ESSENTIAL 29: Heat Stress



Key Takeaways:

- Learning what hazards can result from working in hot environments, including physical signs, symptoms, and treatments of heat stresses.
- Understanding how to protect yourself from heat stresses, including observing your employer’s heat stress protective strategies, along with other preparations and practices.

Course Description

Every year, heat stroke, a serious side effect of heat stress, kills more than 300 people.

If you are exposed to heat in your work environment – and if you work outside it is likely that you will be – then the risk of heat stress illness and injury needs serious attention.

Majority of people that are most affected by heat stress work in outdoor conditions, but it is easy to forget about those working indoors where there is insufficient building insulation, ventilation, or cooling, or with tasks where heat is generated or warm conditions are needed. Perhaps obviously, working outdoors presents greater risk depending on location; in the American southwest, summer is simply hotter and the climate is more arid than in other parts of the country, so risk of heat stress is naturally greater. Nonetheless, in many occupations it is crucial to be clear that heat stress can and does happen when working inside.

Everyone who must work in extremely hot conditions must understand the types of heat stress and ways to protect and prevent heat related illnesses and injuries.

Heat stress may lead to heat stroke, heat exhaustion, heat cramps, heat syncope, or heat rashes. As well, heat can increase the likelihood of other injuries to workers because of: sweaty palms, which make gripping activities more difficult; fogged-up safety glasses make it hard to see clearly; dizziness can make working at heights dangerous; burns may also occur as a result of accidental contact with hot surfaces, steam or sunlight. Lastly, heat can bring high-risk working conditions to another level.

Here are some of the common effects of heat stress:

Firstly, heat syncope is a fainting episode or dizziness that occurs during activities in a hot environment. Some factors that create heat syncope include dehydration and lack of acclimatization. Heat syncope symptoms include lightheadedness, dizziness, fainting, dry mouth, excessive thirst and sweating, headache and possibly nausea or vomiting. Be sure to make workers with heat syncope sit or lie down in a cool place, slowly drink water, clear juices or sports beverages, and cool their body with tepid water.

Typically, heat cramps affect workers who sweat a lot during strenuous activity, such as construction laborers who use the entire body over the course of a day. Their symptoms will usually include muscle pain or spasms in the abdomen, arms, or legs. In order to treat heat cramps, first stop all activity and sit in a cool place. Proceed to drink a clear juice or a sports beverage, preferably one with electrolytes; the body needs salt in these situations, which is why you may have heard that pickle juice is a remedy for muscle cramping.

Lastly, a heat rash is a skin irritation caused by excessive sweating during hot, humid weather. Luckily, heat rash typically disappears in a few hours or days without medical treatment.

Treatment

Employers can utilize various actions to protect workers from heat stress. For example, scheduling maintenance and repair jobs in hot areas for cooler months and particularly hot jobs for the cooler part of the day. When the day is hottest, do work shaded areas if possible. A great idea is to acclimatize workers by exposing them for progressively longer periods to hot work environments. Restrict the physical demands on workers and, whenever possible, use relief workers or assign extra workers for physically demanding jobs.

Ensure everyone has easy access to cool water or liquids with electrolytes. As well, avoid drinks with caffeine, alcohol, or large amounts of sugar because they increase the rate of dehydration. Allot adequate rest periods, with water breaks, in cool areas.

Work in increased air cooling, if possible, through air conditioning or fans. Remember, that although fans cool the body, they can reduce awareness of the loss of fluids through sweating.

When conditions are warm, wear light-colored, loose-fitting, breathable clothing (such as cotton), and avoid non-breathing synthetic clothing as much as possible. Keep in mind that certain personal protective equipment (PPE) can increase suffocating insulation, which in turn can compound heat stress through added physical exertion and resultant perspiration. In these cases, extra precautions must be taken. For further illustration, hazmat suits and heavy welding gear can exponentially intensify the effects of direct exposure to full sun and high temperatures, not allow the body to breath or for natural air to provide circulation that makes sweating effective.