Fact Sheet: Frostbite

Frostbite is the term for tissue death associated with prolonged exposure to cold temperatures. Severe frostbite can cause so much tissue damage that amputation of extremities is necessary.

**Symptoms**

- Skin turning red
- Stinging
- Numbness
- White blotches on skin

**Severe Symptoms**

- Loss of joint function
- Black hardened tissue
- Complete numbness
- Blood filled blisters

**Prevention**

- Frostbite is best avoided by maintaining appropriate clothing and shelter.
- Limit time exposed to cold, wet, and/or windy weather.
- Wear insulating clothing. Remember the phrase “Cotton Kills!” as clothing made from cotton does not provide insulation when wet, and can exacerbate cooling.
- Stay well hydrated and well fed.
- Replace wet clothing with dry as soon as possible.
- Avoid tight clothing.
- Pay special attention to protecting hands, feet, face, and ears.
- Never ignore numbness in cold weather.

**First Aid Treatment**

- Treatment is to warm up, if and only if, re-freezing will not occur, as re-freezing can cause more damage.
- Do not massage or rub the affected area, as this may mobilize ice crystals and do more damage.
- Warm the patient by moving the person to a warm area and by wrapping in blankets.
- After thawing, moderate frostbite may produce fluid filled blisters. After thawing severe frostbite, tissue turns black and hardens.
- Seek medical attention for severe symptoms.

**References and Additional Resources**

- Mayo Clinic [Frostbite](#)
- Adapted from *Frostbite Fact Sheet*, by University of Maryland: Department of Environmental Safety, Sustainability & Risk [https://essr.umd.edu/documents/fact-sheets](https://essr.umd.edu/documents/fact-sheets) with permission.