

# Prevent Hypothermia & Frostbite

## What is hypothermia?

- Hypothermia is caused by prolonged exposures to very cold temperatures. When exposed to cold temperatures, your body begins to lose heat faster than it's produced. Lengthy exposures will eventually use up your body's stored energy, which leads to lower body temperature.
- Body temperature that is too low affects the brain, making the victim unable to think clearly or move well. This makes hypothermia especially dangerous, because a person may not know that it's happening and won't be able to do anything about it.
- While hypothermia is most likely at very cold temperatures, it can occur even at cool temperatures (above 40°F) if a person becomes chilled from rain, sweat, or submersion in cold water.

## Who's most at risk?

Victims of hypothermia are often:

- Older adults with inadequate food, clothing, or heating
- Babies sleeping in cold bedrooms
- People who remain outdoors for long periods—the homeless, hikers, hunters, etc.
- People who drink alcohol or use illicit drugs.

## The following are warnings signs of hypothermia:

Adults:

- Shivering
- Exhaustion
- Confusion
- Fumbling hands
- Memory loss
- Slurred speech
- Drowsiness

Babies:

- bright red, cold skin
- very low energy

**SPOT**

**FROSTBITE**  
A victim is often unaware of frostbite because frozen tissue is numb.

**Signs & Symptoms**  
- Redness or pain in any skin area may be the first sign of frostbite.  
**Other signs include:**  
- a white or grayish-yellow skin area  
- skin that feels unusually firm or waxy  
- numbness

**HYPOTHERMIA**  
Hypothermia often occurs at very cold temperatures, but can occur at cool temperatures (above 40°F), if a person is wet (from rain, sweat or cold water) and becomes chilled.

**Signs & Symptoms**  
**Adults:**  
- shivering  
- exhaustion  
- confusion  
- fumbling hands  
- memory loss  
- slurred speech  
- drowsiness  
**Infants:**  
- bright red, cold skin  
- very low energy

If a person's temperature is below 95° get medical attention immediately.

## Don't wait – take action

**Hypothermia is a medical emergency.** If you notice any of the above signs, take the person's temperature. If it is below 95° F, get medical attention immediately!

If you are not able to get medical help right away, try to warm the person up.

- Get the person into a warm room or shelter.
- Remove any wet clothing the person is wearing.
- Warm the center of the person's body—chest, neck, head, and groin—using an electric blanket, if available. You can also use skin-to-skin contact under loose, dry layers of blankets, clothing, towels, or sheets.
- Warm drinks can help increase body temperature, but do not give alcoholic drinks. Do not try to give beverages to an unconscious person.
- After body temperature has increased, keep the person dry and wrap their body, including their head and neck, in a warm blanket.
- Get the person proper medical attention as soon as possible.

A person with severe hypothermia may be unconscious and may not seem to have a pulse or to be breathing. In this case, handle the person gently, and get emergency assistance immediately.

- Perform CPR, even if the person appears dead. CPR should continue until the person responds or medical aid becomes available. Keep warming the person while performing CPR. In some cases, hypothermia victims who appear to be dead can be successfully resuscitated.



# Prevent Hypothermia & Frostbite

## What is frostbite?

Frostbite is a type of injury caused by freezing. It leads to a loss of feeling and color in the areas it affects, usually extremities such as the nose, ears, cheeks, chin, fingers, and toes. Frostbite can permanently damage the body, and severe cases can lead to amputation (removing the affected body part).

## Who's most at risk?

You may have a greater chance of developing frostbite if you

- have poor blood circulation
- are not properly dressed for extremely cold temperatures

## What are the signs and symptoms of frostbite?

If you notice redness or pain in any skin area, get out of the cold or protect any exposed skin—frostbite may be beginning. Any of the following signs may point to frostbite:

- A white or grayish-yellow skin area
- Skin that feels unusually firm or waxy
- Numbness

A person who has frostbite may not know they have it until someone else points it out because the frozen parts of their body are numb.

## Don't wait—take action!

If you notice signs of frostbite on yourself or someone else, seek medical care. Check to see if the person is also showing signs of hypothermia. Hypothermia is a more serious condition and requires emergency medical care.

**If (1) a person shows signs of frostbite, but no signs of hypothermia and (2) immediate medical care is not available, do the following:**

- Get the person into a warm room as soon as possible.
- Unless absolutely necessary, do not walk on feet or toes that show signs of frostbite—this increases the damage.
- Do not rub the frostbitten area with snow or massage it at all. This can cause more damage.
- Put the areas affected by frostbite in warm—not hot—water (the temperature should be comfortable to the touch for unaffected parts of the body).
- If warm water is not available, warm the affected area using body heat. For example, you can use the heat of an armpit to warm frostbitten fingers.

- Do not use a heating pad, heat lamp, or the heat of a stove, fireplace, or radiator for warming. Affected areas are numb and can easily burn.

Don't substitute these steps for proper medical care. Frostbite should be checked by a health care provider. And remember, Hypothermia is a medical emergency and immediate medical care is necessary.

**Be prepared.**

Taking a first aid or emergency resuscitation (CPR) course is a good way to prepare for health problems related to cold weather. Knowing what to do is an important part of protecting your health and the health of others.

Being prepared is your best defense against having to deal with extremely cold weather. By preparing your home and car ahead of winter storms or other winter emergencies, and by taking safety precautions during extremely cold weather, you can reduce your risk of developing health problems related to cold weather.



The infographic features a central red triangle with a white border containing the text "FROSTBITE CAUTION!" in white capital letters on a blue background. Below this, a blue banner reads "Since skin may be numb, victims of frostbite can harm themselves further. Use caution when treating frostbite and:". Four numbered icons in red circles with diagonal slashes indicate prohibited actions: 1. A person walking on snow. 2. A fireplace with a fire. 3. A folded electric blanket. 4. Hands being rubbed together. Each icon is accompanied by a numbered red triangle and a corresponding text instruction.

**FROSTBITE CAUTION!**

Since skin may be numb, victims of frostbite can harm themselves further. Use caution when treating frostbite and:

- 1** UNLESS NECESSARY, DO NOT WALK ON FEET OR TOES WITH FROSTBITE
- 2** DO NOT USE A FIREPLACE, HEAT LAMP, RADIATOR, OR STOVE FOR WARMING
- 3** DO NOT USE A HEATING PAD OR ELECTRIC BLANKET FOR WARMING
- 4** DO NOT RUB OR MASSAGE AREAS WITH FROSTBITE

# Prevent Hypothermia & Frostbite

Wind Chill Factor

Wind Speed (mph)	Actual Air Temperature °F								
	40°	30°	20°	10°	0°	-10°	-20°	-30°	-40°
10	34	21	9	-4	-16	-28	-41	-53	-66
20	30	17	4	-9	-22	-35	-48	-61	-74
30	28	15	1	-12	-26	-39	-53	-67	-80
40	27	13	-1	-15	-29	-43	-57	-71	-84
50	26	12	-3	-17	-31	-45	-60	-74	-88
60	25	10	-4	-19	-33	-48	-62	-76	-91

Frostbite times:

30 minutes	10 minutes	5 minutes
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