

# Spotlight On Safety

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## HEAT ILLNESS PREVENTION & RESPONSE

Work in hot environments can result in heat illness - a group of medical conditions resulting from the body's inability to cope with a particular heat load. Mild heat illnesses have the potential of becoming severe life-threatening emergencies if not treated properly. University employees who may be at risk for heat illness include, but are not limited to, field researchers, grounds crews, and building/rooftop maintenance workers. This fact sheet provides information on heat illness and establishes campus and field station procedures for preventing and responding to heat illness.

### Contributing Factors

- ✦ Air temperature, relative humidity, radiant heat from the sun or other sources, conductive heat from the ground or other sources, air movement, workload severity and duration, and clothing
- ✦ Employee's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications may affect the body's water retention and other physiological response to heat

### Preventing Heat Illness

- ✦ **Take Breaks** - a "preventative recovery period" in shade (with an opportunity to drink water) is required to recover from heat and prevent heat illness
- ✦ **Allow for Acclimatization** - Acclimatization is a temporary adaptation of the body to work in the heat that occurs gradually as a person is exposed to hot conditions (usually takes 4 to 14 days of regular work for at least 2 hours per day in the heat)
- ✦ **Provide Access to Shade** - The direct heat of the sun can add as much as 15° F - wide brimmed hats can decrease the impact of direct heat. If possible, work should be performed in the shade. If not, supervisors should provide a shaded area for breaks such as canopies, umbrellas, or other structures or devices that block direct sunlight
- ✦ **Drink Water** - Frequent drinking of water is encouraged
  1. Supervisors must ensure employees have access to potable drinking water in sufficient quantity to provide each employee one quart (4 cups) of water per hour for the entire shift
  2. Avoid caffeinated or alcoholic beverages
  3. Generally, dark yellow urine indicates dehydration and the need to drink more water
- ✦ **Identify, Evaluate, & Control Exposures** - Employees, supervisors, and safety committees should periodically discuss and/or update procedures to identify, evaluate and control exposures to factors that contribute to heat illness
  1. Supervisors should monitor employees closely for signs and symptoms of heat illness, particularly when they have not been working in heat for the last few days, and when a heat wave occurs
  2. Environmental Health & Safety (EH&S) is available upon request (951-827-5528) to help assess various job tasks and environmental conditions, and to assist supervisors in

providing heat illness prevention training

- ✦ **General Rule** - actions to prevent heat illness should be implemented when temperatures approach 80° F; during heat waves, it is advised that strenuous outdoor work be performed early in the morning or late in the afternoon when heat is less intense

### Obtaining Emergency Medical Services

- ✦ It is important to immediately report any symptoms/ signs of heat illness in oneself or co-workers
- ✦ Emergency medical service is generally available by calling 9-1-1 (this may not be available for remote field locations)
- ✦ Supervisors should remind employees what to do if emergency medical treatment is needed
  1. Provide procedures for contacting emergency medical services and, if necessary, transport for employees to a point where they can be reached by an emergency medical provider must be available (visit [www.ehs.ucr.edu/ep](http://www.ehs.ucr.edu/ep) & <http://ehs.ucr.edu/ep/fp/accidentVersion21.pdf> to learn what to do in emergencies)
  2. In remote field locations, develop procedures for emergency medical services and ensure employees are informed of exactly how and where medical attention may be received - information about field safety is available at <http://ehs55.ehs.uci.edu/fieldsafe/index.jsp> to help with planning

Visit [www.ehs.ucr.edu](http://www.ehs.ucr.edu) for additional information or call 951-827-5528 if you have any questions.