

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

**KERRY:** This evening's speaker is Bob Seebohar. He is one of the first board-certified specialists in sport's dietetics in the United States. He is a former Director of Sports Nutrition for the University of Florida and most recently served as sports dietician for the US Olympic Committee in Colorado Springs. Bob traveled to the 2008 Summer Olympics in Beijing, China as a sports dietician for the US Olympic team and personal sports dietician for the Olympic Triathlon team. As a nutrition coach Bob specializes in enhancing health and improving performance through the use and concept of nutritional periodization, which provides nutrition recommendations to each specific athlete based on training cycle, changes in body composition and weight goals. He is also the author of the book, "Nutrition Periodization for Endurance Athletes - Taking Sports Nutrition to the Next Level." With that I welcome Bob Seebohar to the call. How are you doing?

**BOB:** I'm doing great. Thanks, Kerry, for having me here and offering this great Triathlon Summit to everybody.

**KERRY:** No problem, no problem. Let's get into our first question this evening. Like I said before, you've got the book on nutritional periodization, why don't you explain to everyone what nutritional periodization is and how you came up with it.

**BOB:** Perfect. The story dates back probably about six to seven years. I remember vividly where I had the same Ironman triathlete come visit me about two to three years in a row, with the same goals. The first year he came to see me he wanted to lose weight, lose some body fat, to improve his time to try to qualify for Kona. So we got him down to his race weight, his fighting weight. He qualified to Kona and came back to me the next year, about the same time, with the same exact goal of losing weight. I had a puzzled look on my face and I asked him, "Didn't we do this last year?" And he said, "Yeah, but I gained weight over the off-season." So we went through the process again and the third time around I realized that this athlete, and all endurance athletes at that time, were simply not thinking about their nutrition like they were training. They weren't periodizing or separating their nutrition to actually support their physical training cycle.

That's kind of the basis of nutritional periodization. It supports whatever physical training that you are impairing on your body, whether or not you're coached or self-coached. Whatever your physical goals nutrition periodization should support those.

How it works is very simple. The first question I usually get asked by athletes is, "Bob, what should I eat?" Really, the first question to ask

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

yourself is, “What training cycle am I in?” That’s the first and foremost because you can’t feed yourself appropriately if you don’t know what you’re trying to do to your body - be it increase strength, increase endurance, take a fun, planned recovery or whatnot.

**KERRY:** Excellent. What can a triathlete gain from using nutritional periodization?

**BOB:** I’ve been in the field for 16 years now and the old-school thinking is just looking at all the nutrients as one. There’s carbohydrates and protein and fat and water and micronutrients. Really what athletes can gain, and specifically triathletes is, the number one and two goals of nutrition periodization I’ve identified are pretty simple. We can enhance our health by keeping our immune system healthy, by really keeping enough energy in our system so we’re able to train and not bonk. The second thing is we want to improve performance. We fuel our bodies and we hydrate our bodies well enough so we prepare our bodies for our workouts or for our training sessions. I have a mantra that is “eat to train, don’t train to eat.” And third, the most important part of nutrition periodization triathletes can gain is body composition and/or body weight maintenance or manipulation.

In the practice that I’ve been in for years working with Olympic athletes and age-group athletes, probably the number one goal athletes come to see me for is to reduce weight and to reduce fat. That is where nutrition periodization earns its keep because again, it’s the cycling of your nutrition to support your training that can offer that body composition change or that body weight change. Just to give a short example, usually when you have high and low volume and intensity in your training your nutrition will typically stay the same. You may be able to get by with that if you have high training where you’re burning a lot of calories and you may not be feeding yourself enough calories but once you dip down either into an off-season or recovery or restoration block or possibly even an injury state, if you maintain that same amount of nutrition and nutrient intake that you do normally you’re going to gain weight. First and foremost, the main emphasis for nutrition periodization is controlling weight, controlling body composition.

**KERRY:** Okay, excellent. In terms of racing, a lot of people have issues in terms of stomach things going on, upset stomachs or whatever. So what should be eaten before a race, during it and after it?

**BOB:** That’s a great question and one that many coaches get and one that I get quite often. I hate to use the answer, it depends, but there are some factors, before I answer this question, that we have to address first. The first one is, has the athlete practiced in training what they’re going to do on race day. I know that may sound silly but it’s like buying a new pair of shoes

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

the day before the race and trying them out on the race if you've never tried them before. What I try and have athletes do is just like you have your separated cycles of training be it preparatory or your base cycle, your intensity, your pre-competition, your race season, your off-season, what I like them to do is separate the sports - the swim, bike and run - find what foods work well before each sport. So before you hop in the pool does a glass of juice and a banana work for you? Does a bowl of oatmeal? Can you do the same thing before a bike and can you do the same thing before a run?

Once you get to know, and I call this simply "training the gut," once you train the gut you can then move into your intensity training where you usually have a little more race simulation. So you're doing some combo workouts, you're doing some brick workouts. Then you can start trying this nutrition before these higher-intensity, more demanding training sessions. And then maybe if you have group workouts you can simulate a little stressful response or race pattern to see if the body responds. But most importantly think about the intensity of the exercise and the response of digestion. This is why a lot of athletes have GI problems, gastrointestinal problems, because they don't realize as intensity goes up the blood flow in the gut actually becomes shunted or is delivered away from the gut, away from the stomach, to the working muscles to fuel exercise. Add on top of that the stress, and the stress hormones that we get when we toe the line and before we start, and the gut is constantly in distress.

So what I recommend before a race, obviously if you've done your homework and you've seen what works well for you in training and at high-intensity training, usually that will get you through before race day. What I usually recommend athletes do is separate their race distances. So fueling for a sprint in an Olympic-distance triathlon is going to be a lot different than fueling for a 70.3 in a full Ironman.

So if we're doing the short course which we can define as sprint in Olympic, what I usually like to say is because intensity is a little bit higher for that and the race is a little bit shorter, you can get by with the foods or the meals or the drinks that you've done in training, during your high-intensity training. Typically athletes, and this doesn't hold true for all, but typically athletes do better on what I call a semi-solid or a liquid meal beforehand because it gets out of the gut a little bit quicker. It's a little bit easier to digest when then stress hormones are increasing. Certainly what I recommend is usually between about two to four hours before a race, if you can afford it - I know the race sometimes goes off at 7am and we're in the transition area by 5, 5:30 - but if you can afford it wake up at least a couple of hours before and put something back in your tank. That's for a sprint and Olympic.

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

For long course, depending on how you've trained the gut during the season, if you've trained the gut to get by with less, you certainly don't want to put more in your stomach and more in your gut the morning of the race just because your friend or your training buddy tells you, "Hey, you're doing an Ironman, you're doing a 70.3, maybe you should eat a little bit." You really want to stay tried and true to the plan that you've done during training.

But again, what holds true is that you consume or your snack two to four hours beforehand, again probably focusing more on semi-solids and liquids. However I'm a big fan of including a little bit more balance of nutrients, specifically carbohydrate and protein, to sustain the hunger response and really to not get the high blood sugar and insulin spike right before you toe the line. That was before the race--

KERRY: [Cross talk] Sorry, keep going. I thought you were done.

BOB: That was before the race. During the race, again, for the athletes on the line listening, really separate your race into the race distance and more importantly, what would your intensity be because we know if you're an age-grouper just having a great time out there at Ironman, then you can probably eat a little bit better. Meaning you're not going to have as much blood flow shunted to your muscles. So you're going to be able to digest a little bit more food, possibly, if you tried it in training.

Now there's this thing out there that athletes try and train their gut to consume more calories. I'll get to that later in the talk. What I really recommend athletes focus on during the race are consuming fluids, electrolytes, specifically sodium, carbohydrates, and if protein works for you, I never negate that from an athlete's during-the-race nutrition plan. If it works for you, go ahead. I would just recommend more of what I call single-amino acids in that those are branch-chain amino acids, and possibly glutamine, rather than the whole proteins such as soy and whey protein, just because they're a little bit easier to digest at those higher intensities. I'm not a big fan of recommending protein for everyone during a race, but if you use it in training, it works for your gut and you've had no problems, then stick with it.

KERRY: And what about after?

BOB: After a race you really have to...a lot of it factors into the body composition goals. If you're just really wanting to focus on, "Boy, I just want really good nutrition recovery. I want to regain my glycogen stores. I want to replenish my fluid stores. I'm at a comfortable weight or body comp and I just want to get to my next race really dialed in and recover well." What I recommend is you focus on what I call the Fab Four. That is

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

carbohydrates, fluid, sodium and protein.

I'll give some guidelines here because carbohydrates, just to make sense of this, we're using a lot of carbohydrates, a lot of limited stores of carbohydrates while we race. So we want to make sure we replenish that and those are probably the ones in the highest quantity we want to put back in our body. What's usually recommended, I can base it on body weight but usually most athletes in the "normal" body weight, should consume about 200 to 400 calories from carbohydrate, 50 to 100 grams.

From a fluid perspective, this gets a little tricky because depending on your sweat rate and where you're racing and the country, especially if it's down in the southeast or the southwest during the summertime, you can really lose a lot of fluid, especially when the humidity turns up. If your sweat rate is pretty high and you lose a lot of fluid, you're going to want to try and decrease the amount of fluid you lose during and beforehand by properly hydrating yourself before the race and during the race, because the whole goal after the race is to minimize the amount you need to drink. For example, you should drink about 24 ounces of fluid for every pound of body weight that you lose during a race. I've met a lot of athletes over my years and I've done sweat rates, testing on myself and others, and have found that if you lose any more than about two pounds during a race and I ask you to drink two 24-ounce bottles of a fluid, you may buy into that. But once we get to about over three bottles, or four bottles, or five bottles, or six bottles, they look at me like I'm crazy. So what we want to really focus on is minimizing dehydration by maximizing your hydration strategy before and afterwards.

From a protein perspective, we don't need a lot of protein after a race. We need about 10 to 20 grams, about 40 to 80 calories. That's it. That's just a little bit in there.

Then sodium, think of sodium like a sponge. It acts to help soak up that fluid and help us retain the fluid. So you can set a range of sodium. Certainly the minimum that exists is 500 milligrams, but really, just eat some salty food, salty pretzels. I see a lot of athletes having watermelon with salt on it after a race. Chose your strategy but definitely include those Fab Four.

While I'm on this, and I race a lot myself, and probably one of the worst things we could see at the finish line is pizza, for our recovery. Pizza is a great food. I hate to say that because I love pizza. It's one of my favorite foods. But right immediately after racing, and we want to start this nutrition within about 15 minutes of finishing and crossing that finish line. After 15 minutes, after a couple hours, pizza does fine, once you've gotten the Fab Four in there, you've re-hydrated, you're getting that process

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

started. But because of the high fat content with pizza - and you didn't hear me say that we need a lot of fat post-workout or post-race - that fat content will actually work against carbohydrates in refilling your glycogen stores. So I don't recommend the pizza. Take a couple slices, wrap it up, have it a couple of hours later.

**KERRY:** All right, good deal. Good advice on that one. Do triathletes have different nutritional needs compared to other endurance sports or athletes?

**BOB:** That's a great question. I think because we do three sports, and sometimes if we want to throw in strength-training as a fourth sport, because we do three sports we have different needs from the standpoint of we need to find what foods work best for our gut. I only say that because all of you out there listening, if you're triathletes, you know what may or may not work for you before you get in the water, before you get in that prone position. You could have a little bit of reflux when you get in that position.

Then you get on the bike and a lot of triathletes think is all about a buffet because it's easy to eat. And then the run, typically our calories go down quite a bit. I would say our needs are different in that we're doing three sports that have different body positions and different mechanics that are involved that interrupt digestion differently. So we're not pure runners, we're not pure cyclists, we're not pure swimmers. In fact, we even know long-course, open-water swimmers, they can stop and ingest some stuff. It's tricky but because we're combining the three our needs are special in that we need to find what foods work best for our gut.

**KERRY:** Excellent. What's the biggest mistake you see triathletes make in their nutrition and how can they fix that?

**BOB:** Yeah. It's kind of a two-pronged approach. I'll talk about daily nutrition and then training or racing nutrition. I think during the day, and this may sound like a no-brainer, but during the day I see a lot of triathletes make the mistake of not staying hydrated, not staying well-nourished. They don't feed often. They don't snack often. They go into the training session without a lot of gas in their tank or without a lot of carbohydrate in their tank. If you have quality training sessions and you don't have a lot of gas in the tank, you're not going to be able to make the objectives and the goals, the physiological goals and the adaptations that you or your coach wants because you're running on empty or you're running on low. So that, from a daily perspective, I see that as kind of a low-hanging fruit where it's just simply combining lean protein, healthy fat, fruits and veggies, whole-grain, depending on your weight goals. Combining that at every feeding is the easiest way to fix that.

Now I get to get on my soapbox a little bit and talk to you about training

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

and racing. I think, by far - and I think this may shock many listeners out there - I think, by far, the biggest mistake triathletes make during training or during a race is over-consuming calories and under-consuming electrolytes. Let me support those statements because it could be a shocker, especially the calories one, especially if you do long-course racing. A lot of athletes, a lot of coaches out there, a lot of the old-school, is saying train your body, train your gut to eat just as many calories as possible. The way I look at it is if we can train your body to utilize more of its internal fat stores, of which we have almost unlimited, we've got probably 80,000-100,000 and more calories stored as fat in our body and protect our carbohydrate stores, of which we probably only have about maybe 1600 to 2000 calories in our body, I would rather have an athlete try and train their body to use more fat at higher intensity, and this is a principle that I refer to as metabolic deficiency, instead of trying to shove more calories down in their gut, while they're racing or training. Now think about this, remember what I said before, as intensity of exercise goes up, during quality training sessions or if you're racing, as your intensity goes up, your body's ability to digest food goes down. So every opportunity you introduce a large amount of carbohydrates, of calories, of protein, whatever it is, the higher risk you have for GI distress.

I think I said this earlier, the two main concerns athletes come to see me about are weight loss and body-comp loss and GI distress, minimizing GI distress. You can try this. Go out to the track or do some swim intervals. Try and eat as much as you can during your rest intervals.

**KERRY:** And you'll get sick.

**BOB:** Yeah. I will guarantee you will have GI distress. The biggest mistake is taking the new research that says you absorb a lot of carbohydrates. The mistake would be, "Well, if the research says that..." and it's only been done on cyclists, take that for a little golden nugget. It's great research and it gives up great information but especially if you're more of a petite female or a smaller guy competing in triathlon, you try and push 90 grams or 360 calories in your body per hour, you're going to have some GI distress.

So what I try and get athletes to do is to buy into the principle "less is more." Train your body to utilize the fat stores, protect your carbohydrate stores and only give your body what it needs instead of over-feeding. That's my first point.

My second point is on my electrolyte soapbox. Almost every single athlete I've talked to-- when I say electrolytes, I'm a big fan of the whole electrolyte panel that we see, being sodium, fluoride, potassium, calcium and magnesium. We know sodium chloride are the two big ones when it

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

comes to cramping but what I usually see is a lot of athletes, for whatever reason, they're under-dosing their electrolyte intake therefore they're getting hyponutremic, they're feeling dizzy, dehydrated. They're feeling lethargic. It's a very simple thing to fix. All you need to do is dose up on your electrolytes.

I've got a lot of athletes that I consult with that follow what I call a "clean" diet - not a lot of processed foods, not a lot of junk, not a lot of refined products. So they follow kind of a lower-sodium diet and they want to maintain that. That's fine, just remember your body is so good at balancing its food and electrolytes that if you introduce a high load of electrolytes your body is going to send a signal to your brain to drink more water, therefore it's going to remain imbalanced. I would rather overdose electrolytes during a race, especially if it's hot, especially if it's humid, rather than under-dosing and relying on the ambulance to pick you up or having to get some IVs in the arm.

**KERRY:** All right. Actually, a quick question on that. Do you basically calculate how many calories a specific athlete needs or how do you work that?

**BOB:** That's a great question. There's some spreadsheets that are floating around the Internet that I've seen. It takes into consideration your body weight. That is only one factor of it. In fact, you don't know, if you've got two athletes weighing 170 pounds, they're going to process calories differently. One may have an allergic response to certain foods or an intolerance. So what I like to look at is I always start an athlete on the lowest dosing possible for carbohydrates. That would be 30 grams an hour or 120 calories. I start there in training. Then I'll dose up as needed during their quality training session. Then by the end of their quality training block, then they know how much to consume in the race, if that makes sense.

**KERRY:** Yeah, that does. The USA Triathlon team did a really good job in terms of staying healthy in the lead up to the Beijing Olympics. They all credit you in big part to do that. What did you do to keep them healthy and going good? A lot of times people are training for that big race and they get sick at the last minute or they get injured or whatever. I'd just like to know the strategy that you use to make that all work well for them.

**BOB:** Great question. I think it can be applied to all of us who travel, even if it's not internationally. You can pick up some golden nuggets from some of the tips I'm going to say now. When I was at the USOC we obviously didn't treat the Olympics too lightly. We started planning for this, the food portion of the whole Olympics, about 18 months beforehand. I'm not going to tell you the behind-the-scenes sourcing of the foods but I will tell you that I started educating the triathletes - and we didn't even know who

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

was on the team yet - 18 months beforehand, especially 12 months beforehand. I started educating them on nutrition periodization. So saying, "Let's cycle your nutrition. Let's work with your coach, make sure it's supporting your needs, your physical needs. But more importantly, let's start training your gut to identify what foods work best for you, what foods don't work good for you in hot and humid conditions," because that's what we would face in Beijing. So about 12 months out we get started and get pretty serious at developing what I call a GI-safe food list. That's what I recommend to everyone. Identify what foods you know of that you can put in your gut during high intensities, during different environmental conditions based on where you're going, that will not induce GI distress, that will be safe, that will be easy to digest no matter what the condition, no matter what the situation.

From there what we did was we were able to provide athletes with these little hot pots, little rice cookers. If you guys can imagine a 32-ounce or 1-quart plastic hot pot that's powered by an electrical source. We gave every single athlete a hot pot and a power transformer and held cooking classes for a lot of them that were in the area. So we showed them how to use it. I came up with menu ideas of what to cook. It's kind of that one-pot cooking approach. What can you cook in one pot? Rice, vegetables, oatmeal, you name it.

We really took into account the education, cooking, as well as going to the store and picking out certain foods that are right for them based on their GI safe list. So again, if we're traveling, and I do this with myself when I travel to races, if they're in a different part of the country or a different part of the world, I will bring my familiar GI-safe food list items with me. I'll bring my cooking source. Even if you don't trust the water boil it for four or five minutes and it should be pretty safe. It's doing all that in preparation for where you're going. So that was on the front-end.

On the back-end, once we got there - not they of course had the luxury of having me fulltime and that was one of my primary jobs. I made sure that before we went...I should back up. Before the Olympics, they took me the year before because they had a staging before the event in Beijing, just like the Olympics, same course. We actually stayed at the same location in both locations that we stayed so we knew what food sources we had available, we knew what cooking methods, we knew if it was safe. The funny story is when we were in Beijing in 2007 I tried to get in the kitchen of the hotel we were staying in by the course and it took me about three days to convince these people to allow me in the kitchen. We went through a lot of interpreters, a lot of management, but finally I went into the kitchen and I realized, and I kind of did my scouting then and my recon saying, "This kitchen is unacceptable for what we need." Therefore I controlled all of our nutrition. So through help with the USOC and

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

through help with the athletes bringing their food and their hot pots, I cooked their meals. I made their lunches. I had them do most of their breakfasts in their hot pots, because we brought a lot of oatmeal. And I prepared the dinners, not in the restaurant but I depended on our US-based cafeteria restaurant.

So control everything you can. If you can do recon before your event, great. If not, scope it out on the Internet, find a grocery store and really know what foods work good for your gut. Take an extra suitcase. I know it costs a little bit to check these things in now but take an extra suitcase with food and cooking equipment. That is the easiest way to be prepared.

In 2007 in our staging race we had three athletes get sick. One actually ended up going to the hospital. In 2008, as you said, we had absolutely zero athletes with GI distress. We had no problems at all. Interestingly enough, we stayed at a different hotel than all the other athletes did. We stayed at, not the host hotel but one that was about 4K away. A lot of the athletes that ate at the host hotel had GI distress on race day. So there's something to be said for if you can control everything on the front-end and the back-end, you're going to almost, there's a lot of things that can enter in there, but almost keep your gut safe.

KERRY: Yeah.

BOB: It was definitely fun. I remember we had a lot of translators too. We were actually in South Korea nine days before at our training camp. I didn't have a translator there but I had to somehow communicate with our Korean chef. What I ended up doing was, because the language barrier was so great, I actually ended up going on the Internet, finding the foods in Google images, finding the photos of foods I put on the menu, put it in a PowerPoint presentation and every morning I would show her our daily menu. That was the easiest way to communicate with her.

KERRY: Good deal. That's pretty cool. Where can people get your book?

BOB: They can get it either at my website, [fuel4mance.com](http://fuel4mance.com) or just search for it on Amazon.

KERRY: Okay, great. What's your take on supplements? Do you need them? Do you not need them? What's your opinion on that?

BOB: I've got to tell you, next to nutrition periodization this is probably the most evolving area of sport nutrition since I started in this field 15 years ago. We know a lot of strength and power athletes have used supplements. I think a lot of endurance athletes, while they may not think about it, they use supplements almost every day if they're drinking sport drinks or

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

consuming energy gels or energy bars. I think the lowest denominator with that is just to remember that all these bars that you're consuming, and gels and drinks and chews and you name it, they do have some extra micronutrients, vitamins and minerals. So those can be considered a supplement, depending on how you term that. I usually categorize supplements into dietary supplements - those are like your calcium, iron, zinc, B vitamins, multivitamins. Then you can certainly do the ergogenic supplements, the performance enhancing. Those would be items specific to triathletes, those would be things like carbohydrates, fluid - yes those are ergogenic - sodium citrate is definitely up there, some of the adaptogens, which I can talk about, are up there. Then the last one are just the sport supplements, like I said, the bars, the gels, the drinks. I actually classify supplements into three categories. Once you can think about them in those three categories it becomes very clear that we take supplements, we need supplements, it just depends on what classification you're talking about.

Now if I go through all of them, if I could have a few minutes to discuss all of them, from a sports supplement - the energy bars, the gels, the drinks, the chews - absolutely hands down. Those are needed at only certain times of the year but they're definitely needed to contribute to keeping us in a good calorie state, a good fluid state and a good electrolyte state. So those are the low-hanging fruits.

I think from a dietary perspective your multi-vitamins, your B vitamins, your zinc, your iron - I am a huge proponent of some of those. Specifically for endurance athletes iron in particular, possibly vitamin B12 if you're a vegan or vegetarian athlete and don't eat any animal products. Certainly calcium sometimes for females. I think there's a lot of good, when it comes to a dietary supplement. The most work I do, and continue to do with endurance athletes, triathletes in particular, is from an iron perspective. I think a lot of people don't realize the impact of iron or they don't have their iron levels measured and it makes a huge difference in performance and health.

From an ergogenic standpoint, that's where it gets a little tricky because we know ergogenically, probably one of the most popular ergogenic aids, as far as supplements, is creatine. It's got thousands of published researched articles. We know hands down it works for strength and power athletes. It's still to be determined with endurance athletes, based on your goals. If you're in resistance training hypertrophy state and want to add some lean mass, absolutely go for it.

There's a few in particular, from a ergogenic standpoint that I think a lot of triathletes should start either reading on or learning more about. Those certainly can include sodium citrate. That's just a buffering compound.

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

You may have heard of it from the other classification, sodium bicarbonate. That's just simply the little orange box that some of us have in their refrigerator. That's just the Arm and Hammer. That's pure buffering. We're trying to buffer a lot of the lactic acid that we have built up during exercise. Fortunately, or unfortunately, sodium bicarbonate usually produces some pretty serious GI distress. The way I've heard it from some of my athletes is explosive diarrhea. So it might not be the best thing to take. But we've found and we've shown that sodium citrate is a lot easier on the stomach and it still works to buffer. Now it's funny because the whole story behind sodium citrate is that you're trying to buffer really hard intensity efforts. A lot of endurance athletes look at it like, "Why do I need this?" If you're going through a power improving phase or a strength-building phase where you're doing up to 30-second efforts, really tough on the bike, the swim or the run, then sodium citrate could actually help produce positive physiological adaptation. If you're just doing long-distance stuff it doesn't make sense to take it. So why even blink and eye with it? So sodium citrate definitely.

I don't think a lot of triathletes recognize that carbohydrates and fluids can actually be an ergogenic aid. Ergogenic means performance enhancing and we know that fluid and carbohydrates do that. It's been on the horizon for about four or five years but really there's a lot more companies popping up that are doing this, but these compounds called adaptogens are becoming very popular. They're basically herbal supplements that counteract the stress response in our body. So it helps our body respond to stress. Not only the daily stress but the stress of our workouts that we're doing every single day. I think we're going to continue to see quite a bit of supplements with adaptogens. There are hundreds of adaptogens. Probably the most popular in supplements right now are called rhodiola rosea and CortiCepts. Those are two you'll see in some supplements. It could have an ergogenic effect, absolutely.

I think hands down, I'm not a big pill-pusher, but hands down, we need supplements. As far as classifying in those three areas, we absolutely hands down need supplements. It just depends on which area you're talking about.

I should also mention, while I'm on that subject, I'm a huge, huge fan of omega 3 supplementation because of the anti-inflammatory responses that we're seeing with omega 3 supplementation and the body's responses. We know as we exercise we actually induce inflammation in our body. One of the best ways, from a nutrition standpoint is to balance out our omega 3 and our omega 6 levels. One of the best ways to do that is we can certainly eat fish and high omega foods but there aren't that many that can actually give us the benefits that fish oil can. That's why we're seeing a lot of athletes using fish oil these days. It's absolutely justified. It's been proven

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

in research to work on cardiovascular patients, reducing the inflammation in the body there. There's some research beginning to surface now on omega 3 supplementation to reduce inflammation in athletes. So I would definitely keep that one on the horizon. I recommend it. Quite a few of our triathletes are on that now.

Of course, when it comes to supplementation, I have to say this, depending on what level you're racing at, you really need to make sure where you're sourcing it from. There's a lot of scares and a lot of issues with supplement contamination these days. Part of my job, and certainly it can be part of yours if you're thinking about taking a supplement, is to call the manufacturer and simply ask for their quality control procedures, their manufacturing procedures, if they can share that with you, if they can produce what's called a certificate of analysis at the very least. If they can and if they do, they'll have third-party clinical testing to make sure that what's in their supplement is actually in it and there's nothing that's contaminated, no contaminated substances in there. We see athletes getting dinged for that every year where they say, "I'm just taking an electrolyte supplement. How did I test positive for a precursor to steroids?" There's something to be said. Really watch out, especially for the elites out there. If you get drug-tested, really pay attention. Even for age-groupers I think it's still important to know what's in the supplements so we don't have any adverse affects of possible supplement contamination, or if you're on medications, possible medication interactions, with these supplements.

**KERRY:** Yeah. So basically look for a third-party source to confirm that it's okay to take those supplements from that company. Is that the main thing?

**BOB:** Yeah. That's the big thing. Two particular companies, the NSF, if you see a NSF stamp on it, or Informed Choice. Those are probably two of the most popular companies that are doing testing on supplements now. I have to say that a lot of supplement companies don't do this because it costs a lot of money to batch-test their products. What I really respect is when I see supplement companies stepping up to the plate and paying for this because that tells me that they're serious about it, they're serious about safety and they're going to put their money where their mouth is and prove it to us. So absolutely hands down look for those types of companies and give them your business.

**KERRY:** Awesome. Great piece of advice there. Another question we've got here is basically you hear some people say that in terms of race nutrition the best thing is to take in real food - baked potatoes and I've even seen some ultra-endurance guys doing 100-hour bike rides and whatever and they're taking in mashed potatoes and chicken and things like that. What's your take on that for triathletes, taking in real food versus the supplementation

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

food out there?

**BOB:** There's some interesting answers to that. First and foremost I think define your distance. If you're doing anything less than an Ironman, it's going to be pretty hard to digest solid food. If you're in fact racing it, and you're not going to be out there for a long time at lower intensities. Just going back to the higher intensity equals lower digestive abilities, Ironman athletes, I think you could get by with some solid foods but I am usually not a big fan of, even with Ironman athletes, trying to do a lot of solid foods, because of that possible GI distress. Just because there's not adequate blood flow to the gut to help break it down.

Now certainly there is that five percent out of the bell-shaped curve. We don't want to call them freaks of nature but sometimes they are. Take into consideration that they're also doing that in training. So they're teaching their body how to process that food during those conditions. Kerry, like you were saying, I think the ultra guys and gals out there with the 100-mile plus, I think it's so easy to eat solid food because usually unless you're climbing a 10,000-foot mountain pass, usually your intensity is pretty low. But for triathlons, the first side of the sword is if you can teach your body how to do it in training then fantastic.

The second side is that it could be beneficial if you do teach your body because a lot of the things I'm seeing come across my desk and my email, are GI distress. What I'm seeing is a lot of what I call gut-rot out there. If you introduce a lot of simple sugars in the form of high-sugar gels, high-sugar drinks, at a certain point throughout the race, it might not bite you until after the race, which I hear most of the athletes when they feel lethargic or they're vomiting, if it bites you after the race great. But if it bites you during, that gut-rot could take you out of a race. So that could give you good evidence to support saying, "Maybe I should go easy on the gels. Maybe I should sneak in half a peanut butter and jelly sandwich or a honey sandwich," or something that your body can process. I think it's a very good point as long as your body can train itself to do it. I just haven't met many Ironman or 70.3 or sprint or Olympic triathletes who can actually pull it off successfully while racing at a high intensity. It's a great idea though. I wish our bodies were a little bit smarter in processing it. Try it in training. It's a valid concept. I would actually support it fully, if we could, especially in long-course racing.

**KERRY:** Even with fruit juice and stuff for people to do?

**BOB:** I'm sorry, say that one more time.

**KERRY:** Even with something such as fruit juice?

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

BOB: Yeah. I think fruit juice is tough because number one you need to spike it with a lot of sodium because it has very low sodium. Because it has a little more fructose in it at times that can be a little bit tougher on the gut, depending on the ratio and the quantity. We know we can increase our carbohydrate absorption by using a little bit of fructose. Fruit juice itself, I think it's that sweet factor. I hear this from athletes too. They just want to get away from the sweets. It's scientifically proven the longer we exercise the less affinity for sweet foods we have, meaning we don't want a lot of sweets.

I'm seeing some products come out there that are either dosed lower on the sweetness factor or are a little more tart, which I'm actually supporting. On that topic Kerry, a lot of athletes will dilute their sport drinks because of this. I think that's fine from a carbohydrate perspective. But just remember that when you're diluting your sport drink you're also diluting your electrolytes which is diluting your sodium content in your blood which may predispose you for hyponatremia. I've got a lot of elites who I work with on the ITU circuit who will dilute their sport drink. But I have it concentrated a little bit more with some electrolyte tablets, just to make sure I get that balance right.

KERRY: Right. We've got a few people on the webcast here asking a few questions. Do you want to answer them?

BOB: I'd love to.

KERRY: All right, awesome. We've got Peter and he asks, it's kind of what we were talking about a little bit ago, "Is there a natural way to consume sufficient nutrients during a half Ironman? Something that does not involve drinking, eating, fructose, maltodextrin, bars or drinks?"

BOB: Wow, so you're talking real food.

KERRY: Basically.

BOB: You know, let me think about that real quick. The first response I would have is that it depends on the intensity that you're doing. Again, if you're racing a half, is it possible? Absolutely. I think anything is possible. I think you can train your body to do that, even if it's something as simple - and I don't know if this fits your qualification - even if it's something as simple as white bread and jam. That can still sustain the carbohydrate needs without getting a lot of these formulated sugar compounds in. I've had some athletes do those fruit bars and stuff, kind of like those fruit rollups, fruit leathers is what they're called. I've had a lot of athletes train their bodies. The golden nugget here is just remember that when you're doing this in training you've got to do what I call race-simulation nutrition

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

training. So pick your pace, be it a heart rate pace or power zone, take about an hour to two hours of a training session or combo workout, simulate your race intensity and then try these types of things - your white bread and jam or your fruit leather - to see what kind of a response it's going to have on your body. Chances are if it has a good response you're good to go through the half Ironman. But keep on trying it. I would say absolutely.

There's a lot we can learn from the ultra-running and ultra-cycling world. These guys and girls, every day they train their bodies to do the solid foods. I see a lot of triathletes entering in - this is kind of a funny aside but a lot of triathletes entering - the ultra-endurance market in competitions. They try and sustain themselves on all these supplement products like the bars, gels and drinks. They end up bonking or they end up vomiting because during that you need solid food, you need real food. However, what I think they forget is these ultra athletes are doing it and simulating it during their training. So that's a very long answer to say yes.

**KERRY:** All right, good deal. Ted from Toronto asks, "What is your recommendation as protein sources for a triathlete with lactose intolerance training for an Ironman?"

**BOB:** Yeah, I think if that question is more on the daily side of things, it depends. I see a lot of athletes with lactose intolerance. There are definitely different grades of lactose intolerance. If you're pretty lactose intolerant, pretty severe, you can certainly get by with lactose-free products. They make them. They're bountiful, at least in the states, with the milks and whatnot. They make the enzyme tablets that help you break down lactose. But to be honest, I have a lot of my athletes who do have lactose intolerance, we just dose lactose-containing foods in very small doses and more frequently throughout the day. That usually doesn't provide that response to the body, be it bloating or nausea or vomiting or diarrhea. So my first answer would be, if it's not too serious, shrink down your lactose products and include them with other foods so it works around that positive digestion. Then secondly, if it's really, really, really bad just stay away from the products. By the products that are lactose-free.

**KERRY:** Awesome.

**BOB:** Even from that standpoint, a lot of the whey protein powders out there, I consult a lot of athletes on whey protein, whey protein isolate is pretty darn low in lactose. So in small amounts you can still consume pretty high-quality protein sources.

**KERRY:** Okay, good. Jonathan from Buffalo, New York asks, "How about caffeine? How much should you have?"

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

**BOB:** I can't believe I failed to mention caffeine. Caffeine is one of my favorite ergogenic aids in the world.

**KERRY:** Yeah, I thought you were going to mention it too.

**BOB:** Yeah. Thank you for bringing that question up. I don't know why my mind slipped that. That's probably the most popular supplement protocol I've worked with with triathletes, and you name the endurance athlete, is caffeine protocol. We know it works. However what we don't know is how each athlete's body responds to it. So again, kind of the whole tried in training first. The dosage that is recommended is based on body weight. That does is three to nine milligrams of caffeine per kilogram of body weight. So what I recommend what athletes do is always dose lower on the beginning, just to see what kind of response your body is going to give you. Too much can cause some gastric distress, some GI distress. Go low. What's usually recommended is about 60 to 90 minutes before the training session or before the race you start dosing.

Keep in mind that the half life is about four to six hours so if you're using it for a race just keep in mind the distance of your race. I don't have a lot of athletes starting caffeine too early, although they'll dose beforehand and then maybe somewhere on the, if it's a half or a full Ironman, somewhere on the bike they'll start again. I usually recommend a lower end, about maybe three milligrams, maybe four milligrams if the gut can take it, about every 60 to 90 minutes, once you introduce it again during exercise. We usually see Coke at stations on the run. The good factor to keep in mind is once you start don't stop. But hands down, caffeine works. It's just a matter of dosing because some athletes need more and some athletes need less, especially if you're what I call a "habitual caffeine user." If you consume a lot of caffeine during the day you may not have as much of a response as someone who doesn't.

But the whole basis, just to dispel this myth out there, the whole basis that we've been finding, at least in research, where what caffeine really does for us, is it acts as a central nervous system stimulant. The whole theory of improving free fatty acid utilization and using more fat, that's pretty much thrown out the door now. It stimulates our central nervous system. It keeps us more mentally acute and able to focus better and actually decreases our reading of perceived exertion. So I highly recommend it. But again, try it in training and dose it lower to higher during quality training sessions.

**KERRY:** Okay. So it does nothing in terms of glycogen storage, burning better, things like that?

**BOB:** There's, I think, one study out there that shows that. But I think it's really

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

interesting data in showing that it can actually improve carbohydrate oxidation. I wouldn't use that as the primary focus of using caffeine. I would use the central nervous system first, before more research can actually tell us if that works or doesn't work.

KERRY: Okay, excellent. He also asks, "Can you have too much of it?"

BOB: Absolutely. I think a lot of us make mistakes during our training and unfortunately I think I made that mistake years ago. It will cause some pretty serious GI distress if you overdose, which is why I recommend going lower to start with and then seeing where your body's threshold is. You'll know it right away because you'll lose that mental acuity, you'll lose that focus, without a lot of GI distress. That's kind of your cusp of almost where you want to be. If you feel GI distress, specifically what I've seen a lot is with diarrhea or runny stool, I would definitely dose down immediately.

KERRY: Okay, good deal. Julie from Littleton wants to know, she wants you to repeat your website for your book and stuff. Could you repeat that for us?

BOB: I will. So you can find great sport nutrition information and my book for sale on my [www.fuel4mance.com](http://www.fuel4mance.com) website. Or you can find my book on Amazon.

KERRY: Good deal. I'll shoot your website out to everyone tomorrow. I'll send an email. We'll get that covered for everyone.

BOB: Thank you.

KERRY: No problem. Jane from Indiana asks, "How much fish oil per day and what brands are safe with no mercury contamination?"

BOB: Great questions. I think with that there's never an easy answer. I will recommend one particular company, just because years ago one of our elite females came to me and said, "This company approached me. They want me to start using their product. What do you think?" What I did was call the company and actually educated them quite a bit on some third-party testing. They had no idea that that one, existed, and two, that they should do it. I didn't hear from them for about six months and they called me up and said, "Okay. We got the third-party testing. Will you look at our supplement now?" And I said, "That's fantastic." They showed me the quality certificate of analysis. They showed me the third-party testing. So I would highly recommend Zone Labs. I think you can find them at [zoneliving.com](http://zoneliving.com). If you guys have ever heard of the Zone diet before, it's the maker of the Zone diet, Dr. Barry Sears. They've come up with these omega 3s. They're putting a lot of money into their testing, which I

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

completely support.

As far as dosing is concerned, it depends on your physical goals that you want to attain. For example, for anti-inflammation purposes, what we've seen in the research for cardiovascular disease is about two to four grams per day. For sports, while I haven't seen it in a published, "This has been on triathletes or endurance athletes," we usually tend to dose up. I've heard, and this is purely anecdotal and I need to let everybody know that, about five to ten grams a day. So if you want to be safe I would dose about four grams a day. You can certainly experiment. But again, if you're taking any medications, talk to your physician to see if there's an interaction between fish oil and your medications.

**KERRY:** Good deal. Can you just tell us the third-party resources again, for testing that you recommend?

**BOB:** One is NSF and then Informed Choice. Those are two big ones. Their business is to test, especially Informed Choice. They're really working hard at getting a lot of supplements tested these days.

**KERRY:** Good deal. Do you have any supplements in particular that you recommend that you think are solid?

**BOB:** I think as far as the Zone is concerned, any of their omega 3s are pretty good. They've got different dosages of their omega 3s. They've got one super high dose which I recommend to professional athletes, anyone who's under a high stress load or a high inflammatory load. I think any of their omega 3 supplements are fantastic. If you're looking for a solid multivitamin that actually has iron - I hit on iron a little bit earlier. I'm such a fan of iron. I'm so particular and methodical with iron nowadays. We've been using, and I've been in the field for a while now, I recently in the past few years switched the source of iron that I've used with athletes. It's really important for those of you that are taking iron right now or thinking about it. Stop taking ferrous sulfate and start taking what is called ferrous bis-glycinate. It's also called ferrochel. That is about 75 percent more absorbed or better absorbed than ferrous sulfate. There's nothing wrong with ferrous sulfate except you don't absorb a lot of it.

So one supplement on the market right now that combines a multivitamin and this iron in it is called a multi V, from First Endurance. Highly, highly recommend it. In fact I've done some blood work testing with some athletes that I coach. I pretty much break them down with pretty much the highest training loads you can imagine, high volume, high intensity. And we measured blood work while taking this multivitamin their iron stores have actually increased, which I've never seen before in my life.

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

KERRY: Oh, wow.

BOB: There's something to be said about this different iron source that's better absorbed. Keep in mind too, if you're taking iron supplementation, just to get on this soapbox real quick, in the past we've had to super-dose iron because we knew that types like ferrous sulfate are so low in absorption that we need to super-dose it. Well what we haven't realized is that as you increase the dose of iron, the absorption rate actually goes down. So with this new type of iron, this ferrochel, aka ferrous bis-glycinate, you only have to dose what the recommended daily allowance is, which is fantastic. So there's no concern of hemocomatosis, the iron overload disease, or overloading with iron.

KERRY: Good deal. Actually, Ted from San Francisco is asking a question on recommended iron intake and he entered that and says, "I like to use raisins."

BOB: Oh, absolutely. I think there are some great foods - blackstrap molasses, raisins, lean red meat (obviously you don't want to do that during training or racing.) There's some great food sources. Even in our westernized diet, if you're a non-vegetarian, you're only going to absorb about 18 percent that iron. If you're a vegetarian in our society you'll absorb about 10 percent of the iron. So these foods are fantastic ways to get iron, unless you're already iron deficient or anemic. Then you cannot get out of that hole with just food alone. That's where the supplement comes in handy to kind of get you over the hump and start being aggressive with those foods again. But absolutely, hands down you can use those types of foods.

KERRY: And then Heidi Flemming from Port Orange, Florida wants to know if you have any thoughts on Juice Plus.

BOB: Juice Plus. I understand the concept. What I see a lot of times is I'll include that in the supplement category. I think athletes are taking supplements, especially things like Juice Plus which is basically just concentrated fruits and vegetables, they're taking them for the wrong reasons. Those reasons are usually, "Well, I don't consume those in my diet therefore I can take a pill and get all my recommended allowances." There's a lot, not just Juice Plus. There are others on the market too. I'm not picking on Juice Plus. The concept is just, I just believe that athletes aren't using it properly or they're justifying it in the wrong manner in trying to take it.

KERRY: Got ya.

BOB: Can we get all the nutrients we need from our diet alone, from foods alone? Depending on your training cycle, I'd probably say no. Again,

## The Triathlon Summit - Learn How to Master Your Nutrition Year Round

that's why we look at multivitamins, we look at iron, we look at calcium, we look at these kind of things, we look at fish oils. Sometimes we just can't eat enough. You can get into the whole argument about the bioavailability. I think there are places for these supplements at the right times. That includes the sport supplements - the drinks, the bars and the gels - also.

KERRY: Good deal. That's all we've got Bob. What's the name of your book again? And they can get that on Amazon, right?

BOB: Yep. The book is "Nutrition Periodization for Endurance Athletes." It's specific to us. I wrote it as a triathlete and as a sport dietician. You can get it on Amazon. You can go to my website, of which I will spell correctly this time - [fuel4mance.com](http://fuel4mance.com). So fuel, like the fuel you put in your car. The number 4 and then m-a-n-c-e. Fantastic!

KERRY: Good deal. Bob, I'll shoot that out to everyone on the call, his website, out to you, tomorrow for sure. Bob, thanks so much for coming on to the call with us.

BOB: I appreciate it. Kerry, thank you because the service you're providing athletes is phenomenal, all this education. I think everyone should do the virtual clap for Kerry because he definitely needs some appreciation going his way also.

KERRY: Thank you very much, Bob.

BOB: You're welcome.

KERRY: That's it. We'll talk to you later.