

Texas Department of Criminal Justice

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Risk Management

Cold Weather Safety

Hypothermia

People who work outside face certain risks. Hypothermia is one of these risks that is often overlooked or not recognized. Because hypothermia can affect reasoning and judgment, you can quickly find yourself in a life threatening situation without realizing you are in danger.

Q: What is Hypothermia?

Hypothermia can occur when the body is unable to warm itself. In this condition, serious cold related illnesses and injuries occur and permanent tissue damage and death may result. Hypothermia can occur when land temperatures are above freezing or water temperatures are below 98.6°F. Cold related illnesses can slowly overcome a person who has been chilled by low temperatures, brisk winds, or wet clothing.

Q: What happens to the body when hypothermia occurs?

- Normal body temperature (98.6°F) drops to or below 95°F.
- Fatigue or drowsiness occurs.
- Uncontrolled shivering occurs.
- The skin is cool and bluish.
- Speech is slurred.
- Movements are clumsy.
- Behavior is confused or irrational.

Q: What should be done for a victim of hypothermia?

- **Call for emergency help (Call 911)**
- Move the person to a warm area. Do not leave the person alone. Remove any wet clothing and replace with warm, dry clothing or wrap the person in blankets.
- Have the person drink warm, sweet drinks (sugar water or sports-type drinks), if they are alert. Avoid drinks with caffeine (coffee, tea, or hot chocolate) or alcohol.
- Have the person move their arms and legs to create muscle heat. If they are unable to do this, place warm bottles or hot packs in the arm pits, groin, neck, and head areas.

Q: How can hypothermia be prevented?

- Recognize the environmental and workplace conditions that lead to potential cold-induced illnesses and injuries.
- Learn the signs and symptoms of cold illnesses and injuries and what to do to help the person affected.

- Train all employees on cold weather issues.
- Select proper clothing for cold, wet and windy conditions. Layer clothes and adjust to changing environmental temperatures. Wear hat and gloves.
- Take frequent short breaks in warm, dry shelters to allow the body to warm up.
- Perform work during the warmest part of the day.
- Avoid exhaustion or fatigue; energy is needed to keep muscles warm.
- Drink warm, sweet beverages (sugar water, sports-type drinks). Avoid drinks with caffeine (coffee, tea, or hot chocolate) or alcohol.
- Eat warm, high calorie foods like hot pasta dishes.

Q: Can hypothermia be a problem even if the temperature is well above freezing?

Hypothermia can occur any time that the body cannot generate enough heat to maintain its core temperature regardless of the time of year. Even on a sunny summer day, a person immersed in 40° to 50° Fahrenheit water may reach the exhaustion point in as little as 30 minutes. Death from hypothermia may result in three hours.

Q: Can the medications I'm taking make me more susceptible to hypothermia?

A number of commonly prescribed medications can affect the body's resistance to hypothermia. Sedatives, anti-depressants, tranquilizers, and some vascular drugs can all affect the body's ability to regulate temperature. If you are concerned, ask a doctor.

Frostbite

Q: What happens to the body when frostbite occurs?

- Frostbite usually affects the fingers, hands, toes, feet, ears, and nose.
- Freezing occurs in the deep layers of skin and tissue.
- Skin is pale, waxy-white in color.
- Skin becomes hard and numb.

Q: What should be done for a victim of frostbite?

- Move the person to a warm dry area. Don't leave the person alone.
- Remove any wet or tight clothing that may cut off blood flow to the affect area.
- **DO NOT** rub the affected area, rubbing causes damage to the skin and tissue.
- **GENTLY** place the affected area in a warm (105°F) water bath and monitor the water temperature to slowly warm the tissue. Don't pour warm water directly on the affected area, it will warm the tissue too fast causing damage. Warming takes about 25-40 minutes.
- After the affected area has been warmed, it may become puffy and blister. The affected area may have a burning feeling or numbness. When feeling, movement, and skin color have returned; the affected area should be dried and wrapped to keep it warm.