

# Natural Disasters: Extreme Heat

## Definition and Characteristics:

Heat waves of extreme and unusually hot temperatures may occur periodically and unpredictably. Heat kills by pushing the human body beyond its limits. In extreme heat and high humidity, evaporation is slowed and the body must work extra hard to maintain its normal temperature. Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat. Conditions that can induce heat-related illnesses include stagnant atmospheric conditions and poor air quality. Consequently, people living in urban areas may be at greater risk from the effects of a prolonged heat wave than those living in rural areas. Also, asphalt and concrete store heat longer and gradually release it at night.

## Terminology:

Heat Wave	Prolonged period of excessive heat, often combined with excessive humidity.
Heat Index	A number in degrees Fahrenheit (F) that tells how hot it feels when relative humidity is added to the air temperature. Exposure to full sunshine can increase it by 15 degrees.
Heat Cramps	Muscular pains and spasms due to heavy exertion. Although heat cramps are the least severe, they are often the first signal that the body is having trouble handling 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 blood flow to decrease to the vital organs, resulting in a form of mild shock. If not treated, the victim's condition will worsen, body temperature may keep rising, and heat stroke will ensue.
Heat Stroke	A life-threatening condition where the victim'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.
Sun Stroke	Another term for heat stroke.

## Public Information / Recommended Actions:

Before	<p>Make a plan: Be alert to changing weather conditions. Listen to NOAA Weather Radio or local radio or television newscasts for the latest information.</p> <p>Prepare your home: Install window air conditioners snugly; insulate if necessary. Install temporary window reflectors between windows and drapes, such as aluminum foil-covered cardboard, to reflect heat back outside. Weather-strip doors and sills to keep cool air in. Cover windows that receive morning or afternoon sun.</p>
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During	<ul style="list-style-type: none"> <li>• Take shelter indoors. Listen for weather reports and emergency information.</li> <li>• Stay indoors as much as possible and avoid sun exposure. If air conditioning is not available, stay on the lowest floor. Use fans to circulate air.</li> <li>• Eat well-balanced light meals, avoiding excessive salt.</li> <li>• Drink plenty of water. Avoid alcoholic beverages.</li> <li>• Dress in loose-fitting, lightweight, and light-colored clothes that cover as much skin as possible. Wear a wide-brimmed hat outdoors.</li> <li>• Check on family, friends, and neighbors who do not have air conditioning and who spend much of their time alone.</li> <li>• Never leave children or pets alone in closed vehicles.</li> <li>• Avoid strenuous work during the warmest part of the day. Use a buddy system and take frequent breaks.</li> <li>• Watch for signs and symptoms of heat-induced illnesses, listed below. Call 911 if medical assistance is needed. Administer first aid as indicated in the additional information table below.</li> <li>• Provide for animals as in Natural Disasters: General Guidance.</li> </ul>
After	Listen for news reports for information. Follow the advice of authorities.

**Additional Information:**

First Aid for Heat-Induced Illnesses:

Condition	Symptoms	First Aid
Sunburn	Skin redness and pain, possible swelling, blisters, fever, headaches	<ul style="list-style-type: none"> <li>• Take a shower using soap to remove oils that may block pores, preventing the body from cooling naturally.</li> <li>• Apply dry, sterile dressings to any blisters, and get medical attention.</li> </ul>
Heat Cramps	Painful spasms, usually in leg and abdominal muscles; heavy sweating	<ul style="list-style-type: none"> <li>• Get the victim to a cooler location.</li> <li>• Lightly stretch and gently massage affected muscles to relieve spasms.</li> <li>• Give sips of up to a half glass of cool water every 15 minutes. (Do not give liquids with caffeine or alcohol.)</li> <li>• Discontinue liquids, if victim is nauseated</li> </ul>
Heat Exhaustion	Heavy sweating but skin may be cool, pale, or flushed. Weak pulse. Normal body temperature is possible, but temperature will	<ul style="list-style-type: none"> <li>• Get victim to lie down in a cool place.</li> <li>• Loosen or remove clothing.</li> <li>• Apply cool, wet clothes.</li> </ul>

	likely rise. Fainting or dizziness, nausea, vomiting, exhaustion, and headaches are possible.	<ul style="list-style-type: none"> <li>• Fan or move victim to air-conditioned place.</li> <li>• Give sips of water if victim is conscious. Be sure water is consumed slowly. Give half glass of cool water every 15 minutes.</li> <li>• Discontinue water if victim is nauseated.</li> <li>• Seek immediate medical attention if vomiting occurs.</li> </ul>
Heat Stroke – A severe medical emergency!	High body temperature (105+); hot, red, dry skin; rapid, weak pulse; and rapid shallow breathing. Victim will probably not sweat unless victim was sweating from recent strenuous activity. Possible unconsciousness.	<ul style="list-style-type: none"> <li>• Call 9-1-1 or emergency medical services, or get the victim to a hospital immediately. Delay can be fatal.</li> <li>• Move victim to a cooler environment, using fans and air conditioners.</li> <li>• Remove clothing.</li> <li>• Try a cool bath, sponging, or wet sheet to reduce body temperature.</li> <li>• Watch for breathing problems.</li> <li>• Use extreme caution.</li> </ul>