



Heat Illness and Prevention – Annual Refresher

General Safety/HIPP
2501

Working in high temperatures especially during the summer months can be unavoidable. These working conditions can quickly lead to heat stress and heat-related illnesses, which can be life threatening and thus should be taken very seriously.

Heat illness is the result of the body overheating. Normally you perspire, and as the perspiration evaporates, it cools your skin, cooling your body, and maintaining the proper body temperature. Blood vessels also play a role, bringing heat to the skin surface and releasing it from the body. When it is hot and humid, it is time to be extra careful when you work or play outside.

Factors That Lead to Heat Stress –

Anyone can be at risk of heat-related illnesses no matter how young or fit. However there are several factors that can affect your ability to handle heat stress. These can include your age, body fat percentage and heat sensitivity. Alcohol and caffeine intake, as well as taking prescription medicines also affect your ability to stay healthy in hot conditions. If you are predisposed to heat illnesses, it is vital that you identify any personal factor that may lead to heat stress so you can take proper precautions.

Signs and Symptoms of Heat-related Illnesses and how to Treat Them-

Heat related illnesses can become very serious very quickly, so it is critical that you recognize the early signs of heat stress and take the appropriate steps to protect yourself.

- **Heat Stroke** is the most severe heat related illness. This occurs when your body's attempts to regulate its temperature fail and your body temperature rises to critical levels. Signs and symptoms that may indicate heat stroke are confusion, irrational behavior, loss of consciousness, convulsions and abnormally high body temperature. There may also be a lack of sweating and hot dry skin. Heat stroke is a medical emergency, request immediate professional medical treatment if you experience these signs. Treatment includes finding placing in a shady area, removing outer clothing, apply cool wet cloths to skin, and drinking cool water if conscious. Never send a person who is suspected to have heat stroke home or leave them unattended without approval of a physician.
- **Heat Exhaustion** is another serious heat related illness. This can develop after several hours of exposure to high temperatures combined with inadequate fluid intake. There are several signs and symptoms of heat exhaustion, including heavy sweating, paleness, muscle cramps and headache. There may also be nausea or vomiting, dizziness and weakness.

One common symptom is fainting. First aid treatment should be provided as soon as possible.

Treatment includes removing worker from the hot environment and then provide a cool non-alcoholic beverage and encourage the victim to rest before resuming work.



- **Heat Cramps** are usually the first and least severe sign that your body is having problems handling the heat. Heat cramps typically occur when hard physical labor is performed in high temperatures. The painful spasms that characterize heat cramps are linked to an electrolyte imbalance caused by sweating profusely and having either too much or too little salt in your system. Sweat is a salt based fluid and excess salt can build up in your system if you don't replace the water you lose through sweating. Do not rely on your thirst to tell you when to drink water. Drink water or sports beverage every 15 to 20 minutes when working in a hot environment. Treatment for heat cramps is to have affected employee stop all activity and sit in a cool place. Affected employee should drink cool water or a sports beverage and not return to strenuous activity for a few hours. If they return too soon they could suffer heat exhaustion or heat stroke. If heat cramps don't subside in one hour seek immediate medical attention.
- **Heat Rash** is the most common problem caused by heat, this condition is also known as prickly heat. It usually appears as red papules in areas where person's clothing is restrictive and the skin is persistently covered in unevaporated sweat. As sweating increases, the papules will start to cause a prickling sensation and may become infected if left untreated. Since most heat rashes disappear once the person leaves the hot area, the treatment involves moving the person to a cool and less humid environment. Keep the affected area dry.

Preventative Measures to Minimize Heat Stress-

While knowing how to recognize and treat heat-related illnesses can potentially save lives, preventing them from occurring in the first place is even better. There are many preventative measures you can take to minimize heat stress and reduce the likelihood of developing a heat-related illness.

- Drink plenty of fluids, especially water throughout the day, even if you're not feeling thirsty. Be proactive by hydrating in advance to stay ahead of dehydration.
- Avoid any unnecessary or unusually stressful activities.
- Ensure you get enough sleep.
- Maintain good nutrition.
- Avoid eating excessively heavy or hot foods when working in hot environments.
- Take all approved breaks, and try to find cool areas to take these breaks.
- Make sure you are wearing proper Personal Protective Equipment (PPE).
- Wear lightweight, light colored and loose fitting clothing.
- Wear a hat when in direct sunlight.
- Apply sunscreen at least 30 minutes prior to working outdoors and re-apply according to manufacturer's instructions.

Following these preventative measures will allow you to work in a hot environment safely while minimizing heat stress.

Recognizing the warning signs of heat illness and taking preventative measures can keep you safe while working in a high temperature environment.

