

Hydration Recommendations

Physical exercise can elicit high sweat rates and substantial water and electrolyte losses, particularly in warm-hot weather. If sweat water and electrolyte losses are not replaced then the individual will dehydrate during physical activity. Excessive dehydration can degrade exercise performance and increase risk of exertional heat illness. Overdrinking can lead to symptomatic exercise-associated hyponatremia. Women and older adults may be at greater risk for fluid-electrolyte imbalances during and after vigorous exercise.

Thirst is not the best indicator of how much athletes should replace in terms of fluid and sodium losses following prolonged physical activity and/or heat exposure. If you feel thirsty you are already dehydrated and in most cases you will not drink enough to fully replace the fluids lost in sweat. Consuming fluids before, during and after exercise are an important part of regulating body temperature and replacing body fluids lost through sweat.

Rather than relying on thirst or simply drinking as much as you can tolerate (which can also be dangerous), knowing how much you sweat is the best way to determine hydration needs. To figure out how much you sweat, weigh yourself before and after exercise. The weight you lost in ounces represents fluid and that amount is how much should be consumed (in total) before, during and after exercise to adequately replace sweat and keep the body balanced.

Here are some general hydration guidelines for athletes:

Before exercise:

Prehydrating with beverages should be initiated at least several hours before the exercise task to enable fluid absorption and allow urine output to return toward normal levels. Consuming beverages with sodium and/or salted snacks or small meals with beverages can help stimulate thirst and retain needed fluids. While cutting back on overall sodium in the diet is sound advice for the majority of the public, athletes have a special need to replenish lost sodium stores in the short-term.

During exercise:

The goal of drinking during exercise is to prevent excessive dehydration (>2% BW loss from water deficit) and excessive changes in electrolyte balance to avert compromised exercise performance. Studies have shown that physical performance can suffer from just a 1% body weight loss (sweat) during exercise. Consistent intake of beverages containing electrolytes (salt) and carbohydrates can help sustain fluid-electrolyte balance and exercise performance.

After exercise:

After exercise, the goal is to fully replace any fluid and electrolyte deficit. If recovery time and opportunities permit, consumption of normal meals and snacks with a sufficient volume of plain water will restore euhydration, provided the food contains sufficient sodium to replace sweat losses. Failure to sufficiently replace sodium losses will prevent the return to euhydrated state and stimulate excessive urine production.