

Heat stress and illnesses

We are well into the dog days of summer! Many of us may be thinking that fall (and cooler weather) are right around the corner. However, it is important we stay mindful of the hazards from the heat during these last few months. There are ways we can combat heat illness but let's first take a look at how the body uses its' own mechanisms.

Normal body temperature is around 98° F and to achieve that temperature the body responds in the following ways:

1. Activating sweat glands.
 - a. There are anywhere from 1.6 to 5 million sweat glands in our body.
 - b. Sweat glands release water and electrolytes. Be sure to replenish!!!!
 - c. Evaporation of sweat carries heat away from the body.
2. Pumping blood (opening and closing blood vessels) to the surface of the skin.
 - a. This is a result of blood taking heat from the body to the surface.
3. Raising or flattening the hair on our body.
 - a. Positions of hair can help reduce body temperature.

Whether our job requires us to work indoors or outdoors in a hot environment, quick response to the symptoms of heat illness is crucial. Let's review some of these illnesses and their treatment.

Heat Cramps – The mildest form of heat illness and is caused by depletion of salt and water levels in body resulting in painful muscle cramps or spasms. Be sure to drink water (or a sports drink) and take a break in a cool area.

Heat Exhaustion – More severe than heat cramps, it is a continued result of water and salt loss without proper hydration. Symptoms include weakness, profuse sweating, nausea, rapid breathing, and continued muscle spasms/cramps. If you have heat exhaustion or see someone who shows the symptoms, get to a cool shaded area, drink small sips of cool water and put cold cloths on the skin. Keep an eye on this situation as it might require immediate medical attention.

Heat Stroke – This is the most severe of heat illnesses and begins as the body temperature reaches 104° F. The body is in an altered mental state with symptoms of confusion, inability to sweat, hallucinations, slurred speech, and potential seizures. Immediately get to a cool area, call 911, loosen clothing and try to cool the body off with water mist or cool compresses. Do not give the person anything to drink.

These conditions are preventable if you take the proper steps when working in this environment. Here are some tips.

- 1) Be sure to hydrate frequently. Remember, sweat is a combination of water and electrolytes. We must be sure to replenish.
- 2) Monitor daily temperatures and humidity and take appropriate precautions.
- 3) Be sure to take breaks in the shade or cooler areas.
- 4) Wear light weight and light-colored clothing.
- 5) Spread the word to other employees on how to identify signs and symptoms of heat illness.
- 6) Avoid alcohol and caffeine when working in a hot or humid environment.
- 7) Finally.... never "tough it out" and be a hero.

If you would like to find more information on “Warning Signs and Symptoms of Heat-Related Illness” go to the CDC website at <https://www.cdc.gov/disasters/extremeheat/warning.html>.

Did you know that heat illness has become such a “hot” topic that the Occupational Safety and Health Administration (OSHA) has created a National Emphasis Program where they are focusing on industries where heat illnesses may be an issue. To read more about it, click on the link <https://www.osha.gov/heat>.

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