



[Home](#) > [Advice Tailored for You](#) > [Building/Remodeling](#) > [Content](#)

Working in the Winter Part 1: Winter Safety

[Building/Remodeling Tools and Technology](#)

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Although he now owns his own software company, Dale Thornberry got his start on the ground in the construction industry, where he worked for more than 30 years as a contractor—come rain, shine and, worst of all, snow.

“Was it harder to work as a contractor in the winter? Absolutely,” says Thornberry, who’s now president of GeoEstimator, an Indianapolis-based company whose software provides roof measurements based on aerial and satellite imagery and allows contractors to work on a roof without getting on it. “You work slower in the winter. My guys typically could produce only at a 50 to 60 percent level of what they’d do on a normal, good-weather day. It’s tough, because you want to be safe, number one, but you still want to make good progress.”

It’s that conflict between speed and safety that makes winter such a dangerous time of year to work in construction, according to Dr. Brian Morris, an occupational medical physician and associate corporate medical director for Boston-based AllOne Health Resources.

“I started to do a little bit of research, and what I found is, if you look at the number of work-related injuries on construction sites in a month like January versus a month like July, there’s a five-fold increase,” says Morris. “There’s the cold factor, of course, and the hazard of ice and snow, but for whatever reason—maybe it’s because you’re worried the weather’s going to get worse, or because of the holidays—there seems to be a lot of pressure to finish jobs quickly at that time of year, which leads to sloppy work and complacency.”

In good weather and in bad, the best way to stay safe during the winter months is to stay up to speed on common hazards and respond with weather-appropriate plans, practices and polices.

Winter hazards to watch

In winter, builders are most prone to two types of injuries, according to Morris: injuries related to temperature and injuries related to precipitation.

Frostbite, the most common temperature-related injury, accounts for approximately 75 percent of all weather-related winter injuries, he says, adding that exposed extremities, such as the tip of the nose, the ears and the fingers, are most susceptible.

Precipitation-related injuries include falls due to ice or snow, which can cause broken bones and internal injuries, as well as hypothermia, which is most likely when workers get wet in extreme temperatures from snow or sweat.

Winter planning and preparation

Whether it’s frostbite or hypothermia, the first line of defense is you, says Morris, who offers the following tips:

- **Eat well and often:** Working on an empty stomach can lower your body temperature, so ensure you are eating hearty meals often.
- **Know your body:** The thinner you are, the less heat your body can retain. Likewise, the more you sweat, the more prone to hypothermia you are. It therefore pays to know your own limits and prepare for them by taking breaks if the weather is affecting your job performance.
- **Dress in layers:** Dress in three layers: a wicking layer, such as long underwear, that can keep perspiration away from your body; an insulating layer, like a sweatshirt, that can trap heat; and a wind-repellant layer, like a nylon jacket. Because restricted mobility is also dangerous, choose athletic clothing that is warm but allows you to maintain dexterity.

Winter work practices

While what you eat and how you dress before work is key, what you do at work is just as important, stresses Morris, who recommends the following stay-safe, common sense work habits:

- Take regular breaks from the cold.
- Make more trips to avoid carrying heavy loads when there’s snow or ice present. Carrying heavy loads can dramatically increase falls.
- If you sweat often, change your clothes throughout the day in order to stay dry.
- Be sure to drink lots of hot beverages to keep warm.

Of course, the smartest work practice is sometimes not to work at all. “If there’s snow or frost on a roof, don’t get on it,” Thornberry says. “The biggest thing about safety is recognizing when you can’t work today.”

Winter-proof wonderland

Although workers must be responsible for their own well-being, their employers have to be safety-conscious, as well. In fact, it’s up to the employer to make sure the job site is winter-ready, says Thornberry, who equipped his workers with forced-air kerosene heaters—“so they could thaw something if they needed to, including themselves.” He also built plywood roads in order to prevent slip-and-fall injuries.

Other important job site equipment, according to Morris, is a snowplow, a high-horsepower vehicle that’s outfitted with snow tires and chains, tarps to keep floors and equipment dry and calcium carbonate for melting ice. He adds there should also be a site monitor designated to keep an eye on the work site in order to spot dangerous conditions and take action – shovel snow, put ice melt down, etc.

Finally, every job site needs a safety monitor. “Designate somebody to keep an eye on the work site to spot dangerous conditions and take action,” Morris recommends. “There should be a set time—at the beginning of the workday, because weather conditions can change overnight—for shoveling snow and putting salt down, and a set place—a trailer or other enclosed area—where employees can go to get warm when they need to.”

Check back next month for Working in the Winter Part 2: Winter Challenges.