

The cold, hard truth about surviving bitter winter weather

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Doctors offer practical advice for dealing with record-breaking temperatures.

(HealthDay)—The record-shattering cold weather that's gripping much of the United States can pose extreme health risks, doctors warned Monday.

"It's best to limit your outdoor activity as much as possible, since prolonged exposure can lead to [frostbite](#) and hypothermia," said Dr. John Marshall, chair of emergency medicine at Maimonides Medical Center in New York City. "Both of these conditions can become serious, and even life-threatening if untreated."

The extreme cold, which meteorologists blamed on a "polar vortex," extended from Montana to Alabama on Monday afternoon and was

expected to slam into the East Coast Monday night. Wind-chill readings were projected to be minus 55 Monday night in International Falls, Minn., before "rebounding" to minus 25 to minus 35 on Tuesday. A bit farther south, the wind chill was expected to hit negative 50 in Chicago and minus 35 in Detroit, the *Associated Press* reported.

When temperatures drop that low, there are many simple safeguards you can take to prevent severe injury, Marshall said.

They include:

- **Dress warmly.** Layering your clothing will provide the best insulation and retain body heat. Wearing a non-permeable outer layer will minimize the effects of strong winds.
- **Protect your extremities.** Hands and feet are at greater risk of frostbite because body heat is naturally reserved in the torso to protect vital organs. So wear an extra pair of socks, and choose mittens instead of gloves because fingers stay warmer when next to each other.
- **Wear a hat.** You lose about 30 percent of your body's heat from your head. Particularly good are hats that cover the ears and nose.
- **Wear properly fitted winter boots.** Boots that are too tight can limit or cut off circulation to the feet and toes. Also, choose a boot that's insulated and has treads on the bottom because treads provide traction on ice and snow.
- **Stay hydrated.** The body uses a lot of energy to keep itself warm. Drinking plenty of fluids is important because your body will need frequent replenishing when fighting off the cold.
- **Get out of wet clothing as soon as possible.**

When you're out in the cold, the part of your skin that's exposed will chill rapidly, experts say. This can lead to decreased blood flow and your body temperature can drop, leaving you susceptible to frostbite and

hypothermia.

According to Marshall, frostbite "starts with tingling or stinging sensations. The face, fingers, and toes are the first body parts to be affected. Then muscles and other tissues can become numb." Additional signs of frostbite include redness and pain in the skin. This can lead to discolored and numb skin, he said.

Hypothermia, which often goes hand-in-hand with frostbite, can affect the brain, making it harder to think clearly and make smart decisions. Warning signs of hypothermia include shivering, confusion, slurred speech and drowsiness, Marshall said.

"If any of these symptoms become noticeable, you should protect the exposed skin, get to a warm place and seek immediate medical treatment," he said.

Some people are especially vulnerable to the dangers of [cold weather](#). They include the elderly, those with diabetes, heart, or circulatory problems, and people who use alcohol, caffeine or other drugs that inhibit the body's ability to protect itself against the cold.

Dr. Robert Glatter, an [emergency medicine](#) physician at Lenox Hill Hospital in New York City, said there are several key factors that determine how long people can endure extremely cold temperatures. Those factors are wind speed, how well a person is dressed, and if their skin is wet or moist.

Shoveling snow or working in extremely cold temperatures can be dangerous because sweat decreases the ability of clothes to provide needed insulation.

Dressing in layers may help. Use the "three-layers guideline" to provide

more effective insulation. The first layer helps to drain moisture or sweat. The second layer serves as insulation, while a third sturdy outer layer can help to block out the cold, Glatter said.

If you think you or another person is suffering from frostbite, get to a health-care professional as fast as possible or call 911. If you can't get immediate medical help for at least two hours, re-warm the affected area with warm water—but it shouldn't be boiling or excessively hot. And drink warm, non-alcoholic fluids, Glatter said.

Cindy Lord is director of the physician assistant program at the Frank H. Netter MD School of Medicine at Quinnipiac University in Hamden, Conn. She likes to use the acronym C.O.L.D. when advising people on dealing with the cold.

- **Cover up:** Wear a hat or other protective covering to prevent body heat loss from your head, face and neck.
- **Overexertion:** Avoid activities that cause you to sweat a lot. This can cause you to lose body heat more quickly.
- **Layers:** Dress in layers. Wear loose-fitting, layered, lightweight clothing. Wool, silk or polypropylene inner layers hold [body heat](#) better than cotton.
- **Dry:** Stay as dry as possible. Get out of wet clothing as soon as possible. Keep your hands and feet dry.

More information: For more on protecting yourself in the cold, visit the [U.S. Centers for Disease Control and Prevention](#).

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