

Toolbox Talk

Heat Stress

Working in high temperature and humidity causes hundreds of illness and fatalities every year. A publication from the CDC reports between 2004-2018 there was an average 702 heat related deaths per year. As a direct reaction to extreme heat like *heat stroke*, or indirectly as *heat stress* which can show as a lack of focus or excessive fatigue leading to other incidents.

Heat-Related Illness

Heat Cramps: Brief muscle cramps and involuntary spasm. Occur during exercise or doing physical work in a hot environment for a few hours.

Signs: Heavy sweating, muscle spasms or cramps

Heat Exhaustion: 1) Water depletion, showing up as excessive thirst, headache, weakness, or loss of consciousness. 2) Salt depletion, showing up as nausea and vomiting, cramps, and dizziness.

Signs: Heavy sweating, cramps, fainting, vomiting, headache

Heat Stroke: Heat stroke is a very serious illness. Heat stroke can cause brain damage, internal organ failure, and death. This comes from prolonged exposure to high temperatures combined with dehydration. The body becomes too overwhelmed to control its temperature.

Signs of Heat Stroke: Hot dry skin, confused and unable to understand and think logically, collapse, seizures, **may have stopped sweating** (this is a big difference between heat stress and heat stroke) body temperature over 104 degrees and unable to help themselves.

First Aid

Heat Cramps: drink cool water or sports drinks with electrolytes to help bring sodium level back up. Apply cold compress or cool towels. Move to a shaded area or space with air conditioning.

Heat Exhaustion: drink cool water or sports drinks, apply cold compress, loosen clothing and remove any unnecessary PPE, move to shade or air condition space, continue resting and cooling until the body temp is below 100 degrees. If symptoms are not improving seek medical help.

Heat Stroke: Call 911 immediately. DO NOT give anything to drink, the body is in shock and the mind is not clear so this could cause a choking hazard. Apply cold compress, move to a shaded area until help emergency medical help arrives.

What Increases the Risk

- High temp and humidity, direct sun, no breeze
- Physical labor activities
- No recent exposure to hot work environment, the body takes 2 weeks to acclimate to extreme conditions.
- Poor diet (caffeine and alcohol greatly increase sensitivity to heat)

How to Prevent Heat Illness

- Run through a Job Hazard Analysis to recognize dangerous conditions
- Provide training about heat stresses and heat stroke.
- Provide cool water, and encourage frequent breaks
- Designate a responsible person to monitor weather and temperature conditions, and give them the authority to give breaks.
- Consider clothing or PPE that provides cooling.
- Wear lightweight, light colored, loose fitting clothes
- Avoid alcohol the night before, and avoid large amounts of caffeine the morning of a hot work day.
- Drink water often and BEFORE you feel thirsty. A bit of water every 15 minutes

If a co-worker is not alert, or seems confused, this may be a heat stroke. Do not hesitate to call 911. Heat Stroke can cause brain and organ damage. Apply ice as soon as possible and wait with the person until help arrives.