

Heat Illness Prevention Plan for Outdoor workers

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Scope and Purpose

California State University, Dominguez Hills (CSUDH) is dedicated to protecting the health, safety and wellbeing of students, employees, visitors, and the surrounding community. The Heat Illness Prevention Plan is established to protect employees from heat-related injuries and illnesses.

The Plan applies to employees who work outdoors or in areas where the environmental risk factors for heat-related injury or illness are present. Environmental Health & Safety (EHS) administers and oversees implementation of the Plan. This Plan shall be made available to employees at the worksite. This Plan complies with Cal/OSHA's requirement for CSUDH to develop and implement a written heat illness prevention plan as defined in the following regulation:

California Code of Regulations (CCR),	https://www.dir.ca.gov/Title8/3395.html
Title 8 Section	

Definitions

Acclimatization - The temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for about two hours per day in the heat.

Environmental risk factors for heat illness - The 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 personnel protective equipment worn by employees.



*This heat index chart shows how environmental risk factors can affect someone's response to heat

Heat illness - 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. Refer to the chart below on types of illnesses for specific information.

Personal risk factors for heat illness - Factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

Preventative cool-down rest - A period of time to recover from the heat in order to prevent heat illness.



Shade - The blockage of direct sunlight. Canopies, umbrellas, and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning. Shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions and that does not deter or discourage access or use.

Temperature - means the dry bulb temperature in degrees Fahrenheit obtainable by using a thermometer to measure the outdoor temperature in an area where there is no shade. While the temperature measurement must be taken in an area with full sunlight, the bulb or sensor of the thermometer should be shielded while taking the measurement, e.g., with the hand or some other object, from direct contact by sunlight.

Responsibilities

EHS shall:

- Review the written Plan for effectiveness, make revisions if necessary and maintain the Plan.
- Provide training to all potentially impacted employees and their supervisors on the risks and prevention of heat illness, including how to recognize symptoms and respond when they appear.
- Maintain training records.

Department Supervisors shall:

- Identify all employees who are required to work outdoors or in other environments where potential heat illness could occur.
- Provide affected employees with access to adequate water and shade at the job site when the environmental risk factors for heat illness are present.
- Ensure that all affected employees have received proper training on heat illness prevention.
- Bring a copy of the Plan to the worksite and make it accessible to employees.
- Ensure that the requirements of the Plan are followed.
- Allow and encourage affected employees to drink water frequently and take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating.
- Monitor the temperature at the job site and implement high-heat procedures when required.
- Implement emergency response procedures and contact University Police to request emergency medical services in the event medical assistance is required.

Affected Employees shall:

- Receive training and comply with the provisions of the Plan.
- Ensure they have drinking water available at all times when the environmental risk factors for heat illness are present.
- Ensure they have access to a shaded area to prevent or recover from heat-related symptoms.
- Monitor coworkers and themselves for signs and symptoms of heat-related illness.

Report all signs and symptoms of heat-related illness to their supervisor



Types of Heat Illness Disorders

Heat Illness is a medical condition resulting from the body's inability to cope with a particular heat load, and includes heat rash, dehydration, heat cramps, heat exhaustion, and heat stroke.

Condition	Symptoms	Treatment
Heat Rash	Itching/irritation of the skin from clogged sweat glands	Keep affected area dry, and apply powder if necessary to absorb moisture
Heat Cramps	Painful spasms in arms, legs, abdomen; hot, moist skin	Drink fluids, massage cramped areas, rest in shade. If condition does improve after 1 hour seek medical attention
Heat Exhaustion	Heavy sweating, pale/cool skin, rapid Pulse, Fatigue, Increased thirst, headache, blurred vision, fainting	Move to a cool, shaded area, rest with legs elevated, loosen clothing, drink plenty of fluids
Heat Stroke	Very high body temp, lack of sweating, hot, red and dry skin, headache, dizziness, weakness, rapid pulse	Call 911 or university police at (310) 243-3333 Stay with person and help them to shade If conscious and responsive, provide drinking water Remove layers of clothing and apply wet cool towels or wet their clothes down Use a fan or other cooling device directly to the person

Access to Water

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

Where drinking water is not plumbed or otherwise continuously supplied, it 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. Employers 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. The frequent drinking of water shall be encouraged.



Access to Shade

Shade shall be **present** when the temperature exceeds 80 degrees Fahrenheit. When the outdoor temperature in the work area exceeds 80 degrees Fahrenheit, the employer shall have and maintain one or more areas with shade at all times while employees are present that are either open to the air or provided with ventilation or cooling. 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. The shade shall be located as close as practicable to the areas where employees are working. 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.

Shade shall be **available** when the temperature does not exceed 80 degrees Fahrenheit. When the outdoor temperature in the work area does not exceed 80 degrees Fahrenheit employers shall either provide shade, as stated above, or provide timely access to shade upon an employee's request.

Employees shall be allowed and encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating. Such access to shade shall be allowed at all times. An individual employee who takes a preventative cool-down rest shall:

- Be monitored and asked if he or she is experiencing symptoms of heat illness.
- Be encouraged to remain in the shade.
- 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.
- If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cooldown rest or during a preventative cool-down rest period, the supervisor shall provide appropriate first aid or emergency response according to the section below.

Where access to shade is not feasible or it unsafe to have a shade structure, or otherwise to have shade present on a continuous basis, CSUDH may utilize alternative procedures for providing access to shade if the alternative procedures provide equivalent protection or better. For example, the use of misting machines may be provided in lieu of shade if CSUDH can demonstrate that these measures are at least as effective as shade in allowing employees to cool down. Any use of alternative procedures must be documented in writing prior to starting work and communicated to supervisors and affected employees.

High Heat procedures

The following procedures shall only apply to Grounds and high heat procedures shall be implemented when the temperature meets or exceeds 95 degrees (°F).

These procedures include:

- 1. Maintaining effective communication between employees and supervisors, by voice, observation, phone, radio, or otherwise, so that the employees may contact a supervisor when necessary.
- 2. Observing employees closely for signs/symptoms of heat illness. This can be accomplished by ensuring that each supervisor oversees 20 or less employees, by implementing a buddy system, or by maintaining



constant communication with a sole employee (using one of the methods above).

- 3. Designating one or more employee(s) on each worksite to contact emergency services when necessary (and allowing other employees to contact emergency services when designee is not available).
- 4. Reminding employees to drink water regularly throughout the work day.

Pre-shift meetings shall be conducted before the commencement of work during high-heat periods to review the procedures listed above, encourage employees to drink adequate amounts of water, and remind them of their right to take a cool-down rest when necessary.

Emergency Response Procedures

CSUDH shall implement effective emergency response procedures. Supervisors shall:

- Ensure 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, the employer will ensure a means of summoning emergency medical services.
- Respond to signs and symptoms of possible heat illness, including but not limited to, first aid measures and how emergency medical services will be provided.
 - 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.
 - 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.
 - 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.
- Contact University Police at (310) 243-3333 or 9-1-1 for emergency medical services.
- Ensure that, in the event of emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

Acclimatization

All employees shall be closely observed by a supervisor or designee during a heat wave. "Heat wave" means any day in which the predicted high temperature for the day will be at least 80 (°F)and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days. An employee who has been newly assigned to a high heat area shall be closely observed by a supervisor or designee for the first 14 days of the employee's employment.

Training

EHS will provide one-time effective training to supervisors and affected employees before the employee



begins work in an environment that should reasonably be anticipated to result in exposure to the risk of heat illness. Employees can also utilize CSU Learns' training on "Heat Illness Prevention". Supervisors can also utilize CSU Learns' training on "Heat Illness Prevention for Supervisors". Refresher training will be provided by EHS upon request or if an employee demonstrates a need to be retrained. Department supervisors must identify employees that require training and contact EHS to arrange for training to be provided. EHS will provide training for employees as follows:

Employee Training

All employees who may work in an environment that should reasonably be anticipated to result in exposure to the risk of heat illness will be trained on the following:

- 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.
- Procedures for complying with the requirements of this standard, including, but not limited to, CSUDH'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.
- 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 concept, importance, and methods of acclimatization pursuant to CSUDH's procedures stated in this program.
- The different types 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.
- The importance of immediately reporting to the direct supervisor symptoms or signs of heat illness in themselves, or in co-workers.
- CSUDH's procedures for responding to signs or symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary.
- CSUDH'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.
- CSUDH's procedures for ensuring that, in the event of 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.

Supervisor 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 to the supervisor:

- The information outlined in the Employee Training section.
- The procedures the supervisor is to follow when an employee exhibits signs or reports symptoms consistent with possible heat illness, including emergency response procedures.
- How to monitor weather reports and how to respond to hot weather advisories.



Recordkeeping

Records related to the implementation and maintenance of the University's Heat Illness Prevention Plan shall be retained per the CSU Executive Order 1031 record retention policy and schedule: http://www.calstate.edu/recordsretention/documents/EHS.pdf

The following records shall be maintained by EHS:

• Training Records

Helpful Resources

For more information and resources on preventing heat-related illness, visit Cal/OSHA's website at https://www.dir.ca.gov/dosh/heatillnessinfo.html



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