

Heat Illness Prevention

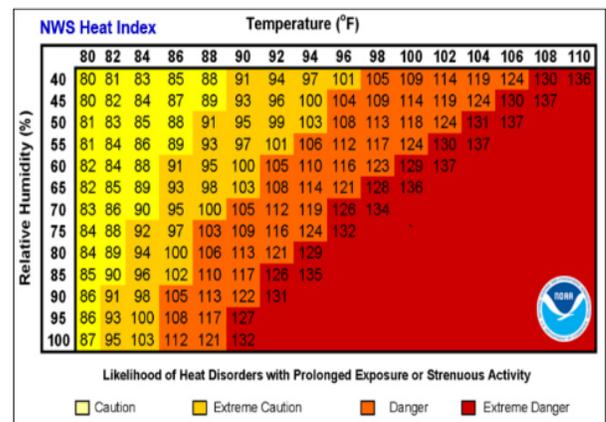
Training Short 2.0

Heat-induced illnesses can occur when the body cannot cool off by sweating. These illnesses can be serious, sometimes even resulting in death. This training will help reinforce awareness of heat stress, heat-related illnesses, and prevention measures. Note: Employers in California, Minnesota, Oregon, and Washington have additional heat illness guidance and responsibilities.

Factors Leading to Heat Stress

The following are common factors that can all contribute to heat stress:

- Temperature and humidity – Heat Index or Humidex
- Direct sun or heat
- Limited air movement
- Physical exertion
- Physical and medical conditions
- Some medications
- A lack of tolerance for hot workplaces or areas



Source: National Weather Service

The Heat Index is an indicator of what the temperature really feels like outdoors.

Heat Stress Prevention

- Know the signs and symptoms of heat-related illnesses and monitor yourself and your co-workers.
- Block or avoid direct sunlight or other heat sources.
- Use cooling fans or air conditioning.
- Take regular breaks in shaded areas.
- Drink plenty of water or high-electrolyte fluids.
- Wear lightweight, light-colored, and loose-fitting clothing.
- Avoid alcohol, caffeinated drinks, and heavy meals.



Tip: Drink up to 4 cups of water per hour on hot days.

- If you detect signs of heat exhaustion, notify a supervisor or appropriate individual with first aid training.

Heat Illnesses

Type	Symptoms	Causes	First Aid
Heat Rash	Clusters of small red pimples or blisters	Excessive sweating can cause clogged pores and infection	Cleanse and dry the affected area.
Heat Cramps	Painful spasms of leg, arm, or abdominal muscles, heavy sweating, and thirst	Electrolyte deficiencies during or after strenuous physical activity due to extended periods of intense sweating	Cease activity and move to a cool place. Drink plenty of water or high-electrolyte fluids. Wait a few hours after the cramps have subsided before engaging in strenuous physical activities.
Heat Syncope	Lightheadedness, dizziness, or fainting spells	Lack of blood flow to the brain, usually resulting from dehydration or strenuous activity. Non-acclimated employees may be more susceptible.	If safe to move the victim, move them to a shaded, cool area. Elevate legs slightly. Provide cool fluids if they can drink.
Heat Exhaustion	Fatigue, profuse sweating, weak and rapid heartbeat, headache, nausea, confusion, loss of coordination, muscle weakness, dizziness, or fainting	Dehydration, lack of acclimatization to high temperatures, strain on the circulatory system, and reduced blood flow to the brain	Rest in a cool, shaded, or air-conditioned area. Cool the individual by fanning, misting with water, or applying an ice pack. Give cool (not cold) water only if the individual is conscious.
Heat Stroke	Core body temperature exceeding 104° F, hot skin with a lack of perspiration, strong and rapid pulse, nausea, confusion, dizziness, seizures or convulsions, or fainting	Heat exhaustion was left untreated, and the body's cooling mechanisms were exhausted.	<p>Heat stroke is life-threatening. Notify a supervisor and follow emergency action procedures. While waiting for medical personnel to arrive, the individual giving care should take the following measures:</p> <ul style="list-style-type: none"> • Move the affected person to a cool, shaded, or air-conditioned area. • Give only cool (not cold) water if the individual is conscious. • Cool the individual by fanning, misting with water, or applying ice packs. • If necessary, loosen or remove heavy clothing.

Tip: Never order employees back to work if they exhibit symptoms of a heat illness!

Employer Best Practices

- Have a written emergency action plan:
 - Determine a means of effective communication between supervisors and employees.
 - Establish procedures for contacting emergency response services, administering first aid, and training employees.
 - Always staff the area with a person capable of administering first aid.
- Monitor for weather events or major changes in temperature throughout the workday.
 - Use the OSHA/NIOSH Heat Safety Tool App to check the heat index.
- Close monitoring by supervisors should be supplemented by peer monitoring.
- Closely observe new employees during their first 14 days of employment in high-heat areas as they acclimatize.

Controls For Employees

- Provide shaded areas large enough to accommodate all employees during meal, rest, or recovery periods and encourage their use. This can be achieved through the rotation of employee breaks.
- Locate shaded areas and drinking water close to where employees work.
- Provide employees one quart of water minimum per hour for the entire shift.
- If any employee feels the need for protection from overheating, allow a rest period of at least five minutes.
- Acclimatize employees by having them work for short periods in the heat and gradually increase their time over two weeks.
- Use cooling fans or air-conditioning if possible.
- Employees should wear lightweight, light-colored, and loose-fitting clothes.
- Employees should avoid alcohol, caffeinated drinks, and heavy meals.



Tip: Eat light, cool meals to fuel your body in the heat.

Acclimatization

The Occupational Safety and Health Administration (OSHA) found that 50-70% of heat-related fatalities happen in the first few days of working in high heat environments. Gradually increase the intensity and duration of work performed in a hot setting for employees working in high heat environment, whether they are new employees, adjusting to the heat for the first time that season, or are returning to the heat after a week or more absence.

- Gradually increase the employee's work time in hot conditions over a period of 7 to 14 days.
- Acclimatization typically requires at least 2 hours of heat exposure per day, which can be separated into two, 60-minute periods.
- In addition to getting used to the heat, employees also need to acclimatize to the level of work they need to do. Doing light or brief physical work in the heat will only acclimatize employees to light, brief work. More strenuous or longer tasks require more acclimatization.
- It is important for employees to cool off and fully rehydrate between their shifts.
- Employees should eat their regular meals and stay hydrated while they are acclimatizing.
- Acclimatization will be maintained for a few days after heat exposure stops, but employees will lose their full acclimatization level after not working in the heat for 1 week or more.

Extreme Heat Conditions

Certain weather conditions may call for additional responsibilities and requirements to work safely in the heat. Follow the table below to understand how to work safely in heat wave and extreme heat conditions. Be aware that at temperatures of 115° F or higher, strenuous work and work requiring non-breathable clothing should be suspended.

Heat Wave Conditions <i>Temperatures equal to or exceeding 80°F or anytime the temperature is 10°F higher than normal.</i>	Extreme Heat Conditions <i>Temperatures equal to or exceeding 95°F; or equal to or exceeding 90° and higher and 9°F above the previous days.</i>
Shaded Break Periods	
<ul style="list-style-type: none"> • Provide large, shaded areas with seating (recommended) to accommodate all employees during meal, rest, or recovery periods. This can be achieved through the rotation of employee breaks. • Locate shaded areas as close as feasible to where employees work. 	In addition to heat wave controls: <ul style="list-style-type: none"> • Institute a mandatory 10-minute break period after every two hours worked. • Supervisors must remind employees to rest.
Fluid Intake	
<ul style="list-style-type: none"> • General controls apply. 	In addition to general controls: <ul style="list-style-type: none"> • Require supervisors to remind employees to drink water.
Employee Monitoring	
In addition to general controls: <ul style="list-style-type: none"> • Increase the number of supervisors to provide adequate close observation and monitoring of employees. 	In addition to heat wave controls: <ul style="list-style-type: none"> • Assure failsafe communication methods between supervisors and employees.

Remember: All employees working in high-heat conditions have a right to a heat-stress-free workplace and should understand how to report heat related concerns. Train them on the topics covered in this packet and any additional requirements, and your worksite-specific procedures.

Heat Illness Prevention - Training Roster

This form documents that the training specified above was presented to the listed participants. By signing below, each participant acknowledges receiving training on the abovementioned subject. They understand that this training was only a general overview of the subject and that they should contact their supervisor with any questions or concerns.

Organization: _____ **Date:** _____

Trainer: _____ **Trainer's Signature:** _____

Class Participants:

Name: _____ Signature: _____

Name: _____ Signature: _____