

FLUIDS, DEHYDRATION & THIRST QUENCHERS

Drinking enough fluids is essential for top athletic performance. Unfortunately, many active people pay too little attention to proper hydration and fail to include adequate fluids in their sports diet. They fatigue early and needlessly hurt their performance.

If you sweat heavily and lose too much fluid, you reduce your ability to provide adequate circulation to both the muscles and body surface. This not only hurts your performance but also endangers your health because body fluids have important jobs. Fluid in the blood transports glucose to the muscles and carries away lactic acid. Urine eliminates waste products. Sweat dissipates heat via the skin. By using the following tips, you can help keep your body well hydrated.

Fluids during training

On a daily basis, make sure you drink enough fluid. You can easily determine if you have had enough to drink by monitoring the volume & color of your urine.

1. You should urinate every two to four hours throughout the day. The urine should be a light color, like lemonade, and in significant quantity. If the urine is dark, concentrated and scanty, you need to consume more water, juice and other fluids.

Note: If you take vitamin pills, your urine may be dark colored. Monitor hydration by the *quantity* of urine and *darkness* of color.

2. To increase awareness of your sweat losses during exercise, weigh yourself before and after a hard workout. Each pound lost represents one pound (16 ounces) of sweat. During training, practice replacing sweat losses accordingly, and try to lose <2% of your weight.

3. You don't have to drink *only* water for fluids. Juice, sports drinks, soft drinks, and watery foods such as yogurt, oranges, melon and soup all have a high water content that contributes to overall fluid balance.

4. Be aware that beer, wine and alcohol can hurt your performance. If you choose to drink alcoholic beverages, be sure to first quench your thirst with other fluids (and eat carbohydrates to fuel your muscles). That is, drink two glasses of water, eat some pretzels, then have a beer, if desired.

Fluids before hard endurance exercise

1. The day before, drink extra water, juice and other fluids to be sure your body is well hydrated.

2. The morning of the event, drink at least 16 ounces of fluids up to two hours prior to the start. Because the kidneys require 45 to 90 minutes to process liquids, two hours allows adequate time for you to empty your bladder before the start of the event.

3. Five or ten minutes before start-time, "tank up" on another 8 to 16 ounces of water or sports drink.

Fluids during hard exercise

1. Drink 8 to 10 ounces of water, sports drink or diluted juice every 20 minutes. Because you may be sweating three times this amount, you may still have a fluid deficit. Stop drinking if your stomach is "sloshing."

2. *Prevent* dehydration by drinking adequate fluids early in the event. Drink *before* you get thirsty! By the time your brain signals thirst, you will have lost 1% of your body weight (1.5 lbs or 24 ounces of sweat for a 150 lb. person). By 2% dehydration (3 lbs. sweat loss), you have reduced your work capacity by 10 to 15%.

Fluids after exercise

1. Drink to quench your thirst, and then drink even more. Because the thirst mechanism inadequately indicates whether or not you've taken enough fluids, you'll have to tell by monitoring your urine. If several hours pass without your having to urinate, you are still dehydrated. Keep drinking!

2. Juices (such as orange, apple, cranberry) replace not only fluid but also offer more carbohydrates than do most sports drinks. Drinking 16-24 ounces within the hour after exercise helps muscles refuel and recover.

Water vs. sports drinks

For the casual exerciser, water is always appropriate. Water is convenient, familiar, and satisfies your body's needs. For highly competitive athletes who exercise intensely for an hour, and for endurance athletes who expend large amounts of energy for more than an hour, a sports drink during exercise will optimize fluid absorption and retention, and enhance stamina and endurance. The beverage should offer 50 to 80 calories per 8 ounces plus a little sodium. Be sure to experiment *during training* to learn which flavors of sports drinks settle best in your stomach.

Sodium replacement

Sweat contains not only water but also small amounts of sodium (and other electrolytes) that keep your body in fluid balance. You lose small amounts of sodium when you sweat, but you do not deplete your body's stores—except possibly under extreme circumstances such as exercising for more than 4 to 6 hours in the heat. Most athletes can easily replace sodium losses by eating pretzels, soup, pizza, and other standard food after exercise. Commercial fluid replacement drinks are generally weak sources of sodium compared to what you can get in your recovery meal. The sodium in sports drinks is added to enhance fluid absorption and retention, not to replace sweat losses.