

Dehydration Facts - It can happen faster than you think!²

In less than one hour of physical activity, an athlete may become dehydrated and performance and health will surely suffer.

Dehydration of just 1-2% of body weight (only 0.6-1.2 lbs. for a 60 lb. athlete) can negatively influence performance.

Dehydration of greater than 3% of body weight substantially increases an athlete's risk of heat illness (heat cramps, heat exhaustion, or heat stroke).

During physical activity, most athletes only drink enough fluid to replace 50% of what was lost.

Thirst should not be used as a guideline. Once an athlete is thirsty, he has already started to become dehydrated.

Dehydration Warning Signs

Basic signs of dehydration are:²

- Thirst
- Irritability
- Headache
- Weakness
- Dizziness
- Cramps
- Nausea
- Decreased performance

Risk Factors

The following are risk factors for heat illness. An athlete experiencing one or more of these should be closely monitored while engaged in physical activity in high heat and humidity.^{1 2}

- Dehydration or previous heat problems
- Physical barriers to evaporation - *(includes athletic equipment or wearing excessive or dark colored clothing)*
- History of Illness - *(Sickness involving sweating, vomiting, and diarrhea increases susceptibility to heat related illnesses.)*
- Overweight

Risk Factors (cont'd)

- Poor physical conditioning
- Lack of adjustment to the heat

- Medications and drugs - *(Some medications result in a dehydrating effect. Also alcohol and caffeine can cause an increased loss of body fluids.)*
- Fluid imbalance - *(This can result from not replacing fluids from a previous exercise session or from vomiting or diarrhea.)*

What to Drink During Exercise

Water is adequate for 45-50 minutes of physical activity. However, if activity lasts longer or is particularly intense, sports drinks are more effective in replacing fluids and nutrients. Through sweat, the body loses essential nutrients that must be replaced to ensure peak athletic performance.² The body loses important nutrients, through sweat, that need to be replaced in order to not affect an athlete's health and performance.

If exercise lasts longer than 45-50 minutes and you are unable to provide a sports drink, cold water (50-55 degrees F) should be provided in order to replace the fluid that has been lost.

What to Drink During Exercise (cont'd)

The carbohydrate concentration in the ideal fluid replacement solution should be in the range of 6-8%.²

Fluids with salt are beneficial to increase thirst and voluntary fluid intake as well as offsetting the amount of salt lost in sweat

What NOT to Drink During Exercise²

Fruit juices, carbohydrate gels, sodas and those sports drinks that have carbohydrate levels greater than 8% are **not recommended** as the sole beverage during exercise.

The use of beverages comprising caffeine, alcohol, and carbonated water is discouraged because they may cause dehydration by stimulating urine production and decreasing voluntary fluid intake.

Hydration Tips²

- Drink according to a schedule based on individual fluid needs. By the time you become thirsty, you're already dehydrated.
- Drink before, during and after practices and games (follow the fluid guidelines listed to maintain hydration and maximize performance).
- Avoid soft drinks and juices during play. Drinks with high carbohydrate content may cause stomach problems.

Fluid Replacement Guidelines²

Before Exercise

- Drink 17-20 oz. of water or a sports drink 2-3 hours before exercise.
- Drink an additional 7-10 oz. of water or sports drink 10-20 minutes before exercise.

Fluid Replacement Guidelines (cont'd)²

During Exercise

- Begin drinking early during the sporting event - even minimal dehydration compromises performance.
- In general, drink at least 7-10 oz. of water or a sports drink every 10-20 minutes. Remember to drink beyond your thirst to maintain hydration. Optimally, drink fluids based on the amount of sweat and urine loss.
- **Athletes should be given unlimited access to fluids.**
- Weight, before and after practice, should be monitored to determine proper hydration levels. Parents may be given this responsibility.

Fluid Replacement Guidelines (cont'd)²

After Exercise

- Within two hours, drink enough to replace weight loss from exercise.

Signs of Adequate Hydration

- Body weight is within 2% from previous exercise session.
- Lighter urine. (Darker urine indicates dehydration.)
- Thirst is satisfied or lightened. However, remember, if you wait until you are thirsty, you are already dehydrated!