

Heat-related illness

Tips for young athletes

Heat-related illness is responsible for thousands of emergency department visits annually by young athletes.

Hydration tips for young athletes

Thirst is a poor indicator of hydration status. When children and adolescents begin to feel thirsty, they may already be 1 to 2 percent dehydrated.

- Prehydrate 30 minutes before an activity. Children and adolescents should drink until they are no longer thirsty, plus another 8 ounces.
- Hydrate during an activity:
 - Drink 5 ounces every 20 minutes of activity for children and adolescents weighing less than 90 pounds.
 - Drink 8 ounces every 20 minutes of activity for children and adolescents weighing more than 90 pounds.
 - Encourage children and adolescents to drink water during an activity instead of pouring it on their heads or faces.

Water is best if the activity lasts less than one hour. For activities lasting more than an hour, a fluid with carbohydrates (sugar) and electrolytes is best. Gatorade and Powerade were designed specifically for rehydration during exercise and contain the right amount of carbohydrates (about 6 to 8 percent).

Children younger than age 10 may dilute a sports drink—one part sports drink to one part water—for a better taste. Drinks such as fruit juice and soda contain too much sugar and can cause cramping. Avoid carbonated and caffeinated beverages because carbonation can cause bloating and caffeine can speed up metabolism, generating more heat.

Tips for exercising in the heat

- Schedule workouts during cooler times of the day.
- Allow children and adolescents who are out of shape or unacclimated time to adjust to the heat.
- Schedule water and rest breaks every 30 minutes during activities. During these breaks, encourage and require children and adolescents to drink. This also gives the coach or trainer a chance to monitor athletes.
- Have shade, ice and a kiddie pool available for emergency treatment and rapid cooling.
- Have a cellphone with a charged battery available at all workouts for emergency contact.
- Wear sunscreen with a sun protection factor (SPF) of at least 15. Apply it 30 minutes before going out into the sun and every 20 to 30 minutes if the athlete is sweating or swimming.
- Wear hats with brims and light-colored, breathable clothing.
- Youth sports rules can be modified to increase the safety of athletes. For example, soccer games can be divided into quarters rather than halves to allow for more rest breaks, hydration and monitoring. Referees can call an official time-out for hydration periodically during the game.

Be aware of the heat index

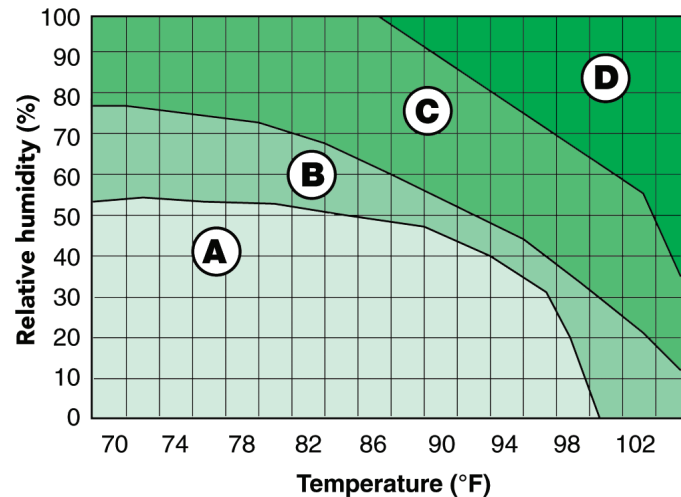
Humidity plays a major role in an athlete's heat response. Know the heat index, which is a measure of the environmental temperature and humidity. This can be measured at the field or obtained from your local weather service on the internet. When the temperature is 90°F and the humidity is 80 percent, the heat index is 115°F, which places athletes at risk of suffering a heat-related injury.



Activity guidelines

Add 5°F to the temperature between 10 a.m. and 4 p.m. from mid-May to mid-September during sunny days.

- A.** Children and adolescents should receive a five- to 10-minute rest and fluid break every 25 to 30 minutes of activity.
- B.** Children and adolescents should receive a five- to 10-minute rest and fluid break every 20 to 25 minutes of activity. Children should be in shorts and T-shirts, with helmet and shoulder pads only, not full equipment, if worn for activity.
- C.** Children and adolescents should receive a five- to 10-minute rest and fluid break every 15 to 20 minutes of activity. Children should be in shorts and T-shirts only, with all protective equipment removed if worn for activity.
- D.** Cancel or postpone all outdoor practices and games. Practice may be held in an air-conditioned space.



Early signs of heat-related illness

Dehydration and heat cramps

Thirst, fatigue, dizziness, light-headedness, muscle cramps and loss of energy may be signs of dehydration. Athletes should stop and drink water or a sports drink. Muscle cramps can be stretched and lightly massaged. Resume activity with caution only when all symptoms have cleared.

Heat exhaustion

Dizziness, a rapid pulse, headaches, nausea, vomiting, chills and loss of coordination may be signs of heat exhaustion. An athlete may be sweating profusely or their skin may be dry. Activity should be discontinued and the athlete should be rehydrated. If his level of consciousness does not allow oral hydration, transport him to a medical facility for intravenous hydration. Core body temperature should be measured. If this is not available, transport him to a medical facility for hydration and monitoring.

Heat stroke

Call 911 immediately. Confusion, irrational behavior, drowsiness, nausea, vomiting and a dangerously high temperature (104°F and above) may be signs of heat stroke. This is a life-threatening medical emergency that requires rapid cooling by immersion in an ice bath. Ice bags on the neck and groin may help if a bath is unavailable.

Physicians and parents with knowledge about heat-related illness should take on a role of educating administrators, coaches and officials, and encouraging proper training in the recognition and treatment of heat-related illness.

Certain children and adolescents are at an increased risk of suffering a heat-related illness and must be identified so extra precautions can be taken if needed. At-risk children and adolescents include those who:

- Are unacclimated to exercising in a hot environment.
- Have or are recovering from a recent illness, especially involving vomiting, diarrhea and/or a fever.
- Are taking certain prescription medicines, such as diuretics, attention deficit hyperactivity disorder (ADHD) medicines, anticholinergics and caffeine.
- Have chronic medical conditions, such as asthma, sickle cell trait, hyperthyroidism or cystic fibrosis (CF).
- Have a history of suffering a heat-related illness.



Call 404-785-KIDS (5437) for more information.



choa.org/sportsmed

This is general information and not specific medical advice. Always consult with a doctor or healthcare provider if you have questions or concerns about the health of a child.