Cold-Related Emergencies

- Frostbite
- Hypothermia

Frostbite

What is it?

> When skin and underlying tissues freeze after being exposed to very cold temperatures.

The areas most likely to be affected are the fingertips, toes, earlobes, cheeks, chin and tip of the nose.

Signs/Symptoms:

- Cold skin with a prickly feeling
- Numbness
- Skin that looks red, white, bluish-white, grayish-yellow, purplish, brown or ashen
- Hard or waxy-looking skin
- Clumsiness due to joint and muscle stiffness
- Blistering after rewarming (severe cases)

3 Stages of Frostbite:

Step 1: Frostnip

- A mild form of frostbite

- Continued coldness leads to numbness in affected areas
- As your skin warms, you may feel pain or tingling
- Does not cause permanent damage

Step 2: Superficial Frostbite

- Slight changes in skin color
- Skin may begin to feel warm - a sign of serious skin involvement
- As your skin warms, you may feel stinging, burning, and swelling
- Fluid-filled blister(s) may appear 12 to 36 hours after rewarming the skin

Step 3: Deep (Severe) Frostbite

- Skin turns white or blue-gray
- Loss of all sensation of cold, pain, or discomfort in the area
- Joints or muscles may stop working
- Large blisters form 24 to 48 hours after rewarming
- The tissue turns black and hard as it dies

Plan of Action:

You can treat mild frostbite (frostnip) yourself. All other frostbite requires medical attention. First-aid steps for frostbite are as follows:

- **Check for hypothermia.** Get emergency medical help if you suspect hypothermia. Signs of hypothermia include intense shivering, drowsiness, confusion, fumbling hands and slurred speech.

- **Protect your skin from further damage.** If there's any chance the affected areas will freeze again, don't thaw them. If they're already thawed, wrap them up so that they don't refreeze.

  If you're outside, warm frostbitten hands by tucking them into your armpits. Protect your face, nose or ears by covering the area with dry, gloved hands. Don't rub the affected skin with snow or anything else. And don't walk on frostbitten feet or toes if possible.

- **Get out of the cold.** Once you're in a warm space, remove wet clothes and wrap up in a warm blanket.

- **Gently rewarm frostbitten areas.** Soak frostbitten fingers, toes or other extremities in warm water — 105 to 110 F (about 40 to 43 C). If a thermometer isn't available, test the water by placing an uninjured hand or elbow in it — it should feel very warm, not hot. Soak for 20 to 30 minutes or until the skin becomes its normal color or loses its numbness. For the face or ears, apply a warm, wet washcloth.

  Don't rewarm frostbitten skin with direct heat, such as a stove, heat lamp, fireplace or heating pad. This can cause burns.

- **Drink warm liquids.** Tea, coffee, hot chocolate or soup can help warm you from the inside. Don't drink alcohol.

- **Consider pain medicine.** If you're in pain, consider an over-the-counter pain reliever.

- **Know what to expect as skin thaws.** You'll feel tingling and burning as the skin warms and normal blood flow returns. Take care to not break any blisters that may form on the affected skin. Seek medical help for anything more serious than mild frostbite.

Hypothermia

What is it?

> Occurs when your body loses heat faster than it can produce heat and your body temperature falls below 95 F (35 C).

Hypothermia is often caused by exposure to cold weather or immersion in a cold body of water. It can also be caused by ongoing exposure to indoor temperatures below 50 F (10 C). You could be at increased risk if you're also exhausted or dehydrated.

Symptoms:

Signs and symptoms of hypothermia usually develop slowly and may include:

- Shivering, though this may stop as body temperature drops
- Slurred speech or mumbling
- Slow, shallow breathing
- Weak pulse
- Clumsiness or lack of coordination
- Drowsiness or very low energy
- Confusion or memory loss

- Loss of consciousness
- Bright red, cold skin (in infants)

Plan of Action:

> If you suspect someone has hypothermia, **call 911 or your local emergency number.**

Then immediately take these steps:

- Gently move the person out of the cold. If going indoors isn't possible, protect the person from the wind, especially around the neck and head. Insulate the individual from the cold ground.
- Gently remove wet clothing. Replace wet things with warm, dry coats or blankets.
- If further warming is needed, do so gradually. For example, apply warm, dry compresses to the center of the body — neck, chest and groin. The CDC says another option is using an electric blanket, if available. If you use hot water bottles or a chemical hot pack, first wrap it in a towel before applying.
- Offer the person warm, sweet, nonalcoholic drinks.
- Begin CPR if the person shows no signs of life, such as breathing, coughing or movement.

Caution:

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Do not rewarm the person too quickly, such as with a heatinglamp or hot bath.

Don't attempt to warm the arms and legs. Heating or massaging the limbs of someone in this condition can stress the heart and lungs.

Don't give the person alcohol or cigarettes. Alcohol hinders the rewarming process, and tobacco products interfere with circulation that is needed for rewarming.