



Fuel Your Marathon

SPORT NUTRITION TIPS

Running long distance requires the right type and amount of nutrition and hydration.

Be sure to practice the tips below in your long training runs to determine what and how much your stomach can tolerate. With this information you can adjust accordingly to meet your specific needs for a successful finish.

The information below is to be used as a general guide. Calorie, protein, carbohydrate and fluid needs vary based on the intensity and duration of your training program. Please contact a sport dietitian to help you individualize the information below.

Training Diet:

- Balance your diet so each meal contains whole grains, lean protein, and vegetables. Choose snacks that contain protein and carbohydrate. Some good snacks to consider are low fat yogurt, pear with cottage cheese, or peanut butter on banana. Eating smaller more frequent meals will provide adequate energy for frequent training runs.
- If your training involves 2-a-day workouts or if workouts are less than 8 hours apart, focus on eating easily absorbed carbohydrates immediately post-workout (sports drinks, fruits, bread with jam) to help replenish your muscle glycogen (energy) stores.
- Use the plate method in your off season, for low-intensity training, or for weight loss if exercise demands are not high: $\frac{1}{2}$ plate is vegetables, $\frac{1}{4}$ plate is lean protein, $\frac{1}{4}$ plate is whole grain. You may also try the hand method: 1-2 cupped hands for vegetables, palm of hand for lean protein, fist for whole grain.
- The body will require more carbohydrates as training demands increase. If training is hard and long (>1 hour) or if your energy levels and/or performance are dropping, you likely need more carbohydrates (the body's preferred fuel source). If this is the case for you, try increasing whole grains to $\frac{1}{2}$ of your plate and decreasing vegetables to $\frac{1}{4}$ plate.
- On long training runs drink the exact beverage that will be provided at your marathon to see how much you can drink each hour to feel strong. You can teach your stomach to tolerate what you need.
- Calculate your sweat rate during training to tailor your fluid intake to YOUR specific needs. Your sweat rate will change based on the temperature and humidity, altitude, and intensity of training. To calculate sweat rate, see the Sweat Rate Calculations handout.



Pre-race nutrition:

- When running events longer than 90 minutes at a moderate to high intensity, carbohydrate loading may help improve your performance by 2-3%. Carbohydrate loading is a term used to describe increasing your carbohydrate intake to “top off” your glycogen stores, which are your energy (carbohydrate) stores in your muscles. True carbohydrate loading can cause water weight gain (up to ~4.5 pounds) because water is stored along with carbohydrate in your muscles’ glycogen stores. Weigh the risks and benefits before choosing to carbohydrate load.
- Increase carbohydrate (pasta, rice, bread, potato, cereals) starting several days before your event.
- Decrease fiber (beans, whole grains) and spices, and increase salt by adding to foods. Avoid gassy foods the day before (broccoli, cauliflower, Brussels sprouts, cabbage, and beans).
- Drink enough water to keep your urine the color of straw.

Race morning:

- Eat a high carbohydrate, low fat breakfast 2–4 hours before (smoothie: fruit, milk, and yogurt; or hot cereal made with skim milk and a sliced banana).
- Drink 16-24oz of water or electrolyte beverage 2 hours before and 5-10 oz 30 minutes before the start.

During the Marathon: (Provide your body with fluids, carbohydrates, and electrolytes)

- Choose sports drinks w/ about 14 grams of carbohydrate/8 oz serving. This is the standard amount in almost all sports beverages like Gatorade®, Cytomax®, HEED®.
- Start drinking early during the race to keep up with your sweat loss. A loss of $\geq 2\%$ body weight while running can cause a significant decline in your performance. Use your sweat rate to figure out your fluid needs and drink at regular intervals. Typically, females sweat less than males. Sweat rates will increase in hot and humid climates, as well as during high intensity bouts of activity.
- Consume sports drinks or another source of carbohydrate (gels, blocks, beans, or foods like bananas, pretzels, bagels at aid stations) with water. Aim for 30-60 g of carbohydrate/hour.
- Stick to carbohydrates that you are used to eating and drinking during long training runs. Be careful with fruits and fruit juice during exercise, as they are high fructose and could cause stomach upset. Spread out your intake of carbohydrate and fluids throughout the duration of your race.
- After mile 18, or maybe sooner, your desire to eat and drink will continue to decline but this is when your needs for fluids and carbohydrates are at their highest. Fading energy levels are a sign of inadequate nutrition and/or inadequate training. Even the best nutrition plan will not make up for a poorly followed training plan.

After the Marathon:

- Eat and drink right after the finish even if you don’t want to.
- At most marathon finishes you are handed food immediately, so start here (pretzels, fruit, and milk-based drinks).
- Within 30 minutes, consume protein (chicken sandwich, omelet, meat/bean burrito, or a recovery drink).
- If this is not available at the event, leave to eat a real meal within 1 hour of your finish.
- A celebratory beer is OK provided you have done the above first. Alcohol is detrimental to your recovery.

For individualized sport nutrition plans, contact 866-868-7112 or 303-614-1070 to schedule an appointment with a sport dietitian.