

Heat Related Illnesses

By KI5UAJ

Here in Texas, we are not strangers to the extreme, summertime conditions of high temperatures coupled with high humidity. Events taking place during hot weather typically see heat illness as the bulk of the medical calls. You've probably way too often heard the line "it's not the heat, it's the humidity" — there is truth to that statement. The main mechanism for the human body to rid itself of excess heat is evaporation of sweat. When relative humidity is high, there is less capability for evaporation and therefore less cooling, increasing the risk of succumbing to heat illness.

There are three levels of heat illness:

Heat Cramps occur from exercising in hot conditions and are not directly caused by heat. They are marked by cramps in large muscle groups such as the legs and abdomen and is relieved by rest and hydration.

Heat Exhaustion is marked by fatigue, headache, dizziness, nausea, and/or fainting. The treatment is to immediately stop any activity, get out of the heat, cool off and rehydrate.

Symptoms

Symptoms of heat exhaustion may start suddenly or progress over time, especially with prolonged periods of exercise. Possible heat exhaustion symptoms include:

- Cool, moist skin with goose bumps when in the heat.
- Heavy sweating.
- Faintness.
- Dizziness.
- Fatigue.

- Weak, rapid pulse.
- Low blood pressure upon standing.
- Muscle cramps.
- Nausea.
- Headache.

Heat Stroke occurs when someone ignores the symptoms of heat exhaustion and continues working in the heat. In addition to the symptoms of heat exhaustion, any altered mental state (such as confusion, difficulty speaking, erratic behavior resembling bi-polar switches or changes in consciousness), stumbling or uncharacteristic clumsiness should be considered heat stroke. The affected person needs to be removed from the heat and sun and be immediately cooled. **This is a medical emergency** — 911 should be called for transport to an emergency facility for evaluation. Heat stroke can cause damage to the kidneys, brain, muscles, and other body systems that may not be apparent until much later. It can also exacerbate existing, controlled illnesses.

Heatstroke symptoms include:

- **High body temperature.** A core body temperature of 104 degrees Fahrenheit (40 degrees Celsius) or higher is the main sign of heatstroke.
- **Change in mental state or behavior.** Confusion, agitation, slurred speech, irritability, delirium, seizures and coma can all result from heatstroke.
- **Change in sweating pattern.** In heatstroke brought on by hot weather, skin feels hot and dry to the touch. However, in heatstroke brought on by strenuous exercise, sweating may be profuse.
- **Nausea and vomiting.** Someone with heatstroke may feel sick to their stomach or vomit.
- **Flushed skin.** Skin may turn red as body temperature increases.
- **Rapid breathing.** Breathing may become rapid and shallow.
- **Racing heart rate.** Pulse may significantly increase because heat stress places an extreme burden on the heart to help cool the body.
- **Headache.** Heatstroke may cause the head to throb.

If you think a person may be experiencing heatstroke, seek immediate medical help. Call 911 or your local emergency services number.

Take immediate action to cool the person with heatstroke while waiting for emergency treatment.

- Get the person into shade or indoors.
- Remove excess clothing.
- Cool the person with whatever means available — put in a cool tub of water or a cool shower, spray with a garden hose, sponge with cool water, fan while misting with cool water, or place ice packs or cold, wet towels on the person's head, neck, armpits and groin.

Children, the elderly, and people with chronic ailments are at higher risk for heat illness as are those of us who spend the majority of our time in air conditioning. Ensure pets have plenty of drinking water and a shady place to rest. Never leave children or pets in vehicles as the interior temperatures may quickly climb to over 150°F.

NOTE: Too much water, too quickly can be hazardous. After drinking a pint, victims should sip slowly and limit water to 1 Liter per hour to a maximum of 2 Liters. It is important to add minerals as these are lost when sweating or in the urine. There are a number of products available such as Pedialyte or other sports drink.

To prevent heat related illness:

1. Respect the heat. Keep track of the weather and keep out of the heat in the hottest part of the day. Restrict strenuous physical activity to the morning or evening hours. Wear light colored clothing, a hat to shield yourself from the sun and use sunscreen to minimize the risk of sunburn.
2. Avoid dehydration. The recommendation is to drink at least 15 oz of water before going out in the heat and 8 oz every 20 minutes during the exposure though that may not be enough. You can lose as much as a gallon per hour under extreme conditions. Drink often and drink your fill. Monitor your urine...often is good but orange is bad.

3. Avoid caffeine and alcohol as they can impair the body's ability to regulate temperature and cause added water loss via the urinary system.
4. Allow proper time to acclimate to a hot environment – this may take over a week. If you're a couch potato, spend several hours a day for a week outside to acclimate yourself prior to an event.
5. Recognize your personal tolerance to heat and your medical status. Some medical conditions and medications reduce heat tolerance.
6. Become familiar with the symptoms and signs of heat illnesses.
7. Stop activities at the first sign of heat illness. This can be hard to discern so stay alert!

That concludes tonight's training.

Thanks, this is KI5UAI, back to net control.