

## WORKING SAFELY WHEN IT IS HOT

### Hot weather (80°F and higher) has predictable effects on humans:

- Thermal discomfort increases poor decision making and more errors in judgment.
- Operators of tools, vehicles and power equipment may lose concentration and focus.
- Fluid imbalance gives rise to nausea, light headedness and general weakness with an elevated temperature. If untreated it will lead to fainting and possibly heat stroke.
- Employees become less aware of hazards. There is an increased risk of accidents.

### Protect yourself when working conditions are HOT:

- Drink plenty of water! Your body cools by sweating, losing water that must be replaced during the day. It is commonly recommended that adults drink 8 cups (64 oz.) of water per day. If you're working outside during hot weather, you will probably need more. Cool water is best.
- Avoid: Carbonated drinks, which can cause cramps; avoid alcohol, which is dehydrating; and avoid salt tablets which can actually make dehydration worse.
- Dress cool: Wear loose-weave, cotton fabrics that allow your skin to breathe while protecting you from the sun. Wear a hat with a wide brim in the sun.
- Know your limits: People with disorders of the heart, obesity, circulatory system, lungs or skin are more susceptible to heat stress and should be especially careful. Consult your physician.
- Get used to it: You can increase your tolerance to working in the heat by gradually acclimatizing yourself to higher temperatures. For this reason, hot days early in the season can be the most risky.
- Plan your activities: Perform the most strenuous work during the cooler parts of the day.
- Stay cool: Take breaks in a shady area or an air-conditioned room.
- Lead a healthy lifestyle: Get sufficient rest, enough sleep and good nutrition. Regular, moderate exercise will keep you in shape for any working conditions you may encounter.



### What about heat illnesses from heat stress?

#### Preventing Heat Stress

- **Replace Fluids:** Drink plenty of cool water. Be aware of the amount and frequency of fluids you consume. Cool tap or bottled water for is always available to employees.
- **Rest Breaks:** take required cool-down breaks
- **Wear required PPE**
- **Maintain awareness and promptly report** your own heat stress related signs and symptoms
- **Be aware of and report co-workers** who may be showing signs of heat stress illness
- **Report to Supervision any problems** dealing with heat stress conditions
- **Understand heat illness** prevention training information and how to properly apply it
- **Avoid Excessive Physical Demands:** when heat avoidance becomes a safety factor, reduce the physical demands by reducing physical exertion such as excessive lifting, climbing, or digging with heavy objects. Distribute work involving more individuals, use relief workers and assign extra workers.



## HEAT ILLNESS SYMPTOMS AND FIRST AID TREATMENTS

HEAT STRESS ILLNESSES			
Heat Illness	SYMPTOMS	MENTAL STATUS	TREATMENT
<p><b>HEAT CRAMP</b> Excessive loss of electrolytes in blood due to sweating</p>	<ul style="list-style-type: none"> <li>• pain in the legs</li> <li>• abdomen pain</li> <li>• nausea</li> <li>• hypotension</li> <li>• rapid pulse</li> <li>• skin cool / pale</li> </ul>	<ul style="list-style-type: none"> <li>• conscious</li> </ul>	<ul style="list-style-type: none"> <li>• shady place</li> <li>• if there isn't nausea, you should drink water with salt</li> <li>• if there is nausea, you may require IV fluids</li> <li>• rest</li> </ul>
<p><b>HEAT EXHAUSTION</b> Excessive water loss</p>	<ul style="list-style-type: none"> <li>• headache</li> <li>• nausea</li> <li>• fatigue</li> <li>• dizziness or light headedness</li> <li>• actively sweating</li> <li>• skin is cool and pale</li> </ul>	<ul style="list-style-type: none"> <li>• usually conscious</li> <li>• may faint</li> </ul>	<ul style="list-style-type: none"> <li>• shady place or AC room</li> <li>• keep cool</li> <li>• increase fluids</li> <li>• cold wet towels</li> <li>• fan</li> <li>• may require IV fluids</li> </ul>
<p><b>HEAT STROKE</b> Failure of body's heat controlling mechanisms <b>EMERGENCY!</b></p>	<ul style="list-style-type: none"> <li>• headache</li> <li>• flushed skin</li> <li>• dry skin</li> <li>• rapid, bounding pulse</li> </ul>	<ul style="list-style-type: none"> <li>• incoherent speech</li> <li>• disoriented</li> <li>• confused and/or aggressive actions</li> <li>• possibly unconscious</li> </ul>	<ul style="list-style-type: none"> <li>• immediate action necessary</li> <li>• shady place or AC room</li> <li>• remove most of the clothes</li> <li>• apply cool, wet towels</li> <li>• fan to increase air flow</li> <li>• transport the victim to the hospital as rapidly as possible</li> </ul>

**Note: heat illness may quickly go from mild symptoms and to a serious and life threatening illness!**



**WORKING SAFELY IN HOT WEATHER**



**Employees' Responsibilities in Preventing Heat Stress Illnesses:**

- ★ Learn the hazards of heat stress and the best practices for avoiding heat stress.
- ★ Learn the predisposing factors, danger signs, and symptoms of heat stress such as avoiding drugs, including prescriptive drugs and alcohol in hot work environments.
- ★ Wear protective clothing and equipment such as hats, long and loose clothing and wetted clothing.
- ★ Rest in the shade when it is hot.
- ★ Take all required rest breaks, meal breaks and cool-down rest periods.
- ★ Take a preventative cooldown rest when you feel the need to do so to protect yourself from overheating.
- ★ If feeling any symptoms of heat illness, report them immediately and take a rest break in the shade.
- ★ Learn and practice how to respond to heat illness symptoms and first-aid procedures for treating heat illnesses.

Trainer Name	Date
<b>I UNDERSTAND AND AGREE TO PRACTICE HEAT STRESS ILLNESS PREVENTION AND EMERGENCY RESPONSE.</b>	
Employee Name	Signature

## HEAT STRESS ILLNESS PREVENTION

### OR-OSHA PERMANENT RULES FOR HIGH AMBIENT TEMPERATURES EFFECTIVE JUNE 15, 2022

When the heat index temperature in a work area equals or exceeds 80 °F, (“caution level”) provisions for access to shade and drinking water for workers are provided.

Additional high-heat practices are initiated and followed when the ambient heat index reaches 90 °F (“extreme heat”) including implementation of an Emergency medical plan that describes the procedures to follow should an employee suffer a heat illness incident; and the implementation of effective acclimatization practices.

#### Employees exposed to high heat conditions must have training on:

1. Heat-related illness, how to prevent it and how to respond to heat illness signs and symptoms.
2. At 80 °F and higher: ensure access to shade and drinking water.
3. At 90 °F and higher: ensure emergency medical plan is implemented when an employee suffers a heat illness incident; and ensure the implementation of effective acclimatization practices.
4. Understanding heat illness prevention training information and how to properly apply it.
5. Taking required cool-down breaks
6. Drinking plenty of cool water

#### SHADE HEAT INDEX OF 80 °F AND HIGHER (“CAUTION HEAT”)

Shade must be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions and that does not deter or discourage access or use. Shade areas have the following features:

- Are open to the air or have mechanical ventilation for cooling.
- Provide at least enough shade for the number of employees who are on recovery or taking a rest break or meal break that they can sit in a normal posture fully in the shade.
- Are located as close as practical to the areas where employees are working.

When there is a circumstance when the shade area is unsafe or impractical to provide or use (for example, during wind storms or when an employee is not working near shade) then alternative shade or cooling options for employees that provide equivalent protection is provided.

#### DRINKING WATER HEAT INDEX OF 80 °F AND HIGHER (“CAUTION HEAT”)

- Provide adequate supply of additional drinking water that is readily accessible to employees at all times and at no cost when the heat index in the work area is 80 °F and higher.
- Supply each employee at least 32 ounces/hour.
- Ensure that employees have ample opportunity to drink water.

(Note: the entire supply of drinking water for all employees for the whole shift is not always supplied at the beginning of the shift when other effective procedures to replenish water consumed during the shift are used.)



## WORKING SAFELY IN HOT WEATHER

**TRAINING (All employees) HEAT INDEX OF 80 °F AND HIGHER (“CAUTION HEAT”)**

All employees, including new employees, supervisory, and non-supervisory employees are trained in the following topics (in a language readily understood) before employees begin work that can reasonably be anticipated to expose employees to a heat index equal to or in excess of 80 °F:

1. The environmental and personal risk factors for heat illness including the added burden of heat load on the body caused by exertion, clothing, and personal protective equipment.
2. That employees will be provided water, daily heat index information, shade, cool-down rests, and will be trained on how to report symptoms of heat-related illness, access to first aid, and employees' right to exercise their rights under the Rules without fear of retaliation.
3. The concept, importance, and methods of acclimatization.
4. The importance of employees immediately reporting symptoms or signs of heat illness in themselves, or in co-workers.
5. The effects of nonoccupational factors (medications, alcohol, obesity, etc.) on tolerance to occupational heat stress.
6. The different types of heat-related illness, the common signs and symptoms of heat-related illness.

**HIGH HEAT ACCLIMATIZATION HEAT INDEX OF 90 °F AND HIGHER (“EXTREME HEAT”)****IMPLEMENT A SCHEDULE OF REGULAR COOL-DOWN BREAKS – USE METHOD #1 OR #2****Method #1: “Minimum” schedule of rest breaks:**

Heat index (°F)	Rest break durations and intervals
90°F	10 minutes every two hours
100°F	15 minutes every hour

The duration and/or frequency of Minimum Rest Breaks may have to be modified to ensure Employees are protected based on the following factors:

- The effect of personal protective equipment (PPE) on the body’s ability to retain heat.
- The effect of the type of work clothing on the body’s ability to retain heat.
- Relative humidity, whether work activities are indoors or outdoors.
- The intensity of the work being performed.
- The effect of exposure to direct sunlight.

**Method #2: The “Simplified” work/rest schedule:**

Heat index (°F)	Rest break durations and intervals
90°F	10 minutes every two hours
95°F	20 minutes every hour
100°F	30 minutes every hour
105°F	40 minutes every hour

The cool-down rest breaks may be at the same time with other normal unpaid meal or paid rest periods.

**EMERGENCY MEDICAL PLAN HEAT INDEX OF 90 °F AND HIGHER (“EXTREME HEAT”)**

When an employee has signs or symptoms of severe heat illness (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior or convulsions), the supervisor always immediately implements emergency response procedures.

**The emergency procedures include:**

- First aid measures.
- Knowing how and when emergency medical services will be provided.
- Observing employees for alertness and signs and symptoms of heat illness and monitored.
- Maintaining effective communication with employees (especially employees working alone) by voice, observation, or electronic means so that employees at worksites can contact a supervisor when necessary. An electronic device (cell phone or text messaging device) is normally used for this purpose when reception in the area is reliable. Otherwise, radio, a buddy system, observation, or other personal contact method is used.
- Designating one or more employees on each worksite to call for emergency medical services should a heat illness incident or other emergency occur. Other employees may also call for emergency services when designated employees are not immediately available.

A central requirement of the emergency medical plan requires a supervisor who has observed any signs or symptoms of heat illness in any employee, or when any employee reports signs or symptoms, to take immediate action appropriate to the severity of the illness.

1. The employee is immediately relieved from duty and provided with a sufficient means to reduce body temperature (for example: cooling blankets, cooling vests, and fans).
2. The employee exhibiting signs or symptoms of heat illness is monitored and is never left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with the emergency procedures.
3. Emergency medical services are contacted. If necessary and instructed to do so by the medical professionals, The Company transports employees to a place where they can be reached by an emergency medical provider.
4. Clear and precise directions to the work site are provided to first responders in order to quickly navigate to the location of the distressed employee.

