

Toolbox Talk # 1.14 – Handle the Heat

Working in the heat puts an extra strain on your body. With some understanding of how the body reacts to heat, you can prevent heat-related disorders.

What are the risk factors?

Age, weight, degree of physical fitness, metabolism, medications, use of alcohol or drugs, and a variety of medical conditions such as hypertension all affect a person's sensitivity to heat. It is difficult to predict who will be affected by the heat, or when someone will be affected. Air temperature, humidity, direct sun, radiant heat sources, and clothing are all other factors to consider.

Another factor is whether or not you are accustomed to the heat. By gradually being exposed to working in hot conditions, your body develops a greater tolerance for the heat.

What are heat disorders?

There are several heat-related illnesses that you should be aware of:

Fatigue. Muscles get tired more quickly in the heat because the body cools itself by sending more blood to the upper layers of the skin. Relatively less blood is available to provide active muscles, the brain, and other internal organs with the energy they need for peak performance. For first aid, rest in a cooler area before a more serious condition develops. Gradual adjustment to working in the heat eventually reduces heat fatigue.

Heat rash. Body heat is released through sweating, but, when it's humid, the skin can remain moist. If the sweat ducts become plugged, a rash can develop. The heat rash may disappear when you return to a cooler area, but washing the area and allowing the skin to dry will help. Beyond first aid, if the rash shows signs of infection, get medical attention. Heat rashes can be prevented by being able to rest in a cool place for part of the day and by regularly bathing and drying the skin.

Fainting. As blood circulates to the skin to aid in cooling, it can accumulate in the lower part of the body if you are standing still. Fainting can be the result when the brain doesn't get an adequate blood supply. Lay down in a cool area to recover from the fainting spell. Acclimatization to the heat reduces the chances for fainting. Moving around helps blood circulate and also helps prevent fainting.

Heat cramps. Muscles can develop painful cramps or spasms from salt imbalances in the body. Sweating and not replacing fluids can cause cramps. Drink about 5 to 7 ounces of fluids every 15 to 20 minutes to replenish your body fluids. Don't wait until you feel thirsty. Avoid beverages containing caffeine or alcohol—they promote more fluid loss through urination. Drinking salted liquids or commercially available carbohydrate replacement liquids helps with recovery from heat cramps. If salt replacement is required, adding a little extra salt to food is better than using salt tablets.

Heat exhaustion. Heat exhaustion may result when a large amount of body fluid has been lost through sweating. The symptoms may resemble the early signs of heat stroke. The victim becomes extremely weak or fatigued, giddy, nauseous, and can have a headache. The person still sweats, the skin is clammy and moist, and the body temperature remains at or near normal. In serious cases, the victim may vomit or lose consciousness. Heat exhaustion can be treated by resting in a cool place and drinking plenty of fluids, but severe cases may require care for several days. Medical attention may be required.

Heat stroke. This is a life threatening condition. It occurs when the body's temperature regulatory system fails. In heat stroke, the victim's skin is hot and dry. Body temperature is usually 105 degrees F or higher. The victim is mentally confused or delirious and can have convulsions or become unconscious. Immediate treatment by medical professionals can prevent brain damage or death. Until help arrives, the victim should be removed to a cool area, clothing should be soaked with water, and the body should be vigorously fanned to increase cooling. No person suspected of being ill from heat stroke should be left unattended.

How can I protect myself?

Here are some suggestions for managing the heat:

- Get accustomed to working in the heat by gradually increasing your work load over a period of a few days.
- Be aware of the symptoms of heat disorders and take rest breaks in a cooler area as needed.
- Drink small amounts of water or other fluids frequently throughout the day. About 5 to 7 ounces every 15 to 20 minutes is recommended. Avoid drinks containing caffeine or alcohol.

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Project: _____

Date: _____

Supervisor: _____

Company: _____

Other safety issues covered or comments from crew members:

Attendees:

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