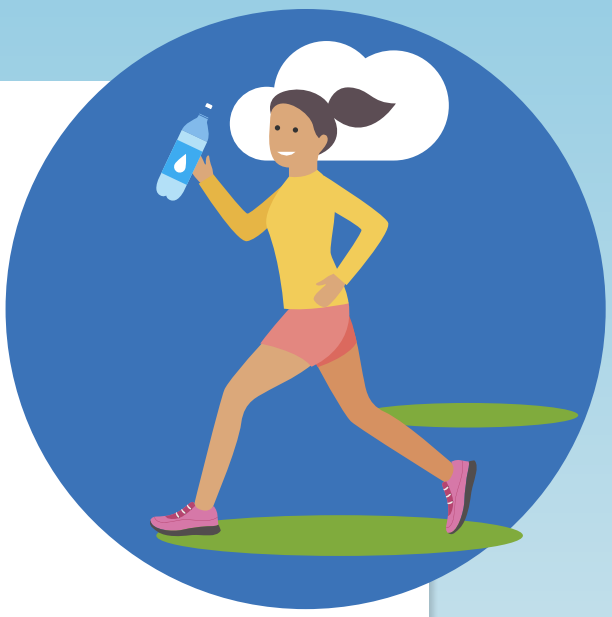
HYDRATION TIPS
EVERY MARATHON RUNNER NEEDS TO KNOW



DRINK UP

Maintaining optimal hydration is essential to performing your best during any workout, but when you're running a marathon, optimizing your hydration can be the difference between setting a PR, hitting the wall…or worse.[1,2,3]

Even mild dehydration (a 1-2 percent loss of body weight or 1.2 pounds for a 120-pound runner), can adversely affect endurance training or racing.[1,2,3] In fact, in one study, researchers concluded that a loss 1 percent body weight slowed athletes' run times by about three percent.[4]

WHAT DEHYDRATION DOES TO YOUR BODY

Mild dehydration causes your blood volume to decrease so your heart delivers less oxygen-rich blood to your working muscles.[1,2,3] It also increases your body's core temperature, which can lead to heat-related illnesses, especially when running in hot or humid conditions.[1,2,3]

HYDRATE RIGHT

To help you perform your best, drink enough fluids to replace what is lost in sweat, to keep weight loss to less than two percent of your body weight during any endurance run or marathon.[1,2,3]

The exact amount of fluid you need to drink during a marathon in order to stay adequately hydrated depends on a number of factors including your gender, body size, run pace, sweat rate acclimatization and also the heat index (a combination of the temperature and humidity).[1,2,3]

This article was authored by a Nationally Recognized Board Certified Sports Dietitian on behalf of Nestlé Waters North America.

Nestlé Waters NORTH AMERICA

FOLLOW THESE 6 SIPPING STRATEGIES TO HELP YOU FINISH STRONG

1 PRE-HYDRATE

You want to make sure you start your race well hydrated.[1,2,3] Experts recommend drinking 2 to 4 milliliters per pound of body weight 2 to 4 hours before the start of your race. You need to drink enough so that your urine is pale yellow.[2,3] Then, if you feel you need more, drink another 7 to 10 ounces 10 to 20 minutes before the gun goes off just to ensure that you are adequately hydrated.[3]

2 START THE RACE WITH FLUIDS

Aid stations at the beginning of a race can be very congested, making it all too likely you'll skip them completely rather than dodging the crowds to sip. Carrying your own water bottle, (at least for the first few miles), will allow you to drink at ease during the first few miles, and also to concentrate on your pacing and overall race-day plan for success.

3 CALCULATE YOUR SWEAT RATE & SIPPING SCHEDULE

Athletes have varying sweat rates, and therefore need to create and follow a customized fluid replacement plan, ideally based on "sweat testing" during training.[2,3] Assessing the change in your body weight after a training run will help you determine your sweat rate under specific environmental conditions so you will know how much you need to drink to reduce risk for dehydration.[2,3]

Here's how:

1. Weigh yourself before and after running to determine weight loss in pounds. Multiply this number by 16 to obtain the ounces lost from sweat (16 ounces = 1 pound).
2. Add the number of fluid ounces you drank from any beverage consumed during your run to the number of ounces lost from sweat. Divide total ounces needed to maintain body weight (from step 2) by exercise time to determine your sweat rate per period of time.This number (in ounces), becomes your goal fluid intake for your next long run.
3. Determine sipping schedule to comfortably drink the necessary ounces per hour to stay relatively hydrated.

Example:

1. An athlete weighs 160# pre-run and 158# post-run = 2 pounds lost to sweat 2 pounds x 16 ounces per pound = 32 ounces.
2. The athlete drank 24 ounces of water during the run.
3. 32 ounces + 24 ounces drank during the run = 56 ounces lost.
4. Run time was two hours; 56 divided by 2 =28 ounces per hour for a sweat rate.[4] An achievable sipping schedule could be 7 ounces every 15 minutes.

Many runners find that setting their watch to beep every 15 minutes to remind them to drink makes it easier to stay on target. Do drink often (every 10-15 min or 1-2 miles), as it's easier to absorb and tolerate smaller amounts at frequent intervals.

4 WHEN WATER IS PREFERRED

In addition to replacing water, you also need to replace carbs and electrolytes during a marathon or long run.[1,2,3] To ensure optimal digestion and absorption, water should be your go-to beverage when chasing down energy gels or bars that you nibble on during your race.

The reason: Water helps the body absorb the carbs you need for extra energy. Drinking water – as opposed to sports drinks – with gels helps ensure that the concentration of carbs from your snack is optimal rather than too concentrated. (You will want to drink 8 to 12 ounces of total water to help you fully digest and absorb each gel. Try drinking 4 to 6 ounces with the gel and an additional 4 to 6 ounces a half-mile to mile later.)

5 POST-RACE HYDRATION

Once finished, start rehydrating to replenish the fluids you lost from sweat with water and sodium (from foods or sports drinks). The goal is to drink 20 to 24 ounces of water for every pound you lost from sweat.[2,3] While it may be tempting to celebrate with a beer or glass of wine, it's recommended to avoid alcohol until you are fully rehydrated as alcohol can make it harder to rehydrate.[2]

6 DRINK ENOUGH…BUT NOT TOO MUCH

During the marathon, your goal is to replace fluid lost to sweat, not to drink more than you're losing. When you over-hydrate, it can cause issues just as serious as when you become dehydrated. Hyponatremia, or low blood sodium, occurs when you drink more than your sweat rate and what your body can sufficiently process through urination.[5]

Hyponatremia is a rare condition that generally affects slower marathon runners and walkers who drink too much for fear of becoming dehydrated. Common things associated with mild hyponatremia include puffiness and weight gain, lightheadedness and dizziness. More severe symptoms include vomiting, headache, altered mental status, seizure or coma.[5] To minimize risk, experts recommend that those who are jogging or walking a marathon at a more leisurely pace to drink when thirsty to avoid over-hydrating.[5]

1. Carlton A, Orr RM. The effects of fluid loss on physical performance: A critical review. J Sport and Health Science. 2015; 4(4): 357-363. 2. Thomas DT, Erdman KA, Burke LM. Position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance J Acad Nutr Diet. 2016 Mar;116(3):501-28. 3. Casa DJ, Armstrong LE, Hillman SK et al. National Athletic Trainers' Association position statement: fluid replacement for athletes. J Athl Train. 2000 Apr-Jun; 35(2): 212–224. 4. Armstrong LE, Costill DL, Fink WJ: Influence of diuretic-induced dehydration on competitive running performance. Med Sci Sports Exerc.1985;17:456–461. 5. Tamara HB, Rosner MH, Fowkes-Godek S, et al. Statement of the Third International Exercise-Associated Hyponatremia Consensus Development Conference, Carlsbad, California. Clinical Journal of Sport Medicine. 2015;25(4): 303–320.

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