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## PRESS RELEASE

### For More Information:

ELLEN G. DUYSSEN

Central States Center for Agricultural Safety and Health

University of Nebraska Medical Center

College of Public Health, Room 3035

984388 Nebraska Medical Center

Omaha, NE 68198-4388

402.552.3394

### FOR IMMEDIATE RELEASE

*By UNMC, Central States Center for Agricultural  
Safety and Health, Omaha, NE*

### **FROSTBITE: A GENUINE THREAT**

***In less than 30 minutes, frostbite can cause serious, even permanent harm to exposed skin.***

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Anytime skin is exposed to very cold temperatures, there is a risk of frostbite. Most commonly fingers, toes, nose, ears, cheeks and chin are affected when exposed to cold temperatures.

While cold weather is the most common type of exposure, skin that comes in direct contact with ice, frozen metal or very cold liquids may also succumb to frostbite.

However, even skin covered by gloves or other clothing is susceptible to frostbite when exposed to temperatures below 32 degrees (Fahrenheit). Risk of frostbite increases in temperatures below 5 degrees (Fahrenheit). Wind chills of -16.6 (Fahrenheit) can lead to frostbite on exposed skin in less than 30 minutes.

When skin becomes very cold and red, frostbite may occur. If exposure to the cold continues, the skin will become numb, hard and pale. These symptoms indicate that skin and the underlying tissues are freezing. Because skin becomes numb with frostbite, the victim may not realize it's happening.

Less severe forms of frostbite include frostnip and superficial frostbite. Frostnip doesn't result in permanent skin damage and can be treated with basic first-aid, including rewarming the affected skin. As the skin is warmed, tingling and pain may occur.

Superficial frostbite causes skin to redden and turn pale or white. If the skin begins to feel warm, it could indicate serious skin involvement. Treating this level of frostbite with rewarming may cause the skin to appear mottled. Stinging, burning and swelling may occur. Within 12 to 36 hours of rewarming, a fluid-filled blister may occur.

Severe frostbite, as it progresses, affects all layers of the skin, including underlying tissues. When this level of frostbite occurs, skin turns white or bluish-gray. Numbness may occur along with all sensation of cold, pain or discomfort in the affected area. Muscles and/or joints in the affected area may no longer function. With rewarming, large blisters can occur within 24 to 48 hours of rewarming. As the tissue in the affected area dies, the skin will turn black and hard.

Conditions that can lead to frostbite include:

- Wearing clothing unsuitable for protecting skin from cold, windy, wet weather conditions.
- Exposure to cold and wind for an extended period of time.
- Touching elements such as ice, cold packs, frozen metal, etc.

Factors that further increase risk of frostbite include:

- Medical conditions such as dehydration, excessive sweating, exhaustion, diabetes and poor blood flow to limbs. These conditions may hinder the ability to feel or respond to cold.
- Alcohol or drug abuse.
- Smoking.
- Conditions that inhibit sound judgment and ability to respond to overexposure to cold. These include fear, panic, mental illness, etc.
- Previous frostbite or cold injury.
- High altitudes, which reduce oxygen supply to skin.
- Infants or aging adults because each may have difficulty producing and retaining adequate body heat.

Signs and symptoms of frostbite include:

- Cold skin accompanied by a tingling sensation.
- Numbness.
- Skin color that is red, white, bluish-white or grayish-yellow.
- Hard or waxy-looking skin.
- Clumsiness due to joint and muscle stiffness.
- Blistering that occurs after rewarming, a common condition in severe frostbite cases.

Medical assistance is advised if increased pain, swelling, redness or discharge occurs in an area where frostbite occurred. Other signs that medical attention is necessary include fever and/or new or unexplained symptoms.

In the interim, before medical help arrives, appropriate self-care measures include:

- Protect the area from further exposure to cold.
- Avoid walking on frostbitten feet.
- Reduce pain with Ibuprofen.

Once frostbite occurs, other complications may arise. These include:

- Increased sensitivity to cold.
- Increased risk of recurring frostbite.
- Long-term numbness in the affected area.

- Excessive sweating.
- Skin color changes.
- Loss of or changes in fingernails/toenails.
- Joint stiffness or frostbite arthritis.
- Infection.
- Tetanus.
- Decay and death of tissue due to interruption of blood flow to the frostbitten area. This condition – gangrene – could lead to amputation.
- Hypothermia, which may be indicated by intense shivering, slurred speech, drowsiness and loss of coordination.

Staying warm and safe in cold weather conditions can be accomplished with some simple steps.

- Dress appropriately for weather conditions. This includes use of several layers of loose, warm clothing. When air is trapped between layers of clothing, it acts as insulation against cold temperatures. Undergarments that wick moisture away from the skin help skin stay dry. Windproof and waterproof outer garments protect against wind, snow and rain. If clothing becomes wet – especially gloves, hats and socks – change them as soon as possible.
- Wear a hat or headband that fully covers the ears. The most protective headwear materials include woolen or windproof fabric.
- Wear mittens rather than gloves because mittens better protect the hands. A thin pair of glove liners made of wicking fabric (such as polypropylene) may be worn under a pair of heavier gloves or mittens.
- Socks and sock liners should be made of wicking materials and fit well. Hand and foot warmers may also be effective in protecting against cold. Avoid socks or foot warmers that cause boots to fit tightly as this restricts blood flow.
- Eat well-balanced meals and stay hydrated prior to spending time outdoors. These practices assist in staying warm.
- Never drink alcohol before spending time in cold weather. Alcoholic beverages expedite cause the loss of body heat.
- Limit the time spent in cold, wet or windy weather. Be alert to changing weather conditions and forecasts and stay aware of wind chill readings. In very cold and windy weather conditions, frostbite may occur in a matter of minutes.
- Pay attention to signs of frostbite that include red or pale skin, prickling sensation in skin and numbness. If frostbite is suspected, seek warm shelter.
- When traveling during cold weather, maintain a stash of emergency supplies and clothing for unexpected events that may result in being stranded. Make others aware of travel plans and routes, including the projected return date.
- When stranded in cold weather, maintain physical movement, but don't do it to the point of exhaustion.

Source: *Mayo Clinic: Frostbite*

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