

USC HEAT ILLNESS PREVENTION PROGRAM

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USC University of
Southern California

OFFICE OF ENVIRONMENTAL HEALTH & SAFETY

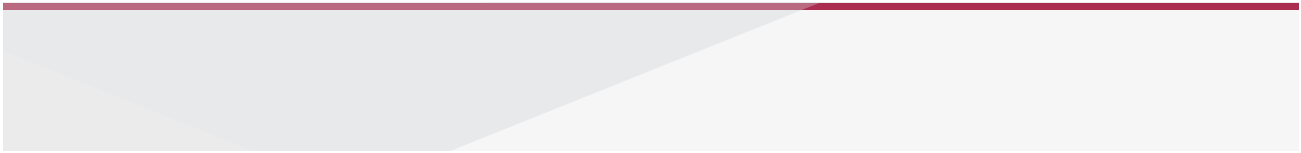


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Revision Summary

Sections 1.0 - 2.0

- Pg. 1.1 • Minor edits to Policy and Scope.
- Pg. 2.1 • Minor edits to Definitions and one addition.

Sections 3.0 - 4.0

- Pg. 3.1 • Minor edits to *EH&S'* responsibilities; edits to and *Supervisors'* responsibilities.
- Pg. 3.2 • Edits to *Employees'* responsibilities.
- Pg. 4.1 • Edits to *Access to Water* and *Access to Shade* sections.
- Pg. 4.2 • Major edits to *Monitoring the Weather*, *Work Acclimatization*, and *Heat Related Illness Response* sections.
- Pg. 4.3 • Edits to *Training* section.

Sections 5.0 - 6.0

- Pg. 5.1 • No edits.
- Pg. 6.1 • Reference to Cal/OSHA Discussion Guide: Water. Rest. Shade removed.
• Reference to California Emergency Management Agency web page removed.
• New URLs for weather.gov, OSHA Heat Safety Tool, and OSHA Heat App added.

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1.0 Policy, Authority, and Scope

Policy

Employees working in the outdoors or in locations when environmental risk factors for heat illness are present are at greater risk for injury if they do not take the necessary steps to protect themselves. The objective of this program is to enhance employee awareness regarding heat illness, the different types of heat illness, prevention measures, and related first aid.

It is the policy of University of Southern California (USC) that employees who work outdoors and warm environments and all individuals who supervise these employees must comply with the procedures in this program in addition to those in the [Injury and Illness Prevention Program](#).

Authority

California Code of Regulations, Title 8, Section 3395.

Scope

This program applies to employees who work outdoors and in warm environments, and their supervisors, when environmental risk factors for heat illness are present.

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2.0 Definitions

Acclimatization is the beneficial physiological adaptations that occur during repeated incremental exposure to a hot environment. These physiological adaptations include:

- Increased sweating efficiency (earlier onset of sweating, greater sweat production, and reduced electrolyte loss in sweat)
- Stabilization of blood circulation
- The ability to perform work with lower core temperature and heart rate
- Increased skin blood flow at a given core temperature



Drinking water - Must be fresh, pure, suitably cool and located as close as reasonably achievable to employees.

Environmental risk factors for heat illness - The cumulative effects of 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), tools, clothing and personnel protective equipment.

Heat illness - A serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat rash, heat cramps, heat exhaustion, heat syncope and heat stroke.

Personal risk factors for heat illness - Characteristics and lifestyle behaviors including age, degree of acclimatization, health, consumption (water, alcohol and caffeine) and prescription medications that affect the body's retention of fluids and other physiological responses to heat.

Preventative cool down rest period - A period of time taken (as needed) by an employee to "cool down" or restore the body's vitals to restive numbers.

Shade – That which results from blocking direct sunlight. Canopies, umbrellas, and other temporary structures or devices may be used to block the sun and provide shade. An appropriate shade area must factor in both the lack of exposure to direct sunlight as well as a lower temperature. Both are essential for the body to cool.

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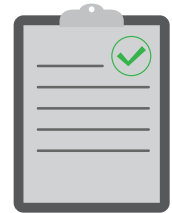


3.0 Accountability

Environmental Health and Safety (EH&S)

Environmental Health and Safety will:

- Prepare and maintain a written program which complies with the requirements of Cal/ OSHA Title 8, 3395.
- Provide training to potentially impacted employees and their supervisors on the risk factors of heat illness and ways to prevent it, including how to recognize symptoms and take appropriate response measures.



Supervisors

Supervisors will:

- Identify all employees having work duties, environments, or health issues that put them at higher risk for heat illness.
- Provide fresh, pure, and suitably cool drinking water and cool shaded areas that are closely accessible to employees when access to a building's amenities is beyond a short walk.
- Monitor the weather (current and forecast) and make necessary adjustments to the work load or schedule for the purpose of reducing the risk of heat-related illnesses.
- Ensure that all employees receive proper training on heat illness prevention to reduce the risk of heat-related illness.
- Ensure that the requirements in this program are followed.
- Contact the Department of Public Safety (DPS) for medical emergencies or when medical assistance is required.

Employees

Employees will:

- Comply with the provisions of the Heat Illness Prevention Program. Attend and adhere to information/ guidelines that were covered and/or documented as part of the Heat Illness Training.
- Consume drinking water frequently when risk factors for heat illness are present.
- Utilize cool shaded areas to rest and recover after working in the heat.
- Report any heat related illness symptoms to their supervisor.
- Be alert for the signs and symptoms of heat illness.
- Inform your supervisor of any health issue that might affect your ability to work safely in the heat.
- Inform your supervisor if water or shade is not readily available.
- Look out for fellow co-workers.

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4.0 Program

Access to Water

- Supervisors must provide employees with access to fresh, pure, and suitably cool water and encourage consumption of small amounts frequently throughout the workday.
- All workers, whether working alone or in groups, will have access to drinking water.
- If plumbed potable water is not readily accessible, portable water containers or bottled water must be made available before work can commence.
- Water storage containers, drinking vessels and support utensils must be kept in a condition that is both clean and sanitary.
- Water must be placed as close as possible to the workers to encourage frequent water consumption.
- When the work environment is such that water cannot be placed close to the workers, bottled water or personal water containers must be provided.
- Storage containers must be refilled with fresh cool water when levels drop below 50%.
- When the aforementioned mandates cannot be met, work must cease and the workers must be moved into a controlled environment.
- During employee training, the importance of frequent water intake will be stressed.










Access to Shade

- Access to open shade structures is required when temperatures equal or exceed 80°F.
- Supervisors must provide access to shade promptly at temperatures less than 80°F when requested by an employee.
- Employees in need of a recovery period from the heat must be provided with access to shade that is either open to the air or provided with ventilation or mechanical cooling.
- Alternative cooling methods may be used if they prove to be at least as effective as an appropriate shaded area.
- When access to open shade structures is required, the shade structures must be as close to the workers and work site as practical.
- During employee training, the importance of taking frequent rests breaks in cool shade will be stressed.



Monitoring the Weather

- Prior to each workday, supervisors will monitor the weather via either the National Weather Service, the Weather Channel, AccuWeather, or local broadcast station.
- Work scheduling and type of work performed must be respectful of the forecast and modified, if necessary, to prevent heat illness.
- A thermometer will be used to determine current temperatures at work locations.
- When the temperature equals or exceeds 95°F, outdoor activities will be modified accordingly.
- Supervisors will remind workers before and during the work shift to take frequent breaks and drink plenty of water; small amounts frequently is best!

Su	M	Tu	W	Th	F	Sa
						
95 ^o	105 ^o	105 ^o	90 ^o	90 ^o	100 ^o	100 ^o

Worker Acclimatization

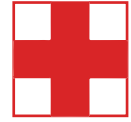
- Supervisors of new employees and employees not accustomed to working in the heat must lessen the work load and intensity for the first two weeks. Acclimatization must be gradual and deliberate.
- Acclimatization process must be appropriate and tailored to the individual employee.
- Supervisors will remind employees before and during the work shift to pace themselves, take frequent breaks in cool shade, and to drink plenty of water.

Heat-Related Illness Response

- When an employee displays signs or symptoms of heat illness, move the victim to shade, provide cool water to drink, remove excess layers of clothing, place ice packs in the armpits and groin and fan the victim. Do not leave the victim unattended at any time.
- When an employee suffering from heat illness condition does not improve after consuming water and resting, initiate medical emergency procedures..
- When an employee displays signs or symptoms of severe heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face), initiate medical emergency procedures.
- When any of the above occurs at a location in which a hospital is greater than 20 minutes away, initiate medical emergency procedures.

Medical Emergency Procedures

- Notify the USC Department of Public Safety at (213) 740- 4321.
- All other locations and work sites notify the local emergency medical response at 911.



Training

When environmental risk factors for heat illness are present in a job site or work location, heat illness training must be provided for employees assigned to work in those areas. Supervisors of those employees must also attend or complete subject appropriate training. Refresher training must be conducted annually. All training must be documented.

Employees

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

- The environmental and personal risk factors related to heat illness.
- The procedures for identifying, evaluating, and controlling exposure to the risk factors.
- The importance of:
 - Acclimatization
 - Water, rest, and shade
- The different types, signs and symptoms of heat illness.
- The importance of promptly reporting any symptoms of heat illness to their supervisor.
- How to respond to symptoms of heat illness, including how to request emergency medical services should they become necessary.

Supervisors and Affected Employees

Supervisors or their designees shall receive training from EH&S or an accredited outside source on the following topics prior to being assigned to supervise outdoor employees:

- Information as detailed above in the employee training requirements.
- How to effectively implement the provisions of this program.
- How to respond effectively when an employee exhibits or reports symptoms consistent with possible heat illness, to include requesting emergency medical services.

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5.0 Records

Records

All training records (electronic or hard copy) prepared in association with the Heat Illness Prevention Program will be maintained by the host department.

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6.0 References/Resources

References/Resources

Cal/OSHA:

<http://www.dir.ca.gov/dosh/heatillnessinfo.html>

OSHA Heat Safety Tool (Heat Safety Application)

<https://www.osha.gov/heat/heat-app>

National Weather Service:

<https://www.weather.gov/>



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