



**Episode 15 Transcript**

**Release Date: Monday, April 17, 2017**

### ***The Ins And Outs Of Ketogenic Dieting For Athletes: Part 2***

**Dr. Krissy Kendall:** Welcome back to *The Bodybuilding.com Podcast*. This is part two of my talk with Jason Wittrock and Steve Hertzler where we dive into all things keto-adaptation. Enjoy.

So once you get into your now fully ... Let's fast forward a few weeks from my start date and I'm keto-adapted. What can I expect to be different? How I feel? How I perform? What were some of the things that you noticed or maybe that you've heard of that people ... When they finally got to be fully keto-adapted?

**Jason Wittrock:** I think the number one thing is the energy levels. The maintaining high energy levels is, from my experience ... Like I said before, before I did keto, I was just straight cutting carbs forever. My energy levels were rock bottom. When you have high blood sugar your energy levels are up, but when your blood sugar goes down all of a sudden your energy levels are down. It creates this rollercoaster type of energy. With ketosis, your body's able to kind of draw its energy from itself. It no longer has that urge to go out and seek more glucose. So you'll start to notice that you have more steady energy levels throughout the day which, in my opinion, is huge. Energy crashes are the worst. That's the one thing that I was thankful for the ketogenic diet is, "All right, I don't have to worry about feeling like crap all day long." Inflammation goes down in the body when you restrict carbohydrates. So you'll feel a bit lighter on your feet. Less joint pain, if you have joint pain. Mental clarity and alertness is through the roof. I remember right when I first became adapted, I was waking up in the morning and I was just ready to rock and roll. You'll also notice some suppression in appetite. Again, your body's able to kind of use itself and use its own fat stores as energy. Especially in the morning when you wake up, you won't be as hungry as you used to be. Those are few of the things. The gym, I noticed more endurance. I wasn't getting huffy and puffy so quick. I could go forever. I think that's one of the main reasons why a lot of long distance runners and endurance athletes are using this diet, including some MMA fighters. Most popularly Joe Rogan uses it, as well. For that endurance factor, as well.

**Dr. Steve Hertzler:** I think that kind of tying in with that, there's a lot of research now on not only

ketogenic diets but also training the muscles in a state of low carbohydrate availability. So hitting muscles repeated times without replacing glycogen. One of the things that are showing in a lot these models is that that does up-regulate some of the enzymes associated with fat metabolism in the muscles. So some athletes might be using this diet on a periodized type of basis where they'll go keto for a while to try to increase some of those fat metabolizing enzymes. They may not necessarily go keto through their whole training structure, because for some athletes where they have to have really high power outputs. Have to exercise at a really high percentage of their maximal oxygen consumption. It can be hard to do that with just fat and ketones as an energy source. But if they're also in sports where they're using fat for energy for a period of time during the exercise. So having a period of fat adaptation type of training might be helpful in particular phases of their event to improve their performance, as well. I know that's one of the things that athletes are experimenting with a lot.

**Krissy:** What about someone who wants to add muscle? We hear with the ketogenic diet, sometimes people use it for weight loss. It's received a lot of attention as a weight loss diet along with some of the other low-carb, high protein diets. But if I wanted to add muscle, would this diet work for that? Or would I have to tweak or change up anything to my diet or training to follow a high-fat diet, but still increase muscle protein synthesis and put on mass?

**Steve:** I guess my take would be is ... there are some studies that Dr. Jacob Wilson's lab has done and presented at some meetings showing that it was possible for individuals on a ketogenic diet to actually gain lean body mass and strength. I think that one of the messages that sort of gets lost in the ketogenic literature is that there's just not that many studies that are out there. There are very, very few studies on people who are actually doing heavy duty and appropriately designed resistance training at the same time. One of the advantages those studies have is that they were doing periodized resistance training and a very well-designed weight training program. Now I wouldn't say that the ketogenic diet is necessarily the *optimal* diet for building muscle mass. I think if you really in a serious muscle building phase, you may want to have that extra carbohydrate in there to help you out. But I don't think it's necessarily impossible to gain muscle mass and certainly you can at least maintain your muscle mass on this ketogenic type of diet.

**Krissy:** To follow up on that, is this a diet ... Or is there a population or type of athlete that you wouldn't recommend? You talked a little bit about athletes cycling on and off. But is there someone where based on their energy requirements and if their a sport athlete, if there's a specific sport that says, "Absolutely not. This diet will not support." Or it could really be used in certain parts of their training season for anyone?

**Steve:** I think if you've got an athlete with Type-1 Diabetes, for instance, this is probably not the diet that you want to go with in that particular instance. The one thing that I always tell people to is, if you're concerned about it from a medical perspective and overall health. Yes, there are some studies that have been done showing the some potential positive effects on blood lipid panels and everything. But the bottom line is, when you're applying it, you're the person that you're interested in, not a research subject who lives 500 miles away. If you really want to know how this diet affects you, test, test, test. Go to the doctor. Get your blood lipids done. I can't believe how many people I run into who are worried about taking this supplement, that supplement or going on a keto diet, and yet they don't even bother thinking about going to the doctor, getting their lab values tested. Get your liver enzymes tested. It's a very simple blood test. It's not expensive. You can monitor and see how your blood lipids are doing. What your fasting blood glucose looks like. All those kinds of things. You know how this diet affects you. There's just not enough research out there to say for sure that this diet is the absolute, wonderful thing for everybody that's out there. You have to find out how it is affecting you. And go in with the knowledge that there are some things that you would want to

monitor to make sure that you're not damaging your health and actually helping your health in the process.

**Krissy:** So Jason, I'm interested to hear how, because you are a keto athlete. You follow the diet, I believe, for eight and a half months you've said.

**Jason:** Yes, almost a year.

**Krissy:** So how have you taken the research side of things and what you've read about, and then tailored it to fit your lifestyle?

**Jason:** To everyday life.

**Krissy:** Yeah. That's what people want to know. It looks great on paper. It looks great in a controlled research study, but what happens in real life?

**Jason:** Yeah. So ideally versus reality-wise. Like I've said before, I've kind of progressed into the [keto diet](#). I started from the very beginning as a wrestler counting calories. Thinking that was it. Then I went to low carb. From low carb, I kind of found out my energy levels were terrible so I went to carb cycling. Then from carb cycling through my opportunity to work with the mentally ill children, I found ketogenic dieting. It solved all of the problems. I was just in heaven. There are people that will do a strict ketogenic diet forever. That's great, but there's also different approaches you can take like targeted ketogenic diet and cyclical ketogenic dieting. For me, I chose to do a cyclical ketogenic diet. It's probably the primary reason why I've been able to stick to this diet for about eight and a half months. Carbs are just absolutely everywhere and avoiding them for eight and a half months is almost an impossible task. Some people can do it. My hats off to you. For me, wife wants to go out on the weekend. I've got a birthday party to go to. A wedding. It kind of allows you that social flexibility. So, what I basically did was I took a keto cycle approach. I would get myself adapted. I would take myself through the adaptation phase and then from that point once I was adapted, I would do a strategic carb day once every weekend. The carb day was very restricted though. It wasn't just go blow it out. It was 300-350 grams of carbohydrates. I would have my cheat meal, of course, but I then I would also scale it back and have slower digesting carbohydrates in there as well. The average American gets about 300-350 grams of carbs a day anyways. So it felt like that was kind of a good place to be. I was able to get back into ketosis 24 hours after that strategic carb day. I think it's important to note that when you eat those carbohydrates, they're going to refill muscle glycogen. Once the muscle glycogen gets up to the top then you will start storing fat. So I also kind of took a conservative approach in saying, "I'm not going to go eat 1,700 grams of carbs. I want to make sure I get the gas tank up there, but I don't want to get too overboard with it." So really that has kind of helped me stick with it. Now when I work with clients who need to lose significant amounts of weight, I would suggest going what's called the long cycle. Where you're going two weeks keto with a strategic carb day on the weekend even less carbs. Then I also work with clients who are over 300 pounds. Both men and women. For them, I keep them in ketosis for much longer periods of time. So three weeks in a row keto with a carb day on the weekend. It's worked out brilliantly. Life just happens and they ... It's like the carrot in front of you. It's like, "Hey, let's go keto for these three weeks." Then you can have your carb day. It's just a cheat day. Everything's great. You're right back into it. So socially, I feel like it's been a great way to kind of take keto and apply it to every normal day life. I've gotten amazing results. That's why I'm sitting here right now. First, I did it with myself. Well, first I saw it change the lives of a bunch of kids with mental illness that were literally going to die. This diet saved their life. For me, it solved a lot of problems. I'm in the fitness

industry. My physique is my business card. I have to have a diet that I can stick with long term. It has to be a lifestyle for me. So the ketogenic diet is absolutely been a God-send for me and my career. All of a sudden I was able to maintain very low body fat and continue and maintain muscle with having the added extra energy. So that was my biggest thing when I went on this ketogenic diet was, was I going to lose a bunch of muscle? I knew I was going to lose a bunch of weight, but was I going to lose a bunch of muscle? I did some research. I found that ketones actually have a protein-sparing effect because when you're on ketosis, your body's relying less on the glucose. It's not going to try to convert the protein that you have in your body into glucose to stimulate protein synthesis. My gains were still there. Like I said before, my strength went down in the very beginning. I got a little bit alarmed, but that quickly bounced back. I've been able to maintain and build slightly a lot of good muscle. I feel like the visual appearance of the muscle definition and things like that is something that I go for. So yeah, that's kind of how that happened.

**Krissy:** So would you say it's more less have ... It's helped you maybe train better with more energy versus it's gotten you this body where it's at right now? Just helping you maintain, if that makes sense.

**Jason:** Yeah. It takes years and years of training to build muscle. Like I said before, I'm interested in being in shape is best possible. I don't go through big bulks, big bulking periods and things like that. It took a lot of time to build muscle. This diet is just been the best in turns of increasing my energy and making me feel better. Allowing me to stay shredded without losing weight. I know so many guys that do competitions and they just straight cut the carbs out completely. It doesn't last for very long. It's very hard to do that. So something like the ketogenic diet approach would actually, in my opinion, be beneficial as well. I feel like I could jump on stage anytime I want throughout the year because I can stay lean and muscular all year round without losing the muscle density. I'm making gains in the gym. Much more than when I was just running straight low carb. That is for absolute fact. I think that 50% of your muscle is made up of fat. You really don't need carbs in order to build muscle, really you need protein synthesis. So things like leucine, HMB, things like that, creatine, help that out as well.

**Krissy:** Yeah, and less miserable.

**Jason:** Yeah. Less miserable. I mean, when you looked at me if I was a year ago and I looked the same, if I looked like this. I was miserable. I really was. It's very, very tough to live a low-carb life. When I went to the ketogenic diet all of a sudden I got to eat all this fat, all this butter and fatty meats. It was like a dream come true. I thought it was too good to be true in the beginning, to be honest with you. That's my approach. The keto cycle is, in my opinion, for me. What works for me and my clients the best.

**Krissy:** Would you say with the keto cycle that it's important to get keto-adapted first?

**Jason:** Yes. Taking yourself through the keto adaptation is part of the program. Absolutely.

**Krissy:** I've heard and I've read, maybe you can talk a little about why this wouldn't work, is from the get-go doing the during the week your keto or your high fat. Then during the weekend, your high carb or you're just not really paying attention. How does that affect ... Does it just drop your ketones back again? You'll never get to the keto-adaptation process? If you're only doing keto five days a week and typical carb diet the other two days. Not being in a keto-adapted state. How might that effect the whole process? Will you still get the benefits of ketones? If that makes sense?

**Jason:** Yeah. Like I said before, I take myself and make sure I get keto-adapted first before I start introducing my strategic carb day. Like I said before, it's one day for me. I've been able to get back into ketosis 24 hours afterwards. The majority of my clients have, as well. So, I don't really know.

**Krissy:** Would you say it's just most important to get keto-adapted first before you introduce any carbs or higher carb.

**Jason:** Yes.

**Steve:** Then again, there's not a lot of research that's been done on cyclical approaches yet. Some of the limited stuff that I have seen from Dr. Wilson's lab show there may be some concerns with a two-day carbohydrate loading type of phase in a cyclical diet. But I think there's also a lot of other potential approaches that just simply haven't been investigated yet.

**Jason:** There's also the targeted ...

**Steve:** Yeah. Also, monitoring yourself as you go through the process. So you know where you're at. I think those are some of the main things to really think about during that process. There's still a lot of work that needs to be done and a lot that we still don't know about this diet yet.

**Jason:** Absolutely.

**Krissy:** You've brought up a good point of you're not going to stick with it if it's not something that fits with your lifestyle. It's always said that ketogenic diet and I think that a lot of people think diet as it's a weight loss or it's something. But it's a lifestyle for people. If you're not okay with eating 75% of your calories from fat. If you're not okay with saying goodbye to carbohydrates, this just may not be the lifestyle for you. But figuring out a way to make it work.

**Jason:** To make it work for you in a real-world setting. The most important part of any diet is adherence. That's the most important thing. That's going to tell whether a diet is good or not is how long can somebody stick with it and can they get results. So that's essentially what I've done is I've just kind of custom tailored it to meet my needs.

**Steve:** To his point, that's exactly right. When you look at the studies on the different weight loss diets that are out there, different macro ratios and stuff like that. They compare the Ornish diet, the Weight Watchers diet, the Atkins diet. The bottom line is the one that you can stay on is the right one.

**Jason:** Absolutely.

**Krissy:** Yep. Preaching to the choir. Definitely.

**Jason:** It really is.

**Krissy:** So, kind of on that line, any tips to help you, if the ketogenic lifestyle is one that you're wanting. Any tips? I mean, you're traveling right now.

**Jason:** Yes.

**Krissy:** Your wife just had a baby. You were telling us that you were at the hospital for three days.

**Jason:** Yes. Which is another reason why the keto cycle saved my day.

**Krissy:** I'm pretty sure they don't support or have higher fat foods like that. So how do you integrate or any tips that you can give us on staying on track? Or monitoring your diet to allow for travel emergencies?

**Jason:** Yeah. I've kind of built in the travel emergency event, social week with the keto cycle. So I do kind of get that part out of the way when those tough situations come up on the weekend. I'll just say, "Okay, well I have something coming up on Saturday where I know I'm going to be surrounded by tons of carbs. I don't want to be the outcast so I'll make that my carb day." I just think that getting over the 'fat makes you fat' thing. For example, I make keto coffee. That's one tablespoon of coconut oil and one tablespoon of butter. To be able to actually put butter in your coffee and drink it, and not feel like you're doing something crazy is a big hurdle. So really just don't be afraid of fat. Fat does not make you fat. That's kind of my biggest thing. Then track your macros. Keep doing all the research you possibly can. You'll be good.

**Krissy:** Steve, I'm interested, kind of an insider perspective. We talk about that there's not a lot of research in this category or with this diet. Do you see this going in any specific way? Or is it more or less just trying to again get more studies looking at long term effects of this diet? Is there a push to study it in certain populations? Or making slight alterations to it? What can we expect with some of the upcoming research in this field?

**Steve:** Dr. Jeff Volek at Ohio State is one of the most active researchers in the world in this area. He's very interested in the potential effects that this diet can have on insulin sensitivity and a lot of the variables associated with metabolic syndrome. So I think you'll continue to see that field grow. There's also been a lot of research in exercise phys world looking not only ketogenic diets but also looking at, again, states of training with low carbohydrate availability. There may be some benefits during certain types of exercise or different training routines. They've studied the ketogenic diet, for instance, in artistic gymnasts, for instance, and find that their strength doesn't go down. It helps maintain their body weight that they need to be competitive. So I think, as a dietitian, you're looking at trying to have a toolbox of approaches that might be appropriate for individuals that have a specific sport, specific goal, a specific metabolic profile. One of the things I want to do as a dietitian is I want to make sure I have tools in my toolbox for all those different kinds of individuals. There may be some people who really, really need the high carb. Okay. We'll do that. But then there's some individuals who ... I might look at this individual and they come up to me and they think they're supposed to be on a really high carb diet. They already have really high triglycerides. I'd be like, "Wow, I don't think I want to go as high carbohydrate for this individual. I want to get information." I think more than anything from the research and applied perspective, we're starting to recognize now that you can't just have a one size fits all sports nutrition recommendation. You have to take in to account the entire person, their health profiles, their sports goals, whatever they may be. You can have a different diet, a very different diet recommendations for these athletes. Instead of just saying pushing everybody has to have 60% of their calories from carbohydrates which is frankly what we did in the '80s and '90s.

**Jason:** Yeah.

**Krissy:** Yeah. Very standardized, generalized.

**Jason:** We went low fat for 30 years, and there's record number of Americans who are obese. There's a record number of people who are suffering from diabetes and children, especially.

**Steve:** What I'm hopeful for too is more studies, especially with the ketogenic diet in association with exercise. If you look at the vast majority of studies that have been done in the obese population and the metabolic syndrome population, you don't have exercise as part of that equation. We know we need people to exercise. So to really have the best scientific studies that give us the most applicable results to our population, we got to have people doing both the diet and exercise pieces of things. You're not going to really get the best research that you can apply to the population. And I know, everybody says, "Well, I want to be able to achieve my results without exercise." My answer to that is, "It ain't going to happen." If you really are committed to making change, you're going to need to exercise. You can't just follow a diet and say, "Okay, that's all there is." The exercise piece is critical. You need to figure out how to hit that part of it.

**Krissy:** Yeah, you bring up such great points that this is very much in its infancy. There is still so much research that needs to be put into it. I don't want to say it's a complaint, but my biggest question I always bring up with the ketogenic diet is, what about a highly-active individual? We have 'n' of one, one subject and we can kind of say, "Okay, this is how it worked for one person." But to see in a larger group and see how the body reacts to it. If it can maintain a lifestyle anaerobic or involves short bursts of activity that our body is so used to. We've learned from introductory to ex-phys 101 that you're body use carbs for all of that. What happens when you take it all out? I look forward to seeing some of the research hopefully that can be done on that. So we have a better understanding in how to incorporate it into different athletes' lifestyles.

**Jason:** I think you're going to see big things coming from the ketogenic diet.

**Krissy:** Yeah. It's definitely a very interesting ... I know a lot of our viewers love it.

**Jason:** Yeah. It goes against the grain. It's complete opposite from everything you've learned and grew up with. But there's a lot validity to it. A lot of success stories. Now if we could just get the funding for the studies, that'd be amazing.

**Krissy:** Yeah. Funding. Always the biggest ...

**Steve:** That's the rule as far as sports nutrition, exercise physiology research in general. For an approach that is the number one approach for helping people improve their lives and their health, you would think there would be more devotion of NIH resources and all those types of things to studying this field in particular. Thinking about how much it could potentially affect health care expenditures and everything in this country. It's just, sometimes it's mind boggling to think about how low the funding is for research like this relative to other approaches that don't carry nearly the potential for success. In helping people change their lives and improve their health.

**Krissy:** Well, hopefully one day we will be in that right direction to go forward. So, one thing that I do want to get from each of you is maybe your number one tip that you would have. And maybe it's not a tip, maybe you hear the same kind of misunderstanding or error associated with the ketogenic diet. So either or a tip or your number one mistake that you hear. Then how would you correct that to someone who is looking to go keto. Whether that be a supplement. Whether that be this is my



favorite type of fat. This is how I start my day because I think it sets me up.

**Jason:** Coconut oil and butter.

**Krissy:** Coconut oil and butter.

**Jason:** No, I think a lot of people are afraid of losing gains on the ketogenic diet. That's one of the reasons why I've loved it. Ketones have a protein sparing effect. Like I've said before, I just went low carb for a long period of time and I lost all my muscle gains completely. With the ketogenic diet, I've been able to maintain and actually build lean muscle. I feel like a lot of people kind of shy away from it because they don't want to lose muscle mass. My other biggest tip is you've got to focus on the electrolytes. [Electrolytes](#) are absolutely critical on this diet. Do not fear fat. Fat will not make you fat. If you don't get enough fat on this diet, your energy levels will simply be sapped. You'll end up quitting. Just kind of have confidence with it. It's scary when you go into it. I'm telling you, I've been there before. You're like 200 grams of fat. It plays games with your head. It goes against everything you've ever known and learned and believed before. But if you can kind of just say ... Especially if you're somebody that has to lose a lot of weight and you've tried everything out there. You've just got to say, "Okay, I'm going to take the plunge. I'm going to do this. I'm going to give it a shot." Just give it a shot. Don't be scared off just because we're telling you to eat a bunch of fat when you grew up thinking fat made you fat.

**Krissy:** Anything ...

**Steve:** I think for me, it's kind of a educate yourself, plan and monitor. Those three words are the words I would keep in your mind. This is a very significant departure from the typical diet. I've done a contest diet for body building before and I know when I had to do that diet it wasn't necessarily a ketogenic diet, but it was a lot different diet than I was eating. I dropped 50 pounds on this diet to get into contest shape. It's all about educating yourself, planning, and monitoring yourself as you go along. That's the same thing with keto. You need to really understand, "Okay, what is a ketogenic diet at its core? What am I going to be eating? How can I keep track of my carbohydrates? How can I ..." Get those systems in place so you've educated yourself on it. Make yourself a plan for those kinds of foods that you can use. Shoot, there's a lot of really good cookbooks out there. I just got a ketogenic diet cookbook that has some amazing recipes in there. Like using cauliflower as a substituent for rice.

**Jason:** Fat bombs.

**Steve:** I was just like, "How do you do that?" I wouldn't have even thought about that in my traditional thinking about a diet as a dietitian. There's a lot of creative ways that you can incorporate this deal so that you can still maintain a ketosis state, but have some interesting foods you can incorporate as part of your plan. And then monitoring. Again, get your blood tested. Don't be afraid to go to the doctor and say, "Hey, I'm thinking about doing this. Here's why I want to do it. I've been reading about this. Here's the tests I want done." That's one of the things I tell moms who worry about their kids and taking supplements. They're worried about if their kid should take creatine or not. It's like, well, take your kid to the doctor. Get the blood values tested. Let the doctor know that your kid is on creatine. Then you can monitor things as you go along. If there's a health issue then you address it. But at least you caught it early before you've had ... If you start to see blood creatinine levels go up abnormally in that process, you can get off this thing before kidneys start to shut down or something much more terrible happens. That's the same with ketogenic diet, if you



monitor yourself and make sure that your values are where they need to be.

**Krissy:** So best resources for you guys because you mentioned educate. I think that's hugely important especially with something that is so new. Something that you guys go to?

**Jason Wittrock:** So there's obviously a bunch of good articles and research led by Dr. Wilson that are on Bodybuilding.com. For me, Jeff Volak, Steven Phinney, and Dr. Gary Taubes have been excellent researchers and kind of at the forefront of this ketogenic diet. Dispelling a lot of the myths, coming out with the studies even though as limited as they may be. So I definitely keep my eye on them and what they're doing. For sure.

**Dr. Steve Hertzler:** Yeah, they have a lot of good books that they have written where they talk about the research that has been done out there. I think those are good resources to look at. Certainly the FAQ's that Dr. Wilson has produced are really good. Again, these are people that are actively researching this and really are at the forefront of what's new and what's cutting edge as far as this diet goes. I think those kinds of resources are going to be really, really helpful. There's no better resource than monitoring yourself and seeing how you're doing. Making sure that you've got ... You're monitoring your medical status and you're monitoring your body composition; your energy levels; all those things that are important for athletes that are training and trying to get the best results possible.

**Krissy Kendall, Ph.D.:** Yeah. Those are all great resources. Additionally, we do have content and articles right on Bodybuilding.com. And thank you so much for being here. I truly enjoyed spending my day with you and learning pretty much everything there is to know about the ketogenic diet. And if you like these articles and videos, keep coming back to Bodybuilding.com.

That concludes my interview with Jason Wittrock and Steve Hertzler. Hope you guys enjoyed it and got something out of it. My name is Krissy Kendall and I will see you guys next time. That's a bacon wrap ... LOL.



## [KETOGENIC DIET: YOUR COMPLETE MEAL PLAN AND SUPPLEMENT GUIDE](#)

Jumping into the ketogenic diet without a rock-solid plan will set you up for failure. Use this approach, crafted by researchers and athletes who have done the work and made the switch already!