

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 	<ul style="list-style-type: none"> • Blockage of sweat ducts 	<ul style="list-style-type: none"> • 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	<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 acclimatized to heat • Increased blood flow to the skin in limbs 	<ul style="list-style-type: none"> • Elevate and apply compressive stockings to the affected limbs.
Heat tetany	<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 	<ul style="list-style-type: none"> • Remove the affected person from the heat and advise the person to breathe slowly.
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"> • Drinking liquid without electrolytes • Dehydration • Electrolyte deficiency 	<ul style="list-style-type: none"> • Stop all activities, relocate to a cool location, rest and drink electrolyte containing fluids. Seek medical attention if symptoms persist.
Heat syncope	<ul style="list-style-type: none"> • Dizziness • Fainting • Body temperature normal or elevated core temperature up to 104° F 	<ul style="list-style-type: none"> • Increased blood flow to the skin resulting in decreased blood flow to the central nervous system 	<ul style="list-style-type: none"> • Lay the affected person gently on the floor and provide lots of fluid. Seek medical attention.

<p>Heat exhaustion</p>	<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"> • Drinking liquid without electrolytes • 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, adverse effect of exposure to extreme heat, usually occurring when the body temperature is greater than 104°F.</i></p>	<ul style="list-style-type: none"> • Oral body temperature of 104°F 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 104°F 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, axilla, and groin. • The person is unlikely to be able tolerate oral fluids.
<ol style="list-style-type: none"> 1. Centers for Disease Control and Prevention. (2006). Frequently Asked Questions (FAQ) About Extreme Heat. Retrieved April 17, 2012, from http://www.bt.cdc.gov/disasters/extremeheat/faq.asp. 2. Platt, M. and Vicario, S. (2010). Heat Illness. In Rosen's Emergency Medicine: Concepts and Clinical Practice, 7th Ed. p1882-3. 3. Zimmerman JL, Hanania NA. (2005). Chapter 111. Hyperthermia. In: Hall JB, Schmidt GA, Wood LD, eds. Principles of Critical Care. 3rd ed. New York: McGraw-Hill. 			

Chart courtesy of Minnesota Department of Health:

http://www.health.state.mn.us/divs/climatechange/docs/toolkit_chapter2.pdf