

## Pre-race Nutrition By Bob Seebohar

In my last article I detailed the recommended quantities to eat throughout the year based on your weight and training goals. This article is meant to provide you with key nutritional strategies before your big race to help you perform your best.

Let's start with my basic recommendation I always make first: each athlete is different and you must find what works best for you. This is not one single nutrition plan that works for everyone. I will present you with the facts that are based on credible, scientific research and you can then apply them to your situation as you see fit.

There are many things to consider for pre-race nutrition such as the length of your event, environmental conditions, and your specific likes and dislikes but a couple of facts remain the same.

- The goal of the week before your event is to load your muscles and liver with the glycogen (stored carbohydrates) you will need for the event. The greater these stores, the greater your potential to perform well during endurance events. There is one tried and true method for doing this: carbohydrate loading. The "old-school" method of carbohydrate loading included performing an exhaustive exercise bout about 7 days before the event in order to reduce glycogen stores. Athletes would then follow a high-protein, high-fat, low-carbohydrate diet for the next few days (the depletion phase). Athletes would then follow a high-carbohydrate diet 3 days before their event (loading phase). This approach did work for some athletes but for most it was detrimental because they were not used to high-fat diets, which caused digestive issues along with gastric discomfort. This would obviously be detrimental not only physically but also mentally as it would redirect your focus to your stomach and GI tract instead of your working muscles and race strategy.
- The "new-school" method of carbohydrate loading proves to be very effective both in laboratory settings and in the field. Numerous scientific studies have proved that higher glycogen stores increase performance by increasing time to exhaustion, which equates into faster times. Traditionally, this method is followed about 7 days before the event (longer if it is a longer distance race) and includes decreasing the duration of training while increasing the amount of carbohydrates in the diet. One recommendation is to follow a normal intake of carbohydrates (5-7 grams per kilogram of body weight) during the first three days of the taper week. The next three days before the event, it is recommended to increase this amount to 10 grams of carbohydrate per kilogram of body weight. This is termed the loading phase. This modified and better tolerated regimen results in glycogen stores equal to those provided by the "old-school" carbohydrate loading regiment but does not produce any ill effects from a high-fat or high-protein diet. Here is what I am talking about in a table format:

### Day Diet

1. 5-7 grams/CHO/kg body weight
2. 5-7 grams/CHO/kg body weight
3. 5-7 grams/CHO/kg body weight
4. 10 grams/CHO/kg body weight
5. 10 grams/CHO/kg body weight
6. 10 grams/CHO/kg body weight

## 7. Competition

*Let's look at a real life example. Heather weighs 120 pounds (54.5 kilograms) and is training for her first half Ironman. On days 1-3 before her race she would need to eat 272.5-381.5 grams or 1090-1526 calories just from carbohydrates alone. On days 4-7, Heather would need to eat 545 grams or 2180 calories from carbohydrates.*

I have not mentioned protein and fat too much for a reason. These macronutrients typically are not recommended in large amounts the week before the big race because they are not the body's primary energy source, they are longer to digest, and they may do not allow the carbohydrates to do their storage job as well. These nutrients are still important but I would recommend consuming about 1.1-1.3 grams of protein/kg of body weight and about 0.8-0.9 grams of fat/kg body weight.

Back to our example with Heather. This would mean that she would eat about 60-71 grams (240-284 calories) of protein and about 44-49 grams (396-441 calories) of fat per day.

Her totals would be:

### **Days 1-3 of taper and carbohydrate loading:**

Carbohydrate: 272.5-381.5 grams or 1090-1526 calories

Protein: 60-71 grams or 240-284 calories

Fat: 44-49 grams or 396-441 calories

Total calories: 1726-2251

*In this example, Heather would be eating 63-67% of her calories from carbohydrates, 13-14% of her calories from protein, and 19-23% of her calories from fat.*

### **Days 4-6 of taper and carbohydrate loading:**

Carbohydrate: 545 grams or 2180 calories

Protein: 60-71 grams or 240-284 calories

Fat: 44-49 grams or 396-441 calories

Total calories: 2816-2905

*In this example, Heather would be eating 77% of her calories from carbohydrates, 8-10% of her calories from protein, and 14-15% of her calories from fat.*

### **Conversions:**

1 gram of carbohydrate=4 calories

1 gram of protein=4 calories

1 gram of fat=9 calories

1 kilogram=2.2 pounds (body weight in pounds divided by 2.2 gives body weight in kilograms)

- Keep in mind that weight gain is common with carbohydrate loading or by following a high carbohydrate diet. Each gram of carbohydrate is stored with almost three grams of water attached to it, thus the cause of weight gain is water weight. This is highly beneficial for an endurance athlete because your cells will be saturated with water, which will help prevent dehydration and decreased performance.
- Carbohydrate loading will not help you run faster, but it can help you maintain your pace longer before tiring. Typically, if your race will last less than 90 continuous minutes, you won't gain too much of an advantage from carbohydrate loading.
- If you will be racing for a couple of hours at a lower to moderate intensity, your fat stores can provide the majority of the energy you need, but (here is the important part), only if you have enough carbohydrates in your body because "fat burns in a carbohydrate flame". Carbohydrates are needed for the body to burn fat. Fat-loading the week before the race is of no use to the endurance athlete. This will not enable you to burn more fat! Again, this is the reason why consuming an adequate carbohydrate diet is so important.
- Remember that you should make a concerted effort to hydrate yourself at least 7 days before your event. I have seen many athletes overhydrate so be careful here. Depending on race day environmental conditions and your hydration routine, 10-12 cups (80-96 fluid ounces) of water and sports drink combined should suffice and get you to the start line in a hydrated state.
- Last but not least, here is a detailed list of tips to keep in mind for your pre-race nutrition strategy:
  - Drink plenty of fluids but not too much. There is such a thing as overhydration which could lead to hyponatremia.
  - Avoid high-fiber foods such as raw fruits and vegetables, beans nuts and seeds to ensure your GI system agrees with you on race day and you will not have to stop at every porta potty on the course!
  - Stick with familiar foods and drinks. One week before your race is not time to try something new.
  - Avoid sugar substitutes like sorbitol and mannitol as they could cause diarrhea.
  - Limit alcohol.
  - Try to eat your last big, high-carbohydrate meal two nights before your race.

I cannot stress enough that each athlete is different when it comes to training as well as with nutritional concerns and strategies. Use my recommendations as a template to build your own individual nutritional plan to suit your body.

"Train hard. Eat smart."