



Heat Illness Prevention Program

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Purpose

The intent of this policy is to establish practice guidelines to prevent employees from suffering heat related illnesses.

References

OSHA's Occupational Heat Exposure

Responsibilities

Responsibilities for the successful implementation of this program shall be as follows:

Managers / Supervisors

Shall be responsible for the implementation of the program, including the necessary leadership, direction, enforcement and resources that will assure this program's effectiveness.

Safety Manager

Shall assist managers and supervisors by periodically auditing the employees' work environment for program effectiveness and compliance issues. Safety managers will also assist in any required corrective measures.

Employee

Employees shall report to their supervisors immediately should they encounter any workplace conditions where it may be necessary to implement all or part of this procedure.

General Requirements

Under OSHA law, employers are responsible for providing workplaces free of known safety hazards. This includes protecting workers from extreme heat.

1. Provisions of Water:

Water is a key preventive measure to minimize the risk of heat related illnesses.

Employees shall have access to potable drinking water meeting including but not limited to the requirements that it be fresh, pure, suitable cool, and provided to employees free of charge. The water shall be located as close as practicable to the areas where employees are working.



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Where the supply of water is not plumbed or otherwise continuously supplied, water shall 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. Work sites may begin the shift with smaller quantities of water if they have effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour without leaving the site without a water supply at any time.

The frequent drinking of water shall be encouraged. "High-Heat" means when temperatures reach 95 degrees or above. Procedures include observing employees, closely supervising new employees and reminding all workers to drink water.

The frequent drinking of water, as described in subsection (h)(1)(C) To ensure access to sufficient quantities of potable drinking water, the following procedures shall be observed NP Mechanical is requiring each employee on a jobsite to have at least 2 gallons of water at the beginning of each shift.

- a) The designated person will bring not-less-than 1 drinking water container (of 5 to 10 gallons each) to the site, so that at least 2 quarts per employee are available at the start of the shift. When the predicted temperature equals or exceeds 80°F, the designated person will provide enough drinking water so that each employee can drink at least 1 quart per hour, and will encourage them to do so.

NOTE: The average number of Company employees on a job site, per day/shift, is 3.

- b) The designated person will bring bags of disposable cups to the job site to ensure that enough disposable cups are made available for each worker and are kept clean until used.
- c) As part of the Company's Effective Replenishment Procedures, the designated person will check the water level of all containers every 30 minutes, and more frequently when the temperature exceeds 95°F. When the water level within a container drops below 50%, water containers will be refilled with cool water. To accomplish this task, the designated person will carry 1-2 additional 5 gallon water containers to replace water as needed.
- d) When the temperature exceeds 95 degrees, the designated person will carry ice in separate containers, so that when necessary, it will be added to the drinking water to keep it cool.
- e) The designated person will check the work site and place the water as close as possible to the workers, but not less than 50 feet from the workers. If field terrain prevents the water from being placed as close as possible to the workers, the designated person will bring bottled water or individual containers (in addition to disposable cups and water containers), so that workers can have drinking water readily accessible.



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- f) The designated person will ensure that the water containers are relocated to follow along as the crew moves, so drinking water will be readily accessible.
- g) The designated person will be responsible for cleaning the water containers and ensuring that they are kept in sanitary condition (all necessary cleaning supplies are provided by the company).
- h) The company will reimburse the designated person for any cost incurred for them to fill up their water containers as needed on a daily basis or to purchase necessary disposable cups or cleaning supplies. The company will furnish the designated person with expense reimbursement forms for this purpose, and will issue reimbursement checks with each payroll period (if the person has turned in the appropriate form).
- i) The designated person will point out daily the location of the water coolers to the workers and remind them to drink water frequently. When the temperature exceeds or is expected to exceed 85°F, the designated person will hold a brief 'tailgate' meeting each morning to review with employees the importance of drinking water, the number and schedule of water and rest breaks and the signs and symptoms of heat illness.
- j) The designated person will use audible devices (such as whistles or air horns) to remind employees to drink water.
- k) When the temperature equals or exceeds 95°F or during a heat wave, the designated person will increase the number of water breaks, and will remind workers throughout the work shift to drink water.
- l) During employee training, the importance of frequent drinking of water will be stressed.

2. Access to Shade :

Access to rest and shade or other cooling measures are important preventive steps to minimize the risk of heat related illnesses.

Employees suffering from heat illness or believing a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. Such access to shade shall be available at all times.

- a) Whenever acceptable sources of shade, such as houses, construction trailers, storage bins or trees, are not readily available and within a 2.5 minute walk away from the employees / workers, the designated person will bring at least 1 canopy or other portable shade structure to the site, to accommodate at least 25 percent of the employees on the shift and either chairs, benches, sheets, towels or any other items to allow employees to



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sit and rest without contacting the bare ground, and will ensure that the shade structure is open and placed within a 2.5 minute walk away from the workers when the temperature equals or exceeds 80°F. When the temperature is below 80°F, the shade structure will be brought to the site and opened upon workers' request.

Employees will have access to construction trailers or other air-conditioned buildings whenever possible. The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned and the air conditioner is on.

- b) The designated person will point out the daily location of the shade structures to the workers as well as allow and encourage employees to take a preventive cool-down rest in the shade whenever they feel the need to do so to protect themselves from overheating. Such access to shade shall be permitted at all times. The shade area shall be located as close as practicable to the areas where employees are working.
- c) The designated person will ensure that the shade structures are relocated to follow along with the crew and double-check that they are as close as practical to the employees, so that access to shade is provided at all times.
- d) The amount of shade present shall be at least enough to accommodate the number of employees on recovery or rest periods, so that they can sit in a normal posture fully in the shade without having to be in physical contact with each other.
- e) Subject to the same specifications, the amount of shade present during meal periods shall be at least enough to accommodate the number of employees on the meal period who remain onsite.
- f) In situations where it is not safe to provide shade (example winds of more than 40 mph), the designated person will document how this determination was made, and what steps will be taken to provide shade upon request.
- g) The designated person is expected to know the forecast, as of 5:00 p.m. the previous day, and to ensure that shade is present at the beginning of the shift and throughout the day whenever the predicted high equals or exceeds 80°F.
- h) When the temperature exceeds or is expected to exceed 80°F, the designated person will hold a brief 'tailgate' meeting each morning to review with employees the importance of cool-down rest in the shade, drinking water, the number and schedule of water and rest breaks and the signs and symptoms of heat illness.
- i) An employee taking a preventive cool-down rest will be monitored, and asked if he or she is experiencing symptoms of heat illness; shall be encouraged to remain in shade and shall not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than 5 minutes in addition to the time needed to access the shade.



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- j) If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest or during a preventative cool-down rest period, the employer shall provide appropriate first aid or emergency response.

3. Monitoring the Weather.

- a) 2 weeks in advance (or with as many days in advance as possible), the Employer and/or designated person will go on the internet (www.nws.noaa.gov), call the National Weather Service Phone Numbers (see NV numbers below) or check the Weather Channel TV Network to view the extended weather forecast in order to plan in advance the work schedule, know whether a heat wave is expected and if schedule modifications will be necessary. This type of advance planning should take place throughout the summer months; generally, the months of June, July and August, or for as long as the extended weather forecast is for temperatures that equal or exceed 80°F.

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- b) Prior to each workday, the designated person 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, for instance whether or not workers will be exposed at a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses such as heat stroke. 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.
- c) Prior to each workday, the designated person will be responsible for monitoring the weather (using www.nws.noaa.gov or with the aid of a simple thermometer) at the worksite. This critical 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).
- d) The designated person will be responsible for using a thermometer at the jobsite and checking the temperature every 60 minutes to monitor for sudden increases in temperature, to ensure that once the temperature exceeds 80°F, the shade structures are opened and accessible to the workers and to make certain that once the temperature equals or exceeds 95°F additional preventive measures such as the High Heat Procedures are implemented.

4. Handling a Heat Wave.

During a heat wave or heat spike (a sudden increase in daytime temperature of 9 degrees or more), the work day will be cut short, the work will be rescheduled or, if possible, cease for the



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day.

- a. If schedule modifications are not possible and workers have to work during a heat wave, the designated person will hold a tailgate meeting to reinforce heat illness prevention with emergency response procedures and review the weather forecast with the workers. In addition, the designated person will institute alternative preventive measures, such as provide workers with an increase number of water and rest breaks, supervise workers to ensure that they do stop work and take these breaks, and observe closely all workers for signs and symptoms of heat illness. A tailgate meeting will be held at the start of each workday for as long as the heat wave persists.
- b. The designated person will assign each employee a “buddy” to be on the lookout for signs and symptoms of heat illness and ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness.

5. High Heat Procedures.

The Company will observe the following additional preventive measures when the temperature equals or exceeds 95°F.

- a) The designated person will ensure that effective communication by voice, observation, or electronic means is maintained so that employees at the worksite can contact a supervisor when necessary. If the designated person is unable to be near the workers to observe them or communicate with them, then an electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable.
- b) The designated person will observe employees for alertness and signs and symptoms of heat illness.
- c) The employer shall ensure effective employee observation/monitoring by implementing one or more of the following:
 1. Supervisor or designee observation of 20 or fewer employees, or
 2. Mandatory buddy system, or
 3. Regular communication with sole employee such as by radio or cellular phone or,
 4. Other effective means of observation
- d) The designated person will remind employees throughout the work shift to drink plenty of water.
- e) The designated person will on each worksite be authorized to call emergency medical services, and allow other employees to call for emergency services when no designated employee is available.



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- f) Pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary.

6. Acclimatization

- a) The Company will monitor the weather and in particular be on the lookout for sudden heat waves or increases in temperatures to which employees haven't been exposed to for several weeks or longer.
- b) During a heat wave or heat spike (a sudden increase in daytime temperature of 10 degrees or more), the work day will be cut short, the work will be rescheduled or, if possible, cease for the day. If possible during the hot summer months, the work shift will start 1 hour earlier in the day.
- c) For new employees, the designated person will try to find ways to lessen the intensity of the employees work during a two-week break-in period 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.
- d) The designated person will be extra-vigilant with new employees and stay alert to the presence of heat related symptoms. New employees shall be closely observed by a supervisor or designee for the first 14 days of the employee's employment.
- e) The designated person will assign new employees a "buddy" or experienced coworker to watch for discomfort or symptoms of heat illness.
- f) During a heat wave, the designated person will observe all employees closely (or maintain frequent communication via phone or radio) and be on the lookout for possible symptoms of heat illness.
- g) The Company's training for employees and supervisors will include the importance of acclimatization, how it is developed and how these company procedures address it.

7. **Emergency Response Procedures.**

The employer shall implement effective emergency response procedures including:



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- a) Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor or emergency medical services when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable. If an electronic device will not furnish reliable communication in the work area.
- b) Responding to signs and symptoms of possible heat illness, including but not limited to first aid measures and how emergency medical services will be provided:
 - 1. If a supervisor observes, or any employee reports any signs or symptoms of heat illness in any employee, the supervisor shall take immediate action commensurate with the severity of the illness.
 - 2. If the signs or symptoms are indicators of severe heat illness (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior or convulsions), the employer must implement emergency response procedures.
 - 3. An employee exhibiting signs or symptoms of heat illness shall be monitored and shall not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with the employer's procedures.
- c) Contacting emergency medical services and, if necessary, transporting employees to a place where they can be reached by an emergency medical provider.
- d) 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.
- e) Prior to assigning a crew to a particular worksite, the designated person will provide workers 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.
- f) Prior to assigning a crew to a particular worksite, the designated person will ensure that a qualified, appropriately trained and equipped person will be available at the site to render first aid if necessary.
- g) Prior to the start of the shift, the designated person will determine if a language barrier is present at the site and take steps to ensure that emergency medical services can be immediately called in the event of an emergency.



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- h) All foremen and supervisors will carry cell phones or other means of communication to ensure that emergency medical services can be called and check that these are functional at the worksite prior to each shift.
- i) When an employee is showing symptoms of possible heat illness, the designated person will take immediate steps to keep the stricken employee cool and comfortable once emergency service responders have been called.
- j) In the event a job site is located in a remote area, the designated person will designate an employee or employees to physically go to the nearest road or highway where emergency responders can see them. If daylight is diminished, the designated employee(s) shall be given a reflective vest or flashlights in order to direct emergency personnel to the location of the worksite, which may not be visible from the road or highway.
- k) During a heat wave or hot temperatures, workers will be reminded and encouraged to immediately report to their supervisor any signs or symptoms they are experiencing.
- l) The Company's training for employees and supervisors will include every detail of these written emergency procedures.

8. Handling Sick Employees.

- a. When an employee displays possible signs or symptoms of heat illness, the designated person and/or a trained first aid worker will check the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called. The designated person will stay with the sick worker, or designate an employee or employees to stay with the sick worker until he or she has recovered and/or emergency responders arrive. If no trained first aid worker is available at the site, call emergency service providers.
- b. Call emergency service providers immediately if an employee displays signs or symptoms of heat illness and does not get better after drinking cool water and resting in the shade. Signs or symptoms of heat illness include the following:
 - 1. Dehydration, which may cause muscle cramping.
 - 2. Incoherent speech.
 - 3. Convulsions.
 - 4. Red and hot face.



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5. Weakness and tiredness.
6. Mental confusion.
7. Irritable or erratic behavior.
8. Heat rash, which looks like a red cluster of pimples or small blisters and often occurs on the neck, chest, groin, under the breasts or in elbow creases. It can disrupt sleep and work performance, and lead to an infection.
9. Heat cramps; i.e., painful muscle spasms in the stomach, arms, legs and other body parts.
10. Fainting, sudden dizziness, light-headedness or unconsciousness.
11. Heat exhaustion. Signs or symptoms of heat exhaustion include heavy sweating, painful muscle cramps, extreme weakness and/or fatigue, nausea and/or vomiting, dizziness and/or headache, body temperature normal or slightly high, fainting, pulse fast and weak, breathing fast and shallow, and clammy, pale, cool, and/or moist skin.
12. Heatstroke. Signs or symptoms of heatstroke include no sweating (because the body cannot release heat or cool down), mental confusion, delirium, convulsions or dizziness; hot and dry skin, uncontrollable muscle twitching, rapid and weak pulse, throbbing headache, shallow breathing, seizures, unconsciousness and coma.

While the ambulance is in route, initiate first aid, cool the worker, place in the shade, remove excess layers of clothing, place ice pack in the armpits and joint area and fan the employee. Do not let a sick worker leave the site, as he or she can get lost or die (when not being transported by ambulance and treatment has not been started by paramedics) before reaching a hospital!

- c. If an employee does not look OK and displays signs or symptoms of severe heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face, heat exhaustion or heatstroke), and the worksite is located more than 20 minutes from a hospital, call emergency service providers, communicate the signs and symptoms of the sick employee and request Air Ambulance.

9. Training:

Effective training in the following topics shall be provided to each supervisory and non-supervisory employee before the employee begins work that should reasonably be anticipated to



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result in exposure to the risk of heat illness:

- a. 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. **"Environmental risk factors for heat illness"** means working conditions that create the possibility that heat illness could occur, including:

1. Air temperature
2. Relative humidity
3. Radiant heat from the sun and other sources
4. Conductive heat sources such as the ground
5. Air movement
6. Workload severity and duration
7. Protective clothing and personal protective equipment worn by employees

"Personal risk factors for heat illness" means factors such as:

1. Water consumption
2. Alcohol consumption
3. Degree of acclimatization
4. Caffeine consumption
5. Use of prescription medications that affect the body's water retention or other physiological responses to heat.
6. An individual's age
7. Health

- b. The employer's procedures for complying with the requirements of this standard, 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.

- c. The importance of frequent consumption of small quantities of water, up to 1 quart per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties.



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- d. The concept, importance, and methods of acclimatization, pursuant to the employer's procedures under subsection (i)(4).
- e. The different types of heat illness and the common signs and symptoms of heat illness, the common signs and symptoms of heat illness, and appropriate first aid and/or emergency responses to the different types of heat illness, and in addition, that heat illness may progress quickly from mild symptoms and signs to serious and life threatening illness.
- f. The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in coworkers.
- g. The employer's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary.
- h. The employer's procedures for contacting emergency medical services, including how to proceed when there are non-English speaking workers, how to furnish emergency responders with clear and precise directions to the job site, how to transport employees to a point where they can be reached by an emergency medical service provider, and how to direct emergency responders to job sites located in remote areas.
- i. The Company will ensure that all foremen and supervisors are trained prior to being assigned to supervise other workers. Training will include its written procedures and the steps foremen and supervisors will follow when employees exhibit signs or symptoms of heat illness.
- j. The Company will ensure that all employees and supervisors are trained prior to working outside. Training will include its written prevention procedures.
- k. When the temperature exceeds 75°F, the designated person will hold short tailgate meetings to review the weather report, reinforce heat illness prevention with all workers and provide reminders to drink water frequently, to be on the lookout for signs and symptoms of heat illness and inform them that shade can be made available upon request.
- l. The designated person will assign new employees a "buddy" or experienced coworker to ensure that they understood the training and follow company procedures. In addition to the above training, prior to supervising employees performing work that should reasonably be anticipated to result in exposure to the risk of heat illness, foremen and supervisors shall receive additional training:
 - 1. The information required to be provided by the training described in this program.



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2. The procedures the designated person and/or supervisory employees are to follow to implement the provisions of this program.
3. The procedures the designated person and/or supervisory employees are to follow when an employee exhibits symptom consistent with possible heat illness, including emergency response procedures.
4. How to monitor weather reports and how to respond to hot weather advisories.