



Heat Illness Chart

Heat Illnesses and Their Symptoms^{1,2,3}

Medical Condition	Symptom(s)	Causes	Safety Tips
Heat rash	<ul style="list-style-type: none">• Red cluster of pimples• Blisters• Itching• Red rash on the skin that usually occur on the neck, chest, breast and/or groin	Excessive sweating that blocks sweat ducts	Remove the affected person from heat. Minimize exposure of skin to sun. Keep the affected area dry. Seek medical attention if rash does not improve.
Heat edema (swelling)	<ul style="list-style-type: none">• Swelling in the ankles, feet and hands• Body temperature normal or elevated core temperature up to 104° F	<ul style="list-style-type: none">• Occurs in persons who are not used to heat• Increased blood flow to the skin in limbs	Elevate and apply compressive stockings to the affected limbs.
Heat tetany (heat stress)	<ul style="list-style-type: none">• Respiratory problems, such as breathing difficulty• Muscular problems, including spasms or numbness or tingling of muscles• Body temperature normal or elevated core temperature up to 104° F	<ul style="list-style-type: none">• Hyperventilation• Respiratory alkalosis – the blood becomes basic	Remove the affected person from the heat and advise the person to breathe slowly.

Chart courtesy of Minnesota Department of Health

Medical Condition	Symptom(s)	Causes	Safety Tips
Heat cramps	<ul style="list-style-type: none"> • Muscle spasms • Muscles usually affected include the abdomen, calf, thighs and shoulder muscles • Body temperature normal or elevated core temperature up to 104° F 	<ul style="list-style-type: none"> • Dehydration • Electrolyte deficiency 	<p>Stop all activities, relocate to a cool location, rest and drink Electrolyte-containing fluids (sports drinks). Seek medical attention if symptoms persist.</p>
Heat exhaustion	<ul style="list-style-type: none"> • Profuse sweating • Weakness • Rapid breathing • Dizziness • Nausea/vomiting • Muscle cramps • Normal mentation • Body temperature normal or elevated core temperature up to 104° F 	<ul style="list-style-type: none"> • Dehydration • Electrolyte deficiency 	<ul style="list-style-type: none"> • Stop all activities, relocate to a cool location, rest and drink electrolyte containing fluids. • It can be difficult to determine if someone has heat stroke and not exhaustion. • If symptoms do not quickly improve, or unable to oral rehydrate, seek medical attention.
<p>Heat stroke</p> <p><i>This is a life threatening condition due to extreme heat, usually occurring when the body temperature is greater than 104F.</i></p>	<ul style="list-style-type: none"> • Oral body temperature of 104F and above • Often sudden onset of symptoms • Confusion or loss of consciousness • Rapid and strong pulse • Hot, red and dry skin • Headache • Dizziness • Nausea/vomiting 	<ul style="list-style-type: none"> • Profound dehydration • Profound electrolyte deficiency • Body is unable to maintain heat diffusion through the skin • Normal regulation of body temperature is no longer intact • Mortality can be as high as 50% 	<ul style="list-style-type: none"> • Call 911 immediately if you see anyone with these symptoms and has a body temperature of 104F and above. • While waiting for first responders, the affected person should be taken to a cool shady area. • Cool the person with immersion in cool water, spraying the person with cool water while fanning the person vigorously, or placing ice packs on neck, underarm, and groin. • The person is unlikely to be able tolerate oral fluids.

Chart courtesy of Minnesota Department of Health



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