



Hydration and Athletes

EXTENSION

December 2021

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Hydration is important for all athletes. It helps to delay feelings of tiredness. Proper hydration also supports performance. Staying well hydrated is important for athletes who engage in events lasting longer than an hour. Participating in physical activity in extreme hot or cold may increase an athlete's hydration needs.

Dehydration and Nutrient Loss

Fluids and nutrients may be lost when athletes exercise for long periods of time. This often occurs when athletes train at a high intensity or in a hot setting. Fluid and nutrient losses can cause an athlete's body functions to be out of balance. This can hurt both health and performance.

Some actions that may lead to a body being out of balance are:

- drinking too much water,
- starting exercise while dehydrated or
- not eating enough nutrients in regular diet.

One way to check hydration level is to check the color of urine. Use this urine color chart to check hydration level.

Overhydrated

Hydrated

Dehydrated

Extremely Dehydrated

Note: If taking a multivitamin, sometimes urine will be yellow or green for several hours after taking the vitamin. This is due to the vitamin itself. It may not be a sign of hydration level.

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Hydration

Hydration Level	Definition	Body Effects
Moderate Dehydration	2% or more of body weight lost through sweat.	Delay in brain function and exercise performance.
Dehydration	3% to 5% of body weight lost through sweat.	Decreased exercise performance and increased risk of injury.
Overhydrated	Occurs from not eating enough sodium or from drinking too much water.	Headache, vomiting, swollen hands and feet, restlessness, extreme tiredness, confusion or wheezy breathing.

Before Exercise

- Start drinking fluid two to four hours before training.
- Drink about 1 ounce per 12.5 pounds of body weight of water or a sports drink. Use the table below for a quick reference of this recommended intake.

Weight in pounds	Total ounces of water or sports drink two to four hours before exercise
100	8
125	10
150	12
175	14
200	16
225	18
250	20

During Exercise

An athlete may need sports drinks or snacks that contain specific nutrients. These nutrients are called electrolytes and carbohydrates. The athlete should drink a sports drink that

includes electrolytes and carbohydrates before and during exercise if they:

- will be exercising longer than two hours,
- are a salty sweater (gritty white sweat or a white line on dark cloth) or
- need to drink a lot of water to rehydrate

After Exercise

Athletes should replace the water lost from heavy breathing and sweating during exercise. They should also replace water lost from normal daily activities, like going to the bathroom. The table below is a guide to help athletes replace fluid lost during exercise. It shows the correct amount of water to add to their normal water intake. In addition, consume foods like fruits, vegetables and salted nuts or pretzels to recover electrolytes lost.

Training Level	Activity Length	Extra Fluid Intake
Light	30 minutes	8 to 16 ounces water per hour of exercise
Moderate	60 minutes	8 to 16 ounces water per hour of exercise
Intense	90 minutes	8 to 16 ounces water plus electrolytes per hour of exercise

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