Preventing Heat Illness

Heat illness includes heat cramps, fainting, heat exhaustion and heatstroke. Workers have died or suffered serious health problems from these conditions. Heat illness can be prevented.

- **Know the Symptoms of heat illness:**
  Watch for symptoms in yourself and your coworkers. If you feel any symptoms, tell your coworkers and supervisor immediately because you may need medical help. Know who to talk to and how to get help before you start each workday.

  - **Early Symptoms:**
    - Fatigue
    - Heavy Sweating
    - Headache
    - Cramps
    - Dizziness
    - High pulse rate
    - Nausea/vomiting

  - **Life-threatening symptoms:**
    - High body temperature
    - Red, hot, dry skin
    - Confusion
    - Convulsions
    - Fainting

Tell your supervisor if you are new to working in the heat or have had heat illness before.

- **Stay alert to the weather:** During a heat wave, you are at greater risk of getting sick. You need to watch yourself and coworkers more closely, and may need to drink more water, take more breaks and use other measures.

- **Drink enough cool, fresh water:** Drink at least one 8-ounce cup (3 cones) every 15 minutes during your entire work shift. Do not wait until you are thirsty to drink water.

- **Do not drink alcohol**
- **Avoid coffee**
- **Choose water over soft drinks**
- **Take rest breaks in the shade to cool down**
- **Wear proper clothing:** Loose fitting light-weight and light-colored cotton clothes, a wide-brimmed hat or cap, and a bandana. Talk to your doctor if you have illnesses like diabetes, are taking medicines or are on a low salt diet.

- **If you work outdoors, by law, your employer must provide you:**
  - Enough cool, fresh drinking water throughout the day.
  - Access to shade or an equally cool spot for at least 5 minutes at a time
  - Training on how to prevent heat illness and how to call for emergency services.
Amended California Regulations Impact Outdoor Workers

By: Sara Souza - UC Berkeley EH&O

Most of us have experienced some form of heat illness—perhaps on a trip to a hot climate or sitting in the hot sun at an outdoor event. We likely chose to take refuge in air conditioning or recover in the shade with a cold drink. In the workplace, however, employees may ignore the early signs of heat illness and continue working in the sun; for example if they are new on the job, or possibly under pressure from supervisors or coworkers to get the job done, or simply to prove they can keep up.

But heat exhaustion can lead to heat stroke—and be fatal—if signs and symptoms are ignored. Cal/OSHA enforces the Heat Illness Prevention Standard (Title 8 §3395) to address this workplace hazard through required training, supervision, access to water, and mandatory rest breaks in shade.

As of May 1, 2015 the requirements of the Heat Illness Prevention Standard are triggered for outdoor workers when temperatures reach 80°F (instead of 85°F). Other amendments include clarification that water provided must be “fresh, pure and suitably cool,” and that a pre-shift meeting is now required when high-temperature controls are triggered at 95°F. The employer must also ensure effective employee observation or monitoring by direct supervision, a buddy system, or regular communication via radio or cell phone. The full standard, a summary of changes, and training resources are available at dir.ca.gov/dosh/heatillnessinfo.html.

The lower temperature trigger means the standard will apply more frequently throughout California, and is more relevant in coastal areas. For example, 2014 weather data for the UC Berkeley campus shows that the temperature reached 80°F on 34 days, 85°F on 14 days, and 95°F on just one day of the year. About an hour drive away at the UC-managed Blue Oak Ranch Reserve, temperatures reached 80°F on 122 days, 85°F on 70 days and 95°F on ten days.

Outreach and Training:

In the Heat Illness Prevention Standard, Cal/OSHA emphasizes the role of supervisors to check weather forecasts, ensure access to shade and water, monitor workers for signs and symptoms of heat illness, and ensure that, in the event of an emergency, clear and precise directions to the work site can and will be provided to emergency responders. At UC Berkeley, we are taking a train-the-trainer approach by targeting outreach to supervisors of outdoor workers and providing a one-page work site checklist as a planning tool to document compliance with the requirements.

DID YOU KNOW?

California employers are required to take these four steps to prevent heat illness:

Train all employees and supervisors (that work outdoors) about heat illness prevention.

Provide enough fresh water so that each employee can drink at least 1 quart per hours, and encourage them to do so?

Provide access to shade and encourage employees to take a cool-down rest in the shade for at least 5 minutes. They should not wait until they feel sick to cool down.

Develop and implement written procedures for complying with the Cal/OSHA Heat Illness Prevention Standard.

HEAT RELATED APPS:

- **iHydrate**: Helps athletes, parents, and coaches to monitor signs of heat-related illness
- **OSHA Heat Safety Tool**: Allows workers and supervisors to monitor the heat index for their worksite, get reminders about protective measures, monitor symptoms, and provide training on heat-illness. It is available for iphone and android, in Spanish and English
HEAT ILLNESS SAFETY TRAINING RESOURCES

- Cal/OSHA Heat Illness Information and Regulations
- California Department of Public Health (Heat-related illness and mortality report)
- Weather Forecasts
- CDC guidance on heat stress
- Cal/OSHA Pocket Guide for Workers (English and Spanish)
- OSHA Heat Fatalities map with incident reports
- Warning signs and symptoms of heat-related illness from the CDC
- FEMA Extreme Heat Fact Sheet

UPCOMING EDITIONS

- August: Lab Safety
- September: Emergency Preparedness
- October: Fire Prevention

CONNECT

Know where to turn on your UC campus for the information you need to keep yourself, your workplace and your environment safe and secure. Click on the campus links below to connect to local program, educational and informational resources.

- UC Berkeley
- UC Davis
- UC Irvine
- UCLA
- UC Merced
- UC Riverside
- UC San Diego
- UC San Francisco
- UC Santa Barbara
- UC Santa Cruz
- UCOP
- UC ANR

Heat Safety Quiz

Questions

1. Following the Cal/OSHA standard (Title: 8 §3395. Heat Illness Prevention), a 10 gallon water cooler will provide enough drinking water to cover an 8 hour shift for how many employees?

A. 20  
B. 10  
C. 5  
D. 1

2. The body's temporary adaptation to heat which occurs gradually when a person is working and exposed to heat is called what?

3. True or False? If someone has “Heat Stroke” their skin will be hot and dry?

Answers

1. C. Each person must have access to 1 quart (4 cups) of water per hour. For an 8 hour workday that's 2 gallons per person! 2 gallons of water weighs almost 20 pounds, that's a lot of water. The water must be pure and cool, and workers should be encouraged to drink regularly in hot temperatures. It's always best to drink before you feel thirsty.

2. Acclimatization. Generally it takes up to 14 days to acclimate to working in heat. When temperatures exceed 95°F new workers must be supervised at all times during their first 14 days working in heat. There must be an effective means of communication, observation and monitoring for signs of heat illness for all workers.

3. True. Heat stroke occurs when the body's ability to cope with heat stress shuts down, sweating stops, and the body's temperature rises to 104° or more. Heat stroke is a life-threatening emergency. 911 must be called and efforts to cool the person must begin immediately.

FEEDBACK, PLEASE

Send an email to EHS@ucop.edu to submit your comments on the May issue or to suggest content ideas for future issues. We look forward to hearing from you!