

HEAT ILLNESS PREVENTION PROGRAM

The California Occupational Safety and Health Act (Cal/Osha) adopted regulation CCR, Title 8, Section 3395 entitled Heat Illness Prevention requiring all employers to take preventative measures to protect employees in hot work environments.

Cal/OSHA Web Reference: <http://www.dir.ca.gov/Title8/3395.html>

1.0 PURPOSE AND OBJECTIVE

The Heat Illness Prevention Program serves to control the risk of occurrence of heat illness in hot work environments and establishes the minimum requirements for complying with this program. The objectives of the program are employee awareness regarding heat illness, ways to prevent illness, and what to do if symptoms occur.

2.0 RESPONSIBILITIES

The Department Safety Officer is responsible for:

- Development and administration of a written program in compliance with Cal/OSHA requirements;
- Providing or coordinating Heat Illness Prevention training to affected managers and supervisors;
- Assisting affected managers and supervisors with the required training component of this program by providing Heat Illness Prevention literature and resource information to them to assist them in providing training to their affected staff.

Managers and Supervisor are responsible for:

- Implementing Heat Illness Prevention when environmental and/or personal risk factors for heat illness are present;
- Identifying employees who are or may be required to work outdoors where heat illness could occur;

- Ensure the appropriate work clothing is used by the employees to protect them against the sun and other environmental risk factors and allows the body to cool helping to prevent heat illness.
- Ensuring all affected employees receive training on heat illness prevention including proper medical response procedures for each work site. Such training shall be provided at least annually and before entering work sites where environmental and personal risk factors for heat illness may be present;
- Ensuring the availability for affected employees to acclimate, when necessary, to work sites where environmental and personal risk factors for heat illness may be present;
- Ensuring adequate water and shade or provision for adequate water and shade is made available to employees at job sites when environmental and personal risk factors for heat illness are present; and
- Ensuring the basic requirements of this program are met.

What's in the Forecast?!?!

Remember that the major way the body loses heat is through sweating. High relative humidity reduces the body's heat loss through sweating. Therefore, during periods of high relative humidity there is a greater risk of developing Heat Illness. An indication of how relative humidity affects the risk of developing Heat Illness is called a **Heat Index Value**. Heat Index Values or Apparent Temperatures, are given in degrees Fahrenheit and measure how hot it really feels when relative humidity and air temperatures are both considered (see <http://www.weather.gov/om/heat/index.shtml#heatindex>).

IMPORTANT: Since heat index values were devised for shady, light wind conditions, **exposure to full sunshine can increase heat index values by up to 15°F**. also, **strong winds**, particularly with very hot, dry air, can be extremely hazardous.

Affected employees are responsible for:

- Complying with Heat Illness Prevention Program guidelines when environmental and/or personal risk factors for heat illness are present;
- Ensuring access to adequate amounts of drinking water is available at the beginning of each shift and throughout the work day, and consuming adequate amounts of drinking water when environmental and personal risk factors for heat illness are present;

- Ensuring access to shade for purposes of a preventative recovery period is available during the work day and utilizing this preventive measure when environmental and personal risk factors for heat illness are present;
- Recognizing the signs and symptoms of heat illness and immediately reporting personal occurrences of heat related illnesses or a co-worker exhibiting heat illness symptoms to supervisors and/or managers; and
- Following proper procedures to contact emergency medical services when necessary.

3.0 BASIC REQUIREMENTS

The basic requirements of the Heat Illness Prevention Program are:

Provision of Water:

This requirement goes in affect when environmental and/or personal risk factors for heat illness are present. Affected employees shall have access to potable drinking water in the amount of one quart per employee per hour. For an eight-hour work day this equals at least two gallons per person. The water shall be located as close as practicable to the areas where employees are working. Where drinking water is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift for the entire shift. Employees may begin a shift with smaller quantities of water when adequate replenishment of fresh drinking water is available. The frequent drinking of water shall be encouraged.

Access to Shade

Shade shall be present when the temperature exceeds 80 degrees Fahrenheit. When the outdoor temperature in the work area exceeds 80 degrees, one or more areas with shade shall be maintained at all times while employees are present that are either open to the air or provided with ventilation or cooling. The amount of shade shall be adequate enough to accommodate the number of employees on recovery or rest periods, so

that they can sit in a normal posture fully in the shade without having to be in physical contact with each other. The shade shall be located as close as practicable to the areas where employees are working. The amount of shade present during meal periods shall be at least enough to accommodate the number of employees on the meal period who remain on site. If it is unfeasible or unsafe to have a shade structure, or otherwise to have shade present on a continuous basis, alternative procedures may be utilized for providing access to shade if the alternative procedures provide equivalent protection. Cooling measures other than shade may be provided in lieu of shade if the measures are at least as effective as shade in allowing employees to cool.

High-heat Procedures

High-heat procedures shall be implemented when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

- Ensure that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary.
- Ensure effective employee observation/monitoring by implementing one or more of the following:
 1. Supervisor observation of 20 or fewer employees, or
 2. Mandatory buddy system, or
 3. Regular communication with sole employee such as by radio or cellular phone, or
 4. Other effective means of observation.
 5. Designate one or more employees on each worksite as authorized to call for emergency medical services, and allowing other employees to call for emergency services when no designated employee is available.
 6. Reminding employees to drink plenty of water.
 7. Pre-shift meetings before the commencement of work to review the high heat procedures, remind employees of their right to take a cool-down rest when necessary.

Pay close attention to employees during High Heat!!

During high heat (temperatures which equal or exceed 95°F), and where there is a sudden and temporary rise in temperatures above the seasonal average, heat illness can develop even faster.

Emergency Response Procedures

- Ensure a means of summoning emergency medical services.
- Respond to signs and symptoms of possible heat illness in any employee, including but not limited to first aid measures.
- If a supervisor/employee reports or observes any signs or symptoms of heat illness, the supervisor shall take immediate action commensurate with the severity of the illness.
- If symptoms are indicators of severe heat illness, emergency response procedures must be implemented.
- The affected employee shall be monitored and shall not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services.
- Contacting emergency medical services and, if necessary, transporting employee to a place where they can be reached by an emergency medical provider.
- Ensure that in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

Acclimatization

- All employees shall be closely observed by a supervisor or designee during days which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days.
- An employee who has been newly assigned to a high heat area shall be closely observed by a supervisor or designee for the first 14 days of the new assignment.

Training

Training on the following topics will be provided to all affected employees:

- Guidelines for Heat Illness Prevention
- The environmental and personal risk factors for heat illness
- The importance of appropriate PPE and clothing for the job they will be performing.
- The importance of drinking frequent amounts of water
- The importance of acclimating to the environment
- How to recognize types, signs, and symptoms of heat illness
- The importance of immediately reporting occurrences of heat illness
- How to respond to staff affected by heat illness; contact emergency medical services; effectively report work location to 911 (emergency medical responders)

Training on the following topics shall be provided to all affected supervisors prior to supervising employees working in the heat:

- The training provided to all affected employees
- Procedures supervisors shall follow to implement the Heat Illness Prevention Program
- Procedures supervisors will follow when possible heat illness symptoms occur in an employee: how to respond to staff affected by heat illness; how emergency medical services will be summoned for staff affected
- How to effectively report staff's work location to 911 (emergency medical responders)

4.0 RECORDKEEPING

A record of training given to employees and supervisors shall be retained. This can be accomplished by requiring employees to sign their name to a training roster when they receive the required training. Upon completion of the annual training, the training rosters shall be made available to the

Department Safety Officer, as well as the Lead Safety Officer/Risk Management Division for retention. Such records shall be maintained for a minimum of two years.

5.0 DEFINITIONS

“Acclimatization”

Means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

“Environmental Risk Factors for Heat Illness”

Working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.

“Heat Illness”

A serious medical condition resulting from the body’s inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

“High Heat”

Means temperatures that equal or exceed 95 degrees Fahrenheit.

“Personal Risk Factors for Heat Illness”

Factors such as an individual’s age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medication that affect the body’s water retention and other physiological responses to heat.

“Potable Water”

Means fit to drink.

“Shade”

Means blockage of direct sunlight. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. Shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions and that does not deter or discourage access or use.

“Temperature”

Means the dry bulb temperature in degrees Fahrenheit obtainable by using a thermometer to measure the outdoor temperature in an area where there is no shade. While the temperature measurement must be taken in an area with full sunlight, the bulb or sensor of the thermometer should be shielded while taking the measurement, e.g., with the hand or some other object.