Heat Stress Toolkit

Health & Wellness
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What is Heat Stress?

♦ The body is unable to cool itself by sweating and the core temperature rises

♦ Heat stress illnesses include:
  o Heat rash
  o Syncope
  o Dehydration
  o Heat cramps
  o Heat exhaustion
  o Heat stroke
Environmental Factor

- **Temperature**
  - Body stores heat it cannot disperse
  - Core temperature and heart rate increase

- **Humidity**
  - High humidity prevents sweat evaporation

- Direct sun exposure

- Still air
## Effects of Heat Index

<table>
<thead>
<tr>
<th>Heat Index</th>
<th>Risk Level</th>
<th>Protective Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 91°F</td>
<td><strong>Lower (Caution)</strong></td>
<td>Basic heat safety and planning</td>
</tr>
<tr>
<td>91°F to 103°F</td>
<td><strong>Moderate</strong></td>
<td>Implement precautions and heighten awareness</td>
</tr>
<tr>
<td>103°F to 115°F</td>
<td><strong>High</strong></td>
<td>Additional precautions to protect workers</td>
</tr>
<tr>
<td>Greater than 115°F</td>
<td><strong>Very High to Extreme</strong></td>
<td>Triggers even more aggressive protective measures</td>
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Heat Related Illness

◆ Heat Rash
  o Sweat is trapped by tight or impermeable clothing
  o Shower after working in multiple layers of clothing or clothing that is not breathable

◆ Syncope
  o Fainting mostly occurs on those who are not acclimated to heat
  o If fainting occurs:
    • Move person to a cooler environment
    • Put in reclined position
    • Should be elevated by medical provider ASAP
Dehydration

◆ The process of reducing body water through:
  o Illness
  o Physical exertion
  o Thermal Stress
  o Water deprivation

◆ Maintaining water balance is essential for health and is determined by sophisticated mechanisms that balance water input (drinking water) vs water output (respiration, urination, and perspiration)

◆ Drink water early and often
Heat Cramps

- Painful cramps after heavy work and inadequate fluid replacement
- May occur during or after work
- Replace fluids with an electrolyte solution
  - Alternate electrolyte replacement solution with water if working in a hot environment or under high physical stress for more than 2 hours
    - Otherwise drink water
Heat Exhaustion

◆ Too much sweat loss, not enough fluid replacement

◆ Symptoms
  o Headache
  o Dizziness, weakness
  o Pale, moist skin
  o Profuse sweating
  o Irritability or confusion
  o Loss of consciousness
  o Nausea or vomiting
  o Body temperature of 99 degrees F or higher

◆ First Aid
  o Move to cool area
  o Loosen or remove heavy clothing
  o Fan patient to move air
  o Mist with water
  o Provide cool drinking water
  o Seek medical attention if no improvement in 30 minutes
Heat Stroke

- Occurs when the body overheats to a point where it can no longer regulate body heat and shuts down

- Symptoms:
  - Dry, hot skin
  - No sweating
    - Body temp of 106 degrees F or higher
  - Confusion, loss of consciousness
  - Seizure or convulsions

- MEDICAL EMERGENCY: CALL 911
  - Move person to a cool place
  - Remove clothing
  - Immediately cool patient by any available means
    - Ice pack under arms, groin, and neck
    - Wet towels
HEAT EXHAUSTION

1. MOIST & CLAMMY SKIN
2. PUPILS DILATED
3. NORMAL OR SUBNORMAL TEMPERATURE

HEAT STROKE

1. DRY HOT SKIN
2. PUPILS CONstricted
3. VERY HIGH BODY TEMPERATURE

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Preventing Heat Stress

- Know the signs and symptoms of heat illnesses
- Know heat illness first aid
- Block out direct light
- Use cooling fans
- Regular rest periods
  - Reduce work pace or load
- Drink lots of water, at least 1 cup every 15 minutes
- Wear lightweight, light colored, and breathable clothing
- Avoid alcohol, caffeine, and heavy meals
- Apply sunscreen
Questions?

Contact us to schedule a presentation or for more information:
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