

Heat illness training

Summers are getting hotter and longer. For people working in hot environments, the risks of heat illness are on the rise. These talking points provide a quick overview of what you need to know to protect yourself and others from heat illnesses.

Types of heat-related illness

Heat illnesses are a serious issue for many workplaces and it's important to recognize symptoms early. Here are the four most common types of heat illnesses.

Heat cramps – These happen when workers are sweating a great deal while doing physical tasks. The cramps come from losing salt through sweating, which causes muscle pain. What to look for:

- Muscle cramps or pain
- Spasms in the abdomen, arms, or legs

Heat exhaustion – This comes from the body's response to losing water and salt, usually through sweating. What to look for:

- Headache
- Nausea
- Dizziness
- Weakness
- Irritability
- Thirst
- Heavy sweating
- Elevated body temperature
- Decreased urine output

Heat syncope – Fainting or dizziness spells caused by dehydration or not being used to working in the heat. What to look for:

- Fainting
- Dizziness
- Light-headedness after standing for long periods or after quickly rising from a sitting or lying position

Heat stroke – The most serious heat-related illness, heat stroke can cause death or permanent disability if not treated immediately. The body is unable to control its temperature or cool itself down. What to look for:

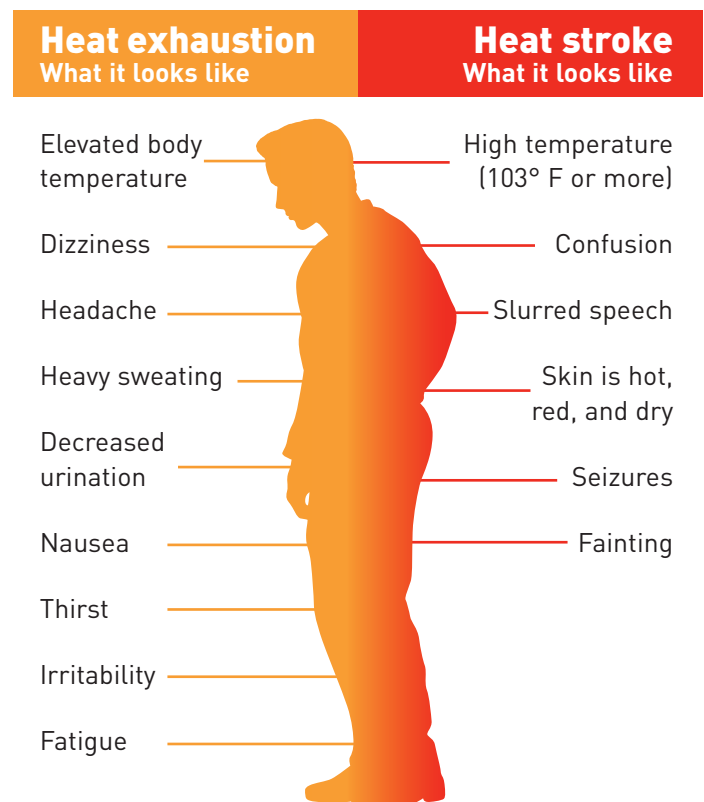
- Confusion, altered mental status, slurred speech
- Loss of consciousness
- Hot, dry skin or profuse sweating
- Seizures
- Very high body temperature

Resources: NIOSH heat stress- heat-related illness
<https://www.cdc.gov/niosh/topics/heatstress/heatrelillness.html>

Heat exhaustion vs. heat stroke:

Learn the symptoms: https://www.saif.com/Documents/SafetyandHealth/Wellness/S1106_Handout_HeatStress.pdf

Poster: https://www.saif.com/Documents/SafetyandHealth/Wellness/S1106_POSTER_HeatStress.pdf



Risk factors

The risk of heat-related illness increases when heat is paired with:

- Strenuous activity
- Wearing heavy or dark clothing
- Wearing personal protective equipment (PPE)
- Age, particularly 40 years or older
- Medical or chronic health conditions — obesity, high blood pressure, diabetes, or pregnancy
- Medication — antihistamines, beta blockers, diuretics, or calcium channel blockers
- Alcohol, which can cause dehydration
- History of heatstroke — if a worker has had a heatstroke in the past, they are more likely to have another one

Adapting to a hot work environment

Workers are less likely to experience heat illness if they gradually adapt to working in hot environments.

The National Institute for Occupational Safety and Health (NIOSH) has a schedule that can be used to help workers. <https://www.cdc.gov/niosh/topics/heatstress/acclima.html>

What can employers do?

Oregon OSHA passed a temporary rule for excessive heat in July 2021, and have set requirements based on the heat index, not just temperature:

- **What's the heat index?** The heat index is a measure that combines humidity and air temperature. These are two apps that can help you calculate the heat index:
- **Outdoor workplaces:** Use the OSHA-NIOSH Heat Safety Tool <https://www.cdc.gov/niosh/topics/heatstress/heatapp.html> for real-time heat index information and hourly forecasts by location.
- **Indoor workplaces:** Use the NOAA Heat Index Calculator. <https://www.wpc.ncep.noaa.gov/html/heatindex.shtml>

Resource: Oregon OSHA tutorial on using the OSHA-NIOSH Heat Safety Tool <https://www.youtube.com/watch?v=VQg-cGDLnDQ>

- **80 degrees Fahrenheit**

Employers are required to provide access to shade and drinking water when the heat index reaches 80 degrees Fahrenheit.

Water must be provided by the employer free of cost and easily accessible. Enough water must be available for each worker to have 32 ounces per hour, and employers must provide ample opportunity to drink water. The water must be under 77 degrees.

Shade must be provided as close as practical to working areas and either be open to the air or provide mechanical cooling. The shaded area needs to be large enough to accommodate all workers during their breaks.

- **90 degrees Fahrenheit**

In addition to the measures required at 80 degrees, employers must provide a shaded 10-minute rest period for every two hours of work when the heat index reaches 90 degrees Fahrenheit. Employers must ensure workers can effectively report concerns and must monitor all workers for signs and symptoms of heat illness. Finally, the employer must create both a plan to allow workers to gradually adapt to working in the heat, and a plan to deal with heat-related medical emergencies.

Resource: Oregon OSHA video on heat illness

<https://www.youtube.com/watch?v=ISCC3etvMi4>

What can workers do?

The most important thing workers can do is look out for one another. Heat illnesses can come on very quickly, and workers often don't realize what's happening until it's too late.

Learning the signs and symptoms, scheduling frequent breaks, and being aware of the risk factors that can contribute to heat illnesses can help keep workers safe.

Other things to remember:

- Sip water instead of drinking quickly
- Avoid caffeine when working in heat
- Wear sunscreen and hats when working outside
- Do outdoor work in the morning or in late evening, if possible

Find out more

SAIF's page on heat stress

<https://www.saif.com/safety-and-health/topics/prevent-injuries/heat/cold-stress.html>

Oregon OSHA's temporary rule on heat illness prevention

<https://osha.oregon.gov/OSHArules/adopted/2021/ao6-2021-letter-heatillnessprevention.pdf>