Heat Stress
Safety Meeting
Sources of Heat

- High temperature or humidity
- Limited air movement
- Direct sun exposure
- Indoor exposure to radiant heat sources
- Low fluid consumption
- Physical exertion
Hot Weather Work

Relative Humidity  Temperature
70%  100°F  37.8°C
60%  95°F  35°C
50%  90°F  32.2°C
40%  85°F  29.4°C
30%  80°F  26.7°C

- Danger
- Caution
- Less Hazardous
Risk Factors

- Seldom work outdoors or in heat
- Not physically fit or are overweight
- Drinking alcohol or taking drugs
- Wearing heavy, dark or tight fitting clothing or use of certain PPE
- Having any prior heat related symptoms
Types of Heat

- Heat stroke
- Heat exhaustion
- Heat cramps
- Heat rash
- Fainting
Heat Stroke

- Most serious form of heat stress
- Body becomes unable to control its temperature
- Body temperature rises rapidly
- Sweating mechanism fails
- Body is unable to cool down
- Medical emergency
Heat Stroke Symptoms

- Hot, dry skin or profuse sweating
- Hallucinations
- Chills
- Headache
- Confusion/dizziness
- Very high body temperature
- Slurred speech
Heat Exhaustion

• Body's response to excessive loss of water and salt through sweating
• Extreme weakness or fatigue, giddiness, nausea or headaches
• Usually recover naturally with proper treatment
Heat Exhaustion Symptoms

- Heavy sweating
- Elevated body temperature
- Headache
- Nausea, dizziness or weakness
- Irritability
- Fast and shallow breathing
- Pale or flushed complexion
- Muscle cramps
Heat Cramps

• Muscle pains usually caused by physical labor or strenuous activity
• Sweating depletes body's water content and salt level
• Low salt levels in muscles cause painful cramps
  – Can occur during or after work
Heat Cramp Symptoms

- Muscle pain
- Spasms
- Symptoms usually occur to the abdomen, arms or legs
Heat Rash

• Skin irritation caused by sweating
• Sweat does not evaporate and skin remains wet
• Sweat ducts become plugged and a rash may appear
• Also known as prickly heat
Heat Rash Symptoms

- Red cluster of pimples or small blisters on the skin
- Usually appears on the neck, upper chest, groin and inside elbow creases
Fainting

• Dizziness that usually occurs with
  - Prolonged standing
  - Sudden rising from a sitting or lying position
• Caused by dehydration
Fainting Symptoms

- Light headedness
- Dizziness
- Faded hearing or ringing in the ears
- Darkened or blurred vision
- Paleness
- Shortness of breath
First Aid Response for Heat Stress

- Notify the supervisor
- Get medical help
- Move to a cooler place or into the shade
  - Do not leave a coworker alone
  - Be prepared to describe symptoms
- Drink water
- Loosen clothing
- Stay cool
Heat Stress Prevention

- Water
- Rest
- Shade
- Report heat symptoms
- Training
- Emergency plan
Heat illness can be prevented!

- Water
- Shade and Rest
- Training
- Emergency Plan

OSHA 5422-04N 2011

Developed by CAL/OSHA

If you have questions, call OSHA. It's confidential. We can help!

1-800-321-OSHA (6742)
TTY 1-877-889-5627
www.osha.gov
Heat Stress Prevention

• Add more frequent breaks during a heat wave
• Schedule strenuous work during cooler times of the day
Heat Stress Prevention

• Employers
  - Provide training on hazards and prevention
  - Provide cool water close to the work area
  - Schedule frequent rest periods in shade
  - Schedule strenuous work during cooler times of the day
  - Routinely check workers who are at risk
  - Consider PPE that provides cooling
Heat Stress Prevention

• Worker
  - Know the signs and symptoms
  - Block direct sun and other heat sources
  - Drink small amounts frequently, as opposed to larger amounts less often
  - Drink even if you do not feel thirsty
  - Avoid caffeinated or alcoholic beverages
  - Drink plenty of water before, during and after work to help your body recover
INSTRUCTIONS: Sign and date this quiz sheet. Circle the letter representing the correct answer to each question below.

1. Sources of heat can include:
   A. High temperature or humidity
   B. Limited air movement
   C. Low fluid consumption
   D. All of the above

2. ________ may be a risk factor of heat stress.
   A. Prior heat related symptoms
   B. Wearing loose, cool clothing
   C. Drinking plenty of water
   D. Using a cool rag on your face

3. ________ is the most serious form of heat stress.
   A. Heat exhaustion
   B. Heat cramps
   C. Heat stroke
   D. Fainting

4. Heat rashes are muscle pains usually caused by physical labor or strenuous activity.
   A. True
   B. False

5. Heat rash is a skin irritation caused by sweating.
   A. True
   B. False

6. Dizziness that usually occurs with prolonged standing or the sudden rising from a sitting or lying position is also known as ________.
   A. Fainting
   B. Hypnosis
   C. Allergies
   D. Hangover

7. It is okay to leave a victim of a heat stress alone while you run to get help.
   A. True
   B. False

8. Which of the following is not a form of heat stress prevention?
   A. Drinking water
   B. Rest
   C. Driving
   D. Shade

9. Drinking plenty of ____ will help your body recover.
   A. Sprite
   B. Water
   C. Beer
   D. Coffee

10. You can protect yourself more by wearing dark colored, heavier clothing.
    A. True
    B. False
Below is the answer key for the quiz.

1. D
2. A
3. C
4. B
5. A
6. A
7. B
8. C
9. B
10. B
Sign-In Sheet for Safe Operations Meeting

Date: ____________________ Conducted By: ____________________

Means to Verify Understanding:  □ Quiz    □ Q & A - Group Discussion    □ Hands On Demo

Safety Topic(s) Covered: **Heat Stress**

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