

Heat Illness Education and Training Program

Practice Name: _____

Person Designated to Oversee this Program herein referred to as "The Supervisor":

"Heat Illness" means 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.

1. The environmental and personal risk factors for heat illness

"Environmental risk factors for heat illness" means 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.

"Personal risk factors for heat illness" means factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

- a. Areas in or around the practice or situations during mobile/ field work where potential heat exposure/ illness can occur are: _____
- b. General environmental risk factors include: _____
- c. General personal risk factors include: _____

2. The added burden of heat load on the body caused by exertion, clothing, and personal protective equipment.

- a. Types of exertion at this practice which may cause added burden of heat load include:

- b. Types of clothing that may cause added burden of heat load include:

- c. Personal protective equipment that may cause added burden of heat load includes:

3. Access to drinking water

Provision of Water. Employees shall have access to potable drinking water meeting the requirements of the California Code of Regulations, Title 8; Sections 1524, 3363, and 3457, as applicable including but not limited to the requirements that it be fresh, pure, suitably cool, and provided to employees free of charge. 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 to provide one quart per employee per hour for drinking for the entire shift. Employers may begin the shift with smaller quantities of water if they have effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour. The frequent drinking of water, as described in subsection (f)(1)(C), shall be encouraged.

Location of plumbed or potable water suitable for drinking at this practice:

- a. The Supervisor is responsible for assuring that workers have access to drinking water.
- b. The Supervisor is responsible for providing clean or disposable drinking cups.
- c. The Supervisor is responsible for making sure that workers have access to water within 50 feet.
- d. The Supervisor is responsible for making sure that ice is available in a separate and appropriate storage container when temperatures rise above 90 degrees Fahrenheit.
- e. The Supervisor will be responsible for cleaning the water containers and ensuring that they are kept in sanitary condition (all necessary cleaning supplies are provided by the company).
- f. The company will reimburse The Supervisor for any cost incurred to fill up their water containers as needed on a daily basis or to purchase necessary disposable cups or cleaning supplies. The Supervisor will be given a per diem of \$_____ per week for the purchase of water (when applicable) and/or drinking water supplies .
- g. The Supervisor will point out daily the location of the water coolers to the workers and remind them to drink water frequently.
- h. When the temperature exceeds or is expected to exceed 90 degrees Fahrenheit, the Supervisor will hold a brief meeting each morning to review with employees the importance of drinking water, the number and schedule of water and rest breaks and the signs and symptoms of heat illness.
- i. When the temperature equals or exceeds 95 degrees Fahrenheit or during a heat wave, the Supervisor will increase the number of water breaks, and will remind workers throughout the work shift to drink water.
- j. During ongoing employee tasks, the importance of frequent drinking of water will be stressed.

4. Access to Shade

Shade shall be present when ambient temperature equals or exceeds 80 degrees Fahrenheit.

“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. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning. 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, from direct contact by sunlight.

- a. When the outdoor temperature in the work area exceeds 80 degrees Fahrenheit, the Supervisor shall have and maintain one or more areas with shade at all times while employees are present that are either open to the air or provided with ventilation or cooling. The amount of shade present shall be at least enough to accommodate the number of employees on the shift at any time, 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. Subject to the same specifications, 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 onsite.

- b. Shade shall be present when the temperature exceeds 80 degrees Fahrenheit. When the outdoor temperature in the work area does not exceed 80 degrees Fahrenheit employers shall either provide shade provide timely access to shade upon an employee's request.

Employees shall be allowed and encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating. Such access to shade shall be permitted at all times. An individual employee who takes a preventative cool-down rest (A) shall be monitored and asked if he or she is experiencing symptoms of heat illness; (B) shall be encouraged to remain in the shade; and (C) shall not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than 5 minutes in addition to the time needed to access the shade.

If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest or during a preventative cool-down rest period, the employer shall provide appropriate first aid or emergency response according to subsection (f) of this section.

Exceptions to subsection (c):

(1) Where the employer can demonstrate that it is infeasible or unsafe to have a shade structure, or otherwise to have shade present on a continuous basis, the employer may utilize alternative procedures for providing access to shade if the alternative procedures provide equivalent protection.

- c. In situations where trees or other vegetation are used to provide shade, the Supervisor will evaluate the thickness and shape of the shaded area (given the changing angles of the sun during the entire shift), before assuming that sufficient shadow is being cast to protect employees.
- d. If trees are not available or are insufficient to provide adequate shade to employees, the Supervisor shall be responsible for supplying and setting up a shade structure.
- e. The Supervisor is responsible for making sure that shade is accessible to employees within a 2 ½ minute walk from the work site.
- f. The Supervisor will be responsible for overseeing and ensuring that employees are taking adequate number of breaks in the shade.

5. Monitoring the Weather

- a. Prior to each workday, the Supervisor will review the forecasted temperature and humidity for the worksite and compare it against the National Weather service Heat Index to evaluate the risk level for heat illness, for instance whether or not workers will be exposed at a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses such as heat stroke. It is important to keep in mind that the temperature at which these warnings occur must be lowered as much as 15 degrees if the workers under consideration are in direct sunlight.
- b. Prior to each workday, the Supervisor will be responsible for monitoring the weather (using www.nws.noaa.gov or with the aid of a simple thermometer) at the worksite. This critical weather information will be taken into consideration, to determine when it will be necessary to make modifications to the work schedule (such as stopping work early, rescheduling the job, working at night or during the cooler hours of the day, increasing the number of water and rest breaks).
- c. The Supervisor will be responsible for using a thermometer at the jobsite and checking the temperature every hour to monitor for sudden increases in temperature, to ensure that once the temperature exceeds 80 degrees Fahrenheit, the shade structures are opened and accessible to the workers and to make certain that once the temperature equals or exceeds 95 degrees Fahrenheit additional preventive measures such as the High Heat Procedures are implemented.

In addition to the training subjects listed above, all supervisors of employees who work in outdoor locations receive additional training to understand:

- How to adjust work schedules and breaks at the beginning of the warm weather season, or during initial exposure by a new employee, to provide a period of acclimatization.
- How to adjust work schedules and breaks during periods of high heat to reduce exposure during daily periods of peak heat. The plan for adjustment of work schedules, in effect when peak temperatures reach or are expected to reach 95 degrees or above, includes:

- Our procedures for ensuring that adequate water supplies are available at all times, is as follows:

- If a problem with availability of water at the workplace should occur, workers are to contact:_____

HIGH HEAT PROCEDURES

High Heat is defined as temperatures equal to or above 95 degrees Fahrenheit.

During times of high heat, the Supervisor will be responsible for the following:

- ✓ Maintain continual open communication with employees working outdoors
- ✓ Continually observe employees for alertness and signs and symptoms of heat illness
- ✓ Remind employees throughout the work shift to drink plenty of water
- ✓ Assign a work "buddy" if applicable so that workers may observe each other for signs and symptoms of heat illness

The employer shall implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

...

(2) Observing employees for alertness and signs or symptoms of heat illness. The employer shall ensure effective employee observation/ monitoring by implementing one or more of the following:

(A) Supervisor or designee observation of 20 or fewer employees, or

(B) Mandatory buddy system, or

(C) Regular communication with sole employee such as by radio or cellular phone, or

(D) Other effective means of observation.

(3) Designating 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.

(4) Reminding employees throughout the work shift to drink plenty of water.

(5) Pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary.

(6) For employees employed in agriculture, the following shall also apply:

When temperatures reach 95 degrees or above, the employer shall ensure that the employee takes a minimum ten minute net preventative cool down rest period every two hours. The preventative cool down rest period required by this paragraph may be provided concurrently with any other meal or rest period required by Industrial Welfare Commission Order No. 14 if the timing of the preventative cool down rest period coincides with a required meal or rest period thus resulting in no additional preventative cool down-rest period required in an eight hour work day. If the workday will extend beyond eight hours, then an additional preventative cool down-rest period will be required at the conclusion of the eighth hour of work; and if the work day extends beyond ten hours, then another preventative cool down-rest

period will be required at the conclusion of the tenth hour and so on. For purposes of this section, preventative cool down rest period has the same meaning as “recovery period” in Labor Code Section 226.7(a).

6. Acclimatization

The Supervisor shall be responsible for overseeing acclimatization of employees during heat conditions.

“Acclimatization” means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. In more common terms, the body needs time to adapt when temperatures rise suddenly, and an employee risks heat illness by not taking it easy when a heat wave strikes or when starting a new job that exposes the employee to heat to which the employee’s body hasn’t yet adjusted. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

Acclimatization is an immediate consideration at this practice if, due to a sudden heat wave, employees are working at temperatures to which they haven't been exposed for several days or longer. New employees are among those most at risk of suffering the consequences of inadequate acclimatization, heat wave or not. An employer with new employees should be extra-vigilant, try to find ways to lessen the intensity of the employees' work during a two-week break-in period, and recognize immediately symptoms of possible heat illness.

Implementation of acclimatization includes:

- ✓ Taking frequent breaks in adequately shaded areas to avoid overheating
- ✓ Frequently drinking water
- ✓ Close observation of employee by the Supervisor
- ✓ Assigning work “buddies” to oversee new employees if applicable

7. Signs and Symptoms of Heat Illness

“Heat Illness” means a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat rash, heat cramps, heat exhaustion, heat syncope and heat stroke.

- a. Early signs
 - i. Headache
 - ii. Muscle cramps
 - iii. Unusual fatigue
 - iv. Weakness
 - v. Dizziness
 - vi. Heat Rash (small red bumps on skin, usually on back, arms, legs, stomach)
- b. Advanced signs
 - i. Loss of consciousness
 - ii. Seizures
 - iii. Mental Convulsion
 - iv. Incoherent
 - v. Unusual behavior
 - vi. Nausea or vomiting
 - vii. Hot dry skin
 - viii. Unusually profuse sweating

Type of Heat Illness	Symptoms	Causes	First Aid
Heat Rash	<i>Heat Rash</i> appears as a red cluster of pimples or small blisters, most likely to be found on the neck and upper chest, in the groin, under the breasts, and in elbow creases.	Excessive sweating during hot humid weather can cause heat rash. This occurs when the body substantially reduces its ability to sweat, thereby reducing the employee's tolerance to heat.	Wash the affected area with soap and water and dry it thoroughly. Apply calamine lotion or powder to relieve discomfort. The use of creams or ointments should be avoided as they may aggravate the condition.
Heat Cramps	<i>Heat Cramps</i> are muscle spasms that result from loss of large amount of salt and water through exercise. Heat cramps are associated with cramping in the abdomen, arms and calves. This can be caused by inadequate consumption of fluids or electrolytes.	Electrolyte imbalance caused by sweating.	Interrupt all activity and remove victim to a cool environment. Increase intake of a sports beverage or water or juice. Continued rest for several hours is recommended. Seek medical attention if the cramps do not subside within one hour, as this may be a symptom of heat exhaustion.
Heat Exhaustion	<i>Heat Exhaustion</i> is an early form of heat illness and manifests as headache, weakness and fatigue and can rapidly progress into a more serious conditions such as muscle cramps, dizziness, nausea, vomiting and syncope if not treated. <i>Heat Syncope</i> is fainting as a result of overheating. It is another stage in the same process as heat stroke, it occurs under similar conditions. The basic symptom of heat syncope is a body temperature above 40°C (104°F) with fainting, with or without mental confusion.	Exposure to high temperature resulting in loss of fluid through sweating and from not drinking enough replacement fluids.	Call emergency medical provider for first-aid assistance or 911. Rest the victim in a cool place or provide a cool water shower, spray or sponge bath. If conscious, provide the victim with a sports beverage, water or juice, but not with any beverage containing caffeine or alcohol. Severe cases, in which the victim vomits or loses consciousness, may require longer treatment under medical supervision.
Heat Stroke	<i>Heat Stroke:</i> Defined when body temperature rises above 105.1 degrees Fahrenheit due to environmental conditions with lack of thermoregulation. It is characterized by dry skin, rapid strong pulse, and dizziness. It can progress to delirium, loss of consciousness, convulsions or coma.	Body fails to regulate its core temperature. Sweating stops and the body can no longer dissipate excess heat.	Immediately call emergency personnel or 911. If conscious, provide water or sports drink. While awaiting medical help, move the victim to a cool place and fan vigorously. Gradually soak the victim's skin and clothing with cool (not cold) water. You may place the victim in a tub of cool water, or shower with cool water.

8. Medical Response for Heat Illness

All heat illness should be treated as an emergency and addressed appropriately and immediately.

It is highly recommended that someone in the office be trained in first aid and available on site to administer such treatment should an employee have heat illness. This practice DOES DOES NOT have someone available on-site who is trained in first aid. (Training shall be equal to that of the American Red Cross or the Mine Safety and Health Administration) If applicable, the person trained in first aid is: _____.

This practice ensures the ready availability of medical personnel for advice and consultation on matters regarding Heat Illness beyond that of a person on the premises trained in first aid. The name of medical personnel for advice is: _____ and the telephone number is: _____.

This practice keeps on-hand adequate and appropriate first-aid materials, approved by the consulting physician, readily available for employees on every job. Such materials shall be kept in a sanitary and usable condition. The supervisor will routinely inspect these materials on a monthly basis and materials replenished or replaced as necessary.

This practice will provide a map along with clear and precise directions (such as streets or road names, distinguishing features, contact phone number and distances to major roads) of the site, to avoid a delay of emergency medical services. This information will be made available in a conspicuous place within reasonable distance from a work site. The Supervisor will be responsible for notifying employees of its whereabouts.

If applicable, at remote locations such as rural farms, lots or undeveloped areas, the Supervisor will designate a person or persons to physically go to the nearest road or highway where emergency responders can see them. If daylight is diminished, the designated person(s) shall be given either a reflective vest or flashlights in order to direct emergency personnel to the location of the worksite, which may not be visible from the road or highway.

When an employee is showing symptoms of possible heat illness, the Supervisor will take immediate steps to keep the stricken employee cool and comfortable once emergency service responders have been called (to reduce the progression to more serious illness).

a. Medical Aid Measures

The Employer shall implement effective emergency response procedures including:

Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor or emergency medical services when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable. If an electronic device will not furnish reliable communication in the work area, employer will ensure a means of summoning emergency medical services.

When an employee displays *possible* signs or symptoms of heat illness, the Supervisor will check the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called. Sick workers will not be left alone in the shade during this period.

When an employee displays *possible* signs or symptoms of heat illness and no first aid is available at the site, emergency service providers will be called by the Supervisor. The telephone number is 911.

Emergency service providers will be called immediately by the Supervisor if an employee displays signs or symptoms of heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face), does not improve after drinking cool water and resting in the shade. While the ambulance is in route, _____ will initiate the following first-aid measures:

- ✓ Cooling the employee by fanning and using damp cloth to wet skin
- ✓ Placing the employee in the shade
- ✓ Removing excess layers of clothing from the employee
- ✓ Placing ice packs in the armpits and groin area of the employee
- ✓ Not allowing the employee to leave the site unless by ambulance

If an employee does displays signs or symptoms of severe heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face), and the worksite is located more than 20 min away from a hospital, the Supervisor will call 911, communicate the signs and symptoms of the victim and request Air Support.

Responding to signs and symptoms of possible heat illness, including but not limited to first aid measures and how emergency medical services will be provided.

If a supervisor observes or any employee reports any signs or symptoms of heat illness in any employee, the supervisor shall take immediate action commensurate with the severity of the illness.

If the signs or symptoms are indicators of severe heat illness (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior or convulsions), the employer must implement emergency response procedures.

An employee exhibiting signs or symptoms of heat illness 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 in accordance with the employer's procedures.

Contacting emergency medical services and, if necessary, transporting employees to a place where they can be reached by an emergency medical provider.

Ensuring 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.

9. Compliance

This practice will ensure that all employees are trained on Heat Illness Prevention. Training will include these written training procedures as well as any other training materials that this practice chooses to provide. This practice will further ensure that all employees are trained prior to working outside.

The Supervisor will train employees on the steps that will be followed for contacting emergency medical services, including how clear and precise directions to the site will be provided.

When the temperature exceeds 75 degrees Fahrenheit, the Supervisor will hold short meetings to review the weather report, reinforce heat illness prevention with all workers and provide reminders to drink water frequently, to be on the lookout for signs and symptoms of heat illness and inform them that shade can be made available upon request.

For updates on compliance with the Heat Illness Prevention Program as well as access to educational and training materials, visit the Cal/OSHA website at: <http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html>

You may also use the Department of Industrial Relations "Excessive Heat at Work" training guide:

<https://www.dir.ca.gov/chswc/WOSHTEP/SpecialistCourseMaterials/WOSHTEPIndoorHeatIllnessPreventionParticipantsHandoutsforWebFINAL.pdf>