

HEAT STROKE – HEAT EXHAUSTION



What Are Heat-Related Illnesses?

Prolonged or intense exposure to hot temperatures can cause heat-related illnesses, such as **heat exhaustion**, **heat cramps**, and **heat stroke (also known as sun stroke)**. As your body works to cool itself under extreme or prolonged heat, blood rushes to the surface of your skin. As a result, less blood reaches your brain, muscles, and other organs. This can interfere with both your physical strength and your mental capacity, leading, in some cases, to serious danger.

By reducing excessive exposure to high temperatures and taking other precautionary steps, most heat-related illnesses can be avoided. Those who work in hot or humid environments - such as manufacturing plants, bakeries, or construction sites during summer months - are most at risk. However, even long, hot afternoons at the beach can pose problems if warning signs are ignored.

With prompt treatment, most people recover completely from heat illness. However, heat stroke can be deadly if not properly managed.

What Causes It?

Heat exhaustion occurs when the body loses large amounts of water and salt through excessive sweating, particularly through hard physical labor or exercise. This loss of essential fluids can disturb circulation and interfere with brain function. Individuals who have heart problems or are on low-sodium diets may be particularly susceptible to heat exhaustion.

As in heat exhaustion, **heat cramps** can strike when the body loses excessive amounts of fluids and salt. This deficiency, accompanied by the loss of other essential nutrients such as potassium and magnesium, typically occurs during heavy exertion.

The most serious of the heat-related illnesses, **heat stroke** occurs when the body suffers from long, intense exposure to heat and loses its ability to cool itself. In prolonged, extreme heat, the part of the brain that normally regulates body temperature malfunctions. This decreases the body's ability to sweat and, therefore, cool down. Those who have certain medical conditions - such as scleroderma or cystic fibrosis - that decrease the body's ability to sweat may be at greater risk of developing heat stroke.

What Are the Symptoms?

Heat cramp symptoms include:

- Severe, sometimes disabling, cramps that typically begin suddenly in the hands, calves or feet.
- Hard, tense muscles.

Heat exhaustion symptoms include:

- Fatigue
- Nausea
- Headaches



continued on back

- Excessive thirst
- Muscle aches and cramps
- Weakness
- Confusion or anxiety
- Drenching sweats, often accompanied by cold, clammy skin.
- Slowed or weakened heartbeat.
- Dizziness
- Fainting
- Agitation



Heat exhaustion requires immediate attention but is not usually life-threatening.

Heat stroke symptoms include:

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| <ul style="list-style-type: none"> • Nausea and vomiting • Headache • Dizziness • Fatigue • Hot, flushed, dry skin • Rapid heart rate • Decreased sweating • Shortness of breath | <ul style="list-style-type: none"> • Decreased urination • Blood in urine or stool • Increased body temperature (above 104 degrees Fahrenheit). • Confusion, delirium or loss of consciousness • convulsions |
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Heat stroke can occur suddenly, without any symptoms of heat exhaustion. If a person is experiencing symptoms of heat exhaustion or heat stroke, **OBTAIN MEDICAL CARE IMMEDIATELY**. Any delay could be fatal. You should seek **emergency medical care** for anyone who has been in the heat and who has the following symptoms:

- Confusion, anxiety or loss of consciousness.
- Very rapid or dramatically slowed heartbeat.
- Rapid rise in body temperature that reaches 104 to 106 degrees Fahrenheit.
- Either drenching sweats accompanied by cold, clammy skin (which may indicate heat exhaustion); or a marked decrease in sweating accompanied by hot, flushed, dry skin (which may indicate heat stroke).
- Convulsions.
- Any other heat-related symptom that is not alleviated by moving to a shady or air-conditioned area and administering fluids and salts.

Prevention

In hot weather, spend most of your time in cool, air-conditioned areas, and reduce outdoor physical activity, particularly in the hottest afternoon hours. Eat small, well-balanced meals throughout the day to maintain energy, and drink plenty of non-caffeinated, non-alcoholic beverages. Wear loose-fitting, lightweight, light-colored clothing: protect your face and head with a wide-brimmed hat. It's also a good idea to use a sunscreen to prevent sunburn, which can hinder the skin's ability to cool itself.

From: <http://www.webmd.com/content/article/110/109524.htm>

SOURCES: The Red Cross. American Academy of Family Physicians