Heat Illness Symptoms and First Aid

**Key Points for Workers about Heat Stress**

1. Your body normally operates best at a temperature of 98.6 degrees and requires oxygen and nutrients delivered through the blood stream.
2. Both heat and the body’s processes for getting rid of excess heat have effects on your comfort, performance, and accident risks for you and others.
3. Heat stress is a buildup-up in the heat that threatens its functioning. Heat injury or illness is a disruption of physical or psychological processes vital to protecting you from serious fatigue or heat stroke.
4. When you are working, most of the heat load in your body comes from its own metabolism. About three-fourths of the stored calories you draw on to move muscles turn into heat rather than into muscle power. When you exercise, the more heat you produce, the more you need to get rid of it.
5. Heat and high humidity increase your heat stress risks mainly by slowing down the movement of heat from your body to the environment.
6. Your body naturally radiates heat to cooler environments (below 86.6°). When it produces heat faster than the air is cool enough, it uses additional means to keep a normal temperature.
7. When your body temperature is above normal, your heart rate increases and blood vessels expand to bring more heat carrying blood closer to the body surface, from which it radiates to the environment.
8. Increasing blood flow to your body surface for cooling diverts some of the flow that brings vital nutrients to your muscles, brain, and other internal organs.
9. If your body can’t release excess heat fast enough though radiation, your sweat glands activate and draw water from the bloodstream to carry heat through pores onto the skin surface, where it moves more easily to the environment.
10. The loss of fluid as sweat not only decreases the volume of blood to supply vital organs but also reduces your ability to get rid of excess heat faster.
11. Losing fluid and continuing to produce heat over time increases risks of feeling heat illness symptoms – weakness, poor concentration, loss of stamina and coordination, muscle pain, blurriness, headache, confusion, dizziness, nausea, fatigue, and unconsciousness.
12. If you notice these symptoms in yourself or a co-worker, get rest and fluids, and attention from your supervisor as soon as possible.
13. The single best measure for reducing risks of heat stress is to drink water frequently throughout the day to replace the fluids you lose as sweat – as much as 1 liter per hour during strenuous work in warm weather.
14. Most people do not feel thirsty until their fluid loss is 2% or more of their body weight. However, performing physically heavy work so it is important to drink based on what you know and not wait until you feel thirsty, you have been too dry for too long.
15. If fluid losses approach 8% of your body weight, there is serious risk of heat stroke – a life-threatening medical emergency in which the body’s temperature control mechanism breaks down, and the brain is deprived of oxygen. Don’t let it get this far! If it does, get medical help immediately.