Heat Stress Awareness
Workers who work in hot environments or are exposed to extreme heat may be at risk for heat stress.

Heat stress includes a series of conditions where a person’s body is under stress from overheating.
Heat stress causes thousands of worker illnesses and some worker deaths each year from working in extreme heat or humid conditions.

Work that has a high potential for causing heat stress usually involves hot and humid conditions outdoors or hot indoor environments.
The potential for heat stress increases if the job involves performing heavy work tasks or using bulky or non-breathable protective clothing and equipment.

Jobs that have a high risk of heat stress include:

- Farm work
- Construction
- Oil and gas well operations
- Asbestos removal
- Landscaping
- Emergency response operations
- Hazardous waste site activities
Heat stress can result in **heat-related illnesses** that can affect anyone, regardless of age or physical condition.

Some workers may be at **higher risk** than others if they have not built up a tolerance to hot conditions, or if they have certain health conditions.
There are **two major** heat-related illnesses that you need to know:

- Heat stroke
- Heat exhaustion
Heat stroke is the most serious heat-related illness. It happens when your body cannot control its temperature and is unable to cool down.

Your body’s temperature can rise to 106°F or higher within 15 minutes. Heat stroke requires immediate medical attention. It can result in death or permanent disability.
**Signs of heat stroke include:**
- Red, hot, dry skin
- High body temperature
- Confusion
- Fainting
- Convulsions
Heat exhaustion is the body’s response to loss of water and salt from heavy sweating.

Signs of heat exhaustion include:
- Heavy sweating
- Headache
- Nausea
- Dizziness
- Weakness
- Irritability
- Thirst
Other heat-related illnesses include heat cramps and heat rash. **Heat cramps** can occur in the muscles used for work and are caused by the loss of body salts and fluid during sweating.

**Heat rash** is skin irritation caused by sweat that does not evaporate from the skin.
Heat can also increase the risk for other injuries that can result from sweaty palms, dizziness, and fogged-up safety glasses. Accidental contact with hot surfaces or steam can cause burns.
Heat stress is **preventable**. Your company should use engineering controls and safe work practices to protect workers who are at risk for heat stress, including:

- Training workers about the hazards that lead to heat stress and how to prevent them
Engineering controls include air conditioning and ventilation for hot work environments. Moving air can help prevent workers from overheating.
Some **safe work practices** include:

- Modifying work schedules so jobs take place during the cooler parts of the day
- Arranging frequent rest periods with water breaks in shaded or air-conditioned areas
- Providing plenty of cool water to workers close to the work area
- Routinely checking on workers who are at risk for heat stress
Your company may develop an acclimatization, or adaption, program that allows workers to gradually adapt to the heat by slowly increasing workloads and allowing more frequent breaks for workers new to the heat and those that have been away from work.
Another way to prevent heat stress is using personal protective equipment (PPE) that helps cool workers down, such as reflective clothing, body cooling ice vests, water-cooled garments, and personal cooling systems.
You can protect yourself and your coworkers by knowing the **signs and symptoms** of heat-related illnesses, monitoring yourself, and using the buddy system.
Other measures you can take to protect yourself from heat stress include:

- Blocking out direct sun and other heat sources
- Drinking plenty of fluids. Drinking often and before you are thirsty. Drinking water every 15 minutes.
- Avoiding beverages that contain alcohol or caffeine
- Wearing lightweight, light-colored, and loose-fitting clothes
If you suspect a coworker is experiencing heat stress, call a supervisor for help. If a supervisor is not available, call 911.
Have someone stay with the worker until help arrives and move the worker to a **cooler or shaded area**.

If the worker is not alert or seems confused, **call 911 immediately** and apply ice as soon as possible.
Heat stress is a **serious hazard** for workers in hot environments, but it is preventable. Know the signs and symptoms of heat-related illnesses, monitor yourself, and use the buddy system.
1. Workers who work in hot environments or are exposed to extreme heat may be at risk for _____________________.
   A. Silicosis
   B. Heat stress
   C. Asbestosis
   D. Hypothermia

2. Work that has a high potential for causing heat stress usually involves ____________ conditions outdoors or hot indoor environments.
   A. Hot and humid
   B. Cold and wet
   C. Warm and dry
   D. Cool and moist

3. The potential for heat stress ____________ if the job involves performing heavy work tasks or using bulky or non-breathable protective clothing and equipment.
   A. Stays the same
   B. Decreases
   C. Increases
   D. Is removed

4. ______________ is the most serious heat-related illness.
   A. Heat rash
   B. Heat stroke
   C. Heat exhaustion
   D. Sunburn

5. ______________ is your body’s response to loss of water and salt from heavy sweating.
   A. Heat rash
   B. Heat stroke
   C. Heat exhaustion
   D. Sunburn

6. ______________ can occur in the muscles used for work and are(is) caused by the loss of body salts and fluid during sweating.
   A. Heat rash
   B. Heat stroke
   C. Heat exhaustion
   D. Heat cramps

7. ______________ is skin irritation caused by sweat that does not evaporate from the skin.
   A. Heat rash
   B. Heat stroke
   C. Heat exhaustion
   D. Sunburn

8. ______________ can help prevent workers from overheating.
   A. Bulky, non-breathable clothing
   B. Closing off ventilation
   C. Moving air
   D. Heavy work tasks

9. Measures you can take to protect yourself from heat stress include wearing _____________.
   A. Lightweight, light-colored, and loose-fitting clothing
   B. Bulky, non-breathable clothing
   C. A respirator
   D. A fully encapsulating chemical protective suit

10. Safe work practices for preventing heat stress include _____________.
    A. Arranging frequent rest periods with water breaks in shaded areas
    B. Drinking water every other hour
    C. Modifying work schedules so jobs take place during the hottest part of the day
    D. Exposing workers to direct sun and other heat sources
Instructors: The following key shows the answers for the Heat Stress Awareness safety meeting quiz.

1. B
2. A
3. C
4. B
5. C
6. D
7. A
8. C
9. A
10. A
Student Roster

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Student Instructions: Print and sign your name. Also, provide your date of birth or the last four digits of your social security number.

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