

Indoor Heat Illness Prevention

Working in hot indoor environments can result in heat illness, which left untreated can rapidly lead to serious health-threatening situations. To prevent heat illness, SU personnel and their supervisors are to:

- Understand the environmental and personal risk factors for heat illness
- Take the necessary steps for preventing heat illness
- Be able to recognize the early signs/ symptoms of heat illness
- Know the University's established emergency response procedures for heat illness

Basics of Heat Illness:

Heat Illness Signs/ Symptoms

Recognizing symptoms of heat stress early is paramount in preventing more severe illness. Having the knowledge will enable a supervisor/designee to take the proper emergency response steps. Some are listed below:

A. Early signs/ symptoms of heat illness include:

- Dehydration
- Headache
- Muscle cramps
- Unusual fatigue

B. Progression to serious illness such as heat exhaustion and heat stroke can be fast, and is indicated by symptoms including:

- Cool, moist skin
- Dizziness, light headedness
- Nausea or vomiting
- Fast heartbeat
- Confusion or unusual behavior
- Excessive sweating OR red, hot, dry skin/face
- Convulsions or seizures
- Fainting

IMPORTANT: For signs/symptoms of heat illness, immediately give first aid or emergency response described below. Anyone with symptoms must never be sent home or left unattended without medical evaluation.

Workplace Emergency Procedures

If any symptoms of serious illness are present, and first aid trained personnel are not immediately available to make an assessment, immediately call 911 (or 9-911 from a campus phone) or transport employee to the Stanford Hospital Emergency Room. While waiting for emergency help:

- Get victim to a cool environment
- Loosen or remove excess clothing
- Provide cool drinking water if person is conscious and not nauseous
- Fan and mist the person with water
- Apply a water-soaked towel (or ice pack wrapped in a towel) to head and ice packs to the armpits.

FOLLOW-UP: Any employee who is evaluated for heat illness in the emergency room must follow-up with the Stanford University Occupational Health Center (650) 725-5308 on the next business day and be medically cleared before returning to work.

Risk factors:

A. **Personal risk factors** for heat illness include (but are not limited to):

- Age
- Medical Conditions
- Alcohol/Caffeine Consumption
- Water Consumption
- Degree of Acclimatization

B. **Environmental risk factors** for heat illness include (but are not limited to):

- Air Temperature
- Relative Humidity
- Air Movement
- Radiant/Conductive Heat
- Work Intensity
- Clothing

Preventing Heat Illness While Indoors- General Requirements

Supervisors shall ensure the specific measures below to prevent heat illness amongst their staff while also ensuring compliance with Cal/OSHA's regulatory requirements for Indoor Heat Illness Prevention ([Title 8 CCR 3396](#)).

A. Indoor Heat Illness Prevention Training

Employees and supervisors shall be provided training prior to assigning and beginning indoor work during periods of warmer weather. This safety training shall cover:

- 1) The general information in this document, and
- 2) Department-specific procedures
 - Departments shall document local indoor heat illness prevention procedures which shall be made available to employees. Refer to **Appendix A** below or contact EH&S at (650) 723-0448 for guidance on creating these procedures.

B. Provision of Drinking Water

A sufficient quantity of fresh and suitably cool drinking water shall be readily accessible. If water is not plumbed or continuously supplied to the area, supervisors should make a point to provide at least one quart of water (per employee) per hour.

C. Work Planning and Supervision

- 1) Assess conditions-- For indoor locations where temperatures may exceed **82°F**, stay alert during warm periods, checking weather forecasts (<http://www.weather.gov/>) and the current weather (<https://weather.stanford.edu/>) to assess the potential for heat stress/ illness. *NOTE: For unseasonably humid days, the heat load will be greater.*
- 2) If the indoor temperature is, or is expected to be, greater than **87°F** during warmer seasons, consider temporary relocation to a cooler area where practical.
- 3) Worker acclimatization-- The body needs a certain period of time to adjust to working in heat and humidity, especially when heavy physical exertion is required. *NOTE: Acclimatization is especially important for new employees, those returning to work after a prolonged absence or recent illness, or for those recently moving from a cooler climate.*
- 4) For indoor environments with temperatures or heat indexes (whichever is higher) of **87°F** or warmer, OR **82°F** for workers working in clothing that restricts heat removal or near high-radiant-heat areas, supervisors shall ensure:
 - a) An adequate cool-down area is present for employees to take their rest/meal breaks at or nearby their work area
 - b) To encourage employees to take a preventative cool-down rest when they feel it is needed to prevent overheating. Workers taking a cool-down rest shall:
 - Be monitored and asked if they are feeling heat illness symptoms,
 - Take at least 5 minutes to rest, AND
 - Not be ordered back to work until any signs/symptoms of heat illness are gone
 - c) Provision of effective means for personnel to contact supervisor and emergency services (i.e., cell phones, walkie-talkies)

Contact SU EH&S at (650) 723-0448 for further information on indoor heat illness prevention.

Appendix A Indoor Heat Illness Prevention: Department Procedures

Department/Group Name:

Contact Person:

Contact Telephone Number:

Prepared by:

Date:

Per Cal/OSHA's Heat Illness Prevention in Indoor Places of Employment requirement (Title 8 CCR 3396), SU departments shall provide written local procedures for preventing indoor workplace heat illness where their workplace does not receive mechanical cooling. Use the template below to document these procedures.

DIRECTIONS:

- 1) Carefully review the standard procedures (in italics) and include further detail on how these safety measures will be implemented locally.
- 2) Ensure employees are trained on local procedures (in addition to the general indoor heat illness guidance above).
- 3) Keep these written procedures accessible for employee review.

Contact SU EH&S at (650) 723-0448 for additional assistance.

Note: These procedures provide the minimal steps applicable to most indoor work settings and are essential to reducing the incidence of heat-related illnesses. In working environments with a higher risk for heat illness (e.g. during a heat wave, or other severe working or environmental conditions), it is the department's duty to exercise greater caution and additional protective measures beyond what is listed in this document, as needed to protect their employees.

I. INDOOR HEAT ILLNESS PREVENTION PROCEDURES
A) Indoor Heat Illness Prevention Training
<ul style="list-style-type: none"> • <i>Supervisors and employees are to be provided heat illness prevention training prior to beginning work indoors where temperatures may exceed 82°F . For training assistance, EH&S can be contacted at (650) 723-0448.</i>
B) Provision of water and cool-down area
<p><i>Supervisor ensure:</i></p> <ol style="list-style-type: none"> 1) <i>Fresh and suitably cool water is provided and readily accessible to employees while working-- at least one quart per employee per hour at the start of every shift if water is not plumbed or continuously supplied.</i> 2) <i>Employees are encouraged to drink water frequently.</i>

C) When indoor temperature OR indoor heat index is greater than 87°F OR if the indoor temperature is 82°F for workers working in clothing that restricts heat removal or near high-radiant-heat areas:

- 1) If able, ensure employees find alternative work locations that have a temperature-controlled environment. Describe how you intend to ensure this, OR, ensure items # 2) and 3) are completed.**
- 2) Create and maintain adequate cool-down areas for employees to use during rest and lunch periods, and actively encourage their use for these purposes:**
 - a) First, utilize engineering controls such as mechanical cooling systems to better control temperature in cool-down spaces., cool-down areas should be blocked from direct sunlight to assist with keeping temperatures in the space below 87°F OR 82°F for workers working in clothing that restricts heat removal or near high-radiant-heat areas. NOTE: Where not safe or feasible to provide a cool-down area at or near the worksite on a continuous basis, supervisor shall document why the cool-down area cannot be provided and what alternative steps will be taken to provide other cooling measure(s) having equivalent protection. Retain records for one year.
 - b) Supervisors encourage employees to take a cool-down rest in _____ when they feel it is needed to prevent overheating.
 - c) Workers taking a cool-down rest are:
 - Monitored and asked if they feel any symptoms of heat illness,
 - Provided first aid and emergency response (see Section II) if heat illness symptoms are indicated
 - Encouraged to rest in the cool-down area, AND
 - Not ordered back to work until any signs/symptoms of heat illness are gone. Employee shall remain resting for at least 5 minutes, and is not to return to work tasks until any signs/symptoms of heat illness are gone.
- 3) Employee heat acclimatization is ensured:**
 - a) During a heatwave- when the temperature is at least 10 degrees warmer than the average daytime temperature of the previous 5 days:
 - Supervisor/designee closely observes employees for discomfort or possible signs of heat illness
 - b) When an employee is newly assigned to work in these warmer indoor conditions:
 - Supervisor/designee closely observes any employee for the first 14 days

II. EMERGENCY RESPONSE PROCEDURES

A) Stanford University'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.

- **Immediately call 911 (or 9-911 from on-campus phone).**
- **Transport affected employee to Stanford Hospital Emergency Room.**

B) Department's procedures for ensuring that, in the event of an emergency, clear and precise directions to the worksite can and will be provided as needed to emergency responders.

Supervisors ensure that work crews are provided (on paper or other means) the exact location of the worksite (e.g., street address, building name) and can give clear, precise directions to emergency responders to avoid delay of emergency medical services.

Appendix B

Heat Illness Prevention: Group Training Documentation

Per Cal/OSHA and University policy, any health and safety training provided shall be documented. Training records shall be maintained for at least one year. Contact EH&S at (650) 723-0448 or visit ehs.stanford.edu for any health and safety training questions.

Title of Training: Indoor Heat Illness Prevention for (circle one):	Supervisors	Employees	Date:
Location:	Training Time/Duration:		
Reason for Training: Regulatory and awareness			
Regulation Required: 8 CCR 3396			
Summary of Topics Covered: Heat illness risk factors, preventive measures (general and department-specific), recognition of signs/symptoms, and emergency response			
Training Aids Used:			
Instructor (name and department):			
Instructor's Signature:		Date:	

	Printed Name (please print legibly)	Signature	SU ID Number	Department
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