



# TECHNICAL UPDATE

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## Heat-related Illnesses

As temperatures soar, the risk of heat-related illness increases. These illnesses are caused when the body's cooling mechanisms (i.e., sweating, radiating heat, etc.) cannot lower the body's core temperature, usually due to physical activity and/or high temperatures. People with pre-existing medical conditions, the elderly, and young children are most at risk for heat-related illnesses. Heat cramps, heat exhaustion, and heatstroke are three heat-related syndromes.

### HEAT CRAMPS

Heat cramps are the mildest of the heat-related syndromes. While the exact cause of heat cramps are unknown, doctors believe that an electrolyte imbalance brought on by heavy sweating is most likely to blame. As we sweat, our bodies lose sodium, potassium, calcium, and magnesium. The loss of these nutrients can result in chemical changes in body tissue.

### HEAT EXHAUSTION

Heat exhaustion is caused when your body cannot cool itself, usually due to exertion during high heat. While not as serious as heatstroke, heat exhaustion symptoms (e.g., confusion, dizziness, fainting, fatigue, headache, muscle cramps, rapid heartbeat, profuse sweating, etc.) should not be ignored.

### HEATSTROKE

Heatstroke occurs when the body overheats, reaching temperatures above 104°F. It is a serious condition that can cause brain damage, internal organ damage, and death. Heatstroke requires immediate medical attention. The longer treatment is delayed, the greater the risk of serious complications, so it is important to know and recognize heatstroke symptoms:

- Throbbing headache
- Dizziness and light-headedness
- Lack of sweating
- Red, hot, dry skin
- Muscle weakness or cramps
- Nausea and vomiting
- Rapid heartbeat, either strong or weak
- Rapid, shallow breathing
- Behavioral changes (e.g., confusion, disorientation, staggering, etc.)
- Seizures
- Unconsciousness

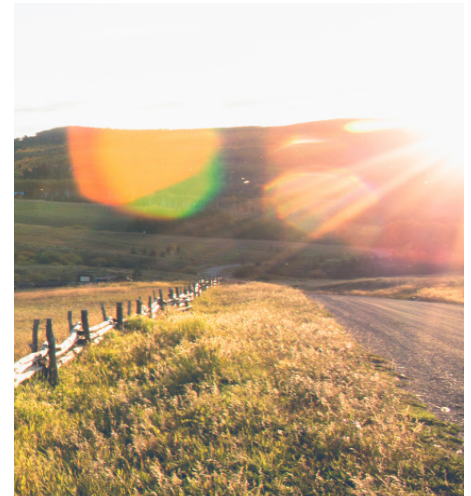
Heat cramps and heat exhaustion usually precede heatstroke. These milder forms of heat-related illnesses can serve as a warning sign to seek treatment before the onset of heatstroke. However, heatstroke can occur without prior symptoms.

### AVOIDING HEAT-RELATED ILLNESSES

The Mayo Clinic recommends people take the following precautions:

- Wear loose-fitting, lightweight, light-colored clothing
- Avoid sunburn
- Seek cooler places
- Drink plenty of fluids
- Avoid hot spots (i.e., parked cars)
- Let your body acclimate to the heat

If possible, avoid strenuous activity during high heat. If you must work in those conditions, take frequent breaks and stay hydrated.



### WHAT THIS MEANS FOR COUNTIES

Heat-related illnesses can be serious. Know the signs of heat-related illnesses and take action before heatstroke has a chance to occur. For more information, contact CTSI at (303) 861 0507.