

# Heat Illness Prevention Program

## Purpose:

The Heat Illness Prevention Program has been developed to provide workers with the training and equipment to protect them from heat related exposures, fainting and illnesses.

The Heat Illness Prevention Program has been developed using the Cal-OSHA Heat Illness Prevention Model Program format. The program has been designed to meet the requirements of California Code of Regulations, Title 8, Chapter 4, Section 3395 and California Labor Code, Section 226.7 to provide employees with "Cool-Down Recovery Periods." A copy of this standard will be provided upon request to all employees.

## Training:

All employees who may be exposed to potential heat related illnesses will receive training on the following:

- The environmental and personal risk factors for heat illness;
- The employer's procedures for identifying, evaluating and controlling exposures to the environmental and personal risk factors for heat illness;
- The importance of frequent consumption of small quantities of water, up to 4 cups per hour under extreme conditions of work and heat;
- The importance of acclimatization;
- The different types of heat illness and the common signs and symptoms of heat illness;
- The importance of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers.
- The employer's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
- Procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;
- How to provide clear and precise directions to the work site.
- The Company will train supervisors prior to them being assigned to supervise other workers. Training will include a review of the Heat Illness Program, written procedures, and the steps supervisor will follow when employees' exhibit symptoms consistent with heat illness.

- Supervisors will be trained on how to track the weather at the job site. Supervisors will be instructed on how weather information will be used to modify work schedules, to increase number of water and rest breaks or cease work early if necessary. A thermometer will be provided to the Supervisor.
- All Company employees and supervisors will be trained prior to working outside. Training will include a review of the Heat Illness Program, Heat Exposure Checklist and the company's written heat prevention procedures.
- Employees will be trained on the steps that will be followed for contacting emergency medical services, including how they are to proceed when there are non-English speaking workers, how clear and precise directions to the site will be provided and the importance of making visual contact with emergency responders at the nearest road or landmark to direct them to their worksite.
- When the temperature exceeds 75 degrees Fahrenheit a tailgate meeting will be held to review the weather report, to reinforce heat illness prevention with all workers, to provide reminders to drink water frequently, to inform them that shade can be made available upon request and to remind them to be on the lookout for signs and symptoms of heat illness.
- **The temperature "trigger" for which employees will have shade up/identified and available for the beginning of a work day is 80 Degrees Fahrenheit. The 80 Degrees Fahrenheit trigger is based on the National Weather Service forecast as of 5 P.M. the previous day. "If the prediction on the previous day is for the temperature high for the area to exceed 80 Degrees Fahrenheit, shade will be be up/identified as of the beginning of the shift and present throughout."**
- At 95 Degrees Fahrenheit or above, supervisors will evaluate workers condition throughout the shift by determining hydration needs and access to shade and/or preventative recovery areas.
- Employees suffering from heat illness or believing a preventative recovery period is needed, will be provided access to an area with shade that is either open to the air or provided with ventilation/cooling for a period of no less than five minutes. Access is permitted at any time during the work day.
- New employees will be assigned a "buddy" or experienced coworker to ensure that they understand the training and follow company procedures.

Supervisor Responsibilities:

- All supervisors will be provided a copy of this program and training documents prior to assignment of employees working in environments where heat exposures may occur.
- Supervisors will be provided the procedures to follow to implement the applicable provisions of this program.
- Supervisors will be provided the procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

Provision of Water:

**Employees shall have access to “fresh, pure, suitably cool “potable water. Water shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking the entire shift. Employees may begin the shift with smaller quantities of water if effective procedures for replenishment of water during the shift have been implemented to provide employees one quart or more per hour.**

Drinking water containers will be brought to the site or potable water sources will be identified. At least two quarts per employee will be available at the start of the shift. All workers whether working individually or in smaller crews, will have access to drinking water.

- Paper cone rims or bags of disposable cups and the necessary cup dispensers will be made available to workers and will be kept clean until used.
- As part of the Heat Illness Program - Effective Replenishment Procedures, the water level of all containers will be checked every hour and more frequently when the temperature rises. Water containers will be refilled with cool water, when the water level within a container drops below 50 percent. Additional water containers will be carried, to replace water as needed.
- Ice will be carried in separate containers, so that when necessary, it will be added to the drinking water to keep it cool.
- Water containers will be placed as close as possible to the workers to encourage the frequent drinking of water. If the configuration of the project site prevents the water from being placed as close as possible to the workers, bottled water or personal water containers will be made available, so that workers can have drinking water readily accessible.
- Water containers will be relocated to follow along with the crew, so drinking water will remain readily accessible.
- Water containers will be kept in sanitary condition.
- Daily, workers will be reminded of the location of the water coolers and of the importance of drinking water frequently. When the temperature exceeds or is expected to exceed 90 degrees Fahrenheit, a tailgate meeting will be held 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.
- Supervisors will verbally remind workers throughout the day to drink water.
- When the temperature equals or exceeds 95 degrees Fahrenheit or during a heat wave, the number of water breaks will be increased, and workers will be reminded throughout the work shift to drink water.
- During employee training and tailgate meetings, the importance of frequent drinking of water will be stressed.

### Access to Shade:

**Employees suffering from heat illness or believing a “Cool Down Recovery Period” is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. Such access to shade shall be permitted at all times.**

- Shade structures will be opened and placed as close as practical to the workers, when the temperature equals or exceeds 80 degrees Fahrenheit. The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned and the air conditioner is on.
- Enough shade structures will be available at the site, to accommodate all employees on the shift at any one time.
- Daily, workers will be informed of the location of the shade structures and will be encouraged to take a five minute cool-down rest in the shade.
- Shade structures will be relocated to follow along with the crew and they will be placed as close as practical to the employees, so that access to shade is provided at all times.
- In situations where trees or other vegetation are used to provide shade, the thickness and shape of the shaded area will be evaluated, before assuming that sufficient shadow is being cast to protect employees.
- In situations where it is not safe or feasible to provide access to shade (e.g., during high winds), a note will be made on the Heat Exposure Checklist of these unsafe or unfeasible conditions, and of the steps that will be taken to provide shade upon request.
- Where it is not safe or feasible to provide shade, a note will be made of these unsafe or unfeasible conditions, and of the steps that will be taken to provide alternative cooling measures but with equivalent protection as shade.
- **Shade shall be located as close as practicable to the area where employees are working.**

### Procedures for Monitoring the Weather:

- Supervisors will be trained and instructed to check in advance the extended weather forecast. Weather forecasts can be checked by calling the National Weather Service phone numbers or by checking the Weather Channel TV Network. The work schedule will be planned in advance, taking into consideration whether high temperatures or a heat wave is expected.
- CALIFORNIA Dial-A-Forecast
  - Eureka 707-443-7062
  - Hanford 559-584-8047
  - Los Angeles 805-988-6610 (#1)
  - Sacramento 916-979-3051
  - San Diego 619-297-2107 (#1)
  - San Francisco 831-656-1725 (#1)

- Prior to each workday, the forecasted temperature and humidity for the worksite will be reviewed to evaluate the risk level for heat illness. Determination will be made of whether or not workers will be exposed at a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses.
- Prior to each workday, the supervisor will monitor with the aid of a thermometer at the worksite. This 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).
- A thermometer will be used at the jobsite to monitor for sudden increases in temperature, and to ensure that once the temperature exceeds 80 degrees Fahrenheit, shade structures will be opened and made available to the workers. In addition, when the temperature equals or exceeds 95 degrees Fahrenheit, additional preventive measures such as the High Heat Procedures will be implemented.

#### Heat Wave Procedures:

- During a heat wave or heat spike, the work day may be cut short or rescheduled.
- During a heat wave or heat spike, and before starting work, a tailgate meeting will be held, to review the company heat illness prevention procedures, the weather forecast and emergency response. In addition, if schedule modifications are not possible, workers will be provided with an increased number of water and rest breaks and will be observed closely for signs and symptoms of heat illness.
- **Each employee will be assigned a “buddy” to be on the lookout for signs and symptoms of heat illness and to ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness.**

#### High Heat Procedures:

- High Heat Procedures are additional preventive measures that the Company will use when the temperature equals or exceeds 95 degrees Fahrenheit.
- Communication by voice, observation, or electronic (cell phone) means will be maintained, so that employees at the worksite can contact a supervisor when necessary. If the supervisor is unable to be near the workers (to observe them or communicate with them), then an electronic device, such as a cell phone or text messaging device, will be used for this purpose if reception in the area is reliable.
- Frequent communication will be maintained with employees working by themselves or in smaller groups to be on the lookout for possible symptoms of heat illness. Employees will be observed for alertness and signs and symptoms of heat illness. When the supervisor is not available, an alternate responsible person may be assigned, to look for signs and symptoms of heat illness. Such a designated observer will be trained and know what steps to take if heat illness occurs.

- Employees will be reminded throughout the work shift to drink plenty of water.
- New employees will be closely supervised, or assign a “buddy” or more experienced coworker for the first 7 days of employment.

#### Acclimatization Procedures:

The following procedures have been implemented to help “acclimatize” new employees who may be exposed to hot environments.

- The weather will be monitored daily. The supervisor will be on the lookout for sudden heat wave(s), or increases in temperatures to which employees haven’t been exposed to for several weeks or longer.
- During a heat wave or heat spike, the work day will be cut short, rescheduled or if at all possible, cease for the day.
- For new employees, the intensity of the work will be lessened during a one-week break-in period. Steps taken to lessen the intensity of the workload for new employees will be documented in the Note Section of the Heat Exposure Checklist Form.
- The supervisor will be “extra-vigilant” with new employees and stay alert to the presence of heat related symptoms.
- New employees will be assigned a “buddy” or experienced coworker to watch each other closely for discomfort or symptoms of heat illness.
- During a heat wave, all employees will be observed closely to be on the look out for possible symptoms of heat illness.
- Employees and supervisors will be trained on the importance of acclimatization, how it is developed and how these company procedures address it.

#### Emergency Response Procedures:

- Prior to assigning a crew to a project site, workers and the supervisor will be provided a map of the site, along with clear and precise directions (such as streets or road names, distinguishing features and distances to major roads), to avoid a delay of emergency medical services.
- Prior to assigning a crew to a particular worksite, efforts will be made to ensure that a qualified and appropriately trained and equipped person is available at the site to render first aid if necessary.
- Prior to the start of the shift, a determination will be made of whether or not a language barrier is present at the site and steps will be taken (such as assigning the responsibility to call emergency medical services to the supervisor or an English speaking worker) to ensure that emergency medical services can be immediately called in the event of an emergency.

- All supervisors will carry cell phones or other means of communication, to ensure that emergency medical services can be called. Checks will be made to ensure that these electronic devices are functional prior to each shift.
- When an employee is showing symptoms of possible heat illness, steps will be taken immediately to keep the stricken employee cool and comfortable once emergency service responders have been called (to reduce the progression to more serious illness).
- At remote locations, lots or undeveloped areas, the supervisor will designate an employee or employees to physically go to the nearest road or highway where emergency responders can see them. If daylight is diminished, the designated employee(s) shall be given 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.
- During a heat wave or hot temperatures, workers will be reminded and encouraged to immediately report to their supervisor any signs or symptoms they are experiencing.
- Employee and supervisor training will include a review of the Emergency Medical Service Plan.

#### Procedures for Handling a Sick Employee:

- When an employee displays possible signs or symptoms of heat illness, a trained first aid worker or 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. When an employee displays possible signs or symptoms of heat illness and no trained first aid worker or supervisor is available at the site, emergency service providers will be called.
- Emergency service providers will be called immediately if an employee displays signs or symptoms of heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face), does not look OK or does not get better after drinking cool water and resting in the shade. While the ambulance is in route, first aid will be initiated (cool the worker: place the worker in the shade, remove excess layers of clothing, place ice pack in the armpits and groin area and fan the victim). Do not let a sick worker leave the site.
- If an employee does not look OK and 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 minutes away from a hospital, call emergency service providers, communicate the signs and symptoms of the victim and request Air Ambulance.

# Emergency Medical Service Plan

## Purpose:

To provide employees of the Company with the training and guidelines for emergency medical services at job sites, should the need arise. The plan has been developed to comply with CCR, Title 8, General Industry Safety Orders, Section 1512 (i).

## Program Requirements:

- Whether engaged as a sole contractor in work activities on a job site or with more than one employer, our Company will coordinate and identify the availability of emergency services with all employees/employers, including:
  - Emergency phone numbers for fire, police and ambulance.
  - The location and phone number of the nearest hospital.
  - The type of transportation available and to be provided in the event of an injury that requires off site medical attention.
  - The identity/identities of personnel trained in CPR/First Aid.
  - First Aid Kits that are inspected regularly and stocked with required contents.
  - Emergency washing facilities for drenching the body or flushing the eyes.
  - Communication system (radio/cell phone)

An Emergency Medical Services Plan Checklist will be posted at all job sites.

# Emergency Medical Service Plan - Checklist

Project: \_\_\_\_\_

Supervisor: \_\_\_\_\_

Other Contractors: \_\_\_\_\_  
\_\_\_\_\_

Emergency Numbers:      Fire: \_\_\_\_\_  
                                    Police: \_\_\_\_\_  
                                    Ambulance: \_\_\_\_\_  
                                    Hospital: \_\_\_\_\_

Address and Driving Directions to Nearest Hospital/Urgent Care Center:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Available Mode of Transportation:

\_\_\_\_\_

CPR/First Aid Trained Personnel: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Location of: First Aid Kit/s: \_\_\_\_\_  
\_\_\_\_\_

Means of Communication/Numbers: \_\_\_\_\_  
\_\_\_\_\_

## Heat Stress Disorders:

### 1. Heat Rash (Prickly Heat)

#### Symptoms:

- Red blotches and extreme itchiness in areas persistently damp with sweat.
- Prickling sensation on the skin when sweating occurs.

#### Treatment:

- Cool environment.
- Cool shower.
- Thorough drying of body

Heat rashes typically disappear in a few days after exposure. If the skin is not cleaned frequently enough the rash may become infected.

### 2. Heat Cramps

#### Symptoms:

- Loss of salt through excessive sweating.
- Cramping in back, legs and arms.

#### Treatment:

- Stretch and massage muscles.
- Replace salt by drinking commercially available carbohydrate/electrolyte replacement fluids.

### 3. Heat Exhaustion

Heat exhaustion occurs when the body can no longer keep blood flowing to supply vital organs and at the same time send blood to the skin to reduce body temperature.

#### Symptoms:

- Weakness.
- Difficulty continuing work.
- Headache.
- Breathlessness.
- Nausea or vomiting.
- Feeling faint or actually fainting.

Treatment:

- Call 911.

Help the victim to cool off by:

- Resting in a cool place.
- Drinking cool water.
- Removing unnecessary clothing.
- Loosening clothing.
- Showering or sponging with cool water.
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It takes 30 minutes to cool the body down once a worker becomes overheated and suffers heat exhaustion.

4. Heat Stroke

Heat stroke occurs when the body can no longer cool itself and body temperature rises to critical levels.

Symptoms:

- Confusion.
- Irrational behavior.
- Loss of consciousness.
- Convulsions.
- Lack of sweating.
- Hot, dry skin.
- Abnormally high body temperature.

Treatment:

- Call 911.

Provide immediate, aggressive, general cooling.

- Immerse victim in tub of cool water or;
- Place in cool shower; or
- Spray with cool water from a hose; or
- Wrap victim in cool, wet sheets and fan rapidly.
- Transport victim to hospital.

Do not give anything by mouth to an unconscious victim.

5. Heat Syncope - Fainting or sudden loss of strength due to excessive heat gain.

- A worker not acclimated to a hot environment that may simply stand still in the heat.

## Work Procedures:

### 1. Supervision:

- Give workers frequent breaks in a cool area away from heat.
- Adjust work practices as necessary when workers complain of heat stress.
- Oversee heat stress training and acclimatization for new workers and for workers who have been off the job for a period of time.
- Monitor the workplace to determine when hot conditions arise.
- Increase air movement by using fans where possible.
- Provide potable water in required quantities.
- Determine whether workers are drinking enough water.
- Make allowances for workers who must wear personal protective clothing and equipment that retains heat and restricts the evaporation of sweat.
- Schedule hot jobs for the cooler part of the day; schedule routine maintenance and repair work in hot areas for the cooler times of the day.
- Make available to all workers, cooling devices (hard hat liners/bibs/neck bands) to help rid bodies of excessive heat.

### 2. Workers:

- Follow instructions and training for controlling heat stress.
- Be alert to symptoms in yourself and others.
- Determine if any prescription medications you're required to take can increase heat stress.
- Wear light, loose-fitting clothing that permits the evaporation of sweat.
- Wear light colored garments that absorb less heat from the sun.
- Drink small amounts of water – approximately 1 cup every 15 minutes.
- Avoid beverages such as tea or coffee.
- Avoid eating hot, heavy meals.
- Do not take salt tablets unless prescribed by a physician.

## Program Review:

Management will periodically review this program for compliance with all applicable regulatory standards. Updates will be provided to all employees.

# Heat Illness Prevention Program

## Heat Exposure Checklist

Project: \_\_\_\_\_

Date: \_\_\_\_\_

The Heat Exposure Checklist has been developed to comply with the requirements of California Code of Regulations, Title 8, Section 3395.

Designated Shade/Cool Down Recovery Area:

\_\_\_\_\_

Access to Potable Water:

\_\_\_\_\_

***Shade shall be located as close as practicable to the area where employees are working.***

The temperature “trigger” for which employees must have shade up/identified and available for the beginning of a work day is 80 Degrees Fahrenheit. The 80 Degrees Fahrenheit trigger is based on the National Weather Service forecast as of 5 P.M. the previous day. “If the prediction on the previous day is for the temperature high for the area to exceed 80 Degrees Fahrenheit, shade must be up/identified as of the beginning of the shift and present throughout.”

At 95 Degrees Fahrenheit or above, supervisor must evaluate workers condition throughout the shift by determining hydration needs and access to shade and/or preventative recovery areas.

Training:

Workers have been trained in the following:

- \_\_\_ Health effects of heat stress.
- \_\_\_ Signs and symptoms of heat rash, heat cramps, heat exhaustion and heat stroke.
- \_\_\_ Proper precautions to prevent heat illnesses.
- \_\_\_ Effects of alcohol and drugs on the risk of heat illness.
- \_\_\_ Proper use of protective clothing and equipment.
- \_\_\_ Supervisor have received specific training as to how to identify heat-related illnesses.

Work Practices:

- \_\_\_ Workers are rotated in hot, strenuous jobs to minimize heat stress.
- \_\_\_ Strenuous work is done during cooler parts of the day.
- \_\_\_ New hires that are not acclimatized are given lighter work during the first few days of the job.
- \_\_\_ Cool, potable water is available at the facility. Workers are instructed to drink a least one quart per hour depending on conditions and their level of exertion.
- \_\_\_ Workers have been informed that they are to take a break and notify the supervisor if they feel symptoms of heat stress.
- \_\_\_ Workers performing jobs that require constant attention (equipment operators/etc.) and workers wearing personal protective equipment are given frequent breaks.
- \_\_\_ Workers are instructed to use the buddy system to recognize signs of heat illness in each other (including weakness, unsteady gait, irritability, disorientation and changes in skin color).
- \_\_\_ First aid supplies and equipment are readily available at the facility.

Cool Down Recovery Period:

Definition – a period of time to recover from the heat in order to prevent heat illness.

- Employees suffering from heat illness or believing a preventative recovery period is needed, will be provided access to an area with shade that is either open to the air or provided with ventilation/cooling for a period of no less than five minutes. Access is permitted at any time during the work day.

Protective Clothing and Equipment:

- Workers wear loose, light-colored, lightweight cotton clothing when working in the sun.
- When working in the sun, workers use sunscreen products with a sun protection factor (SPF) of at least 15.
- Workers may be provided water or air-cooled garments, ice packet vests or wetted over garments in extremely hot environments.

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