

# Division of Occupational Safety and Health (Cal/OSHA)

## 2015 HEAT ILLNESS PREVENTION TRAINING



**WATER.  
REST.  
SHADE.**

*The work can't get done  
without them.*

# Training Goals

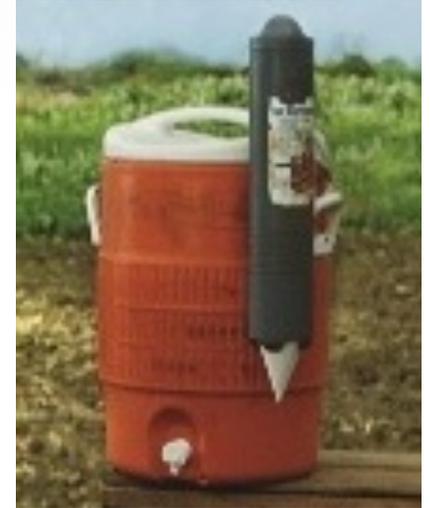
- ❖ Review the regulatory language and heat illness preventive measures.
- ❖ Increase awareness and commitment to safety and health at the work site.

# **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

- ❖ Potable drinking water must be made available at no cost to the employee.
- ❖ 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



- ❖ 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 the workers.

# Access to Water

- ❖ Implement and maintain effective replenishment procedures when beginning the shift with smaller quantities.



**Unacceptable**

# Access to Water

- ❖ 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 workers!
- ❖ Encourage the frequent drinking of water.

**Remind workers not to wait until they are thirsty!**



# Shade Up:

## When the temperature exceeds 80° F

- ❖ 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

- ❖ 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 period who remain on site
- ❖ Remember: Access to shade must be permitted at all times.



# Access to Shade, cont.



- ❖ 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
- ❖ Don't order back to work until symptoms abated, allow at least a 5 minute rest
- ❖ Take appropriate first aid steps or emergency response as necessary

# Access to Shade, cont.



- ❖ Shaded area must not cause exposure to another health or safety hazard. Areas underneath mobile equipment (e.g. tractor), or areas that require crouching in order to sit fully in the shade are not acceptable.



# If temperature is below 80° F

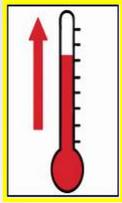


- ❖ When the temperature does not exceed 80° F, provide timely access to shade upon request.

# 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](http://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.

National Oceanic and Atmospheric Administration's  
**National Weather Service**

Site Map News Organization

Home > Products > State Listing

California State Information

Satellite Radar Weather Offices

Hourly Report Public Information

State Forecast Climatic Data

Zone Forecast Hydro Products

Short Term Forecast Aviation Products

Forecast Discussion Watches

Weather Summary Special Weather

Warnings and Advisories

Click on the above map for current site specific weather observations

Back to Main Lvl

# 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

You must implement additional preventive measures:

- ❖ Ensure effective communication (by voice, observation or electronic means).



# When the temperature equals or exceeds 95° F

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



- ❖ 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



- ❖ 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 8<sup>th</sup> and 10<sup>th</sup> hour of work

# **Emergency Response Procedures**

- ❖ **Ensure effective communication**
- ❖ **Respond to signs and symptoms of possible heat illness**
  - **Supervisor to take immediate, appropriate action**
  - **If indicators of serious heat illness, implement emergency response procedures**
  - **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.**
  - **Contact emergency medical services and ensure that clear and precise directions to the site can be provided**

# **Address Lack of Acclimatization**

- ❖ **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 workers 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**

- ❖ **Thus, determine how your company will:**
  - **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 non essential duties, during the hot summer months;**
  - **be extra-vigilant with your employees to recognize immediately symptoms of possible heat illness.**

# Employee & Supervisor Training

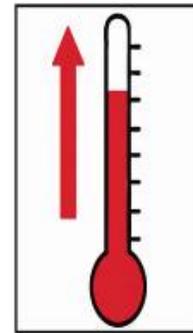
Ensure all employees and supervisors:

- ❖ Are trained before beginning work that should reasonably be anticipated to result in a heat illness.



# Employee Training

- ❖ The environmental and personal risk factors for heat illness, as well as the added burden of heat load on the body



# Employee Training

- ❖ Your 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 as the employees' right to exercise their rights under this standard without retaliation



# Employee Training, cont.

- ❖ 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

 **Stay safe and healthy!**  
**WATER. REST. SHADE.** *The work can't get done without them.*

**Drink water even if you aren't thirsty – every 15 minutes.**  
 

**Rest in the shade.**  
 

**Watch out for each other.**  


**Wear hats and light-colored clothing.**  
 

**2** "Easy does it" on your first days of work in the heat. You need to get used to it. Rest in the shade – at least 5 minutes as needed to cool down.

 **Health effects of heat**  
**Two types of heat illness:**

**Heat Exhaustion**  


**Heat Stroke**  




**1** Watch out for early symptoms. You may need medical help. People react differently – you may have just a few of these symptoms, or most of them.

# Employee Training, cont.

- ❖ The concept, importance, and methods of acclimatization

Training must include the importance of acclimatization, how it is developed, and how your 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, cont.

- ❖ 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 the following:

- ❖ The heat standard requirements
- ❖ The procedures they must follow to implement the requirements
- ❖ Procedures to follow when a worker 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 Procedures

- ❖ As long as they are effective, your Heat Illness Procedures can be integrated into the IIPP.
- ❖ Maintain the procedures on site or close to the site, so that it can be made available to employees and representatives of Cal/OSHA upon request.
- ❖ Plan in English and the language understood by the majority of the employees

**EMPLOYER SAMPLE PROCEDURES FOR  
HEAT ILLNESS PREVENTION**  
August 2011



California employers with any outdoor places of employment must comply with the Heat Illness Prevention Standard T8 CCR 3395. These procedures have been created to assist employers in crafting their own heat illness prevention procedures, and to reduce the risk of work related heat illnesses among their employees.

These procedures are not intended to supersede or replace the application of any other Title 8 regulation, particularly T8 3203 Injury and Illness Prevention Program (IIPP). Title 8 CCR 3203 requires an employer to establish, implement, and maintain an effective IIPP. The measures listed here may be integrated into the Employer's Injury and Illness Prevention Program. The employer must also be aware that other standards apply to Heat Illness Prevention such as the requirement to provide for drinking water, first aid and emergency response.

Please note: These procedures provide the minimal steps applicable to most outdoor work settings and are essential to reducing the incidence of heat related illnesses. In working environments with a higher risk for heat illness (e.g., during a heat wave, or other severe working or environmental conditions), it is the employer's duty to exercise greater caution and additional protective measures beyond what is listed in this document, as needed to protect their employees.

To effectively establish your company procedures, carefully review the key elements listed on this document, as well as the examples provided, then select and fill out the procedures applicable to your workplace. Please use additional paper when necessary. Implement and train employees and supervisors on your company procedures and follow-up to ensure your procedures are fulfilled.

Furthermore, to successfully tailor these procedures to your work activities, evaluate and consider the individual conditions present at your site (such as, but not limited to):

- (1) Size of the crew
- (2) The length of the work-shift
- (3) The ambient temperature (which can be taken either with the aid of a simple thermometer or by monitoring the weather)
- (4) The presence of personal protective equipment or additional sources of heat

Again, these sample procedures do not include every workplace scenario, so it is crucial that your company evaluate and take into account conditions found in your individual workplace that are likely to cause a heat illness.

Your written procedures should also:

1. Identify the designated person(s) that has been assigned the applicable task(s) (e.g. supervisor, foreman, safety coordinator, crew leader).
2. Provide specific details required to carry out the task and ensure that the task is accomplished successfully (e.g. how many water containers/shade structures, of what size,

# Written Procedures, cont.

## Detail how your 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**

You risk 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!

You may also 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.

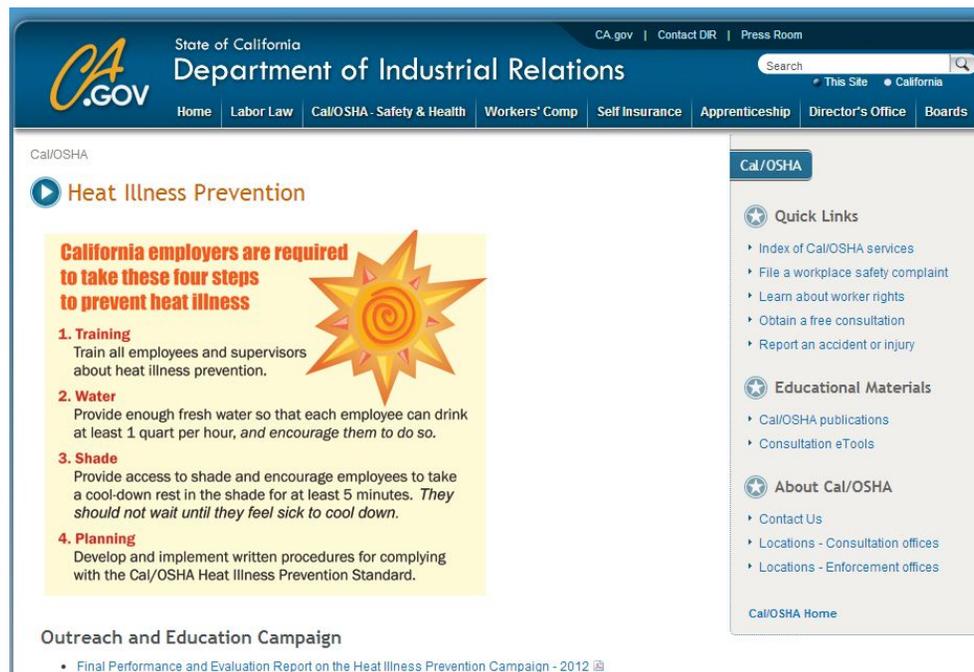
An OPU:

- ❖ Will shut down the operation, and;
- ❖ Work will not be allowed to resume until the employer demonstrates that the imminent hazard has been corrected.

# For Additional Information

Visit the Cal/OSHA Heat Illness Webpage:

<http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html>



The screenshot shows the Cal/OSHA Heat Illness Prevention webpage. The header includes the State of California Department of Industrial Relations logo and navigation links. The main content area features a yellow box with a sun icon and the text: "California employers are required to take these four steps to prevent heat illness". The four steps are: 1. Training, 2. Water, 3. Shade, and 4. Planning. A sidebar on the right contains quick links, educational materials, and information about Cal/OSHA.

State of California  
Department of Industrial Relations

CA.GOV

Home | Labor Law | Cal/OSHA - Safety & Health | Workers' Comp | Self Insurance | Apprenticeship | Director's Office | Boards

Cal/OSHA

## Heat Illness Prevention

**California employers are required to take these four steps to prevent heat illness**

- 1. Training**  
Train all employees and supervisors about heat illness prevention.
- 2. Water**  
Provide enough fresh water so that each employee can drink at least 1 quart per hour, and encourage them to do so.
- 3. Shade**  
Provide access to shade and encourage employees to take a cool-down rest in the shade for at least 5 minutes. *They should not wait until they feel sick to cool down.*
- 4. Planning**  
Develop and implement written procedures for complying with the Cal/OSHA Heat Illness Prevention Standard.

Outreach and Education Campaign

- Final Performance and Evaluation Report on the Heat Illness Prevention Campaign - 2012

Cal/OSHA

Quick Links

- Index of Cal/OSHA services
- File a workplace safety complaint
- Learn about worker rights
- Obtain a free consultation
- Report an accident or injury

Educational Materials

- Cal/OSHA publications
- Consultation eTools

About Cal/OSHA

- Contact Us
- Locations - Consultation offices
- Locations - Enforcement offices

Cal/OSHA Home

Contact us by email:

[heat@dir.ca.gov](mailto:heat@dir.ca.gov)

# Heat Illness Materials

Multilingual educational materials can be downloaded free from the [www.99calor.org](http://www.99calor.org) website



The screenshot shows the top portion of the 99 Calor website. At the top left is a red square containing a yellow sun icon. To its right, a red banner features the text "WATER. REST. SHADE." in large white letters, with the tagline "The work can't get done without them." in smaller yellow text below it. Below the banner is a navigation bar with several buttons: "Educational Resources", "For Employers", "Campaign", "FAQ's", "Contact", and a yellow button with the phone number "877-99-CALOR". The main banner below the navigation bar shows a woman in a purple long-sleeved shirt and a blue sun hat sitting on a wooden crate under a white canopy tent in a field. The text "YOU'LL LAST LONGER AFTER A LITTLE REST." is overlaid on the image in large white letters.

## HEAT SAFETY TIPS:

Drink water often

Rest in the shade

Report heat symptoms early

Know what to do in an emergency

Employers must train workers about heat safety and provide water, rest, shade.

*Welcome to the California campaign  
to protect outdoor workers from HEAT ILLNESS.*

# Cal/OSHA Consultation

## How to reach us

Visit [www.dir.ca.gov/dosh/consultation.html](http://www.dir.ca.gov/dosh/consultation.html) for complete listing of our services. **Contact the nearest office at:**

<b>State wide Toll Free No.</b>	<b>800-963-9424</b>
<b>CentralValley/Fresno</b>	<b>559-454-1295</b>
<b>San Francisco/Oakland</b>	<b>510-622-2891</b>
<b>No. California/Sacramento</b>	<b>916-263-0704</b>
<b>San Diego/Imperial</b>	<b>619-767-2060</b>
<b>San Bernardino</b>	<b>909-383-4567</b>
<b>Santa Fe/Los Angeles/Orange</b>	<b>714-562-5525</b>
<b>San Fernando Valley</b>	<b>818-901-5754</b>
<b>Cal/VPP</b>	<b>510-622-1081</b>

