



## Frostbite & Hypothermia Symptoms

Frostbite and hypothermia are cold-related emergencies that may quickly become life or limb threatening. Preventing cold-related emergencies includes not starting an activity in, on, or around cold water unless you know you can get help quickly in an emergency.

**Frostbite** is an injury caused by freezing of the skin and underlying tissues. First your skin becomes very cold and red, then numb, hard and pale. Frostbite is most common on the fingers, toes, nose, ears, cheeks, and chin. Exposed skin in cold, windy weather is most vulnerable to frostbite. But frostbite can occur on skin covered by gloves or other clothing.

Frostbite occurs in several stages:

1. Frostnip. Frostnip is a mild form of frostbite. Continued exposure leads to numbness in the affected area. As your skin warms, you may feel pain and tingling. Frostnip doesn't permanently damage the skin.
2. Superficial frostbite. Superficial frostbite appears as reddened skin that turns white or pale. Your skin may begin to feel warm — a sign of serious skin involvement. If you treat frostbite with rewarming at this stage, the surface of your skin may appear mottled. And you may notice stinging, burning, and swelling. A fluid-filled blister may appear 12 to 36 hours after rewarming the skin.
3. Deep (severe) frostbite. As frostbite progresses, it affects all layers of the skin, including the tissues that lie below. Your skin turns white or bluish gray, and you may experience numbness, losing all sensation of cold, pain or discomfort in the affected area. Joints or muscles may no longer work. Large blisters form 24 to 48 hours after rewarming. Afterward, the area turns black and hard as the tissue dies.

Signs and symptoms of frostbite include:

- At first, cold skin and a prickling feeling
- Numbness
- Red, white, bluish-white, or grayish-yellow skin
- Hard or waxy looking skin
- Clumsiness due to joint and muscle stiffness
- Blistering after rewarming, in severe cases

**Hypothermia** is another cold-related emergency which may quickly become life threatening. Hypothermia is a medical emergency that occurs when your body loses heat faster than it can produce heat, causing a dangerously low body temperature, which can lead to organ failure and death.



Someone with hypothermia usually isn't aware of his or her condition because the symptoms often begin gradually. Also, the confused thinking associated with hypothermia prevents self-awareness. The confused thinking can also lead to risk-taking behavior.

Signs and symptoms of hypothermia include:

- Shivering
- Slurred speech or mumbling
- Slow, shallow breathing
- Weak pulse
- Clumsiness or lack of coordination
- Drowsiness or very low energy
- Confusion or memory loss
- Loss of consciousness

#### **SAFETY REMINDER**

Any individual regardless of age, sex or health status can develop cold weather-related illness if exposed to prolonged cold.