

Paleo Solution – Episode 127

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- Robb: Hey, folks. Robb Wolf here. Greg Everett in the house. This is episode 127 of the Paleo Solution podcast. Greg, what's going on?
- Greg: I just can't believe 127 episodes. I – I guess 126 at this point but – soon to be 127.
- Robb: We should have had better judgment than this. Everybody should have had a better judgment than this but we didn't.
- Greg: You know, what we need to do is instead of doing it weekly, start doing it on an eight-day cycle and then move to a nine-day cycle.
- Robb: Slowly push it back.
- Greg: So no one notices that they get less and less frequent.
- Robb: I like it. I like it.
- Greg: Although that might be very – it's hard enough for me to keep track of this as it is.
- Robb: Yeah. Yeah. We – we're doing it on a non-typical day because at the end of the week it ended up turning into a "fiesta de mierda" for both of us. So we're rolling a little bit early now. So...
- Greg: Oh boy.
- Robb: So anything new, anything exciting that folks need to know about?
- Greg: I don't know. Do you have anything exciting and new?
- Robb: We just had – I alluded in my blog post. I just went up today because today – yeah, Wednesday – the – how do you convince somebody to eat Paleo. At the end of that thing, I talked about a risk assessment program. And the basic background sorted with that is the City of Reno has signed on to a risk assessment program where basically the police, the fire, the rest of the city workers are put through an extensive, physical blood work, you know, the whole nine yards each year. And people who are displaying signs and symptoms of insulin resistance, metabolic arrangement are put on a low-carb Paleo diet. They're counseled on sleep.

Their – you know, they have options for exercise. And this thing is an outgrowth of a risk-assessment program from these folks that – an outfit called Specialty Health that they've been doing this for about two and a half years. They did a pilot study. Did involve about 15 or 20 people and they got some really, really amazing results with it. And it's super exciting. This thing came about because these folks have lived here a long time and the players involved are the chief of police, the chief of fire, three or four prominent city council members; a very prominent plastic surgery place in town, a very prominent orthopedic surgery and risk assessment place.

And about 10, 12 years ago, they just noticed that city workers were getting hammered by cardiovascular disease: stroke, heart attack, peridiabetic type stuff. And so on the human suffering side you have a bunch of people who are really sick and either dying or, you know, getting a medical out and stuff like that, which is horrible for those folks. And then the cost to the city and, you know, society at large was staggering. If somebody, say, has a cardiovascular event while they're working as a police or fire fighter, it cause millions of millions of dollars in dealing with that event right up front and then dealing with the long-term ramifications of this stuff.

So they sort of asking the question, "Can we – can we do some risk assessment and fix all this?" And it's pretty sophisticated of what they're doing now. When they first went into this, they were doing kind of the standard Framingham model high-carb, low-fat, and not surprisingly – not getting particularly good results off that and then over the course of time have migrated toward this Paleo low-carb approach. And then when they found out that I was in town I discovered that they've been using a bunch of my stuff out of the book and everything and the risk assessment programs. And I'm one of the – one of the consultants on this gig.

So it's pretty damn exciting. You know, a city – you know, a municipality has signed off on it or risk assessment program to intervene on metabolic arrangement. And it's interesting not to belabor this thing too much but the usual Framingham risk assessment, which is – it's kind of a crazy involved deal. But despite that, we were talking about this in – say, if you took an average group of 160 – 150, 160 people out of the city in police scene, and you pump all these people through a risk assessment program and use the standard Framingham model, you would probably end up with 10 people at high risk of cardiovascular event over the next 10 years, 10 people with moderate risk and then the rest of the people would come out as low risk.

But with some additional stuff that we're looking at like insulin-resistant triglyceride and things like that, that same group of people according to our risk assessment we're actually finding about 90 – 95 people at high risk of cardiovascular event, about 30 people at moderate risk and then only about 10 or 15 people at low risk.

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Robb: And so the risk assessment piece that we're doing is very, very different and I think much more telling because we're looking at metabolic arrangement and insulin resistant and stuff like that.

And Dr. Kim Mulvihill, who's the gal that did the five-part CBS series after the Ancestral Health Symposium, she just came over to Reno and shot video on this whole risk assessment thing and talked to the – you know, the fire department and all those stuff. And so it's another big Paleo piece that's going to out from Dr. Mulvihill. And so it's super cool. It's very exciting. And who on Earth would have thought that it would happen in Reno, Nevada.

Greg: That was – my first reaction is, “Man.” When I think of progressive cities, Reno is not at the top of my list.

Robb: No. No. And, you know, it's...

Greg: But that's pretty awesome.

Robb: It's pretty cool. And the whole thing is really driven by economics, you know, just to beat that kind of libertarian free market drum a little bit. It – you know, the reason why they're doing this is because everything else is failing. And they've tried everything else. And this is kind of like the last ditch effort and then they started using these, you know, basic kind of Paleo low-carb intervention. They use a little bit of Glucophage. They use a little bit of Statins in certain situations if the cholesterol levels are really, really high. And then typically they, you know, progress people over the course of time off of the Statins and off the Glucophage.

And – so, for me, it's a really smart, balanced program. But the driver is both the human suffering side but also the economics. And it's really interesting the plastic surgery place in town has been recommending a basic kind of Paleo intervention for folks going through their services. And they're doing great with this because people get better results and they have better healing and all this stuff. So it's just really interesting that this approach works both at the kind of – you know, kind of banal and just,

you know, saving lives. And it also works at this kind of economically-insulated level of folks who have the money to spend on plastic surgery and stuff like that.

But both sides are benefiting because people are healthier. They're just doing better all the way around. So it's pretty cool. It's pretty bad ass.

Greg: All right. Shall we talk about coffee? Because I'm definitely running low.

Robb: Let's jump in. I actually had a two-cup day today because I got the absolute dog speed out of me at jujitsu yesterday. So I needed the second cup to pull this thing off. So...

Greg: Oh man. The two-cup day is a high intake for you.

Robb: I've been titrating down.

Greg: How big are your cups?

Robb: Standard cup. I've titrated down to typically one cup a day on my adrenal relocation program. So, yeah.

Greg: You're a stronger man than I, Robb Wolf.

Robb: I don't know. Maybe I'm weaker, I don't know.

Greg: I just – I have – I have larger adrenal glands. I absorb more.

Robb: There you go.

Greg: Okay. Mycotoxins and bulletproof coffee. I like the name of it. Catchynameheresays, "Hey, Robb and Greg. Dave Asprey of The Bulletproof Exec / Upgraded Self / Better Baby Book is making the claim that most of the coffee out there is contaminated with mycotoxins – a broad range of fungus from what I Googled. Knowing the basics of coffee roasting – temps often in excess of 250 degrees Fahrenheit – I assume that any fungus would be killed off during the roasting process, but Dave claims this is not the case.

So to the questions. Do you know if mainstream coffee is often contaminated with mycotoxins? Can these mycotoxins survive the roasting process? If yes to the above, what are the possible effects on our health due to these mycotoxins? If no, do you think this guy is a quack just slinging pounds of coffee for 20 bucks? By the way, he also sells a

grass-fed whey product. I thought this grass-fed whey idea was squashed in the Paleo community. Any thoughts?

Robb:

So I'll tackle the gra... I'll work my way backwards on this. The grass-fed whey deal is important from a sustainability standpoint. But because the whey removes all the – you know, the lipid-containing, you know, portions of the dairy then the grass feeding – you know, the importance of that is maybe a little bit lost. But out of that scenario, you certainly could make some awesome grass-fed butter and then make some whey protein out of the – out of the milk. And I guess that's good to go. And there is the sustainability piece of it.

So, you know, this mycotoxin story, coffee is frequently contaminated with mycotoxins. Coffee grows in a warm, humid environment. If this stuff doesn't get processed immediately or properly then you can get some mold growth. This is common feature of -- you know, peanuts and tubers and all kinds of stuff can end up having mold growth in mycotoxin exposure.

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Robb:

When you dig around and look at the different mycotoxins, they have a variety of heat stability kind of coefficients. Some of them are very, very robust and survive high heat. Some of them are not so robust and don't survive high heat. Most batches of coffee are analyzed for mycotoxin content. And if they're found they have high mycotoxin content they will often times remove the mycotoxins but it's kind of gnarly stuff like the coffee and toluene or hexane or something like that and then boil the stuff off.

So that's kind of gnarly. You know, I dug around on the Bulletproof Exec website and I couldn't really figure out what the claim was on – you know, why this stuff doesn't contain mycotoxins. And I didn't see anything about, you know, a third-party standardized lab analysis comparing that coffee versus somebody else's variety of the coffee. I have bought a bag of the coffee that I've made a couple of – a couple of cups of coffee out of it. It's good. I mean it's definitely good. But I didn't see much in the way of quantified examples or description of like, "Okay, here's how we're proving that this stuff is free of mycotoxins or decreased in mycotoxin content and here's kind of the procedures or stuff like that."

If I missed it, my apologies. I dug around on their pretty good chunk of time. So at the end of the day, is this a huge issue? I don't know. You know, mycotoxins are definitely nasty stuff. I think it's just one other

piece of the overall, you know, risk assessment profile. I would – when I worry about the world collapsing and things going mad Max, I'm not worried about finding food. I'm worried that Juan Valdez will not get me coffee. So I...

Greg: It's an important concern.

Robb: It's an important concern so I – you know, for me, if I were to look at, you know, my coffee and take it and I knew from a toxicology risk assessment standpoint, that is probably going to take two to four years off the top into my life. I'm fine with that because the rest of my life is actually worth living with that one or two cups of coffee a day. So...

Greg: Yeah.

Robb: ...you know, like a true addict. So, hopefully, that answers the question.

Greg: I think you got to be hitting at least a dozen cups a day...

Robb: For it to add up.

Greg: ...before you start getting into the addict class.

Robb: Yeah. You know, the funny thing with this, I did a little digging around but I wouldn't be surprised, you know, of probably burning in sustainability health for this. But I wouldn't be surprised if you found lower amounts of mycotoxins in things like Folgers and, you know, nonorganic like, you know, Yuban coffee. And then probably you see the highest levels of mycotoxins in the, you know, shade-grown – you know, the trees are hugged and, you know, petted and talked to. And then everything – it's kind of interesting. I've seen this in other agricultural products. They actually have higher levels of fungal load and consequently mycotoxins because they don't have the – you know, the pesticides and shit like that on them.

So – and, you know, the interesting thing with that is that mycotoxins are typically far more toxic than any type of pesticide. Now if you're – if you're one of the dudes that fly the airpleans that spray them, the...

Greg: Pilots.

Robb: No, not pilots. What is that term for spraying the crops? Crop duster. You know, crop duster, I think you're probably pretty concerned about the – you know, the toxicity of – the shit that you're putting on the fruits and

vegetables. But for the rest of us, it's been pretty well demonstrated that endogenous or naturally-occurring toxicants like mycotoxins are probably worse than the synthetic stuff just because of the dilution factor and all that. So, that's a whole other thing but yeah. I'm just rambling now.

Greg: Interesting. You can – you can save the rest of that for your position speeches when run over the libertarian president.

Robb: Perfect. Perfect.

Greg: All right. Are you ready for the next one?

Robb: **[0:14:29] [Inaudible]** or something because I don't – I don't think we're going to pull it off.

Greg: I don't know if that's a position you really want.

Robb: That's true.

Greg: All right. Casey says, "Hi, Greg and Robb. Firstly, thanks for the podcast. It has been an awesome resource for me and one that I look forward to each week. I am a physical education teacher in Australia and over the last few years I've have seen more and more students become interested in "working out" and using our schools gymnasium after school. At the moment we do a lot of body weight exercises with them – pull ups, push-ups, squats – but haven't introduced any barbell exercises.

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Greg: I'm curious to hear your views on strength and conditioning for 13 to 17-year-olds. I love the idea of kids getting involved in a structured weight lifting program and learning correct techniques. There seems to be a bit of concern down here about teenagers lifting heavy or lifting at all due to their developing bodies. Do you guys deal with any kids in your respective gyms? Any opinion you guys have on the matter or pointing me in the direction of some useful resources would be much appreciated. Thanks heaps.

Robb: Do you want to – do you want to tackle this one?

Greg: Sure. We don't really deal with kids much here. Not that we don't like kids although I don't like kids. It just has kind of been how it's worked out. But the whole injury issue with kids and weightlifting and stuff like that is really just a persistent myth. I mean, yes, there's a potential for people to get hurt when they're lifting things. There always is. But, you

know, much of what people hear or tell other people is just kind of nonsense with really no support via legitimate research or even just anecdotal evidence.

And so just as an example of that, I happen to have in front of me a little chart from the International Weightlifting Federation Club Coach Manual, which was reproduced in the Long-Term Athlete Development booklet from the Canadian Weightlifting Federation. That was just sent to me, which is awesome by the way. Guy Greavette did a great job. But anyway, it has injury rates for a number of popular sports. And so the injury rate per 100 participant hours for weightlifting is .0017. Now, that doesn't really mean much unless we compare it to something else.

So, for example, basketball we have – where is it here? – an injury rate of .3. In the U.K. it's even higher. It's 1.03. Apparently, they get hurt a lot more in that sport in the U.K. than in the U.S. Let's see. What's the highest one here? Rugby in Australia is 1.48. That's no surprise. But – oh. And, say, rugby in the U.K. is 1.9.

Robb: Do you have soccer on there?

Greg: Man, the English are just getting beat up. Yeah. In Denmark, you got .56. In the U.K.: .1. So anyway, the point is you have at least 100 times higher rate of injury with these more typical sports than you do with the sport of weightlifting, which is interesting because the same parents who will freak out at the thought of their kid touching a barbell, we'll gladly send them out into a field sport and, you know, have their knees get blown out three times a season. So there's this just – a very odd resistance to weightlifting based on, you know, information that really isn't there.

So that being said that doesn't mean go have your 13-year-olds snatch to max and clean and jerk to max all the time. It means that if you have a properly implemented training program in which these kids are learning how to move properly. They're developing the proper mobility. They have respect for the program and the process and are trying to push themselves beyond what they're capable of doing, then it offers a huge amount of benefit for them in terms of motor skill development, in terms of bone density and, you know, obviously strength, mobility, all that kind of stuff.

That's not only going to transfer over in terms of health but in terms of them developing as athletes in other sports.

Robb: I like it. And, you know, here's a thought with that, too, is, you know, in the gym environment you can load in a very safe, incremental manner. You can start with a piece of PVC and then work up to a dowel and then an alumina-lite bar. And so there's this almost infinite spectrum of progression. And loading and weightlifting is a fairly – and we can, you know, separate out even the – you know, the sport of weightlifting and just think about, you know, basic strength training, you know, even squatting and deadlifting and curling and all the rest of that stuff.

But it's all very incremental and it's fairly controlled relative to, like you said, playing soccer where the kids are cutting and moving. And they've got an accelerating body moving towards them and stuff like that. So you've a much more complex scene that you're dealing with, with like a soccer scenario but yet with relatively little ability to scale that and to progress things. And, obviously, they do. You know, they start little kids off running cone drills and stuff like that.

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Robb: But definitely it's one of the funny things that if you can just sit people down and look at the risk assessment side of this, it's really, really safe hundreds or thousands of times safer than even playing soccer or, you know, certainly rugby and stuff like that. And also it's going to, you know, injury-proof the kids against this stuff in the – in the future if they were to fall or, you know, have an impact or need to really cut hard. And they actually have the motor recruitment to be able to avoid a knee injury at a young age. So...

Greg: Yeah. Yeah. So there's definitely some information out there on programming for kids of that age. Check out the QWA website. I think they have some stuff. That's the Queensland Weightlifting Association. And then I mean even the big organization like NSCA and stuff are coming around on this sort of thing. And I think, you know, NASM and all those guys are finally seeing the reality of this and actually recommending weight training for kids just again doing it appropriately and not – you know, it's the same with adults, you know. You do the right thing at the right time and you're fine.

Robb: And so what would be appropriate for this, you know, 13 to 17-year-old range working up, you know, kind of linear progression, three sets to five kind of self on the basic lifts ensuring good technique and just kind of running with that or what – you know, what's a good parameter?

Greg: Yeah. I mean definitely I would tend to stay with generally higher reps than I would with an adult. So...

Robb: Maybe even the 10 range or something?

Greg: ...probably not fewer than triples. Yeah...

Robb: Yeah.

Greg: ...like that three to ten range or so on strength movements. But then also I think the – some of the research that’s been done has – kind of suggested more that these kids actually benefit more from training in that kind of 70 to 80 percent range than they do from lifting heavier anyway. So you kind of want to stick in there for the most part. It doesn’t mean you can never have them push themselves and work up to, you know, heavy singles but that should be a very small percentage of their total training time. And, obviously, it should be closely supervised. And they shouldn’t be doing that if they don’t know how to execute the exercises properly yet.

So, yeah. They can certainly learn how to snatch and clean and jerk starting at 13 years old. But again, like Robb said, starting with the PVC pipe or an empty barbell and, you know, speaking to people who have come up in sport school systems and Eastern Bloc countries and stuff. I mean I’ve heard stories of those guys working with a broom stick for literally a year or two with regard to the classic lifts. Never once touching a bar that whole time. All they were doing more kind of GPP and prep work and strength work and just building those motor patterns so that they were second nature.

So by the time a kid is 16 or 17, you definitely have some more – some more options. You can start pushing them little more. They – depending on kind of biological age. They should be hitting puberty and starting to produce quite a bit testosterone. And that’s a great opportunity to put some size and strength on them. Again, just being smart with your loading and your progressions and making sure that you’re not exceeding what they’re capable of.

Robb: Cool. You know, a friend of mine Jim Laird, who’s a strength coach – I think they’re in Kentucky. My – Jim, my apologies if you’re not there. I forget exactly where you guys are located. But he shout out a Tweeter paying maybe about a week ago. And he said, “Hey, have you guys been noticing that your 40-year-old clients have better movement than your 15 and 16-year-old clients. And he shot me some video on some of his young athletes.

And these kids looked pretty lean. They looked kind of jacked. And then he had them doing some really basic stuff like some bear crawls. And it was insane. I mean the lack of basic ability to do like a quadrupedal movement pattern and stuff like that was frankly shocking and apparently – you know, this kid had shown up at Jim’s place because he had gone through a speed and agility program and had sore knees and had sore hips.

And when you look at the basic recruitment that was going on just something like a bear crawl and then you imagine trying to recruit maximally with printing and stuff like that, it’s kind of horrifying. And so I – you know, just to extend off of what Greg just mentioned if you’ve got younger at least. And even maybe a little bit older athletes, you know, when they’re coming in and doing basic strength and conditioning, I think a lot of people need to go back and work bear crawling and crab crawling. And some really fundamental, basic movement patterns are missing frequently from folks. And...

Greg: Yeah. And I’m just going to say, that’s – this is something that Joe Ken I’ve heard talk about a number of times.

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Greg: And it’s like these kids are getting into high school and even college and their, you know, coaches are getting them to squat and do all the stuff. And they can’t even hold the plank position for 10 seconds.

Robb: Right.

Greg: You know, they can’t do a pushup. And, you know, he mentioned. He’s like, you know, “I think a lot of it comes from the fact that this current generation is growing up almost completely sedentary.” You know, “They’re watching TV, they’re texting, they’re on the internet all day long and playing games whereas,” you know, “prior generations have spent more time,” you know, “playing physically outside. A lot of PE programs are getting cut. So, kids aren’t being forced to do that stuff,” you know, “when they wouldn’t otherwise choose to it.” And, you know, this is what you’re ending up with is teenagers who – you know what I mean? They don’t know how to arch their back. They don’t know how to – they can barely walk in a mechanically sound manner let alone squat or lift something explosively.

So it’s actually kind of disturbing when you – when you step back and look at it all.

Robb: Indeed. Indeed. So, hopefully that helps. Definitely a good question. Definitely a big emerging problem that I think we need to really tackle in a concerted manner and do some smart risk assessment on this as, you know, societies. We don't have jungle gyms anymore because one in a million kids falls off and becomes a paraplegic and stuff like that or one in 10 million. And as horrible as that is, you know, and we're getting ready to have a kid, and do I want my kid to get hurt? No. But there's also that other – that other reality where if we so neuter the environment that these kids grow up in, they don't develop soundly. There's not sound neurological development.

The kids that are – that have access to some sort of a cross fit type facility or something like that it's going to start looking like two different species of Homo sapien, you know. It's like Homo sapien couches and Homo sapien bad asses, you know. It's – and we can't as a society bare the cost of not doing these basic preparatory features. You know, we need to really allocate the resources to take care of our youth and get them started on – literally on a good foot.

Greg: Indeed. All right.

Robb: Shifting to foam rolling.

Greg: Forgive me if I'm mispronouncing your name. Aileah says, "Hi, Greg and Robb. My husband and I are big fan of the show. We actually have a training session with Greg scheduled in May that we're super excited for." I wonder if I know about that. "While I have a million questions I could ask, today I'm mainly interested in proper foam-rolling technique. I've listened to many of your podcasts but certainly not all. So if you've covered this before you can just direct me to that episode. I have some patellar tracking issues in both legs, which recently has been causing me quite a bit of pain on my right side. This is in combination with a tight right ankle due to falling down the stairs three months ago. Yes, I can be quite clumsy sometimes."

"I do CrossFit WODs at my local box two to three times a week and work specifically on the Olympic lifts about twice a week as well. I'm a 28-year-old woman. I have pain on the inside of my right kneecap, which has been suggested to me is due to a weak VMO. It hurts when I walk, go up or down stairs, ride my bike and bend my knee in pretty much any way with or without pressure. I have been trying to strengthen the VMO with simple exercises and loosen up my outer quad muscles with foam rolling. I've been rolling out my calf as well."

“What’s the best method for foam rolling as I’ve read conflicting information about the best technique. In Greg’s book you write “Pain is a clear indication of the need for foam-rolling”. So I know I need it because rolling is painful. But how much pain is too much or is there such a thing? Is it best to sit on those sorest spots until the pain reduces or just roll them with pressure? Is twice a day of VMO work or foam rolling too much, not enough, or just right? I want this to get better and my legs to be stronger but, of course, I don’t want to do any more damage in the process. Also, what do you think about a standard foam roller versus a rumble roller? Thanks for everything.”

Robb: What is a rumble roller?

Greg: Oh, man, they’re horrible.

Robb: Are they?

Greg: My buddy Mike sent me one. And it’s – picture a foam roller with...

Robb: Is it like divots?

Greg: ...snow spikes – like a tire with snow spikes basically.

Robb: Okay.

Greg: It’s these knobs that are a good, you know, inch tall. So I’ll start there. I don’t like the rumble roller. And reason being, I feel like 1. it doesn’t have good coverage. So you can role on that thing and it’s like you’re hitting this certain pinpoint spots but you’re missing, you know, 60 percent of whatever you’re trying to role. And I think – I tend to be pretty aggressive with that stuff but I almost think that is too aggressive. So I mean if you could happen to roll2 on it in a way that those points perfectly landed in your little trigger point areas then that would be fantastic.

But I just – I’ve messed with it. I’m just not a huge fan. So, I like the standard foam roller, the cross ball and even those little trigger point rollers because they’re a little bit harder those are great for like I.T. band area. But other than that, I’m not into it.

Robb: So, I mean...

Greg: So, Robb, any thoughts on the rolling?

Robb: You know, I guess just start at a level that's a little uncomfortable and then kind of graduate up from there. If it's so painful then you're going to, you know, hold your breath and go to your happy place and you're not really going to affect much in the way it release with the foam roller. So, I think you just need to find one. And, you know, there – they have the white foam rollers that are really squishy, but I've seen people who are super inflamed and pretty jacked up and even that is hard for them. And then they have this black foam rollers that are pretty dense and then you can graduate into PVC rounds and stuff like that.

When I'm really on top of my mobility, I can jump on a PVC roller and pretty much roll out my whole body and I'm good to go with that. And then when I've been traveling or I've been sitting a lot and my mobility has been off then that will cause me to want to blow my brains out. And I've got to go back to a regular black foam roller. So I think just find what level is doable for you and then know that you'll probably – you know, if you stay on top of your mobility and kind of connective tissue, soft tissue maintenance that you'll probably graduate. And that's a good indicator that you're going in the right direction.

Greg: Yeah. So I would say, first all, I always foam roll before I train. That's the first thing I do when I'm getting ready to train. And I think that's the number one...

Robb: Benefit.

Greg: ...most effective thing...

Robb: Yeah.

Greg: ...that I've added to my training is that timing of foam rolling. So I would say, number one, do that before every time you train. And like Robb said, you know, build up to it. With regard to doing it multiple times a day, no, I think there's nothing wrong with that. But what I would say is you might want to try to keep only one session really nasty and keep the other ones a little bit lighter and more relaxing. So if you have a softer foam roller, you can do that or you can find ways to reduce the pressure. So, for example, rolling on two legs at a time instead of one or if you're rolling on your lateral quad, for example, instead of having your entire body weight on that quad, use the free foot to support yourself somewhat, so you're taking some of the pressure off and go for kind of longer, smoother passes rather than the real slow grinds.

And, you know, don't hang out on the real sore spots during those times. Just kind of pass through them and think of it more like a – like a light massage at that point rather than a deep tissue massage. And, you know, you say, "What's the best technique of foam rolling?" I don't know that I'm familiar with roll – any kind of techniques per se. I mean...

Robb: I guess...

Greg: ...get on the thing and roll. I mean, yeah, there's different ways to do it in terms of, yeah, should I sit there for five minutes and let this trigger point release or should I go – instead of rolling on it, should I rock back and forth? I mean, honestly, start with the rolls if you – like I said, if this is one of your more intense sessions then hang out on a spot and do quicker rolls back and forth that, you know – so there's barely any movement. You can try just sitting on one point. That's never really worked well for me. I like having a little bit of movement in there. And then – you know, honestly, experiment with it as much as possible. And I think if you're doing it multiple times a day then do it a little differently each time. Is there something you wanted to add to that, Robb?

Robb: No, no. That was it. That was it.

Greg: I think that covered it.

Robb: Yeah. Yeah. But definitely good stuff.

Greg: Cool.

Robb: And I think Greg's made the point. I've tinkered both implementing foam rolling really aggressively before workout and after workout and I think that biggest benefit is doing it before, just kind of breaking up adhesions, getting you neurologically kind of – kind of wired up and ready to go. Post workout, it's good but I would rather see some PNF stretching, some, you know, static relax stretching, whatever. I'd rather see some kind of muscle elongation stuff at the end of a workout or the foam rolling at the beginning to get you warmed up and moving.

Greg: Indeed. I have to foam roll just to get this podcast going.

Robb: Dude, you mean both?

Greg: I foam roll my brain. All right. This next one is how ripped were cavemen? Christopher says, "Hi, Robb and Greg. Awesome podcast you guys are

running. Thanks a bunch. I'm a CrossFitter and a semi-endurance athlete."

[0:35:03]

Greg:

"Used to bike, run and swim a lot more than I do now, but I still get a couple of hours of endurance in per week. And I eat Paleo with one to two cheat meals per week. Obviously, I train to be fit and healthy and to live longer and better, but also to some extent just to look good at the beach in the summer. During the last six months where I have scaled down my endurance training and focused much more on power lifting and only weightlifting I've seen my strength numbers go up along with performance in other areas."

"No surprise. My weight is also increasing and so is my body fat percentage. Of course, I don't mind as long as my performance goes up but it got me wondering, 'Were our Paleolithic ancestors ripped like today's fitness role models or should we actually aim for a bit of cushioning? Is there an optimum body fat percentage for overall fitness, which to me is something like the CrossFit ideal of endurance, strength, power and mobility, et cetera?' Hope you have time to answer. Thanks a bunch."

Robb:

This is a good one I guess. I would look at this and then we can crawl around in the anthropological stuff. And I think in general, you know, if we look at what little stuff we have out of anthropology, look at, you know, photographs and anthropometry and stuff like that, I think like hunter gatherer males intended to be in that lake; eight to – eight to 11 percent body fat level. Females up a little bit higher than that. I think, you know, doing CrossFit consistently – there are some people you get like a rich froning or someone like that that they can run really, really lean on the volume of activity that they do with CrossFit.

But I actually find that most people when they're doing that level of activity they actually have to carry a higher body fat relative to if they were just lifting weights and doing some sprints and stuff like that. That added stress level actually ends up kind of necessitating a higher body fat level for those folks. And there's some variability with that. It's not an across the board thing. Pat Sherwood had a CrossFit journal piece that was putting on idiot suit or something like that.

I mean he was basically talking about the fact that if he wanted to run at a body fat level that supported the activity pattern of being, you know, as a high level CrossFitter as he could he was carrying around more body fat than what he did when he was just lifting weights. And so I think that

that's something to consider when you start heading down the road of a really high stress input, you may end up running higher body fat level than what you could otherwise run.

And I know that that was definitely the case for me when I lifted weights, did gymnastics, did some sprinting, maybe a little bit of Brazilian Jiu-Jitsu. I could run pretty darn lean when I started trying to be competitive with the CrossFit type stuff because of the volume and the way that it responded to my body. I ended up running at a higher body fat level. So I – you know, I think that there's a spectrum within all that stuff. What's optimum for males? It seems like somewhere around that eight to 10 percent is pretty darn good both for androgen levels. You have decent testosterone level. You have good signaling. You're lean enough that you look pretty good. You're lean enough that you're not getting a tone of conversion of testosterone and estrogen and stuff like that.

So I think that that's a pretty good spot for guys and then, you know, females just kind of ratchet it up a bit from that. But that's pretty much what I've got on that. Greg, any thoughts?

Greg: Grow a really big beard because that's lean body mass and that'll offset the numbers for you.

Robb: It's your protein baby, yeah.

Greg: That's my plan.

Robb: Nice.

Greg: Yeah. I would agree that I think a lot of people – what is aesthetically most pleasing is not necessarily optimal for performance. And I think a lot of – a lot of guys especially strive to be super lean and it's beyond what they can maintain comfortably and so they're kind of in this constant state of deficit in a number of senses of the word. And I think that's certainly not healthy physically or psychologically. And I think one of the biggest things you see when people kind of recover from being – kind of a little OCD about the exercise and the nutrition is that their body fat percentage goes up a little and they start feeling way better.

Robb: Yeah.

Greg: And so it's not to say be 20 percent body fat but, you know, just maybe calm down a little bit on that and certainly, you know, shoot to meet your performance ideals rather than the parent's ideals primarily.

Robb: Indeed.

Greg: All right.

Robb: And just in the side, it's definitely worth nothing that when we see people whether they're in a movie or photoshoots or whatever, you get a ton of photoshopping.

[0:39:59]

Robb: It's kind of one thing to diet down for an event and be, you know, six percent lower body fat than what you normally are, but it's hard to sell to walk around like that all the time. So, yeah.

Greg: All right. This one is called Salt Licks, Tricks and Picks. I had to read that one very carefully. Lucia says, "Dear, Robb and wonderful company."

Robb: That's you?

Greg: Do you think she just doesn't know my name or...?

Robb: I think she's just trying to elevate you even beyond simply being great.

Greg: Oh. Thank you, Lucia. "Thank you so much for what you do. Your website is an amazing resource for those looking to reclaim their health. My question: is salt consumption necessary? If not, what about for those who have low blood pressure? While I don't get light-headed anymore since switching to Paleo, I still generally have low blood pressure. And even after perusing multiple forums and podcasts, it seems the Paleo community thinks upping salt content would be a boon for someone like me. If able, can you expand upon the historical importance of salt and if it has any relation to a human's actual need for salt?" That a – that's a pretty wild question.

Robb: It's...

Greg: The historical importance of salt.

Robb: Yeah. So...

Greg: That's more like a political science sort of question.

Robb: It kind is. It kind is. And that's possibly why I'm floundering on this. So, you know, if you look out in the environment other than being at the

ocean interface or the occasional like salt pan kind of – kind of scenario, sodium as in sodium chloride is pretty rare in the environment. And we intended to get, you know, eight or – eight or ten times more potassium than we did sodium in the ancestral environment. And so we definitely have a taste for sodium because it's kind of a rare element in the ancestral diet. We definitely need sodium to live.

So it's important but, you know, what's happened is we've shifted to an environment in which we get much more sodium typically than we get potassium. And for some people – again, you know, out of the Mat Lalonde refinement of our message of this evolutionary biology gig, for some people, they've had enough time to evolve to an environment in which higher sodium intake is not that big of a deal comparatively. But if we have elevated insulin levels plus a lot of salt, then we've got a hell of a problem because the elevated insulin cause, you know, elevated aldosterone. Aldosterone causes sodium retention, blah, blah, blah. And so there's issues with that.

So whether or not sodium is an issue for somebody is dependent on other features. And then you have some people that because of their ancestral background, they come from a genetic lineage that was selected for really heavy duty sodium retention because of the stressors that their forbearers were put under. And that was critical for their survival under certain circumstances. But now, if they're exposed to high sodium intake it gives them elevated blood pressure like crazy. And this is really endemic in the upper American community because of the stressors that they were put under the – you know, the situations of slavery and being transported across the ocean and stuff like that.

And so there's really interesting selection pressures that happened in that population. And so those folks have exceptionally high responsiveness to sodium. And they need – even if they're on a low-carb diet, they need to be even particularly careful with the amount of sodium that they take in because they can retain too much sodium and too much water and have elevated blood pressure as a consequence of that. So there's a big spectrum within this.

And so for some people like – it sounds like Lucia is on a little bit of the low blood pressure side and she would almost definitely benefit from having a little bit more salt in the mix so that we have a little bit higher blood pressure and you don't get that kind of vasovagal effect when she stands up. But for a lot of other people that may be totally inappropriate. But it's not that hard to figure this out and figure out where you are on the spectrum.

Greg:

All right. Kids and gut repair. Niki says, "Here's an angle that I would like to see covered in the Paleo world but I think has not been addressed. When a family transitions from unhealthy eating whether it was SAD or vegan – in our case – what steps should we take to heal our children? Yes, the first step is changing the diet. But after that, what is appropriate for a child? My four-year-old was vegetarian almost vegan for the first two and a half years of his life. Then we introduced meat and only six months ago did we go full Paleo. On a side note, three days ago I found out that my son's iron supplement had wheat germ in it. So he has been 100 percent Paleo for three days now."

"So I'm guessing his digestive system has been damaged from all of the grains, beans, soy, et cetera that we used to consume. Through this process we discovered that he is gluten sensitive. Getting official tests in three weeks. He had some formula supplemented for the first two months of his life until I got breastfeeding down but was mainly breast fed for a few years. He has had antibiotics once or twice. I'm also gluten sensitive – recently discovered as well."

[0:45:01]

Greg:

"So not only was he getting some of the inflammation in the foods that he ate but he was getting it multiple times a day for years in my breast milk, too. So how does a parent go about healing a child's gut? I haven't found much information on this in the Paleo world. Can he use hydrochloric acid? What else can be done? After families make the switch, then what? How do we actively go about fixing the damage that has been done? I have a lot of questions beside that. How much fruit and carbs are okay for a growing child? They are very active so should I go off of the advice of a high endurance athlete? How different are the needs of a growing child compared to an adult?"

"Most of the parent information out there deals with how to pack Paleo lunches and everyday practical advice. There's a whole other side that needs to be addressed. I don't know if you have the answers to these questions but I know I am not the only Paleo parent who is concerned with this stuff."

Robb:

Good. Holy cat. It's a good question. Chris Kresser put together this phenomenal program The Healthy Baby code and maybe we need to make it a little more clearer that that thing isn't just about getting pregnant and having healthy, you know, pregnancy. And it deals with how to feed and water kids after the – you know, you give birth and the breastfeeding and weaning process and what foods to introduce and whatnot.

The deal with this is that I think if you generally are stirring the boat towards this kind of Paleo orientation and they're – you're feeding them, you know, egg yolks and – ideally, you know, some of the first stuff a kid should eat are egg yolks and beef or chicken livers and stuff like that. If you introduce that stuff early, usually they develop a taste for it and they love it. If it's kind of a late adoption then you can have a little bit more variability on that. But that's a lot of the stuff that you kind of shoot towards kids first; yams and sweet potatoes. Generally, it kind of depends. For some kids, if they've had a lot of problems you may need to follow a gaps protocol. The gut and physiology syndrome protocol where you're cooking down, you know, bone broth so that you're getting minerals and glycine and collagen and all stuff. Chris talks about that in the Healthy Baby code. I'll make a mental note to put a link to that and – to show notes on this so that folks can check that out.

But those are some other things that you can. Not all kids need that. Maybe some croute, you know, some sort of fermented veggies to help reestablish gut flora. That's smart. I don't think I would play around with the hydrochloric acid with a little kid because they're just so young that I think, you know, it would be tough for them to really recognize whether or not they had too little or too much. Betaine hydrochloride has, you know, a therapeutic dose, so I would be pretty nervous about using that. But I would check out Chris Kresser's Healthy Baby Code. I wouldn't stress too much about the macros. I would just throw a good food in front of the kids if they really heavily gravitate towards the yams and fruit and they're not getting seemingly enough protein.

Maybe, you know, put a little bit of a protein requirement on the kids. They've got – you know, what's the Pink Floyd thing? How do you have your pudding if you don't eat your meat? You know, kind of – kind of that gig. So, just keep an eye on that. But I think kids are pretty wily about eating what they need to eat. We might need to lean on them a little bit like I see with Caden. He'll start getting a little bit fruit-heavy and a little bit sweet potato-heavy just because this stuff, you know, is sweet and taste good and all that.

And so Krissy and Sean will need to lean on them a little bit to have a little bit of protein but not always. It's just an occasional gig but they'll all go through three cycles where they're really, really hungry and then there will be times where they just run wild and don't eat all that much at all and they're not going to starve. They will get hungry and they'll come back and kind of make up for lost time later. So, Greg, any thoughts?

Greg:

Cool. No. I would just echo what you just said though that definitely the appetite fluctuates quite a bit. All right. Rich the Diabetic says, "Hi, Robb and Greg. I've been diabetic for over 41 years, diagnosed at age two. I only recently discovered Paleo and read Robb's book the Paleo Solution. At his suggestion, I decided to give it a try for 30 days. Something he mentioned in the book is the difference between Ketosis and Ketoacidosis. All my life I've been afraid of Ketoacidosis based on what doctors have told me because it can kill me. When I started researching it and realized Ketosis is very healthy, as Robb said in his book, I decided to try it."

"I kind of feel like a medical student at this point with all the research I've done. I have tons of medical terms swimming in my head. If you read this in the podcast, please make sure to let everyone know that if they're not careful as a diabetic attempting ketosis it can really harm them. So I started Paleo 11 days ago and started Ketosis 5 days ago. I've been checking my blood sugar 10 to 12 times a day during this experiment. My average blood glucose has gone down from 250 to 134."

[0:50:00]

Greg:

"None of my research prepared me for what happened though. I bought myself some Ketostix to monitor my ketones. And the first time I entered Ketosis, my blood sugar went up by 100. It was at 220, close to the Ketoacidosis threshold. Nothing I researched warned me of this possibility. I had to bolus for it three times before it came down. That's three times the amount of insulin it would normally take. I realized that to adjust or cover this effect I had to – all I had to do is double my basal rate for about four hours and I was fine. Been doing that ever since, but part of the goal in Ketosis is to use less insulin, right?"

"Now I've gone looking for answers on forums, blog, videos, again, swimming in medical terms and no one seems to know for sure what's happening. But speculation from one person is that since Ketosis is new to my body it's causing stress, which produces cortisol, which then causes the liver to turn protein into glucose. This makes a lot of sense to me because when a type one diabetic gets sick the same things sometimes happens. This person believes that after a week or so my body will stop doing this and my blood sugars will stay normal in ketosis. I'm kind of hoping that you can confirm or deny this theory. Thanks for any input you may have and thanks so much for all the information you provide on robbwolf.com and especially the index to the book. It's been so – it's been much help to me.

Robb:

Cool.

Greg:

Yeah.

Robb:

You know, there are a lot of folks and we've had a ton of testimonials on this that they will do this kind of ketogenic – quasi-ketogenic approach and they don't get the rebound in blood glucose. So this is somewhat rare from the experience that we've seen from people reporting this. The only thing that you could do is if you want to is just do exactly like you said: ride it out for a week or two and see if your body normalizes. And it could be that ketogenic intervention for you isn't the – isn't the appropriate mix. It could be that you may dial the carbohydrates down to a level where you're almost ketogenic.

You're may be producing a little bit more ketone bodies than the average person would just, you know, running around. But it's at a spot where you're still getting enough carbohydrate so that you're not getting an out of control production of glucose spilling out of the liver because of both glucagon and cortisol. The tough thing with the type one diabetic is that normally it's that – you know, if you have a blood sugar crash and then the resulting increase in blood glucose level either from cortisol or glucagon or the combination, then normally we get insulin release to kind of mitigate that effect. And the insulin actually blocks the glucagon feed forward mechanism that's stimulating gluconeogenesis.

In the type one diabetic, that doesn't really happen. And so that's where for those folks they still typically need some amount of insulin in the mix. Ideally, we can get them such that they're using much less insulin overall but that – you know, that's – it's variable. There's a lot of variabilities on that. And in the post that I've talked about related to this, you know, your exercise intensity, your sleep, all of these different factors can affect your blood sugar. And so that – that's where I described this is kind of a mapping process where you just need to be as fastidious as you can trying to keep variables similar so that you know is it your sleep that's modifying blood glucose levels? Is it the actual ketosis? Is it – is it exercise?

So that's where – you know, it takes a fair amount of detective work and being willing to be pretty careful with your recordkeeping so that you can know what's really causing what issues. But, you know, if you play with this more, it would definitely be interesting to know how this plays out if you – if you try this for 8, 10, 12 days, you know, two weeks, something like that. It'd be interesting to see if the blood sugar levels go down on their own; if you're able to ratchet the insulin down. If that doesn't work, you know, what carbohydrate level do you function better at? That's a great data point. So I would definitely like to hear, you know, what experience is one way or the other.

Greg: All right. Cool. I like it. That's it for me.
Robb: All right, G. Another one on the books. We'll talk to you soon, man.

Greg: All right. Have fun with your busy week.

Robb: Guaranteed.

Greg: All right.

Robb: Bye.

Greg: See you.

[0:54:22] End of Audio