Heat related illnesses may result from working in hot environments. There are three main types of heat related illnesses:

- heat cramps
- heat exhaustion
- heatstroke

Heat cramps and heat exhaustion are common illnesses that are related to being exposed to high temperatures; heatstroke is a medical emergency which can result in death. However, with a few precautions and helpful tactics, **most heat-related illnesses can be avoided.**

Heat & Human Physiology

The ability to sweat is the most effective defense mechanism our bodies possess. When the human body becomes overheated, it begins to sweat and moisture collects on the outside of the skin. This moisture then evaporates, cooling the skin and eventually, the entire body. However, in hot weather the moisture on the outside of the skin does not always evaporate, and it collects on the skin itself. Consequently, the body begins to warm up and the heart starts pumping more blood to the skin. This in turn makes a person sweat profusely, and a loss of water and electrolytes occurs, leading to one or more heat related illnesses. **Humid environmental conditions can increase the likelihood of heat-related illness.**
Once a person stops sweating and the sun is hot and dry, heatstroke may be imminent--seek medical attention immediately.

Heat Cramps Due To Fluid Loss

Heat cramping, the most common heat related illness, occurs when a person has been doing a great deal of physical activity in a hot environment. Losing fluid and electrolytes (sodium, potassium, glucose, etc.) through sweating causes the muscles in the body to contract slowly, causing painful muscle spasms.

Preventive Treatment:

- Drink plenty of fluids
- Ensure adequate electrolyte intake
- Rest frequently in a cooler, shaded environment

Heat Exhaustion

Heat exhaustion usually occurs within a span of a few days, when a person works long periods of time outdoors, in the heat, consuming few liquids. Over the course of this time, the person starts loosing electrolytes and water.

Symptoms:

- Nausea
- Headache
- Weakness
- Confusion
- Elevated temperature
- Accelerated pulse
- The victim may pass out
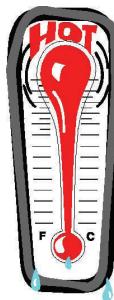
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Treatment:
Lay the victim in a cool, shaded place
Remove personal protective equipment
If conscious, have the victim drink water or fluid such as Gatorade or Powerade
Seek prompt medical attention

Heatstroke

Heatstroke is a life threatening medical emergency and is the most deadly of the heat related illnesses. Again, prolonged exposure to heat and minimal consumption of liquids are both causes of heatstroke.

Symptoms:
- Headache
- Slurred speech
- Dizziness
- Faintness
- Hallucinations
- Seizures
- Loss of consciousness
- The skin is hot and dry to the touch
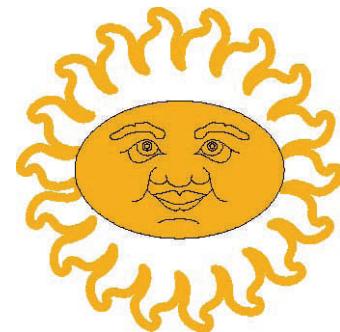
Treatment:
- Lay the victim in a cool, shaded place
- Remove personal protective equipment
- If conscious, have the victim drink water or fluid such as Gatorade or Powerade
- **Seek immediate medical attention**

Exertional Heatstroke

Exertional heatstroke, on the other hand, happens quickly, usually after only a few hours of exercise. The skin is able to sweat but, because of the increased activity and heat, the body temperature rises to dangerous levels. Exertional heatstroke victims are usually young and relatively healthy people, such as runners. If you suspect someone has heatstroke, **seek medical attention as soon as possible.**

Ways to prevent heatstroke:
- Drink plenty of water—a pint to a quart every hour
- Take more frequent breaks as heat and humidity increase
- Work during the coolest part of the day, if possible
- Protect skin by wearing proper clothing. Shirts should have long sleeves. Wear a wide-brim hat
- Work at a reasonable pace

Although heat related illnesses can be very serious and deadly, they can also be avoided. If the proper precautions are taken, the heat should not be a great detriment to your activities. Working in the heat can be safe, but only if you take it seriously.

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