



Fuel for Triathlons

NUTRITION TIPS FOR LONG AND ULTRA DISTANCE TRIATHLONS

What you eat and drink can make or break your long or ultra course experience.

It is essential to experiment with these tips and make adjustments to learn what you can tolerate. This will help you determine your 'nutrition plan' for your race based on your unique physiology and nutritional needs.

Long Course/Half-Iron Distance: 70.3 miles in total. Swim 1.2 miles, Bike 56 miles, Run 13.1 miles

Ultra Course/Full-Iron Distance: 140.6 miles in total. Swim 2.4 miles, Bike 112 miles, Run 26.2 miles

Pre-race nutrition:

Carbohydrate loading is a term used to describe increasing your carbohydrate intake to "top off" your glycogen (energy) stores in your muscles. This technique can help improve your performance by 2-3% and increase sustained physical efforts by 20% and it is best used for longer course races. If you have a sensitive stomach and find it difficult to eat while racing, then carbohydrate loading in advance is a good idea. Carbohydrate loading can cause water weight gain (up to ~4.5 pounds) because water is stored along with carbohydrate in your muscles' glycogen stores.

Significantly increase carbohydrate (pasta, rice, bread, potato, cereals, fruit juice) starting 1-3 days before your race. Decrease fiber (beans, whole grains), spices and increase salt by adding to foods. Avoid gassy foods the day before (broccoli, cauliflower, Brussels sprouts, cabbage, and beans).

Keep hydrated so urine is pale in color. Avoid under-hydration (urine is medium-dark color). Avoid over hydration (urine is clear like water).

Race morning:

Regardless of the race distance, it is wise to arrive at the race fed, well hydrated but with an empty stomach meaning breakfast was 2-4 hours before the start. Eat a high carbohydrate, low fat breakfast 2-4 hours before (smoothie: fruit, milk, and yogurt; or cereal with milk and a banana). Some athletes get up early in order to eat several hours before a 7am start. It is always best to eat what you have found works for you during training so be sure to practice this to learn what foods you tolerate for breakfast.

Drink approximately 16-24 oz of water or sports beverage 2-4 hours before the start. This fluid will improve your hydration but will have left your stomach and bladder within this time. Take another few sips or 5-8 oz as tolerate about 30 minutes before the race. You may also consider eating a gel to 'top off' blood sugar.

Hydration:

Drinking too much water can lead to hyponatremia, low levels of sodium in the blood. Avoid this condition by using a sports beverage with sodium and understanding your sweat losses. Drinking too little can lead to dehydration. A loss of $\geq 2\%$ body weight during exercise can cause a significant decline in your performance. You can find the right balance by doing a sweat rate test to figure out your unique fluid needs. Pay even closer attention to proper hydration when training and racing in hot or humid conditions or at altitudes above 8000 ft.

Sweat rate = weight lost + fluids consumed in a give time (usually tested in 1 hour).

Example: In one hour lose 8 oz weight + drank 16 oz fluid = need 24 oz/hour to replace sweat loss. You will be more likely to tolerate larger volumes of fluids if you drink them at frequent intervals (4-5 oz every 15 minutes). Fluids leave the stomach faster this way. You likely not need to match your sweat losses precisely, but it's a good idea to aim for around 75% of your fluid losses and avoid losing >2% of your body weight from sweat loss. Keep in mind that your sweat rate will vary depending on temperature, humidity, wind, and altitude. Also you can train your gut to handle the amount of fluid and nutrition you need to perform well. This means every training session over 1.5 hours is an opportunity to practice your race day nutrition plan.

Check out <http://data.gssiweb.com/fluidLoss> for an easy to use sweat rate calculator

Nutrition During the race:

Swim: Some athletes tolerate a 25 gram carbohydrate gel, with water or sports drinks before the swim start.

T1 (transition from swim to bike): Heart rates are quite high running out of the water and into T1 so many triathletes choose not to eat or drink in T1. If you ate breakfast you should not need much in the first hour. If you need something take small amounts of fluid once you have settled into a moderate pace on the bike.

Bike: The bike leg is where you can consume higher levels of calories and carbohydrates as it is easier to do this than on the run as food and drinks can be easily stored on your bike and your stomach is more stable compared to running. In training you can practice to see how much you need to drink and eat to sustain power on the bike. Aim for at least 30-60 gram carbohydrate, which is 120 – 240 calories/hour. Larger athletes may need 300-500 calories/hour. Smaller athletes may do fine with 200-250 calories/hour. Small amounts of protein (10 gm/hour) have not been shown to improve performance but may help prevent the loss of muscle during endurance races. Many athletes lose 1000 mg/hour of sodium in sweat each hour. If your clothing gets stained white from salty sweat or you have problems with cramps, replacing sodium is a good idea. In the final 30-45 minutes on the bike stop eating and drinking if you learned in training that eating at this time gives you a 'too full' or 'sloshy' feeling on the run.

T2 (transition from bike to run): Your nutrition plan in T2 can vary from consuming nothing to taking your time to eat a favorite snack. If you eat anything keep it small and something you know you tolerate.

Run: Your body still needs 30-60 grams or more of carbohydrate and fluids + sodium to meet sweat losses but this becomes more of a challenge on the run. Keep track of what you are consuming – this gives you something to think about too. You may have to rely mostly on fluids and gels as solids become harder to digest. Resist the urge to stop eating/drinking. It is common to have no desire to eat or drink but it is critical to stick with your plan. If you don't, you risk dehydration and major stomach problems. Once this happens you will have to slow down or stop to recover. Avoid this by staying hydrated. It is possible to consume too much so if you feel full, bloated or about to regurgitate stop eating a drinking until this passes. Many athletes are able to tolerate the right amount of nutrition by eating and drinking small amounts, very often. Caffeine may help you feel alert in the final hours of long course racing.

Recovery Nutrition:

Congratulations! Your race is over, but your nutrition plan is not. In the finish area eat and drink what you can within 15-30 min. Follow this up with a meal containing protein, carbohydrate and fluids. Many athletes prefer to use a recovery drink or chocolate milk followed by a meal. It is common to have little to no desire to eat after a long and demanding race. If this is the case, focus on fluids and eat small amounts of food every hour for the next 4-5 hours.

Example Nutrition Plan: (female, 140 lb, Full Iron distance triathlete)

Goal per hour: 200-275 cal, 45-60 gm carbohydrate, 20-24 oz fluid and 700 mg sodium

Breakfast: 3 hrs before the start: Smoothie (non fat milk, frozen berries, banana), toast with jam, 20 oz Sports drink

Swim and T1: 1 gel and 5 oz water 20 min before the swim start. No food or fluid in T1

Bike: 1st 30 minutes nothing or small sips sports beverage as tolerated. Then 1 oz Sports Bar + 20 oz sports drink/hr. If bars become too hard to eat switch to 1 gel or 3 bloks w/ sips of water. 1 salt pill/hour to meet sodium needs.

T2: nothing but have a gel with caffeine in back pocket of tri top. Start eating this while legs are adjusting to run.

Run: Each hour 16 -20 oz sports drink on course (4 oz at 5 aid stations/hour), 1 gel with caffeine each hour.

Recovery: After finish: 12-16 oz chocolate milk. 2 hours later: Tofu or chicken, veggie stir fry, rice, water, pudding

Sports Nutrition Services are available for Kaiser Permanente Colorado.