

## Frostbite Fact Sheet

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](#)

*Illness, injury and close call events shall be reported by submitting an [SU-17](#).*

If you have questions or need support, contact EH&S's Field Safety Program at [ehs\\_field\\_safety\\_support@lists.stanford.edu](mailto:ehs_field_safety_support@lists.stanford.edu).

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