

Eating in the Morning before Workouts and Races
Written for Jack and Adams Newsletter 09/2007
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I've been asked several times by athletes as to the best foods to eat in the morning before a race or workout. The answer to this question is almost always "it depends." Since it's a good idea to periodically fine tune your nutrition and fueling strategies, I see this as an appropriate article topic.

Before diving into the breakfast world, it's important to understand some basic physiology specific to this topic. Our bodies are simply machines; fascinating and extraordinarily complex machines. The fields of exercise physiology and sports nutrition are always learning more about the operations our little biochemical engines, but for the purposes of this essay, we're going to make some simplifications and safe assumptions. Our engines need water, electrolytes, and glycogen to run. First, for our pre-exercise nutrition, most people do not need any special electrolyte considerations. We have plenty in our system to begin workouts and races. During the activity you'll need to consider electrolyte intake and depletion, but for our purposes you don't need to worry about this specifically at breakfast. That leaves us with glycogen and water. Glycogen is a derivative of glucose (sugar) synthesized by your body. It is the energy used by your body to perform metabolic functions as well as for your muscles during exercise.

Glycogen is produced and stored primarily in your muscles and liver. Think of this in terms of the stored fuel or energy your body needs to perform work. The water and glycogen stored in your body, for our intents and purposes, is your fuel tank for exercise. Now those stores are limited to approximately 2,000 kcal (or calories in terms of our food labels). So when your body is fully fueled, you have the stores to perform about 1.5 hours worth of intense activity. This can be more or less depending on the intensity level. At a lower exercise intensity level, your body will utilize fat stores to supplement your muscle glycogen.

I've read that your body can deplete up to one third of your stored glycogen, especially in the liver, overnight as your body continues to use energy to perform metabolic functions during your sleep. Therefore, when you wake up, your fuel tank is no longer full. The same goes for hydration; you wake up slightly depleted because your body continues to work in your sleep. So it's important to take in fluid regardless of the event. Water is usually fine for shorter duration activities. The day of your marathon or Ironman, you may want to use a sports drink rather than water as a way to maintain your electrolyte balance and get some additional calories. Truthfully, I'll usually use both water and sports drink on race mornings, while before normal morning workouts, I just grab whatever sounds better at the time. It's really most important to get fluids into your body.

This brings us back to the original question and answer: "what do I eat in the morning before exercise" and "it depends." The primary variables to consider are the nature and duration of activity, the time before activity, and personal preferences. We tend to be creatures of habit, superstitious, and we each have certain foods that our bodies and brains like better than others. This makes personal preference always an important factor. Therefore, if you've found a pre-exercise fueling strategy that works for you, sometimes it's wise to stick with what you know to be safe. At the same time, don't be

afraid to experiment because there may be a food and fluid combination that works even better than your normal routine. Just try to be judicious in deciding when to experiment. The day of your marathon or Ironman is probably not the best time.

If the activity is immediate, in an hour or less from the time you have to eat, you have to consider putting something in your stomach that will not cause you issues once you start. For morning workouts and races with around 1.5 hours or less duration, your body is usually already fueled (if you've been eating and drinking correctly in the days before). It's good to take in fluids and some calories to compensate for depletion of your stores overnight. Usually a couple hundred calories and some fluids will suffice to increase your blood glucose level and replace the lost fluids. The trick is to take in the calories in a form that will not disturb your digestive system. This is where personal preference is important. I've found that a banana and sports drink or water are enough that I can almost immediately begin warming up. Similarly, something like Clif Bloks and water offer quick calories and fluids that also don't give me gastrointestinal issues. Taking in a small amount of calories with fluids will achieve the goal of helping to replenish depleted stores.

If the activity is a more prolonged event such like a marathon, long bike ride, or Ironman, then it's important to take in more calories and fluids, but also allow your body longer to move the food along in the digestion process. For single day events, there has been much research and debate about the need for protein both before and during the event. I buy into the idea that eating protein before a long-duration single day event is not necessary. It is important for repairing damaged tissue, so protein is much better utilized in your body as part of the recovery process after the event. Morning meals rich in carbohydrates are important for getting fuel in your system to be utilized later in the day. Therefore it is important to allow enough digestion time for these larger meals. This is completely personal. I've found that I can eat a large meal three hours before an long distance event and not feel full at the start, but two hours is not enough time.

Different athletes have their different morning rituals. You'll hear talk of bagels, oatmeal, pancakes, or pasta. My preference is to fire up the waffle maker in the hotel room and enjoy waffles with syrup at 3:30 am the day of a long distance event. I've read that Rutger Beke, a top Belgian pro triathlete, eats twelve pieces of white bread with jam the morning of an Ironman. The commonalities among these opinions are that all the meals consist of carbohydrate rich foods. Syrup or jams are more simple sugars in nature, but this is not necessarily bad. With all breakfasts you will have to contend with an insulin response which may make you feel temporarily sluggish. This feeling will be negated if you allow enough digestion time and a good warm-up. The excitement of "race day" also helps to make you feel chipper on race mornings.

In summary, if the duration of the event is fairly short, then taking in small amounts of calories with fluids should get you ready to go. The longer the activity, the more food and fluids you need to take in race morning, but also the longer you need to allow for digestion. The key is to experiment with all nutrition changes in your training. Don't wait to see if Beke's white bread and jam works for you until the morning of your Ironman. For me, I'll stick with my waffle maker.