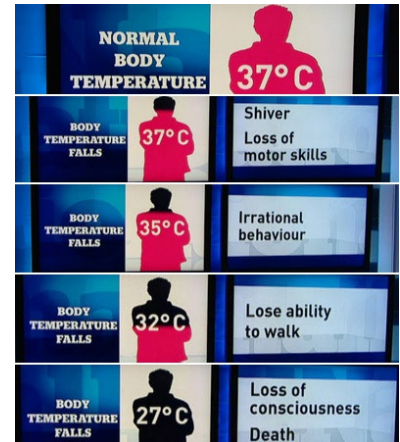


Weather-Related Health Issues

HYPOTHERMIA

Hypothermia is a medical emergency that occurs when your body loses heat faster than it can produce heat, causing a dangerously low body temperature. The normal body temperature is around 98.6 F (37 C). Hypothermia occurs as your body temperature passes below 95 F (35 C).

When your body temperature drops, your heart, nervous system, and other organs can't work correctly. Left untreated, hypothermia can eventually lead to complete failure of your heart and respiratory system and to death. It usually occurs when the body is exposed to extremely cold temperatures and/or immersed in cold water.



SIGNS & SYMPTOMS OF MODERATE TO SEVERE HYPOTHERMIA

- Shivering stops
- Clumsiness or lack of coordination
- Slurred speech or mumbling
- Stumbling
- Confusion or difficulty thinking
- Poor decision making, such as trying to remove warm clothes
- Drowsiness or very low energy
- Apathy or lack of concern about one's condition
- Progressive loss of consciousness
- Weak, erratic and/or fast pulse
- Slow shallow breathing

RISK FACTORS

- Older people (65 and older) are more vulnerable to hypothermia. The body's ability to regulate its temperature declines with age.
- Very young age. Children lose heat faster than adults do. Children have a larger head-to-body ratio than adults do, making them more prone to heat loss through the head.
- Mental illness leading to poor judgement.
- Alcohol and drug use.
- Certain medical conditions. Examples include underactive thyroid (hypothyroidism), poor nutrition, stroke, severe arthritis, Parkinson's disease, trauma, spinal cord injuries, burns, neuropathy, dehydration, serious infections, and any condition that limits activity or interferes with normal blood flow.

- Medications, i.e. certain blood pressure and heart medications, along with antidepressants, antipsychotics, and sedatives, can change the body's ability to regulate its temperature.

FIRST-AID CARE FOR HYPOTHERMIA

- Be gentle — don't massage or rub the person. When you're helping a person with hypothermia, handle him or her gently. Limit movements to only those that are necessary. Excessive, vigorous, or jarring movements may trigger cardiac arrest.
- Move the person out of the cold. Move the person to a warm, dry location if possible. If you're unable to move the person out of the cold, shield him or her from the cold and wind as much as possible.
- Remove wet clothing. If the person is wearing wet clothing, remove it. Cut away clothing if necessary to avoid excessive movement.
- Cover the person with blankets. Use layers of dry blankets or coats to warm the person. Cover the person's head, leaving only the face exposed.
- Insulate the person's body from the cold ground. If you're outside, lay the person on his or her back on a blanket or other warm surface.
- Monitor breathing. A person with severe hypothermia may appear unconscious, with no apparent signs of a pulse or breathing. If the person's breathing has stopped or appears dangerously low or shallow, begin cardiopulmonary resuscitation (CPR) immediately if you're trained.
- Share body heat. To warm the person's body, remove your clothing and lie next to the person, making skin-to-skin contact. Then cover both of your bodies with blankets.
- Provide warm beverages—non-alcoholic, non-caffeinated beverages If the affected person is alert and able to swallow, to help warm the body.
- Use warm, dry compresses. Apply a compress only to the neck, chest wall or groin. Don't apply a warm compress to the arms or legs. Use a first-aid warm compress (a plastic fluid-filled bag that warms up when squeezed), or a makeshift compress of warm water in a plastic bottle or a dryer-warmed towel. Heat applied to the arms and legs forces cold blood back toward the heart, lungs, and brain, causing the core body temperature to drop. This can be fatal.
- Don't apply direct heat. Don't use hot water, a heating pad, or a heating lamp to warm the person. The extreme heat can damage the skin or even worse, cause irregular heartbeats so severe that they can cause the heart to stop.

FROSTBITE

When exposed to very cold temperatures, skin and underlying tissues may freeze, resulting in frostbite. The areas most likely to be affected by frostbite are your hands, feet, nose, and ears.

If your skin looks white or grayish yellow, is very cold, and has a hard or waxy feel, you may have frostbite. Your skin may also itch, burn, or feel numb. Severe or deep frostbite can cause

blistering and hardening. As the area thaws, the flesh becomes red and painful. Gradually warming the affected skin is the key to treating frostbite.

To do so:

- Protect your skin from further exposure. If you're outside, warm your frostbitten hands by tucking them into your armpits. Protect your face, nose, or ears by covering the area with dry, gloved hands. Don't rub the affected area and never rub snow on frostbitten skin.
- Get out of the cold. Once you're indoors, remove wet clothes.
- Gradually warm frostbitten areas. Put frostbitten hands or feet in warm water — 104 to 107.6 F (40 to 42 C). Wrap or cover other areas in a warm blanket. Don't use direct heat such as, a stove, heat lamp, fireplace, or heating pad, because these can cause burns before you feel them on your numb skin.
- Don't walk on frostbitten feet or toes if possible. This further damages the tissue.
- If there's any chance the affected areas will freeze again, don't thaw them. If they're already thawed, wrap them up so that they don't become frozen again.
- Get emergency medical help. If numbness or sustained pain remains during warming or if blisters develop, seek medical attention.

HYPERTHERMIA (3 STAGES OF HEAT-RELATED ILLNESS)

HEAT CRAMPS

Heat cramps are painful, involuntary muscle spasms that usually occur during heavy exercise in hot environments. The spasms may be more intense and more prolonged than typical nighttime leg cramps. Inadequate fluid intake often contributes to heat cramps. Muscles most often affected include those of your calves, arms, abdominal wall, and back, although heat cramps may involve any muscle group involved in exercise.

FIRST AID IF YOU SUSPECT HEAT CRAMPS

- Rest briefly and cool down.
- Drink clear juice or an electrolyte-containing sports drink such as Gatorade or similar.
- Practice gentle, range-of-motion stretching and gentle massage of the affected muscle group.
- Don't resume strenuous activity for several hours or longer after heat cramps go away.
- Seek medical care if your cramps don't go away within one hour or so.

HEAT EXHAUSTION

Signs and symptoms of heat exhaustion often begin suddenly, sometimes after excessive exercise, heavy perspiration, and inadequate fluid or salt intake.

- Feeling faint or dizzy
- Nausea

- Heavy sweating
- Rapid, weak heartbeat
- Low blood pressure
- Cool, moist, pale skin
- Fever from 98.6 to 104 degrees
- Heat cramps
- Headache
- Fatigue
- Dark-colored urine

FIRST AID

- Get the person out of the sun and into a shady or air-conditioned location.
- Lay the person down and elevate the legs and feet slightly.
- Loosen or remove the person's clothing.
- Have the person drink cool water or other non-alcoholic, non-caffeine beverage.
- Cool the person by spraying or sponging with cool water and fanning.
- Monitor the person carefully. Heat exhaustion can quickly become heatstroke.
- Call for emergency medical help if the person's condition deteriorates, especially if fainting, confusion, or seizures occur, or if fever of 104 F (40 C) or greater occurs with other symptoms.

HEAT STROKE

Heatstroke is the most severe of heat-related problems and often results from exercise or heavy work in hot environments combined with inadequate fluid intake. Young children, older adults, people who are obese, and people born with an impaired ability to sweat are at high risk of heatstroke. Other risk factors include dehydration, alcohol use, cardiovascular disease, and certain medications such as some blood pressure and psychiatric medications.

What makes heatstroke severe and potentially life-threatening is that the body's normal mechanisms for dealing with heat stress, such as sweating and temperature control, become inadequate.

SIGNS AND SYMPTOMS

- The main sign of heatstroke is a markedly elevated body temperature — generally greater than 104 F (40 C).
- Changes in mental status ranging from personality changes (irritability) to confusion and coma.
- Fainting, which may be the first sign in older adults.
- Skin may be hot and dry.
- Rapid heartbeat
- Rapid and shallow breathing

- Elevated or lowered blood pressure
- Cessation of sweating
- Feeling dizzy or lightheaded
- Headache
- Nausea

FIRST AID

- Move the person out of the sun and into a shady or air-conditioned space.
- Call for emergency medical help.
- Remove excess clothing.
- Cool the person by covering with damp sheets or by spraying with cool water. Direct air onto the person with a fan or newspaper.
- Apply ice packs in armpits and groin if available.
- Have the person drink cool water or other non-alcoholic, non-caffeine beverage, only if fully conscious.
- Do not give fever-reducing medications.
- Once the body temperature lowers to 101 F, turn the person to recovery position.

REFERENCES

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