



BSA SAFETY MOMENT

FROSTBITE

SUMMARY

Serious injuries can occur when it's cold and you spend time working, playing, or sleeping outside, particularly if you are wet or your clothes are wet or too tight. Scouts should be instructed to inform an adult as soon as possible if they are at an event, winter camp, or troop campout and start experiencing any of the symptoms in this Safety Moment.

GENERAL INFORMATION

There are four degrees of severity from the cold, ranging from frost nip to frostbite. The extent of the injury will depend on the individual's length of exposure, outside temperature, wind chill, and how the exposure is treated. Listed below from the University of Utah Health Burn Center* are frostbite severities and descriptions of the identification and severity of injury, characteristics, prevention, and treatment guidelines.

Identification

- First-degree frost nip (superficial)—Limited damage to skin, may be painful with no immediate blistering. Wounds will look like a central white area surrounded by pink skin, followed by mild swelling. Immediately remove yourself or someone with these symptoms from the cold and change clothing if needed. Soak the affected area in warm water or use body heat to provide warmth.
- Second-degree frostbite (superficial)—This degree affects both the top layer of your skin and slightly deeper into your tissue. Signs are pink and moist tissue present beneath clear blisters, usually surrounded by redness and swelling. Be sure not to rub the affected area because friction may cause more damage to your skin. Take care not to damage the blisters because they are protecting the tissue underneath. Rewarming must begin immediately followed by professional medical care.
- Third- or fourth-degree frostbite (deep)—These degrees of frostbite are dangerous and can lead to damage in muscles, tendons, and bones (fourth degree). Skin feels frozen and hard and appears red, purple, or even black. If left untreated, a development of thick, black, dead tissue over one to two weeks will follow. Rewarming in this condition will induce critical pain.

Prevention and Treatment

- Be prepared: Pack warm clothes and change them frequently, or as needed. At the first signs of redness or pain in any skin area, get out of the cold or protect any exposed skin—frostbite may be beginning.
- Act quickly: Frostbite treatment needs to be addressed immediately. The most dangerous situations may occur hours away from a medical professional's help. The first line of treatment is wearing appropriate clothing. Finding shelter to get out of the elements is necessary as well. Eating can also aid in elevating body temperature.
- Prevention is key: Layering clothing, socks, gloves, scarves, and hats will help prevent frostbite, while removing layers can help to prevent excess sweating. Change clothing immediately if it becomes wet, including any base layers due to perspiration. Your base layer of clothing should fit loosely enough to allow full blood flow, which is necessary for warmth, and the air space between layers of clothing provides additional insulation against the elements such as cotton and wool material.
- If anyone experiences or displays any symptoms of second-, third-, or fourth-degree frostbite, go to the nearest health-care facility immediately. For optimum results, injuries should be examined by a doctor as soon as possible.

RESOURCES

- State of Alaska—Cold Injuries Guidelines: <http://dhss.alaska.gov/dph/Emergency/Documents/ems/documents/Alaska%20DHSS%20EMS%20Cold%20Injuries%20Guidelines%20June%202014.pdf>
- University of Utah Health—Frostbite Treatment: <https://healthcare.utah.edu/burncenter/frostbite.php>
- Centers for Disease Control and Prevention—Frostbite: <https://www.cdc.gov/disasters/winter/staysafe/frostbite.html>
- ThoughtCo.—Cold-Weather Survival: Clothing: www.thoughtco.com/cold-weather-survival-clothing-3157434

* This frostbite Safety Moment was created in partnership with the University of Utah Health Burn Center. For more information on this topic, please contact the center directly (801-581-3050), visit their website—<https://healthcare.utah.edu/burncenter/>—or stop by.