

HEAT EXHAUSTION AND HEAT STROKE

During the summer months, many people enjoy outdoor sports, exercise or work. At times people get so involved they don't pay attention to signs their body has started to have difficulties. According to the U.S. Centers for Disease Control and Prevention, nearly 700 people die each year due to heat-related illness. People should be aware of the definitions and the signs and symptoms of these heat related illnesses.¹

Dehydration: a condition that can occur when the loss of body fluids, mostly water, exceeds the amount that is taken in. With dehydration, more water is moving out of individual cells and then out of the body than the amount of water that is taken in through drinking. Our bodies begin to let us know with an increase of thirst.

Dehydration does not just affect the amount of water in the system but also affects the balance of the electrolytes (salts) in the body. Medically, dehydration usually means a person has lost enough fluid so that the body begins to lose its ability to function normally and begins to produce symptoms related to the fluid loss such as trouble with movement, cramps, or thought processes.²

Possible Signs of Dehydration:

With 2% of fluid loss:

- Thirst
- Loss of Appetite
- Dry Skin
- Skin Flushing
- Dark Colored Urine
- Dry Mouth
- fatigue or Weakness
- Chills
- Head Rushes

With 5% fluid loss

- Increased heart rate
- Increased respiration
- Decreased sweating
- Decreased urination
- Increased body temperature
- Extreme fatigue
- Muscle cramps
- Headaches
- Nausea
- Tingling of the limbs

Heat exhaustion: This condition often occurs when people exercise (work or play) in a hot, humid place and body fluids are lost through sweating, causing dehydration and overheating of the body. The person may also be exhibiting an elevated temperature. These symptoms may develop over time or suddenly, especially with extended periods of exercise.²

Possible symptoms of heat exhaustion:

- Cool, moist skin with goose bumps when in the heat
- Heavy sweating
- Faintness
- Dizziness
- Fatigue

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- Weak, rapid pulse
- Low blood pressure upon standing
- Muscle cramps
- Nausea
- Headache

When to see a doctor:

If you think you're experiencing heat exhaustion:

- Stop all activity and rest
- Move to a cooler place
- Drink cool water or sports drinks

Contact your doctor if your signs or symptoms worsen or if they don't improve within one hour. Seek immediate medical attention if your body temperature reaches 104 F (40 C) or higher.³

Heat stroke:

Heat stroke, which is also referred to as sun stroke, is a life-threatening medical condition. The person's cooling system, which is controlled by the brain, stops working. The body isn't able to cool itself down and the internal body temperature rises. The rise in body temperature elevates to the point at which brain damage or damage to other internal organs may result.³

Possible symptoms of heat stroke:

- High body temperature. A body temperature of 104 F (40 C) or higher is the main sign of heatstroke.
- A lack of sweating. In heatstroke brought on by hot weather, your skin will feel hot and dry to the touch. However, in heatstroke brought on by strenuous exercise, your skin may feel moist.
- Nausea and vomiting. You may feel sick to your stomach or vomit.
- Flushed skin. Your skin may turn red as your body temperature increases.
- Rapid breathing. Your breathing may become rapid and shallow.
- Racing heart rate. Your pulse may significantly increase because heat stress places a tremendous burden on your heart to help cool your body.
- Headache. You may experience a throbbing headache.
- Confusion. You may have seizures, hallucinate, or have difficulty speaking or understanding what others are saying.
- Unconsciousness. You may pass out or fall into a state of deep unconsciousness (coma).
- Muscle cramps or weakness. Your muscles may feel tender or cramped in the early stages of heatstroke but may later go rigid or limp.⁴

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How to avoid heat exhaustion and heat stroke:

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You can avoid heat exhaustion by not engaging in strenuous activity in hot and humid environments. Stay as hydrated as possible to prevent heat exhaustion and heat stroke. In addition, follow these steps if you need to be outdoors in the heat⁴:

- Wear loose fitting, lightweight, light-colored clothing. Excess, dark or tight clothing holds in heat and doesn't let your body cool properly because it inhibits sweat evaporation.
- Avoid sunburn. If you're going to be outdoors, wear a lightweight, wide-brimmed hat or use an umbrella to protect yourself from the sun, and apply sunscreen to any exposed skin. Sunburn reduces your body's ability to get rid of heat.
- Seek a cooler place. Being in an air-conditioned building, even for just a few hours, is one of the best ways to prevent heat exhaustion. If your home doesn't have an air conditioner, consider spending time at a library or shopping mall. At the least, find a well-shaded spot. Fans alone aren't adequate to counter high heat and humidity.
- Drink plenty of fluids. Staying hydrated will help your body sweat and maintain a normal body temperature. If your doctor has told you to limit fluids because of a health condition, be sure to check with him or her about how much extra you need to drink when the temperature rises. Avoid alcoholic beverages.
- Take extra precautions with certain medications. Ask your doctor or pharmacist whether the medications you take make you more susceptible to heat exhaustion and, if so, what you can do to keep your body from overheating.
- Avoid hot spots. On a hot day, the temperature in your parked car can rise 20 F (about 6.7 C) in just 10 minutes. Let your car cool off before you drive it. Never leave children or anyone else in a parked car in hot weather for any period of time.
- Let your body acclimate to the heat. If you travel to somewhere hot, or the temperatures suddenly jump in your area, it can take several weeks for your body to get used to the heat. You'll still need to take precautions, but working or exercising in heat should become more tolerable. If you're on vacation, you probably don't have several weeks to wait, but it's a good idea to wait at least a few days before attempting vigorous activity in the heat.⁴

It's best not to exercise or do any strenuous activity in hot weather, but if you must, follow the same precautions and rest frequently in a cool spot. Taking breaks and replenishing your fluids during that time will help your body regulate your temperature.⁴

Stay safe and cool during this summer season! Please join us next month for our newest newsletter.

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For further information about these conditions, please visit these websites.

1) http://www.emedicinehealth.com/heat_exhaustion_and_heat_stroke/article_em.htm

2) http://www.emedicinehealth.com/dehydration_in_adults/article_em.htm

- 3) <http://www.symptomsofdehydration.com/>
4) <http://www.mayoclinic.com/health/heat-exhaustion/DS01046/DSECTION=symptoms>

The health information contained herein is provided for educational purposes only and is not intended to replace discussions with a healthcare provider. Decisions regarding patient care must be made with a healthcare provider, considering the unique characteristics of the patient.



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