

HEAT AWARENESS



Summer is upon us, and outdoor workers should prepare for increased temperatures, sun exposure, and humidity. Working in extreme heat places additional stress on the body, potentially affecting the body's cooling system, which may result in occupational illnesses and injuries. Heat stress-related illnesses include heat stroke, heat exhaustion, heat syncope, heat cramps, and heat rashes. Dehydration, exhaustion, fatigue, physical labor, and humidity increase the likelihood of heat-related illnesses.

Sweaty palms, fogged-up safety glasses, instability, and exposure to hot surfaces can also increase the risk of injuries. Burns may occur if contact is made with hot surfaces or steam.

Workers who are 65 years of age or older, are overweight, have heart disease or high blood pressure, or take medications are at a greater risk of heat stress-related illnesses.

Employees should be trained to understand heat stress, how it affects their health and safety, and how to prevent it.

Types and Treatment of Heat-Related Illnesses

Heat Stroke — occurs when the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Heat stroke is the most serious heat-related illness and can cause permanent disability or death if the person does not receive immediate emergency treatment. Symptoms of heat stroke can include confusion, altered mental status, slurred speech, loss of consciousness (coma), hot, dry skin or profuse sweating, seizures, and a very high body temperature.

If heat stroke is suspected, call 911 immediately. Move the worker to a shaded, cool area, remove outer clothing, and stay with the worker until emergency medical services arrive. Cool the worker rapidly with cold water or an ice bath if possible. If not available, wet the skin, place cold, wet cloths or ice on the head, neck, armpits, and groin, and soak clothing with cool water. Circulating the air around the worker can also help speed cooling. Offer sips of water if the victim is conscious.

Heat Exhaustion — the body's response to an excessive loss of water and salt, usually through excessive sweating. Symptoms of heat exhaustion include headache, nausea, dizziness, weakness, irritability, thirst, heavy sweating, elevated body temperature, and decreased urine output. If an employee shows signs of heat exhaustion, seek emergency care or call 911 if medical care is unavailable. Heat exhaustion can lead to heat stroke, so it is imperative that you move the person to a cool, shaded area. Remove unnecessary clothing, including shoes and socks. Cool the worker with cold compresses or have the worker wash their head, face, and neck with cold water. Encourage frequent sips of cool water.

CASE STUDY

An employee was installing sprinkler heads and covering up the trench. The employee spent most of his shift digging narrow trenches with a pickaxe and laying the irrigation pipe. The employee lost consciousness and collapsed while working. It was determined that the employee had suffered a heat stroke and died.



CASE STUDY

An employee was performing moderately strenuous work when he stopped, said he was hot, and went to get a drink. The employee was drinking an excessive amount, so coworkers had him sit down and attempted to cool him off. The employee became incoherent and stopped breathing. Two coworkers attempted CPR while another coworker called 911. EMS arrived and began attending to the employee, but he later died of heat-related illness.



HEAT AWARENESS HAZARD ALERT

Heat Cramps — sweating depletes the body's salt and moisture levels. Low salt levels in muscles cause painful cramps. Symptoms of heat cramps include muscle cramps, pain, or spasms in the abdomen, arms, or legs. Employees experiencing heat cramps should move to a cool, shaded area and drink water. A snack or fluids that replace carbohydrates and electrolytes can also help with heat cramps. Seek medical attention if the employee has heart problems, is on a low-sodium diet, or if heat cramps do not subside within 1 hour.

Heat Syncope — a fainting (syncope) episode or dizziness that usually occurs when standing for too long or suddenly standing up after sitting or lying. Factors that may contribute to heat syncope include dehydration and lack of acclimatization. Symptoms of heat syncope include fainting (short duration), dizziness, and light-headedness. Employees experiencing heat syncope should sit or lie in a cool place and slowly drink water, clear juice, or a sports drink. Seek medical attention if symptoms persist.

Steps to Prevent Heat-Related Illnesses and Injuries

- Stay well hydrated. Drinking plenty of water is vital. Water intake must equal or exceed the increased rate of water loss to keep the body temperature normal.
- Provide adequate amounts of cool, potable water near the work area, and encourage employees to drink often.
- Employees should protect themselves from sun UV damage by liberally applying sunscreen and wearing appropriate light-weight clothing.
- Recommend high-SPF clothing for those with photosensitive skin or a history of skin cancer.
- Employees should wear wide-brimmed hats and sunglasses to prevent excessive sun exposure to the eyes.
- Allow sufficient time for employees to acclimate to the working conditions.
- Know and be on the lookout for signs of heat-related illnesses.
- Use a buddy system where employees observe each other for signs of heat-related illnesses.
- Schedule additional rest and cool down times utilizing shade when working in elevated temperatures.
- Monitor weather service forecast and inform employees of increased temperature hazards. Adjust work schedules to perform heavier work during cooler hours of the day.

CASE STUDY

An employee who works as a rigger for a utility contractor was installing water lines at a new construction site. The employee collapsed from heat exhaustion and was hospitalized.



CASE STUDY

An employee working outdoors collecting waste on a residential route experienced symptoms of heat illness early in the day. At the end of the day, the employee was hospitalized for treatment of heat exhaustion.



CASE STUDY

An employee operating a chipper machine reported experiencing severe cramps. The employee was hospitalized to treat dehydration from the heat.



Questions? KLC is here to help!

Contact Aaron Parrish (left) at aparrish@klc.org or Gary Musgrave (right) at gmusgrave@klc.org with KLC Loss Control or call 800.876.4552. Visit klc.org for more information.