

Cold-related injuries

In certain circumstances, cold can pose a threat to survival and may also cause injuries, some of which can be irreversible. This must be taken into account, especially when engaging in mountain sports or during cold waves. The main injuries caused by the cold are hypothermia and frostbite.

Factors that contribute to cold injuries include:

- Environmental factors beyond our control: low temperatures, prolonged exposure to cold, presence of wind or ambient humidity.
- Intrinsic personal factors: such as nutritional status or vascular diseases.
- Behavioral factors: not wearing appropriate clothing, immobility, or not being accustomed to cold exposure.

Hypothermia, or low body temperature, occurs when the body loses more heat than it can generate. It initially manifests with shivering, fatigue, slow thinking and movement and frequent urination. As it worsens, the person becomes confused, may fall asleep, or lose consciousness. The skin may become colder and bluish, with a high risk of cardiac arrest.

How to act in case of hypothermia?

If the person is **conscious**:

- Remove wet clothing, dress them in dry **clothes** and place them in a sheltered and enclosed area.
- **Gradually warm** the room, provide warm and sugary drinks and avoid alcohol.
- Place them in a preheated bed.
- **Prevent them from walking.**

If the person is **unconscious**, call emergency services (**112**), remove wet clothing and cover them.

If unconscious and not breathing, call emergency services (112) and begin **resuscitation maneuvers** if trained to do so.

Frostbite affects a part of the body, especially in persistent temperatures below 0°C or through constant contact with a frozen object. It damages the skin similarly to burns and, like burns, comes in different degrees. It primarily affects the most exposed parts, generally those farthest from the body's center, such as fingers, nose, chin, ears, or cheeks.

In **superficial frostbite**, the skin appears whiter and the individual feels tingling and pain, but soft and flexible tissue can be felt beneath the skin. In these cases, if protected with **warm clothing**, frostbite can recover.

In **deep frostbite**, the skin is white or bluish and hardened. The individual feels no pain. Tissues do not slide; they are rigid. This type of frostbite is severe, and it is **necessary to**:

- Seek treatment at a hospital or healthcare center.
- Avoid rubbing the frozen area.
- Loosen tight clothing.
- Avoid alcohol and tobacco.
- Assess whether hypothermia is also present.

Prevention is crucial. It is necessary to avoid contributing factors

Stay active and eat calorically dense foods.

● When going to an area at risk of freezing temperatures, wear appropriate, waterproof **clothing** that fits snugly and is insulated. If possible, bring a thermal blanket.

● **Cover** the entire body surface, including the head, hands, and feet. If available, wear gloves, mittens, a cap and a scarf or balaclava.

● Avoid **tight clothing** that hinders circulation.

● If there is a risk of falling into cold water, wear completely waterproof and insulating clothing.

