

# Recognizing and Treating Heat-Related Illness

Summer heat can be dangerous – even short periods of high temperatures can cause health problems that range from minor to life threatening. It is important to recognize the signs and symptoms of heat-related illness in order to ensure proper treatment. Heat-related illnesses include heat rash, sunburn, and the more severe illnesses heat cramps, heat exhaustion, and heat stroke.

**Heat rash**, also known as prickly heat, is an irritation of the skin caused by blocked sweat glands. Heat rash appears as clusters of red pimples or blisters on the skin. It usually occurs when clothing inhibits the evaporation of sweat from the skin. In most cases, heat rash will clear up on its own in a few days if the affected area is kept cool and dry.

**Sunburn** is skin damage from the sun's ultraviolet (UV) rays. Most sunburns cause mild pain and redness but affect only the outer layer of skin. To treat mild sunburn, apply cool cloths to affected areas, take frequent cool showers or baths, and apply lotions/creams that contain aloe vera. Topical steroids, such as 1% hydrocortisone creams, may also help with sunburn pain and swelling. For more severe sunburn, especially sunburn over large portions of the skin surface or that which has resulted in severe blistering, seek medical treatment.

**Heat cramps** are painful muscle contractions that affect people who sweat a lot during strenuous activity. Cramps are caused by a combination of dehydration and electrolyte imbalance. To treat heat cramps:

- Stop all activity and rest in a cool, shaded area.
- Drink fluids such as water, fruit juices and sports drinks to re-hydrate and replace salt and mineral levels.
- Do not return to the strenuous activity for a few hours after the cramps subside, further exertion may lead to heat exhaustion or heat stroke.
- Seek medical attention for heat cramps that do not subside within one hour.

**Heat exhaustion** is the body's response to an excessive loss of water and salt contained in sweat.

Warning signs of heat exhaustion include:

- Heavy sweating
- Paleness
- Muscle cramps
- Tiredness
- Weakness
- Dizziness
- Headache
- Nausea
- Vomiting
- Fainting
- Skin may feel cool and moist
- Pulse rate will be fast and weak, and breathing will be fast and shallow

Cooling measures that may be effective include:

- Cool, non-alcoholic beverages, as directed by your physician
- Rest
- A cool shower, bath, or sponge bath
- An air-conditioned environment
- Lightweight clothing

**Heat stroke** occurs when the body becomes unable to regulate its temperature. The body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool itself. Heat stroke can cause death or permanent disability if emergency treatment is not given. **If you suspect heat stroke, immediately call for medical assistance.**

Warning signs of heat stroke vary but may include:

- An extremely high body temperature (above 103°F)
- Red, hot and dry skin (no sweating)
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness

While waiting for medical assistance, immediately begin cooling the victim:

- Get the victim to a shady area.
- Cool the victim rapidly using whatever methods are available:
  - Wrap the victim in a cool, wet sheet and fan vigorously; spray or sponge with cool water and fan; immerse the victim in a tub of cool shallow water only if awake and alert; or place in a cool shower.
- Monitor body temperature, and continue cooling efforts until the victim's temperature drops to 101-102°F.
- If emergency medical personnel are delayed, call a hospital emergency department for further instructions.
- **Do not give fluids to an unconscious person.**

Your best defense against heat-related illness is prevention. Staying cool and making simple changes in your fluid intake, activities, and clothing during hot weather can help you remain safe and healthy. For additional tips, please reference the DRI Heat Stress Fact Sheet at [http://safety.dri.edu/FieldSafety/Guidelines/Heat\\_Stress\\_Facts.pdf](http://safety.dri.edu/FieldSafety/Guidelines/Heat_Stress_Facts.pdf).

Sources:

- [http://www.bt.cdc.gov/disasters/extremeheat/heat\\_guide.asp](http://www.bt.cdc.gov/disasters/extremeheat/heat_guide.asp)
- <http://www.drreddy.com/heat.html>
- [http://www.cchd.org/disease\\_factsheets/heat\\_illnesses.htm](http://www.cchd.org/disease_factsheets/heat_illnesses.htm)