Heat Stress – By the Numbers



HEAT STRESS

DID YOU KNOW?

Millions of U.S. workers are ed to heat in their workplaces. Although illness from exposure to heat is preventable, every year, thousands become sick from occupational heat exposure, and some cases are fatal. **Most outdoor fatalities, 50% to 70%, occur in the first few days of working in warm or hot environments because the body needs to build a tolerance to the heat gradually over time. The process of building tolerance is called heat acclimatization. Lack of acclimatization represents a major risk factor for fatal outcomes.**

BLS highlighted data showing that environmental heat exposure contributed to 37 work-related deaths and 2,830 nonfatal occupational injuries and illnesses in 2015. Nearly 90 percent (33) of the deaths occurred from June through September.

Workers in transportation and material moving occupations were involved in 720 of the nonfatal injury and illness cases involving days away from work. Among states, Kansas had the highest rate of nonfatal injuries and illnesses, at 1.3 per 10,000 workers. South Carolina (1.0) and Nebraska (0.6) followed.

OSHA provides resources for employers and employees about the dangers of working in hot weather by tips to help prevent heat-related illnesses and fatalities:

- Drink water every 15 minutes.
- Take rest breaks in the shade to cool down.
- Wear a hat and light-colored clothing.
- Monitor co-workers for any signs of problems.

KEEP IN MIND

Too much heat can be a killer!!!

The heat can be generated in an indoor environment like a non-air-conditioned warehouse or foundry or in outdoor worksites as a farm or construction sites.

Prevention of heat stress in workers is important. Employers should provide training to workers so they understand what heat stress is, how it affects their health and safety, and how it can be prevented.

- **Three** progressive stages of heat illness are heat cramps, heat exhaustion and heat stroke. Heat cramps, the first sign of heat illness, are muscle cramps. Heat exhaustion is a state of being dizzy, weak and nauseated because of dehydration and loss of body minerals through sweating. Heat exhaustion occurs when the body can no longer cool itself. This condition can quickly turn fatal as body temperature spikes.
- **One** factor that can bring on heat illness more quickly is high humidity. Humidity reduces the rate at which sweat evaporates from the body, keeping body heat on the skin and thereby causing the body's temperature to rise.
- It takes the human body between **seven and 10 days** to adapt to working in hot weather conditions.
- **Five** symptoms of heat stroke are red, hot, dry skin; high body temperature; confusion; fainting; and convulsions.
- If you are exercising or performing physically demanding work in hot conditions, you should be drinking up to **10 ounces** (about 300 mL) of water or sports drink every **10 to 20 minutes**. (Presence Health)
- **Six** elements of heat stress training you should be imparting to your workers are the risk factors for heat illness; symptoms of heat-related illnesses; preventative measures they can take; the importance of monitoring themselves and co-workers for symptoms of heat illness; treatment; and how their personal protective equipment could raise their risk of a heat-related illness.
- Heat exhaustion – **Three** things for heat exhaustion first aid: move victim to a cool, shady area or air-conditioned space; have them drink plenty of water or sports drink, and have them take a cool shower, bath or sponge bath.
- Heat Stroke – **Three** things for victims of heat stroke: immediately call 911; move them to a cool, shady area; and cool them by soaking their clothes with water, sponging their skin with cold water, showering the bodies with water, or fanning them.

Exposure to ultraviolet radiation (UV) can cause the following:

- Sunburn
- Premature skin aging
- Eye damage
- Skin cancer

Tans and sunburns are signs that UV have damaged the skin. This damage can occur quickly and stay with you for life.

Workers at risk of heat stress include outdoor workers and workers in hot environments such as firefighters, bakery workers, farmers, construction workers, miners, boiler room workers, factory workers, and others. Workers at greater risk of heat stress include those who are 65 years of age or older, are overweight, have heart disease or high blood pressure, or take medications that may be affected by extreme heat.

Takeaways

OSHA enforcement have declared **lessens** from its investigation.

- Protect new workers during their first two weeks on the job. Make sure they take plenty of rest breaks and drink enough fluids.

- Never leave workers alone when they complain of heat-related symptoms. Their condition can worsen quickly! Take them to a cool location and provide first aid. Even a brief delay in first aid can make the difference between life and death.
- Temperatures do not have to be extremely hot to cause heat stroke in workers. Remember, total heat stress is a combination of environmental prevention heat and workload. Air temperatures in the 80s (°F) are high enough to result in a Heat Index value of 90°F. They are also high enough to kill some workers.
- Even experienced workers are vulnerable to heat-related illness when the weather becomes warmer. Throughout the first week of warmer conditions, treat all workers as if they need to adapt to working in the heat. Take extra precautions to protect them from heat-related illnesses.
- Make sure workers drink enough fluids during warm or hot weather.
- Heat-related illness can occur indoors. The risk is not limited to outdoor workers.
- Some types of work clothing prevent the release of heat from the body. Environmental heat measurements underestimate the risk of heat-related illness in these situations.
- Workers are at risk of heat-related illness when they are reassigned to warmer job tasks.