RISK INSIGHTS

FATIGUE RISKS IN COLD CONDITIONS

Cold weather does more than make working conditions uncomfortable; it can also lead to fatigue and reduced alertness and responsiveness in employees, increasing the risk of injury. This article discusses cold-weather hazards in construction and provides strategies for employers to keep their workers safe.

RISKS OF WORKING IN COLD WEATHER

Cold weather can impact employee performance by causing fatigue, inattentiveness and reduced responsiveness, potentially resulting in the following:

- **Slower reaction times**—Cold external temperatures drive blood away from the extremities, which can cause numbness and loss of coordination. This loss of fine motor control and dexterity can slow a worker's response time and impair safe use of tools and equipment.
- **Impaired decision-making**—Cold stress forces the body to shift its energy to preserving warmth, leading to reduced cognitive capacity and decision-making abilities. This can lead to errors and lapses in judgment on the job, thereby increasing the risk of injury. In addition, NMS Health reported that 38% of outdoor workers experience seasonal depression, which worsens mental fatigue and decreases alertness.
- **Cumulative fatigue**—Working for long periods of time in cold or freezing conditions can exacerbate physical fatigue and exhaustion. In fact, NMS Health found that 39% of outdoor workers have had to stop working due to winter-related injuries or health issues caused by prolonged cold exposure.
- **Restricted mobility**—Cold-weather personal protective equipment (PPE) can be bulky, limiting movement and reducing visibility, while layering clothing to keep warm can also restrict mobility, impair balance and make it difficult to handle tools properly. These methods may be more harmful than beneficial if not chosen and used appropriately.

The cold's impacts on physiological and mental performance in workers can pose many safety hazards, including equipment operation and backing incidents; slips, trips and falls on icy surfaces; and injuries caused by improper tool use due to reduced dexterity.

INJURY PREVENTION

Construction employers should implement the following measures recommended by OSHA, the Centers for Disease Control and Prevention, and the National Institute for Occupational Safety and Health to prevent fatigue-related incidents and injuries:

- **Rotate workers' tasks or shifts regularly** to limit the workers' time in the cold. Monitoring employees' overtime and shift length is crucial to prevent prolonged cold exposure. Employers should also consider using relief crews for prolonged tasks to reduce cold stress and fatigue.
- **Schedule frequent warm-up breaks** in heated shelters to recover workers' energy and restore body temperature.
- **Encourage reporting of fatigue.** Many employees don't report fatigue symptoms or other safety hazards due to job pressures and fear of retaliation. Employers should encourage timely reporting so they can intervene before accidents happen.
- **Provide suitable cold-weather PPE** that maintains workers' warmth while allowing for mobility and visibility.
- **Conduct winter-specific job safety analyses** to identify and remove hazards on the worksite. Employees should also be regularly trained on how the cold affects operations and safety, as well as how to spot signs of fatigue and cold stress.

Fatigue in cold conditions is a predictable and preventable risk. Proactive scheduling, supervision and winter-specific controls can significantly reduce injuries and incidents during the coldest months.

Contact us today for additional resources and risk management strategies.