



HEAT STRESS AND HYDRATION

Introduction: Working in hot environments, particularly on construction sites, can lead to heat stress, which can have serious health consequences. Heat stress occurs when the body is unable to cool itself properly, leading to conditions like heat exhaustion and heat stroke. These are potentially life-threatening if not treated promptly. Staying hydrated and taking proper precautions in hot weather is essential for maintaining workers' health and safety.

Key Hazards of Heat Stress:

- Dehydration: When the body loses more fluids than it takes in, it can't regulate temperature properly, which can lead to heat stress and related illnesses.
- Heat Exhaustion: This condition includes symptoms such as heavy sweating, weakness, dizziness, nausea, and headaches. If untreated, it can progress to heat stroke.
- Heat Stroke: A serious, life-threatening condition characterized by high body temperature (above 104°F/40°C), confusion, loss of consciousness, and, in some cases, seizures. Immediate medical attention is required.
- Heat Cramps: Painful muscle cramps, typically in the legs or abdomen, caused by a loss of fluids and electrolytes from heavy sweating.
- Heat Rash: A skin irritation caused by excessive sweating, often occurring in hot, humid conditions.

Symptoms of Heat Stress:

- Fatigue or weakness
- Heavy sweating or, in the case of heat stroke, little to no sweating
- Dizziness or confusion
- Nausea or vomiting
- Muscle cramps
- Rapid heartbeat or shallow breathing
- Hot, red skin (in the case of heat stroke)
- Loss of consciousness

Preventing Heat Stress:

- **Stay Hydrated:** Drink plenty of water throughout the day, even if you don't feel thirsty. Workers should consume 1 cup (8 ounces) of water every 15-20 minutes. Avoid caffeinated or sugary drinks, as they can contribute to dehydration. In extreme heat or when working for extended periods, consider electrolyte-replacement drinks to replenish lost salts and minerals. Set up hydration stations around the work area and remind workers to take regular water breaks.
- **Recognize Warning Signs Early:** Pay attention to your body and the warning signs of heat stress. If you feel dizzy, weak, or unwell, stop working immediately, find shade, and hydrate. If a coworker shows signs of heat exhaustion or heat stroke, act quickly and seek medical help. Do not ignore these symptoms.
- **Take Regular Breaks:** Schedule regular rest breaks in shaded or cool areas, especially during the hottest parts of the day (typically between 10 a.m. and 3 p.m.). If possible, rotate workers to limit exposure to direct sunlight and extreme heat. Use cooling towels, fans, or misting systems to help cool down during breaks.
- **Wear Appropriate Clothing:** Wear light-colored, loose-fitting, and breathable clothing to allow for airflow and body heat dissipation. Use a wide-brimmed hat or cap to protect your head and neck from direct sunlight. Apply sunscreen to exposed skin to prevent sunburn, which can reduce the body's ability to cool itself.
- **Use Engineering Controls:** Where possible, use shade structures, tents, or canopies to protect workers from direct sunlight. Use fans or ventilation systems in enclosed or semi-enclosed spaces to promote airflow and reduce heat buildup.

Emergency Response to Heat Stress:

Heat Exhaustion:

- Move the worker to a cool, shaded area.
- Have them drink water slowly or a beverage with electrolytes.
- Apply cool, damp cloths to the skin and encourage them to rest.
- If symptoms don't improve or worsen, seek medical attention.

Heat Stroke:

- This is a medical emergency. Call for emergency services immediately.
- Move the person to a cool area and try to lower their body temperature by soaking their clothes with water or applying cool compresses.
- Do not give them water if they are unconscious or confused.

Key Takeaway:

- Drink water regularly, even if you don't feel thirsty.
- Know the early signs of heat stress and act quickly if you or a coworker are feeling unwell.
- Take frequent breaks in the shade, and wear appropriate clothing for hot weather.
- If you or someone else shows signs of heat stroke, seek medical attention immediately.

Discussion Topics:

- Have you experienced symptoms of heat stress while working? How did you handle it?
- What steps can you take to stay hydrated and prevent heat-related illnesses?
- Do you have easy access to water and shaded areas on your job site?
- What would you do if you noticed a coworker showing signs of heat exhaustion or heat stroke?

