Take 7 Ergonomic Measures to Protect Outdoor Mobile Workers from MSI Risks



Musculoskeletal injuries (MSIs) remain a leading source of lost-time workers' compensation claims across Canada. Outdoor mobile workers like utility crews, telecom technicians, drivers, delivery personnel, inspectors, and construction teams are particularly vulnerable to MSIs because their work typically involves exposure to a broad array of ergonomic risks. Canadian occupational health and safety (OHS) laws require companies to take seven steps to protect their workers from MSI hazards.

Go to the OHS Insider website for a complete Ergonomic and MSI Safety & Compliance Game Plan.

1. Perform Ergonomic Hazard Assessment

The first step is to designate a competent person to identify and assess the MSI hazards to which your workers are exposed. For mobile workers, focus on task-related risk factors such as:

- Repetitive motion, awkward postures, or twisting such as repeatedly climbing in and out of vehicles.
- Lifting, carrying, pushing, or pulling heavy or

awkwardly shaped materials.
- Whole-body vibration such as from being inside vehicles or using power tools.
- Environmental conditions such as snow, ice, mud, heat, humidity, and uneven terrain.
- Long hours and fatigue, such as driving a truck all night.

2. Implement Vehicle & Equipment Controls

Vehicle and equipment design have a major impact on MSI risk. Effective controls for outdoor mobile workers include fleet vehicles that have ergonomic seating and lumbar support, foot rests, low-step access, and easily adjustable controls. Where practicable, companies should provide lift-assist devices, powered reels, carts, and mechanical handling tools to minimize the need for manual lifting and allows for neutral body positioning. Frequently used equipment should be ergonomically designed and cushioned against potentially stressful contact.

3. Implement Administrative/Work Controls to Prevent MSI Hazards

Establish safe operating procedures enabling workers to carry out ergonomically stressful tasks while maintaining a safe posture, with minimum repetition and contact stress, and without having to reach above, below, or across the body. Other administrative/work controls for preventing MSIs may include:

- Using teams of workers to lift heavy or awkward objects, including patients in ambulance settings.
- Rotating workers in and out of high-risk tasks to prevent repetition and continuous exposure.

- Giving workers regular rest breaks to recover and stretch.
- Alternating heavy with light tasks.

4. Get Workers to Use Personal Protective Equipment (PPE)

PPE and protective equipment for MSI hazards may include:

- Gloves that make it easier for workers to grip objects and/or protect hands from vibration, contact stress, impact, or cold.
- Anti-fatigue mats to reduce musculoskeletal strain and fatigue from walking on hard, uneven, or gravelly surfaces.
- Footwear with anti-fatigue insoles.
- Knee and elbow pads to minimize stress and fatigue from contact with hard or sharp surfaces.
- Wrist splints and braces to limit arm and wrist movements that may cause or aggravate MSIs.

Note that back belts have **not** proven effective in protecting workers against MSI hazards.

5. Use Artificial Intelligence (AI) to Monitor Worker Exposure to MSI Hazards

Many companies use AI technology to keep workers safe, healthy, alert, and fit for duty. Thus, for example, wearable sensors providing for real-time monitoring of heart rate, blood pressure, steps taken, and other key health metrics can help you determine if mobile workers are experiencing elevated levels of fatigue or stress at an early stage when there's still time to respond proactively.

6. Provide Ergonomic Safety Training to Workers at Risk of MSIs

Educate and train workers on MSI hazards and how to protect against them. At a minimum, ergonomic safety training should cover:

- What MSIs are.
- The causes of MSIs and how workers can get them from the tasks they perform.
- The symptoms and signs of MSIs and what to do if they detect them.
- How to set up their workstations safely.
- The safe postures workers should maintain to avoid MSIs.
- How to use the ergonomic equipment and furnishings provided.
- Procedures for reporting MSIs and hazards.

Verify that workers actually understand their training by:

- Quizzing them on the material after the lesson.
- Making them demonstrate the safe workstation postures and methods covered in the training.
- Observing them perform high-risk tasks to ensure they're actually following their training.

7. Monitor Your Ergonomic Controls

Continually monitor your ergonomic controls and identify problems you need to correct. Red flags to look for include:

- Workers exhibit or report MSI signs and symptoms.
- Workers are diagnosed with MSIs.
- Significant changes to operations, equipment or the physical environment that weren't accounted for or anticipated in the current MSI hazard assessment occur.