

# Paleo Solution - 396

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Robb: Welcome back to another edition of the Paleo Solution Podcast. Super stoked for today's guest. It took Craig and I a long time to pin down a day that worked for both of us. Craig Emmerich. You are probably familiar with both he and his wife Maria's work. They're paragons in this ketogenic diet space. Both of them have some fascinating health transformation stories that brought them into doing the work that they're doing.

Craig is an electrical engineer by training. If you've followed any of the podcasts or some of the stuff I've written, it really seems like these folks with an engineering background, when they come into this diet topic and they start looking around particularly to solve problems of their own health or the health of maybe a loved one, oftentimes they settle on this Paleo low carb keto world, really focused on nutrient density, optimizing that part of the equation.

Craig and Maria have a new book, Keto: The Complete Guide to Success on The Ketogenic Diet. The thing is fantastic, really, really good, covers both for weight loss, various disease states. It has a ton of interestingly no cook recipes in addition to your more standard pots, pans, and all that type of stuff. But really, I had a great time talking with Craig. He has a very balance nuanced approach to this whole story, loves the ketogenic diet as much as I do but also understands that it's one tool among many.

The guy is not a zealot and that's a pretty refreshing thing. If you are into figuring out how to optimize the ketogenic diet, want to get somebody's perspective on some interesting topics like oxidative priority of various nutrients, which actually gives you some insight into maybe the way that one would want to set up a particular dietary regimen, this podcast is for you. I hope you enjoy this interview with Craig Emmerich.

Hey, Craig, how are you doing, man?

Craig: Good. How are you, Robb.

Robb: Good, good. You are back from Hawaii. You're in Wisconsin. How's the family doing?

Craig: Good, good. Maria is actually on the Low Carb Cruise speaking right now about oxidative priority and lots of good stuff. He took the boys along and I'm just trying to get some work done here at our office.

Robb: Probably it will be like a ten-to-one work efficiency compared to when the family is home. That's cool.

Craig: Yeah, it is. Getting those ten to 12-hour days on the computer.

Robb: Right, right.

Craig: Getting stuff done.

Robb: Hey, Craig. I know probably all of my listeners are familiar with you, you and your wife's work, your background, but to flesh folks out a little bit about your background and how this whole ancestral health definitely with a keto orientation got on your radar and piqued your interest. You're an engineer by training. Just an interesting aside, I'd been finding that the engineers in our community are pretty consistently providing the greatest insights into what we're doing just due to the data analysis capabilities. Yeah, give folks a little bit more background on you.

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Craig: Definitely, yeah. I think it's also that engineering mindset of a kind of a systems approach looking at the whole system versus the inputs and outputs and everything that goes into it. I think that really helps, that engineering mindset when it comes to nutrition.

There's so many inputs to the body that the elements of nutrition are, of course, key but all the other elements of sunlight and different things that affect the body and I think if we get all those inputs you can better picture of things. But, yeah, my background, I have an electrical engineering degree. I was in that field for quite a few years.

My wife Maria, we got married, and she was doing her thing. She was a rock climbing guide and she's very active outdoors. She herself in her own journey, she had IBS and acid reflux and always struggled with her weight even though she was running marathons. She was following the "proper advice" of low fat diets and all this kind of things. She just knew there had to be something different that would work better.

She started researching and writing her own books and 15 years ago just dove into it and found this lifestyle and has been living it ever since and helping

clients. I kind of came along for the ride. She was flying down this path and probably seven or eight years ago, I see how much energy she has, I see how she's improved all her health, lost weight, I said, "Well, I might as well give it a try too." I kind of dove into it and it just made sense for us. I was in the background keeping her website going and doing all the technical stuff. It just made sense for me to come over and work on our business and go into it 100%.

Robb: Awesome. That's fantastic. Have you noticed specific health improvements, shifting the stuff around? I know for myself I've been -- A lot of folks are surprised even though I'm the Paleo guy, my first foray into this ancestral eating was a low carb ketogenic way of eating, effectively an Atkins approach, and then I found the work by Mauro Di Pasquale, the anabolic diet and metabolic diet.

There was a really good and, I think, now, out of print book called Optimal Hormonal Enhancement or something like that, written by this guy Rob Fagan. I really like that book. Those were really my anchor points, I guess, into getting into all this. And then I played with everything from the safe starches and then trying to follow more standard Paleo protein carb fat ratios. But I've really settled into this, I guess, Dominic D'Agostino might call it a little bit of a modified keto where my protein tends to run a little bit on the higher side.

I'm 165-170 pounds, probably eat about 140-150 grams protein a day, and then just flush out the carbs and fat as needed from there. This has just been kind of my safe haven for almost 20 years. I'll tinker and deviate but I keep on coming back to this spot. What's that process been like for you?

Craig: That's been kind of what -- I came in more slowly. Like I said, I would eat whatever she made, what Maria made me during the week and then maybe on the weekends I would go to the restaurant, eat some things that weren't exactly part of it. That's probably, like I said, seven to eight years ago. But then I just started to notice that on those weekends, after the weekends I didn't feel good, the indigestion and all the issues I had, so I just started eliminating all of that.

This is coming from somebody who used to brew his own beer. That was probably the hardest one to get past. I haven't had beer in a long time now and just feel a lot better. It was just that same thing of I would still have beer on the weekends and I'd feel like crap and the next morning have digestive issues and I just started saying, all right, it's not worth it and I cut it out and I feel a lot better.

Robb: Man, people ask me. They're like, "Do you miss anything from pre-keto, pre-Paleo land?" There's very, very little that I miss but beer is one of them. I mean, it's kind of funny because when we figured out that I had celiac I was on this terror of finding the thickest darkest beer you could possibly imagine. It was basically liquid bread.

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And I love this stuff but then I was, you know, my guts were all tore up. I had ulcerative colitis. Out of anything, that's really about the one thing that I miss. It's kind of like French bread. It smells amazing when it's cooking. But even with that, every once in a while I'll throw down a gluten free piece or something like that and that's about 95% the same. Man, there is no substitute for beer. I like NorCal margaritas but they are not beer.

Craig: Yeah. That one stuff. But I just try to look at how I feel especially right now. I don't know if you know, I'd been dealing with Lyme disease.

Robb: I've heard a little bit about that.

Craig: For a while now. That's another area where keto has definitely, I think, helped me keep the inflammation down. There's a lot of people, there's quite a few people out there in the carnivore community who swear by it for Lyme, helping with Lyme disease and the pain. I think that has helped me. I'd been dealing with it probably four years now. I'm about finally got diagnosed about four months ago and about four months into the treatment and the treatment that I'm on is some pretty drastic protocols.

Most people are pretty much bedridden by this point. I think my lifestyle and everything, I'm definitely -- I'm in pain but I'm able to keep functioning, able to do my work. I think having that diet that's low in inflammation and keeps things under control has really helped.

Robb: Right. That brings up an important or possibly an interesting topic, at least for me. Since we do only have six listeners, they're not interested. We'll see about jumping into this. It's interesting to me because keto as a fat loss aid, in my opinion, there is -- Man, there's just a lot of contention and back and forth on the topic. I see some folks doing some things that from my perspective are maybe hamstringing that fat loss and maybe even enhancing inflammation at the end of the day.

If they're just overeating and if the goal is fat loss, I think that we're maybe at this point now where we kind of like, okay, calories do matter. The insulin hypothesis is really interesting but maybe it hasn't borne out quite what we thought that I had. I think that you're very much in that kind of lipo-centric view of insulin resistance. Maybe we can dig into that a little bit.

On the one hand, we have this weight loss scene for the ketogenic and para-ketogenic diets that maybe it's out into some squirly areas and then people just

kind of want jettison the whole keto approach but then we flip things back around and when you start looking at a lot of chronic disease states with Lyme being kind of maybe at a bull's eye within that thing, which is interesting, in that it's both an infectious disease and a chronic condition and oftentimes keto or maybe even going that full carnivore, it is the only thing that works from a dietary perspective to try to mitigate this stuff.

What's your sense of trying to find some balance between these two competing worlds? Because in my opinion, keto is still vastly underused in the medical scene for a huge number of conditions but at the same there's kind of been some mysticism that's grown up around the fat loss scene. What are your thoughts around all that stuff?

Craig: Yeah. That's one of the reasons we wrote our book Keto, is because we want to bring some of that clarity in. We have a whole chapter on keto myths and trying to break down some of these barriers to people not only because we understand the biology and we know that that's not a great way to go, you don't want to be throwing Bulletproof coffees and things completely devoid of micronutrients, there's tons of calories on top of you and into your body when you're trying to lose weight and especially when you start talking about like fat balance and how that, if you're trying to lose fat off your body you shouldn't be guzzling it in your diet.

Beyond all of that, we'd been doing this now, like I said, almost 15 years for Maria helping clients and what we follow is the results. It's been really interesting for us because we have literally over a thousand client testimonies of people just sending us their results that when they follow this lifestyle everything from -- We had a woman whose alopecia reversed and she got her first haircut in 20 years. Every kind of gastrointestinal issue whether it's Crohn's or IBS or colitis, seeing big improvements.

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All eczema and these skin issues, all of these issues, people getting off of all these blood pressure medications and reversing their diabetes and getting A1Cs below five, we're doing all these things that people -- The weight loss is just a secondary bonus to how amazing they feel, how much healing they see in the body and how they get off all these medications.

That has what's driven us not only to, again, chase the results, not necessarily any fads or anything, but also keep up on the science so we can understand how our bodies work, how the biology works, and leverage that to improve people's results. You talk about leaning higher on the protein in your diet. I do as well.

With my Lyme, I've been floating more towards carnivore I would say. Not totally but in that direction.

This week one of the things I'm working on is Protein Sparing Modified Fast cookbook that we're coming out with in about a week. We have seen that with our clients that if doing something like a protein sparing modified fast is so great for improving their results not just weight loss but insulin resistance, reversing that. Ten years ago Maria actually called, she coined this in her book at that time, pure protein day.

We hadn't heard of protein sparing modified fast yet. We just knew that the thermic effect of food with protein and if you keep the fat modulated lower and get the protein up a bit so they get that thermic effect of food and you end up being satiated with a lot less calories and it's really great for results.

Robb: You kind of answered my next question. I was going to ask what are some things that you've seen people may be run aground on and then what are you doing to kind of do a logic tree of, okay, we've been doing this, here's an option, we're going to try this, and if we're right then this is the expected results, if we're wrong, this is maybe the other expected result. It sounds like maybe when folks run aground, like introducing maybe a protein sparing modified fast, which maybe you can unpack that next, but is that kind of the way that you guys go about working with folks?

Craig: Yeah. Maria is actually really into certain supplement regimens as well for helping with healing. With the well formulated ketogenic diet, you're doing it right, you're getting the right kind of nutrient dense foods, I don't think supplements outside of sodium, which everybody has to supplement with salt, but I think you can get pretty much everything you need with some leafy greens. And if they do it right you don't need any supplements.

But if you have a chronic disease, if you have an issue with healing or gastrointestinal tract, there are some supplements that you can take early on that can really help get you into that healing direction and push you along a bit. If you've been eating a sad diet that's devoid of micronutrients for so long, amping them up for a while just to top off your cells is a good way to help amplify that healing. That's another way with our clients. We'll actually play around with -- Maria is a whiz. She knows exactly based on conditions what supplements can help boost your healing if you up them for a little bit.

Robb: Right. That makes a ton of sense. Talk a little bit about this protein sparing modified fast especially since you guys have another book coming out on that. I think some people may have heard of these things within the context of like Medifast, which was kind of a medically supervised shake oriented program

which had mixed issues with it. But how can people do that in kind of the whole foods approach?

Craig: Yes. So, basically, protein sparing modified fast, it's in the name. You get a lot of the benefits that you would get from water fast that is oxidizing more, restore our body fat, increasing the use of stored body fat for fuel but don't have some of the main negative of a water fast which is losing lean body mass. The water fast, you're going to lose about, if you're already keto-adapted, probably about a third of a pound of lean mass, each day you do a water fast. So, if you do a three-day water fast, that's a pound of lean mass that's gone.

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Proper therapeutic type fasting, you're going to feast well after and rebuild that lean mass. But if this isn't for like chronic disease or anything, if you're just looking for weight loss, we find it a lot more beneficial to do a protein sparing modified fast so that you basically get all the benefits of the fat burning, the improved insulin resistance of a fast, but you get enough protein to preserve that lean mass so you don't lose that third of a pound each day of lean mass. As you know, Robb, lean mass is not easy to come by, build upon a muscle. That's nothing to take for granted.

Robb: No. Especially when you get to be an old codger like me, you want to fight and scrap for every bit that you have, absolutely.

Craig: I understand that.

Robb: It's interesting when I've looked at the evolution of all of these stories, this protein sparing modified fast, and this is maybe getting out there a little bit of a reach, but when I look back at some of the early Cordain and eating recommendations, which were quite high protein, mainly eating the fat that came along with the protein, a ton of low glycemic load vegetable matter, and then even trying to orient people more towards the fruits that haven't been kind of Luther Burbanked

Apples used to be much smaller. Oranges were smaller. We've gotten really good at making these things huge and super tasty. But when you look at that, the best way that we could maybe construct a "Paleo diet" with modern food sources, it looked a hell of a lot like a protein sparing modified fast. It wasn't too far off of that. It's interesting to me that maybe something a bit closer to that might actually be an optimum point for a lot of people particularly in that fat loss scene due to the satiety that people experience from the protein, the thermic effect, and then you guys have really been beating the drum of oxidative priority within these fuel substrates. Could you talk about that a little bit? What is oxidative

priority and why is that important? How can that inform the way that somebody's putting together in nutritional approach whether it's keto or Paleo or what have you?

Craig: I think oxidative priority is a really great way to look at all the fuels and, like you said, to understand why a certain approach work and others don't. Oxidative priority is your body's process for utilizing fuels that come into the diet. Everything that comes into your mouth, it's got a priority by your body of what needs to be burned first, burned or stored.

It's really interesting because the oxidative priority really goes basically in order of storage capacity which kind of makes sense. Your body doesn't want to have a ton of fuel in the blood. If there's so much fuel in the blood you're going to die. So, what's the first thing it's going to attack if it's high in the blood? The thing you can't store. What can't it store? Alcohol.

Alcohol has no storage capacity in the body and you have to completely burn it out before you can address any other fuel coming into your diet. So, that's the number one oxidative priority. Number two is, I've added to the chart, to add exogenous ketones. If you're doing that, that's the next thing it's going to have to deal with because you got elevated fuel there.

Next is protein. But as you know, the body doesn't want to really use protein as fuel. It's expensive. It takes what, 5ATP to turn it into a fuel source, where I can use carb or fat for, what 2ATP. So it doesn't really want to do that. And, obviously, amino acids, they build lean mass. Your body is always repairing and rebuilding lean mass. It's got to prioritize that for that to be used for lean mass.

The next is carbohydrates. Carbohydrates have a moderate storage capacity like 1500 or 2000 calories stored as glycogen. And then the last one is fat. Fat is theoretically unlimited. That's why it's the last priority. You can just store that away into adipose tissue while you're dealing with all the other oxidative priority fuels. You look at the perfect storm of how do I -- if you want to gain weight I would start drinking some alcoholic beverages that have a bunch of carbs and some fat in them. And guess what? That alcohol is going to force your body to store all those carbs and fat away while it deals with the alcohol. That's a great way to pack on the pounds.

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Robb: Which sounds like a basic meal out at the pub or something like that.

Craig: You're having cocktails while you're eating all this carbohydrate and fat in the meal and all that get stored away as your body's trying to deal with the alcohol

coming in. That's why the number one thing we do with clients for weight loss is cut out the alcohol. But if you look at that priority sheet, you can really look at it and say why certain things work.

Like a protein sparing modified fast, there's no alcohol. Of course, no exogenous ketones. Just enough protein or maybe a little more than you need for lean mass. Little to no carbohydrates and just a little fat, maybe 30-40 grams of fat, just enough for absorbing fat soluble vitamins, you have your hormones and that kind of thing, and that's it. Now, where's the fuel coming from? It's got to tap the stored adipose tissue and utilize that to make up the difference.

Robb: Craig, I'm working on a piece on mTOR because I've been -- Oh, man. You know you start talking about some of these topics and folks that are maybe on the other side of the fence with these things, like PSMF or a little more robust protein intake on a ketogenic diet, they'll just throw this thing like it's hand grenade into the conversations.

They're like, "MTOR." And then they run. It's making me crazy. I am working on this piece. MTOR is clearly a really important component to effective aging. We clearly don't want that lever flipped on every day all the time and all the tissues. But where are you at on that mTOR topic? Because I know just about any time I mention a PSMF or even just some of these more robust protein feeding levels on a ketogenic diet which, again, are actually really must in the grand scheme of things, but folks just throw this mTOR topic out and then they split, don't really substantiate anything all that much. Where are you at on that topic?

Craig: Yeah. I think the issue there is it's like how contentious the whole protein by itself discussion gets. I think part of that is we all have to come to some point of what is too much. The protein thing, I see this all the time, people go back and forth. "It's not high protein." "No, you're going to eat--" They go back and forth. At the end of the day they're only talking about 10-20 grams difference in protein amount. One's calling the other guy high protein and the other one's calling him too low but if they talk about how many--

Robb: Actual amounts.

Craig: lean mass or something, the actual numbers, they're not that far off. They get into this psychological space. I think mTOR is a little bit of the same. What's the degree, right? Yeah, there are just some aging component there but to what degree and to what level do you have to -- Is it hundreds of grams of protein to really significantly affect longevity? Or is it more minutia than that?

My guess is it's much higher. A lot of the studies, I'm sure you're familiar with Dr. Rosedale and some of the things he says around I think comes to one extreme,

that he just basically don't ever want to touch it. I think a lot of the studies have shown that mTOR doesn't cause aging or cancer. If you already have it, it could drive growth. But cancer drives off of just about anything for growth. That's kind of where I think we got to come to a place where we get some understanding of, okay, great, this mTOR is something that deserves attention, it causes aging, but where does it become a problem?

Robb: Right. One of the things I'm digging into is this interesting paper that looks at calorie restriction across a host of different organisms. It makes the case that not all organisms respond favorably to caloric restriction. Some of them, they make the case that possibly everything that we've seen in these lab animals being fed a calorie restricted diet, that all that it's doing is protecting these animals from a really poor lab diet. And then when you feed these critters a specie-specific diet there's no benefit to caloric restriction.

And so then it circles back around to, okay, well, if we take all that at face value and then we apply this to a specie-specific diet for humans, some sort of Paleo-esque, keto-esque, something Mediterranean or whatever, but something in that basic ball park, just not eating constantly out of the center aisle of the supermarket, it really becomes dubious if there's any upside to these really onerous interventions of extended fasting, super low protein intake and particularly absent like a good strength training program.

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The benefits that folks garner from getting stronger, gaining muscle mass, gaining bone density and then eating to fuel that process, it just, for me, becomes really dubious that there's a benefit on the backside of that. And if there is, it may be that you live a bit longer and you're weak and super low sex drive and cold and just the negative list seems pretty significant and it doesn't really strike me as all that much of an upside. But, yeah, that's a--

Craig: The question is: Do I eat 30 grams of protein a day? And over the course of my life, do I gain a year of life? And guess what, at the end of that life, I'm in a wheelchair because I can't move. No muscle mass. Or do you live a year less but at the end of your life you're going on hikes and you got strong lean mass and all that? That's where you got to try to find the balance and what to go for and that's what we don't understand, is what is the difference? I put on a hypothetical one year. That's the question.

Robb: And to your point, that hypothetical one year, if we're avoiding the diseases of civilization, basically hyperinsulinism that comes about from poor food and overeating and bad sleep, chances are, if people just follow that path and then they can lean on kind of modern medicine to the degree they needed, if they

break their arm or they get by a bus or whatever, your chances of living a pretty damn long time are pretty high.

There's genetic variations within that but if we avoid these diseases of civilization then all of a sudden the likelihood of living a pretty damn long life is really good so we're getting out there like 80-90 years that we could expect the benchmarks. So then we're making a tradeoff between maybe 89 and 90 years. And then the 89-year old scenario, still fit and robust and then a very compressed mortality-morbidity curve where it's like a two-week illness, some pulmonary issue like infection or something and then you head out versus the potentially decades long decline. One of those looks a lot more appealing than the other one to me.

Craig: Exactly. Your point is very valid. This mTOR versus this other elephant in the room which is coronary artery disease, diabetes, if you stack up how many deaths per year from all these other issues that presumably if you're eating a low inflammation high nutrient dense diet you're going to avoid much of those parallels? Right there, the longevity you've gained from that, I think, would negate anything you'd get from an mTOR in the other direction.

What you also pointed out was the fasting thing. One of the things that's always pointed to with fasting is autophagy. You increase autophagy when you fast, water only type fast and stuff. Guess what increases autophagy even more than fasting? Exercise.

Robb: Right. And even sauna, I think, too they're finding, yeah.

Craig: To your point, why not just focus on the strength training and feeding that than doing the other thing which is detrimental?

Robb: Right. Fascinating stuff. I'm definitely not trying to make light of folks who are trying to unpack this and it's really complex but I'm just getting the sense that folks are possibly making all of this a lot more complicated and painful than perhaps what it needs to be which is--

Craig: Exactly. The thing that's amazing to me, and this gets in a little bit to the hormone manipulation and all of that, but one of the things that is amazing to me about protein sparing modified fast is people -- You're out talking about a lot of calories like we talked. It's a pretty good calorie restriction. If you're an average sized woman, you might be getting only 600-700 calories in that day because you're getting it all from protein and protein with the thermic effect to food, what the effective calories you end up in your body is maybe 700 calories, 750 calories with 110 grams of protein, 30 grams of fat and little carbs.

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But we get all the time from clients saying, example right here, Jillian said, "I tried it. I couldn't believe I could almost not get the protein in for my goal. I wasn't hungry." I mean, isn't that not the goal? I mean, if there's anything I understand about weight loss it's that if you can find a way to keep people fairly satiated throughout the day eating a low amount of calories, that's what you want, right?

Robb: Right. That's really the holy grail there, trying to find a way that people will spontaneously produce caloric intake and that PSMF is a really powerful tool in that direction.

Craig: Exactly.

Robb: That's funny. I've been looking at some of these other peripheral adjuncts to autophagy and, like you said, exercise is really powerful stimulus. Sauna is a powerful stimulus. Coffee, even decaf coffee, is a powerful stimulus. I'm like, let's see here. Maybe I just do a little bit of fasted training, drink some coffee and then hop in the sauna at the end of that and then eat some good food on top of that and we're -- I think we're may be getting the best of both worlds out of that story.

Clearly, the proof will be in the pudding here a couple of decades down the road. That seems like a much more reasonable approach both on an individual implementation but then also just on living a socially connected life. Because as you guys, I'm sure, know, it's challenging when you start modifying your eating away from the standard American diet. It can become isolating under the best of circumstances. It just seems like a great way to not -- If you want to invite somebody over for a dinner party, people actually show up because they want to hang out with you.

Craig: Exactly. I think looking at these other components is something that we like to do as well with our clients of bringing it out even further, things like focusing on sleep is such a huge component of weight loss and healing. People nowadays get not nearly enough sleep and not quality sleep. Things like worrying about blue light in the evening and circadian rhythm at that, all of these inputs from our environment that are so messed up today compared to our Paleo ancestors, things like getting enough vitamin D from the sun.

Sunlight has been so vilified and sunscreen use has skyrocketed up tenfold over the past 15-20 years. So, obviously, skin cancer must have gone down, right, if that much increase in sunscreen has gone up? Well, no. It continues to skyrocket. And so maybe it's the omega six seed oil and sugars in our diet that

are causing problems in our epidurals that cause oxidation. It's maybe not the sun so much.

Obviously, bad sunburns are bad. Nobody is advocating that. But getting 20-30 minutes of good sun exposure every day gets you up to 20,000 IU of vitamin D. Vitamin D is so correlated with lots of diseases if you have low vitamin D levels. And you also get things like cholesterol sulfate that can only be made in the skin that also have great health benefits. Today we sit in these windowless offices with artificial lights bombarding our eyes with artificial light and TV screens and iPhones all day long and into the evening. We just didn't have that environment for very long in our evolution.

Robb: Right. It's funny because the -- I don't know if doing these things is necessarily easy but it's like if you just look back even maybe 50 years ago, what did people do to relax? They went and laid in the sun and they got a tan. I was talking to a friend of mine who's an aircraft carrier. He's a pilot. They were looking back at some photos of sailors from the 40s and 50s and when they had downtime, when they were off duty, all the guys were outside. All the guys were on the flight deck and they're laying out there getting a tan.

Now, it's interesting the culture has shifted such that they want people to workout and stuff like that, the food on the boats are terrible. But this guy is an officer and he's a pilot and so one day he was sitting outside with his shirt off and laying down.

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A couple of guys yelled at him, but they ended up being enlisted guys, seems like, "Hey, check yourself there." They were like, "Oh, I'm really sorry but if you're doing that then all of my enlisted guys are going to want to do what you're doing and that looks lazy and--" All this other stuff. Now, we have this whole culture of just the things that we should be doing to take care of ourselves are looked at in this weird way. Man, that's going to be a whole interesting story to unpack all that over time.

Craig: Yeah. I think the requirements are a big part of it. My wife is a big fan of cold therapy. She has a tub outside at our house here and she fills it with ice cold water and she'll soak in it. We're finding more and more of that. Cold therapy can be so good for muscle recovery and a lot of these. That's why you see NFL player jumping in an ice bath at the end of the game.

Again, in our environments, we didn't always have hot running water. I mean, if you wanted to bathe, you jumped in the river, and sometimes, most of the time, it was pretty cold. So, it's those environmental aspects that have changed so

much in the last hundred years that if you get back to -- These are free things to do, getting some sunlight, getting some cold exposure, but they can be beneficial to your health.

Robb: Absolutely. Craig, I love the work that you guys have done. I really dig the new book. Tell people about the book. I mean, we've discussed, actually, quite a bit of at least the intro part of the book. Tell folks what the title is and what else is involved with the new book.

Craig: Yeah. It's called Keto, just K-E-T-O period. As an electrical engineer, I went into product management and in product management you basically are the owner of that product and you have to be able to deeply understand the technical level of that product. But then disseminate that information to a wide range of people whether it be other engineers, the sale staff, customers.

I gained a skill there, I believe, of being able to explain complicated things in an easy to understand way. And we tried to put a lot of that in this book. I'm talking about some pretty complex biology but I tried to put it in ways that are really easy for the laymen or anybody to understand but enough of it so that if somebody is more technical they also get something out of it.

Like you were describing, the adipose-centric insulin resistance type of model or protein sparing modified fast. We actually have a whole section, in addition to the whole chapter on myths, we have a whole huge section on modifications for disease. And this is getting back to what I described earlier of we see so much improvement in health with clients that the weight loss is a secondary bonus. We put a lot of text into if you have this condition here are some of the things you can do, some of the supplements you can add to help boost and heal in those situations.

Robb: Awesome. Well, it's a fantastic resource and I'm super stoked that you guys have continued working in this area. Now, what's the timeline again on the new Protein Sparing Modified Fast book?

Craig: It's going to be just an ebook on our website. It will be on keto-adapted.com. I'm hoping to have it done tomorrow.

Robb: Okay. Awesome.

Craig: I'm putting it all together right now.

Robb: This thing is going up -- what day are we probably putting this up? Next Tuesday.

Craig: Yeah, it will be out by then.

Robb: It should be out by then. Give folks the URL again so that they can track you down and maybe check that out too?

Craig: Yeah. It's keto-adapted.com.

Robb: Awesome. And where else can they track you guys down on social media and all that stuff?

Craig: It is kind of our subscription site. We do a lot of support stuff through there. Maria has her blog at mariamindbodyhealth.com. Tons of free information and recipes out there. And then, of course, Instagram, Twitter, et cetera, these are under Maria Emmerich or Craig Emmerich.

Robb: Awesome, man. It's so good to finally get you on the show. I know it was a long time coming between the work I'm doing with the Chickasaw Nation and then just the general squirreliness of living at the Lazy Lobo Ranch. It took us a while to pin this down but I'm super stoked to finally chat with you.

**[0:45:00]**

Craig: Thanks, Robb. I really appreciate you spending the time.

Robb: Hey, are you going to be at any upcoming events? Are you guys going to be at any upcoming events? You mentioned Maria's at the Low Carb Cruise right now. Any other public events you guys are going to be at going through the summer and fall?

Craig: Yeah. We're doing -- In a couple of weeks Maria is going to be doing an Italy Low Carb kind of thing with a touring company and then we're both going to be at KetoCon speaking. That will be good. Maria will be talking more about oxidative priority and I'm going to actually talk about micronutrients and food and nutrient density. And then in the fall, I'm not sure if we're both speaking or if it's just Maria speaking at the Low Carb in Mallorca, Spain, Low Carb Universe over there. We're both at that as well.

Robb: Nice. Fantastic. Again, Craig, so stoked for the work you guys are doing and, hopefully, our paths will cross here at some point in the real world but looking forward to chatting with you guys again soon.

Craig: Thanks, Robb.

Robb: Okay, take care. We'll talk to you soon.

Craig:       Bye.

**[0:46:09]    End of Audio**