

Paleo Solution - 285

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Hi folks. Robb Wolf here. One Faux pas on my first attempt at making this intro very excited for today's guest. Paul Jaminet is a physicist. He's also the author of the perfect health diet, the founder of the perfect health diet retreat and one of the brightest minds in this paleo ancestral health evolutionary medicine scene. Paul, did I do a better jo on the intro at that time.

Paul Jaminet: Yeah. That's terrific Robb. It's great to be here with you.

Robb Wolf: Awesome. Awesome. So you are you jetlagged? You just got back form a big trip.

Paul Jaminet: No, I'm recovered now. You know, thanks for our baby, I can get on to any time zone.

Robb Wolf: Awesome. Okay. Nice. So tell folks about this trip?

Paul Jaminet: Well I – you know, the paleo movement is just getting going in a big way in many parts of Europe and Germany in particular. So they just had the first paleo convention in Germany and it was modelled on Paleo FX. So it was held in Berlin. I was in a funky hippie space in the former East Berlin.

Robb Wolf: Oh, yeah.

Paul Jaminet: About 10 minutes from the mall. You know, it was like a former kind of a warehouse space that have been made over. So you had like one part of the warehouse was an auditorium, one was a workout area. They had like a climbing bar and mats and stuff. The next warehouse over was like a meeting area. They had like rock bands in between there are all these food vendors.

Robb Wolf: Nice, nice.

Paul Jaminet: And it worked perfectly well and it was a lot of fun.

Robb Wolf: Now did you know about how many folks showed up for this?

Paul Jaminet: Well they had two groups. So they had an expensive group which got to do everything including hear the talks and they had 300 people for that. I think the cost of that was like 120 Euros something like that. And then they had a cheaper admission to just the food mart and the food vendors and that was packed all day so.

Robb Wolf: Uh-hum.

Paul Jaminet: I imagine they have thousands of people there.

Robb Wolf: Wow, wow that's very impressive. I was actually invited to go out to a paleo event in the Czech Republic and just couldn't pull things together to do that this year but it's very exciting to see that stuff get in some really great momentum and everywhere besides the United States at this point. That's very interesting.

Paul Jaminet: Yeah it's a lot of fun and you know, and now there's going to be an ancestral health meeting in New Zealand that's in October.

Robb Wolf: Right.

Paul Jaminet: Which I can't make but you know, I wish I could

Robb Wolf: I keep, I'm on the fence with that one. Like I desperately want to go but it think that my wife will kill me if I bring the family or if I leave the family here so. [Laughs]

Paul Jaminet: Yeah.

Robb Wolf: It seems like a no-win situation on that one and Sagan just now turned a year and traveling with small kids across the whole planet and disrupting their sleep and everything just seems like a bad idea at this point. But we'll see. I'm still noodling on that.

Paul Jaminet: Yeah, yeah. We have the same issues. So our Luke just turned 11 months.
[0:05:04]

Robb Wolf: Oh congrats, nice, nice.

Paul Jaminet: Yeah and my saintly wife kindly stayed home with him and...

Robb Wolf: [Laughs] Awesome. So Paul did you guys have something, something special happen with one of the restaurants there in Dusseldorf?

Paul Jaminet: Yeah. But we partnered with a gourmet restaurant in Dusseldorf. It's on the Königsallee which it's the premiere shopping street in Germany. So it's kind of like --

Robb Wolf: Nice.

Paul Jaminet: --Fifth Avenue where it's on and it's also a fashion district. So when I was out in Germany you know, I first spent the weekend at the paleo convention and also spoke at a meeting at the German paleo medical society and then I went to Dusseldorf and did an event at the restaurant there. That week it was fashion week and so there were all these models and photographers and people eating at the restaurant. But it was a lot of fun and --

Robb Wolf: Awesome.

Paul Jaminet: -you know, so I think that's -you know, one thing about our diet compared to lower carb versions of paleo is it's fairly closely resembles gourmet cuisines.

Robb Wolf: Uh-hum.

Paul Jaminet: And you know, so it's pretty tasty and I think being represented in a gourmet restaurant could have helped win over the food community a little bit to ancestral diets.

Robb Wolf: Right, right, absolutely. Yeah, yeah there's a lot of synergy there with food sourcing, farm to table. Like there's a lot of opportunities there to build some great bridges.

Paul, I do want to talk about you know, I believe that you folks were really instrumental in getting discussions about fermentable fiber and some of the downsides of exceptionally low carb eating. You know, I really think you guys champion that and made that an important topic of discussion. But before we jump into that, how did you make a shift from physics to ancestral eating and whatnot? Like what was that process?

Paul Jaminet: Well I think it was similar for me to a lot of people in the ancestral community. You know, I had personal health problems so basically the history was I left physics well before I discovered paleo. So I switched out of physics in 1996 in order to help start a software company and you know, so that was in the middle of the internet boom and I just thought software would be a lot more exciting than physics.

So the branch of physics I was in it was a form of astrophysics and it was becoming dependent on space missions in order to make progress.

Robb Wolf: Uh-hum.

Paul Jaminet: Space missions if they happen at all they take 30 years and there are hundreds of people very bureaucratic, very slip changing and I just looked at them and said I'll be horribly bored if I --

Robb Wolf: Hang in with that.

Paul Jaminet: Yeah if that's how I spent my life.

Robb Wolf: Right.

Paul Jaminet: And you know, so the internet, the internet was happening and looked exciting and you know, I figured what could be more exciting than entrepreneurship and so I got involved in that. The first company was sold in 2001 and then I started another company with a couple of cofounders of that company. The second company moved to Silicon Valley a couple of years later and I stayed in Boston where my wife works. And you know, sort of worked part time telecommuting to them

and did some consulting and decided to start writing some books. So I was working out of home and it became. And meanwhile my health had been declining so I took a yearlong course of antibiotics at age 9 for acne and the antibiotics didn't help the acne but they really hurt my health. You know, so I was a runner and my running place slowed down dramatically while I was on the antibiotics.

It must have really messed up my gut flora and I had basically chronic fungal infections after that so I must –you know, I must have allowed some kind of fungal infection take over my gut. But anyway, after that I had you know, my health just got steadily worse every year. I couldn't figure it out. The doctors couldn't figure it out. Finally the first thing that made a difference is when I found the paleo diet and that was through Art DeVany

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Robb Wolf:

Uh-hum.

Paul Jaminet:

That version it was way too low carb but it fixed some things. So some things got better and suddenly some new negative symptoms appeared. I worked out that they were due to being too low carb and deficient in certain micronutrients. And then I decided alright, you know, clearly paleo has a lot going for it but you know, it really needs to be improved, refined and we've figured out how to do it in the way that doesn't lead to nutritional deficiencies.

So I started working with my wife on that. She had health problems too. It took us five years of research. You know, so the basic strategy since I had had some nutritional deficiencies as just alright let's look at every known nutrient. Let's go through the literature finding out the amount and then we'll work backward to food and say what's the optimal mixed foods. But it's all going to be within the Paleolithic ancestral template where you eat natural whole foods.

Robb Wolf:

Right.

Paul Jaminet:

You know, the kinds of things that a hinderer/gather would hunt or gather. So that's what we did and it took you know, five years and then I started blogging and we refined it. We didn't you know, substantially revised a new addition of our book in 2012.

Robb Wolf:

Nice.

Paul Jaminet:

And yup and you know, we're really pleased with the way that I worked out. You know, like I said it's really delicious. It's like gourmet cuisine and

we were really surprised when it turned out that way. But in retrospect it makes sense. You know, why would our brain have evolved to like food unless it was trying to encourage our hunter/gatherer ancestors to go get health improvement food.

Robb Wolf: Right.

Paul Jaminet: Yeah. So you know, I think it all made sense and our readers have had good results on it.

Robb Wolf: Absolutely. It's been one of the primary areas that I've been fiddling with because I like you said I had significant health problems, GI problems, metabolic derangements. I was actually pretty much ketotic for years and it was such a profound change for me because my whole life up until that point it's like I did this at age 27, 28. My whole life prior to this, like I could count the number of minutes that I had like mental clarity on one hand. I mean it just would seem like my whole childhood adult life, it felt like my head was stuffed with cotton. I just couldn't really think that well.

I would have these little moments of clarity but they were fleeting. And then the first time that I tried a ketogenic diet, it was just like this fog had been lifted. So that was very powerful for me but doing a lot of glycolytic sports activity that wasn't really amenable so I tried cyclic low carb diets and a host of other things. I've really been playing around with some of the macronutrient ratios that you recommend in using MCT oils in conjunction with adequate levels of starch to try to get a sweet spot there. I definitely want to dig into that but I wanted to bounce something off of you. I am curious if you have looked into any potential for antibiotics creating mitochondrial dysfunction in humans.

Now we definitely know that they can wreak havoc on gut flora but given that mitochondria have different ribosomes and they look very, very similar to bacteria and things like that. Like I've done a little bit of digging and there seems to be a little bit of information around that but could that possibly be some of the one-two punch that we see with long term antibiotic use particularly with like we see a lot of folks with Lyme disease end up with some chronic fatigue and really recalcitrant problems that seem to only then respond to something like a ketogenic diet which possibly has kind of a reset mechanism on the mitochondria? Do you have any thoughts on that?

Paul Jaminet: Yeah. I mean that's definitely a risk of antibiotics at least some antibiotics. So I don't think every antibiotic affects the mitochondria but some of them do.

Robb Wolf: Uh-hum.

Paul Jaminet: I haven't looked in this lately but if I recall correctly like the quinolone antibiotics do that and I think that maybe one reason that often cause things like tendon ruptures and some of their side effects.

Robb Wolf: Right.

Paul Jaminet: So it's a –yeah it's definitely an issue and you know I think this is one of the places that should be really major point of emphasis for research for biomedical research. It's you know, we really need better targeted antibiotics that can very specifically hit pathogens and not do so much damage to all the beneficial bacteria and to our mitochondria and our cells.

[0:15:18]

Robb Wolf: Right, right. So Paul what – how are you helping people navigate this low carb versus high carb or moderate carb? You know, some people clearly do seem to experience some at least cognitive benefits while in ketosis. I know that I'm one of those folks like I just – I feel like I'm really firing on all cylinders while ketotic, much more difficulty maintaining kind of you know, normal blood sugar levels, what I perceive to be normal blood sugar levels. Just not as good as cognition, not as consistent. But how are you helping folks to navigate that whole story?

Paul Jaminet: Yeah. Well you know, when people have cognitive issues then I'll almost always recommend trying a ketogenic diet for a few days just as a diagnostic stuff to see if it helps. And you know, there are several ways in which a ketogenic diet can help. You know, so we know there are some people who have genetic mutations which impair, transport our utilization of glucose in the brain. Ketones they go in the brain by a totally different mechanism. They're just water soluble small molecules that cross cell membranes that go everywhere. You know, and so the neurons could utilize them for energy even if the energy transport pathways are messed up. And you know, so those types of mutations they're behind a lot of the seizure disorders and things like that.

Robb Wolf: Uh-hum.

Paul Jaminet: You know, but people could have milder versions of them where they don't have seizures but they can improve their energy status if they try a ketogenic diet. And then but more commonly, it's probably why people have infections of certain kinds like bacterial infections and the bacteria are dependent on carbohydrate. And you switch to a low carb diet and

provide ketones instead, you know, you can dramatically lower the levels of glucose in the brain. So reduce the amount of energy substrates available to bacteria. You're greatly reducing the amount of carbohydrates seen in the gut and I notice a lot of communication between the gut and the brain.

You know, so the brain if you have an infection and inflammation generated in the gut, the brain allows inflammatory cytokines to come into the brain from a circulation and it leads to things like depression and anxiety and other issues. You know, that's an involved thing. The brain wants to know if we have an infection and then we should avoid other people. We should avoid passing on the disease. We should rest take time to recover. So you get fatigued so you can get more resources to your immune system to fight the infection.

You know, but nowadays people have these chronic gut infections that go on for years. So you know, that mechanism just makes them fatigued for years and years. You know, so if you cut out carbohydrates and you feel a lot better than that's a good sign that it's probably – if it's infectious it's bacterial in nature.

Robb Wolf:

Uh-hum.

Paul Jaminet:

You know, so the more you understand what maybe an issue then the easier it is to come up with a remedy. But it's –you know, the health risks of a ketogenic diets they tend to be, you know, they're not very balanced. They tend to be a little malnourishing in some nutrients. You know, those issues build up over long periods of time so that the longer you're malnourished in certain nutrient, the more severe the effects are on your body.

You know, so there's no problem being ketogenic for a short term but if you do it for years and years and years then you could be at risk. You know, or months and months and months in some people. So I'm totally supportive of the diet for diagnosis but then if you can you want to fix the problem. So if you've got some kind of bacterial issue like a small intestinal bacterial overgrowth and you feel a lot better when you switch to a ketogenic diet, you know once you diagnose the issue then you want to clear the issue and get to a state where you can start tolerating carbohydrates and can eat normally.

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Again that's the best outcome.

Robb Wolf: Paul what – so correct me if I’m wrong but one of my understanding of long term ketosis is that although on the one hand we are restricting fermentable carbohydrates and even just glucose itself, from feeding potentially pathogenic overgrowth of bacteria were also decreasing the mucus membrane, mucus production in the gut which is really, really important for gut integrity. So on the one hand, folks could have some gut permeability issues from small intestinal bacterial overgrowth. They kind of address it in the short term with a lower carb diet but then in the long term, they maybe creating a situation of additional gut permeability because of the lack of the mucosal production.

Paul Jaminet: Yeah and that’s exactly right. You know, so that’s an argument I’ve been making for about 5 years and I just did another blogpost on that recently, disease begins in the mucus was the title. Yeah so you know, the issue is your symptoms get a lot better right away because the population of the pathogenic bacteria goes down. They also become less active. So when food is scarce then bacteria sort of hibernate. They become kind of dormant and then when food appears then they become active again and start producing toxins and they multiply and so on. You know, so if you started them, you can greatly reduce the negative symptoms but you’re not eradicating the infection. It’s still there and you’re not providing the fermentable carbohydrates that will support good bacteria which is ultimately what displaces the bad bacteria.

And you’re not necessarily supporting your immune function and your maintenance of a good gut barrier. So both the extracellular matrix between cells has a lot of carbohydrate in it and then the mucus is mostly it’s about 80% carbohydrate.

So the mucus I don’t know if you can hear that but --

Robb Wolf: I do you know, we’re --

Paul Jaminet: Our baby just....

Robb Wolf: --No worries, we’ll probably have Sagan waking up here on my side at some point.

Paul Jaminet: Yeah. Anyway so you know, so if you’re on a very carb restricted diet then you do have a risk. You basically your body revolved to save all of that carbohydrate for the brain alright. So the brain is our most precious organ. If something goes wrong in your brain you can’t hunt, you can’t gather. You can’t make friends to help you. But you know, we can give up a lot of other things like community and maintenance of tissue for weeks

and so evolutionarily we weren't expecting to be deprived of carbohydrate for huge periods of time but it was probably pretty common to be deprived of it for a week.

Robb Wolf: Uh-hum.

Paul Jaminet: Or something like that. You know, so we just shut down some functions like the making of mucus and the maintenance of the gut barrier. But if you do that for too long, then you start to increase your risk of gut infections and of infections coming into the body from the gut. And then people can find when they add carbohydrates back in their diet they maybe even worse off than they were when they first switched to low carb. You know, so when they have trouble going back.

Robb Wolf: Uh-hum.

Paul Jaminet: And that's because you know, the low carb was eliminating the symptoms but it wasn't clearing the infection and the infection was still there and when you return the carbs the infection maybe actually bigger as a fraction of all the bacteria in your gut.

Robb Wolf: Generally are you recommending or do you have practitioners that recommend if we diagnose some small intestinal bacterial overgrowth or maybe a mismatch of beneficial versus pathogenic gut flora, some specific antibiotics. I know there are some traditional use herbal remedies that can be quite beneficial in that regard. Like how are you tackling that?

Paul Jaminet: Yeah well I would do antibiotics last. You know, I would do all the natural and dietary stuffs. Some things like intermittent fasting helps a lot. You definitely need to have good vitamin A, vitamin D status, good thyroid status. Those are all involved in immunity. You want to have good iodine status, good antioxidant status that supports your immune defenses. You want to try to get beneficial bacteria in to help carry the fight against the bad germs. So probiotics and fermented vegetables are a good idea. You definitely want to promote gut motility. You know so things like egg yolks will help with that. Intermittent fasting is a good support of gut motility because you got the migrating motor complex works at night during fasting. Circadian rhythm entrainment really important for that.

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You know, immune function is mainly at night and if you have disrupted rhythms then you know immunity isn't working well. And then also acidification of the small intestine is important.

Robb Wolf: Uh-hum.

Paul Jaminet: So you should support bio flow, you should get things like vinegar in your diet. Alcohol there is some evidence the reason alcohol appears as beneficial is that it's antimicrobial in the small intestine. So it helps sterilize the small intestine a little bit. There's –you know, there's this herbs and spices are also antimicrobial so people that use more herbs and spices live longer and they're especially less likely to have digastric tract issues and diabetes which is probably usually due to small intestinal infections. And there was this recent study which got a lot of press earlier this week, the New York Times wrote it up. It comes from China about how the more spices you eat the longer you live.

Robb Wolf: Hmm.

Paul Jaminet: And one of the interesting things when you look in the subgroup analyses the spices help everybody except the people who drink a lot of alcohol. You know, so it could be that when you have the alcohol killing the small intestinal germs you don't really benefit from the spices killing them.

Robb Wolf: Interesting. Okay. Okay.

Paul Jaminet: Yeah so you know, definitely it's important to tend to the gut but there's a lot of things you can do to by natural means and most people aren't doing them. You know, if you are doing all those natural remedies, you know, then if you do try antibiotics they'll work a lot better. You won't need to take them as long. You know so it's just better all-around to do all the natural approaches first and then do the antibiotics if you need them.

I do know a few cases of people who didn't need the antibiotics. You know, whether they had a severe H. pylori infection or something else and have gotten benefit from it. You know, but we also we all know of people who've tried antibiotics and didn't get any benefit from it.

Robb Wolf: Uh-hum.

Paul Jaminet: So I think if you do all the natural methods then the antibiotics will work a lot better and be more effective. And you can take them for less time, take lower doses and recover.

Robb Wolf: Awesome. Paul, how long are you recommending for folks and how frequently are you recommending that they do some intermittent fasting? What does that look like in your program?

Paul Jaminet: Well I recommend doing it every day. So I do it every day myself. And it's really you know, we strongly emphasized circadian rhythm entrainment so living a rhythmic lifestyle and that works on a 24-hour cycle. So intermittent fasting is kind of part of that. If you --so eating food is a very strong stimulator of circadian rhythms and it gets a daytime stimulus. The most powerful impact on from food eating comes in the afternoon. So that's when it's most beneficial. You know, and probably between like noon and four pm. You know, it's really the best time to get a lot of calories and so we try to get people to concentrate their food intake as much as possible toward that period of time.

You know, so what I generally recommend to people at our retreats is you set up your own artificial 12-hour day and artificial 12-hour night whenever it fits your schedule and you try to make an eight-hour feeding window that starts three hours after the start of the day and ends one hour before the end of day. You know, so like if your daytime is 8 am to 8 pm then your feeding window would be 11 am to 7 pm.

The sleeping window should be exactly 12 hours opposite so that would make the sleeping window of 11 pm to 7 am. And you know, so if you just think of when do you sleep and shift it by 12 hours that's the best time to eat. The more you eat outside that window then you know, the bigger the chance for you to have some issues especially --

Robb Wolf: I've played with that and I generally like it quite a lot. Like if you go to bed reasonably early you'll get up quite early because of the girls. The one challenge that I've had with that is that I tend to do some Brazilian jujitsu around 1 pm is when I ideally try to do it. If I do some sort of physical activity I try to work from like 6:30 until noon and the wrap things up and then do some jujitsu and then do a little bit more work in the afternoon.

So you know, like if I'm going to bed around 8:30 or 9, most evenings get up around 5:30 or 6:30 could I maybe do like a snack at around like 11 am just so I've got a little something in me when I go get beat on at jujitsu and then I do my big primary meal after jujitsu and then have dinner. Does that seem like a pretty reasonable way to slice that?

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Paul Jaminet: Yeah. You could do that. I might even have a bigger breakfast. So if you're going to bed early at like nine am, you know then you could start feeding at 12 hours opposite of like nine am.

Robb Wolf: Okay.

Paul Jaminet: And you could have a good sized breakfast and you're usually best for athletic performance maybe three hours after you finish eating.

Robb Wolf: Uh-hum.

Paul Jaminet: So if you're doing the jujitsu at one then you know if you're last – if you finish your meal by ten am then you could snack a little between 10 am and 1 but you would still be well recovered. And then I would say you know after you do the intense afternoon exercise if you could have another big meal you know, that would be really good. And then maybe try to get some work done after the meal.

Robb Wolf: Right, okay, okay no that seems actually pretty doable. I was with the way that I was trying to schedule it I was – I think actually carrying the fasting a bit too long on any given day and that it was kind of running up against some just kind of lethargy and fatigue when I would get into train. But it actually would make getting out of the house a lot easier in the morning could I could sit out, go to the office, eat while I'm in the office, take a quick break and you know, do that at 9:30 or 10 and then be good to go by 5 o'clock.

Like if I had like you said a good sized meal then I would be riffing along pretty good.

Paul Jaminet: Yeah. I think that's how I would do it.

Robb Wolf: Okay, okay great. Paul what are folks experiencing when they go through your retreat? What is that experience like?

Paul Jaminet: Alright well it's an awesome experience. It's you know, we do our best to make it the best possible experience. So you know, first of all it's I should say first of all you know, we started this so that you know to give the best of our advice to people and help them. We really think we're on to after we finished our diet book, I did a lot of research on lifestyle and some of the things we've been talking about how do you optimize lifestyle and environment and other things.

So we think we've got a really pretty comprehensive natural healing protocol and longevity protocol. So that's what we're trying to teach and we're also trying to teach that you know, these natural methods can really compliment medicine and really help heal disease. You know, so

we're always pleased when the hard cases come to the retreats and we can try and see if we can heal them.

So we do health coaching pre retreat. I do personal health coaching of our guests and then the retreat is really focused on modeling on an optimally healthy lifestyle that is livable in the modern world. So how do you translate all of the good health bacteriolithic effect of lifestyle but in a way that takes advantage of all of our modern technology and it is compatible with holding a job and you know, and with modern life generally.

And you know, so that's the goal and people come for a week . The day is structured in how we would like to in what we think is the optimal way for health so you can experience that. You know, so for example we have four movement sessions per day and they are educational but there's a little morning activity session right at the start of the day on the beach. It's a very light activity but just sort of a trigger for daytime circadian rhythms to get people to wake up the body and let it know that the day has started. Then we have two more intense activity classes where we teach different modalities of improving fitness and those are –one of them is fasted late morning just before the first meal and then one is in between meals in the afternoon.

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And then we have a night class on relaxation, stress relief and we do things like mindfulness meditation and using heart rate variability biofeedback to help you know, do a better job of you know, calming yourself and transitioning to nighttime. The food is perfect health diet food we've got cooking classes. We teach how to cook it as well as provide great food.

I have science classes so we explain the reasoning behind everything. You know, so the people are motivated to believe in it and continue practicing it. We model the environment. You know we have red orange lighting at night and bright white lighting in the day across the sunlight. And then there's time for relaxation and so it's a nice vacation too. We've got two heated saltwater pools, two saltwater hot tubs. It's on a really nice magnificent beach. We do it at times of the year when the ocean water is warm and the air is comfortable.

You know, so it's just a fun time and we've had a lot of fun with the guests and we've had a really good feedback from the guest after they go back home. A lot of you know, the health improvements we've seen are things like weight loss or weight increase when somebody is underweight.

Robb Wolf: Uh-hum.

Paul Jaminet: Improvements to blood glucose, improvements to mood, sleep, energy. And you know, but we're also periodically we contact the guests who came in the past and asked them for health updates. You know, so we're tracking people and we're hoping to really gather some strong evidence that a natural ancestral diet and lifestyle really does improve health.

Robb Wolf: Oh it sounds fantastic and I was hoping to get out there this year for the event but still with the obligations I have can't do it. But you will see the wolf clan descend on the retreat here sometime in the future and that's going to be a blast. I'm really looking forward to it.

Before we started recording, you mentioned a new blog post that you did indicating that red meat maybe problematic for folks with Hashimoto's.

Paul Jaminet: yeah that's right. So I blogged about that last week. I remember there was a new scare about red meat and cancer.

Robb Wolf: Uh-hum.

Paul Jaminet: So I looked into that issue and the tie with cancer is pretty tenuous but there is a strong tie with Hashimoto's hypothyroidism. So basically what happens in hypothyroidism in Hashimoto's specifically is that people get an infection, probably in their small intestine. These are bacteria that take the sugars that are on the cell surface of cells from either human cells or food. You know basically the food we digest they take up the sugars and they put them on their own cell membrane in order to help hide from the immune system. Alright.

So there are a few infections that can do this and our immune system is very good at generating antibodies to bacteria, you know, the things on bacterial cell wall. So when they kill a bacteria that has these things then they can develop antibodies against those sugars or compounds in general.

It turns out that humans have a mutation. You know, there are some sugars on the cell membranes of all mammals except humans and a few other species. Because we had a mutation back in the ape times that stopped us from putting that sugar on our cell membranes. And it seems to be that particular sugar which we can form antibodies to. So because we humans don't have it we can form antibodies against it and mammals do have it. Fish and birds don't have it. So you know, basically

Hashimotos is an autoimmune disease against red meat and if you know, so the more red meat you eat, the more severe your Hashimoto symptoms will be.

It's basically it's not only red meat. It's all mammalian meats but if you think of what are the mammals that we eat it's primarily pork, beef, and lamb. And you know, so red meat is a you know, there's a quick summary of the risks.

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You know, so when we have people at the retreats with Hashimoto's then I recommend that they stop eating red meats for a while and again you know, you can – once you get rid of that infection so this relates to what we're talking about of like the gut infections and the bacteria and if you don't have a good mucus layer and you got too many and the overgrowth of bacteria, then you're going to have problems like this.

You know, but once you – you know, if you give yourself a little time for the antibodies to start to go away and if you can clear the infection from your gut so you're not creating new antibodies, you know, then you can become tolerant or red meat again and you can make the hash moto's go away.

Robb Wolf:

So just to clarify for folks so long as we can repair the gut then we probably can reintroduce red meats at some point, check for symptoms. If we're symptom free then we're probably pretty good. If we're not then we need to keep motoring more with chicken and fish and those types of proteins.

Paul Jaminet:

Yeah, that's right. So you know you're most likely to get Hashimoto's if you know, if your digestion isn't good. You know, so you're not fully digesting your food. If you're a circadian rhythm disrupted you don't have the gut motility you should or kind of the immunity you should. You're not maintaining your mucus barrier and you get all these infections in your small intestine. So then you know, all those bacteria are seen in your food and they can incorporate food compounds into their cell walls and that can trigger autoimmunity.

You know, probably the great majority of autoimmune conditions start this way and so you really want to heal the gut. Once you're no longer creating more problems then you know, usually the body has mechanisms to recover and we go back to normal.

Robb Wolf:

Great. Great. Paul this one kind of gets out in the weeds but it's hard – I'm still trying to wrap my head around even asking the question. So you

know, how well I do with this. But there's a great paper talking about brain evolution, the tendency for humans to seek out novelty but then at the same time we have a tendency to experience palate fatigue. SO we want new things but yet when we got a lot of something, we tend to kind of burn out on that thing and then we have this other concept of optimum foraging strategy where we go to try to seek out the most energetically dense things that we can doing as little as we can. It seems like most critters that creep and crawl and swim kind of follow similar patterns.

There's a lot of talk about the diversity in the gut and then a recommendation for a highly diverse diet. But when I've been digging around in some of the anthropological research and also this one paper on brain evolution, it was interesting in that it made a very interesting point that although for most hunter/gatherers, most contemporarily studied hunter/gatherers there were many, many foods available but the bulk of the foods that were consumed was actually pretty narrow. You know, and kind of surprisingly narrow. How are we getting ourselves in a situation today such that we have super markets and whole foods and we can eat all these different stuff but yet we...

So arguably we're potentially getting an even more varied diet than what we've had in the past. But yet we're ending up with a less varied gut biome or is this a story of the people with the less varied gut biome and folks that are maybe experiencing metabolic derangement and different pathologies. They're eating these refined foods and so we have two different cohorts going on here.

Paul Jaminet:

Yeah. I think that's the biggest issue you know, in the population at large. So you know, people are eating. If you go through all the packaged foods you know, and look at the ingredients it's always you know, starch, sugar, oil. Right? And whether it's cakes or cookies or donuts or whatever. If you just look at the ingredients list and look for micronutrients and fiber, there's very little fiber. You know, they've taken out all the other components of the animals and just found the calorie bearing ones the starch, sugar and the oil then they put in a few flavorings or preservatives and they call it a cookie or whatever.

And you know, so eating those things turns out to be really bad for the gut. I spoke not that long ago about our recent study at – I spoke at a medical meeting about a recent study on high fat diets which showed that it's really not the amount of fat in the diet. It's whether it's a natural whole foods diet or not.

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So if you have the exact same amount of fat, it doesn't matter how much fat there is. If it's natural whole foods, you know, then everything is going to be just fine and you won't have any negative health effects. But as soon as you start eating the starch, sugar, oil, concoctions you know, then you start having problems. You know, so I got just an evolved, I got evolved to food has a certain structure. You know, it's like peeling an onion there's different things as you get down the different layers and our gut structured it digest certain parts of the food in certain times as it traverses down the gut.

You know, if you give it a totally different structured food then you're really messing up the evolutionary plan. You know, so that's the biggest issue. And then you know, and then in general you have the issue that any time you're eating an unbalanced diet, you know you're going to be deficient in some things and you're going to get an excess in others. Our brain it did evolve in order to get us to seek out the things our body needs. It can take months to –you know, when you start eating a diet deficient in something it can take months until your body as a whole becomes deficient of it because you know, we have – you know, we can cannibalize ourselves. We can triage move things from less important uses to more important uses. So you may not notice that you're deficient in it for a period of time. But eventually you do notice and that's why you know, people when they switch between extreme diets can often see health improvements followed by slow health decay.

Robb Wolf: Uh-hum.

Paul Jaminet: So often when people switch from the standard American diet to veganism they say oh I feel great right at the beginning. You know, partly because they've transitioned to a natural whole foods diet. Then it takes months before the nutritional deficiency start to appear. And then you start looking at me and say oh that meat looks good and you know, and they start eating these soy meat flavored soy products or something like that --

Robb Wolf: Right.

Paul Jaminet: You know, but eventually then they give up on veganism and they may switch to a low carb paleo. And then they do awesome when they first started because they're getting all the things that they were deficient in. You know, but then they start developing new deficiencies from whatever is missing from their new diet and then their health can star to decay again and then they start to get cravings for the things that they're missing.

You know, so it's not that uncommon on low carb paleo for people to start craving sugar. When they see sugary things they start to over eat it or they start craving alcohol which is kind of a sugar substitute. You know, so all of those there are these quite complex evolved brain mechanisms to get us to eat what we want. And the only way to really tamp them down entirely is to eat a balanced nourishing diet where they get everything that you need. And then you can be pretty much desire free.

One of the things people often find at our retreats is you know, that hunger disappears. You know and they just don't have any hunger. Fasting becomes really easy and they're surprised at how little they can eat and be totally hunger free.

Robb Wolf: Paul, how far down the rabbit hole or how neurotic do people need to be on this refined food side? So coconut oil, butter, those sorts of things, I guess we could argue that that's a separated fat. Let's say I'm trying to get the bulk of my or a significant amount of my fat intake following the perfect health diet and I'm trying to get it from MCT sources so I get a little bit of a you know, a ketosis load from that. Am I better off eating coconut flakes with that or can I still you know, make an argument for putting butter and coconut oil on a sweet potato or yam? Or is that just kind of creation of neurosis and it depends on how far down that rabbit hole you want to go?

Paul Jaminet: Yeah, well the coconut flakes are mostly fiber. They don't really have a lot of fat. Definitely coconut butter cream, sour cream those are fine and perfect health diet approved fats and flavorings. So I have to distinguish a little bit between our regular diet and the ketogenic version of our diet which has a lot more fat.

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But on a regular diet we would just say yeah you want to flavor your foods with a little bit of fat. You know so fat makes everything more digestible and it makes it taste better and it's good for you normally. You know so if you put a little bit of fat on your potatoes then you'll digest it better. Your glycemic response will be better. You know you'll slow down the digestion. If you put some oil on your vegetables then you'll absorb the fat soluble carotenoids and other nutrients in the salad. So I guess it's good to put oil on your salad. In general you should just – and you should flavor your food with enough oil and fat to make it really taste delicious. Alright. So you know, you don't want to make it so fat that it tastes greasy or that you get sick of fat. But you want to make it delicious.

It's like Julia Childs said if you're afraid of butter, use cream.

Robb Wolf: [Laughs]

Paul Jaminet: Find something that makes your food taste good.

Robb Wolf: Right.

Paul Jaminet: So that would be on a regular diet. Now on the ketogenic diet you're kind of shifting away from what's most delicious towards getting a little more fat, a little less carbs. So I think the typical dessert is a mix of fat and carbs, a ketogenic diet is sort of more fat and less carbs.

Robb Wolf: Uh-hum.

Paul Jaminet: So you still want to get some carbs because you don't want to be totally malnourished in terms of carbohydrate. But you can't quite follow that deliciousness recipe and so there you need to put a little conscious effort in to get more fats. There it can help like you said to use MCT oil which is a little more ketogenic than other fats.

Robb Wolf: Great, great. Paul what did you have for breakfast today for your first meal?

Paul Jaminet: Alright well I have what I always have which is leftovers.

Robb Wolf: [Laughs]

Paul Jaminet: I basically have – I call it bibimbap which is Korean for leftovers. But it's really you know, I take a big bowl and I put in some vegetable. We had spinach today. I put in some starch today with – it was rice. Usually I use potatoes. I put in three egg yolks. I'll have a piece of fruit on the side so I had a banana on the side today. And then I kind of –you know, some leftover meat. So we had leftover rib eye steak. We had a little bit of leftover bacon and I put those in.

I put in some coconut milk. I put in three egg yolks. So we recommend getting three egg yolks per day for our nutrition and you know, so that's a very, that's another source of fat in our diet.

And I put in some a little bit of apple cider vinegar, a little bit of fish sauce and I probably should have added some spice because of that study that came out.

Robb Wolf: Right. Right, right. Yeah. Grate up some ginger and some garlic that you mashed and let oxidize really quickly yeah.

Paul Jaminet: Totally yeah but I was a little I didn't put any spices in today so I just warmed that up. You know, our baby loves that so I end up giving him some of my lunch and we have lunch together.

Robb Wolf: And then you'll have one dinner later on and that's pretty much the works for the day?

Paul Jaminet: Yeah. So dinner is the one time we cook so we do – we spend 30 minutes a day cooking and we make enough so that we have leftovers for the next day. And also a snack in the afternoon between lunch and dinner.

Robb Wolf: Uh-hum.

Paul Jaminet: You know, so we pretty much snack freely in the afternoon. You know, you're trying to get as many calories as you can in in the daytime. And you know, with dinner it's a little tricky. My wife sometimes works late so we don't really know how late we're going to eat. And the later it is the less we eat. So we save more – you know, we save most of what we cook for the next day or two.

And you know, so the more you eat in the afternoon and the more you snack while working then the less you need to eat at dinner.

Robb Wolf: Right. Right. How about coffee, green tea, all that type of stuff?

Paul Jaminet: Oh yeah.

Robb Wolf: Where do you weave that in?

Paul Jaminet: yeah. I have coffee every morning. Usually two cups and that's really what I drink during the fasting period. I'll have flavored water through the day and it can be very lightly flavored like I have some potassium bicarbonate which is used in making alcohol but you can get really cheaply and I just make a tiny pinch and a little bit of water. So it doesn't taste that good if there's you know, a significant amount but it's a little amounts of I think to me anyway it can improve the taste of water.

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I also do flavor water with beneficial acids like lemon juice, lime juice, vinegar, rice vinegar, apple cider vinegar. Sometimes I'll put in a little vitamin C and you know, so all the flavored water. Sometimes I'll make

green tea in the afternoon and drink that instead. So we have some really nice high mountain tea from Taiwan. It's really high quality green tea.

And so more commonly you know, I pretty much have coffee every day. I probably have green tea two or three days a week after I'm done with the coffee.

Robb Wolf: I know I should drink green tea but man when I look at my espresso machine, and then look at my green tea stock I did espresso and it's about 99% --

Paul Jaminet: Yeah.

Robb Wolf: - of the time.

Paul Jaminet: Yeah. Well I believe in the helpfulness of coffee but I don't want to drink too much and I don't want to drink it after 11am or so.

Robb Wolf: Right.

Paul Jaminet: So but tea I'm fine with drinking that in the afternoon.

Robb Wolf: Got you. Okay, okay I've actually found green tea to be a little bit oddly more stimulating than coffee for me interestingly.

Paul Jaminet: Yeah.

Robb Wolf: Like yeah.

Paul Jaminet: Well it maybe. And but I don't have much of an issue with too much stimulus. I seem to metabolize all those things fine and if I have trouble sleeping. So I can probably drink coffee in the afternoon too. I just you know, I think on principle is probably --

Robb Wolf: Yeah.

Paul Jaminet: -- the healthiest one.

Robb Wolf: Right. Fantastic. So Paul, where can people track you down, track down information about the book and the retreat?

Paul Jaminet: Well go to our website, perfecthealthdiet.com. There's a tab at the top that says perfecthealthretreat and there's a whole bunch of pages giving you information there. We've got a whole bunch of video testimonials

upon YouTube so be sure to check those out what our former guests have to say about it. And you know, if anyone has time off, October 10th through the 17th they should think seriously about coming in to join us because it's a fantastic experience and we really want to prove that people come to our retreats they're going to outlive everybody else. So you know, we hope to get enough people to come to get good statistics on that.

Robb Wolf: Awesome. Well you can definitely sign me up for next year. Like I'm bringing the whole Wolf back next year so.

Paul Jaminet: Alright.

Robb Wolf: It will be amazing or a catastrophe one of the other.

Paul Jaminet: Well that will be awesome and you know it will be great for our kids to meet.

Robb Wolf: That will be a blast yeah. So we love playing with everybody so that will be a great time for her to play with her Luke and actually Sagan should be up and motoring pretty good by then. She's motoring around pretty well too. Is Luke walking yet?

Paul Jaminet: I sort of yeah. He'll take two or three steps on his own but --

Robb Wolf: Right.

Paul Jaminet: -- if he has to go very far then he prefers to crawl. But you know, he won't let his knees touch the ground. He does the bear crawl.

Robb Wolf: Oh funny, funny yeah, yeah. Sagan would do that whenever we were outside and there was like gravel or something rough then she bear crawled and we have some video of this and it's hilarious. When she would get really excited, she would get down on all fours then put her head on the ground and then scoot with her head on the ground like three Stooges like Curly style. It was just hilarious. So yeah, yeah.

Paul Jaminet: Yeah that's funny. It's funny Luke does that on the bed.

Robb Wolf: Oh funny.

Paul Jaminet: He likes to play on the bed. He likes to wrestle with pillows.

Robb Wolf: Right.

Paul Jaminet: But he'll do like the downward facing dog yoga move where his butt is in the air and his head is touching the ground and then he'll it's just sort of take a leap and go like spreading his arms and launching himself.

Robb Wolf: Nice.

Paul Jaminet: So yeah it's a lot of fun.

Robb Wolf: Awesome. Awesome. Yes, it is. Well Paul it was a huge honor having you back on the show just an enormous fan of the work that you guys are doing. It's been very, very helpful for me. It's one of those ironies that when theoretically I'm an expert on this stuff and I have questions and I don't know who to talk to. You've been very generous with your time and very, very helpful and I think I've provided some guidance and insight that has benefited me. I've been doing some eubiome tracking and some blood sugar monitoring for the past couple of months since I talked to you the first time and have some very interesting developments and all I'll get a good blogpost on that and be sure to toot the perfect health diet horn because that's been the influence in the change in my direction thank you.

Paul Jaminet: oh that's awesome. You know I would love to see your eubiome results. You know we're doing eubiome measurements of the health retreat guest.

Robb Wolf: Right.

Paul Jaminet: this year and we've seen really interesting changes.

Robb Wolf: Fantastic. Yeah I'm not surprised. Like my digestion is just basically going paleo and I've been cutting out grains with a shocking improvement for me. But there was always just something still not quite right. Like I wasn't as resilient as what I should be given theoretically as well as I was eating but as I've fiddled and tweaked with this stuff, things continue to get better. So I'm very excited to share that with folks.

Paul Jaminet: Oh that's good. So I look forward to your blogpost.

Robb Wolf: fantastic. Well and I'll continue reading all of yours so.

Paul Jaminet: [Laughs]

Robb Wolf: Awesome Paul. Well take care and I hope your family is doing well and very excited for seeing more work from you folks.

Paul Jaminet: Yeah and yeah we're excited too. It's you know, it's a great time for the ancestral health community.

Robb Wolf: Indeed it is. Absolutely is. Yeah. Well Paul take care and I'll talk to you soon.

Paul Jaminet: Okay. Bye Robb.

Robb Wolf: Bye-bye.

[1:00:54] End of Audio