

Summer Heat Safety

Summer means longer, warmer days, but during extremely hot weather, you are at risk of developing a heat-related illness, because the body loses its ability to cool itself. Heat-related illness can come on quickly, ranging from mild *heat cramps* to more serious, life-threatening *heat stroke*, also known as *sunstroke*.

Exposure to a hot environment and strenuous activity for extended periods lead to an increase in body temperature. Wearing excessive clothing, drinking alcohol, and allowing the body to become dehydrated are also risky behaviors during hot weather.

Sunburn, red painful skin that is hot to the touch, can result in skin damage, blistering, infection, and over time, possibly cancer, but sunburn also traps body heat under the skin and limits the body's ability to release heat. If it is severe, sunburn can result in overheating and illness.

What is heat-related illness?

Heat cramps are muscular pains and spasms that happen as a result of physical activity and are often the first signal that the body is having trouble with the heat. *Heat exhaustion* typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing a decrease of blood flow to vital organs, resulting in a form of mild shock.

Body temperature can continue to rise and may lead to *heat stroke*, which is a life-threatening condition. During heat stroke, a person's body temperature control system stops working. If the body is not cooled quickly, brain damage and even death can occur.

How do I know if I'm at risk?

The groups most at-risk for heat-related illness include:

- People aged 65 years and older
- Infants and children

- People with chronic medical conditions
- People with low income
- Outdoor workers
- Athletes

What are the warning signs?

Heat cramps can lead to heat exhaustion, and heat exhaustion can lead to heat stroke, so it is important to recognize symptoms early.

Symptoms of heat cramps include:

- Painful muscle cramps and spasms, usually in the legs and abdomen
- Heavy sweating

Symptoms of heat exhaustion include:

- Heavy sweating
- Weakness
- Cool, pale, clammy skin
- Weak pulse
- Muscle cramps
- Dizziness
- Nausea and vomiting
- Fainting

Symptoms of heat stroke include:

- Altered mental state
- Throbbing headache
- Confusion
- Nausea
- Dizziness
- Shallow breathing
- High body temperature (104°F or higher)
- Skin may be hot and dry (if heat stroke is caused by hot weather) or sweaty (if heat stroke is caused by physical activity)
- Rapid pulse
- Losing consciousness

When do I need medical attention?

If someone experiences symptoms of heat stroke, seek immediate medical attention by calling 911 or your local emergency number. The longer you wait, the more damage that can occur.

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What tests will I need?

Although a doctor can easily recognize heat stroke, he or she may order additional laboratory tests, including:

- **A blood test** to check for low sodium and potassium levels and possible damage to the central nervous system
- **A urine test** to check for any damage caused to the kidneys
- **Muscle function tests** to check for any damage caused to muscle tissue
- **X-rays and other imaging tests** to check for damage to other internal organs

How is heat-related illness treated?

A person experiencing a heat-related illness should be moved to a cooler place and given fluids slowly—a half glass of cool water every 15 minutes. Do not give liquids that contain alcohol or caffeine. If the person is vomiting, do not give him or her anything to drink.

The body should be cooled quickly, either by immersing the person in a cool bath or wrapping him or her in wet towels with a blowing fan. Ice packs may be placed on the head, neck, armpits, and groin. A doctor may prescribe medications that prevent shivering, because shivering also increases body temperature and makes other treatments less effective.

How can I avoid the problem?

- **Drink plenty of fluids**, regardless of your activity level. Don't wait until you're thirsty to drink. If your doctor limits your fluid intake or has prescribed water pills, consult with him or her about how much you should drink during hot weather. Avoid alcohol and drinks with large amounts of sugar.
- **Replace salt and minerals** lost in sweat by drinking a sports beverage. If you are on a low-salt diet, talk with your doctor about the best way for you to replenish salt and minerals.
- **Stay cool indoors**, preferably in an air-

conditioned place. If your home doesn't have air conditioning, visit a public building, such as a shopping mall, movie theater, or public library. Call your local health department to find the nearest heat-relief shelter in your area. Taking a cool shower or bath can also help your body stay cool.

- **Wear appropriate clothing**, including lightweight, light-colored, loose-fitting items that cover as much skin as possible.
- **Monitor those at high risk**, including infants, young children, people aged 65 years and older, people with a mental illness, and those who are physically ill.
- **Limit outdoor time** to evening hours as much as possible.
- **Cut down on exercise**, and rest often in shady areas.
- **Do not leave anyone in a parked vehicle**, particularly children or animals.
- **Protect yourself from the sun** by wearing a wide-brimmed hat and sunglasses. Wearing a broad-spectrum sunscreen with UVA and UVB protection will guard you against sunburn, which reduces your body's ability to release heat.

Before going outside for the day, check your local news for a report of the day's weather conditions so that you can plan ahead. Take it easy, stay hydrated, and visit <http://www.cdc.gov/extremeheat> for further tips on staying healthy in hot weather.
