

# Heat Stress: Employers Sweating It Out

As summer heat raises the temperature in many workplaces, employers and workers alike need to know the threats heat can pose, and what to do if heat-related illness strikes.

It's finally June. And all across the nation, you can almost hear the sighs of relief that, at last, the cold of winter and the damp rain of early spring are finally gone. Welcome to the warmth of summer.

The problem is that the "warmth" of summer can be a little too warm for comfort. In fact, it can be deadly.

OSHA demands that you protect workers from heat stress. Some 4,000 Americans die each year from heatstroke, and many more are made ill from heat-related illnesses. Many of these incidents occur as employees work on jobs that flourish in warm weather, such as construction, roofing, landscaping, or other maintenance chores. All of which makes it vital for both safety professionals and those who might be affected by heat issues to understand the danger and know how to recognize and react to it.

Heat illnesses come in three varieties:

**Heat Cramps.** When hard work (or extreme physical exercise) is done in a hot environment (and that can include an overheated workplace or gym), the body's natural balance is thrown off kilter. Excessive sweating dehydrates the body, and precious electrolytes evaporate with it.

Before long, the large muscles aren't getting the organic chemicals they need to function. They seize up, like a car engine starved of oil, usually in the legs and stomach area first. Anyone who has suffered these cramps knows that there's no negotiating with the pain. You stop what you're doing right now! Cramps are nature's way of telling you to stop exercising [or working], when it's that hot out.

**Heat Exhaustion.** Also known as heat prostration and heat collapse, the causes are the same as those that cause cramping, but the symptoms are different. You'll feel dizzy, weak, headache and perhaps nauseous, but paradoxically, your skin will feel cold and clammy. Body temperature will be about normal, however.

Heat exhaustion can occur even in mild temperatures if you're overdressed for conditions, as multiple layers of clothing inhibit natural heat loss through sweating. Solution: Remove some clothing when you're active.

**Heatstroke:** This is the one that kills kids locked in cars on sunny days ... and old folks in poorly ventilated apartments during heat waves, but it also kills healthy 30-year-old guys working in a humid warehouse.

The difference from the milder maladies is that the heat overload is so overwhelming that the body's temperature controls are totally disrupted. The big marker is extreme body temperature of 105 degrees or higher, this is a medical emergency.

What actions need to be taken should these temperature-related threats appear?

You can treat heat stress, but preventing it is even better. Here are the steps you need to know to do both.

For heat cramps, get out of the hot environment, stop using your large muscles, drink water, and replace electrolytes.

For heat exhaustion, get out of the heat and take off any excessive clothing, particularly around the head and neck. Drink a liter of water (slowly, so nausea doesn't develop), lie down with your feet up, and use a fan for cooling. The problem should go away in 30 minutes. If not, medical attention may be needed.

Heatstroke is a medical emergency. Your first and biggest objective is to lower the [body's] core temperature by any means available. Those include cold packs on the neck, armpits, and groin, coverage with wet sheets or towels, and placement in a highly air-conditioned room. Medical help should be summoned immediately.

It's understandable if all of this has you looking for ways to prevent these conditions rather than having to treat them.

1. **Pre-hydrate.** Before activity starts, have workers drink up to 16 ounces of fluid. Then drink 8 ounces every 20 minutes during the activity.
2. **Drink flavored water.** Plain water quenches thirst too quickly, so workers tend to not drink enough of it.
3. **Acclimate to the heat slowly,** over 5 to 7 days of exposure. For new workers, institute a 20 percent increase of time in the heat for each day. Workers already used to these conditions can increase exposure slightly faster, but 4 days out of the heat means re-acclimation will be needed.
4. **Don't wear a hat.** It restricts heat loss through the head. Workers operating in direct sunlight can wear a visor.
5. **Wear loose, thin synthetic fabrics.** They help the skin stay cool through evaporation. Avoid cotton as it soaks up sweat, forestalling evaporation.
6. **Wear your PPE no matter what the temperature.** It can't protect you if it's not on you. If it's uncomfortable, take frequent breaks.

*Source: BLR's Safety Daily Advisor*