

Five often-overlooked wintertime hazards



Outdoor workers need to be protected in every season. When people are on the job during the winter months, safety plans need to go beyond preventing hypothermia.

That's because cold weather also raises the risk of some not-so-obvious hazards. Here are five to keep in mind.

1. The risk of dehydration

It's not just a warm-weather issue. When we exhale, our bodies lose fluids. And drier/less humid air – common during the winter – can exacerbate that fluid loss. This increases the risk of dehydration, which can lead to illness and injury. In addition, the dry skin that often happens during cold weather makes it harder to retain water. The cold tends to diminish the thirst reflex, resulting in less of an impulse to drink than when it's warm. All of these factors combined can lead people to be chronically dehydrated during the long winter months. To help keep workers hydrated, OSHA recommends that employers:

- Educate workers on the importance of hydration and what to avoid.
- Equip all work areas with accessible and visible cool water (less than 60° F).
- Designate a relief person so workers can take a water break, or have water brought directly to workers who can't leave their work area.
- Encourage workers to keep a sealable bottle of cool water in their work area so they can hydrate.

2. The effects of UV rays

Likewise, sunburn and other sun-related issues can happen in the winter. Ultraviolet rays from the sun are harmful even during cold-weather months. Plus, snow on the ground is a significant factor in UV exposure because it can reflect up to 80% of those rays.

Workers can protect themselves by covering up (which they're probably already doing) and wearing a wide-brimmed hat. Also, use a "broad-spectrum sunscreen" with a sun protection factor, or SPF, of 15 or higher each day. Apply the sunscreen every two hours, and don't forget to use it on often-neglected places such as the ears, neck, and hands.

Consider choosing a moisturizing sunscreen with ingredients like lanolin or glycerin to combat dry winter skin.

Sun-reflected UV rays on snow can also cause a corneal sunburn, sometimes called "snow blindness. Wearing safety eyewear equipped with UV protection or sunglasses can help prevent this painful condition, as well as guard against dry eyes.

In windy weather, sunglasses can actually trap in some humidity; hold in that moisture; and block out the dry, cold air. The winter months can be uncomfortable for many people, but wearing the proper eye protection and paying attention to humidity levels can help relieve those symptoms.

3. Possible exposure to carbon monoxide

The risk of carbon monoxide poisoning is elevated during the winter months. One culprit: increased use of portable heaters or generators. The colorless and odorless gas, which can be deadly, is produced by burning fuels such as oil, gas, kerosene, charcoal, or wood.

Symptoms of carbon monoxide poisoning include headache, dizziness, nausea, and confusion. In 2024, the Mine Safety and Health Administration warned about potential carbon monoxide poisoning from the use of portable heaters in enclosed or confined spaces such as vehicle cabs, work trailers and other unventilated areas.

The agency offered best practices:

- Regularly inspect vehicle exhaust systems for leaks or other damage.
- Make sure monitors and audible alarm systems are installed wherever carbon monoxide may be a hazard.
- Properly ventilate work areas.

Another hazard: snow-clogged tailpipes, which can cause carbon monoxide to build up inside a running vehicle. Check vehicle tailpipes and undercarriages to make sure they're free of snow before starting the engine.

Additionally, workers can roll down windows to help increase ventilation.

4. Incorrectly layered FR/AR clothing

Layering clothing allows workers to remove layers if they get too warm or wet from sweat or water. (Moisture can pull heat away from the body, the same as sweat does in warm conditions.)

But flame-resistant or arc-rated clothing requires special attention: If FR/AR garments are layered incorrectly, they may not provide the needed protection.

FR/AR layering systems typically have three parts:

Base layer: It's crucial to keep this layer dry. Base-layer shirts need to have an optimal 60/40 blend of hydrophobic (nylon, for example) and hydrophilic fibers (cotton or rayon) to constantly pull moisture away from the body, move it to the outer surface of the garment and allow it to dry. With that blend, the moisture-wicking properties can't be washed out and are good for the life of the garment, he added.

Middle layer: This layer provides extra insulation to protect against the cold. When paired with the base layer, this mid layer – using the same 60/40 blend – can also pull moisture away from the body. Look for lightweight fabrics that will provide comfort while not impeding mobility.

Outer layer: “Moisture-wicking fabrics continue the process of pulling moisture away from your body to the outermost layer so that it can dry. This layer also should be water and wind resistant.

Any FR/AR garment made up of 100% of any kind of fiber, “along with claims of moisture wicking,” means that fabric will have a chemical finish. That finish can be washed out “in as little as 10 laundries.”

If you have questions about correct layering, get in touch with the garments' manufacturer.

5. Cold's impact on self-retracting lifelines

Cold conditions can adversely affect fall protection equipment, especially self-retracting lifelines. Lower temperatures and moisture can lead to a buildup of ice on the locking mechanisms and spool.

This could happen if the self-retracting lifeline is left or stored in a cold area overnight or if the temperature drops below freezing while it's being used.

- During cold and wet conditions, rapidly pull on the SRL cable to verify the locking mechanism is working. This should be done before the first use of each shift and then frequently throughout the day.
- The locking mechanism also should respond to a sudden jerk – just as a seat belt would in a vehicle. Quickly pull the cable “three or more times with the cable at different lengths.”
- If conditions are wet, store SRLs vertically and avoid exposing them to freezing temperatures.

Workers should never use an SRL if the locking mechanism isn't working properly or has malfunctioned. Make sure it's placed out of service and the employer and/or a supervisor is notified.