

Heat Stress Prevention

The frequency of accidents, in general, appears to be higher in hot environments than in more moderate environmental conditions. One reason is that working in a hot environment lowers the mental alertness and physical performance of an individual. Increased body temperature and physical discomfort promote irritability, anger, and other emotional states which sometimes cause workers to overlook safety procedures or to divert attention from hazardous tasks.

Excessive exposure to a hot work environment can bring about a variety of heat-induced disorders.

Heat stress is caused from the buildup of heat in the body and occurs when the body's means of controlling its internal temperature starts to fail. The body cools itself by blood flow to the skin's surface and by sweating. When the body is subjected to more heat than it can cope with problems can occur. There are four types of heat-related illnesses; heat rash, heat cramps, heat exhaustion, and the most severe - heat stroke.

Here's how to recognize and treat heat-related illnesses:

Heat Rash – small, red bumps on the skin

- Stop activity; rest in a cool place
- Drink plenty of water, juice or sports beverages (no caffeine!)
- Seek medical attention if condition worsens or progresses

Heat Cramps – painful muscle cramps or spasms, usually in the legs or abdomen that occur among those who sweat profusely in heat, drink large quantities of water, but do not adequately replace the body's salt loss.

- Stop activity; rest in a cool place
- Drink plenty of water, juice or sports beverages (no caffeine!)
- Seek medical attention if there is no improvement in one hour

Heat Exhaustion – the body's response to the loss of large amounts of fluids by heavy sweating, sometimes with excessive loss of salt. The victim's skin is clammy and moist, and the complexion is pale or flushed. The victim may still sweat, but experiences headache and blurred vision, or dizziness. In extreme cases, the victim may vomit or lose consciousness

- Notify a supervisor and call 911
- Stop activity; rest in a cool place
- Drink plenty of water, juice or sports beverages (no caffeine!)
- Remove unnecessary clothing or loosen clothing
- Shower or sponge with cool water

Heat Stroke – the body's temperature regulatory system fails and sweating becomes inadequate. Victim's skin is hot, usually dry, red, or spotted. Body temperature usually rises to 105 degrees Fahrenheit or higher, and the victim is mentally confused, delirious,

or could even be unconscious or convulsing. Unless the victim receives quick and appropriate treatment, death can occur.

- Notify a supervisor and call 911 – immediate hospitalization is required
- Remove the victim to a cool area
- Thoroughly soak the victims clothing with water and vigorously fan the body to increase cooling
- Do not attempt to give the victim anything by mouth – it will not stay down

You can help prevent heat-related illnesses and accidents by taking these simple steps:

- Make sure cool water is readily available. Workers should drink at least 5 to 7 oz. of water every 15-20 minutes or a similar drink such as Gatorade and sports drinks.
- Refrain from drinking caffeinated drinks such as iced tea or soda pop. Caffeine actually works in the reverse and can cause dehydration.
- Wear breathable, light colored clothing that will protect from the direct sunlight and wear gloves when coming into contact with metal.
- Take frequent breaks in cool, shaded areas and remove PPE.
- Sufficient sleep and good nutrition are good for maintaining a high level of heat tolerance. Workers who may be at a greater risk are the obese, the chronically ill, and older individuals.
- Workers taking any type of medications should consult with their physician to see if any side effects could occur during excessive heat exposure.
- Be especially mindful of a new worker's exposure to high temperatures. Under normal circumstances, it takes about 5 to 7 days for the body to adjust to extreme heat conditions.
- Educate your workers on how to deal with extreme heat conditions and on how to recognize the early warning signs of heat stress and act quickly.

Alert your workers that when in doubt – call 911. Over 4,000 deaths each year are attributed to heat stroke.