

**November 29, 2018****Lift & Move USA**Superior Cranes  
Rockingham, NC  
[www.liftandmoveusa.com](http://www.liftandmoveusa.com)**December 4-6, 2018****Power Gen**Orlando, FL  
[www.power-gen.com](http://www.power-gen.com)**January 3-6, 2019****SC&RA Board & Committee Meeting**Wailea, HI  
[www.scranet.org](http://www.scranet.org)**January 22-25, 2019****World of Concrete**Las Vegas, NV  
[www.worldofconcrete.com/en/attendee.html](http://www.worldofconcrete.com/en/attendee.html)**February 19-22, 2019****SC&RA Specialized Transportation Symposium**Westin Galleria Houston  
Houston, TX  
[www.scranet.org](http://www.scranet.org)**February 24-27, 2019****North American Iron Workers/IMPACT Conference**[www.impact-net.org](http://www.impact-net.org)  
Las Vegas, NV**April 8-14, 2019****Bauma**Munich, Germany  
[www.bauma.de](http://www.bauma.de)**April 23-27, 2019****SC&RA Annual Conference**Omni La Costa Resort  
Carlsbad, CA  
[www.scranet.org](http://www.scranet.org)**May 20-23, 2019****AWEA Wind Power**George R. Brown Convention Center  
Houston, TX  
[www.windpowerexpo.org](http://www.windpowerexpo.org)**June 5-8, 2019****Crane Rental Association of Canada (CRAC) Conference and General Meeting**Delta Prince Edward  
Charlottetown, PE  
[www.crac-acla.ca](http://www.crac-acla.ca)

# Uncommon cold

With winter setting in, it's time to talk about cold stress.

**A**s summer gives way to fall, and fall inevitably gives way to winter, employers need to begin preparing for the risks associated with colder weather – namely: cold stress. Cold stress occurs when skin temperature drops, thereby causing the internal body temperature to plummet. When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, and permanent tissue damage and death may result. Types of cold stress include: trench foot, frostbite and hypothermia.

## Environmental cold

Environmental cold can affect any worker exposed to cold air temperatures, and it puts workers at risk of cold stress. Depending on where in the country you operate, your workers may be expected to work outdoors, in cold environments, and for extended periods of time. These cold environments force the body to work harder to maintain its internal temperature, so whenever external temperatures drop below normal, heat can leave your body more rapidly.

Another factor that causes heat to leave the body more rapidly is an increase in wind speed, also known as the wind chill effect. Wind chill, which is determined by combining air temperature and wind speed, is how cold it actually feels. As wind speed escalates, it causes cold air to feel even colder, increasing the risk of cold stress to exposed workers. For example, when the air temperature is 40 degrees F, and the wind speed is 35 mph, the effect on exposed skin is as if the air temperature was 28 degrees F.

Of course, what constitutes extreme cold and its accompanying effects can vary across differing areas of the country. For example, in regions that are not used to winter weather, near-freezing temperatures are considered “extreme cold.” In other areas, “extreme cold” might be defined as temperatures that drop below zero. Regardless, it is extremely important for employers to do everything they can to

## Safety tips

- Your employer should ensure that you know the symptoms of cold stress.
- Monitor your physical condition and that of your coworkers.
- Dress properly for the cold.
- Stay dry in the cold because moisture or dampness, e.g. from sweating, can increase the rate of heat loss from the body.
- Keep extra clothing (including underwear) handy in case you get wet and need to change.
- Drink warm sweetened fluids (no alcohol).
- Use proper engineering controls, safe work practices, and personal protective equipment (PPE) provided by your employer

ensure their workers do not suffer from the effects of cold stress.

## Preventing cold stress

Although OSHA does not have a specific standard that covers working in cold environments, under the Occupational Safety and Health Act (OSH Act) of 1970, employers have a duty to protect workers from recognized hazards, including cold stress hazards, that are causing, or likely to cause, death or serious physical harm in the workplace. OSHA does, however, provide a Cold Stress Guide to assist employers in identifying risk factors. It can be found here: [www.osha.gov/SLTC/emergencypreparedness/guides/cold.html](http://www.osha.gov/SLTC/emergencypreparedness/guides/cold.html).

Employers should train workers to recognize the environmental and workplace conditions that can lead to cold stress. This includes training workers to identify the symptoms of cold stress, ways to prevent cold stress, and what to do to help those who are affected by cold stress. Workers should also be trained in how to select proper clothing for cold, wet and windy conditions.

Employers should also monitor workers' physical conditions; schedule frequent short breaks in warm dry areas to allow the body to warm up; schedule work during the warmest part of the day; use the buddy system (work in pairs); provide warm, sweet beverages; avoid drinks with alcohol; and provide engineering controls such as radiant heaters.

When it comes to the perils of cold weather, a little preparation goes a long way. Understand the risks of cold stress and be sure to do everything in your power to ensure your employees do to. ■

## THE AUTHOR



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