Five Nutritional Mistakes Marathoners Make

It's Not Just a Matter of What You Feed Your Running Body, But When You Take It On Board.

BY MARY COORDT

As we go through life, we learn important lessons from the mistakes we make. The same is true about the marathon. We learn something about our character from each 26.2-mile journey, even if what we learn comes at the shank end of an awful day. If we ran a perfect race our first time out, we would not be constantly checking the marathon calendar to pick out the next marathon so that we could prove to ourselves that we can improve our performance.

Persistently, we dedicate months of intense training, striving for our ideal time goal. We make sure we have the appropriate training *and* racing shoe, schedule massages, see a physical therapist, and of course invest in travel arrangements.

After endless early-morning tempos, late-night track intervals, and long runs on Sunday, we arrive at the starting line, supposedly having covered all the bases. Most runners have already learned (some the hard way) not to wear new shoes on race day, but have they encountered and mastered the stomach-trauma lessons? A quick schooling in racing nutrition will help you avoid a fueling fiasco. Here are the five most common nutritional mistakes committed by marathoners:

1. Eating a new food before race day
2. Consuming a new sports drink or gel during the race
3. Drinking too little or too much during the race
4. Not fueling the morning before an endurance event
5. Eating too close to gun time

EATING A NEW FOOD BEFORE RACE DAY

Even experienced marathoners can get caught up in the excitement of traveling to a new city and wanting to explore the diverse selection of restaurants: scrumptious lobster in Boston or smoky ribs in Memphis. But do your research in advance to

find a restaurant for a prerace meal that is similar to what you have been eating before your long runs. You have dedicated far too much time and training to ruin it by being enticed by the crawfish in southern Louisiana or chili con carne in the heart of Texas. Stick with familiar foods before the race and experiment with a celebration meal after you have crossed the finish line.

CONSUMING A NEW SPORTS DRINK OR GEL DURING THE RACE

Marathoners are easily persuaded to buy and try new products at expos. Maybe it is the fear of not doing what everyone else is trying or just the excess tapering energy that needs to be spent. But when a vendor touts a new product to make you run faster, delay fatigue, or allow you to burn fuel more efficiently, keep your wallet in your pocket. Do not buy and wear new shoes, and do not try products on race day that you have not experimented with. Save them for the next training bout and run the race with the aid you practiced with. Bring energy drinks, gels, or bars with you if you are traveling out of town; do not expect the expo or race to stock your brand. Better yet, research beforehand what aid will be provided at your marathon and try it out several times. However, there are instances when it may be beneficial to succumb to the selling tactics at the expo. For example, I recently witnessed a young man running a marathon while carrying eight sport gels in his hands. His running form, thus efficiency, would have improved if he had bought a fuel belt.

DRINKING TOO LITTLE OR TOO MUCH DURING THE RACE

Many runners are confused regarding how much water to consume during a marathon, and rightly so. There are hazards of both under- and overdrinking water.

Drinking Too Little Water During the Race

The consequences of dehydration are widely recognized. When we exercise, muscle contractions produce metabolic heat that can be 15 to 20 times greater than that at rest. If we did not have a mechanism to cool our body down, we would "cook" our organs and "fry" our brains. Luckily, we are rescued from this internal barbeque by our sweat glands. The heat is transferred to the blood just under the skin, and the skin secretes sweat to evaporate and cool the body down. Marathoners can easily lose 1.5 liters or more of fluid each hour of activity. If some of this loss is not replaced, you will experience a decrease in cardiac output, blood flow to muscles, and definitely in your performance. It is estimated that the typical runner replaces less than 50 percent of his or her sweat during exercise, which can result in nausea, diarrhea, and the real time-goal crusher—fatigue.

Does that mean we should down a cup at every aid station even if we are not thirsty?

No, probably not. The hydration message for years has been that if you feel thirsty, you are already dehydrated.

Drinking Too Much Water During the Race

We listened, so we drank water before thirst kicked in, carried water bottles, *and* stopped to guzzle more at aid stations. But the latest body of evidence supports the notion that thirst *is* actually the ideal way to gauge hydration needs. The International Marathon Medical Directors Association released its long-awaited hydration guidelines, which concluded that runners should simply drink when thirsty. Overzealous drinking can put you at risk for hyponatremia. The American College of Sports Medicine (ACSM) states that it is best "to drink early and at regular intervals rather than [doing] rapid fluid replacement." Plus, this frequent sipping will ensure maintaining significant fluid volume in the stomach, which in turn will promote gastric emptying and maximize the rate of fluid and glucose absorption.

For most runners, dehydration remains the primary concern that could jeopardize their performance, but hyponatremia should be recognized as a possible danger to the smaller, slower runners on a hot or humid race course for four hours or more.

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Hyponatremia occurs when blood-sodium concentration falls to an abnormally low level. It depends on how low plasma sodium falls and how long it remains low, but symptoms can progress from headache, vomiting, swollen hands, and confusion to eventual cerebral edema and death. By consuming a sports drink containing sodium, you will decrease the risk of hyponatremia as well as dehydration. Incidents of hyponatremia prompted the ACSM to update its 1996 Position Stand on fluid replacement. It states, "the goal of drinking during exercise is to prevent excessive (>2% body weight loss from water deficit) dehydration and excessive changes in electrolyte balance to avert compromised performance."

In other words, listen to your body and be sensitive to thirst.

Drinking Too Little Carbohydrate

By hydrating with a sports drink, you will also get the needed glucose source to fuel your marathon. To prevent muscle fatigue (known as hitting "The Wall") and the weakness and lightheadedness that results from lack of glucose to the brain (known as "bonking"), consume 30 to 60 grams per carbohydrate/hour depending on your weight. This is based on long-agreed-upon science that we can absorb 1 gram of glucose per minute during prolonged exercise. Some preliminary studies suggest that you can absorb up to 45 to 90 grams if it is in a 2-to-1 ratio of glucose to fructose. This hypothesis relies on the fact that glucose is absorbed by active transport and fructose by facilitated diffusion. If we can use both transport systems, we can get more carbohydrate absorbed. If the rate of carbohydrate absorption is improved, we theoretically should have more fuel for muscles to oxidize.

Most commercial sports drinks supply a blend of sugars at the right amount (6 to 8 percent solution or about 13 to 17 grams of carbs per cup) to optimize gastric emptying. Sport gels can be easier on the gastrointestinal tract than solid foods and are a good option to quickly get 25 to 28 grams of carbohydrates on board.

Simply stated, lesson 3 is that you will *gain* speed by taking a few seconds at aid stations to sip sports drinks and water.

NOT FUELING THE MORNING BEFORE AN ENDURANCE EVENT

Numerous studies reveal that eating before a workout boosts endurance. How? It helps replenish the liver and muscle glycogen stores that diminished while you were sleeping. The liver stores about one-third of body glycogen and is the source of glucose for the brain. Many do not realize that the brain and nerve cells use about half of the total glucose consumed each day. This is why people who eat breakfast report feeling better and report their perceived exertion is significantly less compared with running on empty.

It is optimal to eat two to four hours before a marathon to allow time for food to be digested and nutrients absorbed. Depending on body weight and exercise

intensity and duration, aim for 100 to 200 grams of carbohydrate and 400 to 800 calories to adequately fuel your marathon. For shorter events, you can experiment with eating a smaller snack up to an hour before.

To speed digestion and avoid gastrointestinal distress, select foods and beverages low in fat and protein and avoid high-fiber foods. Good choices include bagels, toast with jam, bananas, some types of cereal with nonfat milk or soymilk, sports drinks, and some sports bars. Some sports bars are not optimal for endurance events; make sure to choose one high in carbohydrates (about 70 percent of calories from carbohydrates) and with no more than 15 percent of calories from fat or protein. Good choices include Clif Bar and PowerBar. Sport gels and drinks will not require significant digestion time, so they can be consumed closer to gun time.

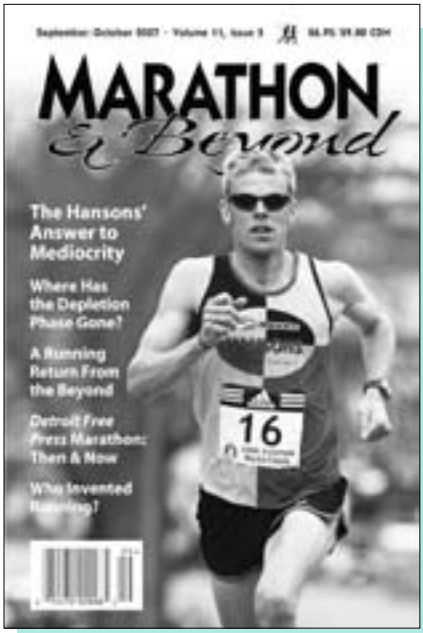
Just as we all run a different pace, we are unique in size and structure as well as in how our digestive tract handles certain foods, so experiment before race day to determine what foods work best for you. Don't assume that what your running partner eats is optimal for you. It may be a matter of trial and error, so you may want to keep a record of prerun meals until you find the best menu.

EATING TOO CLOSE TO GUN TIME

You have watched your veteran training partner do it, but chomping on a sports bar at the starting line is a surefire way to follow your friend to the porta-potty at mile 10. Food entering the mouth has to be digested, absorbed, and then stored away. This takes time—up to four hours for a meal. Hence, for consuming food before a long run or marathon, it will take at least two hours if you follow the guidelines above. Even if this means getting up at 4:00 A.M., it is crucial to fit it into your training program early on so you can adapt. Just as endurance runners train muscle cells to increase glycogen stores and the number of mitochondria, you must also train the gastrointestinal tract.

In much the same way that you would be choosy about the type of gasoline you put into a high-performance car, be careful what you put into the fuel tank of your high-performance, marathon-running body. As you can see from the above, when you eat and how much you eat are as important as what you eat.

Stop Running



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