

Excessive Heat

Is very hot weather dangerous for people?

People suffer heat-related illness when their bodies are unable to compensate for the heat and cool themselves. The body normally cools itself by sweating. But under some conditions sweating just isn't enough. In such cases a person's body temperature rises quickly. Very high body temperature may damage the brain or other organs.

What factors cause the body to be unable to cool itself?

Several factors can affect someone's ability to cool themselves during extremely hot weather. When the humidity (the amount of moisture in the air) is high, sweat will not evaporate as quickly, preventing the body from releasing heat quickly. Other conditions related to risk include age, obesity, fever, dehydration, heart disease, poor circulation, sunburn, and the use of alcohol and certain prescription drugs.

What types of problems can excessive heat cause?

Heat rash: Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. It may occur at any age but is most common in young children. Heat rash is not usually dangerous.

Heat cramps: Heat cramps are muscular pains and spasms due to exertion. Although heat cramps are the least severe of heat-related illnesses, they are an early signal that the body is having trouble coping with the heat.

Heat exhaustion: 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 blood flow to decrease to the vital organs. This results in a form of mild shock. If not treated, the patient may suffer heat stroke.

Heat stroke: Heat stroke is life threatening. The patient's temperature control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly.

Sunstroke: Another name for heat stroke.

What are the warning signs to look for?

Heat rash: Heat rash may look like a red cluster of pimples, a red area of skin, or small blisters. It is more likely to occur on the neck and upper chest, in the groin, under arms, and in elbow creases.

Heat exhaustion: Cool, moist, pale, or flushed skin; heavy sweating; headache; nausea or vomiting; dizziness; and/or fatigue. Body temperature will be near normal.

Heat stroke: Hot, red skin; changes in consciousness; rapid, weak pulse; and rapid, shallow breathing. Body temperature can be very high, as high as 105°F. If the patient was sweating from heavy work or exercise, skin may be wet, otherwise it will feel dry.

What should someone do if they develop any of these illnesses?

Heat rash: The best treatment for heat rash is to provide a cooler, less humid environment. Keep the affected area dry and body powder may be used to increase comfort.

Heat cramps: If you have heart problems or are on a low-sodium diet, get medical attention. If medical attention is not necessary, stop all activity and sit in a cool place, drink clear juice or a sports drink, and seek medical attention if heat cramps do not subside in an hour.

Heat exhaustion: Cooling measures that may be effective for a victim of heat exhaustion include cool beverages as recommended by a doctor, rest, cool shower or bath, air conditioning, and lightweight clothing. Seek medical help if the person vomits, has a change in mental status, chest pain, or difficulty breathing.

Heat stroke: Heat stroke may be a life-threatening emergency. Get the victim to a shady area. Call for emergency medical help. Cool the victim rapidly using whatever methods you can, such as cool water, a cool shower, spray from a hose, or if the humidity is low, wrap the victim in a cool, wet sheet and fan them vigorously. Do not give the victim fluids to drink. Get medical care as soon as possible.

Who is most at risk for heat-related illness?

Although anyone at any time can suffer from heat-related illness, some people are at greater risk than others.

- Infants and children up to four years of age are sensitive to the effects of high temperatures and rely on others to regulate their environments and provide adequate liquids.
- The elderly may not compensate for heat stress efficiently and are less likely to sense and respond to change in temperature.
- People who are overweight may be prone to heat sickness because of their tendency to retain more body heat.
- People who overexert themselves during work or exercise may become dehydrated and susceptible to heat sickness.
- People who are physically ill, especially with heart disease or high blood pressure,

or who take certain medications, such as for depression, insomnia, or poor circulation, may be affected by extreme heat.

What can people do to prevent heat-related illness?

Air conditioning: Air conditioning is the number one protective factor against heat-related illness and death. If a home is not air-conditioned, people can reduce their risk for heat-related illness by spending time in public facilities that are air conditioned.

Fluids: During hot weather it is important to increase the amount of liquids you drink. If your doctor generally limits the amount you drink though or if you are on water pills, ask how much you should drink while the weather is hot. Avoid caffeine, alcohol, and large amounts of sugar because they can actually cause the body to lose more fluid. You should also avoid very cold drinks because they may cause stomach cramps.

Wear appropriate clothing: Wear less clothing, choosing lightweight, light-colored, and loose-fitting clothes.

Limit outdoor activity: If you must be outdoors, try to limit your activity to morning and evening hours. Try to rest often in shady areas so that your body's thermostat will have a chance to recover.

Watch what you eat: Eat small meals and eat more often. Avoid foods high in protein.

For specific concerns about heat-related illnesses contact your health care provider or call the NH Department of Health and Human Services Division of Public Health Services at 603-271-4496 or 800-852-3345 x4496 or refer to the Centers for Disease Control and Prevention website at www.cdc.gov.