

## The Primal Blueprint Podcast – Episode #12: Listener Questions & Answers with Mark Sisson

Topic timestamps:

Losing weight/Getting to Ketosis/Body composition: 00:43

Skipping a meal: 06:30

All-you-can-eat buffet: 08:15

Brain wiring for overeating: 10:40

Sprinting: 13:40

Over-exercising: 16:59

Does cream in your coffee count?: 20:40

Nausea after eating certain high fat foods: 24:14

Primal Blueprint Expert Certification: 29:27

Brad Kearns: Welcome to the Primal Blueprint podcast, with Mark Sisson. Here we are geared up for another question and answer session. How are you doing, Mark?

Mark Sisson: I'm doing just fantastic. How are you, Brad?

Brad Kearns: I'm great. We had a great show last week and some of these questions are wonderful and since then more have been flowing in through our SpeakPipe tool where you record the questions and also some nice long ones have been written in. How about if we jump right in to it?

Mark Sisson: Let's do it.

Brad Kearns: [00:00:43] Shelly recorded a lengthy question I am going to summarize in writing. When you do record on SpeakPipe, try to be concise and think of a question that is appealing to the general audience. That we will tackle once a month.

Shelly is a 55-year-old female who got in to the primal/paleo scene with through her boyfriend who is now out of the scene. Now she reports that leaving the state and moving on, she has gained 15 pounds in the past year so now she is at a point where she wants to lose 30 pounds of total excess body fat. She reports that she does not eat a lot of carbohydrates. She likes the 90 percent dark chocolate which is plenty high. She also reports that she does have some berries and other fruits and also is fond of having a sweet potato before she works out. Mark, I want to get in to ketosis but I am not sure how. What can I do to lose this excess weight?

Mark Sisson: Well, there are a couple of things to look at in this question, one of which is ideal body composition and we don't know what her total weight is. She says she wants to lose 30 pounds, she had lost 15 and gained it back. I will re-iterate, at some point, if you have lost a fair amount of weight and your have gotten down to a plateau, quite often that's a point where your body says, "This is your ideal body composition right here." A little bit of fat as a protective device on a 55-year-old woman that's probably somewhat appropriate in many cases. So if your body says, "I'm healthy. I have the energy I need. I don't get moody or depressed. I am able to maintain this particular weight without of calorie counting or portion control or anything. I intuitively know how to do this." I can argue that that is an ideal body composition.

Now from there, if you want to lose more weight, we have to make some choices. We have to ask what are the costs? What are the benefits? What are the costs involved in dropping another 30 pounds from there. One of those costs may be you might have to spend some time going into ketosis and that is what she indicated that she wants to try. She may be a person who is so sensitive to what is going on in her body now that you get in to ketosis, she may need to get under 35 or 30 grams of carbs a day. So that sort of

rules out the sweet potatoes and perhaps even the berries at this point. If, in fact, that is what she wants to do. So if you want to get in to ketosis and you want to get serious about trying a few days or weeks in ketosis, you really do have to cut the carbs really dramatically in most cases. The highest levels of carb intake that I have heard of people staying in ketosis are 75 to 100 grams a day. That is for an athlete who has been in ketosis in and out cyclicly for a few months or a few years and has been strategically taking in these carbs at times a day when he or she knows that it won't turn off the ketosis. Those carbs will be shunted directly in to glycogen storage and so forth.

So for the average person, getting in to ketosis, means finding some healthy fats, orchestrating a diet that includes eggs, if you are in to grass-fed beef and animal protein like that, certain types of fish, chicken, macadamia nuts, olive oil, avocados, certainly some salads. You can do salads up to a point. We did an analysis a few years ago where we took a big-ass salad, and even though it looked like a lot of vegetables when you broke down the carbohydrate composition of it, it wasn't that much. It was 20 or 22 grams of carbs total. So that's another aspect of getting into ketosis, means being quite cognizant of your carb intake. When you do get in to ketosis, a certain number of things can happen that are good. And, again, for women who are peri-menopausal, post menopausal, you got to be very diligent about how you do this and keep track of how you feel and whether or not you are cold throughout the day or your hair falling out...you know, some of the symptoms of hypothyroid as well.

Because I am not a doctor, I can only advise on the strategy of orchestrating a diet, but typically, I would suggest that people work with their physician on this. The point is that when you become good at burning fat and you generate ketones and you are in ketosis, the body responds by building more mitochondria. The mitochondria are the little energized power houses that actually burn the fat. The fat burns in the mitochondria and then the mitochondria sends the ATP out to be used as energy. So the more mitochondria, the more you can burn fat. That is the message that a low carbohydrate diet sends to the body. You want more mitochondria? Make the ones you have more efficient. Learn to burn fat more effectively and start to burn ketones more effectively. You start to burn ketones effectively, you basically reduce your body's dependency on glucose because of the organs in the body that use glucose can also use ketones. The brain normally depends on glucose because we provide so much of it. When you start to cut back on the amount of glucose or carbohydrate, it converts to glucose that you take in, the brain gets pretty good at burning ketones. You can get to the point where you can reduce your daily brain glucose requirements to maybe 30 grams of glucose and the rest is ketones.

[00:06:30] So as that skill becomes developed and you become good at burning ketones and become good at burning fat and accessing stored body fat, one of the strategies you might use is now that I am so good at burning fat and I don't need that much carbohydrate, maybe I'll skip a meal. I eat normally at other meals, but I will skip a meal so instead of having three meals a day, I will have two meals a day. That will be 500 calories that is coming off the thigh, or the belly and opposed to coming off the plate of food that you just ate. This is one of the benefits of becoming in to a fat-burning beast and learning how to get in to ketosis and starting to develop that skill that not only has you burning fat and accessing ketones and using ketones effectively, but it also regulates your appetite.

Now all of a sudden it is not the blood sugar issue day in and day out, or hour to hour during the day where if your brain isn't getting enough glucose and starts to freak out and says you gotta go eat...you gotta go eat....go find a bagel. That kind of disappears and the brain becomes good at burning ketones and the body is good at creating whatever glucose it needs either from the glycerol that is stripped of the triglyceride molecule or gluconeogenesis where the body takes protein in the diet and converts it into glucose. There are all these mechanisms whereby the body can produce enough glucose so you will never be really short on glucose for the matter. Over time you develop this ability to self regulate an appetite and that is huge because I think appetite drives a lot of people.

[00:08:15] We went to Tulum, Brad, the vacation experience at Primalcon there was all-you-can-eat buffet because it was an all-inclusive resort and it is really interesting to watch people pile an inordinate amounts of food on their plates just because it is available and then because it was on their plate, they have been ingrained their entire lives to finish what is on their plate, I see so often people consuming 200, 300, 400

calories more than maybe they should at a particular meal. Now maybe they'll burn it off during the day. Maybe they are a person who can get away with that. Maybe the thermic effect of food will raise their metabolism automatically, to help burn off those excess calories. Maybe not. Maybe they really are someone who has to watch the caloric intake with regard to how many calories are burned and how many calories are stored as body fat. That is where this ketosis experiment can come in quite handy.

Now the caveat is, if you are a woman and you have tried the very low carb strategy. Some people it works great and some people it does not work as well. I think you have to look at what is going on in a week or two weeks in and note how you feel and it is working and are you losing the body fat and do you still feel energetic and if the answer is yeah, then you can keep doing it for a while. If the answer is no, then you have to go back and refigure the experiment. Now maybe we can say that ketosis isn't working for me in this particular context. Maybe I'll have to add some carbs. Maybe I'll find level of carbohydrate intake that satisfies the requirements of my brain but doesn't put me over the top and so maybe it is appropriate to experiment with 75 to 125 of carbs a day as the first level of that experiment. There is no one right or wrong answer for everyone. The job for me, on Mark's Daily Apple, and not only me, but Chris Kresser and Rob Wolfe and everyone else in this space is to give you enough information and tools so that you can conduct that experiment of one and kind of figure out on your own what is best for you.

Brad Kearns: [00:10:40] I think that all-you-can-eat all inclusive example is pretty relevant because there is so much socializing and conditioning that goes beyond just appetite and hormones. It is a concern except for in the example you brought up of the Dreams Tulum except in the sushi place because when I was in there and the sushi waiter comes over and asks is every okay, it took me a while to I realize that I could order the exact same giant plate that I had just ordered and not hitting my wallet too hard. I definitely took advantage of that all-you-can-eat example but for many people, I know you get this theme a lot and I want to harp on it a little bit more. The departure from the natural appetite is a big concern and it's emotions and all the things that Dr. Alessandra Wall talked about at Dreams Tulum. To get back to the permission to eat when you are hungry and finish when you are satisfied.

Mark Sisson: Right. We have tried to incorporate other strategies like to ask yourself, kind of half way through what would appear to be a normal meal, and ask yourself am I hungry for the next bite. The brain does want to finish what is on your plate. We are wired to scarf food for 2-1/2 million years, gosh, up until a few hundred years ago, food was pretty scarce most of the time. So it behooved any human who came across a big stash of food to consume as much as possible, to take advantage of the wiring to allow that person to store excess calories as fat. That was a good thing in context of survival 10,000 years ago but it is not a good thing when you are confronted with vast quantities and copious amounts of food and, again, the social setting that would have you talk and eat and talk and eat and talk and eat, somebody else finishes their plate and goes back for seconds and you tend to follow suit. That gets back to what we talked about in the last podcast, which is surrounding yourself with like minded people who are conscious of what you are doing and food choices you are making and things like that. So it is constant battle with this ancient reptilian brain that we have at the base of the brain to consume whatever is in front of us and the front of our brain recognizing that If I say, I am not hungry for the next bite and I push this plate away, my rational brain knows that there will be food available when I am hungry, whenever that is. So I don't have to acquiesce to my hard-wired limbic system that forces me to overeat just because that is the wiring that I carry through my genetic recipe.

Brad Kearns: You can be reasonable.. Wow! What an awesome concept.

Mark Sisson: In today's world, being reasonable and responsible are two skills we need to develop because in many cases, they have been taken away from us.

Brad Kearns: [00:13:40] Yes, and there is another interesting item that you often bring up that is along these lines and I have seen you get cornered on a couple of occasions where people say, "Mark, I am already under 100 grams a day. I am doing this good. I am already doing this a fat-burning beast." You often mention the sprinting elements to get the 5, 10, or 15 extra pounds of body fat off.

Mark Sisson: Yeah, I have said for a long time, nothing cuts you up like sprinting. So if you are a person who has plateaued and your metabolism is settled in and you are fine....your body thinks you are fine where you are...again, your frontal lobe and you ego are suggesting that you could lose more weight, sprinting is something that a lot of people will find, even though they have read the Primal Blueprint and the 21-day Total Transformation, they somehow have failed to incorporate the sprinting in. It has an effect, it is really quite simple to figure out a way to sprint. It doesn't have to be at the track. It doesn't have to be running. Doesn't have to be on the beach, which is where I do most of mine. It can be at the gym on the bicycle or the elliptical. Basically, doing a warm up of 5 or 10 minutes and then ramping it up the output until you are going 100 percent for 30 seconds. or 20 seconds if you just started, or it can be a minute if you are really good at it. Then letting your heart rate recover with either an easy spin, easy jog or a walk to recover. Then doing it again multiple times in the course of one workout.

Typically those workouts don't take a half an hour. It is a lot of work compressed into a short period of time. But it has this amazing effect of ramping up the metabolism from 1 metabolic unit to maybe 15 or 20, or in some cases 25 or 30 times that metabolism, for that period of time and that stresses all of the enzyme system in the body that are providing energy for the body. You don't really burn a lot of calories while you are doing it but you create this need for more mitochondria. You create the instance where there is more throughput of fat in the mitochondria in the muscles and other organs of the body. The net effect is you start to take more fat out of storage to just kind of replenish the energy and to keep you going on a regular going simply because you created a short term burst of speed and the need for that energy.

Brad Kearns: Some scientific data referenced in the Primal Blueprint expert certification which I will ask you about in a moment, that suggest that sprinting is the only form of exercise that actually directly contributes to a reduction in body fat because of....and you talk about this in detail too, that the burning of calories through exercise, especially chronic exercise, just corresponds to a reduction in appetite. So it is a wash when you are talking about body composition and weight loss. Sprinting conversely will up-regulate the genes that build muscle and burn fat and because it is so brief in duration, you are not getting that massive hunger afterward and also you are actually getting the appetite regulation because of elevated body temperature and other reasons.

Mark Sisson: Exactly. [00:16:59] It is really quite interesting that people to this day still sort of keep track of how many calories they burn during such and such an exercise. The reality is, and that is one of the initial problems I had with chronic cardio was going to my gym and seeing the same people on the treadmill 4 or 5 days a week for years and never losing any weight. I feel bad for these people. Not only do they not lose weight but they tend to gain weight and they may tend to get jiggle because that amount of repetitive motion bouncing up and down without any real resistance training to cause the muscles to really become fully contracted and tense. It just creates a jiggle effect that may manifest itself in what appears to be cellulite.

All of this work these people are doing in the stated objective of trying to lose body fat and the exact opposite is happening. So when you, just to reiterate what you said....when you go to the gym and you burn 400 or 500 calories for an hour on the treadmill, the brain basically says, "This is a repetitive motion thing. If this clown is going to try this again tomorrow, I got to go home at eat at least 400 or 500 calories to replenish the glycogen that we burned off. Because we have burned off a lot of glycogen"...we actually haven't burned much fat...which is again ironic.

There is a tendency to carbohydrate load every single day, if you are a runner or a cyclist and you have been doing this for a long time. There is a tendency to overdo those carbohydrates so once you have filled up the glycogen stores, which doesn't take much. Now the excess calories from the carbohydrates and the fats and the proteins tend to be stored as fats. It is a cycle that continues on and on. It is just ironic because these are people who really want to do the right thing. They are really trying hard and they are working hard and struggling and suffering. So conversely, when you go to the track or you go to the Versaclimber or the elliptical trainer or in my case, the sprint bike at the gym and you really hit hard for these brief bursts, you don't burn that many calories. But the fact that you get your heart rate up to a max heart rate, the fact that you were going all out, the fact that you were out of breath...completely out of breath at the end of

each of these particular intervals, is enough of a signaling mechanism to make the changes you just described throughout the body. It really isn't about the calories burned in that workout, it is about the signals that we are sending to the genes to rebuild the body in a stronger more efficient metabolism that will burn calories better.

Brad Kearns: Right. I will never forget as a distance runner at UC Santa Barbara...we'd be running and running our laps around the track and working so hard. There was a guy who trained there named Jurgen Hingsen. He was the number 2 decathlete in the world and probably the most ripped physical specimen on the planet. He'd just show up and take a few pole vaults, he'd throw the shot a few times, maybe run a couple of sprints and then his girlfriend would show up and he'd leave the track in 30 or 45 minutes and that was it. He had such different genetic signaling than these chronic athletes that were running themselves into the ground. It showed in his physique.

Mark Sisson: The take home message here is if you are stalled in a plateau and you haven't tried sprinting, then give that a try. Give it a go. There are no other adjustments that need to be made. This would be part of your experiment is just to try sprinting for say four weeks and see how you feel and see if there is any shift in your body composition.

Brad Kearns: [00:20:40] Let's hear from a college student named Zach.

Hi, Mark, This is Zach from Ohio State University. I would like you to clear something up for me. You say you have compressed eating window from about 1:00 to 7:00. But you like cream in your coffee. Do you not count the calories that you drink as part of your fasting?

Mark Sisson: Great question. Yeah, I certainly don't count them as part of my fasting and I don't put that much cream in my coffee. I really just...I don't make a bulletproof coffee. I don't make an egg coffee which is one of the things we featured on Mark's Daily Apple. I basically fool around with the egg coffee just as an answer to the bulletproof coffee concept. A lot of these powered coffees has 400, 500, 600 calories in them and they are not part of a fast, if there is mostly fat in there, they continue the effects of the fast. That is they continue the ketosis that is going on in the fat burning. There is that element of that..well it is not that you are taking in 400 or 500 calories, which certainly does count toward your daily caloric intake, particularly if you are trying to lose weight, but the amount of cream that I put in my coffee is less than a tablespoon. I put a little bit of sugar in....seriously, maybe 4 calories, or whatever.

Coffee by itself has no calories. I really don't count that as having negatively impacted my so-called fast or my so-called compressed eating window. I am really after the effects of, mostly I'm after the habitual taste of coffee in the morning that is as part of my ritual. I am a big fan of these kinds of rituals. I have a cup of coffee every morning when I get up. I go outside and typically watch the sunrise, do a little bit of gratitude process. I go back in and quickly read two papers skim them basically and then I do all the puzzles in the *Los Angeles Times*. I can do that in inside of a half an hour and then I go to work. So the coffee is just part of the ritual. I like the caffeine for its fast stimulating effects but I don't rely on caffeine. I don't abuse the caffeine. I rarely have another cup of coffee during the day. If I do it is probably because I am on the road and I stop at Starbucks. So interesting question and again, even if you are doing the 400 or 500 calorie coffee that has Kerrygold butter in it and MCT oil and a bunch of other fats, because there are no carbs in there and because there is a little caffeine in there, it does not disrupt ketosis, which is one of the main reasons that a lot of people choose to do bulletproof coffee. But on the other hand, it is still contributing 500 calories to the bottom line in some cases which is a lot.

Brad Kearns: Yeah, the *L.A.Times* crossword puzzle in a half hour..that's not bad. Some of those answers take a half hour to find on google.

Mark Sisson: No, Dude! I do all the puzzles. So I do the Sudoku, the crossword, the jumble and one other one I usually do but have forgotten the name of. I do all of them in under a half an hour.

Brad Kearns: Then when you get to work, that is why you are so tired. You don't really chair the meetings....Now we have a letter from Heather. I have to give her credit. Her last name is Starch and she is making an effort to be primal but she is having a bit of struggle. Let's hear about it.

Heather: [00:24:14] My name is Heather and I am from the Dallas/Fort Worth area in Texas. My family and I went primal in May of 2013 and we have had great success and we are greatly appreciative of this program that we found. The question that I have is after about three months into being primal, I started experiencing nausea when eating certain types of foods. First it was macadamia nuts and then it was almonds, avocados, eggs, and finally, just recently coconut oil. I had all kinds of blood work done to see what it might be and everything comes back normal. All of these foods, it has been just since going primal and only on an empty stomach.

If I have something else to eat first and then eat those foods, I am fine. I am just wondering if there has been anybody else you have heard from or heard of that since going primal, there are certain foods, especially, the higher fatty foods that they have issues. What might be the cause of what is going on or what can be done to alleviate it? I look forward to hearing any possible answers. Thanks, Mark

Mark Sisson: Well, Heather. I really don't have an answer for this. It is an interesting phenomenon and I have heard some people will eventually develop an aversion to bacon, literally, just because they went whole hog when they went primal and ate bacon at every meal. But to have developed this nausea over consuming what amounts to some of the healthiest fats you can get, specifically mono-unsaturated, the particularly the avocados, the coconut oil, macadamias, even the almonds to a certain extent. Interesting that you say it is on an empty stomach. I guess one of the take home messages for anybody here who is experimenting is what happens when you eliminate the those foods for a long time. I think we can all live without some of those foods or we can all live only having them on an otherwise full stomach, if that is the case. I am not sure. It could be a stomach PH thing. We could start to talk about SIBO small intestinal bacterial overgrowth, stomach PH, and number of other things. It may or may not have an impact as to what happens when these high fat foods hit your stomach when it is otherwise an empty stomach. The short fix is to either eliminate them or not consume them on an empty stomach. The long term fix would be to eliminate them entirely then maybe reintroduce them in 4 or 5 months. But I really have not seen that or heard of that happening. If any of the listeners to the podcast have had that experience, I would love to hear about that and see what steps you took, if any, to rectify the situation.

Brad Kearns: Let's take one more and then I want to ask you a little bit about the Expert Certification that is coming up. So here a question from Tracy in Old Bridge, New Jersey

[00:27:33] Dear Mark, I appreciated your extensive commentary on the dangers of excess artificial light after dark in the Primal Connection. I have a long time habit of reading myself to sleep, either with an iPad or small bedside light. Sometimes I awaken in the middle of the night and will read for a handful of minutes to help me fall back to sleep. Could this practice be messing with my melatonin and my sleep cycling?

Mark Sisson: The answer is no. It is a very appropriate way to engage in biphasic sleeping or polyphasic sleeping that we talk about a lot in the Primal Connection. Americans, in particular, seem to have this notion that if you don't get a solid uninterrupted eight hours that you have failed in this sleep mission. A lot of studies show that most of the world, particularly in the Third World countries, exhibit a biphasic or polyphasic cycle, where you might sleep for 3 or 4 hours, wake up, mill around, maybe fix a little bit of tea, have a chat with your family members for a little while, maybe have sex, maybe look after the kids, and then go back to sleep and finish off the night's second phase of sleeping and wake up refreshed in the morning. There is nothing wrong with that conceptually.

The only hacks that I would interject when you do get up to read, try to read under a yellow light of some kind. It could be just a yellow incandescent bulb. It could be Brad's famous yellow sun glasses that he wears. It something that doesn't cast too much of a blue light on to your reading material because that is

what would disrupt the melatonin. Otherwise a yellow light would be fine and reading to fall back to sleep again seems like a very pleasant way to orchestrate that biphasic sleep cycle.

Brad Kearns: [00:29:27] I let it slip earlier in the podcast that we are imminently launching the Primal Blueprint Expert Certification. We have had this movement going on for a long time....the primal/paleo evolutionary health movement, but no real formal way to validate people's expertise. Tell us a little bit about your philosophy in developing this program.

Mark Sisson: Well, a number of people, particularly health professionals, not particularly M.D.s, but chiropractors, physician assistants, registered dietitians, nurses, LPN, RNs trainers have expressed an interest in some sort of an acknowledgement that they understand how the Primal Blueprint works so that when they go to explain it to their clients or their patients, they've got some back up that says they have completed this program. I understand the mechanism of how this works. I can work to help you orchestrate a healthy eating or lifestyle plan. We created this Level One certification. It is basically designed to test your knowledge of not just how the Primal Blueprint works from a standpoint of establishing a program or eating style, but a little bit about chemistry, a little bit of understanding how the body works, a little bit of knowing the ins and outs of ketosis, for instance, and to be able to answer the kind of questions that the client or the patient might bring up and do so in a way that gives them the confidence that you know what you are talking about. So we created this on-line program.

It has 13 modules each of which has a fairly detailed test at the end of it. So in order to move on to the next module, you have to pass the test and get at least 75% on the test. At the end of the final module, we will certify that you have exhibited a passing amount of knowledge in how to present the Primal Blueprint to your clients or customers. We are talking now about maybe some Level Two really in-depth things. By the way, this isn't just for health professionals. It is for any individual who wants to get certified and test his or her knowledge and kind of get acknowledgement that they really do understand the mechanisms by which the Primal Blueprint and gene expression actually can help a person, rebuild, renew, regenerate, and reinvigorate themselves.

Brad Kearns: So everything is online and you have video overview of each module and then some extensive reading material followed by an exam and our beta testers are reporting that these exams are pretty rigorous but we are here to help and anyone who is struggling or who fails an exam, can engage with us to make sure that they will get a command of the material so they can feel comfortable graduating and getting their certification.

Mark Sisson: Some of the test questions essentially are so detailed that you really do have to read to get the material you can't just take the test having read the Primal Blueprint two years ago. Even though you may have grasped it fully, we go a lot deeper in this certification because we really do want you to understand the underlying science and the mechanisms behind some of the recommendations you will probably be making to your clients.

Brad Kearns: Mark. Thanks for the heads up and pay attention on [MarksDailyApple.com](https://marksdailyapple.com), [PrimalBlueprint.com](https://PrimalBlueprint.com) for the imminent launch of the Primal Blueprint Expert Certification. Thank you so much for listening to the Primal Blueprint podcast with Mark Sisson. We will talk to you next time.