

# Heat-Related Illness

## SUMMARY

Each year, heat-related illnesses strike the unprepared. Prevention is key! Be prepared by acclimating to the environment for 3 to 5 days before going on an outdoor adventure; drinking plenty of fluids and eating a healthy diet beforehand; and continuing to drink fluids when outdoors on hot or humid days. Be sure to drink only when you're thirsty to avoid overhydrating. Take extra rest breaks, especially if you are exercising strenuously.

## GENERAL INFORMATION

The body cools itself primarily through evaporating sweat. This is why it is so important to stay hydrated. But in hot and humid weather the sweat does not evaporate—it puddles, and sweat that puddles is not cooling. In that case, a person is at greater risk for a heat-related illness, either because of excessive water loss, an increased body temperature, or both. The four most common illnesses are heat syncope, heat cramps, heat exhaustion, and heat stroke.

Heat syncope is dizziness or fainting that usually occurs when standing for long periods of time (such as at summertime flag ceremonies) or when suddenly standing up. Being hot and dehydrated increases the risk for syncope. Heat cramps occur when sweating depletes the body's salt and fluids. In situations of either heat syncope or heat cramps, have the person rest in a cool area and drink water or diluted sports drink. If the person does not feel better within an hour, get medical attention.

### Heat Exhaustion Symptoms

- » Inability to concentrate
- » Pale or ashen skin
- » Rapid pulse
- » Severe thirst
- » Heavy sweating, skin may be clammy, not hot
- » Fatigue, weakness, irritability
- » Nausea, dizziness, headache

### Heat Stroke Symptoms

- » Extremely hot-feeling, flushed skin
- » Altered mental status
- » Fatigue
- » Headache, body aches
- » Nausea, vomiting

Heat exhaustion occurs due to an excessive loss of water through excessive sweating. Uncontrolled heat exhaustion is an urgent medical situation; it can progress to heat stroke if not treated. Provide cold water or diluted sports drink. Get the person out of the heat, remove excess clothing, spray or douse the person with cold water and fan the person. Do not give them salt tablets. Evacuate if the person does not improve within 30 minutes.

Heat stroke is a true medical emergency. Immediate cooling, evacuation and activation of the EMS system is required, as the body is no longer able to cool itself. It is critical to cool the person quickly by any means possible—move the person to a cool, shaded area; remove as much clothing as possible; spray, douse or immerse them in cold water; place ice packs in the person's armpits, groin, and sides of the neck. These actions should happen simultaneously, if possible. If the person is unconscious, maintain their airway. Continue to monitor them and prepare for a rapid evacuation. Do not give an unconscious person anything by mouth. Do not use fever reducers like acetaminophen to bring down the temperature. You may stop cooling the person if their mental status improves.

Again, prevention is key to avoiding heat-related illnesses. Being aware of the environment you will be in, acclimating to the conditions, planning for adequate water, staying hydrated, maintaining a good diet, and being observant of those in your group can help to reduce the risk of someone suffering a heat-related illness.

## RESOURCES

- » Scouts BSA Handbook for Boys/Scouts BSA Handbook for Girls
- » [The National Institute for Occupational Safety and Health, "Heat Stress – Heat Related Illness"](#)
- » [Gauer, R. and Meyers, B.K. Heat-Related Illnesses. American Family Physician. 2019;99\(8\):482-489](#)