

What is heat illness?

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What is heat illness?

Humans have an extraordinary ability to regulate their body temperature within a narrow range. When this regulatory system is overwhelmed, heat illness occurs. Factors that contribute to overheating include high temperature worsened by high humidity, dehydration, poor calorie intake, medical problems such as heart disease and diabetes, certain medications, and "non-breathing" clothing that prevents sweat evaporation – our main cooling mechanism. Overexertion or not understanding one's limitations are common contributors, as well. There are different degrees of heat illness, as described below.

What is the difference between heat exhaustion and heat stroke?

Heat illness can range from mild heat edema (swelling) or cramps through heat exhaustion and finally severe heat stroke. Heat cramps are what they sound like: cramps in the large muscles of the body after exertion in heat. Heat exhaustion is related to elevated body temperature without adequate hydration. One may even pass out and lose consciousness briefly if severely dehydrated. Heat stroke can develop rapidly, and occur without the other symptoms of heat illness. With heat stroke, seizures and organ system dysfunction may develop. Action must be taken at the first sign of illness. The major difference between heat exhaustion and heat stroke is presence of confusion or altered mental status.

How can I avoid heat illness?

It is important to recognize the signs and symptoms of early heat illness and take action immediately to prevent worsening to heat stroke. Also, know if you are at high risk for developing more severe heat illness (i.e. medical conditions, taking certain medications). Overexertion and not drinking enough water are the most common causes of heat illness in any warm environment but in the desert, realize that water is lost from the body at a faster rate through sweating due to the dry air, and in many of the parks and mountain preserves there may not be adequate shade to escape the sun.

You should plan on bringing approximately one liter of water for every hour you will be outside and always have a back-up plan in case you get stranded or run out of water too soon (carry a cell phone, tell people where you are hiking, know where clean water is, etc.) If you are working outside, plan intermittent breaks out of the sun to recover and stay hydrated. Wear light colored clothing and know how much you can exert yourself before you become stressed and overheat. Acclimatization to heat over time is helpful but does not mean you cannot suffer from heat illness.

How can I tell if I'm experiencing heat illness?

It's not always easy to tell when your body is overheated, even if you live in a desert environment. You should not rely on the presence of sweat to determine if someone is developing severe heat illness or heat stroke. Dehydration and dry, desert air may cause someone to appear to not be sweating. Alternatively, you can surely develop severe illness and still be sweating.

Early symptoms of heat illness may include nausea, headache and decreased exercise tolerance. As symptoms become more severe, a person may become confused or make poor decisions. These are signs of significant illness (heat stroke) and immediate action should be taken.

What should I do if I feel like I'm suffering from heat illness?

If you suffer from any of the early symptoms described above, your top priority should be rest and moving to a cooler environment. Water intake is important but one must also remember to eat well to maintain electrolytes and calories (energy). If mild symptoms do not resolve with rest, cooling, and water you should seek medical care. If you feel lightheaded, drowsy, or "not right" or are with someone who is not acting appropriately or seems confused, you must seek medical attention immediately as these are signs of heat stroke.

What is the treatment for heat illness?

Removal from the hot environment, rest, and hydration are the most important first steps. Misting or spraying water on an overheated person in front of a fan is another good way to cool off. If symptoms do not improve or are severe, medical attention should be sought, and more aggressive cooling measures and IV fluid hydration may be used. Severe heat illness and heat stroke often require hospital admission and intensive care treatment.