

Heat-Related Illness

Working conditions that increase susceptibility to heat-related illness include: air temperature, relative humidity, radiant heat (sun, asphalt, etc.), conductive heat sources (ground), air movement, workload intensity and duration, and personal protective equipment.

Personal factors that affect susceptibility to heat-related illness include: age, degree of acclimatization, medical conditions (previous heat-related illness, cardiovascular disease, diabetes), water consumption, alcohol consumption, caffeine consumption, nicotine use, prescription and non-prescription medications that affect water retention, and other factors (weight, fatigue).

Protect yourself and your workers by learning the signs and symptoms of heat stress and how to treat it. Heat stress occurs in a hot environment when a worker's body cannot cool quickly enough. The three major forms of heat stress are heat cramps, heat exhaustion, and heat stroke. Heat exhaustion is a serious problem, and heat stroke can kill you.

Heat Cramps: Heat cramps usually affect workers who sweat a lot during strenuous activity. Heavy sweating depletes the body's salt and moisture levels, which can lead to painful cramps.

What are the symptoms?

- Muscle pain or spasms usually in the abdomen, arms, and legs.

What do you do if someone is suffering from heat cramps?

- Stop all activity, and sit in a cool place
- Drink clear juice or a sports drink
- Do not immediately return to strenuous work after the cramps have subsided, as this may lead to heat exhaustion or heat stroke
- Notify their supervisor.
- Seek medical attention if any of the following apply:
 - The worker has heart problems
 - The worker is on a low sodium diet
 - The cramps do not subside within one hour

Heat Exhaustion: Heat exhaustion occurs when there is an excessive loss of water and salt in the body, usually through excessive sweating. Those most at risk are the elderly, people with high blood pressure, and those working in a hot environment.

What are the symptoms?

- Heavy sweating/Clammy moist skin
- Heavy thirst
- Pale or flushed complexion
- Panting/rapid breathing
- Rapid pulse
- Headache
- Nausea
- Blurred vision
- Exhaustion, weakness
- Clumsiness
- Confusion
- Dizziness or fainting
- Muscle Cramps

What do you do if someone is suffering from heat exhaustion?

- Move the victim to an air conditioned or cool shaded area to rest; do not leave him or her alone
- Loosen and remove heavy clothing
- Give cool water to drink, about a cup every 15 minutes
- Fan the person, spray with cool water, or apply a wet cloth to his or her skin
- Notify their supervisor
- Call 911 if he or she does not feel better in a few minutes

Heat Stroke: Heat stroke is the most serious heat-related illness. It happens when the body is unable to control its temperature (cool down) and the body's temperature rapidly rises (can rise to 106 degrees or higher). This can lead to death or permanent disability if emergency treatment is not provided.

What are the symptoms?

- No sweating
- Red or flushed, hot dry skin
- Any symptom of heat exhaustion but more severe
- Difficult breathing
- Pinpoint pupils
- Bizarre behavior/Hallucinations
- Convulsions
- Collapse

What do you do if someone is suffering from heat stroke (medical emergency)?

- Get medical help immediately, call 911
- Notify their supervisor
- Move the victim to a cool shaded area; do not leave him or her alone

- Lay the person down
- Loosen and remove heavy clothing
- Give cool water to drink, about a cup every 15 minutes, if the person is alert enough to drink
- Fan the person, spray with cool water, or wipe with a wet cloth or cover with a wet sheet
- Place icepacks under the armpits and in the groin area

Avoiding Heat Related Illness:

How do you protect yourself from excessive heat stress?

- Learn the signs and symptoms of heat stress.
- Drink plenty of water or electrolyte drinks, even when not thirsty.
- Try to do the heaviest work during the cooler parts of the day.
- Adapt the pace of work to the heat, go slower when possible.
- Build up a tolerance to the heat and your work slowly.
- Wear light-weight, loose-fitting, light-colored, breathable (e.g. cotton) clothing and hat.
- Take regular breaks in the shade. Remove all personal protective equipment (PPE) while on break.
- Avoid alcohol or drinks with caffeine before or during work.
- Keep an eye on co-workers for symptoms of heat stress.
- If you start feeling ill, stop what you are doing immediately and take steps to cool down. Tell your supervisor.