	Department Name Address	ALS	Paramedic
		Revision #	
		Implementation Date	
Protocol	2.1.28 Frostbite	Last Reviewed/Update Date	
Author / Owner		Medical Director	

Frostbite can occur in three levels of severity:

- A. First degree: Presents itself as numbed skin that may turn white in color and waxy in appearance. The skin may feel stiff to the touch, but the tissue under is still warm and soft.
- B. Second degree: The skin will be white or blue and will feel hard and frozen. Blistering and edema are likely. Second degree frostbite is a serious medical condition.
- C. Third degree: The skin is white, blotchy, and/or blue. The tissue underneath is hard and cold to the touch. The tissue underneath has been damaged and blistering is inevitable.
- 1. Baseline care standards.
- 2. Remove patient from cold environment.
- 3. Check core temperature.
  - If core temperature is < 35° C, refer to Hypothermia protocol.
- 4. Protect from further heat loss.
- 5. Place patient in warm, dry place.
- 6. Remove wet clothing. Dry patient and cover with dry linen.
- 7. Administer  $O_2$  15L per minute via non-rebreather mask. Use warmed humidified  $O_2$  if available.
- 8. Remove jewelry, gloves, shoes, and other restrictive objects.
- 9. Attend to injured areas:
  - Protect from pressure, trauma, and friction.
  - Do not rub or massage.
  - Do not allow limb to thaw if there is a chance it will refreeze.
  - Do not allow patient to ambulate once the limb has started to thaw.
  - Consider warming in warm water, monitoring water to make sure temp stays constant.

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- Continue until distal tip of injured extremity flushes.
- Dry and wrap affected area with dry sterile dressings.
- 10. DO NOT rapidly rewarm.
- 11. Use a pulse oximeter probe to detect peripheral perfusion in affected tissues.
- 12. Establish IV access in unaffected limb.
- 13. For pain control, administer:
  - *Morphine Sulfate 2 4 mg IV.* Repeat PRN.
- 14. Transport to nearest appropriate hospital.

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Medical Director's Signature		Date

## Disclaimer:

The protocols have been developed by the North Dakota Department of Health are meant to be used as general guidance for developing protocols for individual emergency medical services agencies. These sample protocols are not meant to be medical or legal advice; nor do they establish standards of care. Each emergency medical services agency must tailor protocols based on their specific needs or capabilities. Local medical directors must be consulted with and approve any protocol(s) prior to becoming operational in an emergency medical services agency, directors must be consulted with and approve any protocol(s) prior to becoming operational in an emergency medical services agency. The North Dakota Department of Health make no representation on the accuracy of information contained herein and accepts no liability for any loss or damage arising from any content error or omission.