PROTECTING WORKERS FROM HEAT STRESS

There are four environmental factors that can cause heat stress in a hot work area. These are:

1. Temperature
2. Radiant heat from the sun or a furnace
3. Humidity
4. Air velocity. The level of heat stress a person encounters depends on his or her age, weight, level of fitness, medical condition, and acclimatization to the heat. Heat stress occurs when body muscles are being used for physical labor and less blood is available to flow to the skin and release the heat.

What are some of the risks of heat stress?

Rise in body temperature and heart; Loss of concentration and difficulty in focusing on a task; Increased irritability or sickness; Little or no desire to drink; Fainting and possible death if person is not removed from the source of the heat stress

How can you reduce the risk of heat stress?

- Provide water and encourage employees to drink (this helps to replace fluids lost through sweating).
- Train and educate workers to recognize heat stress symptoms.
- Train first aid workers to recognize and treat heat stress disorders.
- Ensure that the names of staff trained in first aid are known to all workers.
- Encourage employees to move to a cooler place, find shade, and rest during their breaks.
- Allow employees to slow the work pace or reduce the work load and to stop and rest if they become extremely uncomfortable.
- Encourage employees to wear appropriate clothing (cotton garments) and to use sunscreen, hats, and sunglasses.
- Be aware that older workers, obese employees, and people on medication are at greater risk for heat stress.

What are the symptoms of heat stress and how they can be treated?

HEAT STROKE

The most serious health problem for workers in a hot environment is caused by the body's failure to regulate its core temperature. Sweating stops and the body can no longer release excess heat. *Victims of heat stroke usually die unless treated promptly.* Signs include: Mental confusion, delirium, loss of consciousness, convulsions, or coma; Body temperature of 106° F or higher; Hot, dry skin that may be red, mottled, or bluish. Prompt first aid can prevent permanent injury to the brain and other vital organs. While awaiting medical help, the victim should be moved to a cool area. The victim's clothing should be soaked with cool water and he or she should be fanned vigorously to increase cooling.

HEAT EXHAUSTION

Results from loss of fluid through sweating and from not drinking enough replacement fluids. The worker still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. The skin is clammy and moist, while body temperatures are normal or slightly elevated. The victim should rest in a cool place and drink water or an electrolyte solution, such as Gatorade or similar beverages used by athletes to restore potassium and salt. Severe cases, in which the victim vomits or loses consciousness, may require longer treatment under medical supervision.

HEAT CRAMPS

Painful spasms of the muscles, are caused by the body's loss of salt. As in the case of heat exhaustion, a victim of heat cramps should drink an electrolyte solution such as Gatorade. Seek medical attention for the victim in the case of severe cramping.

FAINTING

Can occur when a worker is unacclimatized to a hot environment. At first, allow the victim to lie down on his or her back. When consciousness has been regained, the victim should usually recover after a brief period of walking around slowly.

HEAT RASH

Also known as prickly heat, can be extensive and can be complicated by infection. Heat rash can be so uncomfortable that sleep is disrupted. It can impede a worker's performance and can even result in a temporary total disability. Place the victim in a cool place and allow the skin to dry.