

Musculoskeletal Injuries (MSIs)

How to prevent them in your workplace



Overview

MSIs: Nova Scotia's top workplace injury

Musculoskeletal injuries (MSIs) are the most common workplace injury in Nova Scotia – on average, more than 60 per cent of claims that require time off of work are caused by MSIs. The good news is these injuries are preventable. With knowledge, commitment and a systematic approach, you can help eliminate or reduce the risk of your employees getting injured on the job.

What are MSIs?

MSIs affect muscles, tendons, joints, ligaments, bones, nerves and blood vessels. Injury can come from any job, task or equipment that puts an extra strain on our bodies.

Types of injury:

- Sprains and strains
- Overexertion injuries
- Soft tissue injuries
- Repetitive strain injuries

Common risk factors

Injury can happen suddenly from a single incident or develop over time after prolonged exposure to a variety of risk factors:

- Repetitive movements
- Forceful exertions
- Awkward or sustained postures
- Duration

Prevention pays off

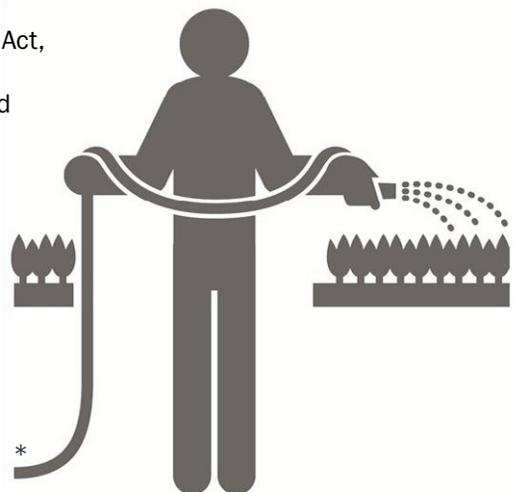
Taking a proactive approach to addressing MSIs can provide significant benefits to your workplace:

- Better injury prevention
- Increased efficiency
- Enhanced productivity

Make workplace safety a group effort

Under the Nova Scotia Occupational Health and Safety (OHS) Act, the general duty clause states employers are responsible to ensure their workplaces are safe for employees. A healthy and safe workplace is free of hazards and implementing controls for MSIs is part of that. But you don't have to do it alone. The best way to keep your employees safe is to engage them in your safety initiatives. With everyone working together to identify hazards and reduce the risks, efforts to improve safety will be more effective and sustainable.

This guide will support your efforts in preventing and decreasing MSIs in your workplace.



Six steps to reduce MSIs



This MSI prevention guide will help you every step of the way. Learn how to build awareness, identify hazards, assess risk, implement controls and assess the effectiveness of your action plan. You'll soon be on your way to making your workplace safer for everyone.

Disclaimer: This document represents best practices to assist in the prevention of musculoskeletal injuries. There is a strong likelihood that other issues will exist that are not addressed by this document. This document is not meant to replace a professional analysis conducted by a Certified Ergonomics Professional.

Consultation and communication

Get everyone talking about safety

Every journey toward a safer workplace begins with a conversation. Inviting employees and others groups to be part of the discussion is an effective way to get ideas on how to identify hazards and reduce risks. Front-line workers are keenly aware of the hazards they face each day and can play a critical role in implementing a successful prevention strategy.

You may also want to consult with representatives from other workplace groups including:

- Joint Occupational Health and Safety Committee
- Human Resources
- Management
- Maintenance
- Unions

Strong communication builds trust

When it comes to workplace safety, trust and commitment are keys to success, which is why communication and consultation are so important in each step of your MSI prevention strategy. Having collaborative conversations and sharing information will increase employee engagement and make it easier to build a strong safety culture.

There are three ways to increase awareness about MSI hazards:

1. Engage workers in the process of identifying hazards
2. Educate employees about hazards and signs and symptoms of injury
3. Evaluate the current level of awareness about MSI hazards and set goals for improvement



The **‘Workplace Injuries Hurt the Most at Home’** video series serves as a great tool to begin or continue conversations about safety in your workplace, leading to a safer work environment.

We’ve developed **discussion guides** you can use to facilitate these conversations.

1

Education and awareness

Build a safety mindset



Education is another essential part of any injury prevention program and should involve everyone in your organization. It should also integrate with other elements of your safety management system such as hazard identification, control implementation and training.

Three effective ways to spread the word about safety:

1. **Continuous improvement team** – Establish a team to focus on MSI prevention and support education and awareness activities.
2. **Best practices** – Optimize or improve how employees do their work by consulting material from safety organizations in your industry to identify ways to make jobs and tasks safer.
3. **Safety awareness opportunities** – Provide more opportunities for employees to learn about safety and discuss safety concerns by hosting lunch and learn sessions, tool box talks and workshops.

Tips for success

Ensure your employee education program is focused on these key areas:

1. Risk factors – How to identify and avoid MSI hazards
2. Signs and symptoms – How to recognize when a job or task is putting too much strain on their bodies

Want to learn more?

Get your education program off to a great start with these useful resources:

- [Infographic on MSIs](#)
- [Office Ergonomics Resource Guide](#)
- [MSI posters and statistics](#)
- [General injury statistics](#)
- [Industry-specific information](#)

Key Performance Indicators for Education and Awareness

- Percentage of employees who have completed training
- Number of tool box talks conducted

2

Risk identification

Know the hazards



The best time to identify MSI hazards is before anyone gets hurt. But it's not always possible to identify all the risk factors for every job in your workplace. Often, the most practical way to start is by prioritizing your prevention strategy to focus on jobs and tasks with the highest risk.

The following tools can help you determine which ones to tackle first:

Occupational Health and Safety Risk Mapping Tool – Plot where injuries are occurring in your workplace to see which areas have the highest risk of injury. Risk mapping provides a visual representation of where injuries are happening and makes it easier to communicate that information to employees and start a discussion about the challenges they face and the possible solutions.

Discomfort Survey – Get a clear picture of which parts of the body are most affected by specific tasks and how much physical discomfort workers are in when they do their jobs. Survey respondents often have useful suggestions about ways to improve the safety of their work.

Workplace Inspection Checklist – Complete an inspection checklist of all jobs within your workplace to identify activities with a high injury risk and then add those to your priority list.

Once you have insight into where injuries are occurring, what types of injuries are most common and which tasks pose the most risk, the next step is to focus on assessing the risk in greater detail.

Tips for success

- To enhance your Risk Map, use colours to differentiate the cause of the injury, whether it resulted in time-loss or medical treatment only
- It is best to break jobs down into smaller tasks. Often, one or two task(s) may be the cause of risks

Key Performance Indicators for Risk Identification

- Number of risks Identified
- Number of prioritized jobs and tasks that have been identified

3

Risk assessment

Reduce the danger



Now it's time to examine your safety priority list to get a clearer view of the degree of risk involved in each job or task. During this risk assessment phase, you will determine which risk factors pose the most danger to employees and are therefore the most important to control. Input from employees who perform those tasks is critical to ensure the risk assessment is accurate.

The degree of risk associated with each task will help you determine which ones should be given priority when it's time to implement controls. If you have an existing risk assessment process, MSIs can be assessed for high, moderate or low risk just like any other safety hazard.

There are also MSI-specific [risk assessment tools](#) that may be useful for assessing more complex jobs and tasks.

Ask the right questions

When you conduct a risk assessment, it's important to measure the force, duration, frequency and postures that are involved in performing a specific task. Asking these five questions will ensure you get the information you need to do a comprehensive assessment:

1. Does the task need a high, medium or low force?
2. What postures does the task require?
3. How long is the employee exposed to the risk?
4. How often is the employee exposed to the risk?
5. What is the combined effect of the risk factors?

Tips for success

After your risk assessment is complete, share it with employees who perform the tasks and those who participated in the process. This is a great opportunity to engage employees, solicit feedback and get ideas about control measures.

Want to learn more?

These resources provide information about the best ways to conduct a comprehensive risk assessment:

- [Recognizing Workplace Hazards](#)
- [Health and Safety Hazards at the Workplace](#)

Key Performance Indicators for Risk Assessment

- Percentage of prioritized jobs and tasks that have been assessed
- Percentage of new equipment, tools and processes that are assessed prior to implementation

4

Control implementation

Take control of safety

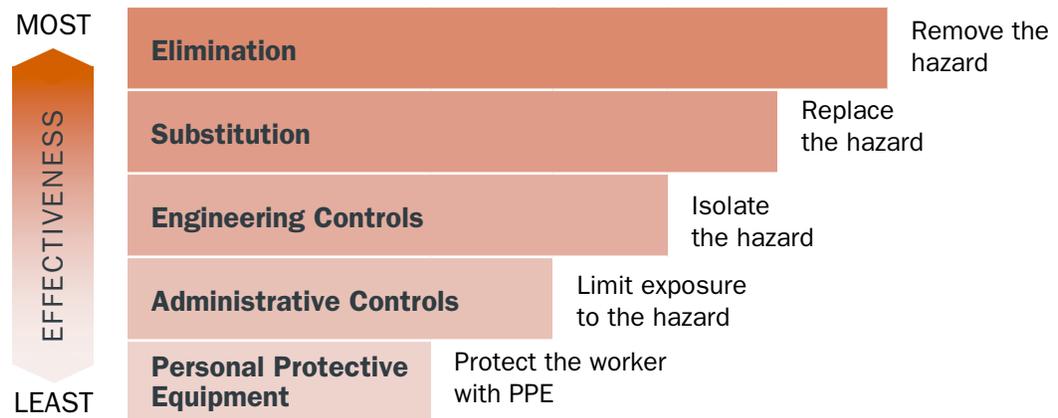


CONSULTATION AND COMMUNICATION

Once you've identified and assessed the risks, the next step is to put in place control measures to eliminate or reduce your employees' exposure to those hazards. The control implementation stage targets the root causes of injury and the specific hazards that you identified in previous steps.

The Hierarchy of Controls is a five-stage process you can use to guide the implementation of your control measures. The most effective way to control a hazard is to remove it, but if that's not possible, other types of controls can be used or combined to reduce the risk as much as possible.

Hierarchy of Controls for Injury Prevention



Tips for success

Controls should target the specific tasks or actions that are causing injury. Use insight from previous steps to ensure you're fixing the right problems:

- Knowledge of the root causes from Risk Identification
- Employee feedback from the Discomfort Survey
- Ideas gathered during Risk Assessment

Want to learn more?

These documents on the WCB Nova Scotia website provide information on control measures for specific risk factors common in various industry sectors.

[Industry tip sheets](#)

Key Performance Indicators for Control Implementation

- Number of controls implemented
- Percentage of jobs and tasks at low risk
- Percentage of jobs and tasks at medium to high risk with controls implemented



After control measures are identified, employees will need to be trained on how to use them before they're implemented. Training should include:

- Proper use of the control
- New safe work methods and procedures
- Required personal protective equipment (PPE)

Once the training has been completed, it's important that there is ongoing supervision to ensure the changes are implemented correctly.

Effective training in action

Here's an example of a comprehensive training program aimed at reducing MSIs for health care workers.

Job function:	Patient transfer
Risk factor:	Lifting, reaching, awkward posture
Control measure:	A new sit-to-stand lift was purchased to reduce the injury risk for workers manually moving patients from a sitting to standing position.
Training:	<p>Before using the new equipment, workers must be trained in the following areas:</p> <ul style="list-style-type: none"> • Safe work procedures for the equipment • Mobility and cognitive requirements for patients • Proper inspection processes • Equipment storage planning • Case study and real-life examples to test knowledge

Tips for success

After the training is complete and the control measure is in place, consult with the employees who are performing the task with the new control. This provides an opportunity to gather feedback about the control and see if there are areas for improvement.

Key Performance Indicators for Training

- Percentage of employees trained on control measures
- Percentage of employees trained on safe work procedures



MSI prevention never ends. It's important that you monitor and evaluate your progress with the goal of continuing to improve. Evaluation should include the tasks you've implemented controls for, as well as the overall impact the safety enhancements have had on your workplace.

Your evaluations should look at both leading and lagging indicators to get a comprehensive view of health and safety performance.

- Lagging indicators measure the end result of safety initiatives and are focused on using past performance to assess how well controls are working.
- Leading indicators focus on future health and safety performance with the goal of continuous improvement.

By evaluating individual tasks, you can determine how effective controls have been in reducing the risk of injury. Reapplying your risk identification and assessment tools can ensure that no new risks have been introduced as a result of the control measures. If there are new risks, reevaluate the control and update training and procedures as needed.

You should evaluate and report progress of your overall MSI prevention strategy at least once a year. This will help ensure your efforts stay on track and continue to reduce the risk of employees being injured. Annual reviews will also help you identify new hazards, set new priorities and make employees more aware of the warning signs so something can be done before an injury occurs.

Key Performance Indicators (KPIs) These are some of the KPIs that can help you track how well your prevention efforts are doing.

For individual tasks:

- Number of risks identified
- Number of prioritized jobs or tasks identified
- Percentage of prioritized jobs and tasks assessed
- Percentage of new equipment, tools and processes assessed before implementation
- Number of controls implemented
- Percentage of low risk jobs and tasks
- Percentage of medium to high risk jobs and tasks with controls
- Percentage of employees training on control measures
- Percentage of employees trained on safe work procedures

For overall performance:

- Return on investment
- Total number of risks identified
- Total number of prioritized jobs and tasks identified
- Percentage of prioritized jobs and tasks assessed
- Percentage of new equipment, tools and processes assessed before implementation
- Total number of controls implemented
- Percentage of low risk jobs and tasks
- Percentage of medium to high risk jobs and tasks with controls
- Percentage of employees training on control measures
- Percentage of employees trained on safe work procedures

Ways to evaluate controls to determine if MSI risks were minimized and eliminated include:

1. Interviewing employees
2. Decreases in severity of signs and symptoms of MSI
3. A reduction in the number of risk factors
4. A reduction in the severity of risk factors



Tips for success

A decrease in these key areas shows your controls are working to eliminate or reduce MSIs:

- Severity of signs and symptoms
- Number of risk factors
- Severity of risk factors

Want to learn more?

[Leading Indicators for Workplace Health and Safety: A User Guide](#)

Safety is everybody's business

The six steps outlined in this guide can help you develop an effective action plan that will reduce the risk that your employees will be affected by a musculoskeletal injury. The key to success is to involve employees from all areas of your organization in every step in the process. That way everyone becomes accountable for the plan's success and the strategy becomes a true representation of the types of tasks being performed and the level of MSI risk they pose.

When everyone takes responsibility for safety and works together to prevent injuries, everyone gets to go home safe at the end of every workday.



* Pictograms developed in collaboration by Workplace Safety & Prevention Services (WSPS) of Ontario, the Institute for Work and Health, Ontario Ministry of Labour, Workplace Safety and Insurance Board Ontario

WORK SAFE. FOR LIFE.
WORKERS' COMPENSATION BOARD OF NOVA SCOTIA

Halifax Office

5668 South Street
P.O. Box 1150
Halifax, NS B3J 2Y2

Tel: 902 491 8999

Sydney Office

404 Charlotte Street
Suite 200
Sydney, NS B1P 1E2

Tel: 902 563 2444

Toll Free

1 800 870 3331

Email

info@wcb.ns.ca

Corporate Website and WCB Online

wcb.ns.ca

Workplace Safety Tools and Resources

www.worksafeforlife.ca

Twitter

[@worksafeforlife](https://twitter.com/worksafeforlife)