

FROSTBITE

"What good is the warmth of summer, without the cold of winter to give it sweetness." -John Steinbeck

Frostbite - Basics

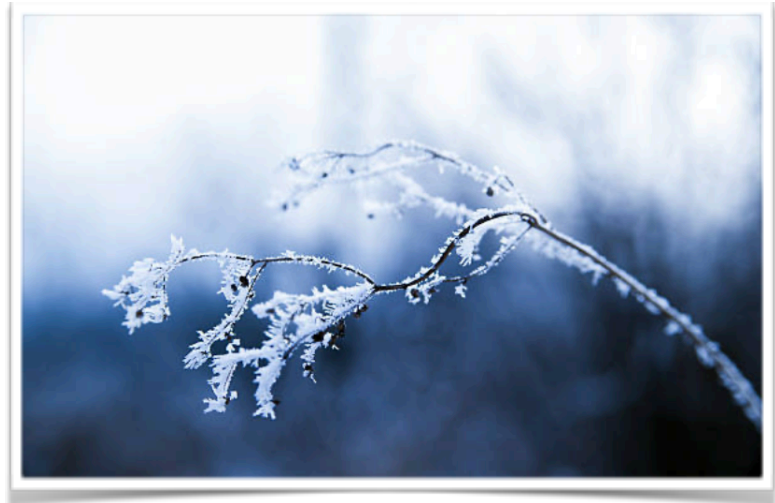
- Cold-related injury characterized by the freezing of tissue

Risk factors for developing frostbite

- Mountaineering, cold weather sports, homelessness, unexpected exposure due to becoming lost or injured
- Chronic medical conditions (e.g. diabetes, cardiovascular disease, peripheral vascular disease), use of certain medications (e.g. beta-blockers, sedatives)

Progressive symptoms of frostbitten areas

- Coldness → stinging, burning and throbbing →
- numbness → complete loss of sensation →
- loss of fine muscle dexterity (i.e. clumsiness of fingers) → loss of large muscle dexterity (i.e. difficulty ambulating)



Prehospital management of frostbite

- Move patient to a warm, dry area. Remove wet clothing and jewelry, and replace with dry clothing and/or blankets to minimize further heat loss. Avoid rubbing the area which may cause further trauma and exacerbate the injury.
- If there is a danger of refreezing of the affected area, once warmed, do not attempt rewarming. This point cannot be overemphasized! That is, it is better to walk with frozen feet to shelter than to attempt rewarming at the scene.
- Initiate rewarming if refreezing is not a concern and care facility is more than 2 hours away. **Avoid heat packs, heaters, and fire** as they pose a significant risk for thermal injury.
- If possible, submerge affected skin in warm water 37-39°C (98.6-102.2° F). Allow the water to swirl around the extremity to maintain proper temperature. After rewarming, apply aloe vera ointment. Wrap extremity in a bulky dressing or blanket for mechanical protection during transport. Consider oral hydration and ibuprofen. Avoid alcohol and sedatives.