



# HEAT STRESS SAFETY INFORMATION

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You have probably heard of ‘heat exhaustion’ and ‘heat stroke,’ the most serious forms of heat stress. Heat exhaustion can occur when excessive amounts of water and salt are lost from the body through excessive sweating, and the body has lost its ability to control temperature. Heat stroke occurs when the body temperature starts to rise to dangerous levels. Heat stroke can result in death. Fortunately, heat stress is completely preventable, and camps can do a lot to prevent heat stress in campers and staff.

## Prevention of heat stress

Prevention of serious complications during times of high heat and humidity is extremely important. While the very young and the very old and persons with chronic medical conditions are most likely to suffer severe heat-related illness, even young athletes may develop heat stroke if the early warning signs go unrecognized. Heat stroke is a medical emergency and may result in death. However, camps can readily prevent most cases of heat stress:

1. Schedule more strenuous activity in the morning and the evening. Schedule some ‘down time’ and ‘pool time’ in the middle of the day, when the temperatures are highest.
2. For sports camps and camps with a lot of physical activity, gradually increase physical activity over several days. Campers and staff may require several days to get used to hot weather. Schedule rest periods in the shade and pool time to allow young athletes to recover.
3. Maintain supplies of cool water readily available in athletic fields and activity areas.
4. Consider erecting temporary shade canopies near athletic fields and activity areas, if needed.
5. Educate campers and staff about heat stress and encourage them to fill up their water bottles and drink regularly. This is especially important during times of high physical activity.
6. Serve cold foods and plenty of water on hot days.
7. Know your weather conditions and adjust activities accordingly: Your local weather station should alert you of a heat warning or advisory, when heat and humidity are expected to be high enough to cause health problems. Alternatively, click on: <http://www.nws.noaa.gov/os/heat/index.shtml> for heat warnings, heat advisories and the ‘heat outlook.’ The ‘heat outlook’ is a 3-7 day forecast of the heat index and may be useful for planning major camp events.
8. Persons with chronic medical or mental conditions or obesity may be at higher risk for heat stress. Camp medical staff should evaluate medical screening forms to determine if any campers or staff need special monitoring or modification of activities.

## Stages of Heat Stress

If prevention fails, people typically go through three stages of heat stress. The mildest stage is referred to as ‘heat cramps.’ If not recognized and treated, the next stage is ‘heat exhaustion.’ The most dangerous stage is ‘heat stroke.’ The diagram on page two lists signs and symptoms and first aid for victims of heat related illness. Not all persons will have all the symptoms listed below, so be sure to seek medical advice immediately if you have any questions.



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Heat Cramps	Heat Exhaustion	Heat Stroke
<p><b>Signs and Symptoms for Heat Cramps</b></p> <ul style="list-style-type: none"> <li>• Profuse sweating</li> <li>• Fatigue</li> <li>• Thirst</li> <li>• Painful cramps, especially in abdomen, legs and arms</li> </ul>	<p><b>Signs and Symptoms for Heat Exhaustion</b></p> <ul style="list-style-type: none"> <li>• Profuse sweating</li> <li>• Paleness</li> <li>• Muscle cramps</li> <li>• Fatigue</li> <li>• Weakness or dizziness or fainting</li> <li>• Headache</li> <li>• Nausea or vomiting</li> </ul>	<p><b>Signs and Symptoms of Heat Stroke</b></p> <ul style="list-style-type: none"> <li>• Oral temperature higher than 103 °F</li> <li>• Red, hot, dry skin; i.e. no sweating</li> <li>• Rapid pulse</li> <li>• Throbbing headache</li> <li>• Dizziness</li> <li>• Nausea or vomiting</li> <li>• Confusion, irritability or unconsciousness</li> </ul>
<p><b>First Aid for Heat Cramps</b></p> <ol style="list-style-type: none"> <li>1. Stop all activity and move the victim to the shade.</li> <li>2. Have the victim drink water or clear juice or a sports drink like Gatorade</li> <li>3. Have the victim stay quiet for a few hours to prevent recurrence</li> <li>4. Seek medical attention if no improvement within one hour.</li> </ol>	<p><b>First Aid for Heat Exhaustion</b></p> <ol style="list-style-type: none"> <li>1. Stop all activity and move the victim to the shade.</li> <li>2. Remove excess clothing, e.g., football padding.</li> <li>3. Help the victim cool down with cool water from a shower, bath, garden hose, or sponge bath.</li> <li>4. Have the victim drink water or clear juice or a sports drink like Gatorade</li> <li>5. Have the victim stay quiet for the rest of the day</li> <li>6. Seek medical attention if no improvement within one hour.</li> </ol>	<p><b>Call 911 immediately for heat stroke.</b> In the meantime, have someone else:</p> <ol style="list-style-type: none"> <li>1. Move the victim to the shade.</li> <li>2. Remove excess clothing, e.g., football padding.</li> <li>3. Rapidly cool the victim down with cool water from:             <ol style="list-style-type: none"> <li>a. A bath, or</li> <li>b. A shower; or</li> <li>c. A garden hose; or</li> <li>d. A sponge bath.</li> </ol> </li> <li>4. Take victim's oral temperature every 10 – 20 minutes. Aim for a body temperature of 101 to 102 °F</li> <li>5. If emergency responders don't arrive right away, contact your hospital emergency room for instructions.</li> </ol>

**ALWAYS seek medical attention immediately for any of these:**

- Body temperature greater than 103 °F
- Confusion, loss of consciousness, irritability, loss of balance (staggering), loss of coordination or seizures
- Failure to improve within one hour after first aid is initiated.

For more information: <http://www.bt.cdc.gov/disasters/extremeheat/>