

During hot weather, employees can suffer heat-related illnesses, injuries, or even death. Workers are in danger of getting a heat illness that threatens vital organs when their body heat rises quickly and sweating alone is not enough to cool them.

Heat illness can cause other injuries. Workers can fall after getting dizzy, slip because their hands are sweaty, or get burns from steam or hot surfaces. All workers are at risk of getting hurt by heat, no matter their age or fitness level.

The law says employers must give workers a safe workplace that is free from risks that may cause death or serious harm – as well as extreme heat.

You can help protect workers who perform physical labor, work in direct sun, work indoors near radiant heat sources (heat coming from hot surfaces like pipes), or work in spaces with little air flow by knowing how to avoid heat illnesses and injuries and what to do if a worker shows signs of heat illness.



Prevent heat illness and injury

Plan ahead

- Check the National Weather Service daily for heat watches, warnings, and advisories issued for your local area. Take these seriously and limit workers' time in the heat when these conditions are forecast. Be especially careful when temperatures rise to 100° F or more in high humidity.
- Save outdoor tasks or heavier work for the early morning when it's cooler.
- Give out work evenly throughout a day and follow work/rest cycles.
- Give workers turns on different jobs to help avoid injuries caused by the heat.

Clothing

- Tell workers to wear loose, light-colored clothing; cooling vests with pockets for cold packs; or wetted clothing like terry cloth coveralls or two-piece, whole-body, cotton suits.
- If employees who work around radiant heat sources wear reflective clothing to help cool themselves, they should wear the clothing as loosely as possible. Most reflective garments are not made of breathable fabric.
- If employees must wear heavy, waterproof, protective clothing, tell them to take breaks often.

Prepare workers

- Give employees tools and machines that make jobs easier.
- Have new workers or those who have been away for more than a week get used to working in the heat by giving them breaks often and slowly adding to their workloads.
- Encourage workers to slow down and pace themselves. Tell them to stop all activity and get to a cool place if working in the heat makes their hearts pound or leaves them short of breath.
- Provide plenty of cool (50-60° F if possible) water, in easy to find places close to the work area, for workers to drink often. Workers should stop and drink water about every 15 minutes, even when they are not thirsty.
- Tell employees to avoid very cold drinks (which can cause stomach cramps) and drinks with alcohol, caffeine, or too much sugar.

- If their doctors allow it, workers should drink watered down sports drinks to replace the salt and minerals lost through sweat.
- Tell your employees that it is important to avoid hot, heavy meals that add heat to the body. Tell them that eating small, well-balanced meals, many times a day, is better.
- Have a plan for what to do if a worker shows signs of heat-related illness and needs to see a doctor right away. Make sure employees have phones and know their worksite's location in case they need to call 9-1-1.
- Tell workers to move around instead of standing still in the heat to avoid fainting.

Outdoor work

- Outdoor workers need to protect themselves from heat illness and sunburn by wearing:
 - loose-fitting, lightweight, light-colored clothing;
 - a wide-brimmed hat made of a tightly woven cloth like canvas (or if wearing a hard hat, a sunshield that fits it, plus a cloth neck shield);
 - water-resistant, broad-spectrum sunscreen with ultraviolet A and B (UVA and UVB) protection and a sun protection factor of at least 15, applied 15 to 30 minutes before going in the sun and several times during the day; and
 - sunglasses that absorb UVA and UVB rays.
- Allow outdoor workers to cool down by resting in shade or air-conditioned break rooms. Several hours spent in air conditioning can help a person stay cooler when he or she goes back into the heat.

Indoor work

- Cool indoor work spaces with air conditioning, cooling fans, fresh air, and sun shades. Repair steam leaks, and protect hot surfaces like furnace walls.
- In steel mills, foundries, or other worksites with high temperatures, have an expert test how much heat workers may be exposed to and offer them ways to avoid illness.

Provide training

- Before beginning hot work, **train employees and supervisors** about:
 - the value of watching out for co-workers on the job and of quickly reporting signs of illness;
 - the signs of illness, how to report the signs, give first aid, and contact emergency medical services;
 - the causes of heat-related illness and plans to limit risk, like drinking enough water and making sure you are urinating enough. Urine should be light or clear in color;
 - how factors outside your job (like age, poor physical shape, or use of alcohol or certain drugs) can make it harder for the body to recover from work-related heat stress;
 - caring for and using heat-protective clothing and personal protective equipment (PPE), and how clothing, PPE, and hard work can add to a worker's heat load; and
 - the value of slowly becoming used to working in hot conditions.
- Before allowing employees to begin hot work, **train supervisors** how to:
 - get workers used to working in hot conditions;
 - react when a worker shows signs of a heat-related illness, and how to follow emergency response procedures;
 - watch for and react to hot-weather reports; and
 - make sure workers drink enough fluids and take rest when needed.

Know and respond to signs of heat illness

Condition	Causes and symptoms	Response
Heat rash (also known as prickly heat)	<ul style="list-style-type: none"> • Often happens in hot, humid environments where sweat doesn't easily evaporate 	<ul style="list-style-type: none"> • Have the person stop physical activity, move to a cool place, and remove extra clothing in the affected area. • Bathe and dry the affected skin. • Seek medical care if the rash doesn't clear once skin is cool.
Heat cramps	<ul style="list-style-type: none"> • Caused by heavy work and sweating that leads to losses of fluids and salts in muscles • Can start during or after working hours • Often the first sign that the body is having trouble with the heat • Pains and spasms, usually in the arms, legs, or abdomen 	<ul style="list-style-type: none"> • Have the person stop physical activity, move to a cool place, and remove excess clothing, including shoes and socks. • Replace the person's lost electrolytes by having them drink cool water or a watered-down sports drink. Stop if the victim is nauseated. • Wait for cramps to go away before the person goes back to work. Get medical help if cramps last longer than one hour or if the worker has heart problems or is on a low-sodium diet.
Fainting	<ul style="list-style-type: none"> • May happen when a person stands in the heat without moving for a long time 	<ul style="list-style-type: none"> • Move the person to a cool, shaded area. • Provide cool water to drink. • Fan the person and apply a wet cloth to the skin to cool the person down. • Lay the victim on the left side if the person feels nauseous. • Lay the victim on the back and raise the legs above the heart (six to eight inches) if he or she is dizzy or unconscious. • Loosen and remove heavy or tight clothing. • Stay with the victim until he or she recovers or until help arrives. • Call 9-1-1 for emergency help if the victim does not feel better in a few minutes or does not regain consciousness within one minute.
Heat exhaustion	<ul style="list-style-type: none"> • The body's reaction to losing body fluids and salts from sweating • Can come on after several days of exposure • Heavy sweating, nausea, dizziness, fainting, weakness, tiredness, thirst, irritability, confusion, paleness, muscle cramps, and headache 	<ul style="list-style-type: none"> • Move the person to a cool place to sit or lie down. Loosen or remove clothing, and fan the person. • Have the person take a cool bath, or put wet cloths or cool packs on him or her. • Have the person sip water slowly. • Do not let the person return to work that day. • Seek emergency medical help if the person refuses water, vomits, or starts to lose consciousness, or if the symptoms do not improve or last longer than one hour. If left untreated, heat exhaustion can turn into heat stroke.

Condition	Causes and symptoms	Response
Heat stroke (also known as sun stroke)	<ul style="list-style-type: none"> • Most serious heat-related illness • Life-threatening condition that makes a person lose the ability to sweat so that the body cannot cool itself • The body's temperature can rise so high that a person can suffer brain damage or die if not cooled fast enough • High body temperatures (103° F or higher); hot, red skin that may be dry or damp; failure to sweat, confusion; a fast, strong pulse; vomiting; dizziness; collapse; changes in consciousness; seizures; and headache 	<ul style="list-style-type: none"> • Do not delay in getting medical help. Call 9-1-1 right away. • While waiting for emergency medical personnel, or while transporting the person to a hospital, move the person to a cooler area; loosen or remove outer clothing; fan the person; place a cool pack on the person's ankles, armpits, groin, neck, and wrists; and/or apply a cool, wet cloth or sponge. • Lay a conscious person on his or her back. • Place an unconscious person on his or her left side and monitor breathing. • If the person is unconscious and has stopped breathing, give CPR (cardiopulmonary resuscitation). • If the victim has a seizure, remove nearby objects to prevent injury.

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