

Heat Stress Signs, Symptoms, & Treatment Briefing For Workers



[Heat stress](#) can be lethal when it sneaks up on victims. That should never be allowed to happen, especially since heat stress doesn't strike without warning. But when you don't make supervisors and workers [aware](#) of its signs and symptoms, you render them vulnerable and empower them to do things that actually make the danger worse, like drinking beer when they're dehydrated. That's why educating your workforce about the dangers of heat stress may save their lives. Here's a briefing you can give your workers to make them aware of the signs and symptoms of the different forms of heat stress and how to treat each one.

Knowing How to Recognize & Respond to Heat Stress Emergencies Can Save Lives

The human body functions normally at a "core" temperature of 36°C/98.6°F. Core temperature rises when the body generates heat faster than it can get rid of it. This can happen when you work in high temperatures and humidity levels, whether inside or outside. And if core temperature rises too high, you can get seriously ill or even die.

High Temperature + High Humidity + Physical Activity = Heat Illness

Bottom Line: It's crucial to know the signs and symptoms of

heat illness and what to do if you or a co-worker experiences them. Here's a real-life story of one worker who paid the ultimate price for not knowing this crucial information.

The Avoidable Heat Stress Death of Anthony Dalton

Anthony Dalton and Ronald Morrissey are trained boilermakers and best friends who decided to leave their native Newfoundland to take a job in a sweltering, unair-conditioned New Brunswick paper mill on an unusually hot spring day when outdoor temperatures climbed to 34.4° C/94° F, and humidity reached 35%.

Dalton began feeling fatigue. It was the first warning of danger. But because nobody at the plant gave them any information or warnings about heat stress, they have no sense of the danger they face or how to protect themselves.

This lack of awareness became even more lethal at the end of the second day when Dalton began cramping up and collapsed on the floor of the motel bathroom after work. Had they been trained, the boilermakers would have recognized that Dalton was dehydrated and needed to get water into his system ASAP. Instead, Dalton, with Morrissey's encouragement, made the situation worse by guzzling two cans of beer not realizing that the alcohol would dehydrate Dalton even more.

The next day was even hotter. Dalton somehow managed to make it through his shift. But he could barely stand up. Incoherent, he stumbled about 100 yards and finally collapsed. Even now, nobody knew what was going on. The ambulance took him to the hospital where he died of heat stroke the next day.

Don't Let It Happen Here!

Anthony Dalton should never have died that way. There were ample warning signs of heat stroke that anybody with basic heat stress training would have recognized. And had they recognized the danger signs, they could have saved Dalton's

life. It was thus lack of training and awareness and not just heat and humidity that killed Anthony Dalton.

Heat Stress Signs, Symptoms, & First Aid Treatment

Heat stress comes in a number of different forms. Here are the principal signs and symptoms and appropriate first aid treatment of each one, from least to most dangerous.

Heat Rash

Heat rash is a skin irritation usually caused by excessive sweating during humid weather or prolonged use of heavy or protective clothing.

Heat Rash Signs & Symptoms

- Red cluster of pimples or small blisters.
- More likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

Heat Rash Treatment & First Aid

- Keep the affected areas clean and dry.
- Periodically allow the skin to dry.
- Use dusting powder, baby powder, or calamine lotion as directed to reduce itch and increase comfort.

Heat Cramps

Heat cramps are painful muscle spasms caused by loss of salt from excessive sweat that usually affect workers who sweat during strenuous activity and have fatigued muscles.

Heat Cramps Signs & Symptoms

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

Heat Cramps Treatment & First Aid

- Get victim to rest in a cool place.
- Give victim cold water or sports drinks sprinkled with salt and salty foods.
- Don't give victim alcohol or salt tablets.
- Remove wet or tight clothing that may restrict flow of blood to affected area.
- If cramps continue, seek medical help – rest alone isn't enough.
- Seek immediate medical help if the worker has heart problems or is on a low-sodium diet.
- Ensure victim doesn't return to work for a few hours after the cramps subside.

Heat Exhaustion

Heat exhaustion is a more advanced and dangerous form of heat illness caused by an excessive loss of water and salt due to excessive sweating. Heat exhaustion may also result from excessive loss of water due to illness and/or alcohol consumption.

Heat Exhaustion Signs & Symptoms

- Noticeable weakness or fatigue.
- Dizziness.
- Fainting.
- Nausea.
- Poor muscle control.
- Clammy, moist skin.
- Pale or flushed complexion.
- Rapid pulse.
- Fast and shallow breathing.

Heat Exhaustion Treatment & First Aid

- Heat exhaustion is life threatening—get medical help immediately.
- Get victim to rest in a cool, shaded or air-conditioned area.

- If conscious, get victim to drink electrolyte drinks or cold water but not alcohol.
- If conscious, get victim to eat salty foods but not swallow salt tablets.
- Check victim's airway, breathing and circulation and give CPR, if needed.
- Cool victim with sponge or spray, covering with cold wet cloths, placing ice packs under armpits and groin, and fanning.

Heat Stroke

A condition in which the body's temperature rises above 41° C/105.8° F and which if not treated immediately may result in coma, permanent brain damage or death.

Heat Stroke Signs & Symptoms

- Hot, dry flushed skin, usually with no sweating.
- Agitation and confusion.
- Erratic or unexpected behaviour.
- Slurred speech.
- Throbbing headaches.
- Dizziness.
- Nausea and vomiting.
- Convulsions.
- Irregular pulse.
- Rapid, shallow breathing.
- Possible seizure and loss of consciousness.
- Possible shock and cardiac arrest.

Heat Stroke Treatment & First Aid

- Call 911 and get victim emergency health right away.
- Get victim to rest in a cool, shaded, or air-conditioned area.
- Cool victim immediately and aggressively using ice water immersion, soaking the victim with cold water and placing ice packs around neck, armpits, and groin.

- If conscious, get victim to drink electrolyte drinks or cold water but not alcohol.
- If conscious, get victim to eat salty foods but not swallow salt tablets.
- Loosen or remove the victim's outer clothing.
- Check victim's airway, breathing and circulation and give CPR, if needed.
- Cool victim with sponge or spray, covering with cold wet cloths, placing ice packs under armpits and groin, and fanning.