



## Department of Public Works Safety, Security and Training Division

# Safety Moment

### Heat Stress

Health and safety problems caused by excessive heat are called heat stress. These range from heat cramps to heat exhaustion to the most serious state, heat stroke.

The human body cools itself by producing sweat. Sweat evaporating from the skin keeps the body cool. Higher humidity, limited air movement, and wearing protective equipment can reduce evaporation. Less evaporation means less cooling. Frequent intake of appropriate liquids is necessary to prevent dehydration through loss of sweat. Drink small amounts frequently for example, one cup every 15-20 minutes.

### Know the Signs

**HEAT CRAMPS** are a warning sign the body has lost too much salt through sweating. The cramps affect working muscles, such as legs, arms, and abdomen. Heat cramps may also occur when a person is resting.

**HEAT EXHAUSTION** is a warning that the body's heat control mechanism has become overworked. Symptoms are exhaustion, dizziness and/or nausea, pale and clammy skin, rapid-pulse and low blood pressure. Heat exhaustion may lead to heat stroke if symptoms are ignored.

**HEAT STROKE** can be fatal. This happens when the heat loss mechanism of the body just shuts down. The person stops sweating and the body temperature goes up. The heart pounds, and the skin is hot and red. A person suffering from heat stroke needs immediate emergency medical attention.

### The best way to treat sickness is to prevent it:

- Drink water early and often. The body loses water through perspiration, and you need to replace it frequently.
- Avoid using **alcoholic beverages, coffee, tea or other beverages with caffeine as a fluid replacement**. These types of drinks cause you to lose even more water and salt. ***The best defense is to drink plain water early and often.***
- Use fans to create air movement throughout your work area.
- When possible, take approved / frequent rest breaks. Immediately move to a cooler area if you feel dizzy or become nauseated. Report this to your supervisor.
- Keep an eye on your work partner.
- Dress in light colors. Choose fabrics that let moisture and heat escape. Dress in layers so you can peel off outerwear as needed as the day progresses.
- Watch for signs of heat stress in yourself and your fellow workers. Most of the time, a worker may not realize what is happening to them until heat sickness strikes.
- If signs of heat sickness do occur, help the victim to cool off by removing him to a cool place, fanning him/her or soaking him/her with cloth that has been dipped in cool water.
- Give him/her sips of water to drink **ONLY** if he/she is conscious.



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REMEMBER!! IF YOU SUSPECT HEAT STROKE DUE TO BRIGHT RED, HOT SKIN AND NO SWEAT, CALL FOR EMERGENCY MEDICAL HELP IMMEDIATELY.

	SYMPTOMS	TREATMENT / FIRST AID
<b>HEAT CRAMPS</b>	<ul style="list-style-type: none"><li>&gt; Irritability, loss of appetite</li><li>&gt; Prickly heat rash, nausea</li><li>&gt; Muscle spasms/ twitching, moist cool skin</li><li>&gt; Painful muscle cramps (limbs and abdomen)</li></ul>	<ul style="list-style-type: none"><li>&gt; Drink more water</li><li>&gt; Have a cold shower or bath</li><li>&gt; Lay in cool place with legs supported and slightly elevated</li><li>&gt; Massage limbs gently to ease spasms or firmly if cramped, then apply ice packs and drink electrolyte replacement solutions</li><li>&gt; Do not give salt tablets or high sodium solutions</li></ul>
<b>HEAT EXHAUSTION</b>	<ul style="list-style-type: none"><li>&gt; Profuse perspiration</li><li>&gt; Cold, clammy, pale skin</li><li>&gt; Headache and vomiting</li><li>&gt; Weak, but rapid pulse</li><li>&gt; Poor coordination</li><li>&gt; Normal temperature, but faintness</li></ul>	<ul style="list-style-type: none"><li>&gt; Lay victim down in a cool place as for heat cramps.</li><li>&gt; Loosen clothing and apply wet clothes to head and body.</li><li>&gt; Fan the victim, or move them to an air conditioned environment</li><li>&gt; Give sips of cold water or electrolyte drink</li><li>&gt; If vomiting continues, seek medical assistance immediately</li></ul>
<b>HEAT STROKE</b>	<ul style="list-style-type: none"><li>&gt; Skin flushed, hot and unusually dry</li><li>&gt; Dry swollen tongue</li><li>&gt; High body temperature (more than 40°C)</li><li>&gt; Deep unconsciousness may develop rapidly</li></ul>	<ul style="list-style-type: none"><li>&gt; Seek medical assistance urgently</li><li>&gt; In the meantime;</li><li>&gt; Lay victim in a cool place and remove outer clothing</li><li>&gt; If unconscious, check airway and breathing</li><li>&gt; Cool victim quickly by applying cold water or wrap in a wet sheet and fan them (keep the sheet wet)</li><li>&gt; When conscious, give sips of water</li></ul>