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 **80°F**

• 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 95°F

• 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