Heat Stress in the Workplace

Heat stress includes a series of conditions where the body is under stress from overheating. It can include:

- heat rash
- heat cramps
- heat exhaustion,
- heat stroke.

Each produces bodily symptoms that can range from profuse sweating to dizziness to cessation of sweating and collapse. Heat stress can be induced by high temperatures, heavy work loads, the type of clothing being worn, etc.

Review the signs of heat stress in the Heat Condition Table and the proper first aid to treat it. The victim often overlooks the signs of heat stress. The employee may at first be confused or unable to concentrate, followed by more severe symptoms such as fainting and/or collapse. If heat stress symptoms occur, move the employee to a cool, shaded area, give him/her water and immediately contact the supervisor.

At-risk Employees

Some employees are more likely to have heat disorders than others. Younger employees and those more physically fit are often less likely to have problems. Employees with heart, lung or kidney disease, diabetes and those on medications are more likely to experience heat stress problems. Diet pills, sedatives, tranquilizers, caffeinated drinks and excessive alcohol consumption can all exacerbate heat stress effects.

It often takes two to three weeks for employees to become acclimated to a hot environment. This acclimation can subsequently be lost in only a few days away from the heat. Thus employees should be more cautious about heat stress after coming back from a vacation, when beginning a new job, or after the season’s first heat wave. In short, precautions should be taken anytime there are elevated temperatures (approaching 90 degrees F) and the job is physically demanding.

Other Factors

Other heat stress factors are also very important. In addition to temperature, increased relative humidity (see the Heat Index Chart), decreased air movement or lack of shading from direct heat (radiant temperature) will all affect the potential for heat stress.
Prevention of Heat Stress - Supervisors:

- Allow time for employees to adjust to the summer heat. It often takes two to three weeks for an employee to become acclimated to a hot environment.
- Adjust the work schedule, if possible. Assign heavier work on cooler days or during the cooler part of the day.
- Reduce the workload. Increase the use of equipment on hot days to reduce physical labor. Also, reduce the use of equipment that produces excess heat.
- Establish a schedule for work and rest periods during hot days.
- Go over with employees how to recognize signs and symptoms of heat stress disorders and be prepared to give first aid if necessary.
- Avoid placing "high risk" employees in hot work environments for extended time periods. Realize individual employees vary in their tolerance to heat stress conditions.

Prevention of Heat Stress - Workers:

- Use the Heat Conditions Table to recognize the signs and symptoms of heat stress. Pace the work, taking adequate rest periods in shade or cooler environment.
- Use adequate fans for ventilation and cooling, especially when wearing personal protective equipment (PPE) or working around equipment that is hot.
- Wear light colored, loose (unless working around equipment with moving parts) clothing.
- Keep shaded from direct heat where possible, for example, wear a hat and apply sunscreen.
- Drink plenty of water. In hot environments the body requires more water than it takes to satisfy thirst. Drink BEFORE you are thirsty. Sports drinks are not necessary, plain water works well.