



# winter safety

by Diane M. Calabrese

**B**usinesses built on outdoor work can move safely across the months of snow, ice, and cold by shutting down until spring. Or, they can continue working when conditions permit, while taking appropriate precautions.

The overarching safety challenge in winter is the same as that in any season: complacency must be avoided. An alert, well-informed worker is a safe worker.

January and February are challenging months, says James Young, managing director of H2Overhaul, LLC, Savage, MN. "This region can see temperatures below zero for days," he explains. "Add a little wind and you have unbearable situations. You must protect every exposed part of your body."

But taking a sustained winter break is not an option. "Unless it's a blizzard, or heavy snowfall, life goes on in the Midwest," says Young. "Nothing stops us from working up in these parts."

There is no doubt that "winter safety is far more of a challenge" than summer safety, says Young. "From driving in adverse conditions to frostbite, one has to be careful and pay attention to avoid any potential damage to oneself whether at work or play."

Sometimes a pause must be taken. "Really it's those blizzard days that make it impossible to work," says Geof White, president, Valley Window Cleaning, Inc., Appleton WI. "The really cold days can be dealt with, but when it's a blizzard outside, the customer always understands that you have to reschedule."

Rational response to winter derives from solid business strategy. Winter can slow down a business that works outdoors, but the idea is to maximize jobs across suitable days. "We are in this business for a decent profit—at least I am anyway," says White.

As such, explains White, "dealing with winter safety issues is just a part of doing business and the smartest way to deal with it is through scheduling. Leave your schedule loose so you can juggle jobs around. For example, don't go on a day of laddering on really cold windy days—stay on the ground those days."

Also, use the natural heat that exists, says White. "When you clean windows at a home do the insides first in the morning, so that it is just a few degrees warmer when you get to the outsides. Use the sun to your



advantage in the winter and chase the shade in the summer.”

#### **Warnings and Responses**

Winter puts workers at risk for the well-known conditions of hypothermia and frostbite, as well as other physical problems. Hypothermia describes an outcome in which the body loses the ability to maintain its normal constant temperature of 98.6 F. As body temperature drops, the brain begins to function poorly, so the descent to hypothermia is accelerated by muddled thinking in the early stage.

It’s important that workers look out for one another. That helps them recognize the early symptoms of hypothermia so that they can thwart it. Regular breaks in dry, warm shelters or vans are important. So are warm drinks.

As winter begins, especially if it starts abruptly, a non-adjusted worker is at greater risk from cold. The change of season and the advent of winter can throw off the biological clock. Until the internal mechanism resets, special care is needed. “The first extreme days of cold are hard,” Young says. “Once the body acclimates to the cold, it seems to get a little easier to manage.”

Combating hypothermia and frostbite starts with proper clothing. “Dressing appropriately is key in staying warm,” says Young. “Usually in layers is the smart way.”

Extra clothing demands a period of adjustment, too. “Wearing all the heavy clothes can also limit movement, which can be unsafe if you are climbing any type of ladder,” says White. Even the lightest, most flexible and most protective clothing constrains.

And do not forget the peril of ice. “Slipping and falling on ice, along with frostbite,” are probably the greatest risks of winter work, says Young. “I can handle cold just fine, but ground conditions cause the biggest problems,” says White. “You can’t set a ladder on ice.” And then there is the path to the work site. “A lot of times your customers do not shovel up to each window, so you are constantly walking through snow banks and ice covered snow.”

The Centers for Disease Control and Prevention (CDC) sums up its advice on ice in two words: Avoid it. Good advice, indeed, but not one hundred percent practical, especially when the ice is not visible or icing conditions come on suddenly.

No one wants to see the symptoms of a cold-related condition. But it’s

important to know what they are and to counter them immediately. Shivering, fatigue, loss of coordination, confusion and disorientation signal the beginning of hypothermia, while blue skin, dilated pupils, sluggish pulse and breathing, and a loss of consciousness indicate hypothermia in a late stage. Obviously, recognizing and reversing hypothermia in the early stage is a crucial part of working safely.

Severe hypothermia can lead to cardiac arrest. But it is not the only serious danger winter workers confront. Frostbite occurs when body tissue actually freezes. Unfortunately, it can lead to permanent damage that requires amputation. Improper dress, such as failure to protect hands and head, is a huge contributor to frostbite. But impaired circulation (because of prescription drugs or health issues such as diabetes) increases the risk of frostbite.

At the first sign of numb skin or a stinging or tingling feeling in skin, a person should get in from the cold to a warm room. Affected areas can

be immersed in warm water, but they should not be rubbed or heated with a pad.

#### Staying Alert

Wind boosts the power of cold on the body. So speaking of wind chill factor is not just a way for meteorologists to spice up their forecasts; the phenomenon is a menace. In short, the higher the wind speed, the faster heat is carried away from the surface of the body. Even cool temperatures can become dangerous in a high wind.

But cool is not the applicable word across the northern tier of the nation. "We are in northern Wisconsin, so we see winter from December through February, though days in November and March sometimes seem like winter," says White. "The challenging days are those days that are cold and windy days—say 10 degrees [Fahrenheit] or below. It's the wind that will get you."

To be sure, below 10 F, a modest wind speed quickly exacerbates the affect of cold on the body. At 10 F, a wind speed of 20 miles per hour puts

exposed flesh at risk of freezing in less than a minute.

The Occupational Health and Safety Administration (OSHA) and the CDC both provide tips for winter safety. An excellent tool for teaching and reminding workers about the essentials of winter safety is a guide produced by the National Institute for Occupational Safety and Health (NIOSH) at the CDC.

The NIOSH guide deals with four types of cold stress—hypothermia, frostbite, trench foot, and chilblains ([www.cdc.gov/niosh/topics/coldstress](http://www.cdc.gov/niosh/topics/coldstress)). It gives both the symptoms (early and late, as appropriate) and the first aid response to each condition.

Trench foot and chilblains are not exclusive to winter. They can occur at ambient temperatures as high as 60 F. Persistently wet feet put a worker at risk for trench foot. In response to the heat loss from the feet toward the surrounding water, blood vessels of the feet constrict as they try to forestall heat loss. But blood vessels that are constricted do not carry oxygen to surrounding tissue and the tissue begins to deteriorate, which may lead to gangrene.

Chilblains are the least severe of the conditions cited, but they can lead to a chronic condition of skin ulceration, as well as itching and redness. Corticosteroid creams are a successful treatment.

All conditions brought on by exposure to cold are exacerbated by alcohol and caffeine. Alcoholic beverages should never be consumed during the workday and caffeinated drinks ought to be avoided in cold (and hot) conditions. Warm, high-caloric foods, such as pastas, are good sources of fast energy to keep body temperature high and should be part of the diet of outdoor workers.

Finally, any tune-up in safety protocols for winter should include a vehicle maintenance check (e.g., no-freeze fluid in wiper reservoir, battery in top shape) and driving review (e.g., black ice reminder, steering into skids). Excellent tips are available at [www.osha.gov/Publications/SafeDriving.pdf](http://www.osha.gov/Publications/SafeDriving.pdf). *cr*



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