



### *Preventing Heat-Related Illnesses*

Most heat related illnesses and their symptoms can be prevented by following a few basic precautions.

- Drink plenty of decaffeinated, non-alcoholic beverages (even before you are thirsty).
- Open windows and use fans and exhaust ventilation to increase air flow and lower temperature and humidity.
- Schedule heavy work during cooler parts of the day.
- Provide cool areas for regularly scheduled breaks.
- Wear loose-fitting, light, natural fiber clothing.
- Use special precautions with protective clothing or respirators.



If someone shows the symptoms of **heat stroke**, call 9-1-1 immediately, as this is a life threatening illness. Move the victim to a cooler place and try to reduce body temperature as rapidly as possible, using cool cloths or sheets, or even ice packs wrapped in cloths applied to wrists, ankles, neck and armpits. Keep the person lying down and watch for breathing problems. Do not use rubbing alcohol on the skin, as it closes pores and traps body heat.

### *Getting Assistance*

If you have additional questions about heat-related illness or would like to have your work area monitored for environmental heat risk level, contact EH&S.



### **Environmental Health & Safety**

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Pullman, WA 99164-1172  
(509) 335-3041

Wenatchee.....509-663-8181  
TriCities.....509-372-7163  
Vancouver.....360-546-9706  
Spokane.....509-358-7500

<http://www.ehs.wsu.edu>

# Heat-Related Illness:



### *Treating Heat-Related Illnesses*

A person who has a heat-related illness should move to a cooler area and rest. If the person is awake, slowly give fluids (about a half glass of water every fifteen minutes). Avoid beverages that contain caffeine or alcohol, because both are diuretics, which means that they cause the body to shed water and can cause dehydration. Loosen or remove tight clothing and apply wet cloths or sheets. If the person loses consciousness, vomits, or refuses fluids, call 9-1-1.

# Don't Lose YOUR COOL

## Heat-Related Illness

Like many workers, you may find yourself working in a hot environment. Within this fact sheet are tools to diagnose your risk of developing a heat-related illness, to prevent heat-related illnesses through the use of precautionary measures, and to treat heat-related illnesses.

Some examples of occupations where workers encounter hot conditions that may pose hazards to safety and health include: asbestos abatement workers, foundry workers, bakers, cooks, construction workers, and maintenance workers in steam tunnels.

## Factors Influencing Heat-Related Illness

Environmental factors that influence the heat-related stress level are:

- Air temperature
- Air movement
- Humidity
- Radiant heat (e.g., the sun, steam pipes)
- Metabolic heat (heat produced by the body).

Other factors that influence the heat-related stress level are:

- Age
- Sex
- Weight
- Fitness level
- Medical condition(s) / medication
- Acclimation



## How Heat-Related Illnesses Develop

About 90 percent of the body's heat is produced in the torso area by the major organs and muscle groups. The amount of heat generated is increased as the body works harder. In order to maintain a constant core temperature, the body must either give up or retain this heat as necessary.

Our bodies are much like car engines in the ways we respond to heat fluctuations, both gains and losses. Blood serves as a coolant, the central nervous system as a thermostat, and skin as a radiator.

As blood temperature increases with body temperature, the body signals for more blood to be sent to the skin, where heat can be given off. The central nervous system further protects us by triggering the sweating mechanism, which enhances the skin's ability to cool the blood.

Cooler blood then circulates back through our bodies, lowering the internal temperature.



## Symptoms of Heat-Related Illnesses

The severity of the effects of working in hot environments varies with exposure. Most heat exposures are not serious, only causing discomfort for a few hours. However, with a greater amount of heat exposure, symptoms may progress to being

very serious and may require medical attention. Below are examples of heat-related illnesses and symptoms, ranging from mildly worrisome to very hazardous.

Heat-Related Illness	Symptoms
Heat Rash	Tiny red patches and blisters on the skin.
Heat Cramps	Spasms of arm, leg and stomach muscles.
Heat Fatigue	Impaired sensorimotor/mental performance.
Heat Exhaustion	Fainting, blurred vision, nausea, headache, profuse sweating.
Heat Stroke	Confusion, loss of consciousness; convulsions; hot, dry skin.

## High-Risk Groups

Studies indicate that, other things being equal, the severity of heat disorders increases with age (heat cramps in a 17-year-old may be heat exhaustion in someone 40, and heat stroke in a person over 60). In addition, chronic invalids, those on certain medications, and persons with weight and alcohol problems are particularly susceptible to heat reactions, especially during heat waves in areas where moderate climate usually prevails.

