



# SAFE TALK

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## TOPIC - 33:

## Heat Illness Prevention

### INCIDENT SUMMARY

Heat is a leading cause of weather-related illnesses in the United States, resulting in fatalities and heat-related illnesses each year. In 2019, Federated members experienced 20 cases of heat illness. According to OSHA, 50% to 70% of heat related outdoor fatalities, occur in the first few days of working in warm or hot environments because the body needs to build up a tolerance to the heat gradually over time. The process of building tolerance is called heat acclimatization.

### DISCUSSION POINTS

#### 1. What is Heat Illness?

- Heat-related illnesses, like heat exhaustion or heat stroke, happen when the body is not able to properly cool itself. While the body normally cools itself by sweating, during extreme heat, this might not be enough. In these cases, a person's body temperature rises faster than it can cool itself down. This can cause damage to the brain and other vital organs.

#### 2. What are some factors that may increase a person's risk of developing a heat related illness?

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|---------------------------|--------------------|
| • High levels of humidity | • Obesity          |
| • Fever                   | • Dehydration      |
| • Prescription drug use   | • Heart disease    |
| • Mental illness          | • Poor circulation |
| • Sunburn                 | • Alcohol use      |

#### 3. Who is Most at Risk?

- Older adults, the very young, and people with mental illness and chronic diseases are at the highest risk. However, even young and healthy people can be affected if they participate in strenuous physical activities during hot weather.
- Heat illness can affect people of all ages.

4. Heat illnesses have three stages: heat cramps, heat exhaustion, and heatstroke. Below is a list of the symptoms and treatments for each. Everyone should become familiar with the heat symptoms and treatments. When any of these symptoms are present, promptly provide first aid. Do not try to diagnose which illness is occurring. Diagnosis is often difficult because symptoms of multiple heat-related illnesses can occur together. Time is of the essence. These conditions can worsen quickly and result in fatalities.

**When in doubt, cool the worker and call 911.**

OSHA and NIOSH have created a Heat Safety Tool. This app is available on apple and android devices. This app will give you the heat index and show you the risk factor for a heat-related illness. It also has the first aid procedures for the different types of heat illness. The app is titled “OSHA NIOSH Heat Safety Tool.”

## Symptoms and First Aid for Heat Illness

- **Heat Cramps** - Heat cramps usually affect workers who sweat a lot during strenuous activity. This sweating depletes the body's salt and moisture levels. Low salt levels in muscles cause painful cramps. Heat cramps may also be a symptom of heat exhaustion.

**Symptoms:** Muscle Cramps, Pain, or Spasms in the Abdomen, Arms, or Legs

### First Aid:

- Drink water and have a snack and/or carbohydrate-electrolyte replacement liquid (e.g., sports drinks) every 15 to 20 minutes.
  - Avoid salt tablets.
  - Get medical help if the worker has heart problems, is on a low sodium diet, or if cramps do not subside within 1 hour.
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- **Heat Exhaustion** - Heat exhaustion is the body's response to an excessive loss of the water and salt, usually through excessive sweating. Workers most prone to heat exhaustion are those that are elderly, have high blood pressure, and those working in a hot environment.

**Symptoms:** Headache, Nausea, Dizziness, Weakness, Irritability, Thirst, Heavy Sweating, Elevated Body Temperature, Decreased Urine Output

### First Aid:

- Take worker to a clinic or emergency room for medical evaluation and treatment.
  - If medical care is unavailable, call 911.
  - Someone should stay with worker until help arrives.
  - Remove worker from hot area and give liquids to drink.
  - Remove unnecessary clothing, including shoes and socks.
  - Cool the worker with cold compresses or have the worker wash head, face, and neck with cold water.
  - Encourage frequent sips of cool water.
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- **Heat Stroke** - Heat stroke is the most serious heat-related illness. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. When heat stroke occurs, the body temperature can rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not given.

**Symptoms:** Confusion, Altered Mental Status, Slurred Speech, Loss of Consciousness (Coma) Hot, Dry Skin or Profuse Sweating, Seizures, Very High Body Temperature, Fatal if Treatment is Delayed

**First Aid:**

- Take the following steps to treat a worker with heat stroke:
- Call 911 for emergency medical care.
- Stay with worker until emergency medical services arrive.
- Move the worker to a shaded, cool area and remove outer clothing.
- Cool the worker quickly with cold water or ice bath if possible; wet the skin, place cold wet clothes on skin, or soak clothing with cool water.
- Circulate the air around the worker to speed cooling.
- Place cold wet clothes or ice on head, neck, armpits, and groin; or soak the clothing with cool water.

**RECOMMENDATIONS**

- Hot cars can be deadly. Never leave children or pets in your vehicle. The inside temperature of the car can quickly reach 120 degrees.
- Slow down, stay indoors and avoid strenuous exercise during the hottest part of the day.
- Postpone outdoor games and activities.
- Use a buddy system when working in excessive heat. Take frequent breaks if working outdoors.
- Stay hydrated by drinking plenty of fluids. Avoid drinks with caffeine or alcohol.
- Check on family, friends and neighbors who do not have air conditioning, who spend much of their time alone or who are more likely to be affected by the heat.
- Community cooling centers are available in many urban and metropolitan areas. Check with your local county office to locate centers near you.
- If someone doesn't have air conditioning, they should seek relief from the heat during the warmest part of the day in places like schools, libraries, theaters, malls, etc.
- Avoid extreme temperature changes.
- Wear loose-fitting, lightweight, light-colored clothing. Avoid dark colors because they absorb the sun's rays.
- Check on animals frequently to ensure that they are not suffering from the heat. Make sure they have plenty of cool water.

*Sources: American Red Cross, Center for Disease Control and Occupational Safety and Health Administration.*