



**SAFE
WORK**

S SPOT THE HAZARD
A ASSESS THE RISK
F FIND A SAFER WAY
E EVERYDAY

EVERYONE'S
RESPONSIBILITY



Musculoskeletal Injury Prevention

Safety and Health Program Supplement

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The prevention of MSI is a requirement of Manitoba Regulation 217/2006 Part 8.

8.1(1) When an employer is aware, or ought reasonably to have been aware, or has been advised, that a work activity creates a risk of musculoskeletal injury, the employer must:

- (a) ensure that the risk is assessed; and
- (b) on the basis of the assessment, implement control measures to eliminate or reduce, so far as is reasonably practicable, the risk of musculoskeletal injury to the worker.

8.1(2) The control measures may include one or more of the following:

- (a) providing, positioning and maintaining equipment that is designed and constructed to reduce or eliminate the risk of musculoskeletal injury;
- (b) developing and implementing safe work procedures to eliminate or reduce the risk of musculoskeletal injuries;
- (c) implementing work schedules that incorporate rest and recovery periods, changes to workload or other arrangements for alternating work;
- (d) providing personal protective equipment in accordance with Part 6 (Personal Protective Equipment).

8.1(3) An employer must:

- (a) monitor the effectiveness of any control measure implemented to eliminate or reduce the risk of musculoskeletal injury; and
- (b) where the monitoring identifies that a risk of musculoskeletal injury is not being or has not been eliminated or reduced, implement further control measures, where it is reasonably practicable to do so.

8.2 An employer must ensure that every worker who may be exposed to a risk of musculoskeletal injury:

- (a) is informed of the risk and of the signs and common symptoms of any musculoskeletal injury associated with the worker's work; and
- (b) receives instruction and training respecting any control measure implemented by the employer.

Introduction

Musculoskeletal injuries (MSI) are currently the most frequently recorded injury type for workers in Manitoba, and account for more than 50% of time-loss injuries in Manitoba. Investigations show that injuries happen more often in workplaces that do not have effective safety and health programs.

The purpose of this guide is to assist workplaces in integrating musculoskeletal injury (MSI) prevention into their Workplace Safety and Health Program. This guide is written so the information contained in each section can be directly inserted into the existing program.

A complete Workplace Safety and Health Program consists of the elements listed below. Highlighted are the six parts where Musculoskeletal Injury prevention is to be included.

- Write a policy that demonstrates your commitment
- **Identify and control hazards**
- Identify people and resources required to deal with emergencies
- Prepare a statement of responsibilities
- **Workplace inspections**
- Develop plans to control chemical and biological hazards
- Develop procedures to safeguard contracted employer(s) or self-employed person(s)
- **Developing a training plan for workers and supervisors**
- **Develop a procedure to investigate incidents, dangerous occurrences, and refusals to work**
- **Develop a strategy to involve workers**
- **Regularly evaluate and revise your program**

Section 1: Understanding Musculoskeletal Injuries

What is a Musculoskeletal Injury?

A "**musculoskeletal injury**" is an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue, including a sprain, strain or inflammation that may occur to a worker in a workplace.

To better understand what occurs, it is helpful to understand how ligaments, muscles and tendons can become injured.

A **sprain** occurs when a ligament stretched beyond its normal length. Ligaments are similar to supporting wires and connect bones together at the joints. Ligaments are strong and do not stretch much, providing strength and stability to a joint and protecting it against unwanted movement.

A **strain** is the stretching or tearing of a muscle or tendon. Muscles are designed to shorten and lengthen causing the bones to move. Every muscle in the body attaches to bone via a tendon.

Signs and Common Symptoms of MSI

It is important for employers and workers to recognize and address the early signs and symptoms of MSIs. Manitoba's Workplace Safety and Health Regulation requires employers to ensure that every worker who may be exposed to a risk of MSI is informed of the risk and of the signs and common symptoms of any MSI associated with the worker's work."

A *sign* of MSI can be observed, such as: *swelling, redness, difficulty moving a particular body part.*

A *symptom* of MSI can be felt but cannot be observed, such as: *numbness, tingling, pain.*

If a worker experiences signs or symptoms of a MSI, the supervisor must be informed and the worker should report to the first aid attendant and seek further medical attention. Signs and symptoms of MSI may appear suddenly from a single event, or they may appear gradually over time.

Workers must be trained:

- Not to ignore early signs and symptoms of MSI.
- How to properly report their signs and symptoms
- To seek treatment to prevent the injury from getting worse.

Section 2: Identify Hazards

W210 7.4(5)(b); MR 217/2006 sec 2.1, 2.2

The Workplace Safety and Health Act and Regulations support every worker's right to a safe and healthy workplace. The duty for creating and maintaining a safe and healthy workplace falls on every person in the workplace, to the degree of their authority and ability. As employers have the greatest degree of control over the workplace, they also have the greatest legal responsibility for safety and health.

The first step in reducing the risk of MSI is identifying those jobs which cause MSI. Helping the employer to identify and assess MSI hazards is an important function of the Workplace Safety and Health Committee. This section describes how the Workplace Safety and Health Program and Committee work best to decrease the risk of workers from suffering a MSI, and may be included in chapter 2: "Identifying and Controlling Hazards", of the existing Workplace Safety and Health Program.

Hazard Identification and Assessment

The safety and health of workers depends on cooperation between the Workplace Safety and Health Committee, employer, workers, and others to identify, assess and control hazards. Use the following steps to identify and assess MSI and other workplace hazards:

1. Collect information about the hazards
2. Assess the risk
3. Set priorities
4. Communicate information about the MSI hazards and risks to workers and supervisors

Once MSI hazards have been identified, effective control measures must be developed and put in place.

1. Collect information

Collect information regarding MSI from sources such as:

- Injury statistics – Reviewing the internal and WCB injury statistics will point to tasks or areas within the workplace that have an increased risk of MSI. Identify tasks with for strains/sprains and pulls/tears.
- Worker physical discomfort surveys (*Included in the appendix*)
- Interviews:

Workers often know or suspect what hazards are present and where they occur in workplace tasks. Ask workers the following questions;

- 1) “Where in your body are you sore/tired at the end of a shift or by morning coffee?”
- 2) “What part(s) of your job/task causes you to feel sore/tired?”
- 3) “What do you think can be changed about the job/task to reduce this soreness/fatigue?”
- 4) “How long has this soreness/fatigue been going on, and has it gotten worse, better, or remained constant?”

- Associations – Many provide training and can recommend appropriate publications from trusted sources such as the Canadian Centre for Occupational Safety and Health, Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST), l'Association paritaire pour la santé et la sécurité du travail du secteur affaires sociales (ASSTSAS), etc.
- Suppliers and manufacturers – Equipment manuals, users' guides, and hazard warnings often provide vital hazard information.
- Workplace Safety and Health Officers and Ergonomists can provide valuable recommendations. The WS&H Division delivers free MSI prevention training on a regular basis and has MSI educational videos available for loan.
- Legislation – The regulations and related guidelines are an excellent starting point for identifying and controlling hazards.
- Unions – Many unions provide safety and health training and information about hazards to their members.

2. Assess the risk

Once a hazard is identified, the next step is to perform a risk assessment. The risk assessment describes what aspects of the job may cause injury. It is important to note that a risk assessment does not need to be complex to be complete.

A risk for musculoskeletal injury is something a worker does that increases exposure to:

- Awkward/sustained postures,
- Repetitive movements
- Forceful exertions
- Vibration
- Mechanical compression
- A limitation on the worker's motion and/or action
- Contact Stress

If the source of the MSI risk is identified by workers familiar with the task and the employer, no further assessment is needed. A more detailed risk assessment is required where there is uncertainty or disagreement about the amount or source of the risk. In general, risk assessments involve ongoing observations. Look for any factors that could contribute to the risk.

Consider the following during risk assessment:

- Is there a history of MSI for workers performing this task?
- Were hazard controls implemented following the most recent injury?
- Are the hazard controls in place and being used properly?
- Work processes and design; Does the requirements of the job expose workers to MSI risk?
- Work schedules and job cycle times; Is there time for workers to pause when they feel tired or sore?
- Do worker body movements involve awkward or sustained postures
- Does the weight or shape of the tools used increase the amount of effort the worker must exert to hold, move or operate the tool?
- Is training delivered at the start of employment, or when a new task is assigned, with refreshers at regular intervals?
- Is consistent supervision present?

Risk

Risk describes the odds that a MSI hazard will cause harm. It refers to the probability and severity of potential incidents. Risk management is intended to be proactive, thus potential injuries in addition to those already reported should be considered

Several variables are used to determine the severity of a MSI risk includes:

- 1) Probability that a MSI hazard will cause harm
- 2) Severity of the MSI hazard
- 3) Frequency of exposure to the MSI hazard

Probability

Probability is the chance that a hazard will cause harm. In terms of musculoskeletal injury, probability can be categorized from highest (1) to lowest risk (4) using the following chart:

Probability	
1	Likely (musculoskeletal injuries have occurred to workers performing this task and are an ongoing concern)
2	Probable (workers have reported some pain or discomfort as a result of this task)
3	Possible (workers are exposed to MSI hazards on a daily basis but no reports of pain/discomfort)
4	Remote (the hazard could cause harm, but is unlikely to do so)

Severity

Severity is the seriousness of the harm that could result from exposure to a musculoskeletal injury risk factor. The harm experienced by workers is often difficult to see by the untrained eye, but is nonetheless significantly affecting the worker. Severity can be categorized from highest (1) to lowest (4) using the following chart:

Severity	
1	Long-term disability (a MSI requiring intensive medical attention, including surgery)
2	Lost Time Injury (a MSI requiring time away from work which may require physical therapy to correct, i.e. physiotherapy, massage therapy, chiropractic care, etc.)
3	Reportable injury, no lost time (workers reporting noticeable fatigue, and/or soreness by the end of the shift)
4	Minor (no injury and/or discomfort)

Frequency

Frequency is how often a worker is exposed to the hazard. The more frequent the exposure to a hazard, the greater the chance of a worker suffering an injury. Frequency can be described highest (1) to lowest (4) using the chart below:

Frequency	
1	> 75% of the day
2	50% - 75% of the day
3	25% - 50% of the day
4	< 25% of the day

Risk Assessment

The combination of identifying MSI hazards and assessing the likelihood of injury is called risk assessment. Risk analyses can help committee members and the employer in setting priorities. Normally, hazards with the highest risk that affect the most workers should receive the highest critical rating and therefore the greatest attention.

The example below shows one method of determining the MSI risk for a workplace task using numbers obtained from the preceding charts.

TASKS	POTENTIAL LOSS	Severity	Probability	Frequency	Total*	Critical Rating**
Carrying stock from cart to platform	Back injury	2	2	2	6	2

*Total of Severity, Frequency and Probability

**

Total	3 – 4	5 – 6	7 – 8	9 – 10	11 – 12
Critical Rating	1	2	3	4	5

Understanding the Critical Rating

1 – Most critical

5 – Least critical

Detailed Risk Assessment

In cases where the risks are not obvious, or not agreed upon by workplace parties, a more detailed MSI risk assessment is required.

Detailed risk assessments may include:

- Manitoba Ergonomics Risk Factor Checklist (*Web link in the appendix*)
- Ontario Musculoskeletal Disorder Checklist (*Web link in the appendix*)
- Revised N.I.O.S.H. lifting equation
- American Conference of Industrial Hygienists – MSI prevention standards
- MSI assessment reports prepared by consultants

3. Set priorities

In addition to section 2.1 of this document, some methods of determining priorities for MSI prevention activities in the workplace include:

1. Using the formula (Risk priority= Probability x Severity x Frequency), where a critical rating of “1” signifies a top priority;
2. Reviewing past injury statistics to identify tasks with the greatest number or severity of MSI;
3. Identifying critical, or bottleneck, positions where a MSI may significantly impact the performance of the organization; or
4. Using information previously obtained from a risk assessment.

Considering the current rate of MSI often exceeds all other types of injury in Manitoba workplaces, MSI risks should rank at the top of the list.

4. Communicate information

Early detection and reporting of MSIs may prevent the injury from progressing further if medical attention is sought and changes are made to the worker's job. MSI prevention efforts require communicating hazard information to workers and supervisors. Ensuring that workers and supervisors have a good understanding of MSI hazards leads to better hazard identification and better recommendations for hazard control.

- Workers must be aware of MSI hazards and control measures in the workplace in order to protect themselves.
- Workers have the right to know about the signs and symptoms of MSIs.

Workplace safety and health committees can help the employer communicate MSI prevention information. To do this, committee members should:

- Post information such as: signs and symptoms of MSI, minutes of committee meetings and meetings with the employer, the results of inspections, summaries of workplace monitoring, warning signs, and hazard labels.
- Discuss risks for MSI with workers, supervisors and managers.
- Hold meetings to discuss MSI concerns.
- Help the employer to arrange worker training and education.
- Keep workers informed about the status of their concern.
- Ensure the critical job inventory, job hazard analyses and safe work procedures refer to MSI hazards and controls.

Section 3: Controlling Hazards

W210 7.4(5)(b); MR 217/2006 sec 2.1, 2.2

Effective MSI prevention requires a good understanding of the hazard identification and MSI risk assessment. This section describes how to use the assessment to develop hazard control measures, and may be integrated into chapter 2: “Identifying and Controlling Hazards”, of your existing Workplace Safety and Health Program.

Controlling an MSI hazard involves removing the hazard, or at least reducing the likelihood that the hazard may cause an injury. Effective MSI prevention must meet four requirements:

1. It must adequately prevent the hazard from causing harm.
2. It must protect everyone who could be harmed by the hazard.
3. It must not create new hazards, or negatively impact production and quality.
4. It must not create a hazard to the environment or the public outside of the workplace.

To be proactive in MSI prevention, an employer should:

- Train managers, supervisors and workers to recognize risks for MSI.
- Give supervisors the training and resources to ensure workers follow MSI hazard controls (*As discussed in Section 5 of this guide*).
- Communicate the Workplace Safety and Health Policies through the management structure. Ensure everyone understands his or her duties.
- Build MSI prevention into all aspects of the organization such as:
 - Work Planning and Design:
 - Consider the adjustability and placement of equipment, machines, workstations, and tools to create a smooth work flow and minimize physical effort.
 - Avoid awkward and sustained postures by planning work to ‘fit the worker.’
 - Build in job-rotation schedules, and ensure that appropriate work-rest schedules are incorporated in the work-cycle. (*Discussed later in this section*)
 - Tendering:
 - Choose from contractors and suppliers who successfully demonstrate their commitment to MSI prevention (*Chapter 7 of the Safety and Health Program*).
 - Adjustability in products and workstations is valuable when it permits workers to avoid awkward and/or sustained postures.
 - Purchasing:
 - Considering risks for MSI when making purchasing decisions.
 - Purchasing in bulk often results in heavy or awkward material handling situations.
 - ‘One-size’ does not fit all workers.

- Training:
 - Recognizing risks for MSI and early reporting of MSI signs and symptoms is an important aspect of MSI prevention. *(As discussed in Section 5)*
 - Training in the proper usage of MSI control measures is a requirement of the Workplace Safety and Health Regulation 217/2006 8.2(b)
 - Workers should encourage each other to avoid exposure to MSI hazards.
- Maintenance:
 - Properly maintained equipment, tools and machines reduces worker exposure to the risks for MSI.
 - Develop and implement preventative maintenance schedules.
 - Review maintenance schedules regularly to ensure their effectiveness.

Technical steps in hazard control

As a first step in hazard control, determine if hazards can be controlled at their sources (where the problems are created). If this is not realistic, place controls between sources and workers. The closer a control is to the source of the hazard, the better. A combination of hazard controls often works well.

a) Control at the source

Elimination – First, try eliminating the hazard. Engineering out a hazardous job, tool, process, body position, or machine is the best way to protect workers.

Substitution – Example: Many older hand tools tend to be bulky and awkward. Consider substituting these tools with newer ones that are better designed.

Redesign – The layout of the workplace, workstations, work processes, tools, and jobs can often be redesigned to prevent risks for MSI. For example, containers can be redesigned to reduce the effort required to hold and lift them. Carts should be redesigned to allow the worker to push rather than pull them.

Automation – There are some tasks that are simply too damaging for the body to perform. These include extremely laborious / monotonous work. Wherever possible, a worker-operated machine should be used to reduce the physical exertion required by the worker.

b) Control at the level of the worker

Housekeeping, repair and maintenance programs:

- Keeping aisles clear may reduce awkward postures and tripping hazards,

- Maintaining tools, equipment and machinery including regular maintenance for vibrating hand-tools,
- Wheeled carts require a regular maintenance schedule to ensure workers aren't required to use extra force.

Administrative controls:

- New policies,
- Improving or clarifying safe work procedures,
- Specifying the body movements (biomechanics) workers will use,
- Educating workers and supervisors on the signs and symptoms of MSI.
- Modifying work schedules to reduce the time workers are exposed to a hazard,
- Implementing job rotation schedules to control MSI hazards due to repetitive work,

Notes on modifying work and rotation schedules:

- Rotation within a shift gives working muscles variety and rest
- Select jobs requiring the use of significantly different muscle groups for workers to rotate through.
- Adjusting work schedules to include rest breaks, mini-breaks (30-60 second), and stretch breaks, in order to reduce fatigue and “let the blood come back” to working muscles.
- If a worker sits during work, sitting down during a break is not, for example, a rest for the working muscles in the lower-back.

Personal protective equipment (PPE) and clothing – Personal protective equipment is much less effective in reducing MSIs than any other control measure since it does not directly address the hazard. It must be used properly and consistently to be effective.

Examples of PPE for MSI prevention include:

- High quality knee pads for workers required to perform work on their knees. This includes maintenance personnel, carpet layers, and pipe-fitters.
- Anti-vibratory gloves.

Review

The employer is responsible for ensuring that workplace MSI hazards are identified, assessed, appropriately controlled, and appropriately addressed via the Workplace Safety and Health Program. Workers have the ‘right to know’ and must be informed about the MSI hazards they may encounter and trained in how to reduce their risk.

The employer is expected to consult and involve the workplace safety and health committee in the hazard control process. Likewise, the committee is expected to work constructively with the employer to maintain a safe and healthy workplace. Helping the

employer identify, assess and control hazards is one of the most important roles of the committee or worker representative within the internal responsibility system.

Documenting the effectiveness of hazard controls in your committee minutes is part of the monitoring and evaluation process (*As discussed in section 8 of this guide*).

(More “review” points)

- Education for everyone in the workplace on MSI hazards will result in more effective hazard identification and better suggestions for job improvement.
- Worker and supervisor interviews are one of the simplest ways to identify hazards and control measures.
- Safe work procedures must include MSI hazard controls.
- Supervisors must be educated on, and prepared to reinforce MSI prevention measures. This education must include how to use proper body mechanics.
- Best practices in controlling MSI hazards involve physical changes to the work along with changes in work practices. The closer a control is to the source of the hazard, the more effective it will be.
- Risk assessments aid in the prioritization of safety and health activities in the workplace.

Key Additions to the Safety and Health Program

- Collect information regarding MSI hazards
- Perform risk assessments to determine MSI risk
- Implement a method for communicating MSI risks and information to workers and supervisors
- Give supervisors the resources to ensure workers use MSI hazard controls.

Section 4: Workplace Inspections

W210 7.4(5)(e); MR 217/2006 sec 2.4(1)(2)

Inspections are one of the most common and effective tools for identifying problems for correction before potential MSIs occur. Be sure to include MSI prevention in your regular workplace inspections. Inspections should also be used to encourage, and draw attention to, good safety and health practices including proper body movements. Include information developed from this section into chapter 5: “Schedule Inspections” of your existing workplace safety and health program.

Generally speaking, there are two types of inspections: Informal inspections and Formal, planned inspections.

Informal inspections – This is the on-going awareness of safety and health hazards and controls as workers do their jobs; basically speaking, this is people being aware of their work environment and those in it reporting a workplace hazard. They should understand how, and be strongly encouraged to report hazards since workers are often the first to recognize issues.

Two important aspects for encouraging MSI hazard reporting;

1. Taking concerns seriously, and
2. Keeping workers informed about the status of corrective action (when and how the correction will be made, or why the corrective action has been delayed or denied). Note: *The Workplace Safety and Health Act 41.1(2)* states:

“If an employer receives written recommendations from the committee or representative identifying anything that may pose a danger to safety or health of any person, the employer shall respond in writing to the committee or representative no later than 30 days after receiving the recommendations unless the employer implements all of the recommendations within 30 days of receiving the recommendations.”

Informal inspections should be performed by:

- Workers
- Supervisors
- Managers

Formal, Planned inspections – A Formal Inspection is a planned walk through or examination of a workplace, selected work area or particular hazards, machinery, tools, equipment and work practices. Formal Inspections help focus attention on change, and help solve problems before they cause MSIs.

Consider including the following in your workplace inspections:

1. **General MSI hazard recognition** – Safe Work Bulletin #247 “Recognizing MSI risks” is designed for the quick review of work activities in flagging tasks for further assessment. *(Included in the appendix)*
2. **Biomechanics (Body Movements)** – Pay special attention to the body movements that workers choose. Remember that safe work procedures call for specific body movements to reduce the exposure to awkward or sustained postures. It is important that supervisors are aware and thoroughly understand the proper body movements described in the safe work procedures. Supervisors must be prepared to encourage and monitor their use.
3. **Maintenance of Machines, Tools, Carts, etc.** – Using poorly maintained equipment will require workers to exert more force, thereby increasing their risks for MSI. Make sure that regular maintenance schedules exist and are being followed. These inspections help prevent equipment and machinery failure through early detection of problems and by setting priorities for servicing, adjustment, repair and replacement.
4. **Housekeeping** – Good housekeeping can minimize/eliminate slips, falls, and awkward postures due to walking or trip hazards which aid in the prevention of MSI. Housekeeping inspections should be done often by workers, maintenance personnel, and supervisors. They should focus on both the cleanliness and orderliness of the work area.
5. **Mechanical compressions** – Workers will often add padding when the hard or sharp edges of tools, machines and equipment press into their bodies and cause pain. This temporary padding indicates the presence of a mechanical compression hazard and requires proper hazard controls.

Ask these questions during all follow-up inspections:

- Have the implemented controls solved the problem?
- Has the risk posed by the original MSI hazard been eliminated or reduced?
- Have any new hazards been created?
- Are monitoring processes adequate?
- Have workers been adequately informed about their risk of injury and the proper use of control measures
- Do orientation and training programs incorporate implemented control measures?
- Are workers using control measures?
- Are further control measures required?

These questions have been included in the appendices for your convenience.

Monitoring the Effectiveness of Controls

Sometimes MSI hazard controls do not work as well as expected. Therefore, the Workplace Safety and Health Program must have a written plan to monitor the effectiveness of the implemented control measures.

Review

- Inspections are one of the most effective means of identifying hazards and monitoring the effectiveness of control measures.
- Observing body movements is very important and requires more time than a simple walk-through.
- Including MSI hazards during regular inspections will generate greater MSI awareness in the workplace.

Key Additions to the Safety and Health Program

- Include MSI prevention in the inspection process, with special attention to mechanics.
- Develop an internal system for collecting and addressing MSI hazard reports.
- Develop a procedure to follow-up with workers who make hazard reports

Section 5: A Training Plan for Workers and Supervisors

W210 7.4(5)(h)

What is Training?

Training means more than simply providing information. It requires a practical demonstration by the trainer and a successful return demonstration by the trainee. The return demonstration will ensure that the skill or knowledge related to the job has been learned and understood. Legal diligence requires the workplace to maintain records of a) who was trained, b) what information was provided in that training, and c) a monitoring plan to ensure that workers and supervisors are using the training.

Safety and health education and training is critical to the Workplace Safety and Health Program and to preventing MSIs. Information obtained in this section can be included in chapter 8: “Develop a Training Plan” of your existing Workplace Safety and Health Program.

MSI prevention training for workers and supervisors should include;

- Signs and common symptoms of MSI, and
- Use of control measures implemented by the employer to reduce the risk of MSI, and
- Proper body movements during work to reduce the risk of MSI, and
- Safe material handling, including lifting, carrying, pushing, and pulling, and
- Updated safe work procedures.

Where practicable, body movement training should be hands-on, using real workplace examples.

Workers should be taught proper body mechanics and MSI prevention for their job as part of their comprehensive training and;

- At the commencement of employment, and
- When reassigned or transferred to a new job, and
- When new equipment, processes, or procedures are introduced, and
- When they are regularly observed using improper bio movements, and
- When planning for non-routine or irregular tasks.

Regular review and retraining regarding MSI prevention;

- is required for both workers and supervisors, and
- should not be seen as an unpleasant task, but as an opportunity for improvement, and

- is needed when supervisors or workers observe others performing work incorrectly, and
- must be included in the Return to Work Program

It is beneficial to develop a procedure for supervisors so that they will be able to identify and recommend workers for re-training.

Review

- Body movement training is most effective when it is hands-on and uses actual workplace examples.
- Supervisors must receive at least the same training as workers, if not more, to ensure effective supervision.
- Training regarding proper body movements and MSI hazards is required when a worker begins a new job, and when a new piece of equipment or new process is introduced to the workplace.

Key Additions to the Safety and Health Program

- Develop training for workers and supervisors on signs and common symptoms of MSI, use of control measures, proper body mechanics, and safe material handling.
- Develop a procedure to provide regular review and re-training for MSI hazards of job functions.

Section 6: Investigating Incidents

W210 7.4(5)(i); MR 217/2006 sec 2.9

Investigations of incidents provide valuable information needed to prevent reoccurrence. Information obtained from this Section can be incorporated into chapter 9: “Investigating incidents, Dangerous Occurrences, and Refusals to work”, of your existing Workplace Safety and Health Program.

The term ‘**incident**’ describes both time-loss injuries and dangerous occurrences where an injury has nearly occurred. A MSI reported to the WCB or a worker reporting signs and symptoms of MSI are both considered to be incidents. Investigate incidents of MSI with the same procedures and resources as any other safety or health related incident.

Incidents of MSI may be difficult to link to a specific event, since they may have developed gradually over time due to exposure to specific risk factors. Whether the MSI developed gradually or from a single event, a hazard assessment and a review of the safe work procedures (control measures) are required by Manitoba Workplace Safety and Health Regulation as follows:

- 8.1(1)** When an employer is aware, or ought reasonably to have been aware, or has been advised, that a work activity creates a risk of musculoskeletal injury, the employer must
- (a) ensure that the risk is assessed; and
 - (b) on the basis of the assessment, implement control measures to eliminate or reduce, so far as is reasonably practicable, the risk of musculoskeletal injury to the worker.

Key Additions to the Safety and Health Program

- MSIs are considered incidents under the Workplace Safety and Health Act and Regulations and trigger investigations similar to any other workplace injury, illness or near miss.
- MSI incident investigations use the same procedures, resources, and skills as any other safety and health incident.

Section 7: Involving Workers

W210 7.4(5)(j)

The most successful Workplace Safety and Health Programs prevent MSIs by educating and involving workers. Workers tend to have a great deal of knowledge about MSI hazards and potential solutions without even realizing it. A worker performing a job daily who regularly experiences soreness and/or fatigue has likely considered what is stressing their body and how the physical job design or work procedure might be improved.

Ask workers the following questions to determine their exposure to risks for MSI;

- 1) Where in your body are you sore or tired at the end of a hard day?
- 2) What aspect of your job makes you feel sore or tired?
- 3) How long has this been going on for?
- 4) What do you think could be changed to reduce your soreness or fatigue?
- 5) Do your symptoms improve with a good nights sleep or on the weekend?
- 6) How long after you start work do your symptoms start?

A good worker participation strategy will minimize the risk of a MSI incident or work refusal occurring in the workplace. The safety and health program functions best with the support of everyone, from senior managers to new workers. This section may be included in chapter 10: “Involving Workers” of your existing Workplace Safety and Health Program.

Everyone must know:

- Their role in the safety and health program.
- Their rights and responsibilities under the Manitoba Workplace Safety and Health Act and Regulations.
- How to report/deal with MSI concerns.
- How to suggest improvements in the Workplace Safety and Health Program.
- Their concerns and suggestions will be taken seriously.
- They will not be subjected to reprisals from participating in MSI prevention.

Key Additions to the Safety and Health Program

- Workers are included in Workplace Inspections *(As discussed in Section 4)*

Section 8: Evaluating the Program

W210 7.4(5)(k)

Musculoskeletal injuries are currently the single largest source of lost-time in Manitoba workplaces. The evaluation process should therefore ensure that the Workplace Safety and Health Program is effective in the area of MSI prevention. Incorporate this section into chapter 11: “Evaluate the Program” of your existing Workplace Safety and Health Program.

The Workplace Safety and Health Act W210, section 7.4(5)(k) states that, at the minimum, the Program as a whole must be reviewed and revised every three years. However, reviews and revisions to the Program should occur on an ongoing basis and include:

- 1) Changes in the workplace that may increase the risk of injury, including MSI (increased production demands, introduction of new technologies, changes in production methods).
- 2) Problems that have been identified through inspections, early reporting of concerns, audits, and investigations.
- 3) Identification of better ways to perform work with recommendations provided to the employer by the Workplace Safety and Health Committee.

The objective of the review procedure is to ensure that your program works through the effective implementation of MSI hazard controls.

Questions to consider during the review:

- Are workers and supervisors trained on and made familiar with the Workplace Safety and Health Program?
- Do they know how to access the written Program?
- How common are MSIs in your workplace?
- How does your Workplace MSI rate compare with that of others in your industry? (This information is available from your Case Manager at the Workers Compensation Board of Manitoba)
- Are risks for MSI considered when purchasing, using and installing tools, equipment, and machinery?
- Can existing tools, equipment, and machinery be modified to include modern MSI hazard controls?
- Are tools, equipment, and machinery adequately maintained and serviced?
- Do supervisors understand the proper body movements that are used when workers perform their jobs?
- Are written policies, procedures, and plans followed and if so, are they effective?

- Are supervisors properly prepared and equipped to handle workers who are repeatedly observed using improper body mechanics?
- Are workers and supervisors involved in setting safety and health objectives and measurements?
- Does everyone understand what is expected?
- Are people rewarded for excellence in safety and health performance as they are for excellence in other areas?
- Is the organization prepared to ensure managers, supervisors, and workers carry out their responsibilities?

These questions have been included in the appendices for your convenience

Section 9: Appendicies

Web-Based Resources

Safe Work Manitoba website

<http://www.safemanitoba.com>

British Columbia - Workers Compensation Board ergonomics page

<http://www2.worksafebc.com/Topics/Ergonomics/Home.asp>

Washington State - ergonomics ideas bank

<http://www.lni.wa.gov/Safety/Topics/ReduceHazards/ErgoBank/default.asp>

Ontario - MSD Risk Assessment Checklist

http://www.iapa.ca/documents/MSD_2006%20Prevention_Toolbox.pdf

Inspection Checklist

- Do safe work procedures contain information on MSI prevention, and include body movements?
- Are workers observed using improper body movements?
- Are machines, jigs, and workstations properly adjusted to permit good working posture?
- Are workers familiar with the signs and common symptoms of MSI and how to report pain and/or discomfort?
- Are workers using MSI prevention control measures?

Action List

Identify Hazards

- Jobs with a history of MSI have been marked for assessment
- Assessments have been performed on jobs
- Priorities have been set
- Workers have been made aware of their exposure to MSI hazards

Controlling Hazards

- Safe work procedures have been updated to include MSI hazard controls
- Jobs containing MSI hazards are being modified or are scheduled to be modified
- A method of communicating information regarding MSI hazards and risks to workers and supervisors has been developed

Workplace Inspections

- MSI prevention has been included in the inspection process, with a specific focus on body movements
- An internal system for collecting and addressing MSI hazard reports has been developed
- A procedure to follow-up with workers who make hazard reports has been developed

A Training Plan for Workers and Supervisors

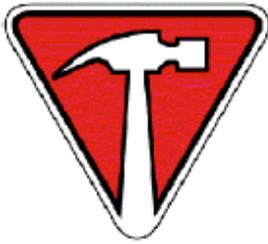
- Supervisors have been trained:
 - On the demonstration and encouragement of proper body movements that workers are expected to use
- Workers have been trained:
 - On the use of proper body movements
 - Not to ignore early signs and symptoms of MSI.
 - How to properly report their signs and symptoms
 - To seek treatment to prevent an injury from getting worse.

Investigating Incidents

- MSIs are recognized as incidents by workplace parties
- MSI incident investigation uses the same procedures, resources, and skills as any other safety and health incident.

Involving Workers

- Workers are involved in workplace inspections
- Workers are interviewed regarding their knowledge of MSIs



SAFE WORK

S
A
F
E

SPOT THE HAZARD
ASSESS THE RISK
FIND A SAFER WAY
EVERYDAY

No. 247
November 2008

Recognizing MSI Risks

This bulletin is written to assist you in identifying risks for Musculoskeletal Injury (MSI) in a particular task. Including workers who perform the task in this risk identification process will increase the accuracy.

How to use this form:

Step 1: Read the MSI hazards definitions below.

Step 2: Choose a task that contains MSI hazards and observe workers performing the task.

Step 3: Record the title and a description of the task at the top on the reverse side of this page.

Step 4: For each hazard listed indicate the body part(s) exposed and what aspect of the task creates the hazard.

Step 5: For each hazard, consult with the workers performing the task and circle the perceived risk presented by the hazard as either: Low (L), Medium (M), or High (H).
Low – not likely to cause injury; Medium – may cause injury; High – likely to cause injury

Step 6: Discuss the results of this form with the workplace safety and health committee to determine what actions are to be taken in order to eliminate or reduce the risk of workers suffering an MSI.

MSI Hazards

Repetitive Motion: Performing the same sequence of actions for an extended period of time with little or no change in the muscles used (i.e. working the same station on an assembly line).

Forceful Exertion: Performing an action that has the potential to overload the body tissues (i.e. moving a heavy object).

Sustained or Awkward Posture / Limitation on Motion or Action: Work elements (tools, workstations, processes, etc.) that cause the worker to adopt body positions that increase the stress on the joints or soft tissues of the body (i.e. twisting the upper body, over-reaching, bending forward at the waist, bending the wrist).

Vibration: The direct transfer of repeating (back and forth) movements of a machine, or tool, to the body. Vibration occurs as hand-arm (i.e. using a vibrating hand tool for prolonged periods) or whole-body vibration (i.e. vibration transmitted through a vehicle cab to the operator's body).

Mechanical Compression: External pressure on the soft tissues, either at high forces and/or for prolonged periods of time (something hard, i.e. a tool or the edge of a workstation, pressing into a part of the body).

Task _____

Completed by _____

Description _____

Date _____

MSI Risk	Source(s) of Hazard	Body Part(s) Affected	Degree of Risk
Repetitive Motion			L M H
Forceful Exertion			L M H
Awkward or Sustained Posture			L M H
Vibration			L M H
Mechanical Compression			L M H

SYMPTOMS SURVEY

Please answer all questions truthfully and to the best of your ability.

1. Date: ____ / ____ / ____ 2. Name: _____
Month Day Year (Optional)
3. Job Title: _____
4. Department: _____ 5. Shift: _____
6. Describe the type of work you perform in this job and the amount of time each day spent on these activities.
- | | |
|--------------|-------------|
| Tasks: _____ | Time: _____ |
| _____ | _____ |
| _____ | _____ |

Personal Information

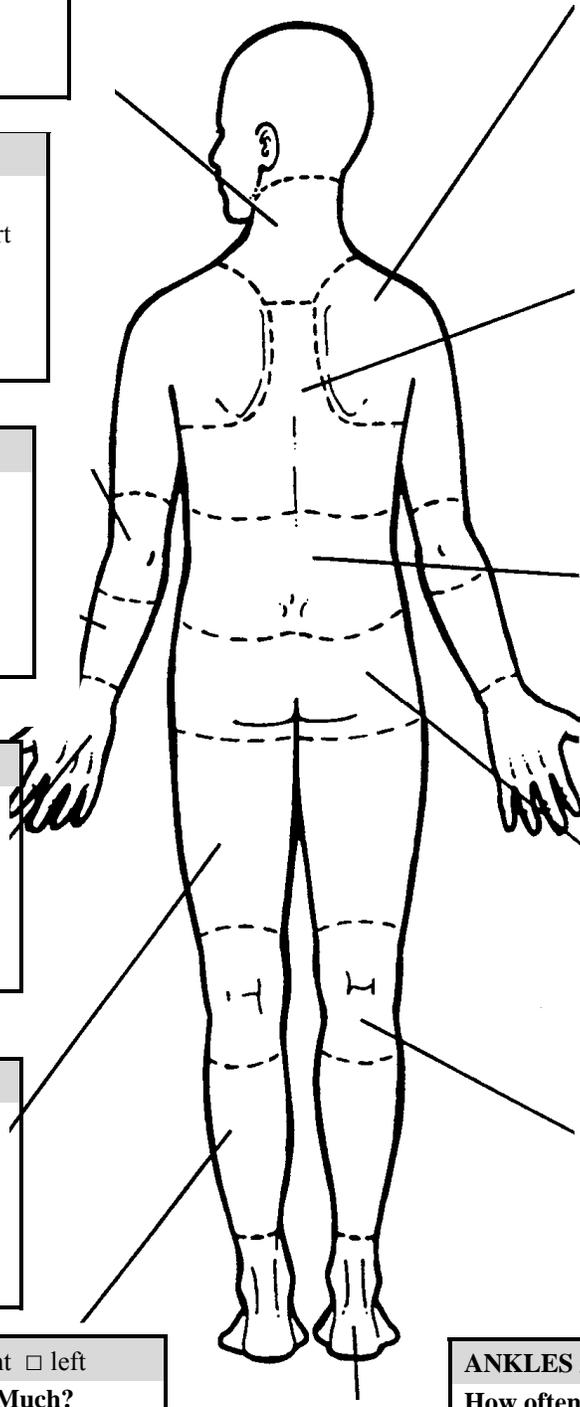
7. Height: ____ feet and inches, or ____ cm
9. Gender: female male
10. Which hand is your dominant hand? (please check one): left right either
11. How long have you worked in your **current** position?
- Less than 3 month
 - 3 months to 1 year
 - 1 year to 5 years
 - 5 years to 10 years
 - Greater than 10 years
12. How often are you **mentally** exhausted after work? 13. How often are you **physically** exhausted after work?
- | | |
|--|--|
| <input type="checkbox"/> Never
<input type="checkbox"/> Occasionally
<input type="checkbox"/> Often
<input type="checkbox"/> Always | <input type="checkbox"/> Never
<input type="checkbox"/> Occasionally
<input type="checkbox"/> Often
<input type="checkbox"/> Always |
|--|--|
14. Have you ever had any pain or discomfort during the last year that you believe is related to your work?
- Yes No (if **NO, stop here**)
15. If **YES**, for each body part described in the boxes on the reverse side of this page, please indicate:
- How often you have discomfort in each body part
 - The severity of discomfort
 - Whether the pain interferes with your ability to do your job
 - On which side of the body the discomfort is felt

For each area with 'Pain' or 'Severe Pain', or in which 'Discomfort' is felt 'Always', please indicate what you think may have caused the problem, and check either 'yes' or 'no', to indicate whether you have suffered a previous injury to this body part.

BODY PART	PREVIOUS INJURY	POSSIBLE CAUSE OF PROBLEM
	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	

PHYSICAL DISCOMFORT SURVEY

Please note: 'pain' may include aches, stiffness, numbness, tingling or burning sensations



NECK	
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

SHOULDERS	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

ELBOWS	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

UPPER BACK	
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

FOREARMS	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

LOWER BACK	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

WRISTS/ HANDS	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

HIPS	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

THIGHS	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

KNEES	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

LOWER LEGS	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

ANKLES / FEET	<input type="checkbox"/> right <input type="checkbox"/> left
How often?	How Much?
<input type="checkbox"/> Never	<input type="checkbox"/> No Discomfort
<input type="checkbox"/> Occasionally	<input type="checkbox"/> Discomfort
<input type="checkbox"/> Often	<input type="checkbox"/> Pain
<input type="checkbox"/> Always	<input type="checkbox"/> Severe Pain

