

Safety Circular



April 2019

Extreme Heat

In extreme heat and high humidity (which is when the air has moisture and feels sticky) the body must work extra hard to maintain a normal temperature and keep the body comfortable. A heat wave is an extended period of extreme heat, and there is often high humidity. These conditions can be dangerous for people who do not take care of themselves properly, pushing the human body beyond its limits.

What Happens to the Body as a Result of Exposure to Extreme Heat?

People suffer heat-related illness when the body's temperature control system is overloaded. The body normally cools itself by sweating, but under some conditions, sweating just isn't enough. In such cases, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs. Several factors affect the body's ability to cool itself during extremely hot weather. When the humidity is high, sweat will not evaporate as quickly, preventing the body from releasing heat quickly. Other conditions that can limit the ability to regulate temperature include senior citizens, youth (ages 0-4), obesity, fever, dehydration, heart disease, mental illness, poor circulation, sunburn, prescription drugs, and alcohol use.

Who is at Greatest Risk for a Heat-related Illness?

Infants and children up to four years of age, and people 65 years of age and older. Also, people who are overweight, have previous medical conditions or are on certain medications (psychiatric).

Recognize the Signs of a Heat-related Illness

Heat Cramps

- Involuntary muscle spasms following hard physical work in a hot environment
- Heavy perspiration
- Cramping in the abdomen, arms and calves

Heat Exhaustion

- Weakness, anxiety, fatigue, dizziness, headache or nausea
- Profuse perspiration, rapid pulse or rapid breathing
- Possible confusion or loss of coordination
- May lead to heat stroke if not treated

Heatstroke (*EMERGENCY!! Medical Care is Urgent*)

- Diminished or absent perspiration
- Hot, dry, and flushed skin
- Increased body temperatures, delirium, convulsions, seizures or possible death
- Rapid pulse, weakness
- Headache, mental confusion, dizziness
- Extreme fatigue
- Nausea or vomiting
- Incoherent speech progressing to coma

Prevention of a Heat-related Illness

- Increase frequency of fluid intake when working in hot environments
- Take a break every 30-60 minutes
- Decrease intensity of work under extreme conditions
- Dress in cool, loose clothing and shade your head and face with a hat or umbrella
- Be aware of high humidity conditions
- Be aware of areas with little to no breeze

Treatment of a Heat-related Illness

- Move person out of direct sunlight into air-conditioned environment, if possible
- Remove clothing, maintaining modesty
- Have them drink water if conscious
- Sprinkle water on them and fan them if there is no breeze
- Get medical attention ASAP

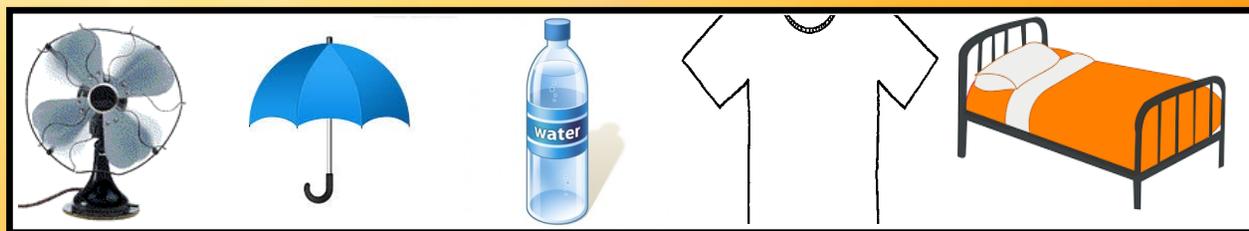
Respite Areas

- Always be aware of the locations of respite areas and understand the importance of their use. Remember offenders may request access to respite areas 24 hours a day seven days a week.



Protect Yourself During Hot Weather

- Remember to keep cool and use common sense. Drink plenty of fluid, replace salts and minerals, wear appropriate clothing and sunscreen, pace yourself, stay cool indoors, schedule outdoor activities carefully, use a buddy system, monitor those at risk, and adjust to the environment.
- During hot weather you will need to drink more liquid than your thirst indicates. Increase your fluid intake, regardless of your activity level. During heavy exercise in a hot environment, drink two to four glasses (16-32 ounces) of cool fluids each hour. Avoid drinks containing alcohol because they will actually cause you to lose more fluid.
- Wear as little clothing as possible when you are at rest. Choose lightweight, light-colored, loose-fitting clothing. In the hot sun, a wide-brimmed hat will provide shade and keep the head cool. If you must go outdoors, be sure to apply sunscreen 30 minutes prior to going out and continue to reapply according to the package directions. Sunburn affects your body's ability to cool itself and causes a loss of body fluids. It also causes pain and damages the skin.
- Pace yourself. If you are not accustomed to working or exercising in a hot environment, start slowly and pick up the pace gradually. If exertion in the heat makes your heart pound and leaves you gasping for breath, STOP all activity. Get into a cool area or at least in the shade, and rest, especially if you become lightheaded, confused, weak, or faint.



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The Safety Circular, a publication of the Texas Department of Criminal Justice Risk Management Department, is published monthly in an effort to promote and enhance risk management awareness on issues relating to TDCJ employees. Design and layout of the Safety Circular is performed by Cliff Prestwood, Risk Management. Comments, suggestions and safety related items are welcome.

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References: ♦copd-international.com ♦ready.gov ♦

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