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Heat and cold



If the temperature inside the factory feels hot or cold, it can make your work uncomfortable. But if the temperature gets too high or too low, it can also cause serious health problems. Many factories around the world are too hot.

Your employer is responsible for:

- monitoring the temperature in the factory.
- making sure the air in the factory does not get too hot. For many people, it is uncomfortable and sometimes unhealthy to do physical labor in temperatures over 27°C (80°F). Check your country's laws to see if they set maximum and minimum temperatures for work.
- installing, monitoring, and improving ventilation (see chapter 17: Ventilation).

Your boss should also provide fresh, safe water to drink and breaks to go to the bathroom (see chapter 29: Access to safe water and toilets).

Dangers from heat

When you get very hot, your body sweats to cool off. And when you sweat, your body loses liquid. To stay healthy, you need to drink enough water to replace the liquid you lose as you sweat. If you do not drink enough water or if you do not get regular breaks from the heat, you can get sick very quickly.

The first signs of too much heat are heavy sweating and a quicker heartbeat. If you begin to have a headache, feel weak or tired, have painful muscle cramps, or feel dizzy, confused, or nauseous, you are in danger of heat illness. As soon as you feel these warning signs, you need to begin cooling off or you could collapse.

If you keep working past these signs, you might suffer heatstroke. One sign of heatstroke is that you no longer sweat even if you are very hot. Heatstroke happens because your body gets too hot and it overheats your brain. It can cause permanent damage to the brain and other organs, and can kill you.



If it is very humid inside the factory you might not notice you are sweating or how hot your body is getting.

Other health problems caused by too much heat include:

- skin rashes, boils, or infected hairs
- heart problems
- vaginal infections, especially in women who sit most of the time, and whose clothing stays damp with sweat
- pregnancy complications and miscarriage
- fewer sperm in men, making it difficult to conceive a child

Too much heat is especially dangerous for people with heart problems, high blood pressure, diabetes, and for people taking certain tranquilizers or medicine for nausea.

When people start a new job in a hot factory, it affects them more. Watch co-workers for signs of too much heat, especially in the first few weeks.

Stand together, fan together

I work in a shoe factory in Reynosa, Mexico. After work, I meet with a group of women to talk about problems at work. When the air conditioning in the factory broke a few months ago, the manager said fixing it was too expensive. We started to talk about how sick we felt working in the heat. The manager did not listen to us when we asked him to fix the air conditioner, so our group decided to find another way to convince him. One morning we walked into the factory, but we did not start working. We sat down and started fanning ourselves. Other workers saw what we were doing and joined us. Soon all the workers in the factory had stopped working and started fanning. By the end of the day, the manager had fixed the air conditioning!



Cool the air inside the factory

The best way to protect workers from too much heat is to keep the air inside the factory cool and give workers time to rest, to cool off, and to drink enough safe, clean water. (For information about ventilation, see chapter 17.)

Rest and drink water

- **Drink cool water** whenever you feel thirsty. It is better to drink a little bit of water several times a day than drink a lot at one time. Do not drink coffee or cola because they will dehydrate you. Policies that let workers take enough bathroom breaks help them stay hydrated and healthy.
- **Take rest breaks.** If your job makes you very hot, you should rest in a cool area for 5 minutes to recover. Take as many cooling breaks as you need.
- **Wear loose-fitting, lightweight clothes** that let air through to your skin to help dry your sweat and cool your body. Loose underclothes made of cotton, instead of nylon, can also help prevent skin rashes and infections.
- **Limit time working in very hot areas by rotating jobs**, so that nobody works in high heat all day or every day.



First aid for heat illness

Pay attention to people who act confused or delusional when working in a hot environment. The person is probably suffering from heat illness, though these are also signs of chemical exposure. Take action immediately. Do not wait until a person faints to give first aid.

1. Have the person lie down in a cool place.
2. Raise his feet and rub his legs.
3. Give him cool water to drink.
You can give juice or other drinks if that is all you have, but do not give coffee or cola.
4. Place cold cloths on his face and neck.
5. If the person faints, get medical help right away.



**First
Aid**

Muscle cramps caused by heat

When you sweat too much and do not drink enough to replace it, your muscles will cramp. Drink fluids regularly during the day to prevent muscle cramps.

If you have a cramp in your legs, arms, or belly:

1. Every hour until the cramps are gone, slowly drink 1 liter of cool water or rehydration drink, juice, or any drink except for coffee or cola.
2. Sit or lie down in a cool place.
3. Gently massage the painful areas.

To make rehydration drink:

1. Pour 1 liter of clean **w**ater in a container.
2. Add $\frac{1}{2}$ teaspoon of **s**alt.
3. Add 8 flat teaspoons of **s**ugar and mix well.

Give as much as the person will take. For more on rehydration drink, see *Where There is No Doctor*, page 152.



Dangers from cold

When you are cold, your muscles become tense and less flexible, which makes strain and injury more likely. When your body gets cold, you can also get sick with other illnesses more easily.

Working when you are too cold can also be dangerous because you think and move more slowly. Your hands and feet cannot hold or feel things as well as usual, so you may not notice if you are injured. Using tools that vibrate can make problems from cold even worse.

Warm up the workplace

The best way to protect workers from getting sick or injured due to cold is to keep the factory at a comfortable temperature.

- **Insulate the roof and walls** to keep warm air inside the building and cold air outside.
- **Heat the work area** with a hot air system, or with hot water or steam radiators that spread the heat evenly.
- **Insulate the floor** – especially floors made of concrete, stone, or metal – with rubber, wood, or carpeting. Anti-fatigue mats can be good insulation from cold floors.
- **Insulate chairs** with cushions, cloth, or foam rubber, especially if the chairs are made of metal. Wood, plastic, and fabric chairs are warmer to sit on than metal chairs.
- **Heat vehicles** with electric seat warmers or hot air blowing on the feet.
- **Close doors and windows** to keep out cold air when the climate is cold. If open windows and doors help ventilate the factory, see chapter 17: Ventilation for information about other ways to keep chemicals and dust out of the air.
- **Open doors, windows, and window shades** to let sunshine and warm air in when the climate is warm.



A hat, jacket, and floor mat can help you stay warmer.

Stay warm in a cold workplace

- **Wear warm clothing**, including socks, closed shoes, and boots with thick soles. Several thin layers are warmer than 1 layer of heavy clothes.
- **Cover your head and ears** with a hat or scarf. Just covering your head helps keep your whole body warm.
- **Wear gloves**, especially if you touch cold things while working.
- **Avoid getting wet**, it makes the body lose heat more quickly. If you do get wet, change into warm, dry clothes.
- **Move around to keep the blood flowing** to all parts of your body.
- **Take regular breaks** from the cold to warm up.
- **Drink hot liquids and eat often** to warm your body from the inside.

First aid for being too cold

A worker who is too cold shivers uncontrollably, cannot think clearly, feels tired or sleepy, speaks slowly and unclearly, and stumbles when walking. This is a very dangerous condition. Often the person does not realize what is happening.



1. Get her to a dry, warm place.
2. Cover her whole body with blankets or any fabric or material you can find. If possible cover her head.
3. Give her warm, sweet drinks and sweet food, fruit, or candy. If you do not have anything sweet, give starchy foods like rice, bread, plantain, or potatoes.
4. If she stops shivering but still has signs of being too cold, or if she loses consciousness, get medical help.

Frostbite

When one part of a person's body is exposed to very cold temperatures, it can become numb and change color as it loses all feeling. This is called frostbite. Frostbite happens mostly on fingers, toes, and nose.

1. Wrap the numb part with a dry cloth and warm it against another part of the person's own body or someone else's.
2. Cover her to warm her whole body.
3. Get medical attention quickly if the body part becomes hard.



**First
Aid**