Division of Occupational Safety and Health (Cal/OSHA)

Heat Illness Prevention Training
Training Goals

• Review the regulatory language of Title 8 California Code of Regulations section 3395: Heat Illness Prevention in Outdoor Places of Employment

• Review heat illness preventive measures

• Increase awareness and commitment to safety and health at all work sites
Heat Illness Prevention Elements Include:

• Access to Water
• Access to Shade
• Weather Monitoring and Acclimatization High Heat Procedures
• Employee and Supervisory Training
• Written Procedures Including Emergency Response
Access to Water (1 of 4)

- Potable drinking water must be made available at no cost to all employees.
- Maintain, at all times, sufficient quantities of pure and cool potable drinking water (i.e. enough to provide at least one quart per employee per hour for the entire shift).
Access to Water (2 of 4)

• Water must be fit to drink. Water containers CAN NOT be refilled from non-potable water sources (e.g. irrigation wells, sprinkler or firefighting systems)

• Care must be taken to prevent contamination of the drinking water supplied to employees
Access to Water (3 of 4)

Implement and maintain effective replenishment procedures when beginning the shift with smaller quantities.
Access to Water (4 of 4)

• Locate the water containers as close as practicable given the working conditions and layout of the worksite
• Keep it readily accessible, move it with the employees
• Encourage the frequent drinking of water
• Remind employees to not wait to hydrate until they are thirsty
Shade Up:  
When the temperature exceeds 80° F (1 of 2)

- Have and maintain one or more areas of shade at all times, when employees are present
- Locate the shade as close as practical to the area where employees are working
Shade Up: When the temperature exceeds 80° F (2 of 2)

- Provide enough shade to accommodate the number of employees on recovery or rest periods
- Provide enough shade to accommodate the number of employees on meal periods who remain on site
- Remember: Access to shade must be permitted at all times
Shade available:
When the temperature is below 80°F

When the temperature does not exceed 80°F, shade shall either be up or provided timely upon request
Access to Shade (1 of 2)

Encourage employees to take a cool-down rest in the shade

- Monitor employees on cool-down rests
- Ask them if they’re experiencing symptoms of heat illness
- Allow at least a 5-minute rest and don’t order back to work until symptoms have abated
- Take appropriate first aid steps or emergency response as necessary
Shaded areas must not cause exposure to another health or safety hazard. Areas underneath mobile equipment (e.g. tractors), or areas that require crouching in order to sit fully in the shade are not acceptable.
When Infeasible or Unsafe

In situations where the employer can demonstrate that it is not safe or feasible to provide shade, an employer can utilize established procedures for providing shade upon request or, for non-agricultural employers, alternative cooling measures that provide equivalent protection.
Monitor the Weather
www.nws.noaa.gov

- Instruct supervisors to track the weather of the job site [by monitoring predicted temperature highs and periodically using a thermometer]
- Determine, and instruct supervisors, on how weather information will be used to modify work schedule, increase number of water and rest breaks or cease work early if necessary
High Heat Procedures

Industries covered by this subsection:

- Agriculture
- Construction
- Landscaping
- Oil and Gas Extraction
- Transportation or delivery of agricultural, construction materials or other heavy materials
When the temperature equals or exceeds 95°F (1 of 4)

You must implement additional preventive measures:

• Ensure effective communication (by voice, observation or electronic means)
When the temperature equals or exceeds 95°F (2 of 4)

You must implement additional preventive measures:

• Observe employees for alertness and signs and symptoms of heat illness
• Supervisory or designee observation of 20 or fewer employees
• Mandatory buddy system
• Regular communication
• Other effective means
When the temperature equals or exceeds 95°F (3 of 4)

- Designate one or more employees to call for emergency services
- Give more frequent reminders to drink plenty of water
- Hold pre-shift meetings on prevention
When the temperature equals or exceeds 95°F
(4 of 4)

For agricultural employers:

• Temps 95 or above, ensure employees take a minimum ten-minute net preventative cool-down rest every two hours.

• Additional ten-minute cool-down rest at end of 8th and 10th hour of work.
Emergency Response Procedures

• Ensure effective communication
• Respond to signs and symptoms of possible heat illness:
  o Supervisor to take immediate, appropriate action
  o If indicators of serious heat illness, implement emergency response procedures
  o Employees exhibiting or reporting signs or symptoms of heat illness shall be monitored and not left alone. Onsite first aid or appropriate emergency medical services shall be offered
  o Contact emergency medical services and ensure that clear and precise directions to the site can be provided
Address Lack of Acclimatization (1 of 2)

• As an employer, you are responsible for the working conditions of your employees, so you must act effectively when conditions result in sudden exposure to heat that your employees are not used to.

• All employees shall be closely observed by a supervisor or designee during heat waves.

• Employees newly assigned to high heat areas shall be closely observed by a supervisor or designee for the first 14 days of employment.
Address Lack of Acclimatization (2 of 2)

Thus, determine how your company will:

• Be extra vigilant with your employees to recognize immediately symptoms of possible heat illness
• Lessen the intensity and/or shift length of the newly-hired employees’ work during a two or more week break-in period
• Modify the work schedule or reschedule nonessential duties during the hot summer months
Employee & Supervisor Training

Ensure all employees and supervisors are trained before beginning work that should reasonably be anticipated to result in a heat illness.
Employee Training (1 of 5)

Training should be given on:

- The environmental and personal risk factors for heat illness, as well as the added burden of heat load on the body
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 that affect the body's water retention or other physiological responses to heat, including:

- An individual's age
- Degree of acclimatization
- Health
- Water consumption
- Alcohol and caffeine consumption
- Use of prescription medications (such as antihistamines for allergies, diuretics (water pills) and some psychiatric or blood pressure medicines
- Use of illicit drugs (such as opioids, methamphetamines or cocaine)
Employee Training (2 of 5)

Training should be given on:

- The company’s heat illness prevention procedures, including but not limited to:
  - The employer’s responsibility to provide water, shade, cool-down rests, and access to first aid as well
  - Employees’ ability to exercise their rights under this standard without retaliation
Employee Training (3 of 5)

- Importance of frequent consumption of small quantities of water
- Different types of heat illness, common signs and symptoms; and appropriate first aid or emergency response
- Knowledge that heat illness may progress rapidly
Employee Training (4 of 5)

• The concept, importance, and methods of acclimatization
• Training must include the importance of acclimatization, how it is developed, and how the company’s procedures address it
• Importance of immediately reporting signs or symptoms of heat illness to a supervisor
• Procedures for responding to possible heat illness
Employee Training (5 of 5)

• Procedures to follow when contacting emergency medical services, providing first aid, and if necessary transporting employees

• Procedures that ensure clear and precise directions to the work site, including designating a person to be available to ensure that emergency procedures are invoked when appropriate
Supervisor Training

Supervisors must be trained on:

- Heat standard requirements
- Procedures they must follow to implement the requirements
- Procedures to follow when an employee exhibits or reports symptoms consistent with possible heat illness, including emergency response procedures and first aid
- How to monitor weather reports and how to respond to hot weather advisories
Written Plan (1 of 2)

• As long as the procedures are effective, the company’s Heat Illness Prevention Plan can be integrated into the IIPP
• Maintain the Plan on site or close to the site, so that it can be made available to employees and representatives of Cal/OSHA upon request
• The written Plan should be in English and the language understood by the majority of employees
Written Plan (2 of 2)

Detail how the company will:

• Provide access to water & shade
• Monitor the weather
• Institute high heat procedures
• Address acclimatization methods and procedures
• Train all employees and supervisors
• Respond to heat illnesses without delay, provide first aid and emergency services
• Provide clear and precise directions to the worksite
Serious Hazard

The company risks a serious citation if the outdoor temperature in the work area exceeds 80°F and any of these required elements is not present at the site:

• Drinking water
• Shade
• Trained employees or supervisor
• Emergency response procedures
Imminent Hazard – Don't Risk an OPU!

The company may risk an Order Prohibiting Use (OPU) and a Serious Citation if the heat and lack of facilities create an imminent hazard.

- An OPU may be issued if:
  - The temperature is $\geq 95^\circ$ and water, shade, training or emergency procedures are not in place
  - The temperature is $\geq 80^\circ$, and there is a heat wave, heavy workload or other critical factor putting employees in danger

- An OPU:
  - Will shut down the operation
  - Work will not be allowed to resume until the employer demonstrates that the imminent hazard has been corrected
Additional Considerations

COVID-19 Emergency Temporary Standards
• Review the latest updates to the COVID-19 Prevention Emergency Temporary Standards at Cal/OSHA’s coronavirus webpage:
  https://www.dir.ca.gov/dosh/coronavirus/

Protection from Wildfire Smoke
• Review Cal/OSHA’s webpage on Worker Safety and Health in Wildfire Regions:
For Additional Information

Visit the Cal/OSHA Heat Illness Webpage:
http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html

Contact us by email:
heat@dir.ca.gov
Heat Illness Materials

Multilingual educational materials can be downloaded free from the www.99calor.org website

In California, heat illness prevention training is required for all outdoor workers and a written prevention plan must be available at all outdoor worksites.

Cal/OSHA's Heat Illness Prevention regulation applies to all outdoor places of employment such as those in the agriculture, construction, and landscaping industries.

Steps Required to Prevent Heat Illness

Water – Access to fresh water so that each worker can drink at least one quart of water per hour.
Rest – A preventative cool-down rest in the shade is allowed whenever workers feel the need to prevent themselves from overheating.
Cal/OSHA Consultation Services

How to reach us

Visit www.dir.ca.gov/dosh/consultation.html for complete listing of our services. Contact the nearest office at:

Statewide Toll Free No. ..................... 800-963-9424
Central Valley/Fresno ..................... 559-445-6800
San Francisco/Oakland ..................... 510-622-2891
No. California/Sacramento ................ 916-263-0704
San Diego/Imperial ......................... 619-767-2060
San Bernardino ............................ 909-383-4567
Santa Fe/Los Angeles/Orange ............. 714-562-5525
San Fernando Valley ....................... 808-901-5754
Cal/VPP ........................................ 510-622-1081