.

Andy Deas: A question from Kevin. "Hey Robb, a bit off topic but would you happen to know of any sites which have references to studies done on dogs and gluten, wheat, corn issues. Possibly some sort of side by side studies of dogs feed an ancestral diet versus the conventional PetSmart garbage? So far I've found that our vet is pretty clueless about the dangers of corn, gluten, wheats, et cetera for dogs. The dog has already gone through a several day bout with allergies because of this Purina crap food she recommended with corn gluten meal. The results of feeding Evo seem to be speaking for themselves but I would love to find some solid studies on this."

Robb Wolf: Yeah. I do the quick little look, and there's a little bit out there but it's not that well developed. I mean it's kind of similar to where human nutrition is in which you get a few practitioners, a few doctors, a few vets who really get what's up with this, and then you have the vast majority that just have no idea. And so we'll do -- maybe if any listeners know about some specific sites or some specific veterinary practitioners who are savvy to the whole kind of ancestral diet for cats, dogs, all that sort of stuff, then that would be great. We could put some links up for some stuff like that. But offhand, I don't know a whole lot of them. But the results are obvious in this situation like the same deal.

You pull the grains out of the diet for cats and dogs, and I think it's even more stunning the resolution that they have with some of their problems -- arthritic conditions. A lot of dogs that are -- claimed to have problems with hip dysplasia and stuff like that, I think it's fully like a malnutrition scenario. They're fed crappy food. If you fed them more of a raw diet or even just like a cooked meat-veggies kind of diet, load them up with fish oil, they do great and these breeds normally are associated with hip dysplasia and stuff. They have virtually no problem. It's really, really interesting.

Andy Deas: Yeah. And you do have what are called the Pottenger cat studies which is a little different, but they did a lot of stuff on -- man, it was -- I feel like it goes like 900 generations or something but a large number of skeletal deformities and all types of interesting stuff. And this is where -- I'll be curious just to see how old the vet is. Like my parents' vet -- whatever, we always have cats. I'm a cat person. But our vet is like in his late 70s, and he's still practicing. And over the 30 some years my parents have had

cats, so obviously not the same one for 30 years, but some lasted into their early 20s. They would develop these weird kidney situations.

There's just a lot of weird gut irritation and stuff and finally -- in recent years my mom asked the doctor, and he was just like, "It's all the food." He's like, "Thirty years ago the cats I treated didn't get any of these things." He's like -- his opinion over time is like they just complete change in the diet has totally caused all these downstream consequences that -- his approach really isn't to worry about changing the food. He's kind of like, "It is what it is. The cats are going to be sick." But I thought it was interesting kind of from someone from an outside perspective not really from the Paleo paradigm. We change what they're eating, here's what happened to them.

Robb Wolf: Right, right, yeah, just complete clinical observation on the whole thing. No real background theory at all, yeah.

Andy Deas: All right. Good. Number 9, a question from Warren I think. "I just want to clarify, avoiding dairy would mean milk, cheese, yogurt, 1/2 and 1/2 but butter and cream would be" -- okay, let me say. Let me just start again, Robb. Clearly, my coffee is wearing off. "Avoiding dairy would mean milk, cheese, yogurt, 1/2 and 1/2 but butter and cream would be okay? Is it because they are mostly pure fat but the others have casein and lactose? I'm going to do the pull it (dairy) out for a month to see but butter and raw cream have to go too?" What are your thoughts on this, Robb? I'm totally tongue-tied. I had too much coffee now.

Robb Wolf: Andy has gone beyond his therapeutic dose on coffee. He's starting to shut down. He's taken enough uppers for them to be downers now.

Andy Deas: Well, you know what it is? Is I had my three tablespoons of heavy cream in there.

Robb Wolf: Ahh, yup.

Andy Deas: So I feel like I'm spinning.

Robb Wolf: Yeah, the heavy whipping cream really -- like we talked about really enhances the caffeine uptake. What you need is a valium now, and that will perk you right back up.

Andy Deas: I don't know how that will help with the rest of the day.

Robb Wolf: Bring you back down it's a normal. So the people that I would pull dairy out of the line-up in totality would be folks who have autoimmune issues or who are really, really, really trying to lean out. I guess like scorched earth, give it a month, and we'll play around with it. And then like Warren is saying the things that I would try reintroducing would be butter and heavy whipping cream. Ideally pastured because of the fat content, and it would minimize the lectin issues in that situation. And that's kind of the main deal that I would look at for that, so leanness because of the insulin spiking, and then also the autoimmune potentially there.

Andy Deas: Yeah, sorry about that noise, Robb.

Robb Wolf: No problem. That was Andy popping a valium so he can get back in the game here.

Andy Deas: I misclicked. It was a poor click. All right. I'm sorry. I was trying to look something up. Anyway, go ahead.

Robb Wolf: No, that's it. We're good on that. And then he had a booze question.

Andy Deas: Yes, the ever important booze. "Also can you give small amounts of booze and dry red wine a pass but no mention of beer (I know I asked about this before in terms of gluten but not carb count/metabolic effect) some light beers carry about 3.5 to 5 g carbs."

Robb Wolf: Yeah. I mean the beer deal is mainly the gluten issue. You can track down some Redbridge or gluten-free beer. You might tolerate that better. But like I mentioned before, there are some people like Dutch Lowy and a couple of other people that are reactive to gluten in general but reacted worse to sorghum beer than they do regular wheat base beer. And so that's just kind of -- they seem even more reactive to sorghum. And so there's that thing again where there is a big variety within all this. Apparently, there are some people who react very, very unfavorably to corn too. I usually give corn and rice a pretty good pass, but I've been reading some stuff on some people who end up with serious GI problems looking like ulcerative colitis and some vector auto-immunity from corn intake.

And so I think that there's a big genetic variation on here. You legitimately like I -- Steve Rast who is a dude who helped set up CrossFit Fenway, and then he's moving out to Oregon, a really good dude, he's kind of reminds me of one of our guys, John Fugoso. He's kind of like Wolverine. He's just jacked, built, strong, and can eat 10 cans, and doesn't affect him. And he legitimately is a guy that -- he's like -- I've

really tried gluten-free, dairy-free Paleo, and then I've done beer and pizza and I just don't notice the difference.

And when you look at him you're like, "So how much do you lift weights?" And he's like, "Uh, once or twice a week." And the dude is just like huge and jacked and "Okay, I hate you." So there are a few people out there that really -- they just don't -- man, their reactivity to this stuff is minimal. But the big reactivity issue for me with this is just the gluten content of the beer, the carbs. I'm not really all that concerned about.

Andy Deas: Yeah. I think this goes back to kind of that whole wheat bread versus banana thing. We're on the basically equality side of the equation versus the carb or that macronutrient breakdown on the side of the equation.

Robb Wolf: Exactly, yeah.

Andy Deas: All right. Two more questions from Warren. The last one may be the most important. But the question, "Pure stevia okay in small amounts?"

Robb Wolf: If you want to sweeten something, just use some sugar I guess. I don't know. I mean if you like stevia --

Andy Deas: Robb, it's natural. I'm waiting for your analogy here.

Robb Wolf: I've killed this analogy. Plutonium is natural too. Stevia causes an insulin response in a lot of people. It makes people hungry after using it. If you want to use it, go for it. But if you're making a mix drink or something, I would just be horrified making a mojito or something. You've got top shelf like Nicaraguan rum. You throw a bunch of mints in there. You mix it all up. You put some lime juice and some soda water and then you're like, "Hmm, some pure cane sugar or stevia?" I would just want to kill the person who would put stevia in there. It's like either make it like a skinny margarita or skinny mojito, if you want to sweeten it up then use the real thing. Just use some moderation on it.

And here again is the deal that if you're trying to lean out or you have some other issues, then don't use any sweeteners until you get your shit squared away. And then if it is squared away, then it shouldn't matter. You should be able to kick your heels up a little bit and have some fun and not worry about little details like this.

Andy Deas: All right.

Robb Wolf: Again, it really depends on where you're out in the whole spectrum.

Andy Deas: And then the last question, he says, "Most importantly why no mention of 'Thrashing'?" Well, because I think it's "Thrashin'" if I recall which is a phenomenal Josh Brolin skateboarding movie. It's amazing that Josh Brolin ever skateboarded, but actually I guess that shows how old this movie is. It came out in the early '80s. So I told Robb I'm going to try to tone down my movie references, but I appreciate the reminder of another fine movie from my childhood.

Robb Wolf: We just need to get some more Grosse Pointe Blank references. I'll be happy.

Andy Deas: Oh, man, you can never have enough of those for sure.

Robb Wolf: Yeah. I just want to put it out there. I wouldn't want to make you uncomfortable.

Andy Deas: Have you seen Thrashin', Robb?

Robb Wolf: I did ages ago.

Andy Deas: Okay.

Robb Wolf: Yeah, it's been ages. It was definitely a beta or VHS when I saw it so...

Andy Deas: For sure. Unlike Prayer of the Rollerboys. You have seen this bit of pop culture history. That's good. I feel better right now.

Robb Wolf: Yes.

Andy Deas: All right. Next, we got a question from Mike. "Hey Robb, I thought you may have discussed this at some point, but couldn't find it in the archives. Is constipation common on a Paleo diet? I've been eating strict Paleo, supplementing with vitamin D, magnesium, and fish oil, and I've recently started taking the NOW Foods Super Enzymes. However, I only go one to two times a week. Not sure if this is unhealthy or if there is a way to remedy it?"

Robb Wolf: It's really common for people in the beginning when they switch around to a Paleo diet to have some kind of slow bowel movements, to be a little bit constipated because their system is kind of primed or used to using the gut irritating effects of grains to basically stimulate peristalsis, stimulate the movement of food through the intestinal lining, and make you go poop more often.

The analogy that I use if you eat some hot food, you eat some hot peppers or some really hot Mexican or Thai food, what happens to your nose or mouth? And people say, "Well, it runs." Yeah, so you get a bunch of mucous discharge. This gets really yummy. Hopefully, people are eating some dinner while they're listening to this. But you get some mucous discharge, and this is identical to the scenario in which your guts get exposed to some sort of irritant -- grains, legumes, hot food sort of gig, and you get increased peristalsis, increase mucous production. Because it's an irritant, your guts are trying to move it out. It's trying to dilute it, and it's trying to move it out.

So the things to do when you transition into a Paleo diet is you're getting plenty of fish oil, plenty of fat in general, lots of water, the magnesium and all that stuff. It's good to go. And then it's probably just going to take a little while to fully adapt to that scene. It's normal, and you should get some sort of adaptation within about a month -- three weeks to a month, something like that.

Andy Deas: All right. Yeah. We see this pretty commonly at the gym, and then eventually it does sort of resolve over time. But there seems to be a fairly wide window for folks. Some folks adapt pretty quickly, and some folks takes a few weeks easily.

Robb Wolf: Right. Totally.

Andy Deas: All right. And finally, a question from Sue, Robb. I don't know why. I think we've visited this before, but I was in the mood to put this in here. I think it was the rain. "Robb, what do you think of vegan athletes? Do you think it's possible for some to be at their best athletically while a vegan?"

Robb Wolf: I answered this one in a brief written response to Sue, and it went pretty much like this which is that we -- if we look to the -- and somebody -- I don't know if it was last time. Maybe it was the last podcast where somebody said -- was it the question where it's like "I haven't seen any elite athletes doing Paleo other than Art White," or something like that. It's in this kind of a genre which is you could find somebody who is ultra -- like Carl Lewis is one of the only gold medaling, vegan athletes that I can think about, but there are people out there who are -- God, who is the football player? There's a football player that just turned 50, and he ran a -- like a legit, like laser timed style time, 4.41-40, and he just turned 50 years old, and he used to have a 4.1 or something or 4.17 some ridiculous thing. I forget. I forget who it is.

But it's like I couldn't run a 4-7 unless I was shot out of cannon, right? I'm a reasonably fast guy. I had a good vertical leap and all that. So there's different -- there's just so much individuality out there. You could have somebody who is still a gold medalist but eating sub optimally, and we see stuff -- examples like that all the time. Welbourn mentioned guys who would do absolutely no training in the off season, sit and watch Scooby Doo all off season and come in the gym and beat him on all the lifts and on all the combined stuff. And they would just kind of laugh at him. Where Welbourn would hire a strength coach and work his ass off during that time.

But he found pretty quickly that there was kind of this optimized nutrition that gave him better performance which was essentially a Paleo diet on kind of a cyclic low carb regimen and then smart training, talking to Eva Twardokens. He had the same deal. She had to train smart and eat smart to be at the highest level that she could be, but yet there were still people who out of the box could beat her, you know, at giant slalom skiing. So in my general heart of hearts I have to say that I don't think veganism is going to produce optimum performance for people.

Now you can have some funny -- what I think is funny interpretations of this like the Mike Mahler vegan in which he eats six meals a day, and he has a bunch of whey protein shakes or brown rice protein and all this sort of stuff. And what you're doing is you're taking vegan food sources -- I don't know. He's vegan so he's not doing whey protein. So it must be like brown rice protein or something like that like tofu or something. But you're essentially emulating a Paleo diet or at least a meat based diet with vegan concentrate which really when you get right down to it, that's all a cow is. It's concentrated grass.

So I'm just kind of like -- I'm completely unimpressed and nonplused by that stuff. It's like, dude, I get my concentrated and get grass from a cow. You get it from soybeans. I'm just not seeing the relationship there. Eat some raw unchanged food like eat beans, rice, nuts, seeds, fruit, vegetables and show me the same results, and then you've got something that would kind of impress me a little bit. And so Andy is like, "Dude, wrap this thing up." So my thought here is that you got huge genetic variation so you can have level people who potentially are vegan, but I think they would potentially train even better. Were they not the ways that people tweak the whole vegan thing to make it work is almost silly to me because it -- I mean if you want to do it, do it. I don't care. I really have no dog in the fight at all. Do whatever you want to do.

But if you need to eat a bunch of protein concentrates and stuff and you're doing it for moral reasons, fine. If you're doing it for some perceived health reason, then I think you're completely missing the mark. And then a lot of what I base this off of we trained a family of vegan and kind of really, really good people like love all of them, really good folks. One or two of the family members ended up peeling out and getting into the chicken, egg, fish. They never really stepped up to the red meat which is fine. That's not necessary to make the stuff work well. But those two people who stepped out, now these are all essentially people from the same genetic lineage. They're all one family basically.

The folks who ended up maintaining this almost vegan-like, they would occasionally do some dairy or some cheese or something like that, but they were basically kind of vegan sort of deal. They saw better performance when they started training with the us. They saw an uptick in their lean body comp and all that, but it really plateaued rapidly. And then their siblings who ended up eating essentially a Paleo diet like a mix Paleo diet, they absolutely destroyed them, like crushed them. Body composition was way better. Recovery was way better. Performance was just astronomically better.

And then when we look at some examples that we have like Laura DeMarco, and again these are like kind unequal, but Laura was a very good athlete; unweighed, unmeasured, high carb, low fat vegan athlete, then became a vegan Zoner and saw better performance. Then became unweighed, unmeasured Paleo athlete, and she has destroyed every other benchmark that she's ever had. I just see this again and again and again. And so for the -- obviously, I beat this thing to death. If people are really adamant one way or the other about this, I would say eat vegan for a month and then eat straight up Paleo for a month and how do you look, how do you feel, how do you perform? And then you can completely answer that question.

From my experience I don't see veganism transfer the way that a mix diet Paleo works, and that's even with using stuff like brown rice, protein powder, and stuff like that. So there you have it, gato.

Andy Deas: The gato is interrupted. Well, we're in an hour and 15, Robb. We're back up above the hour mark, yeah.

Robb Wolf: Holy cats!

Andy Deas: We're close to an hour and 15. So with that, man, I think we're going to call it the end of episode --

Robb Wolf: Seventeen.

Andy Deas: -- 17, yeah. We survived. We're almost to 20. Whoever thought we would see that day.

Robb Wolf: I didn't figure I'd see episode 2. I figured we'd be shot at that point so....

Andy Deas: Or the cat would get tired of listening to you, seriously. All right. I'm going to let you go, Robb. We're 20 seconds to an hour and 15 so I'm going to stop it right now, and then I'll talk to you next week assuming it's --

Robb Wolf: Have fun in Ohio.

Andy Deas: Thanks, dude. See you.

Robb Wolf: Thanks, Andy. Bye.