



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)

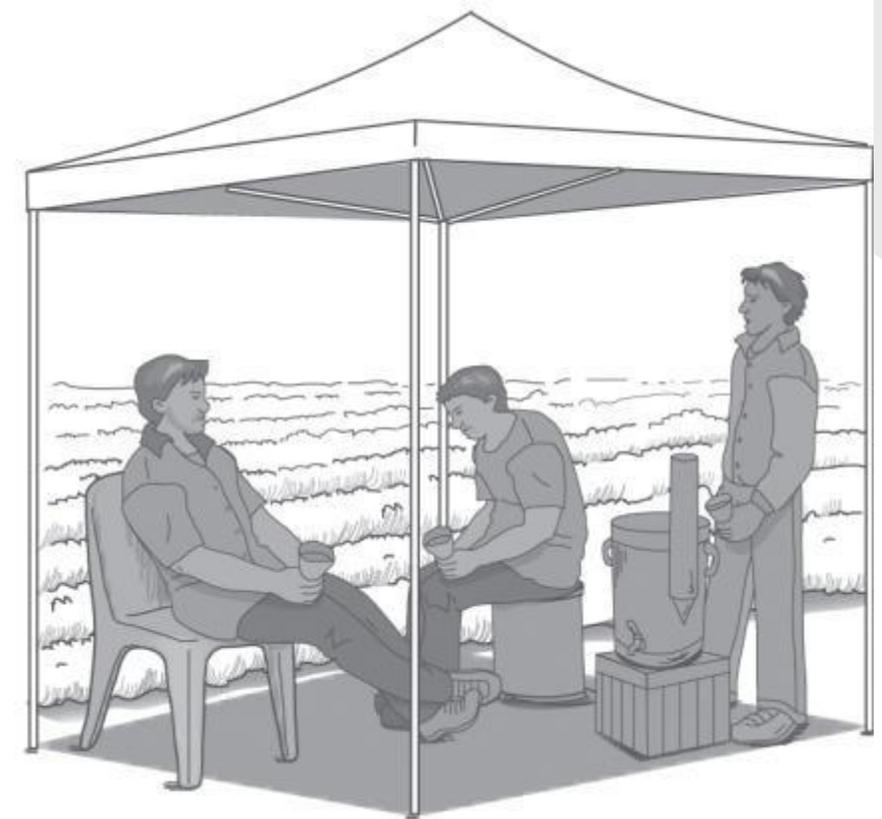
- Have and maintain one or more areas of shade at all times, when employees are present
- Locate the shade as close as practical to the area where employees are working



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

Access to Shade (2 of 2)

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

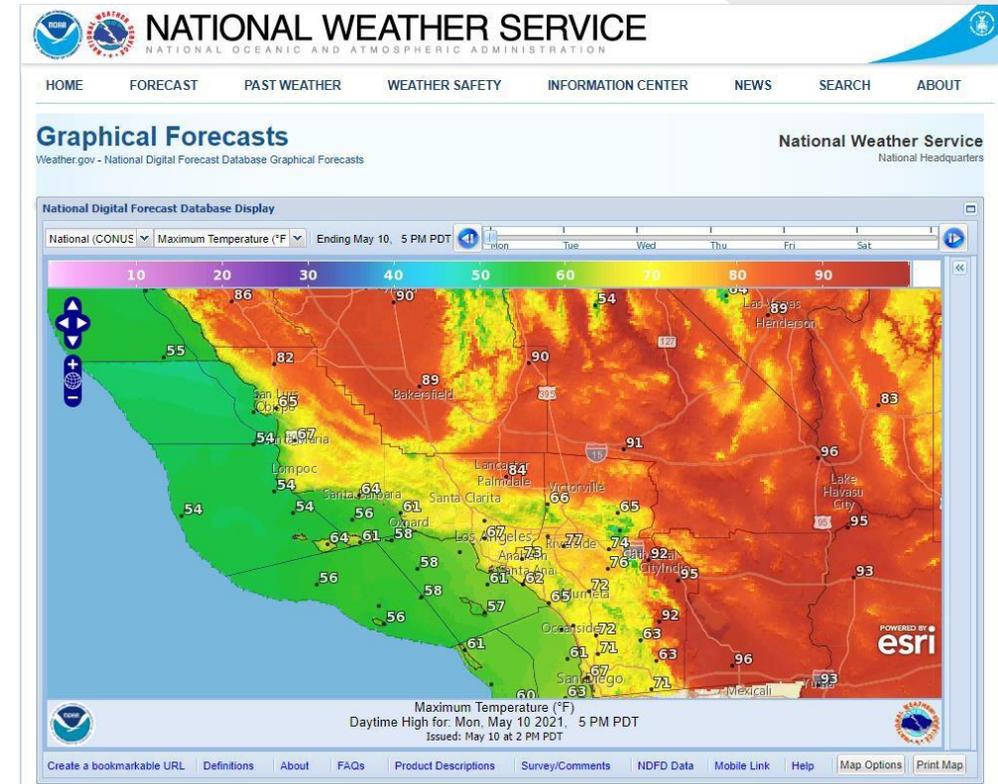
In situations where the employer can demonstrate that it is not safe or feasible to provide shade, an employer can utilize established procedures for providing shade upon request or, for non-agricultural employers, alternative cooling measures that provide equivalent protection.



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 section:

- Agriculture
- Construction
- Landscaping
- Oil and Gas Extraction
- Transportation or delivery of agricultural, construction materials, or other heavy materials.

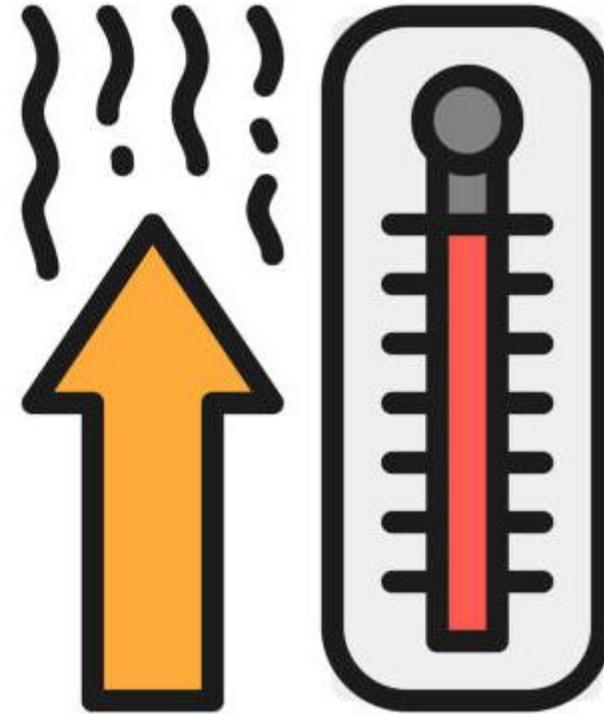


When the temperature equals or exceeds 95°F

(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)

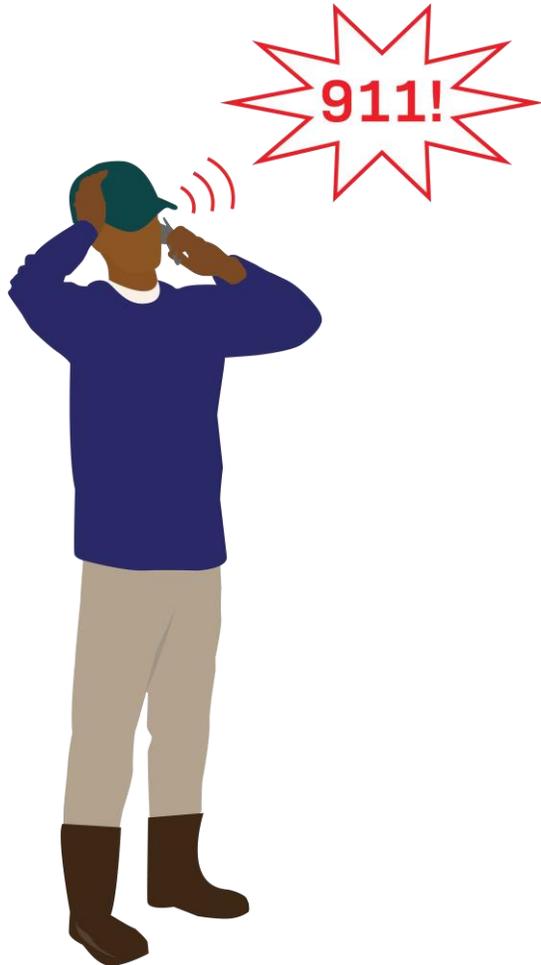
You must implement additional preventive measures:

- 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

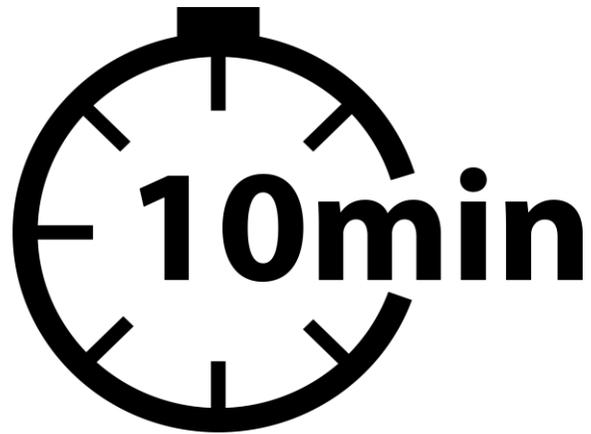
(3 of 4)



- 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:
 - 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 (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

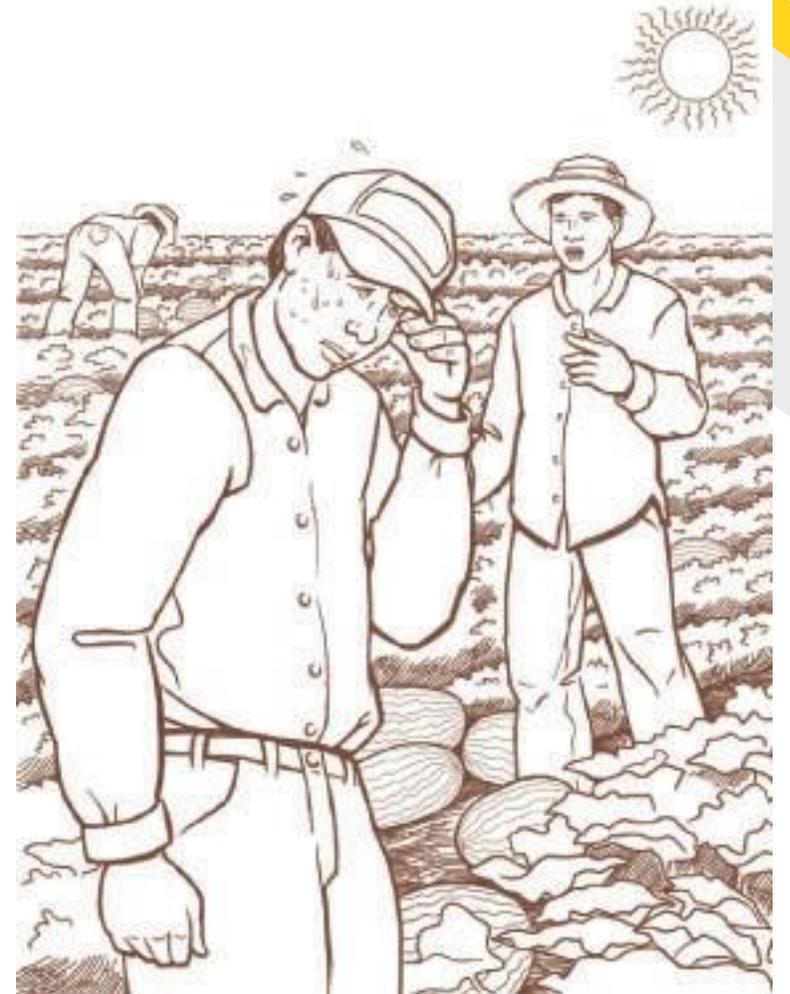
Means factors that affect the body's water retention or other physiological responses to heat, including:

- 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
 - Employees' ability to exercise their rights under this standard without retaliation



Employee Training (3 of 5)

Training should be given on:

- 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)

Training should be given on:

- 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)

Training should be given on:

- 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

EMPLOYER SAMPLE PROCEDURES FOR HEAT ILLNESS PREVENTION

Cal/OSHA Publications Unit

Rev. May 2019



California employers with any outdoor places of employment must comply with the Heat Illness Prevention standard, California Code of Regulations, title 8, section 3395 (8 CCR 3395). These procedures have been created to assist employers in establishing their own heat illness prevention procedures and to reduce the risk of work-related heat illnesses to their employees.

These procedures are not intended to supersede or replace the application of any other title 8 sections, particularly 8 CCR 3203, Injury and Illness Prevention Program (IIPP), which requires an employer to establish, implement, and maintain an effective IIPP. You may integrate your heat illness prevention procedures into your IIPP. You must also be aware that other standards also apply to heat illness prevention, such as the construction, agriculture, and general industry requirements to provide drinking water, first aid, and emergency response.

Note: These procedures describe the minimum essential heat illness prevention steps applicable to most outdoor work settings. In work environments where there is a higher risk for heat illness (e.g., during a heat wave or other severe working or environmental conditions), you must exercise greater caution and employ protective measures beyond what is listed in this document, as needed to protect employees.

To effectively establish your company procedures, carefully review the key elements listed in this document, as well as the examples provided, then develop written procedures applicable to your workplace. The Heat Illness Prevention Plan must be written in English and the language understood by the majority of the employees and must be available at the worksite. Implement procedures, train employees and supervisors on your company procedures, and follow-up to ensure your procedures are fulfilled.

To tailor these procedures to your work activities, evaluate and consider the specific conditions present at your site such as:

1. The size of the crew.
2. The length of the work-shift.
3. The ambient temperature (which can either be taken using a simple thermometer or estimated by monitoring the weather).

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HIPP/Sample Procedures

Rev. 05.2019

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
 - ✓ Will not allow work to resume until the employer demonstrates that the imminent hazard has been corrected

Indoor heat rules

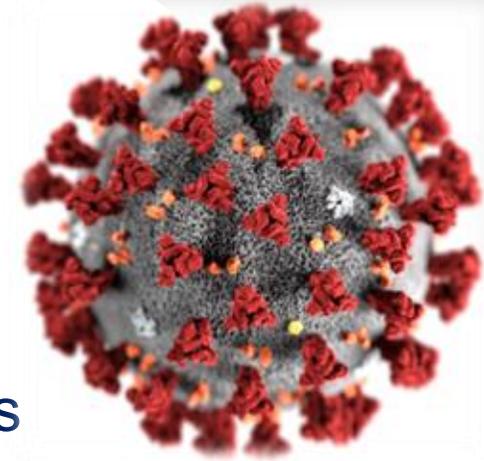
Updated Heat SEP and new proposed regulation

- Cal/OSHA revised its Heat Special Emphasis Program (Heat SEP) in October 2022 to include indoor heat hazards
 - All valid, formal, indoor heat-related complaints will be addressed via onsite inspection
 - View the Heat SEP here: <https://www.dir.ca.gov/DOSHPol/Heat-SEP.pdf>
- Heat Illness Prevention in Indoor Places of Employment
 - The March 31, 2023 notice of proposed rulemaking initiated the formal rulemaking process
 - Proposed regulation can be viewed here: <https://www.dir.ca.gov/OSHSB/Indoor-Heat.html>

Additional Considerations

COVID-19 Prevention Non-Emergency Regulations

- Review the latest updates on the COVID-19 Prevention Non-Emergency Regulations 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: <https://www.dir.ca.gov/dosh/worker-health-and-safety-in-wildfire-regions.html>



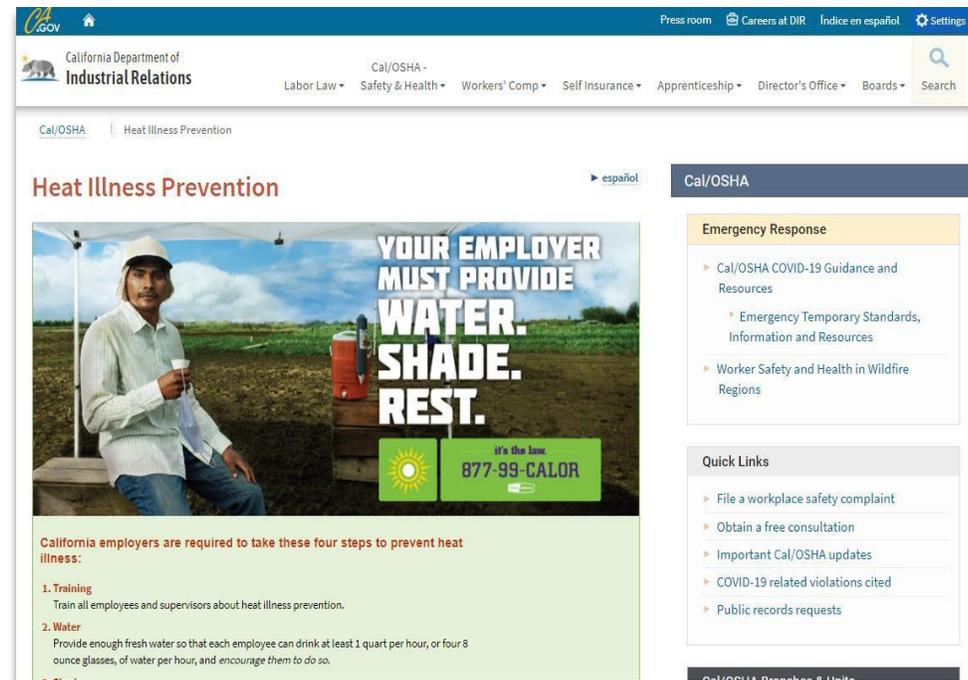
For Additional Information

Visit the Cal/OSHA Heat Illness Webpage:

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

Contact us by email:

heat@dir.ca.gov



The screenshot shows the Cal/OSHA Heat Illness Prevention webpage. The header includes the California Department of Industrial Relations logo and navigation links for Labor Law, Safety & Health, Workers' Comp, Self Insurance, Apprenticeship, Director's Office, and Boards. The main content area features a large banner with a worker in a field and the text: "YOUR EMPLOYER MUST PROVIDE WATER. SHADE. REST." Below the banner, it states: "California employers are required to take these four steps to prevent heat illness:" followed by a list of steps: 1. Training, 2. Water, 3. Rest, and 4. Shade. A sidebar on the right contains sections for "Emergency Response" and "Quick Links".

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 Bernadino	909-383-4567
Santa Fe/Los Angeles/Orange	714-562-5525
San Fernando Valley	808-901-5754
Cal/VPP	510-622-1081





Thank you!

Any questions?

