

This Winter, Keep Safe By Walking Like a Penguin

We all know how dangerous it can be to work on a roof or other elevated surface, but we tend to underestimate the potential consequences of falls from lower heights. In reality, a fall of just a few feet can cause serious injury or even death. Ice and snow can make even walking on the ground a deadly risk: dozens of Americans die each year as a result of slipping on ice, and thousands are injured. With that in mind, it's worth looking a little bit silly to stay safe. This winter, if you have to walk on potentially slippery terrain, **try walking like a penguin**. It could save your life.



How to Walk Like a Penguin

1. Keep your hands out of your pockets! Extend them out to your sides to help you keep your balance, like you're walking a tight rope.
2. Bend your knees slightly, point your toes outward a little bit, and walk flat-footed.
3. Take short, slow steps.
4. With each step, keep your center of gravity above your front leg. Normally, we put our leading foot out and let it pull us forward. When you penguin walk, you want to keep your body directly above your foot as you place it.
5. If you do fall backward, try to tuck your chin. That way your back, not your head, will hit the ground first.

Why Does it Work?

The way that we typically walk (with one leg in front of us and one leg trailing) is inherently unstable on slippery surfaces. Our weight pushes our feet outward, along the surface of the ice. By keeping our center of gravity directly above one flat foot, we use our own weight to pin down our foot, preventing slips and falls. Keeping our arms out not only improves our balance, it means that we can catch ourselves if we do fall.

Other tips from the CDC

1. Wear shoes or boots with traction.
2. Be especially careful when entering or exiting a vehicle.
3. Assume that all wet or dark areas on pavement are slippery or icy.



Hardhats to Helmets. Why Helmets?

Helmets offer superior protection for construction workers. Traumatic Brain Injuries are responsible for 25% of all construction fatalities, and many life altering injuries. These safety helmets are inspired by the best features of hard hats for construction and head protection for sports such as rock climbing and cycling. They incorporate energy-absorbing liners, and other technologies to ensure the head is better protected from impact. These helmets can help the construction industry reduce these fatalities and injuries.

<https://www.hardhatstohelmets.org/why-helmets/>

Work-related Traumatic Brain Injury in Construction

The construction industry has the greatest number of both fatal and nonfatal WR TBI among U.S. workplaces. From 2003 to 2010, 2,210 construction workers died because of a TBI (a rate of 2.6 per 100,000 full time equivalent workers). These deaths represented 25% of all construction fatalities and 24% of all WR TBI fatalities among all industries during that period.

See more information at the [Centers for Disease Control and Preventions website](https://www.cdc.gov/niosh/).

The Physiological Response of Working in Cold Environments and how your PPE can Help

Recent NIOSH science blogs have discussed the physiological impact of wearing respirators. The first blog in this vein explored the Physiological Burden of Prolonged PPE Use on Healthcare Workers during Long Shifts, including potential CO2 buildup. A second blog addressed Heat Stress Imposed by PPE Worn in Hot and Humid Environments and how healthcare workers and their employers can recognize and mitigate potential stressors. As a third installment of this series, this blog addresses the general physiological responses to cold stress while working in cold environments and how personal protective equipment (PPE) can provide some protection.

Incidence of Hypothermia or Cold Injury

Due to the lack of a standardized reporting system, the true incidence of cold injury is not known, but appears to be uncommon across most of North America except in the northern tier states, including Alaska.

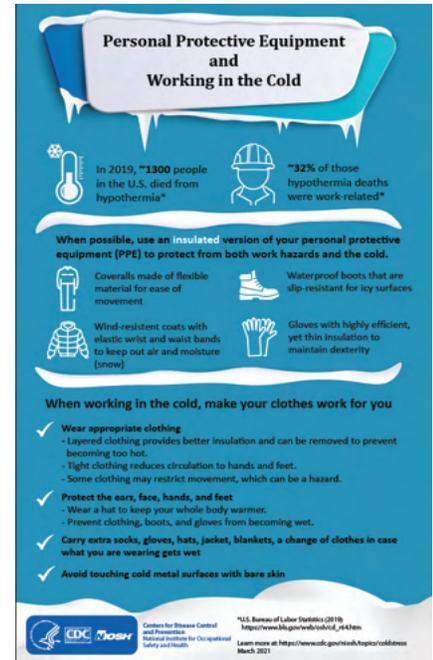
- In 2019, about 1300 people in the U.S. died of hypothermia.
- 420 of these deaths, about 32%, were occupationally related.

Many occupations require employees to work in cold outdoor environments (construction, first responders including search and rescue, North Sea oil and gas workers, etc.). Therefore, it is important to define cold stress and injury, identify the means to mitigate the exposure to cold, and provide immediate treatment for cold injury if necessary. Many of these occupations also require the use of PPE. This begs the question, what is the role of PPE in the mitigation of cold stress?

Can PPE Help Protect Against Cold Strain?

PPE, as the last level of defense within the hierarchy of controls, is worn to protect against specific external hazards found in occupational settings. However, some PPE is, by its nature, highly insulative in addition to its other protective features. Therefore, wearing insulative PPE when available can be protective in cold environments if the PPE remains dry. Some examples of cold protective PPE are:

- Insulated coveralls, bunker gear, and jackets
- Insulated waterproof work boots and gloves
- Insulated hoods, facepieces, and goggles



Personal Protective Equipment and Working in the Cold

In 2019, "1300 people in the U.S. died from hypothermia*"

"32% of those hypothermia deaths were work-related"

When possible, use an insulated version of your personal protective equipment (PPE) to protect from both work hazards and the cold.

- Coveralls made of flexible material for ease of movement
- Waterproof boots that are slip-resistant for icy surfaces
- Wind-resistant coats with elastic wrist and waist bands to keep out air and moisture (snow)
- Gloves with highly efficient, yet thin insulation to maintain dexterity

When working in the cold, make your clothes work for you

- ✓ Wear appropriate clothing
 - Layered clothing provides better insulation and can be removed to prevent becoming too hot.
 - Tight clothing reduces circulation to hands and feet.
 - Some clothing may restrict movement, which can be a hazard.
- ✓ Protect the ears, face, hands, and feet
 - Wear a hat to keep your whole body warmer.
 - Prevent clothing, boots, and gloves from becoming wet.
- ✓ Carry extra socks, gloves, hats, jacket, blankets, a change of clothes in case what you are wearing gets wet
- ✓ Avoid touching cold metal surfaces with bare skin

*U.S. Bureau of Labor Statistics (BLS) <https://www.bls.gov/news.release/osh04.htm>
Learn more at <https://www.cdc.gov/niosh/topics/coldstress>
March 2021

Read more here: NIOSH Science Blog

Heartland Center Trainees Receive Academic Scholarship at the Iowa Governor's Safety and Health Conference



Every year, the [Iowa Governor's Safety & Health Conference](#) awards academic scholarships for Iowa students studying occupational safety. At the 2023 conference held in Altoona in October, nine students received a sum total of \$10,500 in scholarships, including the following Heartland Center Trainees.

Jack Beno Scholarship

Emily Huber

Bill Dickinson Scholarship

Ernesto Mendez

Iowa Occupational Safety & Health Advisory Council Scholarship

Elijah Bowman

Anna Proctor

Alexander Barnet

Sierra Virden

Elizabeth Foster

Zachary Wiggins

Holly Rowland



Dr. Nathan Fethke has been named head of Department of Occupational and Environmental Health.

Dr. Fethke is currently a professor in the Department of Occupational and Environmental Health in the UI College of Public Health. He holds a secondary appointment in the Department of Industrial and Systems Engineering at the University of Iowa.

He directs the Ergonomics Training Program within the NIOSH-funded Heartland Center for Occupational Health and Safety and serves as Deputy Director of the NIOSH-funded Great Plains Center for Agricultural Health.



Goerdt Wins Lifetime Achievement Award

Tammi Goerdt, Director of Continuing Education and Outreach for the Heartland Center for Occupational Health and Safety was honored at and awarded a lifetime achievement award at the Midwest Women in Safety Conference on Thursday, October 19th in Cedar Rapids. Tammi has spent 25+ years advocating for workplace health and safety, assisting public and private sector employers on reducing liabilities, reviewing and writing administrative policies, implementing new regulations and policies, worker's compensation, grant writing, and employee recruitment. She serves on many safety, risk management, and educational boards or committees across the state and some nationally. Her nominator, from the manufacturing industry, had this to say "she works tirelessly to promote safety and health in industry and construction. Her commitment extends to mentoring students in EHS fields, fostering connections with professionals, and creating opportunities for hands-on experience. Her exceptional communication skills and leadership have made her an invaluable presence where she not only imparts knowledge but offers vital information. Tammi's remarkable achievements and selfless contributions truly exemplify the essence of a lifetime achievement awardee".

The Recovery-Ready Workplace Toolkit: Guidance and Resources for Private and Public Sector Employers is designed to help businesses and other employers prevent and respond more effectively to substance misuse among employees, build their workforces through hiring of people in recovery, and develop a recovery-supportive culture.



SAVE THE DATE
Occupational Health Symposium and Case Management Seminar
 March 28-29, 2024
 Radisson Hotel & Conference Center
 Coralville - Iowa City

Wishing you a Happy and Safe Festive Season and a Prosperous 2024



Continuing Education Programs

Check out the Heartland Center's online events calendar at HeartlandERC.org to keep track of our upcoming continuing education events.

Follow the Heartland Center on social media for regular occupational health and safety updates:

 **Facebook**
facebook.com/HeartlandCenterERC/

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linkedin.com/groups/8420341

 **Instagram**
instagram.com/heartlandcntr/

 **YouTube**
www.youtube.com/heartlandcntr

Save the Date- 7th Annual
#SAFECONEXPO Learn Network Energize
 MAY 14th- 16th, 2024
 The Lodge of the Four Seasons
 Lake of the Ozarks, MO
 Pre-Con - May 14th, 2024
 Conference - May 15th & 16th, 2024
 Email shc@shcmoks.com if you would like to be added to the conference mailing list.
 Follow <https://shcmoks.com/> for conference updates.