

Prevent Cold Weather Injury



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Tips for working in a winter wonderland

When a major snowstorm is predicted for southeastern Wisconsin, Kujawa Enterprises, Inc. in Oak Creek marshals approximately 140 people and 250 to 300 pieces of equipment to begin work from the early morning hours until the storm is completely cleaned up.

For this Milwaukee area landscape company, which did close to \$2.5 million in snow-related work last year, that may mean having crew members work long hours in sub-zero temperatures and strong winds for three or four days in a row—then repeat it when the next big storm hits.

“We spend a lot of time stressing wind chill. It is the exposure to the wind, especially if you get wet, that can cause problems in a hurry,” company Vice President Rick Rollo says.

“Knock on wood, we have not had many problems with the cold since our crew members understand the conditions they are working in and come prepared and dressed properly,” he says. “One problem we have had is they will be in a heated truck for a couple of hours and jump out to do some hand work without redressing properly. This can also lower their resistance, and because of all of the stress—the hours, the intensity of the work—we will see a rash of colds and flu-like symptoms about 10 days after a big storm.”

Cold weather basics

Dr. Steve Kirkhorn, medical director of the National Farm Medicine Center in Marshfield, Wis., says that the risk of cold weather injury varies, depending on such factors as the outdoor temperature, the speed of the wind, the amount of time the person spends outdoors, whether his clothing is wet or dry and the person’s physical condition.

When determining the risk for frostbite, hypothermia and other cold weather-

related injuries, it's important to be aware of the current wind chill index, not just the temperature, he says.

"Hypothermia and other cold weather exposure can occur even if the outdoor temperature is above freezing," Kirkhorn says. "Severe hypothermia may result in death, so be sure that you check the National Weather Service's wind chill index, which combines temperature and wind speed to determine the actual risk, before sending your workers out that day."

Kirkhorn offers the following "basics" about two of the most common cold weather-related injuries:

Frostbite is a freezing of the body tissue that is exposed to the cold. Most often, it affects the ears, nose, fingers and toes. Severe frostbite can result in the loss of the frostbitten body part(s). It is important to maintain the body's core temperature in order to help prevent frostbite.

- Symptoms: May include an aching or stinging feeling, then numbness (which can result in the person not knowing he has been frostbitten); waxy and cold feeling skin; skin that turns red, then gray, white, yellow or blue.

- Treatment: Move the person to a warm area. Do not let the person walk if his or her feet are frostbitten. Call 911 for professional emergency medical assistance. Loosely bandage the frostbitten area with a clean and dry bandage. Handle the frostbitten area gently. Do not rub it. Wait for professional emergency medical assistance to arrive. Do not try to rewarm the frostbitten area if there is a chance of refreezing, if the person's temperature can't be maintained or if the person is able to be transported to an appropriate medical facility within two hours. If a deep frostbite injury is thawed, then refreezes, more damage may occur than a non-medically trained person can handle. Do not let the person smoke. Smoking will cause constriction of the small blood vessels.

Hypothermia occurs when a person's body loses heat faster than it can produce it. Occurs more rapidly when a person is wet. Hypothermia is a life-threatening medical condition.

- Symptoms: May include uncontrollable shivering; slurred speech; confusion; loss of balance/poor muscle coordination; increasing irritability; inability to make a responsible decision; possible loss of consciousness.

- Treatment: Move the person to a warm area. Immediately call 911 for professional emergency medical assistance. Take off the person's wet clothing. Wrap the person in a blanket or put on dry clothing. Do not immerse the person in water. Administer cardiopulmonary resuscitation (CPR) if the person is not breathing and you have been trained in administering CPR.

Kirkhorn says that dehydration can also occur when working in cold winter weather. It's important, he says, to drink plenty of water and to avoid drinks that can dehydrate you. These include alcohol, coffee, tea and soft drinks with caffeine.

Training your workers

Working outdoors in cold weather can also result in other types of injuries. "The biggest problems we have in winter are overexertion, back and shoulder injuries and chemical problems," Rollo says. "What I mean by chemical problems is that with all of the salt and other chemicals our crew members handle, they have to be very careful of exposure to bare skin, primarily the face and hands. We carefully monitor the types of chemicals we use so they don't have to deal with excessive dust or blowback."

Slips and falls are another big hazard for landscapers and other green industry workers, especially in snowy and icy conditions. "We stress good boots (with nonslip soles), and have, on occasion, purchased boots for an employee and allowed the person to pay us back over the winter," Rollo says. "We have a program whereby an employee can pick one item of clothing per year (bibs, coat, snowsuit), and the company will pick up half the reduced cost—we buy on volume."

Kujawa, which recently celebrated two years without a lost-time accident, extensively trains its workers in winter weather-related topics. "We spend a lot of time in such areas as training to load spreaders downwind, and to always wear goggles to keep the vision clear in blowing snow and to protect the eyes from flying debris and cold and harsh winds," Rollo says.

In addition to training its workers on the basics of such cold weather injuries as frostbite and hypothermia, the company strongly stresses dressing properly for cold winter conditions.

"We stress head and hand protection. It is very important to wear a hat since the head is a major source of heat loss. Also, the hands are as important as the feet because they are outer extremities that are surrounded by cold and wet snow," Rollo says.

"In the layering process [wearing several layers of clothing to protect the body], we recommend putting something next to the body to wick moisture away from it and into the next layer. Some type of insulator layer comes next, and finally, a wind and waterproof layer. Many of our crew members like to wear insulated jumpsuits because the body heat stays more confined and doesn't escape through the coat or pants," he adds.

Kirkhorn says it's also important to train outdoor workers to talk to their crew leader or another supervisor if they are on any medications. That's because some medications can interfere with the body's ability to retain heat. Finally, he says, remember to have your workers take adequate breaks from the cold.

Barbara Mulhern is a Belleville, Wis.-based agricultural/horticultural freelance writer.