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Frostbite

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Frostbite



University of South Dakota
School of Medicine, Vermillion
and
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Frostbite

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No one is immune from frostbite. It strikes farmers and ranchers, stranded motorists, snowmobilers and ice skaters, hunters and hikers.

When cold winter temperatures are accompanied by high wind, the danger of frostbite becomes much greater. But common sense measures such as remaining indoors as much as possible on bitterly cold days, dressing warmly when you must go out, and staying dry may help keep you from becoming frostbitten.

But if you suspect you have been frostbitten, you can usually prevent serious, permanent injury if you follow the suggestions in this fact sheet.

Degrees of Frostbite

Frostbite ranges in severity from very mild cases that may require almost no treatment to critical instances where the very life of the victim is at stake.

When the skin has simply been "nipped" by the cold, usually it can be warmed easily. For example, if your fingers hurt, they might be warmed by blowing on them through cupped hands. Nipped ears can be warmed by placing warm hands over them.

At the other extreme, a critical frostbite injury can result in loss of limb. Death can even result when the victim has become too cold to shiver and move about in cold weather. At that stage, which develops when the body temperature has fallen to about 93 degrees, the victim must be rapidly rewarmed.

First Aid

Don't ever rub snow on frostbite. Some people still believe the myth that rubbing snow on the injured area is a valid treatment. It is not! Rubbing a frostbitten area with the hands or with snow can do irreparable damage to the skin tissue.

The proper treatment is to rewarm the injured area as quickly as

possible. This should be done by submersing the frozen tissue in water heated to 104-108 degrees Fahrenheit. Water much warmer may burn the skin, and cooler water will delay healing.

The water should be in a container large enough so that the frozen area does not need to rub against the sides. Frozen tissue can easily be bruised or scraped and should not come in contact with anything. A bathtub or large sink usually works well.

The injured area should be warmed in the water until a flush has returned to the skin. This often takes 30 to 40 minutes.

Thawed tissue is very susceptible to infection and injury, so you should be especially careful not to expose the area to freezing cold or to any activity that may result in further damage until healing is complete. The injury should be kept warm and should be handled with extreme gentleness. Even the slightest abrasion must be avoided, and the injury should be soaked in warm water twice daily until the healing is complete. An antiseptic such as betadine may be added to the water to prevent infection.

It may be 2 weeks or longer before the area is completely healed, depending on the severity of the frostbite.

The Only Exception

The only instance when a frostbite injury should not be rewarmed immediately is when there is a possibility that the injury may be immediately refrozen. For example, if a hunter suffers frostbite, then has an opportunity to light a fire to thaw out his frozen feet, he shouldn't make the effort if he has to leave the warmth and go out into the cold again. He should simply leave his feet frozen.

Refreezing results in still more damaged tissue. Walking on frozen feet to shelter is much less damaging than walking on feet that have been thawed.

Medical Attention

If no flush returns to the skin following the rewarming process, see a doctor immediately.

It is good practice to seek medical attention as soon as possible after any serious frostbite occurs. Experienced observation and treatment could mean the difference between complete recovery and permanent damage.

You should not be concerned that a physician may amputate. Even in the most serious frostbite cases, modern medical procedure is to closely watch the injury for weeks, even months, before amputation is even considered.

Gangrene may develop after frostbite, but it is usually superficial and does not require emergency amputation.

Drinking, Smoking Hurt

Some people while out in the cold resort to drinking alcohol or smoking to stay warmer. Doctors say drinking and smoking may give a temporary feeling of warmth. But in the long run, they probably speed the effect of cold on your body. Alcohol and tobacco slow your blood circulation.

Accordingly, alcohol and tobacco probably speed the development of frostbite. Both should be avoided.

What Hurts First

The ears, nose, cheeks, feet, and hands are the most likely parts of your body to suffer first from the cold. They are the most unprotected.

With that in mind, persons venturing into the cold should be careful to wear ear muffs, gloves, and whatever is necessary to keep their feet warm and dry.

Instant Frostbite

If bare skin is exposed to extremely cold metal or to a liquid that does not freeze, such as petroleum products or automobile anti-freeze, almost instant frostbite can occur.

Children are still tempted to lick the pretty frost off a piece of

metal—in our day it used to be a pumphantle. In any case of contact with cold metal, resist the urge to pull away immediately. Wait until the frost thaws.

Wear gloves whenever you are working outdoors in bitter cold or waterproof gloves when working with liquids.

It Can Be Avoided

Frostbite can be a serious winter tragedy. But with the proper precautions, and proper treatment if

it does develop, South Dakotans should be able to avoid permanent damage from frostbite in most cases.

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