

# The Paleo Solution

## Episode 4

Andy Deas: Robb Wolf, Andy Deas back with the Paleolithic Solution, Episode 4. How are you today?

Robb Wolf: Woo-hoo! Good. We haven't been kicked off the air yet so that's sweet.

Andy Deas: We're officially on iTunes as well so I feel like, you know, we're becoming more and more legit by the week I guess.

Robb Wolf: Actually, what it tells me is that iTunes has absolutely no minimum standards with the content they'll provide.

Andy Deas: Well, I need to go back and look at the iTunes ranking 'cause at one point like six months ago, like the number one audio podcast on iTunes was something about Naked Yoga. So clearly, they have no concerns about putting us two schmucks up on the internet.

Robb Wolf: Hey, man, I married a hippie chick so, you know, I could see a podcast devoted specifically to naked hippie chicks being fairly popular.

Andy Deas: But it's an audio podcast. That's where I'm struggling. But anyway, I will double check today and see how that's still doing.

Robb Wolf: Cool, cool.

Andy Deas: So I think first thing we wanted to talk about was we've got a ton of good questions, emails, blogs, and things. I think one of the things we're running into is some folks had given us a lot of background which is very helpful, but oftentimes, it's sort of unclear what their exact question is.

Robb Wolf: Yeah.

Andy Deas: And so I think you and I were talking to the extent folks can really delineate after they provide background, "This is what I'm really asking," I think that would be really helpful for us.

Robb Wolf: Yeah. And occasionally, when you read through these things, it's fairly clear that they aren't entirely sure what they're asking. I mean there's just like a ton of information, lots of question marks, but the question

marks are kind of definitely like give us some background and then lay out what specifically your questions are.

And it could be two or three or four questions. That's fine. If it's interesting, that's what we want to do. We want to cover this stuff. But trying to fish through just a block, a paragraph format with info mixed with questions, is a bugger. So definitely encapsulating at the end "These are my questions," boom, boom, boom, lay them out, that will help us a bunch.

Andy Deas: Perfect! Cool! All right! Well, first question, we got an email question from Jamie. It's pretty long so I'm not going to read the whole thing. I mean basically, he is experimenting with ketogenic dieting but he has some unknowns kind of that he wants some clarification on. So one, he is on day 6 and he is pretty sure he has entered ketosis as he can take the nail polish off my wife's feet with breath.

Robb Wolf: He is kicking out some ketones apparently.

Andy Deas: And so his first question I think on that is once he has entered ketosis, what are the effects of things like cheat meals? He has read here and there about having one every 7 to 10 days would be okay. You know, what's your sense on hey, once we're on ketosis, what's going to happen once we have a cheat meal?

Robb Wolf: You know, the folks seem to be all over the place on this. Some people like Mauro Di Pasquale, Poliquin, they like a cheat meal on this frequency, natural hormonal enhancement. They have a carb load more frequently. This is where they're doing specifically kind of a cyclic low carb sort of thing with some higher carb either meals or days thrown in. For myself, I've never really seen the need for this, although I mean occasionally, we'll just be out to eat and I'll go ahead and have some Mexican food or something like that, and so it just kind of rolls into the mix pretty naturally.

The reality is that having a high-carb meal is going to kick you out of ketosis, but I don't know that that matters at all. Like in the grand scheme of things, I don't know if that matters. Certainly, doing a meal along this line kind of gives you some variety. It makes it easier to just kind of hang out with friends and family. So from that perspective, I think it's fine; and then also, from a performance perspective, you may see a little bit of an uptick with a little pulsatile eating this way.

And there's a paper that I'm -- I'm not sure if I'm going to be able to work it into this first book or in the more advanced topics book that I'm going to do, but it talks about a process called hysteresis, which is a subcategory of hormesis and it's basically that there may be some benefit to eating low carb generally and then pulsatile feedings of high carb because of the way that our body adapts to those mixed types of stressors. So all that stuff said, yeah, go for it. Do your cheat meal. Probably some good stuff going on there.

Andy Deas: Hey, are you using a headset or what are you talking into today?

Robb Wolf: Standard deal, but the heating did come on so that might be some of the background.

Andy Deas: Oh, okay. Okay, a little bit of -- it's not too bad but you know, someone's going to put a comment in the post, Robb, so you'll have to defend it.

Robb Wolf: Okay, perfect.

Andy Deas: The next question that Jamie asks is he's a little unclear about how to balance out a meal now that he doesn't have carbs. So for example, he is saying for lunch or dinner he might have 6 to 7 ounces of Kobe beef, a small avocado and a small piece of dark chocolate. And so I think that sounds like a good meal to me.

Robb Wolf: It sounds pretty delicious to me too. Yeah. And that's totally fine. I mean throw some vegetable matter in there. The avocado definitely counts. And the thing is that for most or maybe not most meals but a lot of meals kind of on the go, this is perfect. You've got some good protein. You've got some good fats. That chocolate is loaded with antioxidants. It doesn't hardly have any sugar in it, and I think you mentioned it's 4 grams of sugar. Good to go. That's fine.

And then when you get a chance to have a big salad, get some more veggies in there, then load up on that. But this is kind of the benefit or the magic of doing cyclic low carb eating or low carb eating in general. Every single meal, it does not have to be overwhelmingly full of veggies, but when you get a chance to really sit down and do a good chunk of veggies, then definitely take advantage of it.

Andy Deas: Yeah. And I think that's something we see with some folks as all their meals end up looking like this, or we're definitely encouraging folks when possible to eat a ton of vegetables when they have time; not every meal but when they have time, when it's convenient.

Robb Wolf: Yeah. And usually, you can make one meal a day kind of like that big uber salad like the salad that takes you like an hour to plow through it and all that stuff. But breakfast and lunch don't necessarily have to be that way or breakfast and, you know, like you said, just try to fit one of those in a day and then generally get some variety within the other meals, and you should be good to go.

Andy Deas: Cool! Jamie then goes on to ask, "Should we be following some Zone-based rules regarding food values when he is doing this sort of low-carb gig?" And I think the short answer to that is pretty much no.

Robb Wolf: Yeah, yeah. I mean that's part of the magic or the nice element of doing this is you want to simplify your life, and so if you want to start weighing and measuring stuff, I guess you can; but generally, if you're sticking to low-carb vegetable sources then you're good to go with a plan like this.

Andy Deas: Yeah, and unless we see a performance decrease or something in which case then maybe you start sort of weighing and measuring just to see how much you're taking in.

Robb Wolf: Yeah. And again, this is all assuming that you've gone through the 3 to 4 week adaptation period that you're going to need for functioning well on a lower carb plan. He mentions Mat Lalonde's blog post on a more ketogenic type approach to CrossFit main page WODs so he is familiar with that.

Andy Deas: Yup. He also wanted to know if he should log his 4 grams of sugar carbs from the chocolate.

Robb Wolf: I wish those could magically disappear, but yeah, you got to keep track of all that stuff though. Yeah, that was a funny question. That was pretty good.

Andy Deas: Yeah. And he also mentions he is trying to keep his carbs less than 25 grams a day, which I think is pretty low, but I think in my mind generally, as long as you're eating vegetables, you're probably not going to get above 50 usable grams a day very easily unless you're consuming gallons of veggies.

Robb Wolf: Right. And I think anything between that 25 to 50 level, especially for somebody who is training pretty hard, they should be fine. I know some people of the more bodybuilding type orientation get very, very, very low carb where they're just basically like meat and fat. It just seems super

bland, there's not enough variety there, and ultimately, I don't know that it's really providing any more benefit than a more moderate approach in this case. So yeah.

Andy Deas: Yeah. And you definitely I think see with folks like that trouble with the acid-base balance sometimes just because they've got so much acid-causing foods and no veggies and things to balance it out.

Robb Wolf: Yeah. And Loren Cordain makes a real good point which is that if you end up in a net acid load environment you get a significant protein loss because you start deaminating or breaking down proteins in an attempt to buffer that acid load. And so this is where having a good amount of vegetable matter in the mix is really, really important even if you're kind of like a figure competitor, bodybuilder, powerlifter sort of thing, strongman or whatever, they may pooh-pooh some of that stuff. But it really does add up. It really does matter and it is a performance impediment to be in a net acid load state.

Andy Deas: Yup. And Jaime finishes his question, basically his last question. Is there anything that he is missing or advice you can lend regarding dialing in this kind of diet? It seems to me he is on a pretty good track.

Robb Wolf: Yeah, totally. I mean he looks good to go. I think he is probably just having a little bit of transitional stuff going on because he is only six days in at this point. So he'll probably see his energy levels uptick with time and just get more comfortable with that.

Andy Deas: Yup, cool. All right.

Next we got an email question from Shane, and Shane had come across this paper published in the Archive of Internal Medicine, and basically, the paper goes into detail that long-term low-carb diets can lead to depression and that low-fat high-carb diets cause elevated moods. And Shane goes on to say this kind of goes against his own experience and some of the folks that he knows, and so he was curious to get your thoughts on the paper and if there was any overt flaws or just your general feeling after looking through that.

Robb Wolf: Yeah. And, you know, this definitely completely flies in the face of my own personal experience, but again, this is only one person. But then when I start looking at the blog, CrossFit message board, all the rest of that stuff and then books like Protein Power Lifeplan, Lights Out: Sleep, Sugar, and Survival, it's looking real dubious from all that stuff that this low-carb approach is actually inducing more depression than fixing it.

And so this paper from the Archives of Internal Medicine, it actually came out just this year 2009. The paper is actually not horribly done but it's interesting. When they get in here, they compare a high-fat diet but it's isocaloric so it's set up such that the low-carb, higher-fat diet is a maintenance diet, whereas the low-fat diet is actually hypocaloric so it's low calorie.

And so I have no idea why they set it up like that. So, you know, usually in science when you're trying to look at various things you try to keep apples and apples, oranges and oranges as best as you can. Ultimately, what we're talking about here is like that closest analogy, like a Fuji apple and a Granny Smith apple, like low-carb diet, high-carb diet. Whenever I see these things and they even claim low carb, I'm always nervous about what the hell that means. Like are they even doing that right?

These guys actually did a really good job on that. The recommended low-carb that they recommend I believe was at 4% of total calories. They were shooting for about 25 grams of carbohydrate a day. But again, there's a real big distinction here. The low-carb diet is supposed to be maintenance calories and this is all on obese individuals, overweight and obese individuals that they're doing this, about 106 people. Then the low-fat, high-carb diet is hypocaloric so it's planned to be a fat loss diet.

Now, the result is that a year later, they checked like weight loss. Interesting deal here, there was no significant difference between the two groups. So the high-carb hypocaloric group ended up losing similar amounts of weight as the low-carb isocaloric group, which a bunch of people just crawled up my ass on the CrossFit Journal website because we had a hypothetical client and we were talking about this individual that was significantly overweight, doing lots of artificial sweeteners and that you can have what appears to be a hypocaloric situation but very insulin spiking foods and the individual ends up gaining weight; and people were like, "Oh, that's impossible. That can't happen."

And right here, these people document something akin to this and I find it fascinating that they didn't find this interesting at all that they have one diet that was prescribed high calorie or adequate calorie but low carb, another diet that was low calorie but high carb, and at the end of the year, the amount of fat that was lost overall was similar. So that's just an interesting thing there that they don't even address.

Now, in their introduction, they go into pretty great detail mentioning that a ton of previous low-carbohydrate ketogenic diets were shown to

be very, very beneficial for mood and depression, but their argument here is that these were simplistic methods of evaluation and therefore did not show quantifiable enough measure, and I guess this being regulated by these really whacky named psychological tests for like aggression and anxiety and all this sort of stuff.

So they wanted to redo this and that was the whole point of this thing, and so they tracked these people at the beginning and gave them these tests for like anxiety and aggression and depression and all that, then tracked them at the end. And then it appears to be statistically significant that the individuals on the low-carb diet had greater rates of depression, but yet, I really don't know anything about the methods that they used to evaluate this. The things that they used previously were very, very simple questionnaires and were used in situations that really seem to indicate a pretty potent dose response with regards to low carbohydrate and anti-depressive type of activity. And even in their own introduction, they mention that the bulk of these things indicate improved depressive state.

They do mention a couple of situations in which low-carbohydrate diets impair cognitive performance and then when you look at those references, like I'm looking at the paper referenced 16, 17, and 19, all of these papers, when they report impaired cognitive function are interventions in which the low-carb diet is of short duration. So you've got somebody who was adapted to a high-carbohydrate intake, you take their carbohydrates away, and they're going to be stupid for a couple of days to a week because their brain is just not functioning on ketone bodies and fatty acids. It hasn't switched over yet. So this is not surprising at all and is typical of poorly designed studies and indicates these people don't understand anything about adaptation to a low-carb diet.

So this thing for me is just really inconclusive. They point out -- here is an interesting thing that they wrapped the whole thing up. The high-carb approach and the low-carb approach, at the end of the whole study, showed no changes in cognitive function. So like test of memory, test of thinking were identical in the two groups, essentially identical. So we see none of the effect that they were reporting earlier with regards to the cognitive impairment, but this would be expected, if these people have been eating a low-carb diet for over a year, then they're adapted to it.

So I'm just not getting anything that's like real compelling like it's actually, this is an interesting study for actually asking a bunch of other questions. It's not answering anything. I think it's really poorly designed as far as I can tell here with regards to trying to actually answer any questions or nothing I can conclusively draw from this. To get deeper on

this, I would actually have to get in and look at what these cognitive studies were that they used to asses people and I'm just not going to do it. I'd blow my brains out looking at that stuff. Cognitive neuroscience and all that is pretty cool; but some of the testing parameters that they use in these questionnaires and all that, no interest in that stuff.

So as far as I can tell with this, again, the thing to take home is like how do you look, feel, and perform? If you've got some depressive type stuff, I would play with a low-carb diet. I would unreservedly recommend folks to play with that and maybe introduce some fish oil and stuff like that too, but I can't see anything real compelling out of this study.

Andy Deas:

Yeah. And I think over and over you see this where you get these studies come out, they have some sometimes pretty interesting titles or conclusions, and then we start to dig through them and you're kind of like, "I'm not sure how you came to this conclusion. I'm not sure what you were studying. There were some interesting dimensions that you didn't consider as part of your study."

So I think a lot of this stuff is useful for background and learning but sometimes the conclusions and things, you kind to really have to scratch your head and say, "I don't know if I'm on board with this conclusion or even how they got there."

Robb Wolf:

Yeah. You know, I would like -- in their error analysis, they had no comparison between the studies that were performed on low-carbohydrate diets and what they termed the simplistic assessments of depression and anxiety and aggression and all that. There's no analysis between those tests and the tests that they are claiming are any better.

And so there's no -- as far as I can tell, and again, I haven't delved real deep in this, but they mention nothing in their error analysis, nothing in their methods and design that compare the studies that they're saying are not valid with the studies that they're claiming are valid. And so I'm just taking it on their good faith that the stuff that they're saying is more valid is actually more accurate than the several studies that they've already cited stating that the low-carbohydrate diets show an anti-depressive effect.

So that's like a real big leap of faith that you don't do in science. You don't have faith in any of that stuff. You demonstrate statistically that there's some significance there, that these things do in fact have predictive value with regards to depression and aggression or whatever



the benchmark is that you're using, and then we can actually use this as a legitimate quantifier and they do nothing with that.

So yeah, and I mean the bummer is that there's a million papers like this a year that are published and then the lay public, you know, occasionally, a news feed will pick it up and pump it out there. And then if you don't have a little bit of a scientific background to be able to read through this stuff, it's just all gibberish. I can look at stuff where people are talking about computer science or electronics or whatever and I have no damn idea what they're talking about. Like they'll say this processor is better than that processor because of this, that, and the other, and I have no steeping in it so I just kind of have to like shrug my shoulders and say like, "Okay, I guess that's valid."

Andy Deas: There's people to help you out with that, Robb.

Robb Wolf: Cool, cool. Well, that's other stuff that I also have little or no interest in.

Andy Deas: But I do think you touched on an interesting point briefly there, and not really related to this question, but I think this concept of the artificial sweeteners and things is pretty interesting, and maybe you want to briefly address that a little more. I mean I think in summary in our minds, our experiences, there are no free rides, you know, no magic tickets. So in my mind, generally stay away from all that stuff. But what's your sense on messing with some of the artificial sweeteners and some of these quasi-low-carb products that are out there with all these unusual ingredients that were designed to make it taste sweet?

Robb Wolf: Yeah. I mean just the reality is we are way more complex than what we initially thought, and the assumption is that the pancreas only releases insulin in response to increased blood glucose levels, but that's not the case. Some people can think about food and release insulin. Some people can look at food and release insulin. Some people simply taste a little bit of sweet and they release insulin.

And this extends to really whacky things like there's this whole concept of the central governor theory which is that there are some part of our brain that regulates how much energy we've expended, like essentially how much we've got in storage, how much we've expended via physical activity, and that the perception of exhaustion is actually in the brain. It's not in the body. And so they've had people run to exhaustion and then they will simply rinse their mouth out with a glucose-containing solution or even a non-nutritive but sweet-tasting solution, and these individuals are able to run 3% to 5% further after already running to exhaustion,

whereas the individuals who rinse their mouth with just plain water, they saw no ergogenic benefit.

And this is really powerful stuff. What it tells us is that our sense of taste really has powerful control over those central governing features, the hypothalamus, the areas of the brain that regulate energy metabolism. So there were a bunch of people crawling up my ass on the CrossFit Journal site saying that there's no way that the sample individual who was like 300 pounds and taking in like 1200 calories a day, that there was no way this woman was sustaining herself on that few calories, that she needed to eat a minimum of 3600 calories by their estimates to maintain her bodyweight.

If I'm eating 3600 calories a day, I'm gaining muscular bodyweight if I'm training. Like that is a stunning amount of food. And so it's just hilarious to me that these people who neither work with clients, have never worked in a hospital setting look at this stuff, and have no real background in any of this science have these like very powerful opinions on the topic. It's kind of hilarious.

Andy Deas: Well put. So in other words, there are no free rides even with some artificial sweeteners.

Robb Wolf: Yeah, there are just no free rides with it. And like for our practice, we just don't really let our clients who are -- and let is in quotations, you know. We just bluntly discourage our clients who are weight loss conscious. We don't let them have artificial sweeteners because it makes them fail and it's that simple.

If you're a lean, non-insulin resistant individual and you throw in some artificial sweeteners here and there, you're probably fine. I would mix it with a meal. I suspect that that will minimize a lot of the deleterious effects but I don't know that to be sure. In general, I would just avoid this stuff altogether because I don't really think it's doing you any favors, but I'm just a goofball so there you go.

Andy Deas: You're just in the backyard in the shed with your tinfoil hat on, Robb.

Robb Wolf: Dude, waiting for the mother ship to come. Totally!

Andy Deas: All right, cool. And then next we got an interesting blog question from Zach and there's actually a couple of different questions so I'll give you a little background and then we'll hit each of his three points separately.

So basically, Zach is saying he eats meats, fruits and veggies pretty strictly 6 days a week. His meat sources are typically grocery store bought grain-fed beef, chicken, and pork with eggs and/or fish. He's had good results but he does have some concerns about long-term health, especially related to my meat choices. He knows that grass-fed, hormone-free is best but his wallet won't support that for now. So basically, he's wondering how much long-term damage he is going to do with these fatty salty meats if he is balancing it out with fruits, veggies, fish oil, and vitamin D. So that's sort of the background so let me then jump in to the first question.

So his first general question is around sodium because he eats a ton of lunch meat and uses some salt on his food at meals. He points out the he recalls Taubes in Good Calories, Bad Calories making the point that high sodium does not cause hypertension and that the body will regulate its mineral levels fairly easily with no permanent damage. Cordain seems to be very anti-sodium due to the acid overload, but he is wondering are there any other reasons to avoid sodium long term? What about additional sodium for athletes, especially very sweaty beasts like himself? And what are some signs of too much sodium?

Robb Wolf:

Good. Good question. I think the sodium deal is of concern and it's something that can be fairly easily controlled. One of the signs and symptoms of too much salt intake we see increased rates of exercise-induced asthma. Usually, a Paleo approach will really ameliorate exercise-induced asthma or asthma in general to anti-inflammatory action. It typically has a higher magnesium load in the body because we're eating more fruits and vegetables and this tends to be a smooth muscle relaxant and so the alveoli in the lungs tend to relax.

Sodium kind of undoes all that stuff so that's one of the signs and symptoms. Kind of lethargy and fatigue can be exacerbated from a net acid load which we talked about a little bit earlier and sodium definitely contributes to that. And then God, what was my other thought on that? Sleep, high salt intake can also affect the amount of quality of sleep. So if you have any type of sleep disturbances, this is another area to kind of take control of.

And if he is really talking about like cost being an issue here, you're saying his wallet won't allow for like buying grass-fed meat and all that sort of stuff, inevitably, the lunch meat which ends up being the high salt stuff is significantly more expensive than buying like a turkey breast and baking it, chicken breast and baking it, pork loin, London Broil. All that sort of stuff individually is always significantly less expensive than the lunch

meat. So if the wallet is really a concern and the salt is a concern, then don't buy the lunch meat for the most part, cook the stuff, and then cut it up yourself and eat it; and then you're saving money and you're avoiding the sodium deal. So I think that kind of addresses both issues there.

And then otherwise, people will ask this question a lot. It's like what about the meat and eggs that I'm eating? Is that going to ruin my health? And it's like, well, what are you going to swap it out for? Is it going to be bagels and rice? I'll guarantee you you're not going to look, feel, and perform or have biomarkers of health better improved by swapping out protein and fat of animal source with starchy carbohydrates.

Now, maybe you can try to make it out of vegetables but getting 2500 calories of veggies a day is pretty hard, and then you go to fruit and then you're getting a massive load of sugar and fructose, which if we recommended a high fructose load, Mat Lalonde will come here and shoot me. So, you know, it becomes kind of rope-a-dope where it's like you get the best quality meats that you can, but usually, these leaner cuts of meats like London Broil, pork loin, all that sort of stuff are inexpensive and pretty lean and then you supplement with stuff like olive oil, coconut oil, fish oil to kind of round things out and you're great.

Andy Deas: Now, how do you rectify the strong we'll say opinion of Cordain and obviously yourself encouraging very low sodium diets with -- I've seen a lot of strength coaches either relate it to adrenal fatigue issues or in general kind of some of these electrolyte balance stuff, encouraging their athletes to take in a reasonable amount of some of the Celtic Sea salt on a daily basis?

Robb Wolf: You know, when I remember Cordain's Paleo Diet for Athletes book, he recommends an increased sodium intake for hard-training athletes, but it's like a teaspoon total a day which is about 3.5 to 4 grams.

Andy Deas: Right.

Robb Wolf: It's not that damn much. And so this might fit in there.

For the general populace though, he doesn't really see a need or any type of benefit for supplementing it, and the reality is even when you're pretty fastidious with your food, if you eat apple at all, you're going to get increased levels of sodium in your diet. So that's just kind of, you know, I think all that stuff kind of plays out in the wash.

Andy Deas: Okay. All right, cool.

The next part of his question is he says he understands the acid/alkaline balance idea of the Paleo diet and how it relates to calcium. And he understands if you've removed dairy from your diet, you can get calcium from several vegetable sources, but unless you are eating collard greens and spinach in huge amounts each day, he thinks it's pretty hard to get anywhere close to the amount of calcium in dairy.

How much calcium does the body need to function optimally? Additionally, with the relatively low amounts of calcium in the dairy-less diet, how does one ensure that they are not leaching bone calcium just to keep blood levels maintained, especially if they are eating large amounts of meat, salted or not?

Robb Wolf: We've bounced around this a bunch already. It's that acid/alkaline deal.

Andy Deas: Yeah.

Robb Wolf: So eat a bunch of veggies. I mean it's like it -- and this is where all the stuff starts dovetailing together. Like when you view other nutritional approaches then you start looking like, "Oh, gee, I need a nutritional supplement for this and that and the other." Whereas if you're eating meat and veggies, good fats oriented Paleo diet, trying to get 20% to 40% of your calories from vegetable matter, 20 to 30, 20 to 40, something like that, you end up in a net alkalinized state, you have more alkaline than acid, and you get tons of vegetables, not vegetables but antioxidants, vitamins, minerals.

And this whole deal about 1000 milligrams a day, I guess the USDA recommendation for calcium is like 1000 milligrams or a gram a day. You know, people adhere to that recommendation and they don't gain bone mineral density all the time. If they have a net acid load diet, they have an irritated gut from gluten intolerance, and so you end up just not absorbing it. And then the reality is that dairy sources are by in large net acid load sources. So it's really not contributing to the total calcium content of their being anyway.

Loren Cordain has a great paper and maybe we can stick this in the show notes or if people are just ambitious a little bit. You just type into Google acid base Paleo and then you'll find this paper where Cordain does a hell of an analysis on this whole thing, and it just shows the key point is that you get enough calcium and magnesium which really isn't all that damn much.

The real point is that you retain it. If you retain the lion share of the calcium and magnesium that you take in, then you don't need that much to be in a positive calcium balance. But if you could take in a ton of it, but be in a net acid load, then you're still going to leach calcium out of your bones.

Andy Deas: Yeah. And I think this is where we see some of our older clients that are on this eating a ton of gluten. They're on a high acid diet but they're supplementing with a crap load of calcium, you know, and they still have all types of issues with their bone density.

Robb Wolf: Yeah. And, you know, there's a popular drug called Fosamax which is used to increase bone mineral density. I need to dig this paper up. I read it years ago. But there was a comparison between like Fosamax and between people just taking like a quarter teaspoon to a half teaspoon of sodium bicarbonate, just baking soda, which is an alkaline source, strongly alkaline source; and the sodium bicarb, because it shifted the acid-base balance towards the base side of the equation, worked as well or better than the Fosamax and with none of the downsides of Fosamax.

And Fosamax tends to accrue bone mineral in just kind of amorphous masses. So it will make people's radiographs, they'll do an x-ray of people to see how much bone mineral density they have and they'll say, "Oh, the Fosamax is working. Your bones are more dense than what they used to be."

But the bone doesn't lay down the way it's supposed to. Our bone is usually set up like rebar buried in concrete. So normally, you know, high-rise buildings have concrete but woven through the concrete are these steel rebar pieces that have enormous additive strength that they give to the building -- rigidity but also flexibility. That's the way our bone is set up. We've got this -- God, what do they call it? Microcrystalline hydroxyapatite is the name of the bone mineral, the calcium mineral substrate that's laid down; and woven into that we have collagen fibers, and it's enormously strong. But like the way the Fosamax works, it does not lay down the bone mineral in that way, and so it's really not that beneficial.

So there again, like the pharmaceutical approach to this is not all that effective, whereas if we heal the gut so people can absorb food and still natural acid-base balance it's on the base side; and actually, interestingly, more protein intake actually enhances calcium absorption in the small intestine, or the large intestine, excuse me. And so normally, people will say that a high protein intake introduces a net acid load which is true, but

dense protein sources like chicken and fish and meat and eggs and all that sort of stuff actually causes an increased absorption of calcium in the intestines versus like just grains or something like that.

Andy Deas: Yup. All right, cool. And then the last question he had was he's commented on -- this was in your particular post regarding cholesterol in the body not being a great indicator for heart disease, but he wants to know if one is supplementing with fish oil to balance the Omega-6's in fatty grain-fed beef, are there still dangers in eating large amounts of fatty grain-fed meats from the saturated fats?

Robb Wolf: You know, with this, maybe, maybe not. I don't know. The real thing to do here is to generally gravitate towards leaner cuts of meat and then supplement your fat with things like coconut oil, a little bit of olive oil, macadamias, avocados, and fish oil, and then you kind of address this whole issue right from the get-go.

I think in general, what we see is that even if somebody is eating pretty poor choices with regards to grain-fed fatty meats, that we see overall a pretty remarkable change in their cardiovascular risk factors. They may see an increase in their LDL count but the LDL particle size changes to the large, puffy, non-oxidizable form. Triglycerides fall, measurements of systemic inflammation fall, and so overall we see benefit there. But I think that we can virtually tweak this by again trying to emulate the types of fats and also the ratios of fats that we would have seen in the ancestral diet. So we do that by getting leaner cuts of meat and then supplementing with coconut oil and stuff like that.

Andy Deas: Yeah. And I think the whole issue of, you know, that continue about the deli meats and things, I think in general, what we've found is that if folks are a little more ambitious will look for farmers and thing in their general area where they're buying things in bulk. The grass-fed meat price point in a lot of cases can be lower than the crappy grain-fed beef that you buy in the store.

Now, if you go to the store and try to buy grass-fed beef they charge you an arm and a leg because it's a premium product, etc., etc. But if you're ambitious and will spend some time cooking and making your own jerky and all that kind of stuff, we don't see a huge difference in price. In some cases it's cheaper to go the grass-fed route.

Robb Wolf: Yeah, totally, totally. Trader Joe's routinely now has a grass-fed ground beef that it's not super cheap but it's oftentimes cheaper than some of

the leaner, you know, like ground rounds and stuff like that that they offer. So that's definitely an option.

Andy Deas: Yeah, cool. All right. Next we got an email question from Joey and he is asking to get our thoughts on Ray Peat who I'll let you kind of describe Ray Peat. But basically, Ray Peat has this thing on his website that we'll link to kind of giving his commentary about supplementation with fish oil.

Robb Wolf: Yeah. Ray Peat has been around the kind of health, kind of Paleo diet-esque, more Weston Price oriented, very, very kind of pro-coconut oil sort of dude, real knowledgeable, but he has this article on fish oil that would seem to paint the stuff as being Satan's spawn. He pulls a bunch of studies down that would seem to indicate that the stuff is like highly toxic and there's kind of a conspiracy trying to supplement like children's diets with fish oil, and this is a bad move.

And I just can't get behind it. I mean I dig all of his stuff on like coconut oil. I think all that stuff is totally legit. But the interesting thing is that if we are generally, if our nutrition -- and this maybe feeds back even into the previous question -- if our nutrition is set up such that we are really getting in a minimum amount of the short-chain Omega-6's and the preponderance of our fats that we're getting in are the longer-chain EPA/DHA and then also, interestingly, if we're getting direct sources of arachidonic acid and whatnot, that tends to just kind of balance things out inherently, like if we're getting them at about a 1:1 ratio, which is what our ancestral diet is.

And so if we keep all that stuff in mind, then the amounts of fish oil that we need to take in, if we're eating leaner cuts of meat or we're eating grass-fed meat or whatever, end up being very, very small; and what Ray is usually recommending is that the bulk of your fat calories come from sources mainly like coconut which is a short-chain saturated fat, it's an MCT, a medium-chain triglyceride, and that's probably a good recommendation, like that's probably a good, healthy, solid recommendation.

And even olive oil tends to have a fairly high amount. About 10% of the total calories out of olive oil comes from the short-chain Omega-6, the linoleic acid.

And so there's a lot going on with this thing, but I think fundamentally, fish oil generally is still good. If you could construct a diet that was 100% grass-fed meat and wild-caught fish and ate some coconut to prop up



your total calories, I think you would be set, but I think what Ray is mentioning in here is a little out and left field with regards to the fish oil.

Andy Deas: Yeah. And I think in general, some of the things Ray talks about, you know, the marketing and certain products is magic, like coconut. I think we're on board with the fact that the marketing of these ideas makes things confusing for folks and all those things, but yeah, I'm totally not on board with his fish oil perspective.

Robb Wolf: Mm-hmm, mm-hmm.

Andy Deas: So, all right, cool. Next question is from Adam and he says, Robb, he is a big fan of your website. He has been eating Paleo/low carb for a few months and has dropped about 15 pounds. He is interested in implementing IF; however, he hasn't found anything on your site regarding how to structure it.

He understands that this is something that each person should feel out and make necessary adjustments, but he was hoping to find an IF 101 post on your blog. He figures he will start skipping dinner and the following breakfast (24-hour fast) a few times a week. "How should I time my fasting and exercise? Does it matter? Is it good/bad to break a fast with a post-workout meal?"

Robb Wolf: Eesh, okay.

Andy Deas: Step away from the intermittent fasting.

Robb Wolf: Yes, seriously. Back away from it. The 101 kind of stuff, initially that was all Performance Menu articles, so I've got two or three Performance Menu articles on intermittent fasting. I think the first one was in July of '04, '05. I forgot which one, maybe July of '04, and then a couple maybe about a year later. Those things kind of lay out the nuts and bolts of the intermittent fasting.

In general, the way that folks need to tackle IF if at all, you need to get a gluten-free, dairy-free Paleo diet dialed. You need to sleep in a dark room, shade drawn, that whole thing, and get maximum amounts of sleep. You need to supplement with some magnesium, some fish oil, and some vitamin D. You need to train hard and periodize your training and think about back-off weeks about every 4 weeks or something like that.

All of that needs to be in place first because all of that stuff is money in the bank. It is a guaranteed success. Gluten-free, dairy-free Paleo diet, fish

oil, vitamin D, magnesium, sleep, non-retarded training, all produces stunning results; and if you don't have all that stuff dialed in, then you have no business trying to drop in the intermittent fasting.

The intermittent fasting might be of benefit, but we see about 50-50 break on this. Some people benefit from it, some people do not. The people who do not do well with tend to already have very, very stressful lives, and that appears to be damn near everybody. And so the thing that IF does for me at this point is that if I get real busy or like I'm traveling and I just have shitty food choices and I can't eat for 8 hours because I'm afraid of getting a gluten dose while I'm cruising through the Phoenix Airport, then I don't eat, and that's just how I roll with it, and I try to make it up later. And so it kind of frees me from all that like bodybuilder manorexia type stuff that I'm going to like wither away and go into negative nitrogen balance if I don't have a meal every two hours. So that's about the way that I tackle intermittent fasting at this point.

If somebody wanted to get in on it, maybe make your last meal at 5 or 6. Make your next meal happen at 9 or 10 a.m. and so that's about a 16 to 18-hour fast. About 16 hours is the maximum fast that you're going to get before you start digging into your protein stores and probably chipping away gluconeogenesis style and trying to make blood sugar out of proteins to keep your blood sugar up. Even if you're fat adapted you still make some blood glucose and that is still something that's being distributed around the body.

So if you jump in on it, do it real skinny, jump into the shallow end of the pool, not 24 hours straight up, and I would do it maybe two days a week and just kind of see how you look, feel, and perform. With regards to post-workout meals and all that, it really depends on how you're rolling, like you got to experiment and check it out. But I would really like to see all of those other factors in place before people start messing around with the intermittent fasting. I feel like folks think that this is going to be some sort of shortcut to getting their ducks in a row and they need to get all the other shit dealt with first.

Andy Deas:

This is one of those things where I feel like you get a lot of folks, they do kind of this Paleo/low carb situation for several months, they've made good progress, they're still making good progress, and I think they get the idea that this will accelerate progress or make things better.

In a lot of cases, I'm always like, "You know what, you're making progress, why change anything" You didn't get in this health situation in two weeks and you're adding in a few days of intermittent fasting. While

it may increase your rate of improvement, what we've seen is that the odds are it probably won't unless you have everything else dialed in. So I'm always like, "Ride what you're doing until the train stops going."

Robb Wolf: Yeah, until the wheels fall off that wagon. And if you are still -- not to beat this into the ground, but if people are still waking up with an alarm, which means that they're basically sleeping less than what their body wants, and they want to find something that will make them leaner, particularly through the midsection, improve their recovery and improve their performance, then they need to go to bed earlier, and that's it.

And I wish I could sell go to bed in a bottle because I'd be a freaking billionaire, but that is like the most -- Dan John. I love it. He is like, "Real food and sleep are more anabolic than what anything else is on the planet." And that's really short of like a massive menstrual cycle or something. That is totally true; but yet, people will not turn off the computer, turn of like Dancing with the Stars and freaking go to bed; but yet, they're wanting to like starve themselves and do all those other stuff.

Now, I do think that there might be some cool shit with regards to intermittent fasting, but it's like miles down the road. You got to have all this other stuff done, and I guarantee you, if you can structure your life such that you go to bed, you sleep in a pitch-dark room and you wake up without an alarm rested, and then get your day going, dude, you will be able to just kick ass at stuff and there's nothing else you can do in your life that will give you that type of return on your investment.

Andy Deas: Yeah. And I think that's a good segue into our annual plug for read T.S. Wiley's Lights Out.

Robb Wolf: Yeah. And I've been working on my updated blog post on that so I'll throw that out there for sure, but yeah, Lights Out: Sleep, Sugar, and Survival. You can get it off of Barnes and Noble. You can get it off of Amazon for like a couple of bucks. Buy six or seven copies and give them to friends and neighbors and family members. So yeah.

Andy Deas: Yeah. Get as much sleep as you can without getting divorced or fired.

Robb Wolf: Exactly. And if the job sucks and the marriage is shaky, then maybe you jettison those too.

Andy Deas: Robb Wolf is not a marriage counselor.

Robb Wolf: I am not, folks. No.

Andy Deas: Please note that. All right, great! The next email question we got was from Justin. He makes his own Paleo kits each week, generally trying to use the most natural ingredients, lowest sodium, etc. He wanted to know thoughts on recommended brands of jerky, almonds, and dried fruits.

Robb Wolf: Oh, this is an easy one I guess. Trader Joe's has a good variety of gluten-free jerky. They have a plain variety and then a peppered variety. The teriyaki one actually does have gluten in it. And then I mean almonds, TJ's, Costco, both good. Dried fruit, I don't really know. I don't really mess around with much of it at all. You just have to kind of fish around and check that one out. I'm not really a huge fan of the dried fruit. You can for like I don't know, about \$100 investment, get a really kickass food dehydrator and make your own jerky for like pennies on the dollar literally. You could roll with that.

And then for a shameless plug for Paleo Brands, we have a totally kickass Paleo snack kit that has grass-fed beef jerky that we've done stability studies on this stuff, and it is the minimum amount of sodium you can have in it, but yet not have fuzz grow on it. So it's real low sodium compared to other jerkies and then it's a mix of nuts, a little bit of almonds, macadamia nuts, sunflower seeds, a pretty good mix, and then the fruit is primarily from the highest antioxidant containing fruits that there are -- Goji berries, blueberries, and cherries. So that's a damn good option too.

Andy Deas: And let me get back on my soapbox. I think you commented on a little bit there is that in a perfect world the best way to do this is to get yourself a damn food dehydrator and do it yourself 'cause then you know exactly what's in the jerky, you can pick the type of fruits you want to dry.

I mean yeah, I eat the Trader Joe's stuff sometimes but there's still some dicey stuff in there. It's like sweetened with agave nectar and some stuff that generally we don't recommend. So I'm like if people are going to eat a ton of jerky and you're going to do this consistently, get a dehydrator and make it your damn self, and generally, it tastes really freaking good.

Robb Wolf: Yeah, yeah. And it's easy and the prep time, like I'm pretty darn busy but it's easy for me to buy 6 or 7 pounds of London Broil, cut it into strips, throw it in a brine. Like how to make jerky, you look online and like you want to brine it and then throw it, you know. Just Google how to make jerky and you'll find some recommendations.

Just don't throw stupid stuff on it but you can really modulate how much sodium goes into it and then you dry it yourself. You could get an airtight container to store it. And like I'll have 4 to 5 pounds of jerky that we can just snack on for really maybe about a half hour, 35 minutes of investment, and then I have stuff to eat on for maybe 2 or 3 weeks. It's easy.

Andy Deas:

Yeah. All right, good question. Next we got an email question from Lisa and she said an athlete at her gym had a complete colonectomy, and said he is unable to give up starches due to his medical condition but he is interested in the Zone and Paleo diet to lose weight. She researched the Paleo site and contacted them for further information on this topic. She is wondering if you could point her in the right direction.

Robb Wolf:

Well, I think you could make a pretty good argument if this guy already has some GI problems that even if he wants to eat a starchier diet, let's get those things from like yams, sweet potatoes, squash instead of grains and legumes which we know to be gut irritating, GI irritating. And so I think that's going to address that.

I think that there are -- given his situation without a colon; the colon largely is involved with the reabsorption of water and minerals; you're going to have to really play around with what type of fueling he is going to be able to handle all the way around. Fat absorption might be an issue. Definitely a digestive enzyme like a NOW Foods Super Enzyme might be in order. But compositionally, I think he could easily just swap out his bread, rice, pasta, potatoes for things like yams, sweet potatoes and that sort of jive and you're going to have better food quality. It should actually be easier digested and we should see less gut irritation.

So I'm definitely not a gastroenterologist, but if I had this situation, that's probably the way I would tackle it for myself, and it's going to require just a lot of experimentation. But the whole like "I need starches due to a medical condition," it's kind of like, "Okay, cool. You're going to get starches from these sources that do not irritate your gut. So here they go."

Andy Deas:

Right on. Cool! Next we got an interesting blog question from Noah which he is talking about the master of marketing, Tim Ferriss. So basically, he read a recent blog post on Tim Ferriss's blog, and Tim is eating this slow carb diet a la Michael Eades. It's very, very low carb, high protein, high fat but allows for legumes and dairy, so not strictly Paleo.

His question concerns one practice he has which is basically allowing a cheat day a week on steroids. Tim says he recommends Saturdays as your “Dieters Gone Wild” day. He eats whatever he wants and goes out of his way to eat ice cream, Snickers, Take 5, which I don’t even know what Take 5 is, and all of his other vices in excess. He makes himself a little sick and don’t want to look at any of it for the rest of the week.

Paradoxically, dramatically spiking caloric intake in this way once per week increases fat loss by ensuring your metabolic rate doesn’t downregulate from extended caloric restriction. That’s right. Eating pure crap can help you lose fat. Welcome to Utopia.

So Noah goes on to say, “How does this strike you? What do you read as the advantages/disadvantages? In general, is there a benefit to this practice?” What’s our thoughts on this?

Robb Wolf: Dude, the only thing missing from that is that you’ll have wiry strength comrades.

Andy Deas: That was a cheap shot, cheap shot.

Robb Wolf: I love Pavel. Pavel’s stuff is legit, but gee, whiz.

I’m not quite too sure where to jump in on this. I mean in general, is a cheat meal a good idea? Yeah, I guess so for most people. Like everybody from again Mauro Di Pasquale to Poliquin, even Barry Sears recommends once a week kind of a cheat meal to shake things up. I think psychologically for a lot of people they need that, and then also there may be some metabolic underpinnings for doing the cheat meal.

For me, like Ferriss’s approach of doing what he calls the slow carb deal, the amount of carbs he is eating, I would be hungry and probably a little chubby all the time from that. Like that is way more carbs than what I would function on. So that’s something that you would, you know, everybody would just have to play with. I could do that whole scenario much easier on just a lower carbohydrate deal and not be hungry.

And, you know, historically, I just haven’t seen all that big of a need for a cheat meal; but all that said, the amount of time -- I’m always traveling, we always end up out to eat, and occasionally, we’ll be out with folks and we’re like, “Okay, we’re going to have some margaritas and like some Mexican food or something like that.” And I just kind of go for that, but I really don’t have all that much of a desire for it. I don’t know that it really helps anything. The claim is out there that it does.

The best example of like the cheat situation being of benefit that I can think of is Freddy Camacho of CrossFit One World. Freddy had been trying and trying and trying to break three minutes on Fran and then he had a bender, a bunch of beer, bunch of tequila, woke up the next day, barely able to like stand up and got like a 2 minute and 42 seconds on his Fran. So if you're Freddy Camacho then it may work.

So that's just stuff that folks are going to have to play with to find their best operating parameter. I do see a lot of people, when they have a bender like what Ferriss is talking about they never come back from it, like they never get back on the pony. So I don't know. It kind of depends on how you're wired up. I don't really see a need for that type of off-the-rails eating myself.

Andy Deas:

Yeah. And I think this concept sort of reeks of the Bill Phillips Body-for-LIFE, the Joel Marion Cheat to Lose diet, all sort of promising that one day we could kind of eat whatever the hell you want to eat crap and that will make things better, and I'm not sure that it will.

I do know some of Jeff Volek's work from UConn, a pretty prominent low carb researcher and the book that he put out with Men's Health last year, the TNT, Targeted Nutrition's Tactics. He experiments with some type of cheat meal or kind of reloading days, but generally, it's kind of along the same lines that Poliquin or Di Pasquale goes with, which is like mostly veggies with maybe a little rice, fruit, certainly nothing that like Snickers and ice cream and whatever the hell Take 5 is.

Robb Wolf:

Yeah, yeah, and that's definitely been my experience and that's been some of my problem with actually doing cyclic low carb as cyclic low carb in that you're supposed to have these fairly significant spikes. Like I felt like such shit from the spike meals and it was just stuff like sweet potatoes and stuff like that, like it just didn't really seem worth it. And then overall, I didn't really see that big of a change in my performance or body composition or anything like that. Like by the time I was fat adapted I was doing well with that.

So I don't know. It's something for people to experiment with. If you want to go completely hog-wild and try to kill yourself in one meal, go for it; but it just doesn't really intuit well and I don't -- in the practice I haven't really seen it play out all that well.

But all that said, usually people are finding themselves -- I mean we live in Chico which was Playboy's top party school of 1987 and so it's usually not

that hard to find the night out where you're waking up under a bush or something. So, you know, when those nights pop up, go for it.

I just don't really plan them in. I like to approach this less as the heroin addict where I'm like pulling out my box and tying off the vein and like thinking about it for five days, and more just as like, "Hey, we're going out with friends and we're going to kick our heels up." And I'm not really going to be concerned about what I eat or drink other than for me again, I'm always gluten-free because it will ruin me.

Andy Deas: Yeah. And this is one of those where generally at least in our gym, when folks have had a big crazy weekend, we can pretty much tell in their performance and it's generally not a positive shift.

Robb Wolf: No, no.

Andy Deas: So they may be in Monday or even at late as Tuesday and you're kind of like, "Hey, rough weekend? Bad food? Yes." And it's like, "Yeah, I can tell because your performance sucks."

Robb Wolf: Yeah, yeah, the inflammatory response, the whole thing is just upregulated. You can see it in their skin. So yeah, play with it. Roll however you want to roll, but I don't think -- again, like you said, Ferriss is a real sharp dude, hugely popular, but I think a lot of this stuff is being so little fast and loose that it's got more efficacy than really what's there.

Andy Deas: Yup. All right! Next we got an interesting question from Evan on the blog. And so I don't think we've talked about this on the podcast. This is a pretty interesting topic.

So he's got a question regarding excessive bruising. So his mother will get a nasty bruise from the slightest little bump. She slipped and fell last winter and it looked like someone beat her with a baseball bat. She definitely has some classic signs of insulin resistance. She holds her weight around the hips and midsection. She has gestational diabetes during both her pregnancies. She suffers from constipation and diverticulitis. She also exercises a lot, mostly cardio, which may be increasing her cortisol levels.

Evan's brother and himself have been trying to get her on a Paleo-ish diet for a while, and he thinks she may be coming around soon. She's going to be starting at her local CrossFit box but was wondering if you think a Paleo diet would help with the bruising. He's done a little research and all



he found so far was to increase her vitamin C intake. Thanks for all the hard work.

Robb Wolf: Yeah. You know, bioflavonoids, phenolics, vitamin C, all these things are really important for vascular health; and this easy bruising scenario, we see it a ton in like celiac, some people with different digestive issues; and he mentions in here that she has constipation and diverticulitis. So she's obviously got some GI inflammation going on. That's like already established.

Hopefully, folks are getting familiar with the fact that if the gut lining is irritated, we do not absorb nutrients. The nutrients we don't absorb are fat-soluble vitamins. All kinds of the phenolics, bioflavonoids, all that stuff that is critical for our vascular health and work as anti-inflammatories, we don't absorb that stuff; and so you end up with people with a ton of these whacky deficiency symptoms and it's not enough to kill them outright, but obviously, there are some problems going on here, the bruising and all this sort of jive.

I was just doing some reading the other day and even on Wikipedia, when they were talking about insulin resistance, magnesium deficiency is one of these really, really understood and recognized symptoms of insulin resistance. But the chicken and egg thing here or the kind of cyclical thing, if the gut lining is irritated, you don't absorb magnesium; and if your gut lining is irritated from grain consumption, which is the bulk of what this stuff comes from, then you have high insulin levels, and so it becomes very, very synergistic but in a downward spiral.

So like a Paleo diet should be very, very beneficial for her; and shocker yet again, yeah, it should help a bunch.

Andy Deas: Although he can't sell it, it works.

Robb Wolf: Yeah, yeah, exactly.

Andy Deas: All right, good answer. And then the last question we're going to get to is an interesting blog question from Bill. He says he listens to your first podcast three times to try and take in all the info. I guess you make things too complicated, Robb, shocker.

Anyway, he was super lean and skinny his entire life until college, gained a bunch of weight until at 6'3" 245. He got fed up and dropped to 190 in about 6 months. He maintained that for a year and then found CrossFit and the Zone. He has dropped to 175 on the Zone but his strength is still

fairly low. He has built some muscle since going Zone but want to bulk up significantly while continuing to lean out/keep low body fat.

“You mentioned cutting met-con work and upping fat and protein intake. I have been there done that with hour upon hour of heavy workloads, but to no avail. I want to ramp up my fat intake and cut more carbs, but I feel like that monkey with my hand in the jar holding the fruit. I’m really afraid of putting on fat again. Thanks again!”

Robb Wolf: Egads. Shoot!

Andy Deas: Robb, I want to be huge.

Robb Wolf: And lean. Shocker! Me too. I should just go to Mexico and set up a gym down there in one of the farmacias and then I’ll get all my stuff done.

I mean this is just the classic deal. I think Bill needs to just like focus on generally like linear strength progression, something like a Wendler 5-3-1, maybe with a little bit of met-con thrown in there, Max Effort Black Box, CrossFit Football, lift heavy shit, eat fairly big, eat on the low carb side of things and just focus on getting strong. And then you’ll get some benefit, you’ll get bigger, you’ll get stronger, you’ll stay relatively lean; but that’s going to be like about the best out of the two worlds that you’re going to get. If you’re going to get a significant amount of mass on there, then there is going to be a period of time in which you’re going to be less lean and that’s just all there is to it; and, you know, this definitely is the hand in the jar sort of deal.

If you really want to push this thing hard, then you’re going to gain some body fat, but what I would do, you know, more and more that I look at this stuff, it’s like eat approximately to what your appetite is, maybe a smidge more. Eat enough to be satisfied and then a little bit more but not a ton more. Lift really heavy weights and train hard, sleep well, and then let biology kind of take care of itself; and it’s going to play out where it’s going to play out. Like for me through a lot of work, I’ve managed to goose myself from about 165 pounds up to about 180, 182 pounds, and I’m getting reasonably lean and starting to get some recomposition here but it’s been a ton of work.

But the reality is that my body probably optimally runs somewhere around like 175, 177 pounds if I’m eating real well, training super hard, but that’s with like almost triple bodyweight deadlift, 2.5 times bodyweight back squat, clean and jerking 275 pounds, decent met-con,

good gymnastic skills; and really at the end of the day, how much more do you want than that?

And I think we have some pretty good body dysmorphism that goes on such that we always assume, you know, inevitably, when they do questionnaires to males and females, the guys are 5 to 10 pounds too small, the chicks are 5 to 10 pounds too big, and it's just silly. That's kind of getting far afield from what the dude's original question was, but I would just basically lift heavy weights, eat well, kind of low-ish carb Paleo, and then get strong as hell and see where you finish out; and it's probably going to be pretty damn good.

Andy Deas: Yeah. And I think just a few things to add. One, I'm just stealing this from Kelly Starrett, *Desired Fatness*. I mean winter is sort of the perfect time to bulk up a little bit so if you're going to give it a shot, I think this is the best time of the year to do it. He mentions the Zone. In my opinion, the Zone protein levels are pretty low if you're trying to put on significant amounts of mass. I think generally, most folks do better when they fall out around one gram of protein per pound of lean body mass or even just per pound of total weight.

Robb Wolf: Right.

Andy Deas: The strengthening is a slow process, you know, like some of these adaptations take a long time. I was listening to a recent interview with Alan Aragon. He made a pretty interesting point. He was like, "When you look at most folks in their entire training life, how many pounds of actual muscle mass are they going to be able to put on say from when they're 18 to whatever, 35?" And he is like, "Realistically for most folks, it's probably not that much, maybe 25 pounds, maybe 30 pounds, without heavy anabolics and stuff."

Robb Wolf: Right.

Andy Deas: And darn right. I mean that's going to take a period of years to do and you're going to really have to build up your strength base, and it's not going to come the way some of the other adaptations do like some of the met-con stuff where we see pretty quick response and you may get pretty close to your kind of genetic limits short of drastically improving your strength base to help move those things along faster.

Robb Wolf: Yeah. There are some really interesting stuff and I think I remember the thing you're talking about where he actually looks at the height versus weight of a bunch of like Mr. Olympia competitors and stuff like that. And

the reality is they're lean, you know, like Frank Zane and different guys, but Zane was like 5'9" 180 or 182, something like that and then like 5% body fat. He had great symmetry, great muscle values, all that sort of stuff, but the dude was not huge.

And there's been some pretty interesting analysis of that actually looking at both pre and post-steroid era top level bodybuilders, and the reality is like unless again, you are just hammering some serious anabolics, like you're usually not going to flesh yourself out such that you end up having the same proportions as the G.I. Joe doll. So yeah.

Andy Deas: I would like to look like General Hawk, Robb. Can we make that happen?

Robb Wolf: Who's the chick in there with the dark suit? That's who I want to look like. Or maybe that's sharing too much. That's something I should have had that conversation with my wife about before announcing it in this.

Andy Deas: Yeah. Maybe you can have that discussion to give us an update next week.

Robb Wolf: Perfect! Cool!

Andy Deas: All right. Well, we're coming up on about an hour and 10 minutes, Robb. So I think unless you have any other hot topics burning a hole in your brain, I think we're good for Episode 4.

Robb Wolf: Good stuff and I totally appreciate folks' feedback. Keep sending us questions. This is definitely a much better format for me to expedite answering questions. And then as the show goes on, we'll have a nice archive of materials so that we can refer folks to it kind of frequently asked questions style. So yeah, dig in it. And thanks, Andy, for that help.

Andy Deas: No problem. And we are up on iTunes, so if you guys like this please give us a nice little review and ranking on iTunes so we can get closer to Naked Yoga.

Robb Wolf: Seriously! We're taking Naked Yoga down, babies.

Andy Deas: All right, Robb. I'll talk to next week.

Robb Wolf: Thanks, Andy.

Andy Deas: All right, bye.