

Safety Facts:

Manual Material Handling*



Manual materials handling is handling items by lifting, lowering, pushing, pulling, carrying, holding, or restraining. It is the most common cause of occupational fatigue and lower back injuries. Three quarters of Canadians whose job includes manual handling suffer from back injury at some point. Many are unable to return to their jobs and some are permanently disabled.

Key characteristics of hazard

While modern industry is more automated, we still perform manual tasks.

The risks of manual material handling depend on what the task is, how the task is performed and what the conditions are at the workplace.

The following scenarios could be hazardous:

If the material is:

- Too heavy
- Too high or low for a safe lift
- A shape that makes it hard to handle
- Hard to grasp
- Unstable
- Too big to let you see where you are putting your feet

If the worker:

- Is not trained and uses poor lifting techniques
- Moves material over long distances
- Lifts or handles more than they can control safely
- Is not encouraged to take appropriate rest break
- Has a combination of handling tasks
- Wears clothing that restricts movement or reduces grip strength

If at the facility there are:

- Walking surfaces that are uneven, sloping, wet, icy, slippery, unsteady, etc.
- Poor housekeeping that causes slip, trip and fall hazards
- Poor lighting
- Environmental conditions
- Working at high pace
- Space is small or posture is constrained or both

Associated risks

Fatigue is a common and expected effect of manual materials handling as manual energy is required to perform the task.

Health impacts of manual material handling:

Injuries resulting from manual material handling can affect any body part — such as shoulder, neck, arms, elbows, hands, and legs. The immediate and short-term effects can be:

- Accidental injury and fatigue
- Wounds (bruises and cuts)
- Back injuries

The effects of fatigue can also contribute to serious and chronic injuries — including disabling back injury and pain. Recovery from back injuries can take a long time and there is always a risk of further injury, making the problem worse.

Preventative next steps

- Refer to legislative guidelines and create workplace policy
- Train employees on safe lifting techniques
- Perform regularly job-task analysis and risk assessments
- Evaluate your ergonomics occupational health and safety program
- Consider engineering improvements
- Try administrative improvements (e.g. job rotation, micro-breaks)
- Evaluate PPE and clothing



For additional resources visit:

WorkSafeBC: [Lifting calculator](#)
CCOHS | NIOSH | OSHA

Manufacturing Safety Alliance of BC: safetyalliancebc.ca

