



# Weekly Safety Meeting

Your Safety Is Our Business®

Volume 3 – Issue 29

July 17<sup>th</sup>, 2016

## Heat Stress

---

As spring turns into summer and brings up "hot weather," we should all be aware of some tips to prevent heat stress. Remember physical activity at high temperatures can directly affect health and indirectly be the cause of accidents.

Hot conditions put your body under a lot of stress. Physical activity stresses the body even more. When heat is combined with physical activity, loss of fluids, fatigue, and other conditions can lead to a number of heat-related illnesses and injuries. Death is even possible.

### Heat Stress:

It's a signal that says the body is having difficulty maintaining its narrow temperature range. The heart pumps faster, blood is diverted from internal organs to the skin, breathing rate increases, sweating increases, all in an attempt to transfer more heat to the outside air and cool the skin by evaporation of sweat. If the body can't keep up, then the person suffers effects ranging from heat cramps to heat exhaustion to heat stroke.

Heat stress is commonly associated with warm weather. It's true that warm weather increases the number of heat-stress injuries and illnesses. Warm weather isn't the only cause of heat stress, though. Heat stress can occur any time the surrounding temperature is elevated. Even if the weather is cool, you may work in warm areas, indoors or out. Be alert for conditions that could cause heat stress and take precautions to prevent it.

### Six main factors are involved in causing heat stress:

- Temperature;
- Humidity;
- Movement of air;
- Radiant temperature of the surroundings;
- Clothing; and
- Physical activity

The body reacts to high external temperature by circulating blood to the skin, which increases skin temperature and allows the body to give off its excess heat through the skin. However, if the muscles are being used for physical labor, less blood is available to flow to the skin and release the heat.

Sweating is another means the body uses to maintain a stable internal temperature in the face of heat. However, sweating is effective only if the humidity level is low enough to permit evaporation and if the fluids and salts lost are adequately replaced.

When the body cannot dispose of excess heat, it will store it. When this happens, the body's core temperature rises and the heart rate increases. As the body continues to store heat, the individual begins to lose concentration and has difficulty focusing on a task, may become irritable or sick and



# Weekly Safety Meeting

often loses the desire to drink. The next stage is most often fainting and death is possible if the person is not removed from the heat stress.

## Ways to Prevent Heat Stress:

- Drink plenty of cool water (one small cup every 15-20 minutes).
- Wear light, loose-fitting, breathable (like cotton) clothing.
- Take your breaks away from heat sources or direct sunlight, allowing your body to cool down).
- Avoid eating large meals before working in hot environments.
- Avoid caffeine and alcoholic beverages (these beverages make the body lose water and increase the risk for heat illnesses).

## Workers Are at Increased Risk When They:

- Take certain medication (check with your doctor, nurse, or pharmacy and ask if any medicines you are taking affect you when working in hot environments);
- Have had a heat-induced illness in the past;
- Wear personal protective equipment (like respirators or suits); or
- Are older.

## Signs and symptoms:

- Shallow breathing;
- Increased breathing rate;
- Weak, rapid pulse;
- Cool, pale, clammy skin;
- Sweating;
- Weakness, fatigue, dizziness;
- Headache and nausea;
- Fainting; and
- Muscle cramps.

The signs and symptoms are the same as those seen in mild shock. Sweating is an important sign, because it is often the only way to tell apart heat exhaustion from a life-threatening condition called "heat stroke." If untreated, heat exhaustion may progress to heat stroke. Workers suffering from heat exhaustion should be transported to medical aid.

Recognizing the symptoms of heat stress is very important, particularly since the victim may not realize what is happening. If you work alone in a hot environment, develop a "buddy system" so someone will check in on you periodically to look for signs of heat stress.

Preventing heat stress is a matter of controlling the factors that cause it. Use precaution and don't hesitate to seek assistance if you suspect heat stress. Your good health depends on it!

**Heat Stress Can Kill...Take Time to Cool Down...and Hydrate!!**



