

HPMC OCCUPATIONAL
MEDICAL SERVICES

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:
 - Heat rash
 - Syncope
 - Dehydration
 - Heat cramps
 - Heat exhaustion
 - 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

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

Heat Related Illness

◆ Heat Rash

- Sweat is trapped by tight or impermeable clothing
- Shower after working in multiple layers of clothing or clothing that is not breathable

◆ Syncope

- Fainting mostly occurs on those who are not acclimated to heat
- 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:
 - Illness
 - Physical exertion
 - Thermal Stress
 - 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

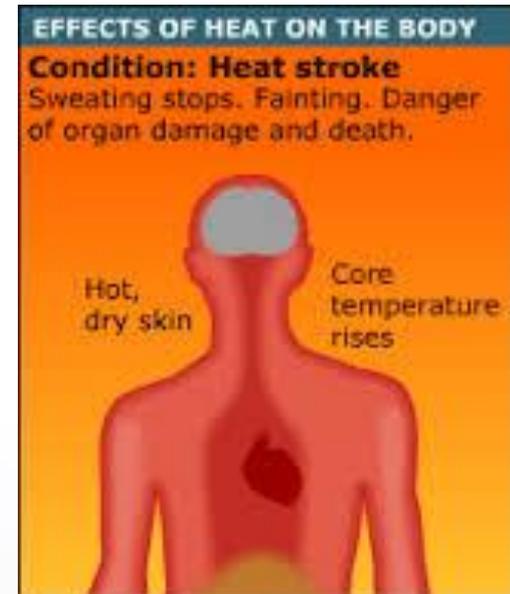
- ◆ Too much sweat loss, not enough fluid replacement
- ◆ Symptoms
 - Headache
 - Dizziness, weakness
 - Pale, moist skin
 - Profuse sweating
 - Irritability or confusion
 - Loss of consciousness
 - Nausea or vomiting
 - Body temperature of 99 degrees F or higher

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



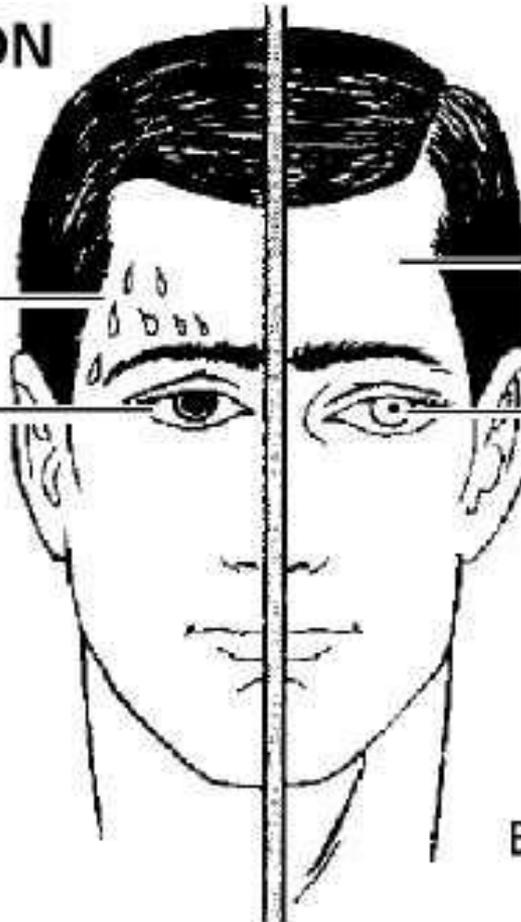
Heat Stroke

- ◆ 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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