

Employer and Heat Stress: Recommendations

Take the following steps to protect workers from heat stress:

- Schedule maintenance and repair jobs in hot areas for cooler months.
- Schedule hot jobs for the cooler part of the day.
- Acclimatize workers by exposing them for progressively longer periods to hot work environments. NIOSH says that, for workers who have had previous experience in jobs where heat levels are high enough to produce heat stress, the regimen should be 50% exposure on day one, 60% on day two, 80% on day three, and 100% on day four. For new workers who will be similarly exposed, the regimen should be 20% on day one, with a 20% increase in exposure each additional day.
- Reduce the physical demands of workers.
- Use relief workers or assign extra workers for physically demanding jobs.
- Provide cool water or liquids to workers.
 - Avoid drinks with caffeine, alcohol, or large amounts of sugar.
- Provide rest periods with water breaks.
- Provide cool areas for use during break periods.
- Monitor workers who are at risk of heat stress.
- Provide heat stress training that includes information about:
 - Worker risk
 - Prevention
 - Symptoms
 - The importance of monitoring yourself and coworkers for symptoms
 - Treatment
 - Personal protective equipment

Individuals and Heat Stress: Recommendations

Avoid exposure to extreme heat, sun exposure, and high humidity when possible. When these exposures cannot be avoided, take the following steps to prevent heat stress:

- Wear light-colored, loose-fitting, breathable clothing such as cotton.
 - Avoid non-breathing synthetic clothing.
- Gradually build up to heavy work.
- Schedule heavy work during the coolest parts of day.
- Take more breaks in extreme heat and humidity.
 - Take breaks in the shade or a cool area when possible.
- Drink water frequently. Drink enough water that you never become thirsty. e.g., one cup every 20 minutes.
- Avoid drinks with caffeine, alcohol, and large amounts of sugar.

- Be aware that protective clothing or personal protective equipment may increase the risk of heat stress.
- Monitor your physical condition and that of your coworkers.

Heat Stress Training

Our heat Stress Training Program reviews how heat effects the body, the steps that employees can take to prevent heat stress, and elementary first aid that can be given to a worker who has been affected by a heat-related illness.

The videotape/DVD and employee booklets include information on:

- Situations leading to heat-related illnesses
- Heat stress, heat exhaustion and heat stroke
- How the body reacts to heat
- Recognizing symptoms of heat stress
- Preventing heat-related illnesses
- First aid for treating heat stress

Available in English and Spanish

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For a complete listing of all of our [safety training materials >>](#)

Five Types of Heat Stress: Symptoms and First Aid

1. Heat Stroke is the most serious heat-related disorder. 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 degrees Fahrenheit or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not given.

Symptoms of heat stroke include:

- Hot, dry skin (no sweating)
- Hallucinations
- Chills
- Throbbing headache
- High body temperature
- Confusion/dizziness

- Slurred speech

First Aid :

- Call 911 and notify their supervisor.
- Move the sick worker to a cool shaded area.
- Cool the worker using methods such as:
 - Soak their clothes with water.
 - Spray, sponge, or shower them with water.
 - Fan their body.

2. 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

- Heavy sweating
- Extreme weakness or fatigue
- Dizziness, confusion
- Nausea
- Clammy, moist skin
- Pale or flushed complexion
- Muscle cramps
- Slightly elevated body temperature
- Fast and shallow breathing

First Aid

- Have them rest in a cool, shaded or air-conditioned area.
- Have them drink plenty of water or other cool, nonalcoholic beverages.
- Have them take a cool shower, bath, or sponge bath.

3. Heat Syncope is a fainting (syncope) episode or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and lack of acclimatization.

Symptoms

- Light-headedness

- Dizziness
- Fainting

First Aid

- Sit or lie down in a cool place when they begin to feel symptoms.
- Slowly drink water, clear juice, or a sports beverage.

4. 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 causes painful cramps. Heat cramps may also be a symptom of heat exhaustion.

Symptoms

Muscle pain or spasms usually in the abdomen, arms, or legs.

First Aid

- Stop all activity, and sit in a cool place.
- Drink clear juice or a sports beverage.
- Do not return to strenuous work for a few hours after the cramps subside because further exertion may lead to heat exhaustion or heat stroke.
- Seek medical attention if any of the following apply:
 - The worker has heart problems.
 - The worker is on a low-sodium diet.
 - The cramps do not subside within one hour.

5. Heat Rash is a skin irritation caused by excessive sweating during hot, humid weather.

Symptoms

- Heat rash looks like a red cluster of pimples or small blisters.
- It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

First Aid

- Try to work in a cooler, less humid environment when possible.
- Keep the affected area dry.

- Dusting powder may be used to increase comfort.