

The Paleo Solution

Episode 20

- Andy Deas: Robb Wolf, Andy Deas, today is a big day. Episode 20, finally.
- Robb Wolf: Holy cats! We're almost have legal drinking age in episode terms.
- Andy Deas: I'm waiting for when we get hit 100 and you can come up with something better than "holy cats!" but I like it. I like it for today.
- Robb Wolf: I'm highly repetitious. It's reflective of me essentially being a four-year-old so...
- Andy Deas: I was actually thinking the other day, someone had, several weeks ago, made a comment on the blog about words they've picked up from you like "dealio" and a bunch of other things. I was thinking we used to have this guy that I worked for and he had like all these sayings of the 50s that he had crafted over his 30 years of Corporate America, and we used to keep track and like walk around, make little notes because they were hysterical and you can tell he had used them for years and years and years. And you're going to be like that someday, Robb.
- Robb Wolf: And actually, mine is the opposite. Mine are all stupid and it actually -- it's actually whittling away a legitimate base of knowledge and verbal acuity in favor of things like "dealio" and "holy cats." So it's actually wadding your brain so...
- Andy Deas: In replacement of your --
- Robb Wolf: That's the best I can do.
- Andy Deas: It's all that pseudo science.
- Robb Wolf: Exactly. Exactly.
- Andy Deas: So once again, one week closer to the book so -- well, to your self-imposed book submission deadline so it's very --
- Robb Wolf: Just shout out to my editors, the exercise chapter, the ancestral fitness chapter and then also the tracking progress chapter. So hopefully I'll get some feedback on that. I did a Facebook update and we spent about an hour and a half talking with the publisher and then some wholesalers

who basically go out and sell the books to Barnes & Noble and all that sort of stuff. And normally, those things only take about 15 minutes, but we actually ended up spending an hour and 10 minutes on the phone and they were super excited. They had a couple of the women who were on the call. They jumped in and they're going to do a 30-day kind of Paleo challenge and do before and after photos. So this thing really fired up. So closer and closer each day. We'll see. Like I keep saying, I'm going to be drunk for a week when it's all done so...

Andy Deas: I think that's a good start, man, drunk for a week. You have to celebrate, that kind of stuff. It's only been five years in the making at least.

Robb Wolf: I know. Seriously.

Andy Deas: The other thing I wanted to mention, Robb, is I'm going to post a link on the show notes, celebrating the Whole9/Robb Wolf fish oil calculator that our friends, Melissa and Dallas, put together combining your knowledge and their love of spreadsheets.

Robb Wolf: That's awesome. I was actually going to do a blog post on it too and had just not got around to it. It's been open in my browser for like a week, but that would be awesome.

Andy Deas: Yeah, because I think that's very cool and a little simpler than one gram of EPA/DHA per 10 pounds of body weight, et cetera, et cetera. They make it nice and customized and we'll base it on what type of fish oil you're taking. They have some nice lifestyle factors which I thought was really cool, and I think it's an easier way for folks to figure where they are as far as fish oil dosage.

Robb Wolf: It is genius and the fact that they attributed it to me is very, very generous, and Dallas and Melissa are great. What can you say?

Andy Deas: It just goes to show, Robb, that some people put things together better than you because you could have whipped this together in Excel like four years ago.

Robb Wolf: Oh, man.

Andy Deas: It takes Melissa and Dallas --

Robb Wolf: Everybody does things better together than I do so yeah.

Andy Deas: It takes Dallas and Melissa to sit around and be like, "You know what? We should just make a little app so that people can do this on their own on the internet." Look how easy that is.

Robb Wolf: Exactly.

Andy Deas: All right. Cool. Well, the first question, Robb, we're actually going to skip today which --

Robb Wolf: Yes.

Andy Deas: -- is odd that we're talking about, but I'm going to let you you're your reason for skipping and what we're going to do for our friend, Ms. Spinach, before I try to misread any words or anything.

Robb Wolf: Yeah, Sarah had this -- Sarah, Ms. Spinach, had a great question talking about -- I think it was about two podcasts back when somebody asked about eating peanuts and being able to down regulate peanut allergy from small exposures. And I was going to need to do some research on that. And then Mike Malloy actually shot me an email and just kind of, Bam! Laid all this stuff out t here which saved me a ton of research, but what I'm going to need to do is actually write all those stuff out on a board because we're going to have to do some basic immunology like talk about the different cells involved and what they do. It's a very interesting concept and I think it's worthwhile to understand it because this is all a lot of the same stuff that underlies autoimmunity and leaky gut in the autoimmune response.

So it is worthwhile getting into and understanding it, but it's going to take a little background. And if I just verbally rattle this stuff off, it's going to sound like I'm saying IGE and IGG like 50,000 times and it's just not going to make any sense except to Mike and to other people with an immunology background. So we're going to -- Sarah, we're actually going to do this whole thing, draw it out. It will be an at-the-whiteboard moment, and Andy and I are liable to -- I don't know. We may need some sort of a penalty or something. If we flub something, we have to do a shot at tequila or something like that and see how the thing that generates from start to finish. But we'll do a good job on it and then we'll be able to understand this whole process. Theoretically.

Andy Deas: That's the first question we've skipped and had an explanation for.

Robb Wolf: Yeah.

Andy Deas: So I think this is a monumental occasion for the 20th episode.

Robb Wolf: Yes. Yeah.

Andy Deas: All right. Cool. The first question we're going to do today is from Jay. He said he's been hearing on the Performance Menu boards that the benefits from fish oil are due to the DHA and not the EPA, and that EPA is actually immune suppressing and increases lipid per...

Robb Wolf: Peroxidation.

Andy Deas: Peroxidation. Once again, Robb, this is why you're here. "I did some googling and found a lot of info supporting this statement as well. Another thing they talk a lot about is the PCB content of fish oil as PCBs and other toxic pesticides accumulate in fat, unlike heavy metals which accumulate in protein. Given these two arguments, a lot of these people conclude that algae derived DHA is the best way to get the benefits fish oil has but without toxins and without the so called 'damaging EPA.' Can you comment on this?"

Robb Wolf: Sure. So the two essential fatty acids that we need are EPA and DHA. Any type of long-chain polyunsaturated fat is going to increase lipid peroxidation. This is reactive oxygen species. It's the oxidative damage that happens in fats. This is also part of why saturated fats are kind of intriguing because they block this feed forward mechanism. Lipid peroxidation tends to happen -- it's almost the chain-reaction type of mechanism. Most biological mechanisms when there's some sort of damage going on there are control mechanism that kind of shut it down. Lipid peroxidation particularly, if you have a lot of polyunsaturated fats, can just go on and on and on. It can be very, very damaging.

Saturated fats actually kind of quenched this whole process which there are some folks out there, this is why they recommend high amounts of saturated fat in the diet because theoretically it should be a lower oxidative stress type diet. You could certainly make some arguments for that. This is also why things like corn oil are so incredibly nasty because it's full of shorter chain polyunsaturated fats both of the omega-3 and the omega-6 varieties. So they are just horrible. They're very pro-inflammatory and one of the main reasons is the lipid peroxidation factor.

So any type of fats can be problematic. EPA does have immunosuppressing action but so does vitamin D, but that doesn't mean that it's necessarily a bad thing. Some people were a little bit freaked out about vitamin D a while back. It suppresses abnormal amounts of

immune expression. I forget if it was Mike Malloy, the guy that just shot the email about the IGEs and the up regulation/down regulation of sensitivity with things like peanuts or if it was someone else. I forget who the email came in from, but they were talking about vitamin D and its role in modulating the immune response in things like the H1N1 flu. And a lot of the reason he was theorizing and I've kind of thought about this too, the reason why that H1N1 flu is fatal in some people is that those people have too much inflammation going on all the time. And so the flu ends up causing an immune response and that immune response ends up going overboard. There's what's called a cytokine storm and it ends up effectively killing you.

So the EPA is actually very mitigating on those kinds of cytokine storms. So from my perspective, EPA is still really important and we know that because EPA and DHA are interchangeable, interconvertible. And so if we're needing more EPA, then the body can convert DHA in the EPA which leads into this other statement or question, would a better way to go about getting all this stuff go from an algae derived DHA source? That might be fine. That might be an okay way to go. I have not looked too much of either the mechanisms or the research that would be involved with having almost exclusively DHA source although you would still be getting some amount of meat and fish and stuff like that, but I think that that would probably be fine but that would take a little bit more tinkering to figure out.

For sure, certainly as kids our primary source is DHA that we get out of these two fatty acids. We get a preponderance of DHA. The EPA is sieved out of the breast milk, and so you could make an argument that it would be fine in that regard. It's definitely better for neurological action, but the EPA definitely has some anti-inflammatory effects that we like on a more systemic level.

Andy Deas: When will people stop hating on fish oil, Robb?

Robb Wolf: Never. Never. It's interesting stuff and I was -- when I was driving to the office today there was a piece on MPR and MPR just kind of rankles me at times. But it was a pretty good deal, talking about like the healthy oceans and a lot of what they were focusing on was actually plastics and the gargantuan plastic load that we are leaching into the marine environment and it's pretty terrifying. And having spent a fair amount of time in Nicaragua the last couple of years, it's amazing how remote you can be literally out in the middle of nowhere and a storm happens and a ton of plastic type residue ends up on the beaches. None of this stuff

biodegrades currently. It just bioaccumulates in the system. That will eventually bite us in the ass in various regard.

So it's just something to kind of think about the quality of all those stuff. It is still better most of the fish oils if you're -- more reputable companies like Nordic Naturals, Carlson's and stuff like that tend to be much better processed. If they're getting fish oil from smaller types of fish, then they have less bioaccumulation and all that. But maybe throwing that reminder out to folks to give a little thought to the type of packaging that they're getting their food in, what type of bags they use. As much as we can we try to leave some cotton totes in the car for dealing with Holland groceries home and all that sort of jive, not to turn it into a complete eco freak out.

But I think that stuff makes sense and a little goes a long way with it. I was horrified at how many plastic bags that we had accumulated in our drawer in the kitchen and I took them in for recycling and all that, but it's still -- it's kind of a silly deal. In Europe, you just don't see that. Those bags -- I think they charge 5 or 10 cents a bag if you were to get those or they don't offer them at all. You've got to bring your own tote and it totally makes sense. And then we actually start dealing with some of these problems.

Andy Deas: I don't know what I would do with them, Robb. They'll go away someday or the planet will explode.

Robb Wolf: Well, like I said, it will all get recycled when the sun explodes and consumes the whole thing. So maybe we don't so yeah.

Andy Deas: All right. Cool. Good question.

Robb Wolf: Yeah.

Andy Deas: Next, we got a question from Celiac Mom. Kind of have a long intro but I think I'm going to read it all, and then she has two or three questions at the end so we will handle them one by one.

Robb Wolf: Cool.

Andy Deas: "Hi, Robb. Over the years, I have had numerous health battles. Everything from skin rashes, skin cancer, reproductive problems -- you name it. Then about a year ago I attended one of your nutrition seminars. During that time, I made a very clear and distinct connection between the health issues I was facing and gluten. When I got back home, I found a doctor

familiar with celiac's disease and I requested that he test me. Prior to that, I've been working with doctors literally for years trying to explain health issues that I've been having. Needless to say, I was diagnosed as being celiac.

Prior to being celiac, I did eat well, very zone-paleo-ish. However, my cheats always included gluten. Since I have been 100% strictly off gluten and following the Paleolithic way of eating, I have since gained 10 pounds. Is this normal? I am currently not following a zone-Paleo method because I got too neurotic with weighing and measuring. It was not a healthy mindset for me. Currently just following Paleo, I truly do not feel that I am eating in excess, my mouth is my mouth and not a vacuum, food is just fuel. I don't have emotional connections to it.

However, my questions stem from the weight gain. Here is my background info: I am 135 pounds at 5 foot 6 inches and in my mid-30s. I follow more of a Max Effort/CrossFit Football type of training. I train about four days a week doing a strength session followed by a short metcon. I supplement with pharmaceutical grade fish oil, magnesium, vitamin D and C, and glucosamine. I have completely cut out my dairy and gluten. I eat grass-fed meats (love my farmers), fish, veggies, fruit, and very few nuts. My fats mostly come from olives, avocados, coconut oil, and olive oil.

Question 1: Do you think the weight gain may have to do with my body being undernourished for so many years due to the autoimmunity shutdown by having gluten in my system? At first, I thought this immediate weight gain was a normal transition, but the weight is still staying on."

Robb Wolf: I think that's a safe bet. Under malnutrition is one of the characteristics of celiac and a host of other kind of GI problems that fall in that category so the rebound weight gain is really, really normal. It's frustrating in some ways, but it's normal.

Andy Deas: Okay. "Question 2: Although I feel better and am performing better, I am not happy with how I look. I now have a small pudgy middle. I do realize the realities of life. I have had several children, however. How do I get back to my desired weight without going neurotic or totally psycho about weighing and measuring or is there something I can cut out or supplement with to help with this process?"

Robb Wolf: I think tackling it kind of lowish carb. Again, maybe cutting out the fruits for the most part, keeping it relatively meat, veggies, fat. Then just kind

of go in a little easy on that. I mean a little bit of mild caloric restriction. You don't have to necessarily break out the scales but you just make sure that you eat a little bit less and you tend to get some pretty good results off of that. We usually eat at a maintenance level and sometimes we need to do a little bit of conscious effort to restrict that a bit. Simply restricting the carbohydrates may be enough.

She might also consider throwing in that just old standard of like 150 micrograms of iodine that the standard RDA amount, but a lot of people with gluten intolerance and celiac disease also have some iodine deficiencies. And I forget who it was. Somebody wrote a piece on basic Paleo eating, also generally being a little skinny on iodine. And so that might be something to throw in the mix just to make sure that that base is covered.

Andy Deas: Cool. "And number 3, should I alter my approach to training and add in more metcon?" Ooh.

Robb Wolf: Good God, no. You're doing great. She's doing great. If she wanted to throw a nice long ramble a day or two a week and just get out and move, I think that would be great. But I think that stuff is fine. If at the end of a regular metcon she wanted to do literally just some kind of long slow distance activity. It's very Art DeVany-esque where you do that hard heavy workout that releases a little bit of adrenaline, releases fat for fuel into the blood, and then you do some low level kind of activity to use that stuff.

Martin, the Leangains guy, talks about this at length. It's a smart effective strategy and it's just kind of classic bodybuilding fat loss. You do a little bit of hard activity upfront and then some low level non-lactate forming cardio at the end.

Andy Deas: Nice. And finally, she wraps up by saying, "I appreciate your help. I am confused as to how to approach this problem, as I am healthier now and feeling great, but I don't like the portion of looking good naked at the moment. Any thoughts or suggestions would be greatly appreciated. Thank you and please realize you do so much for this community and it is greatly appreciated. Sorry for the long question. Listener #8?" Seriously, people, stop with the jokes. We're encouraging Robb.

Robb Wolf: I think we keep dropping people off like the folks in the rest home keep dying and so... We're still hanging right around six listeners I'm sure.

Andy Deas: I just want to say, Robb, if we get to episode 100 and you're still using that joke and people are still encouraging you, I'm not sure what my response is going to be, but I don't think it's going to be positive. That's where I --

Robb Wolf: A hunger strike. I recommend a hunger strike so...

Andy Deas: A hunger strike. Nice.

Robb Wolf: And you write it for all its worth so...

Andy Deas: Yes.

Robb Wolf: A great -- great questions. I totally appreciate it. And if Celiac Mom gives that stuff a shot, please update us and let us know how it goes. Let us know if that works.

Andy Deas: Cool. Good question.

Robb Wolf: Yeah.

Andy Deas: Next, we got a question from Sue. She said, "A friend's teenage son has obliterative bronchiolitis."

Robb Wolf: Bronch -- yeah.

Andy Deas: Yup. Look at that, I got one right today.

Robb Wolf: You did indeed.

Andy Deas: Black tea is kicking in, brother.

Robb Wolf: You're growing up so fast.

Andy Deas: "He is constantly having lung problems. Doctors treat the symptoms with a very expensive antibiotic called Zithromax, and he is being taken off it next month even though his lungs are worse. Would vitamin D3 help with this and what dose? Is 5000 IU daily too much? Should he be tested for vitamin D deficiency before supplementing? What about cod-liver oil?"

Robb Wolf: The obliterative bronchiolitis has some characteristics that look very autoimmune and so that whole autoimmune kind of protocol, the improved sleep, gluten free, dairy free Paleo diet, the vitamin D, fish oil, all of that really make sense. Certainly, folks can check the vitamin D

deficiency before supplementing. I think anything in that 2000 to 5000 IU realm is pretty safe. But I mean it's inexpensive, fairly easy blood test to get that to just verify. Slowly it's coming around that people need much higher levels of vitamin D than what we've previously thought. But I would generally think that that stuff would be safe to do, and I would be shocked if it did not help the condition.

Andy Deas: Yeah. And no to cod-liver oil.

Robb Wolf: No to the cod-liver oil because the vitamin A ends up blocking the effects of the vitamin D potentially. Yeah.

Andy Deas: But there's always the Robb Wolf fish oil calculator/Whole9. I love how they gave -- you're part of it like they named it the Robb Wolf fish oil calculator. I'm so excited.

Robb Wolf: I was honored. I was hugely really honored so... Previously, if I ever had aspirations for anything, it might be the Robb Wolf Dust Bunny Collector or something like that. But this is truly amazing stuff.

Andy Deas: Ah, yes, don't let it go to your head or Melissa and Dallas are going to remove your name.

Robb Wolf: The power hungry and dreaming of more stuff.

Andy Deas: All right. Next, we got a question from Mike D, "Robb, maybe you can use this in the..." Oh, wait. I'm skipping one. Sorry. My favorite question.

Robb Wolf: Yeah, Justin. Justin.

Andy Deas: That's right. Justin. "Robb, question for the podcast. Rereading Lights Out." I'm so proud of this guy right now, "Rereading Lights Out." I recommend it to someone else at the gym the other day and they said, "I tried to read it, Andy, and I fell asleep." And I'm like, "Well, it worked."

Robb Wolf: Yeah, totally.

Andy Deas: "Rereading Lights Out and giving some serious thought to the seasonal training idea. Given their recommendations on lowering carbs to 25-45g in the winter, might it make more sense to hit a mass gain/starting strength protocol in the summertime when carbs and calories are more plentiful? Seems sort of counterintuitive, everyone wants to be lean in the summer. What do you think?"

Robb Wolf: I think it makes a lot of sense. You could tackle it in a way where you could still be relatively lean, like a cyclic low carb kind of approach or at least kind of a targeted ketogenic type thing where you're just doing carbs post-workout which I think is a great way to go. Scotty Hagnas did this last year and I think put on about 15 pounds of muscle like really beefed up and thickened up from this. Historically, I'd always tackled this kind of seasonal eating and training kind of gig by doing just more metcon type things in the summer and matching that activity with more carbs, and I think that works okay too.

But Rutman, Michael Rutherford, pointed out a -- God! And I forget the exact term for -- we might have to do a little digging but -- that the bulk of the strength gains that an athlete makes is very tied to the seasonality and that it's more -- the periods of maximum sun exposure is when people tend to make their best strength gains and there might be some vitamin D underpinnings to it, might be some other light exposure. But I forget the term for it and knowledgeable strength coaches apparently are pretty savvy to this. And it was news to me though. He told me about it about a year ago.

We'll do some digging and try to plug that into the program notes. But it makes sense all the way around to tackle it that way. And I really like that seasonal eating approach, seasonal training approach. It forces some periodization and forces you to change gears and make some short, medium, and long term goals and change up your training, which I think is great.

Andy Deas: Cool. Good question.

Robb Wolf: Yeah.

Andy Deas: Good book as always.

Robb Wolf: Absolutely.

Andy Deas: Now we're on the Mike D question.

Robb Wolf: There we go.

Andy Deas: It must be the rapper from the Beastie Boys. "Robb, maybe you can use this in the podcast. Can you expand on how leptin and other hormones work when it comes to hunger? I'm finding it hard to do the unweighed, unmeasured Paleo gig, and I can't seem to eat to satiety. I can eat till I'm stuffed but then I'm uncomfortably stuffed. There's no in between. Also I

notice that if I don't make a meal with some sort of starchy carb source (yams, squash, etc.) I get ravenous an hour after I finish eating. I get hungry like all hell and sometimes I'll even get a headache. This can be from meals ranging from 500 to 2000 calories in a seating, doesn't matter. These meals generally include a good bit of protein, fat and 4-6 cups of cooked veggies.

If I add to that some fruit or a yam, then the post eating hunger isn't as bad. If I push through the hunger pains, I'm usually good for a few more hours, but that initial hit sucks hard. I'm 5'10", 180# at about 13% body fat and have been strict Paleo for the last six months save for a few cheats a month. I do Max Effort Black Box style WODs 3-5 times a week. I'm also coming off of weighing 240# a year ago and being completely metabolically deranged. Not sure if that matters. The promise of hunger free Paleo eating has eluded me thus far. Thanks. Can't wait for the book. Keep fighting the good fight."

Robb Wolf:

Holy cats! This is a good one. We need to bring Mat Lalonde on here at some point because this guy has just been crushing it with regards to really researching and understanding this whole leptin, insulin resistance, and all that. He can go on. And he shot me a number of PowerPoint presentations and some slides that really encapsulate this stuff. I think what Mike D has going on is still some after-effects of his metabolic derangement, and he's still not managing insulin as effectively as what he could.

What Mat explained to me and what's becoming more clear to me is that there are different routes of effectively like the leptin resistance. We got some autoimmune elements to it. We have high intake of fructose and glucose which feed into a production of triglycerides out of the liver. And then when the triglycerides are produced, that ends up making a spike of palmitic acid that actually cause this transitory leptin resistance and that leptin resistance then leads into insulin resistance. Insulin resistance first in the liver and this is where a fatty liver starts developing and then it starts spreading kind of system wide from there.

And I think what we're seeing here is Mike has probably not fully reversed all that. And what we're also discovering is that depending on how much damage an individual has done to their pancreas, there's oxidative stress that can happen to the beta cells of the pancreas, and then there's also autoimmune damage that can happen. And what were finding is that people who had kind of a type 2 diabetes sort of scenario where they are systemically insulin resistant, not responding well to insulin, they also type 1 diabetes kind of phenomena going on in which

they are simply not responding well to carbohydrates. They're not able to manage the production of insulin well.

It would be interesting to see what Mike's A1Cs and some other blood work would look like because he may also still have some elevated cortisol response to food. There may still be some stress response to this. So a little bit of blood work would be interesting to be able to help nail this down. The high A1Cs that we know, that we maybe have a high cortisol issue that is still bugging the underlying insulin resistance. So there's a little bit of lab work that would really help make a recommendation with this. Usually, if people are -- legitimately there are some people who just run better with a little more starch, a little bit more carbohydrate in their system. I find them to be maybe like 10% of the population at best in most people.

If you titrate them down to a protein, veggie, and fat kind of scenario, they look, feel, and perform really well on that. And it may legitimately be that Mike just runs a little bit better with the starchy carbs but it would be interesting to see if some blood work would make all that a little more clear. And definitely looking at triglycerides, A1Cs, and then possibly even doing glucose tolerance test to see how he does with that. That would tell us a lot about what his pancreas is doing and how it's responding to a bolus of glucose. And then the A1C would tell us how his body is dealing both with regards to cortisol and long-term carbohydrate metabolism.

So there's more stuff that we would need to know to dial this in precisely. Is Mike legitimately just kind of more carbohydrate wired? But the fact that he's not able to -- like he gets really, really ravenously hungry after a meal kind of makes me think that he has some insulin mismanagement going on there.

Andy Deas: All right. Good.

Robb Wolf: Yeah.

Andy Deas: And yeah, let us know, Mike, if you actually end up getting any blood work done the next time you go to the doctor. We'd be curious to see what that looks like.

Robb Wolf: Absolutely. Yeah.

Andy Deas: All right. Next, we got a question Curious. That's original. "Robb, I recently went to my GP and he is taking additional test but believes my

testosterone levels are too low for my age (now near 40) and wants me to start testosterone replacement therapy. The last blood test I had measured at 315..." what are we measuring testosterone in? I don't remember.

Robb Wolf: Nanograms per deciliter.

Andy Deas: Thank you. "Are there natural methods to increase levels that actually work? Just curious as to what your thoughts, opinions, and/or suggestions may be when I review the results and discuss the options with the doc. Thanks."

Robb Wolf: Vitamin D is a biggie with this, not overtraining. Sleep is big. Tribulus, I kind of like. A lot of people at least feel a bump in their libido and just generally have a feel. It's pretty unclear whether or not it's really doing all that much. It does seem to increase luteinizing hormone and luteinizing hormone is what sends the signal to the Leydig cells in the testicles to actually produce testosterone. But it's really unclear how much, if anything, is really going on there. People are going to love this one, looking at females bumps up testosterone levels.

So you can pull up a desktop calendar that's got some Swedish bikini models or something. That's been shown to be helpful. And then from there, this is kind of the Holy Grail kind of thing. There's not a ton of stuff out there that legitimately works. The problem with the hormone replacement therapy though is once you go on you start to some degree down regulating your own production of testosterone. And so it becomes a little bit of a lifetime marriage with that whole thing. So you need to really be clear that you've done everything you can to shore up any problems you might have normally before you consider going on hormone replacement therapy, in my opinion.

Dr. Colgan, Colgan Institute and all that, he's very, very knowledgeable on this stuff, and so I would do some investigating on what he has written. He kind of described at length the pros and cons of hormonal replacement therapy. And if you end up opting for that, why you would do it and what other lifestyle things you want to consider before you go that route.

Andy Deas: All right. Good. Good question.

Robb Wolf: Yeah.

Andy Deas: Next, we got a question from Eric, "Hey, Robb, I have a question for my girlfriend that I was hoping you could answer. She has always had difficulty in getting lean, her mother is a big fan of eating grain and vegetable rich diets and that was how she was raised. Now that she has control of her eating habits she tried to reduce her carb intake after me talking about eating Paleo and reading Good Calories, Bad Calories." Another good book but puts you to sleep. "However, when she did this she had a big problem with an increase in stomach acid to the point of nausea and complete loss of appetite. I think it is important to know that three years ago she had --

Robb Wolf: Giardia.

Andy Deas: -- giardia that went untreated for about six months and for a couple years after she was taking Aciphex to deal with the fallout from that. I was hoping you could shed some light on her situation and give us some ideas of how she (we) can eat to help her lean out and still be comfortable. Thank you."

Robb Wolf: Interestingly, I bet she is hypochloritic. I bet she has both low stomach acid and I would almost guarantee low in the production or secretion of bile salts and pancreatic enzymes. Giardia is an intestinal parasite. I ended up losing 35 pounds after I got exposed to it and that actually really, really worsened. I think I've always been sensitive to gluten, but it was after the giardia exposure that I became wickedly sensitive to gluten. So I would be willing to bet that she would really benefit from just that standard NOW Foods Super Enzymes starting with one capsule per meal, titrating up to two, then three, then four until she feels a little bit of warmth in the epigastric region.

Obviously, still that same thing -- Andy, we need to still do a video on this, on how to do it then we can just refer folks to it but always protein and fat containing meals when you're taking that NOW Foods Super Enzyme. But I suspect even though she feels like she has some lack of acid production, I'm guessing that it's actually the exact opposite that is actually kind of a hypochloridia, low stomach acid production. I could be wrong with that, but that would be my bet.

Andy Deas: And Robb, I would remind you that we're supposed to record that video but we need to wait until your self-imposed book deadline because I don't want to be responsible for Nicki burning down the house.

Robb Wolf: Or shooting us both, yeah.

Andy Deas: Oh, I think I'm safe. I think I'm safe because she knows I'll take care of the cat.

Robb Wolf: That's true. That's true. Keystone will have a surrogate family and so... Yeah, Eric might have her consider still doing another -- what's called an O&P, an Ova and Parasite. It's basically stool sample and they check for kind of a broad spectrum bacterial, yeast, and parasitic composition. She could have another parasite. She could still have a dormant or quasi-dormant strain of the giardia hanging out in there. She would likely benefit from some probiotics. The giardia is gnarly and it can cause some pretty serious damage to the GI lining.

She's going to have to get her digestion dialed in first so that she can actually eat some of these other foods. It's that old thing again like the soups, the stews, the curries, cooking food well, making sure the vegetables are cooked well, cutting the meat up, chicken, fish, meat, cutting up small, going more for ground beef and ground pork when you're going meat options because it's just easier to digest, easier to chew. Just making things easier on her digestion for a while will help a bunch.

Andy Deas: Good. All right. And Robb, this may be the shortest episode ever which I know is part of our plan to help you finish your book. So we're going to do one more question and you haven't pre-screened it, Robb. It's so scary.

Robb Wolf: Uh-oh, uh-oh, okay.

Andy Deas: But as Kelly Starrett says, man, this is performance art so here we go.

Robb Wolf: If this is, it's pathetic. But we'll do our best.

Andy Deas: Well, you realize it was after he watched It Might Get Loud that he was somehow comparing everything in his life to legendary blues guitarist playing on stage which I felt was a bit of a stretch, but I appreciated this gentleman who was trying to bring to life.

Robb Wolf: He definitely has delusions of grandeur but he's big so that's fine.

Andy Deas: Big and much more flexible than I am.

Robb Wolf: Yes, yes.

Andy Deas: So we got a question from Patti. She says, "Hi, Robb. I'm a wife, mother, and recent Paleo adoptee. I'm two months in and feeling good. I'm one of your six avid Podcast listeners (your joke, not mine), and the more I learn the more I'm convinced of the lifestyle. As you often comment, the questions are getting more and more challenging so I thought a return to basics may be helpful. I'm interested in living well and feeling well, exercising but I'm not striving towards any competitive fitness goals, CrossFit or otherwise.

Question 1. Glutens are obviously completely out but when it comes to the borderline cheat foods like nuts, legumes, and dairy. Is it better to have a little dairy, let's say every other day, or is it better to have a true portion of dairy on a cheat day only? I know your response will be not to have any at all, but I find myself eating some in sauces or at restaurants and am wondering how detrimental it really is."

Robb Wolf: I don't know with that. It's very subjective and when we say dairy it could range anything from whole cream or butter. I would really be kind of like -- I don't really care at all unless the individual has some sort of autoimmune thing to like if it's some sort of a cheese deal, then do you react to the cheese? Do you have any type of acne from it? Are you dealing with any type of inflammatory issues? If you're going out for Mexican food and there's a little bit of Cotija cheese on your tacos and you get that once every couple of days or something, I don't care like that. I'm just totally nonplused by that unless the individual has some health concerns, then we would start tightening stuff up.

Andy Deas: Yeah.

Robb Wolf: So if you like having it every couple of days -- all those recommendations are to make your life better. If you really, really like it and you don't feel otherwise like it's causing your problems, then by all means keep it in the rotation. What I would recommend is that thing of give yourself 30 days of none and then see how you really respond to that and then you can kind of make a decision, "Okay, yeah, I can have some sharp cheese or some great French cheese or something every couple of days and it doesn't seem to bother me at all," or you're like, "Wow! Okay, yeah, I really noticed that I get a little joint inflammation or something like that and I'm going to really minimize my exposure to this stuff."

And then within that a lot of people notice that if they can track down a grass-fed variety of cheese, that if they have some of the inflammatory issues to grass-fed varieties do not cause that in them. It still is going to have some of the insulin spiking issues and it still might be a problem

depending on what you have going on health wise. But they are just kind of orders of magnitude of how problematic this stuff can be. So I would just recommend maybe trying to go without it completely for a month. See how you do then reintroduce it on a weekly level then reintroduce it on an every couple of days level and see how you're feeling.

Andy Deas: Yeah. And I think this is one of the topics where I also attack it from are you happy with your level of leanness? If so, maybe you can play with this stuff. If you're not, you probably wouldn't spend too much time playing with some of the dairy that's super insulin spiking.

Robb Wolf: Right. That's the other -- the other folks, if you're trying to lean out then we'll pull dairy out of the equation, again, unless it's a little bit of butter, a little bit of whole wheat with cream generally.

Andy Deas: Yup.

Robb Wolf: Yeah.

Andy Deas: All right. I'm going to read the next question. I think we attacked it a little bit earlier, but this is a little bit different dimension so... "I've been reading about the PCB issues with fish oil and was wondering if you had any access to definitive PCB research by brand? I use Carlson but really have no way of knowing. I've seen studies where 9 out of 10 tested have carcinogenic levels of PCBs."

Robb Wolf: I have no -- we would have to do some looking around on that. I know there are some watchdog groups out there, but like a definitive compendium on that is -- I don't know that one exists. We would definitely have to do some research on that. And then even then, this stuff varies from batch to batch, from seasonality where the sourcing that they have. There's a ton of variables behind all that.

Andy Deas: Yeah. All right. "Question 3. My husband is a type 1 diabetic and is living Paleo now too. Any particular things he should keep in mind or do differently as a type 1-er? I'm looking forward to seeing his blood work, A1C, lipid profile, creatinine level, et cetera in the next visit."

Robb Wolf: She should definitely read several posts and particularly the comments that we've done on type 1 diabetes on the blog. And one of the things to keep an eye on with the husband is the amount and type of exercise that he's doing. And this is one of those scenarios where a lot of activity or a lot of high intensity activity may be totally counterproductive for the type 1 diabetic because of the hepatic release of glucose because of cortisol.

You get into a stress state. The body produces adrenaline and cortisol. The adrenaline and cortisol cause a release of both lipids and glucose out of the liver.

But the problem is that we don't have the lockstep release of insulin that would normally manage that. And so you can end up with sky high blood glucose levels simply from working out. So that's one thing to really keep an eye on and then the obvious things -- sleep, lifestyle -- all the rest of that stuff and really keeping an eye on what you're doing such that you can try to keep those A1Cs below 5, and that is really aggressive in type 1 diabetes land. Most of your doctors and health care providers are okay with A1Cs that are 6 and 7, and for me you're just looking at the person die rapidly and we know we can do better than that.

Andy Deas: Yes. All right. "Question 4. Advice on Paleo for kids. My daughter is 15 months old and it's pretty much the anti-standard kid diet to keep her off glutens and dairy, but I do try. Need to make sure that she gets enough calories. Would you recommend rice for her? Brown rice? When she does eat some bread (out to eat), would you recommend white or wheat?"

Robb Wolf: The horrors of errors.

Andy Deas: That's why I put this in, Robb.

Robb Wolf: Oh, man. There's just -- I mean rule however you want. I always get really nervous when the whole kid thing comes up, but just pump through a nutrition analyzer, 100 calories of rice and 100 calories of yam or sweet potato and which one has got more nutritional value, which one is going to have less gut irritation potential. There's just no comparison. And when people talk about feeding kids, they look at all the grain stuff as if the kids are missing something out of it.

When you look at one of the papers from Cordain and Eaton where they look at the contemporary diet based -- or hunter-gatherer diet based on contemporary food groups, when you ditch the dairy and the grains and the legumes, you suddenly have the diet that looks like you're taking in a nutritional supplement. Lean meats, fruits and vegetables, some nuts and seeds -- it is incredibly nutritious, doesn't mess up their GI tract at all.

Honestly, the longer you could keep the kid off of gluten, I would literally dive in front of a bus to keep that from happening and at that point the wheat, white -- it's all bad. If you want the honest answer, it's just all bad. I see no compelling reason to offer it into the diet to try to make it some sort of a staple or whatever. When it pops up then that's going to

happen. So don't make the kid neurotic. If they go over to a friend's house, don't make them that weird kid because you're already probably going to be that weird kid because your family eats a little bit differently anyway, but I just -- to whatever degree you can control the home environment and keep their food solid, I would do that. I mean if you're already going this far, why mock around with the other stuff. But that's just my opinion on that.

Andy Deas: Yup.

Robb Wolf: We've seen so many examples of people in the gym and then people commenting, writing into the blog, just literally thousands of people now that they had a kid or two and they fed them kind of standard stuff and then they've had the next kid and this kid is all Paleoed out and it's all fruit, meats, veggies, yam, sweet potatoes. And the kids are just doing so much better. The digestion is better. They feel better. They don't have all the kind of whacky digestive problems, the colic and the funky poops and all that. So it's just really hard to find a compelling reason to introduce any of that stuff.

Andy Deas: I think I need to read the last comment from Patti, Robb, because we're just going to wrap up the pseudo science --

Robb Wolf: Oh, just daggering to my soul. Okay. Go for it.

Andy Deas: No, this is positive. This is positive.

Robb Wolf: Okay.

Andy Deas: "Many thanks, Robb. You're a brilliant biochemist and generous purveyor of information. Thanks for sharing the good word and helping us all to see the light." See, you got her.

Robb Wolf: Totally, completely. Yeah, I need to -- she needs to be my PR person with CrossFit Inc. so...

Andy Deas: All right, Robb. Well, we successfully navigated episode 20 so you can go back to hammering out some book stuff.

Robb Wolf: Sweet. I'm getting ready to start the supplement chapter and just kind of look over the whole ball of wax and see what pieces I need to fit in there to make it all fit together, make sure it makes some sense.

Andy Deas: Awesome. Well, we are all getting excited, and I guess once you deliver it to your publisher we'll start with the next countdown for when it's actually available on stores. But one step at a time.

Robb Wolf: We will probably within a month have a presale option on like Barnes & Noble online, Amazon online, all that sort of stuff, and then I'm pretty sure that we're shooting for is like a September 1 physical release for the book. That's my understanding right now. That could change but that should be it. And then we may have some other cool little things as some pre-options with that which I -- I'll get more information. I'll be able to go into that deeper next time.

Andy Deas: Cool. Looking forward to it. Well, Robb, thank you. Go enjoy the rest of your Tuesday and -- what day is it? Monday. Wow! I don't know where I am. And I'll talk to you next week.

Robb Wolf: Sweet. Take care.

Andy Deas: All right. See you, dude.

Robb Wolf: Bye.