

The Primal Blueprint Podcast – Episode #42: Ask the Primal Doctor – Q&A with Dr. Cate Shanahan

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Brad Kearns: Welcome, listeners. It is your host Brad Kearns. I am so excited to have back, keeping our promise that we are going to keep a chronic recurring episode with Dr. Cate, or the "Ask Dr. Cate" show. How are you doing, Dr. Cate?

Cate Shanahan: I am doing really good, Brad, thanks.

Brad: [00:01:03] So Cate Shanahan, Primal Advantage. With had the exciting launch of this new program this summer. This is 2014. We talked a good bit last time about what the one-on-one metabolic consulting program is all about. So listeners that didn't hear that go back and check out that podcast. It is a wonderful service where you are looking at blood work. You are doing dietary analysis, having that wonderful 90-minute consultation. No more getting ushered out of the exam room before the next patient, huh?

Cate: Yes, I love having that luxury of time where I don't feel like I have to be Edgar Allen Poe where there is a big thing hanging over my head going tick tock tick tock. It is really nice to be able to make sure that everybody has all of his or her questions answered.

Brad: We were talking about the program design early on and I thought we only needed 45 minutes and you said, "Oh, no. We need 90." I thought, "How are you going to talk about yourself for 90 minutes with the doctor?" It plays out that people, indeed, have all kinds of questions and conversation required.

Cate: Yes, for me to really get a good handle on what is going on, what their issues are, go over their lab tests, explaining what it all means at a satisfactory level of understanding. We actually go over their food diary as well. I then come up with a plan to get them closer to their goal. It takes a while. It is like the perfect amount of time because most folks can't really handle any more information.

Brad: [00:02:47] Well, I know. It worked for me. I am particular. I would be talking to you about my toenail that just came off and the best way to get that going, and then by the way, my finger. I know you cover the big picture that metabolic snap shot. We didn't talk too much about that. Tell me more about that. It is sort of a custom designed algorithm calculation, right?

Cate: Well the idea is to evaluate how, exactly, a person's diet has so far affected their health. We all have different ways in which a suboptimal diet is going to manifest. It has to do with our genetics and genetic momentum and epigenetics and all that stuff. While it is tough to predict exactly what a bad diet is going to do to a person, it is definitely going to do something. Some folks have weight gain. Some folks will develop autoimmune problems. Some folks will develop connective tissue problems. So we evaluate six body systems and figure out which one of those is the most effected. It is based on a complex questionnaire that they fill out. It takes some time to consider all the answers and give me all the information I need. I look this over before the consultation. And then it also integrates the lab test results so that it kind of spits out a couple of gauges where you can see what has happened with your metabolism. We look for what body system is in the best shape and what body system is in the worse shape.

The idea of doing that was to make it real easy to see improvement other than on the scale. That is one great thing, but people don't need my help with evaluating their weight going down. They need the help of the scale. We have these other things that we evaluate. We have the hormone system, their energy system, the immune system, their connective tissue, neurologic system, and cardio vascular system. Those are the six body systems that are generally effected in just about everyone who needs to recover from the state of the American diet conventional wisdom kind of diet.

Brad: [00:05:08] You mentioned genetics earlier and it reminds me of the podcast that Mark and I just did which is last weeks podcast in the lineup. He said when we reference these genetic predispositions or our heritages, like we have a predisposition for obesity, it runs in the family or arthritis or whatever and Mark pointed out that we are not talking about these things that are going back generation after generation back to the Mayflower. For example, I say all the Kearns family were fat and had achy joints. Mark was saying this is more likely just going back one generation, perhaps, where the adverse dietary practices that your parents had and then from your own upbringing from infancy to adulthood.

Cate: Things really started to fall apart somewhere around 1950s because at that point in time...so however many generations back for you that is...like for me it is my parents. For a lot of people now that would be their great grandparents. What happened at that point in time is we made historic leap away from food that in any way resembles what human beings used to eat. Not just changing the macronutrient ratios of natural foods but changing the chemical nature of the food itself. So that's about the time where if there is something going on in your family, that's usually where it came from. You are absolutely right. You don't have to go back to the Mayflower. Just go back to the new-recorded history where you can look photographs and talk to people.

So many things happened. Women were encouraged not to breast feed. The formula was just horrible. They didn't know about things like essential fatty acids so there was absolutely nothing in there along the lines of Omega 3 fatty acids, or Omega 6. The introduction of all kinds of vegetable oils and chemicals began at that point in time and, of course, it has just accelerated. It is something that you don't have to really wonder really too much about. You can ask your family members about what did they do? I find that most folks who grew up on a farm and who avoided all that sort of modern intervention, "better living through chemistry," kind of changes that were occurring in the middle of the last century are in much better shape. There are a lot of folks wondering what do I do about that? I can't go back in time and fix my family history. That is absolutely true. You can't. At least you can understand that a lot of what is happening in your body. Kind of what we do is sort out what it is that you can't do anything about and what is it that you can. That is one of the things we do in the Primal Advantage consultations. It is always useful.

Brad: [00:08:22] So we plunged off the cliff in 1950, or so. I even recall when I was talking the other day with some of my childhood friends that back in the late 70s when I was 12 years old, I did the McDonald's bike ride for charity and performed a phenomenal athlete fete of biking 78 miles in one day on a route where there were about six McDonalds on each 26 mile circuit. I did it three times and every time you reached your second McDonalds in the order, you got a coupon for a free hamburger and a coke. So I lived like a king for many months after that for that amazing ride. I stuffed my face with all that horrible food. It was probably a wash. I was probably worse off for doing the charity bike ride.

Cate: Actually at that point in time, the fries at least were not fried in vegetable oil, they were actually using a mixture of tallow and I think sesame oil or something like that. It was really based more for getting flavor. They had not been yet influenced by the fear of saturated fat. It did happen shortly after that. They got rid of the natural stuff for the fries and started using the hydrogenated horrible stuff they are still using.

Brad: [00:09:44] You are saying I landed in the sweet spot after 1950 and before the oils came into McDonalds. I remember also in your book, "*Deep Nutrition*," you mentioned how the amazing insights you obtained when you were working as a physician in the rural Kauai and saw the exceptional health of the natives having that traditional ancestral diet.

Cate: Yeah, I was really kind of in a schizophrenic mindset when I got there because on the one hand I had been educated along the regular mainstream that family history is what it is and there is nothing we can do about it. There is nothing we can do about these diseases that come along later in life. It is just part of

getting old. That was kind of depressing. My job was basically to corral folks into my office and hand out different prescriptions and make sure they keep coming back to monitor the BP and keep monitoring for ever and ever. It was unsatisfying knowing that there must be some cause.

When I went to college I had all kinds of shin splint problems. That was one of my problems although I had many. I remember asking my sports medicine physician at the time, "Is there some way you can take a biopsy of my shin and grind it up and analyze it and tell me what is wrong?" He just ignored that. It was far from reality. The drive for most of us is to try to understand the cause but we are not given those tools, unfortunately in medical school. That was still in my DNA that I wanted to do that. When I started to make the observation these folks in Hawaii were so healthy and they were aging so well, even their skin wasn't wrinkly. People in their late 50s were able to do really heavy work like cutting sugar cane in the fields. That is hard work standing up in the field for hours and hours. It goes beyond the 8-hour day. There were guys in their late 60s and that is what they had done their entire lives.

Brad: Devoting their lives to cutting down sugar so the mainlanders can get fat.

Cate: Yeah, right. They were in great shape.

Brad: At least someone is healthy from the sugar addiction of modern society.

Cate: Anyway, though. It really didn't occur to me to investigate that until I started noticing that they ate really differently. They were cooking stuff they had hunted, fished and grown. Food looked really different. It was full of all kinds of body parts that you don't see in a grocery store like hooves...

Brad: Oh, animal body parts. Great.

Cate: Strictly non-cannibalistic on the island of Kauai.

It wasn't until I got injured myself and started being basically confined to my couch with nothing to do than to try to read something and educate myself that I actually started putting two and two together. That was in 2001 and 2002. What I did was find a lot of information out there that I was able to run into even with the web as primitive as it was at the time. It basically revolutionized the way I practice medicine. It possibly would not have happened had I not been injured was really immobilized.

Brad: You are not talking about your college athletics. You are talking about something else that happened later, huh?

Cate: I had a problem in my knee. It was swelling and I was getting fevers and nobody knew what was wrong. I couldn't walk for two years. It was horrible. I was literally immobilized. I had to do something so I started reading about science and stuff. Then I actually changed my diet after I did that, of course, too, and got better and now I don't have that problem at all any more.

Brad: Fantastic.

Cate: I experienced the power of just improving your immune system. It was affecting my immune system.

Brad: [00:14:36] The question that I came up with a question before we get to the real questions, is with this past commentary here and that is that it is great for everyone in the primal/paleo/ancestral health world that you are an actual M.D. who practices and sees real people in the real world. It is sort of a trump card to say that even real doctors agree with our crazy stuff. It actually is really unlikely origin point for someone getting into this movement and countering conventional wisdom at every turn. A great many other leaders in our movement are people like Mark who is a former peak performance athlete. He wasn't steeped in the traditional medical community and getting his perspective narrowed accordingly. And then we have a few other people who healed themselves or science type nerds who just enjoyed the research and realized that they were on to something so in your case, I am going to ask: What has it been like stretching this balance between these incredible revelations that you get basically on your own with your own research and then

getting up in the morning and putting on your white coat and going in to be bad machine which is Western medicine these days?

Cate: The most friction comes from the field of cardiology (a heart specialist) where they are really stuck with the idea that you have to freak out if your total cholesterol is over whatever the number du jour is. It is probably around 200. They freak out if your LDL is either 70, 100, or 130 or higher based on various risk factors and the end all be all is getting that LDL down as low as possible with statin drugs. That is hard because I share patients with cardiologists whose expertise I do need for arrhythmia and monitoring pace makers. I need their input. I need to work with them, but on the other hand, I don't want to have to get my patients caught in between what I say, which is that drug is essentially hurting your body, those cholesterol pills, and the cardiologist who is saying, "You are a ticking time bomb if you don't take this drug." So it is just not a great place to be.

I think that most of the doctors that I run into that are in the ancestral health movement feel the same way because it is the one place where a person's immediate decision of whether or not they will take that pill is going to be dependent on who they trust more, the cardiologist or the primary care doctor. As doctors, we don't like making our colleagues seem like they don't know. It is just that we disagree. It is one of the things about medicine that I really like is that we are sort of are, or should be a uniform front where we all look at the same research and discuss it and make these kinds of pronouncements. This is what we all agree on. This is what it is going to be for the most part, right?

That happens in most fields. But in the field of cardiovascular health and arterial sclerosis, they are just so heavily influenced by the drug companies that there has not been progress in the last 50 years. They are so stuck on that statin drugs are this miracle cure and you need to take them. If you don't, then you are some kind of a cowboy...some sort of wild guy. It is one of the things that patients have noticed that doctors sort of band together to try to not protect each other, but to stay on the same page. It is very important. It is sort of a tribe but with this one issue, it doesn't happen. It is really distressing but they are starting to come around. There was another article in the New York Times about saturated fat isn't the enemy. Hopefully that will change.

Brad: The wheels are moving. It seems to me that there is another challenge which is people crossing over into areas where they don't really have expertise and the doctor is perceived as an expert on just about everything when you walk in the door just because of our cultural programming. In fact, as a general rule have little to no dietary training. Would you agree with that?

Cate: [00:19:48] Absolutely. We don't get enough dietary training but the real problem is that we get the wrong dietary training. You know the standard conventional wisdom of fat is bad. Salt is bad. Fiber is the only thing you should ever eat. Because we get some things, we think that we have gotten all that there is to know and it makes us very resistant to new ideas. It would be better if our medical schools said we don't care about nutrition at all. We don't think it matters so if you have any interest in it, you are going to have to learn this on your own, but realize that you are not educated. That would be better. We don't realize that we are not educated. I thought I knew everything when I came out of medical school. I had just come out of medical school that I paid a lot for. Of course, I learned everything that mattered about nutrition.

Brad: That reminds me of one of those adages from Ben Franklin or somebody in my own life that my wife, Tracy. It applies to me and my permission to operate power tools. I have been banned for many years for even looking at one or plugging it in. The fact that I am extremely convinced of my ignorance and incompetence in that area, I believe serves me very well in passing myself off as an aficionado of construction tools and wreaking havoc on my body and my house. In other words, it is possibly irresponsible to spout off on topics you are maybe not up to speed on and now, fortunately, as you mentioned some articles are coming out from respected scientific journals and medical establishment people putting out studies, like a lot of conclusions in the Framingham study that Mark references in the *Primal Blueprint* saying that intake of dietary cholesterol has no effect on blood cholesterol.

Cate: There is a lot that could be changing in the near future because we are seeing so much recently. I think a lot of it is coming from the low carb movement because the specialists in metabolism understand

how diet affects health. They are really the weight loss doctors. They have almost all of them have kind of adopted the low carb approach and along with that they increase the amount that is naturally occurring in the food. They don't make you eat egg white omelets and such. There is no fear of butter among most of the weight loss specialists. As a medical group, I go there to kind of get some relief from all this friction. Actually when I first encountered the organization called American Society of Bariatric Physicians, it wasn't until 2010. I just couldn't believe there were hundreds and hundreds of doctors all in one place (in Baltimore) that were basically on the same page as me about the cholesterol not being the issue and saturated fat not being the devil, and that cholesterol pills not being the cure-all. A lot of the articles are written or co-written by doctors or written by people who are peripherally involved in that particular organization.

Brad: Oh. That is great to hear. It occurred to me that if there were any challenges in the forward momentum in the great insights, they could just parade success stories up there on stage at the conference with people saying, "I lost 200 pounds and I didn't eat any carbs." It would change the thinking quickly if you had that practical effect. I send people to the success stories on Mark's Daily Apple. It is if you disagree, why don't you check out this picture of Tara. What else can you say?

Cate: That is a great idea. If you had a parade. We could do a million pound march on Washington, D.C.

Brad: To demand changes in the legislation, Cate. That is awesome.

[00:24:18] Do you know what I would like to do here is get a plug in for the Four Pillars so it is so important to you and so the listeners understand where you are coming from. People like to put you in a box. Are you paleo? Are you primal? You sort have a unique perspective on nutrition that you frame in the Four Pillars of World Cuisine that was part of the "*Deep Nutrition*" book. Since we are getting up in the length of our show, we will hit you up on another show on rapid fire with a bunch of questions from listeners. There we can answer questions for the doctor on primal/paleo matters.

You have written an incredible book, "*Deep Nutrition*" that you and Luke, your husband, wrote and, I guess, self-published and threw it up on Amazon that is the modern business model. It sold incredibly well. The centerpiece was these Four Pillars of World Cuisine. Do you want to describe those?

Cate: Yes, the Four Pillars of World Cuisine are in order of availability, I guess: Fresh food, fermented and sprouted food, meat on the bone, and organ meat. Fresh food is just basically whatever is in season and essentially unprocessed. You eat it as is. Salad. Also this includes fresh animal products like milk. You know that is a very common one actually...unprocessed and un-homogenized milk. People often have raw fish that is a very common theme. That would be all kinds of fresh food.

Fermented and sprouted is using nature to increase the nutritional value of your food...your food surpluses. The idea of fermentation is really getting back to how people preserved the excess. There was a fresh crop coming in, they didn't have refrigerators, or canning. They had to work with nature. It was really their only tool. That was the reason that everywhere we found when we studied cuisine, people had some way of using the natural microorganisms to ferment the food and thus preserve them. You get good bacteria when you do that in addition to increasing nutritional value. Sprouting is a similar idea. Before there were flourmills to make bread or to make anything with grains, people had to soften them by soaking in water. They would actually germinate partially and that enhances the nutritional value and drastically reduces the content of a lot of anti nutrients that people are right to worry about. They are not present when you process food in this old traditional way.

Brad: So fresh is number 1 and sprouted is number 2 on the pillars.

Cate: And then number 3 is meat on the bone. The idea there is that folks would work really hard to get these animals. They didn't just roll out of bed and order a Subway. They had to go and hunt and so whenever they caught them, they wanted to use as much as possible, including the bones. The fact that people did that and what they do that they basically boiled it and you get a lot of nutrition extracted from the collagen, not the marrow. You also get nutrition from the marrow. But the specific special magical

missing food group from the American Diet is the nutrients that you get from the collagenous material in skin and joint material. It really helps your collagen health. So people did that for thousands of generations and became dependent upon that. In other words, just like Vitamin C.... people got lots of Vitamin C in their diets and now we need to keep getting Vitamin C. This is how genetics plays a role. The fact that your genes do change in response to the environment, our genes changed a long time ago where we became dependent on Vitamin C and these special collagen molecules.

Brad: How long does that take for our genes to become altered to become dependent on Vitamin C or collagen.

Cate: That is a great question. I don't know and no one really knows. It must take an awfully long time. There are a lot of things that have to change. We have two copies of each gene and so at first what would happen is that one of the copies would get mutated and then it is going to take generations before that second copy gets mutated enough to where it doesn't get produced any more. So I would think it would take a long time. You are losing something. You were not needing a nutrient and now you do. It is different from making a gene in the first place, which probably takes even longer. Most of the genes we have are recycled from other animals. The difference between our genetic code and a mouse is surprisingly small. Most of our genes are identical. By most, I mean something on the order of 90 something percent.

Brad: [00:30:03] Wow! Amazing. I remember Mark talking in the Primal Blueprint countering the people that believe we are continuing to evolve and adapt to modern foods. And he said, "I'd be willing to speculate maybe we will adapt to a high sugar diet and it might take 50,000 years or something and I am not willing to wait that long to make sugar healthy for us." That sounds like something along the lines with what you are saying.

Cate: Yes. And we probably wouldn't look the same by then. Some of these adaptations include reduced skeletal size, and maybe reduce the number of teeth that fit in our mouths along with that. We might not want that to happen.

Brad: So when you say meat on the bones, you are talking about, in effect, a much higher fat consumption with your meat rather than...this is still a prevalent notion in even the strict paleo folks say "lean meat."

Cate: Right so the lean question is coming from basically the fear of saturated fats that started in the 1950s with some flawed science started by a dude named Ancil Keys. We talk about that in our book, "*Deep Nutrition*." The bottom line is if people really have to work for their food, they are not going to throw something out especially if it tastes good. The animals that people hunted themselves are somewhere in between 15 and 30 percent body fat depending on what time of year they were hunted. Are you saying that people would throw it away? Come on. We were highly adapted to having that sort of stuff in our diet.

Brad: It is a little confusing because you hear the comment that the ancient animals were leaner than today's modern feedlot animals and therefore you should go looking for the leaner cuts of meat or the minimal fat in your meat choice.

Cate: We have no way, as far as I know, of estimating the body composition of ancient animals but we do know that what they call Heritage breeds of, for example, pigs were very fatty. Heritage breeds date back a hundred years or so before the fear of fat. Since the 1950s they have actually been bred to be leaner because of the worries about fat and the fact that the farmer didn't want to grow animal products that were going to be cut off and wasted so they just bred for leaner animals.

If you are a hunter, for example, you probably know the amount of fat on a deer is going to vary with the time of the year. Sometimes when food is scarce, the animal is going to be more lean and their body fat might be down maybe 10 percent but that is still a lot of fat. But in the good times, it goes up as much as 20 or 30 percent and so there is some evidence in Native American lore that they would prefer to hunt animals at specific times of the year so that they would be fatter and have more yummy fat to eat and more nutrition. There is a lot of nutrition in the fat. We don't get Vitamin K2; we don't get Omega 3 fatty acid from animal products if they don't have any fat. Those nutrients are stored in the fat. We don't get them either if they aren't pasture raised, by the way. There is a lot of nutrition that we need. You have to ignore

that fact if you say we used to eat lean animals. Then where do we get those nutrients from? A lot of people didn't have access to fish where they would be able to get Omega 3 fatty acids or the few plant seeds that produce fatty acids, yet we all have this requirement. Some of it comes from organ meats as well. A lot of it is in fat.

Brad: Hey, that brings us up to number 4, doesn't it?

Cate: Yes it does. Organ meat. We kind of already alluded to it because once you catch an animal, you are not going to throw anything out. I like to separate it out because at least in this country organ meats that most people are familiar with are liver. Liver is really nutritious. We don't think of organ meats as potential food items. They are not in our grocery stores. If you go to the store in New Zealand, along side the meats, you see kidney, liver, and you see sweet meats and tripe but in this country you hardly see liver any more. If you go to Asia and France, everything is on the menu. They have rooster parts and ears and all kinds of things. They don't go to waste. Each different organ has different nutrients so the more variety you get, the more variety of nutrients you get. And we need that variety.

Brad: So we have the fresh foods. We have the fermented foods, the meat on the bone, and the organ meats. I know when you were working with me and we did a nice guest post on this on Mark's Daily Apple from you. I was totally I was ripping out on two of the four pillars thinking I was eating really healthy and strict primal and with the organ meats, I went out and bought a bunch of liver and found out that I really didn't love the taste. You got me taking the Desiccated Liver pills which was a nice stop gap as I tried to embrace the foods that were so traditional and had such a great track record that even the hard core, really devoted ancestral health people might be missing out on.

Cate: Absolutely. I like to think of it as a culinary adventure rather than you must eat it. If you have the opportunity to try something different, maybe you'll like it. You won't now until you try. Understand that it is something that your body would appreciate if you did like it. By the way, a little tip on how to like foods that you don't like that you know you should like. Eat them when you are really hungry like after a bout of exercise. That is when your body is shouting much more loudly about all the different nutrients it would like to get. You are more likely to start liking something at that point in time. By the way, it takes kids a long time. If you know anybody who has raised kids which I actually haven't.

Brad: You have seen the sick ones.

Cate: I am familiar with the entities. It takes an average of a dozen introductions on a little child to get them to actually recognize it and enjoy it instead of gumming it and spitting it out. They will actually keep on eating it after about 10 to 15 tries. So don't have a whole lot of something new the first time unless it smells really good.

Brad: Good tip. Thanks, Cate. So that was the Four Pillars of World Cuisine from "*Deep Nutrition*," Dr. Cate Shanahan from Primal Advantage program. You can read all about this and sign up on; I believe we have some vacancies open right away for consultation when you get all your work done. So check out Primal Advantage at: primallblueprint.com. Thanks for being with us and we look forward to being with you on future shows where we can get into some fun Q and A. So if you are listening and have a question for Dr. Cate, go to: blog.primalblueprint.com and there is a handy Speak Pipe, it's a microphone tool where you can leave a voicemail question or you can send an email in any time with a written question to: info@primallblueprint.com. This is your host Brad Kearns. Thanks so much for listening to the Primal Blueprint podcast with Dr. Cate Shanahan of Primal Advantage.