

Heat Related Illness

During the hot days of summer, many people are at risk for heat related problems. Often people do not take in enough fluids to cover the loss that hot weather can cause. This can lead to dehydration as well as other illnesses. Sometimes the body cannot regulate its own temperature in excessive heat. The heat can affect everyone but many individuals such as the persons we serve and the elderly can especially be affected.

Regulation:

Our body has an amazing ability to keep its temperature within certain limits. This is regulated through the brain which receives information from not only the skin but also muscles and internal organs. In response to the message of “it’s too hot”, the body will try to dissipate this heat in a couple of ways.

- Dilating blood vessels:
 - Helps heat to escape the body
 - Causes swelling in the ankles because fluid tends to leak out of those dilated vessels into the tissues
- Sweating:
 - Cools off the body through evaporation
 - Causes loss of body water and can lead to dehydration

There are some other problems that compromise the body’s ability to regulate heat. These include:

- Aging: results in a more sluggish sweating mechanism
- Obesity: provides an insulative barrier that reduces the transfer of heat from muscles to the skin
- Alcohol: interferes with the brain’s mechanism for regulating heat and is commonly associated with heat stroke
- Other medications: any medication that affects the central nervous system or hydration can lead to heat intolerance.
- Anyone with heart disease, diabetes, or malnutrition is at increased risk for developing heat related illness.

Acute Heat Disorders:

1. Heatstroke

- Medical emergency
- Affects many organ systems including the brain, blood vessels, liver, kidneys and blood-clotting mechanisms
- Signs include confusion, headache, irritability, and emotional instability
- Can result in loss of consciousness, seizures, and coma
- Body temperature is over 104 ° Fahrenheit

2. Heat Exhaustion

- Temperatures are up to 102.2° Fahrenheit
- Symptoms include headache, nausea, dizziness, weakness, and thirst
- Occurs 10 times more frequently than cases of heatstroke

3. Heat Cramps

- Common in people who work hard in the heat
- Due to loss of salt in the sweat which is not replaced with drinking plain water.
- Usually cramping is in the muscles that are used during work
- Cramps are alleviated by rest, water ingestion and correction of salt imbalance

4. Heat Rashes

- Prickly heat is most frequently seen
- Appears as red bumps, usually in areas where the clothing is tighter
- It causes a prickling sensation
- Rash generally disappears when the person returns to a cool environment.

Heat Related Problems

	Cause	Symptoms	Treatment	Prevention
Heat Rash	Humid, hot environment; plugged sweat glands	Tiny raised, red bumps (blister-like) with extreme itching	Rinse skin with cool water, use mild drying lotions, change into dry clothes	Wash regularly, keep skin clean and dry
Sunburn	Too much exposure to sun	Red, painful, blistering or peeling skin	Skin lotions, avoid sun. If blisters, seek medical attention	Apply sun screens of factor 15 or greater. Wear light clothing
Heat Cramps	Heavy sweating causes loss of salt	Painful cramps in arms, legs, stomach. Occurs suddenly and can be a warning of other more dangerous heat illnesses	Move to cool area, loosen clothing, drink cool water with salt (1 tsp salt per gallon of water), or fluids such as Gatorade	Drink fluids regularly, especially those that contain electrolytes, reduce activity levels and heat exposure
Fainting (heat syncope)	Pooling of blood in dilated vessels, lack of adequate fluid	Sudden fainting while standing	Move to cool area, loosen clothing, offer sips of cool water	Drink fluids regularly, reduce activity levels and heat exposure
Heat Exhaustion	Fluid loss in sweat without fluid and salt replacement causes the body's cooling system to break down.	Heavy sweating, cool moist skin, weak pulse, low blood pressure. The person is tired and weak, has nausea, is thirsty, may be panting or breathing rapidly. Vision can be blurred.	GET MEDICAL ASSISTANCE! Can progress to heat stroke and death. Move person to cool, shaded area, loosen excess clothing, provide cool water. Fan and lightly spray with cool water.	Reduce activity levels and heat exposure. Drink fluids regularly. Check frequently to spot symptoms that precede heat stroke.
Heat Stroke	Body loses ability to sweat once fluid and salt reserves are used up. This will cause the body temperature to rise. Heat stroke can develop suddenly.	Hot, dry skin usually red, mottled or blue (from lack of oxygen). Body temperature is over 104°F. There is weakness, confusion, agitation, with fast pulse, dizziness, headache. May see loss of consciousness or seizures.	Call 911! Death can occur quickly. Remove excess clothing, fan or spray with cool water. Apply cool, wet cloths.	Reduce activity levels and heat exposure. Drink fluids regularly. Check frequently for signs of problems developing