



# EXTREME COLD EXPOSURE

## Hypothermia, Frostnip, and Frostbite



**Hypothermia:** Abnormally low body temperature

**Frostnip:** Skin irritation from cold exposure

**Frostbite:** Injury to the body tissues caused by freezing

### Signs and Symptoms:

- *Hypothermia:* cold all over, mental impairment, sluggish, shivering
- *Frostnip:* skin feels burning, numbness, tingling, itching or cold sensations
- *Frostbite:* skin can feel painful, numb, or hard; can look waxy and change colors (white, gray, purple, black), can develop swelling or fluid filled blisters.

### What is the cause of frostbite?

Your body tissues get so cold that **ice crystals form inside your cells**. This impairs normal cell functions. Without prompt treatment there can be permanent damage.

### Prevent hypothermia and frostbite by keeping warm!

- Areas at high risk for frostbite are **ears, nose, cheeks, chin, fingers, and toes**. So, wear warm thick **socks, mittens, hat, and a scarf or mask**.
- Use water and wind resistant coats and boots
- Wear inner layers that are loose-fitting and that hold heat well (wool, silk, or polypropylene) with sleeves that are snug at the wrist
- Most important, **stay dry** as wet or sweaty clothing chills the body rapidly.
- **Shivering** is the first sign of heat loss, and means it is time to go indoors.

### How to treat cold exposure:

- **Do not rub** areas of frostbite, and do not break any blisters.
- **Go inside a warm room and change into warm, dry clothes.**
- Immerse chilled body parts in **warm (not hot) water for 20-30 minutes until all sensation returns.**
- Do not use dry heat—such as a fireplace, oven, or heating pad—to thaw frostbite. Numb areas would be at **risk for burns**.
- Place the affected area next to a warm part of your body, for example your armpit.
- You may take **ibuprofen** for pain according to the package directions *if you are not allergic to the medication.*
- **Seek health care for frostbite symptoms as soon as possible.** A healthcare provider must be able to see and feel the affected area.

### When to call UHS or seek medical care:

- You experience mental impairment and sluggishness after extreme cold exposure. This is a sign of hypothermia
- You suspect you have frostbite.



Check out more details from the Mayo Clinic:



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