Stanford | Environmental Health & Safety

Heat Illness Prevention

Stanford University Environmental Health & Safety
Occupational Health and Safety Program
Rev. 3/28/2017

Purpose and Objective

Purpose: Understand the hazards of working environments with heat illness potential and how to mitigate those hazards through safe work practices.

Objectives:

- Identify the elements of a heat illness prevention program
- Identify signs and symptoms of heat illnesses
- Identify emergency response procedures for heat illnesses

Agenda

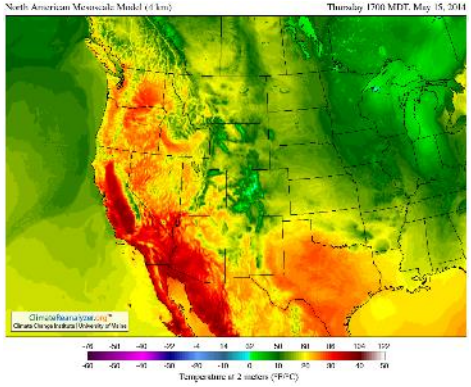
1. Heat Stress/Illness
   - Risk factors
   - Types of heat illnesses

2. Heat Illness Prevention Program
   - Heat illness prevention
   - Emergency procedures
   - Written procedures

3. Responsibilities
   - Employee
   - Supervisor
   - EH&S
   - Occupational Health Center

Risk Factors for Heat Stress/Illness

- Weather conditions
  - Temperature
  - Humidity
  - Air movement
- Intensity and/or duration of physical activity
- Clothing and PPE



Risk Factors for Heat Stress/Illness (Personal)

- Physical condition
- Age
- Degree of acclimatization
- Water consumption
- Some medications
- Alcohol/drugs

Effects of Heat on the Body

The body tries to maintain a constant internal temperature

As internal temperature rises from activity, the body cools itself by:

- Increasing blood flow to skin surface
- Releasing sweat onto skin surface

Heat Exhaustion

Cause

- Excessive loss of water and salt through sweat

Signs and Symptoms

- Dizziness
- Headache
- Sweaty skin
- Fast heart beat
- Nausea, vomiting
- Weakness
- Cramps

Heat Stroke

Cause

- Total breakdown of the body's cooling system

Signs and Symptoms

- Sweating stops; skin is hot, red, and dry
- Mental confusion, losing consciousness
- Seizures or convulsions

Heat strokes are a life threatening medical emergency

Obtain medical assistance immediately

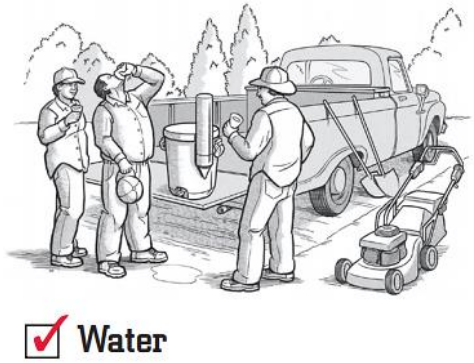
Heat Illness Prevention Program

Heat Illness Prevention Program for each department/group must contain the following:

- ✓ Access to Water
- ✓ Access to Shade
- ✓ Weather Monitoring and Acclimatization
- ✓ High Heat Procedures
- ✓ Emergency Response Procedures
- ✓ Training

Access to Water

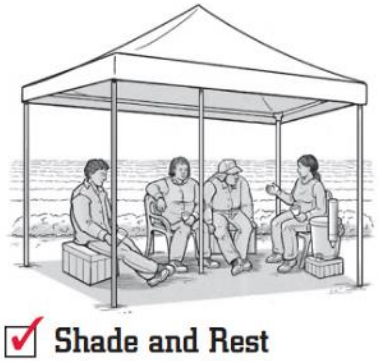
- Provide enough clean, cool, and fresh drinking water to allow every working person to drink at least **four cups per hour**.
- Drinking water must be accessible to every working person
- Encourage personnel to maintain regular fluid intake; drink water even if you aren't thirsty



- Keep water readily accessible; move water as personnel move
- Avoid soda and other drinks with high sugar content

Access to Shade

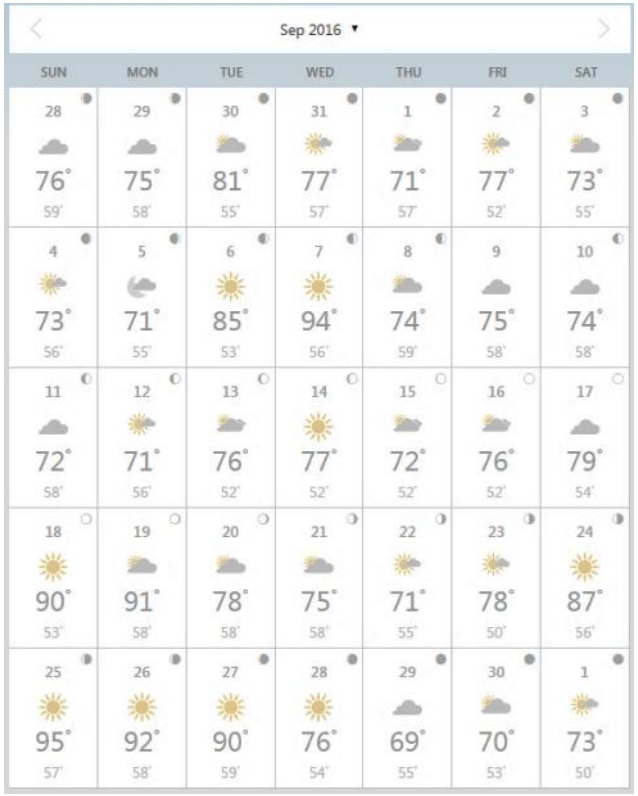
- Provide shade when temperatures exceed **80ºF**
- Encourage employees to take cool-down rests
  - At least 5 minutes to rest
  - Do not go back to work until any signs/symptoms or heat illnesses are gone



- Provide enough shade to accommodate employees taking rest or meal breaks
- Position shade nearby work area

Weather Monitoring and Acclimatization

- Track weather and adjust work to temperatures
  - Modify work schedule
  - Plan for staff rotation
  - Increase water and rest breaks
- Allow personnel to get used to working in heat and/or humidity
  - Typically takes up to 2 weeks to adjust



High Heat Procedures

Extra precautions are needed when temperatures exceed **95ºF**

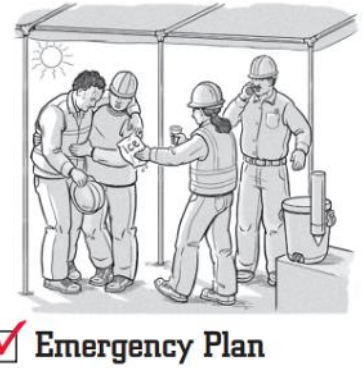
- Regularly monitor employees for alertness and signs/symptoms of heat illness
- Ensure effective communication is maintained throughout workday
- Remind employees to drink plenty of water and take cool-down rests throughout the workday
- Discuss methods to prevent heat illness during pre-shift meetings

Emergency Response Procedures

1. Call 911 (9-911 from campus landline)

2. While waiting for help to arrive:
   - 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 pack to the armpits

3. Follow-up with Occupational Health Center is required prior to returning to work

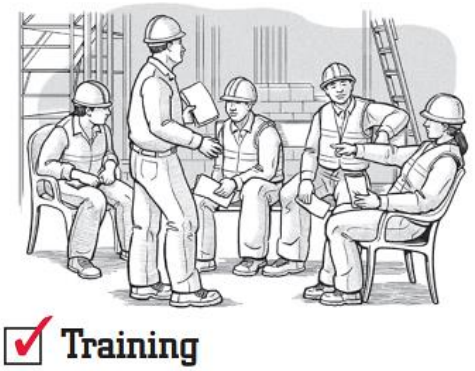


Do not leave any employees exhibiting signs/symptoms of heat illness alone

Training

All supervisors and employees must be trained in the following:

- ❑ Risk factors for heat illness
- ❑ Common heat illnesses and their signs/symptoms
- ❑ Heat illness prevention procedures
  - Access to water
  - Access to shade
  - Acclimatization



- ❑ Emergency response procedures

Written Procedures

Each department/group must have a written Heat Illness Prevention Program that covers the following:

- Provision of water and shade
- Heat illness prevention methods
- High heat procedures
- Emergency response procedures

A Heat Illness Prevention Procedures and Training form is available on the EH&S website to assist with the development of your written procedures

Responsibilities

Employees:

- Understand and follow heat illness prevention and emergency response procedures

Supervisors:

- Implement a Heat Illness Prevention Program
- Provide heat illness prevention training to staff
- Ensure adequate access to water and shade to employees
- Understand and execute emergency response procedures for heat illnesses

Responsibilities

EH&S:

- Assist supervisors with developing and implementing a Heat Illness Prevention Program
- Provide Heat Illness Prevention training

Occupational Health Center:

- Evaluate employees suspected of or having suffered a heat illness prior to returning to work

Questions

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