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|  | |  | | |  | **Instructions** | | |  |
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| **Program Development Guide** |  | Welcome! It looks like you have just been assigned the task of developing and implementing your organization’s Heat Illness Prevention Program. The following sample program is provided to assist you with the preparation and implementation of a truly effective Heat Illness Prevention Program.  You will need to modify and customize areas within the program. The information needed will be indicated by **BLUE TEXT**.  We have also developed a Program Development Guide, located at the end of the sample program. The guide contains valuable information and pertinent Internet resources to assist you with customizing your program.  question.JPG  Throughout the program you will see question mark icons. These are hyperlinks that take you to relevant information in the guide. There is also a “Back” button to return you to the program.  Once your program is customized, we recommend you copy the program material from this document, paste it into a new Word document, and remove the icons. | | | | | | |  |
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**Written Program Sample**

This program is in place to protect all employees from heat hazards posed by working in the outdoor environment, as required by the heat illness prevention regulation (Title 8 CCR 3395). We are committed to preventing heat-related illnesses that can occur to employees working outdoors by implementing the following key steps:

* Identifying outdoor work environments and conditions
* Monitoring weather conditions
* Monitoring employee acclimatization for working outdoors in heat
* Providing clean drinking water
* Providing adequate shade
* Addressing high-heat procedures
* Handling an ill employee and initiating emergency procedures
* Providing supervisor and employee training

[](#OutdoorWork)

**Identifying Outdoor Work Environments and Conditions**

The following positions have been identified as working in outdoor environments that could potentially expose employees to illnesses associated with high heat.

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[](#MonitorWeather)

**Monitoring the weather**

*Weather forecast*

When environmental risk factors create the possibility for heat illness, the supervisor will monitor the two-week forecast for the work area. 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. 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.

Weather information will be obtained by accessing the National Weather Service at [www.weather.gov](http://www.weather.gov), calling the local National Weather Service office, or watching the Weather Channel TV network. Work schedules will be planned in advance, based on the forecast. Modifications will be made accordingly, especially if a heat wave is expected. This monitoring will take place all summer long.

*Weather monitoring prior to workday during times of risk*

Prior to each workday, the supervisor will be responsible for monitoring the weather using [www.weather.gov](http://www.weather.gov) or with the aid of a simple thermometer at the worksite. This 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).

If schedule modifications are not possible and workers have to work during a heat wave, the supervisor will provide a tailgate meeting to reinforce heat illness prevention with emergency response procedures and review the weather forecast with the workers. In addition, the supervisor will provide workers with an increased number of water and rest breaks. The supervisor will ensure workers stop and take these breaks and closely observe all workers for signs of heat illness. The supervisor will also assign each employee a buddy to watch for signs of heat illness and ensure emergency procedures are initiated when someone displays signs of heat illness.

The supervisor will be responsible for using a thermometer at the jobsite and periodically checking the temperature to monitor for sudden increases. Once the temperature exceeds 85° Fahrenheit (F), the shade structures are opened and accessible to the workers. Once the temperature equals or exceeds 95° F, additional preventive measures such as the high-heat procedures are implemented.

[](#Acclimatization)

**Monitoring employee acclimatization for working outdoors in heat**

The supervisor will watch for sudden heat waves early in the season or increases in temperatures to which employees are unaccustomed for several weeks or longer. When necessary, the workday will be cut short or rescheduled for another day. In addition, during the summer months, the work shift may start earlier in the day or later in the evening to reduce exposure. During any heat wave, we will observe all employees closely (or maintain frequent communication via phone or radio) and watch for possible signs of heat illness.

For new employees, the supervisor will try to find ways to lessen the intensity of work during a two-week break-in period. Steps taken to lessen the intensity of the workload for new employees will be documented. The supervisor will:

* Stay alert to the presence of heat-related symptoms
* Assign new employees a buddy or experienced coworker to watch for discomfort or signs of heat illness

[](#Water)

**Providing clean drinking water**

The supervisor will provide access to potable drinking water at the beginning of each work shift so each employee can remain hydrated throughout the workday. The supervisor will remind employees to drink sufficient amounts of water, at least one quart (4 cups) per hour, when the work environment is hot, and employees are likely to be sweating more than usual in the course of their duties.

When employees do not have access to plumbed or otherwise continuously supplied water, and we cannot readily replenish the water during the shift, the supervisor will provide enough water at the start of the shift so each employee has access to one quart of water or more per hour.

[](#Shade)

**Providing adequate shade**

When the outdoor temperature in the work area exceeds 85° F, we will provide and maintain one or more areas with shade at all times while employees are present. These areas will either be open to the air or provided with ventilation or cooling. We will also provide shade when an employee specifically requests it, even when the temperature does not exceed 85° F. Employees will be allowed and encouraged to take a cool-down rest in the shade for a period of no less than five minutes anytime they feel the need to protect themselves from overheating.

Depending on the worksite, shade may be provided by trees or buildings. When natural shade is not available, we will provide other acceptable means of shade such as umbrellas, tents, canopies, etc., to block the sunlight. In these instances, we will provide chairs, benches, sheets, towels, or any other items to allow employees to sit and rest without contacting the bare ground. We will also relocate the shade structure as the work environment or location changes.

The amount of shade present will be at least enough to accommodate 25% of the employees on the shift at any time, so they can sit in a normal posture, fully in the shade without having to be in physical contact with each other. The shaded area will be located as close as practicable to the areas where employees are working.

In instances where natural shade is not available, supervisors will:

* Bring sufficient shade structures to the site
* Ensure sufficient shade structures are opened and placed as close as practical to the workers
* Point out the daily location of the shade structures to the workers, as well as allow and encourage employees to take a five-minute cool-down rest in the shade when they feel the need to do so to protect themselves from overheating
* Ensure the shade structures are relocated to follow along with the crew and double-check they are as close as practical to the employees so access to shade is provided at all times

If it is infeasible or unsafe to have shade structures, or to have shade present on a continuous basis, we will provide alternative procedures with equivalent protection.

In instances where natural shade such as a tree is available, supervisors will evaluate the thickness and shape of the shaded area in orchards or other areas of vegetation (given the changing angles of the sun during the entire shift), before assuming that sufficient shadow is being cast to protect employees.

In situations where it is not safe to provide shade (example winds of more than 40 mph), we will document how the determination was made and identify what steps will be taken if someone requests shade, or we will identify other cooling measures with equivalent protection. Cooling measures other than shade may be used if they are as effective as shade in allowing employees to cool.

[](#HighHeat)

**Addressing high-heat procedures**

When the outdoor temperature equals or exceeds **95° F**, supervisors will:

* Be available so employees at the work site can contact them when necessary; if a cell phone or two-way radio is used, reception must be validated
* Be extra vigilant with observing employees for alertness and signs of heat illness
* Remind employees to drink plenty of water throughout the work shift
* [](#IllEmployee)Closely supervise new employees for the first 14 days of employment, unless the employee indicates at the time of hire that he or she has been doing similar outdoor work for at least 10 of the past 30 days for four or more hours per day

**Handling an ill employee and emergency procedures**

When an employee displays possible signs of heat illness (refer to Attachment B for a detailed list of heat illnesses) a supervisor will:

* Immediately call 911
* Move the employee to a cooler/shaded area
* Remove excess layers of clothing
* Fan and mist the worker with water
* Apply ice (ice bags or ice towels)
* Provide cool drinking water, if able to drink

A supervisor will remain with the sick employee until emergency help arrives. If the area is remote, the supervisor will have a map along with clear and precise directions (such as streets or road names, distinguishing features, and distances to major roads) of the site to clearly communicate the location to emergency medical services. The supervisor will designate someone to physically go to the nearest road or highway where emergency responders can see them.

Prior to assigning a crew to a particular worksite, the supervisor will:

* Provide workers and the foreman a map along with clear and precise directions (such as streets or road names, distinguishing features, and distances to major roads) of the site to avoid a delay of emergency medical services
* Ensure a qualified, appropriately trained, and equipped person will be available at the site to render first aid if necessary
* Ensure responsibility for calling emergency medical service is assigned to an English-speaking worker at the site
* Verify all foremen and supervisors carry cell phones or other means of communication to ensure emergency medical services can be called
* Ensure all communication devices are functional at the worksite prior to each shift

**[](#Training)**

**Providing supervisor and employee training**

*Employees*

All employees are required to attend a health and safety training session prior to beginning work that should be reasonably anticipated to result in exposure to the risk of heat illness. The following information will be provided:

* The environmental and personal risk factors for heat illness, as well as the added burden of heat load on the body caused by exertion, clothing, and personal protective equipment
* Our procedures for complying with the requirements of the heat illness prevention regulation
* The importance of frequent consumption of small quantities of water
* The importance of acclimatization
* The different types of heat illness and the common signs and symptoms of heat illness
* The importance of employees immediately reporting symptoms or signs of heat illness for themselves and co-workers
* Our specific procedures for responding to possible heat illness, including how emergency medical services will be provided should they become necessary
* Our specific 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
* Our procedures for designating a person to be available to ensure emergency procedures are invoked when appropriate
* Our specific procedures for ensuring clear and precise directions to the work site will be provided as needed to emergency responders

*Supervisors*

In addition to obtaining the training required for employees listed above, supervisors will be trained before performing work that could be reasonably anticipated to result in exposure to heat illness. Training will include:

* All information provided during employee training
* Procedures for preventing heat illness, including monitoring weather reports and how to respond to hot weather advisories
* Information about how to identify heat illness
* Steps to take for emergency response to heat illness

**Attachment A - Heat Illness Employee Training Handout**

ORGANIZATION: ***NAME*** DATE: ***DATE***

DEPARTMENT: ***NAME***

We have developed a training program to increase employee awareness of the occurrence of exposures to heat illnesses when working outdoors and to motivate employees to protect themselves.

**Overview of Heat Illness Prevention Regulation**

The heat illness prevention regulation is intended to ensure both employers and employees understand the dangers associated with working in heat in outdoor workplaces. The following information is a review of the specific requirements of a heat illness prevention program, including water, shade, high-heat procedures, and training.

**Written Heat Illness Prevention Program**

We have a written program that outlines how we provide information on and control exposures that can result in heat illness while performing outdoor work in the heat. This program is available to you during our training or during your work shift from ***PERSON*** at ***LOCATION****.*

**Work Environment and Conditions in Our Workplace**

Our written program includes the identification of work that is performed outdoors when the weather is hot. This list is not all inclusive and when other types of work or conditions are identified, we will update our program and our training. The most important element is to realize that when it is hot outside and you are working, take precautions to protect yourself.

**Water**

We will provide enough fresh drinking water so you have access to at least one quart of water per hour and actively encourage you to drink it. Refrain from alcoholic beverages or beverages that contain caffeine, such as soft drinks, coffee, and tea.

**Shade**

Our goal is to provide shade so everyone who needs it has access to it to cool off when the weather is hot. If infeasible or unsafe to provide shade, we will provide other means to help keep you cool.

**High-Heat Procedures**

When the outside temperature reaches or exceed 95° F, additional precautions, to the extent they are feasible, will be taken to ensure your safety and health. This includes good communication, close supervision if you have not recently worked outdoors in the heat for four or more hours per day, observing you, and reminding you to drink plenty of water.

**Training**

All employees and supervisors who have potential heat exposures receive the same training so everyone understands our policy and procedures for keeping everyone safe when working outdoors. Training addresses how to acclimate to the heat, how much water to drink, the signs and symptoms of heat illness, the importance or reporting symptoms to your supervisor, and how to get help in an emergency.

You can read the California heat illness prevention regulation for additional information on any specific program element at <http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html>.

**Attachment B - Types of Heat Illness**

Heat illness is 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.

**Heat Stroke**

The most life-threatening heat-related illness; heat stroke happens when the body can no longer control its temperature. The body’s temperature rises fast. The body cannot sweat and is unable to cool itself. Warning signs include red, hot, dry skin; very high body temperature; dizziness; nausea; confusion; strange behavior or unconsciousness; rapid pulse or throbbing headache. Heat stroke can cause death or disability if treatment is not given.

**Heat Exhaustion**

Heat exhaustion is a milder illness that happens when the body has lost too much water and salt in sweat. Warning signs include heavy sweating, cramps, headache, nausea or vomiting, paleness, tiredness, weakness, dizziness, and fainting. If heat exhaustion is not treated, it can turn into heat stroke. Get medical assistance if the symptoms are severe or if the victim has heart problems or high blood pressure.

**Heat Syncope**

Heat syncope is a fainting (syncope) episode or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and lack of acclimatization. Symptoms of heat syncope include light-headedness, dizziness, and fainting.

**Heat Cramps**

Heat cramps are muscle pains and spasms due to heavy activity. They usually involve the stomach muscles or the legs. It is generally thought that the loss of water and salt from heavy sweating causes the cramps. If you have heart problems or are on a low-sodium diet, get medical attention for heat cramps.

**Heat Rash**

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. Symptoms include red cluster of pimples or small blisters. Heat rash is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

**Sunburn**

Sunburn is when skin becomes red, painful, and unusually warm after being in the sun. Sunburn should be avoided because it damages the skin and could lead to more serious illness.

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|  | |  | | |  | ***Identifying outdoor work environments and conditions*** | | |  |
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| **Program Development Guide** |  | To recognize which employees are exposed to outdoor work environments and conditions, you first need to understand the definition of outdoor work environments and environmental risk factors.  Outdoor workplaces include open areas like agricultural fields, forests, parks, equipment and storage yards, outdoor utility installations, and roads. It also includes construction sites and areas adjacent to buildings (e.g. loading docks) if an employee spends a significant amount of time working in them.  Sheds, packing sheds, and partial or temporary structures such as tents, lean-tos, and structures with one or more open sides can be either indoor or outdoor workplaces depending on the circumstances. In many cases these structures may actually be hotter than the environment outside of them because of heating by the sun and conditions inside like limited air circulation or lack of insulation. The bottom line is if the structure does not significantly reduce the effect of environmental risk factors, it should be categorized as an outdoor environment.  Environmental risk factors are conditions that increase the likelihood that an employee will suffer from a heat-related illness. Environmental risk factors include:   * Air temperature * Relative humidity * Radiant heat (i.e. the sun) * Conductive heat (i.e. the ground) * Air movement * Workload severity and duration * Personal protective equipment (PPE)   [BACK button.JPG](#OutdoorWorkBack) | | | | | | |  |
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|  | |  | | |  | ***Monitoring the Weather*** | | |  |
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| **Program Development Guide** |  | This section outlines your processes and procedures on how you monitor weather conditions.  The National Oceanic & Atmospheric Administration’s (NOAA) heat alert procedures are based mainly on Heat Index Values. The [Heat Index](http://www.nws.noaa.gov/glossary/index.php?word=heat+index) is a measure of how hot it really feels when relative humidity is factored with the actual air temperature.  For example, if the air temperature is 96°F and the relative humidity is 65%, the Heat Index, ***how hot it feels***, is 121°F. The National Weather Service will initiate alert procedures when the Heat Index is expected to exceed 105°- 110°F (depending on local climate) for at least two consecutive days.    **IMPORTANT TO KNOW:**   * Exposure to full sunshine can increase Heat Index Values by up to 15°F. * Strong winds, particularly with very hot, dry air, can be extremely hazardous. * The Heat Index Chart orange and red zones (105°F+) are levels that may cause increasingly severe heat disorders with continued exposure and/or physical activity. | | | | | | |  |
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| **Program Development Guide** |  | The National Weather Service (NWS) Weather Forecast Office (WFO) can issue heat-related watches, warnings, or advisories. Local radio and television stations are used to communicate local conditions. You can also find local conditions at <http://alerts.weather.gov/> .  Examples of heat-related communications include:   * Excessive Heat Outlook - Issued when the potential exists for an excessive heat event in the next 3-7 days. * Excessive Heat Watch - Issued when conditions are favorable for an excessive heat event in the next 12 to 48 hours. A watch is used when the risk of a heat wave has increased, but its occurrence and timing is still uncertain. A watch provides enough lead time so those who need to prepare can do so. * Excessive Heat Warning/Advisory - Issued when an excessive heat event is expected in the next 36 hours. These communications are issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurring. The warning is used for conditions posing a threat to life or property. An advisory is for less serious conditions that cause significant discomfort or inconvenience and, if caution is not taken, could lead to a threat to life and/or property.   [BACK button.JPG](#MonitorWeatherBack) | | | | | | |  |
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|  | |  | | |  | ***Monitoring employee acclimatization for working outdoors in heat*** | | |  |
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| **Program Development Guide** |  | The body needs time to adapt when temperatures rise suddenly, and an employee risks heat-related illnesses by not taking it easy when a heat wave strikes or when starting a new job that exposes the employee to heat.  **Minimize the Risk of Heat Illness**  To minimize the risk of heat illness, encourage employees to report to their supervisors if they have:   * Returned to work after an absence * Recently been working in cool climates and are just now starting work in a warm or hot climate * Had a change in their work activities, locations, or conditions   Any of the above may mean employees are not acclimatized to working in warm or hot environments and are at greater risk for heat illness.  **Train, Monitor, and Track**  Make sure employees are trained, monitored, and tracked closely. Remember that employees who are not acclimatized to working in the heat are at greater risk for developing heat illness. Un-acclimatized employees should not work alone. It is important to:   * Train employees and supervisors on the importance of recognizing and reporting heat illness symptoms * Have supervisors and coworkers use a “buddy system” to watch each other closely for discomfort or signs of heat illness * Set-up a system to account for the whereabouts of your crew at appropriate intervals throughout the work shift and at the end of the work shift (e.g., keep a log of employees on your work crews including their names, supervisors, work locations, and hours worked on a given day, etc.) * Pre-hydrate by drinking more water the day before outside activity may occur.   **Acclimate Employees**  Options for acclimatizing employees to work in warm or hot environments include:   * Have employees pace themselves - If they are not accustomed to working in warm or hot environments, they should start work slowly and pick up the pace gradually. * Reduce physical demands - Assign employees to less physically demanding tasks during their first 14 days of working in a warm or hot environment. * Schedule and provide frequent breaks - Supply sufficient amounts of drinking water. * Start an acclimatization program - These programs have employees work for progressively longer periods in warm or hot conditions where they are at risk for heat illness. | | | | | | |  |
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| **Program Development Guide** |  | One such program is suggested by the National Institute of Occupational Safety & Health (NIOSH) for new employees and employees who have previous experience at worksites where they are at risk for heat illness.   |  |  |  | | --- | --- | --- | | Acclimatization Schedule  *(Total recommended hours working in hot environment per day)* | | | | Day | **Previous experience at worksite** | **New to worksite** | | 1 | 4 | 1.6 | | 2 | 5 | 3.2 | | 3 | 6 | 4.8 | | 4 | 8 | 6.4 | | 5 |  | 8.0 |  |  | | --- | | The acclimatization schedule by NIOSH, as shown above, is only an example program. Depending on the environmental and personal risk factors present, you may need to extend the time employees spend in your acclimatization program. This means that for some employees it may take up to 14 days of working in the heat for them to become fully acclimatized. Throughout this time period you should gradually increase the employee’s time working in the heat. |  |  | | --- | |  |   Acclimatization is critical for:   * A sudden heat wave * Employees working at temperatures to which they haven't been exposed for several weeks or longer * New employees who have not been previously exposed to high heat     **Replace Salts and Minerals**  For un-acclimatized employees, or those on a restricted salt diet, additional salting of food with the approval of their physician may be required to replace the salt and minerals lost in sweating. Acclimatized employees generally lose relatively little salt in their sweat, therefore salt and mineral supplements are normally not required.  [BACK button.JPG](#AcclimatizationBack) | | | | | | |  |
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|  | |  | | |  | ***Providing clean drinking water*** | | |  |
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| **Program Development Guide** |  | Have a designated person(s) whose duties include distributing and replenishing water. If it is necessary to distribute and replenish water over a large area, more than one person should be designated to perform this function. This person(s) should also encourage employees to drink small quantities of water frequently.    Water always needs to be available, and there should never be a feeling of the need to conserve or reduce intake for fear the supply might run out. When drinking water levels within a container drop below 50%, the water must be replenished immediately. At least one quart of water per hour needs to be provided for each employee throughout the shift. Be aware of the following:   * Dipping or pouring of drinking water from barrels, pails, or tanks is not allowed regardless of whether or not the containers are fitted with covers * You can’t use a common cup, glass, or other container for drinking purposes * When single-service cups are used, a sanitary container for the unused cups and a receptacle for disposing of the used cups must be provided * When re-usable containers for individual use are used, the employer must ensure the containers are marked to identify the user and maintained in a sanitary condition * Any container used to store or dispense drinking water must be clearly marked as to the nature of its contents and will not be used for any other purpose   **Distance**  There is no specific distance recommended; however, water must always be readily accessible. Cal/OSHA interprets this phrase to mean that the water should be as close to the employee as is practicable, given the working conditions and layout of the worksite. During an inspection, if a Cal/OSHA inspector questions whether the water supply is close enough to the employees, he or she would ask a supervisor to explain the factors taken into consideration by the employer in determining the placement of water. Cal/OSHA must by law accept placement of the water at a distance that is reasonable under the circumstances. | | | | | | |  |
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| **Program Development Guide** |  | **Encouragement**  The regulation requires not only that water be provided, but that employers encourage employees to drink it frequently. The importance of this cannot be overstated. Employees are there to work, and many of them may not feel how urgently their bodies need water. This is an unfortunate but preventable cause of heat illness.  Every morning when hot weather conditions exist, a short tailgate meeting should be held to remind workers about the importance of frequent consumption of water throughout the shift.  Employers must emphasize and stress the importance of frequent drinking of water throughout the day, especially in high heat. This can be significantly facilitated by steps such as removing any barriers that may exist to access, making the access distance as short as reasonable, and making the water station inviting by using ice and shade.  Encourage more frequent breaks when possible during hot weather to encourage employees to drink more water.  **Water temperature and ice**  When the outside temperatures exceed 90° F, having ice on hand to cool the water is recommended. Cool water adds the extra benefit of providing direct cooling to the body immediately upon consumption, independent of perspiration. However, ice cold water is not recommended as it may prevent employees from drinking adequate amounts. Warm and hot water must also be avoided as well, as this could discourage employees from drinking adequate amounts, and it would not aid in the cooling of the body.  **Replenishment**  In conditions of high heat and strenuous work, the human body can lose over a quart of fluid per hour just by sweating. Continuous replacement of this lost fluid is critical to preventing heat illness, and this means ensuring the presence of, ready access to, and consumption of potable drinking water.  [BACK button.JPG](#WaterBack) | | | | | | |  |
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| **Program Development Guide** |  | The magic number is 85. Shade must be easily accessible to exposed employees when temperatures are expected to exceed 85° F. The whole point of having shade available is to help your employees get out of the sun and cool down.  **What is shade?**   * Shade is blockage from direct sunlight, blockage for your whole body. If an enclosed area is used to provide shade, it must allow cooling at least comparable to the cooling that would be provided in an unenclosed shaded area. * Shade can be provided by buildings, canopies, lean-tos, or other partial or temporary structures that are either ventilated or open to air movement.   **What isn’t shade?**   * The interior of a vehicle cannot be used to provide shade unless the vehicle is air-conditioned and the air conditioner is operating. * Metal storage sheds and other out-buildings do not provide protection from sunlight that meets the definition of shade unless they provide a cooling environment comparable to shade in open air.   **Conditions of shade**   * The shaded area must let employees assume a comfortable posture and not create a hazard. For example, using areas underneath mobile equipment, like a tractor, would not comply with the shade requirement. * Shaded areas must allow employees to avoid contact with bare soil. Direct contact with lawn is ok. | | | | | | |  |
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| ***C:\Users\hcastro\Documents\Logos\BRS_no_white.png*** | |  | **heat illness prevention program** | | | |  | |  |
|  | |  | | |  | ***Providing adequate shade*** | | |  |
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| **Program Development Guide** |  | **Quantity of shade**  As a general rule, Cal/OSHA considers the amount of shade to be sufficient if there is enough to accommodate 25% of the employees on a shift at the same time with employees able to sit comfortably without touching each other.  To accomplish this you can develop procedures to ensure employees have access to shade. Options may include:   * Rotating employees in and out of shaded areas to ensure all have sufficient access for the five-minute recovery period. * Set up additional shade structures as needed. * Any reasonable strategy that ensures employees are not deprived of shade when they believe a preventative recovery period is needed. Just be sure to clearly describe your policy in your heat illness prevention procedures.   **Travel distance to shade**  The nearest shaded area must also be as close as practicable to the worksite. Usually it must be reachable within a 2 ½ minute walk. Exceptions may occur, but Cal/OSHA believes that in no case is it permissible for shade to be located more than ¼ mile or a five-minute walk away, whichever is shorter.  **Preventive Recovery Period**  Shade is a key ingredient to a preventive recovery period. The purpose of the preventive recovery period is to reduce heat stress on the employee. Since people produce more metabolic heat while working, resting reduces this source of heat, and it also reduces the heart rate.  As outlined in the section on drinking water, potable water should be available in the recovery area to prevent further dehydration and enhance recovery.  The preventive recovery period is not a substitute for medical treatment. If an employee has any symptoms of heat illness (refer to Attachment B), first-aid procedures should be initiated without delay.  **[BACK button.JPG](#ShadeBack)** | | | | | | |  |
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|  | |  | | |  | ***Addressing high-heat procedures*** | | |  |
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| **Program Development Guide** |  | Cal/OSHA wants you to be extra diligent when employees are exposed to outdoor heat at **95° F** and above. In addition to heat-related illness, high-heat conditions can also increase the risk of injuries as a result of sweaty palms, fogged-up safety glasses, and dizziness. Burns may also occur as a result of accidental contact with hot surfaces or steam.  Look back at the positions you listed in the Identifying Outdoor Work environments and Conditions Section and make sure you have included all the positions that have potential heat-related illness exposures, such as:   * Firefighters * Public works personnel * Police * Emergency response workers * Parks and recreation employees, including life guards * Athletics   Employees that may be at a greater risk of heat illness include those who are 65 years of age or older, are overweight, have heart disease or high blood pressure, or take medications that may be affected by high heat. [BACK button.JPG](#HighHeatBack) | | | | | | |  |
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|  | |  | | |  | ***Handling an ill employee and emergency procedures*** | | |  |
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| **Program Development Guide** |  | Review these procedures and ensure all supervisors understand their responsibilities.  The goal is to identify possible signs of heat illness as soon as possible to reduce the progression to a more serious stage. Review Attachment B and understand the following levels of heat-related illnesses:   * Skin irritation, sun burn, heat rash * Heat cramps * Heat syncope (fainting and dizziness) * Heat exhaustion * Heat stroke   Training must include the information necessary for effective emergency preparedness. This includes the procedures to be used in responding to an employee showing indications of heat illness, contacting emergency medical services, and providing directions to the worksite. Where the employees themselves are not capable of communicating directly with emergency services and giving directions to their location, the employer must ensure that a designated person who can communicate is identified to employees and is immediately availa[BACK button.JPG](#IllEmployeeBack)ble to contact emergency services. | | | | | | |  |
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|  | |  | | |  | ***Providing supervisor and employee training*** | | |  |
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| **Program Development Guide** |  | Conduct your employee and supervisor training before the warm season begins.  In addition to understanding how the weather and the temperature affect their bodies, employees need to understand their own personal risk factors for heat illness, such as age, health, alcohol and caffeine consumption, and use of medications that affect the body's water retention or other physiological responses to heat.  The importance of supervisory training cannot be overstated. Cal/OSHA conducted a study that showed 63% of the supervisors of employees who died from heat stroke had not been trained in the prevention of heat illnesses.  The most important measurement of successful training is its effectiveness.  Cal/OSHA evaluates whether:   * The training has occurred * The required content has been provided * The training has been effective overall in communicating the essentials to employees.  |  | | --- | | Resources | | Cal/OSHA - Extensive training resources available in English, Spanish, Hmong, and Punjabi  <http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html> | | OSHA Health and Safety Topic and Heat Illness Prevention e-Tool  <http://www.osha.gov/SLTC/heatstress/index.html>  <http://www.dir.ca.gov/dosh/etools/08-006/index.htm> | | Centers for Disease Control – Summer Hazards for Workers  [www.cdc.gov/niosh/blog/nsb071408\_summerheat.html](http://www.cdc.gov/niosh/blog/nsb071408_summerheat.html) |   [BACK button.JPG](#TrainingBack) | | | | | | |  |
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