



ICAR

REC M 0015 E

International Commission for Alpine Rescue

Commission for Mountain Emergency Medicine

**Recommendation REC M 0015 of the Commission for Mountain
Emergency Medicine**

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On Site Treatment of Frostbite for Mountaineers

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Intended for mountaineers

Definition

Frostbite is a localised cold injury. It may be superficial or deep. It may lead to amputation of the frozen part.

Predisposing factors Dehydration/Exhaustion/Lack of Fitness
Poor Insulation/humidity/windchill
Immobilisation
Injuries e.g. Fractures
High altitude
Previous Frostbite
Restriction of Circulation by Equipment e.g.Harness, tight boots, watch, rings.
Pre-existing illness e.g.diabetes, Raynaud's syndrome
Alcohol/ Nicotine/ Drugs

Prevention: Frostbite is preventable, by avoiding the predisposing factors. In particular, Boots and Gloves should be good, windproof and not too tight

Recovery of sensation after 10 mins rewarming may indicate superficial frostbite, with a good prognosis but indicates that prevention has failed.

Recurrence is likely unless prevention is improved

Symptoms/Signs: ?? White pale issue with numbness
?? Increasing loss of sensation without pain

Emergency Treatment

1. In the Open with possible onset of frostbite

- Move out of the wind/Consider turning back/Drink fluids (Warm if possible)
- Remove boots - but consider may be problems with replacement if swelling occurs
- Remove socks/gloves if wet. Change for dry
- Warm by placing foot/hand in companion's armpit/groin **for 10 minutes only**
- Replace boots
- Give one aspirin or ibuprofen to improve circulation (if available and not contra-indicated)
- Don't rub affected part - may cause tissue damage.
- Don't apply direct heat

If sensation returns

-can continue to walk

If no return of sensation

- go to nearest warm shelter (hut/base camp)

- seek medical treatment.

At High Altitude:

Give Oxygen, if available

2. Base Camp, Mountain Hut or other Stable Sheltered Situation

Remove boots / change wet clothing for dry / remove rings from fingers

Warm fluids to drink (+/- alcohol)

Aspirin 500 - 1000mg or ibuprofen 400 - 800mg for pain relief and to improve circulation

Rapid Rewarming:

- Never use Dry Heat / Never rub
- Immerse part in warm water (with disinfecting agent if available) at 37°C.
(="baby bath" temperature, check with elbow)
- Add further hot water to maintain temperature
- Warm the affected part to the same temperature as the rest of the body, or till colour returns (Approx. 1 hr for foot)
- Dry, then carefully apply loose bandaging-sterile if possible.Elevate

Casualty cannot walk out after rewarming of feet- transport is mandatory

The procedure causes large blisters. Do not burst them.

REMEMBER:

DO NOT: RUB WITH SNOW OR OTHER MATERIAL

DO NOT: REWARM ONE PART IF THE CASUALTY HAS HYPOTHERMIA

DO NOT: START REWARMING IF THERE IS A POSSIBILITY OF REFREEZING

**DO : GET MEDICAL HELP AS SOON AS POSSIBLE-
IF CIRCULATION OF THE FROZEN PART IS NOT RESTORED
WITHIN 48 HOURS, LOSS OF THE FROZEN PART IS POSSIBLE**