

# FROSTBITE

## Frostbite at High Elevations

and windchill can cause frostbite. The energy expended in climbing, the lack of good food, smoking, and alcohol will increase a person's vulnerability to frostbite.

## Frostbite Symptoms

Lack of sensation on exposed skin or body parts as the face, fingers, toes, and ears.

White patches occur on exposed skin which become hard and rubbery to the touch.

## To Combat Potential Frostbite

Take adequate vitamins especially the B complex group and vitamin C.

The best way to protect yourself against frostbite is by...

knowing how to dress well for the weather that will be encountered.

Protection is required against cold and the wind chill factor of the blowing wind.

## Treatment for Frostbite

Do not touch the frozen area and let it thaw out with the heat within your body.

Thawing skin is very painful as in some areas the cell walls under the skin

can be damaged.

Frozen areas can become black and blue as blood collects under the

skin's surface.

The pain is a strong tingling sensation.

On no account attempt warming by exercise, massage or rubbing the skin.

## Important

Be very careful if you are pulling a child in a sled. The child is not moving so the body

does not generate much heat. The child could freeze without you knowing it.

## FROSTBITE

Frostbite is a condition in which the skin, and sometimes deeper tissues, actually become frozen. Common areas of frostbite are the nose, cheeks, ears, fingers, and toes. Frostbite is similar to a skin burn.

### Signs of Frostbite

The area initially might have a painful pin-prick sensation and then become cold, hard, and numb. The freezing can occur quite suddenly especially if it is windy and the skin exposed.

Splotches of opaque pale and yellowish-white areas appear on the exposed skin. These areas gradually get hard and freeze. If they are not covered and warmed they will spread. Check the extremities as the ears, tips of fingers, nose, toes and cheeks. The defensive measure of the body getting cold is to withdraw blood from its extremities, to keep the vital organs warm, which will let the extremities freeze. *Touch the exposed areas and if there is no feeling immediately enter a warm area or if not possible cover the frozen skin so that it can gradually thaw out.* If traveling alone, check your face in a mirror and watch for white yellow splotches on your skin. Frozen skin remains unchanged until it thaws when it becomes inflamed. The damage depends upon the degree of freezing. Do not touch the frozen area and let it thaw out from the heat within your body. The highest risk of frostbite is when you do not realize the windchill factor is very high so that *the actual temperature is much lower due to the wind.*

### How to Avoid Frostbite

Know the temperature, the windchill factor, and wear the correct clothing before going out. Leave no skin exposed. Wear mitts and not gloves, balaklava with a face cover, boots that are well insulated and not too tight. Watch for any discoloration of the skin on yourself and your fellow travelers.

### First Aid

See a doctor.

Enter a warm area and take a warm (not hot) bath. If a bath is not possible wrap the victim in a warm blanket and place his hands in his armpits.

- All tight clothing, including boots and socks, should be removed. Clothing frozen onto the body should be thawed by immersion in warm water. *Avoid damaging the frozen skin.*
- Frostbitten parts should be warmed by immersion in warm water (temperature 100°F, 37.8°C). If warm water is not readily available exposure the body to warm air. Do not, expose skin directly to an open fire. *Do not massage frozen area, rub the skin, or apply snow to the skin.*
- Give hot drinks or soup. Do not give any alcohol.
- Do not prick or break blisters. Do not aggressively move the injured extremities or limbs.

# TRENCH FOOT

Trench Foot is called "Trench Foot" because this condition was a common occurrence during the first World War. Combatants on both sides of the conflict, had and fought in wet trenches for months on end.

### Cause

Wet/damp feet (socks and boots) for several hours or days with the temperature being below 50°F (10°C).

### Signs of Trench Foot

Long immersion in water can be painful. The long term problem is that the body adapts to the pain. The condition getting worse without being noticed or treated. In half an hour the exposed part becomes red and numb and it is difficult to move the toes or fingers. Within three hours the limb is slightly swollen. The swelling will increase especially if the limb is hanging down. If the immersion ends and the limbs can be warmed and dried this initial damage will quickly disappear. If the exposure to humidity and cold lasts several days swelling of ankles, wrists, and feet will occur. There will also be blisters or dark patches and the skin will crack.

### First Aid

Remove clothing and keep the victim warm and dry. *Get medical help.*

legs, arms or hands immersed for hours in cold wet boots or mud, at temperatures below 50°F (10°C), the nerves, blood vessels, and skin will be damaged. Trench foot injuries can occur at any point on the windchill chart and is more likely to occur than frostbite especially on extended travel in a wet environment. The longer you stay, the colder the temperature, the more damage to the tissue. North of latitude 40° the Atlantic and Pacific waters are cold enough to cause injuries in winter and summer months.