

## Working outdoors in the heat

As the temperatures rise, it can't be stressed enough the importance of understanding the risks and what to do for heat illness. Heat illness occurs when your body can't adequately cool itself through sweating. According to the National Safety Council, 244 people died in the United States from exposure to excessive heat in 2014. Heat illnesses include heatstroke, heat exhaustion, and heat cramps. Workers who are the most vulnerable are those who work outdoors.

- Drink water, about 1 cup of water every 15 minutes, regardless of whether or not you are thirsty.
- Avoid alcohol, caffeine, and liquids with high sugar content.
- Take rest breaks in the shade or in air-conditioned buildings to cool down.
- Wear loose, light-colored, lightweight clothing, and a hat.
- Replace salt lost from sweating by drinking fruit juice or sports drinks.
- Avoid spending time outdoors during the hottest part of the day, from 11 a.m. to 3 p.m.
- Wear sunscreen; sunburn affects the body's ability to cool itself.
- Pace yourself when you exert your body.
- Ask your supervisor if tasks can be scheduled for earlier or later in the day to avoid midday heat.
- Know the signs of heat stress and what to do in an emergency.
- Watch out for fellow coworkers.
- If you feel faint or weak, stop all activity and get to a cool place.



"You okay man? Looks like the heat's starting to get to you."



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## It's summer, and the heat is here

### *Protect yourself against heat illness*

It's that time of year again when heat illness is a particularly important safety concern. According to the National Institute for Occupational Safety and Health (NIOSH), workers may experience longer or more intense heat exposures and are more likely to engage in strenuous physical activity in the heat than the general public.

### **What's the big deal about heat?**

Heat illness occurs when your body can't adequately cool itself through sweating. According to the National Safety Council (NSC), heat-related illnesses can escalate rapidly, leading to delirium, organ damage, and even death.

### **What are the dangers?**

If you work in hot conditions, you can be at risk of several heat-related illnesses. The following are heat-related illnesses and what to look for:

- **Heat rash** consists of red, irritated bumps and is a sign that hot conditions are affecting your body.
- **Heat syncope (fainting)** can occur when a person is not used to working in a hot environment.
- **Heat cramps** is caused by a loss of salt when sweating. Severe cramps may require a visit to a medical professional.
- **Heat exhaustion** occurs if you have lost too much fluid, salt, or both through sweating.
- **Heatstroke** occurs when the body's natural cooling processes stop working, and the ill person stops sweating. Symptoms of heatstroke include hot and dry skin, confusion, convulsions, seizures, and loss of consciousness. Heatstroke is very serious and can lead to death.

### **What can you do to keep cool?**

All of these heat-related illnesses can be easily prevented by taking the following steps while working in hot conditions:

- Drink plenty of water throughout the day. In hot conditions, you should aim for about 1 cup every 15 to 20 minutes.
- Wear a hat and light-colored clothing.
- Drink sports drinks to help replace the salt you lose when you sweat.
- Avoid caffeine and alcohol, which can both cause dehydration.
- Take frequent breaks in a cool, shady place.
- If the temperature spikes suddenly or you are new to working in hot conditions, take more frequent breaks, and gradually build up your workload.
- If you notice yourself experiencing symptoms of heat illness, tell your supervisor, and take a break in a cool, shaded area.

## Helping employees beat the heat

The Occupational Safety and Health Administration (OSHA) recently asked what employers do to keep employees safe in high-heat conditions. The following are some of the responses.

Land of Lincoln Goodwill Industries in Springfield, Illinois, implements a buddy system within shifts so that workers can keep an eye on one another and report to their supervisor if they notice symptoms of heat illness. New and/or transferred employees are gradually acclimated to the environment through frequent breaks during their first 2 weeks on the job and during heat waves. The company also gives workers cooling caps and bandanas, additional breaks, water and sports drinks when the heat is especially high.

Ballard Marine Construction, a contractor serving international clients in the nuclear, hydroelectric, salvage, pipeline, and submarine cable industries, sets up portable shade canopies outside its dive control vans, with misting hoses woven throughout the frames to cover workers with a fine spray of water throughout the day.

Granite Construction provides workers with portable canopy sun shades; evaporative, cooling neck towels; and shades that attach to the back of their hard hats. The company also monitors the Heat Safety app and conducts training sessions on heat exposure.

*Image credit: Okea / iStock / Getty Images Plus / Getty Images*



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## Quiz: It's summer, and the heat is here

Choose the correct response to the following statements.

- Heat-related illnesses are neither serious nor life-threatening conditions. **True or False**
- You can drink coffee and alcohol if you are working in hot conditions because they have water in them. **True or False**
- It's recommended that in hot conditions, you should drink about 1 cup of \_\_\_\_ every \_\_\_\_ to \_\_\_\_ minutes.
  - Sport (electrolyte) drink; 10 to 15
  - Water; 15 to 20
  - Water; 30 to 40
- Heat cramps are caused by a loss of salt when sweating. **True or False**
- Heatstroke occurs when the body's natural cooling processes stop working and you stop sweating. **True or False**

### ANSWERS

**1. False.** Heat-related illnesses can lead to some very serious and dangerous health problems, including organ damage and even death. **2. False.** It's dangerous to drink alcohol or caffeinated drinks in hot conditions because they are diuretics and can cause dehydration. **3. B.** If you are working in hot conditions, you should be drinking 1 cup of water every 15 to 20 minutes. **4. True.** Heat cramps are caused by a lack of salt in your body when working in the heat. See a doctor or medical professional if you are having severe cramps. **5. True.** If you are suffering from heatstroke, seek help immediately! Heatstroke is very serious and can lead to death.

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### Hot work tips

What is "hot work"? Hot work is any spark-producing operation that has the potential to ignite fires or explosions, including burning or welding. Food processing, pulp and paper manufacturing, oil production, fuel storage, and waste treatment see hot work accidents. The U.S. Chemical Safety and Hazard Investigation Board (CSB) says the most common causes of worker death due to hot work are explosions and fires due to flammable atmospheres in confined spaces. The CSB recently released the following tips to prevent deaths and incidents related to hot work.

**Use alternatives.** Whenever possible, avoid hot work, and ask your supervisor about alternative methods.

**Know the hazards.** Before starting hot work, be aware of the hazard assessment for the scope of the work, potential hazards, and methods of hazard control.

**Monitor the atmosphere.** Conduct effective gas monitoring in the work area using a combustible gas detector before and during hot work activities.

**Test the area.** In work areas where flammable liquids and gases are stored or handled, drain and/or purge all equipment and piping before hot work is conducted. Continuously monitor all surrounding tanks or adjacent spaces for the presence of flammables, and eliminate potential sources of flammables.

**Have the proper training.** Do not perform hot work unless you know the hot work policies/procedures, proper use and calibration of combustible gas detectors, safety equipment, and job-specific hazards and controls.

**If you are a contractor,** make sure you know about site-specific hazards, including the presence of flammable materials, before starting the job.