San Diego State University
HEAT ILLNESS PREVENTION

I. OVERVIEW AND OBJECTIVES

Employees who work in outdoor places of employment or on job tasks in other areas at those times when the environmental risk factors for heat illness are present are at risk for developing heat illnesses if they do not protect themselves appropriately. The objective of this program is employee awareness regarding heat illness symptoms, ways to prevent illness, and what to do if symptoms occur.

This written program is based on the California Code of Regulations, Title 8, Section 3395. Compliance is also required with all other applicable Title 8 regulations. This written program shall be made available to employees and to Cal/OSHA representatives upon request.

II. SCOPE

The San Diego State University Heat Illness Prevention Program applies to the control of risk of occurrence of heat illness. This includes outdoor places of employment or other areas at those times when the environmental risk factors for heat illness are present and it can reasonably be anticipated to result in exposure to the risk of heat illness.

III. POLICY

It is the policy of San Diego State University that any employee participating in job tasks when environmental risk factors for heat illness are present will comply with the procedures in this document and in the Injury and Illness Prevention Program.

IV. PURPOSE

To ensure that all employees on the San Diego State University campus are protected from heat illness while working on job tasks where environmental risk factors for heat illness are present and to establish the minimum requirements for working in this environment.

V. DEFINITIONS

"Acclimatization" means 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” means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personnel protective equipment worn by employees.

“Heat illness” means 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.

“Landscaping” means providing landscape care and maintenance services and/or installing trees, shrubs, plants, lawns, or gardens, or providing these services in conjunction with the design of landscape plans and/or the construction (i.e., installation) of walkways, retaining walls, decks, fences, ponds, and similar structures, except for employment by an employer who operates a fixed establishment where the work is to be performed and where drinking water is plumbed.
“Personal risk factors for heat illness” means 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” means a period of time to recover from the heat in order to prevent heat illness.

“Shade” means 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.

“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.

VI. RESPONSIBILITIES

A. Environmental Health and Safety (EH&S) is responsible for:

1. Preparing and maintaining a written program which complies with applicable Cal/OSHA requirements.

2. Assisting with providing 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.

B. Directors, Managers, and Supervisors are responsible for:

1. Identifying all employees who are required to work outdoors or on job tasks in other areas at those times when the environmental risk factors for heat illness are present and identifying the supervisor of the employees.

2. Assuring that adequate water and shade are available at a job site when the environmental risk factors for heat illness are present.

3. Ensuring that all affected employees have received proper training on heat illness prevention.

4. Ensuring that the requirements in this document are followed.

5. Contacting University Police to request emergency medical services in the event medical assistance is required. University Police will direct emergency medical services to the work site.

C. Affected employees are responsible for:

1. Complying with the provisions of the Heat Illness Prevention Program, as described in this document and in the training sessions they attend.

2. Ensuring they have drinking water available at all times when the environmental risk factors for heat illness are present.

3. Ensuring they have access to a shaded area to prevent or recover from heat related symptoms.
4. Reporting heat related illness symptoms to the supervisor, Facilities Services Work Control, or University Police.

VII. BASIC REQUIREMENTS

The following basic requirements apply to all employees while working where environmental risk factors for heat illness are present.

A. Identification/Training

1. All employees shall be identified who are required to work where environmental factors for heat illness are present.

2. Training shall be provided for all potentially impacted employees working where environmental risk factors for heat illness are present and their supervisors. Training information shall include, but not be limited to the risks and prevention of heat illness, including how to recognize symptoms and respond when they appear, and the topics listed in section VIII of this written program.

B. Potable Water

1. Potable water shall be provided at no cost to the employees. It shall be fresh, pure, suitably cool (in hot weather the water must be cooler than the ambient temperature but not so cool as to cause discomfort), and located as close as practicable to the areas where employees are working.

2. Employees shall periodically check the level of the water containers.

3. Water containers providing a source of potable water shall include: Coolers on job sites for employees to dispense out of into their own personal containers, prefilled personal containers, and drinking fountains inside of buildings.

4. 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.

5. 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.

6. Supervisors shall remind employees to drink frequently and not to wait until they are thirsty. The frequent drinking of water shall be encouraged.

7. This topic shall be reviewed at tailgate meetings.

C. Shade

1. When the outdoor temperature in the work area exceeds 80 degrees Fahrenheit

   a. One or more areas with shade shall be maintained at all times while employees are present that are either open to the air or provided with ventilation or cooling.

   b. 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. 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.
c. The shade shall be located as close as practicable to the areas where employees are working and in a location that does not deter or discourage access or use. When practical, at SDSU the campus buildings shall be utilized for shade.

2. When the outdoor temperature does not exceed 80 degrees Fahrenheit
a. Shade is required as described in Section C.1. or employees shall be provided timely access to shade upon their request.

3. In the event it is infeasible or unsafe to have a shade structure, or otherwise to have shade present on a continuous basis, alternative procedures may be utilized for providing access to shade upon request if the alternative procedures provide equivalent protection.

4. Cooling measures other than shade (e.g., use of misting machines) may be provided in lieu of shade if these measures are at least as effective as shade in allowing employees to cool.

D. Acclimatization/Heat Wave

1. A heat wave is defined as any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days.

2. All employees shall be closely observed by a supervisor or designee during a heat wave.

3. 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 employment.

E. Preventative Cool Down Rest

1. In the event an employee feels discomfort from the heat, a preventative cool down rest is needed to allow the employee to cool down and prevent the onset of heat illness.

2. 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 permitted at all times.

3. 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, shall be encouraged to remain in the 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.

4. If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool down rest emergency services shall be provided.

5. The importance of taking rest breaks and recognizing when a preventative cool down rest is needed allowing employees to cool shall be addressed at tailgate meetings.

F. Communication

1. Effective communication by voice, observation, or electronic means shall be maintained so that employees at the work site can contact a supervisor, Facilities Services Work Control, or University Police when necessary. An electronic device, such as a cell phone, text messaging device, or radio may be used for this purpose only if reception in the area is reliable. Verification that the radios or other means of communication are functional at the worksite shall be carried out prior to each shift.
2. Supervisors shall also maintain effective communication with their employees.

G. Weather Awareness

1. Managers and Supervisors shall be aware of the weather on job sites and the predicted temperature highs.

2. Weather information shall be included as a factor when coordinating the work schedule and work tasks.

H. High Heat Procedures

1. High heat procedures shall be implemented when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

   a. Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor 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.

   b. Observing employees for alertness and signs or symptoms of heat illness. This includes ensuring effective employee observation/monitoring by implementing one or more of the following: Supervisor or designee observation of 20 or fewer employees, or a mandatory buddy system, or regular communication with sole employee such as by radio or cellular phone, or other effective means of observation.

   c. Designating one or more employees on each worksite as authorized to call for emergency medical services, and allowing other employees to call for emergency services when a designated employee is not available.

   d. Reminding employees throughout the work shift to drink plenty of water.

   e. 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.

I. Emergency Procedures

1. If a supervisor observes or an employee reports any signs or symptoms of heat illness in any employee the supervisor shall take immediate action and implement emergency response procedures.

2. 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.

3. In the event of a medical emergency such as heat illness or any other type of emergency, employees shall contact their supervisor or University Police by dialing “911” or (619) 594-1991 from a cell phone or campus telephone. Specific details pertaining to employee symptoms and location shall be provided. University Police will initiate Emergency Medical Services.

4. 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 another procedure for this shall be determined.
5. If radio communication is being used by Facilities Services on the job site, Facilities Services employees shall contact Work Control using the radio and Work Control shall contact University Police.

6. If applicable the employee shall be transported to a place where they can be reached by an emergency medical provider.

7. At the Imperial Valley Campus on site employees shall dial “911” from a cell phone or campus telephone to be connected directly with the City Emergency Medical Services. The supervisor shall also be contacted.

8. When reporting an emergency, employees shall provide very specific details to the dispatcher or Facilities Services Work Control, including but not limited to condition of the employee and job site location.

VIII. TRAINING

A. Requirement

1. Effective training shall be provided for employees participating in job tasks where environmental risk factors for heat illness are present and it can reasonably be anticipated to result in exposure to the risk of heat illness.

2. Training shall be provided before employees begin work and equivalent training shall be provided for their respective supervisors.

B. Topics

All employees working on job tasks where environmental risk factors for heat illness are present shall receive instruction before beginning work tasks. Training topics shall include the following:

1. 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.

2. Procedures for complying with Cal/OSHA requirements, including but not limited to: identifying, evaluating, and controlling exposures to heat illness; requirements for provision of water, shade, cool down rests, and access to first aid; and the employees’ right to exercise their rights under this standard without retaliation.

3. The importance of frequent consumption of small quantities of water, up to 4 cups or 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.

4. The definition, concept, importance, and methods of acclimatization.

5. Different types, common signs, common symptoms of heat illness, appropriate first aid and/or emergency responses to the different types of heat illness, and potential for heat illness to progress quickly from mild symptoms and signs to serious life threatening illness.

6. Observation of coworkers for alertness and signs or symptoms of heat illness. 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 co-workers.

7. Procedures to follow when assisting someone experiencing heat illness symptoms until emergency medical service providers arrive.
8. Importance of immediately reporting symptoms or signs of heat illness in themselves or in coworkers to their supervisor, Facilities Services Work Control, or University Police to initiate emergency medical services.

9. Procedures for ensuring that, in the event of an emergency, clear and precise information will be provided to University Police and they will provide directions to the work site for emergency responders.

C. Supervisors of Affected Employees

Supervisors or their designees shall receive training on the following topics prior to being assigned to supervise employees performing work that should reasonably be anticipated to result in exposure to the risk of heat illness:

1. Information as detailed in section VIII B.

2. Procedures the supervisor shall follow to implement the provisions of this program.

3. Procedures the supervisor shall follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

4. Weather awareness and how to respond to hot weather advisories, i.e. coordinating work schedule and tasks.

5. Reminding employees throughout the work shift to drink plenty of water.

6. High heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit.

7. Acclimatization/heat wave procedures.

IX. PROGRAM AUDITS

A. Responsibility

Audits of the Heat Illness Prevention Program shall be performed by Supervisors and Environmental Health and Safety.

B. Frequency

Audits of the Heat Illness Prevention Program shall be performed annually.

C. Contents

1. The audit shall review the program to ensure that heat illness prevention procedures are in place and are being properly followed.

2. The audit process and findings shall be documented.

X. RECORDS

All training, audit, and other records prepared in association with the Heat Illness Prevention Program shall be managed in accordance with the requirements of the San Diego State University Injury and Illness Prevention Program.