



HEAT ILLNESS PREVENTION PROGRAM

A.J. Padelford & Son, Inc.
562-924-3364 • padelford.com/safety

Operating in California, Nevada, and Arizona

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Summary

It is our policy to ensure that all our employees are protected from heat illness while working on job tasks where environmental risks for heat illness are present, to establish requirements for working in this environment, to ensure employee awareness regarding heat illness symptoms, ways to prevent illness, and what to do if symptoms occur.

Responsibilities

Responsible Person (Brett Padelford or designee):

- Preparing and maintaining these guidelines.
- Assist in providing training to all potentially impacted employees and their superintendents on the risk and prevention of heat illness as outlined.
- Ensure our superintendents are enforcing them on the jobsite

Superintendents:

- Identify all employees who are required to work outdoors where potential heat illness could occur and identify the superintendent of the employees.
- Ensure that adequate water and shade are available on job site and assign an employee to carry this out.
- Ensure that all affected employees have received proper training and the requirements in this document are followed.
- Respond to heat illness without delay: provide first aid and emergency services by contacting 911 to request emergency medical services in the event medical assistance is required.
- Closely supervise new employees for the first 14 days and observe all employees for alertness and signs or symptoms of heat illness.
- Remind and encourage workers to frequently drink water and use shade.
- Maintain effective communication with your crew at all times (by voice, observation, or electronic means).
- Know what procedures to follow when a worker exhibits signs and symptoms of heat illness.
- Ensure that sufficient quantities of bottled water are readily available for use. Specify that the water and shade be located as close as possible to the workers.
- Ensure that the water is fresh, pure, and suitably cool. Don't leave in direct sun or enclosed vehicle, and make sure container(s) are clearly marked.
- Make sure employees have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it must be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift. (You may begin the shift with smaller quantities of water if you have effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour.)
- Keep a thermometer on site to monitor the temperature.

Employees:

- Comply with the provisions of our program.
- Ensure you drink water throughout the work day and utilize the shade as needed.
- Drink at least one quart or more over the course of an hour especially when the work environment is hot and you may be sweating more than usual as you work.
- Monitor your own personal factors for heat-related illness including consumption of water or other acceptable beverages to ensure hydration.
- Start work well hydrated.

- Don't wait for thirst before drinking water.
- Report heat related symptoms to your superintendent immediately.
- Avoid getting sunburned.
- Wear proper clothing: Light colored; Light weight; Natural fibers; Cooling vest may be helpful in some cases.
- Have a "Buddy System" to keep an eye on co-workers for symptoms of heat illness especially in temperatures over 80 degrees and for new employees.
- Employees taking a "preventative cool-down rest" must be monitored for symptoms of heat illness, encouraged to remain in the shade and not ordered back to work until symptoms are gone. Employees with symptoms must be provided appropriate first aid or emergency response.

Training

It is important for all workers and superintendents to be fully trained before they are assigned to work in locations where they are at risk for heat illness. It is critical that workers and superintendents are trained to recognize and report heat illness symptoms early before a more serious medical conditions arises.

Employees

Training in the following topics, as well as any other topic that could reasonably be anticipated to result in exposure to the risk of heat illness, shall be provided to each supervisory and non-supervisory employee before employees begin work.

- 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.
- The employer's procedures for complying with the requirements of this standard.
- The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties.
- The importance of acclimatization.
- The different types of heat illness and the common signs and symptoms of heat illness.
- The importance to employees of immediately reporting to the employer, directly or through the employee's superintendent, 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.
- The employer's 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.
- The employer's procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders. These procedures shall include designating a person to be available to ensure that emergency procedures are invoked when appropriate.

Superintendent Training

Prior to supervising employees performing work that should reasonably be anticipated to result in exposure to the risk of heat illness; effective training on the following topics shall be provided:

- The information outlined under employee training.
- The procedures to follow to implement our program.
- The procedures to follow when an employee exhibits symptoms consistent with possible heat illness including emergency response procedures.

- How to monitor weather reports and how to respond to hot weather advisories during high heat (85 degrees or higher). Make sure you remind employees to drink more water and use the shade areas more frequently.

Reminder to Superintendents on training - Communicate information in a language and by a method understandable to all employees. Make sure that employees understand the information given to them. Information should be specific to employees' and superintendents' actual work conditions and activities. Remind employees daily and during the weekly tailgate meetings. Make sure you review the English/Spanish posting from the trailer.

Records

All training and other records generated in association with this program shall be documented in accordance with our IIPP (Injury and Illness Prevention Program).

Risk factors

Heat illness results from a combination of environmental and personal risk factors described below. Environmental factors are working conditions that create the possibility that heat illness could occur. They include:

- High temperature and/or humidity
- Direct exposure to the sun or heat sources
- Limited air movement
- Physical exertion and duration
- Protective clothing and protective equipment worn by employees

Personal factors

Personal factors affect how well an individual deals with excess heat. They include:

- Age, weight, and physical condition
- Acclimation to working in the heat
- Consumption of water, alcohol, and caffeine
- Use of medications that affect tolerance to heat

Reduce the Risk

Reduce the risk of heat illness by taking these precautions:

- Recognize the hazard. There are no absolute temperature cutoffs below which work in heat ceases to be a risk. With heavy work conducted in high humidity, or if workers are wearing protective clothing, even work at 70°F can present a risk.
- Provide an ample supply of clean, cool drinking water. Superintendents will encourage employees to drink plenty of water. Employees working outdoors in heat need to drink three to four glasses of water per hour. For an eight-hour day, provide two or more gallons per person.
- Provide a shaded area for breaks and relief from the sun. Perform work in the shade when possible. Otherwise, provide a shaded area with good air circulation. When temperatures reach 80 degrees or higher shade will be available prior to the start of the day and will be as close as possible to the work site.
- **Encourage employees** to take a cool-down rest in the shade, for a period of no less than 5 minutes at a time. The amount of shade present must accommodate all employees on recovery or rest periods, and those onsite taking meal periods. Have and maintain one or more areas with shade. Permit access to shade at all times. Locate the shade structure as close as practicable to the areas where employees are working.

- Allow workers time to acclimate or gradually adjust to working in heat. Acclimation is especially important for those returning to work after a long absence or illness or recently arriving from a cooler climate. Starting with about two hours' work per day, allow four to 10 days of progressively increasing work time for very hot conditions.
- Ensure that workers take rest breaks. Breaks in a cooler, shaded area allow the body to cool and dissipate the internal heat load. Rest breaks are also an opportunity to drink water.
- Use the buddy system. **Assign each employee another employee** to keep an eye on that worker to recognize early signs or heat illness especially in high heat areas (over 95 degrees).
- Summon emergency medical services **immediately** when you suspect even initial symptoms of heat illness. Get help even if the person protests. Never leave unattended an employee who displays symptoms of serious heat illness without a medical assessment.

Note: In remote or temporary work areas, make sure you have communication means and knowledge of how to guide emergency services to your location.

Common Symptoms and Signs

Common early symptoms and signs of heat illness include:

- Headaches, dizziness, or lightheadedness.
- Muscle cramps.
- Unusual fatigue or weakness

Progression to more serious illness can be rapid and can include:

- Unusual behavior, irritability, or mental confusion.
- Nausea or vomiting
- Rapid pulse
- Excessive sweating or hot, dry skin.
- Seizures or fits
- Fainting or loss of consciousness

What to do when heat illness occurs:

- Move the person to a cool, shaded area
- Loosen or remove heavy clothing
- Provide drinking water or an electrolyte beverage such as Gatorade.
- Fan and mist the person with water.

Heat Illness – Emergency Response Procedures

Pre-Emergency steps:

- Jobsite has telephone (in trailer or cell phone access)
- Review jobsite address with all employees and the best way to direct emergency response teams to site
- Review nearest emergency medical facility with employee (posted in trailer)
- Review the symptoms of heat illness (posted in trailer) and make sure they understand employees who show they have these signs are never left alone or sent home without medical authorization

If an employee suffers a heat related illness or symptoms, he/she is to be transported to a local medical facility immediately except in extreme emergencies then the following steps will be taken:

- Call 911 immediately
- Move the victim to a cool location and begin cooling measures, including;

1. Loosening clothing.
 2. Pouring water over the head and body if possible.
 3. Providing water or sports type drink type drink for heat stressed worker to drink slowly, but steadily.
 4. Talk calmly to heat stressed person until medical service arrives.
- Position personnel at the site entrance to guide emergency personnel to the location of the injured workers.
 - Notify the designated company medical facility in that area so they will be prepared. Report the employee's name, type of symptoms and company name.
 - Certified first aid/CPR personnel will administer basic life-saving measures to the extent possible until professional help arrives or until the transported employee is at the hospital/medical center if we transport employee ourselves due to the location of the jobsite.
 - Call Brett immediately to report this exposure.
 - Before the employee is allowed to return to work following medical treatment for heat-related incidents, the medical provider must release the employee in writing to return to work.

Extra Measures during Heat Waves

Extra Vigilance - During a heat wave, it is necessary to be ***extra vigilant***. Your communication system and your "buddy system" are especially important and, based on the environmental conditions present and the condition of your employees, you can quickly make the appropriate buddy adjustments and put the changes into place before problems arise or become serious. In a heat wave:

- Do not allow employees to work alone.
- Designate person(s) to closely monitor and frequently report on employees' physical and mental condition.
- Have superintendents and employees watch each other very closely using your "buddy sign system," and encourage them to communicate how they are feeling on a frequent basis.
- Account for the whereabouts of employees at more frequent intervals throughout the work shift and at the end of the work shift.
- High-heat procedures (which are triggered at 95 degrees) shall ensure "effective" observation and monitoring, including a mandatory buddy system and regular communication with employees working by themselves. **During high heat, employees must be provided with a minimum 10-minute cool-down period every two hours.**

Additional Water Consumption

- Encourage employees to drink small quantities of water more frequently (i.e., in addition to the four 8-ounce glasses of water, or a total of one quart per hour) throughout the entire work shift to prevent dehydration.
- Have effective replenishment measures in place for the provision of extra drinking water to ensure that supplies are reliable.
- Ensure that employees replace lost salts and minerals from the added fluid loss.
- Encourage employees to consult with their doctor on salt and mineral replacement.
- Encourage workers to also drink water before and after work.

Additional Cooling Measures - Remember that shade is adequate only when it completely blocks the direct sunlight and allows the body to cool. Shade is not adequate when it does not allow the body to cool. In a heat wave, air temperatures in the shade may still be extremely high and not allow the body to cool. During a heat wave, you may need to use other alternative cooling measures in

addition to shade, (e.g. allowing employees to spend time in air conditioned places or having them spray themselves with water).

Additional and/or Longer Rest Breaks - During a heat wave, it is especially important to permit employees the freedom to interrupt work activities to take rest breaks and allow the body to cool.

During a heat wave (over 80 degrees) you need to allow employees to take more frequent and longer breaks. Remember to provide areas for employees to take their breaks which are:

- Readily accessible
- Open to the air and ventilated or cooled, or in shaded areas
- Near sufficient supplies of drinking water

Changing Work Scheduling and Assignments - During a heat wave, you may need to put into place one or more of the following additional measures:

- Start the work shift even earlier in the day or later in the evening
- Split-up work shifts to avoid work during the hottest part of the day
- Cut work shifts short or stop work altogether
- Reduce the severity of work by scheduling slower paced, less physically demanding work during the hot parts of the day and the heaviest work activities during the cooler parts of the day (early-morning or evening).

Indoor Heat Regulations

Procedures for Access to Cool-Down Areas for Indoor Places of Employment

- Cool-down areas will be provided. The temperature in the indoor cool-down areas will be maintained at less than 82 degrees Fahrenheit.
- The cool-down area will be available to accommodate all workers who are on a break at any point in time and will be large enough so that all workers on break can sit in a normal posture fully in the cool-down area without having to be in physical contact with each other.
- Workers will be informed of the location of the cool-down areas and will be encouraged and allowed to take cool-down breaks in the cool-down area(s) whenever they feel they need a break. A worker who takes a preventative cool-down rest break will be monitored and asked if they are experiencing symptoms of heat illness. In no case will the worker be ordered back to work until signs or symptoms of heat illness have abated (see the section on Emergency Response for additional information). If a worker exhibits signs or symptoms of heat illness while on a preventative cool-down rest, then appropriate first aid or emergency response will be provided. Preventative cool-down rest periods will be at least 5 minutes, in addition to the time needed to access the cool-down area.

Procedures for Temperature Assessment for Indoor Places of Employment

A thermometer will be used throughout the workplace to monitor temperature or heat index. Monitoring instruments will be maintained according to manufacturer's recommendations and the instruments used to measure the heat index shall be based on the heat index chart in Appendix A of Section 3396.

- Initial temperature or heat index measurements shall be taken where workers work and at times during the work shift when worker exposures are expected to be the greatest and when it is suspected to equal or exceed 82 degrees Fahrenheit.
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- Measurements will be taken again when they are reasonably expected to be 10 degrees Fahrenheit or more above the previous measurements where workers work and at times during the work shift when worker exposures are expected to be the greatest.

Procedures for Control Measures for Indoor Places of Employment

Control measures will be implemented when either of the following occurs:

- Indoor temperature or heat index is 87 degrees Fahrenheit or higher.
- Indoor temperature is 82 degrees Fahrenheit or higher and workers are either:
 - Wearing clothing that restricts heat removal or
 - Working in an area with high radiant heat.

Feasible engineering controls will be implemented first to reduce the temperature and heat index to below 87°F (or temperature to below 82°F for workers working in clothing that restricts heat removal or working in high radiant heat areas). Administrative controls will be added if feasible engineering controls are not enough to comply with the standard. If both feasible engineering and

administrative controls are not enough to decrease the temperature and minimize the risk of heat illness, then personal heat-protective equipment will be provided.

The following engineering controls will be implemented to lower the indoor temperature, heat index, or both to the lowest possible level. These controls help make the work environment cooler or create a barrier between the worker and the heat:

- Cooling fans or air conditioning
- Increased natural ventilation, such as open windows and doors when the outdoor temperature or heat index is lower than the indoor temperature and heat index
- Local exhaust ventilation at points of high heat production or moisture (such as exhaust hoods in laundry rooms)
- Reflective shields to block radiant heat
- Insulating/isolating heat sources from workers, or isolating workers from heat source
- Cooled seats or benches
- Evaporative coolers
- Dehumidifiers

The following administrative controls will be implemented once all feasible engineering controls have been implemented. These controls are modified work practices that can reduce heat exposure by adjusting work procedures, practices, or schedules:

- Modify work schedules and activities to times of the day when the temperature is cooler or schedule shorter shifts, especially during heat waves. Heat wave means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least 10 degrees Fahrenheit higher than the average high daily temperature in the preceding five days. For newly hired workers and unacclimatized existing workers, gradually increase shift length over the first one to two weeks.
- Require mandatory rest breaks in a cooler environment, such as a shady location or an air-conditioned building. The duration of the rest breaks should increase as heat stress rises.
- Schedule work at cooler periods or times of day, such as early morning or late afternoon.
- Rotate job functions among workers to help minimize exertion and heat exposure. If workers must be in proximity to heat sources, mark them clearly, so they are aware of the hazards.
- Require workers to work in pairs or groups during extreme heat so they can monitor each other for signs of heat illness.

The following personal heat-protective equipment will be provided if feasible engineering controls do not decrease the temperature enough and administrative controls do not minimize the risk of heat illness. This personal heat-protective equipment consists of special cooling devices that the worker wears on their body that can protect them in hot environments:

- Water and/or air-cooled garments, cooling vests, jackets, and neck wraps. The cooling source can be reusable ice packs or cooled air connected to an external source.
- Supplied air personal cooling systems
- Insulated suits
- Heat-reflective clothing
- Infrared reflecting face shields