Ergonomics & Musculoskeletal Injuries (MSI) Prevention Compliance Game Plan

Musculoskeletal injuries (MSIs) won't kill your workers. They'll just inflict the kind of pain and damage that makes it impossible for them to work, ruins their lives and drives up your company's workers comp costs. MSIs and soft tissue injuries have become the fastest growing segment of workers comp lost time injury claims. Whether specifically spelled out or implied, OHS laws require employers to implement what are known as "ergonomic" and other measures to protect workers from MSI risks. Here's a 12-step game plan to ensure compliance with ergonomics and MSI prevention requirements regardless of where in Canada you operate.

Step 1. Create an MSI Hazard Assessment Team

The first step is to identify and assess the hazards that may lead to MSIs to you own workers. Hazard assessment should be led by somebody with experience and training in MSIs and OHS requirements. If nobody at your company has the necessary knowledge and experience, consider bringing in an outside consultant. Others who should be part of the MSI hazard assessment teams include:

- Representatives of departments and operations that may

have MSD problems;
- Supervisors of high-risk operations or activities;
- JHSC members;
- Workers who have symptoms of MSIs; and
- A representative sample of the workers required to perform the work tasks assessed.

Step 2. Identify the Right MSI Risk Factors

MSI hazard assessment shouldn't be one but a series of assessments, each of which focuses on a different set of MSI risk factors, including:

- **The physical environment** in which work is done, e.g., architectural, design, the layout of work spaces and configuration of work stations;
- **The thermal conditions** in which the work is performed;
- **Job-specific risk factors** associated with particular tasks, e.g., those involving lifting of heavy or bulky objects, twisting or bending, tight gripping, contact stress, awkward postures, continuous repetition and/or exposure to vibration; and
- **Individual risk factors,** or personal characteristics of workers affecting how well they can stand up to MSD stresses, e.g., their age, sex, weight, physical condition and/or allergies.

Also keep in mind that many if not most MSIs are cumulative rather than traumatic. In other words, they happen gradually as a result of repeated exposure to the risk factor over a period of time rather than as a result of a discrete incident:

- **Traumatic MSI:** A worker suffers a wrist sprain when trying to lift a heavy object;
- **Cumulative MSI:** A worker suffers a wrist injury as a result of bending it on a keyboard for 6 hours per day over a 3-year period.

Implementation Strategy: Methods of office workstation MSI hazard assessment include examination of the physical space, including the home office where possible, analyzing ergonomic injury report records, surveying workers and directly observing workers as they actually perform their duties.

Step 3. Identify MSI High-Risk Areas

The next phase in hazard assessment is to actually identify MSI hazards in your workplace. Focus on jobs, operations, and departments that pose the greatest risks of MSIs. Methods you can use to identify high-risk areas include:

- Direct observation by one or more knowledgeable individuals of how different jobs are carried out;
- Reviewing injury logs, incident reports, workers comp claims and other records that may reveal MSI patterns or trends;
- Interviewing individuals who've reported signs or symptoms of MSIs; and
- Records of recommendations by the workplace JHSC or health or safety rep or outside consultants.
- Recommendations and findings of outside consultants.

Step 4: Assess Severity of MSI Hazards You Identify

Companies may not have the resources necessary to address all of the MSI hazards they identify. As a result, they have to assess each of those hazards and determine its level of priority based on the particular hazard's:

- **Severity** and intensity—the potential damage it could inflict were it to occur;
- **Likelihood** to actually cause an MSI based on factors like the duration and frequency of exposure; and
- **Correctability,** including the complexity of the hazard's cause(s), whether technology and other solutions are

available, how much they cost and how feasible they are to implement at your workplace.

Step 5. Consider Elimination of High-Hazard Tasks

Canadian OHS laws require employers to follow the so-called hierarchy of controls approach to managing the workplace hazards they identify. The top of the hierarchy is totally eliminating the hazard, for example, by no longer performing the operation which creates the hazard or at least doing it in a way that makes the hazard disappear. If total elimination isn't reasonably practicable, employers must descend to the next highest layer of the hierarchy.

Step 6. Try to Engineer Away MSI Hazards

The next tier is the use of engineering controls to reduce the hazard. Appropriate engineering controls for MSI hazards may include:

- Use of mechanical devices that eliminate the need to manually lift, move and transport heavy or awkward objects or loads;
- Adjusting chairs, work benches and other furnishings so the workspace better fits the worker;
- Use of ergonomically designed tools like low vibration jackhammers or hand tools with handles that require less force to grip; and
- Ergonomically designed computer workstations for office settings.

Step 7. Implement Work/Administrative Controls for MSI Hazards

The next layer of controls, which can be used either as a supplement to or a substitution for engineering controls that

aren’t reasonably practicable are administrative controls that make the work safer by changing how it’s carried out. The starting point is to implement safe work practices enabling workers to carry out tasks posing high risk of MSIs:

- While maintaining a safe posture;
- With minimum repetition;
- With minimum contact stress; and
- Without having to reach above, below or across the body.

Other administrative/work controls for MSIs may include:

- Using teams of workers to lift heavy or awkward objects (or patients in healthcare settings);
- Rotating workers in and out of high-risk tasks to prevent repetition and continuous exposure;
- Giving workers regular rest breaks to recover; and
- Alternating heavy with light tasks.

Step 8. Use PPE & Protective Equipment to Reduce MSI Hazards

PPE and protective equipment is the control of last resort. Equipment that can protect workers exposed to MSI hazards to consider includes:

- 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 surfaces;
- Footwear with anti-fatigue insoles, which is especially useful for working on hard surfaces that can’t be covered with mats;
- Knee and elbow pads to minimize the stress and fatigue from contact with hard or sharp surfaces;
- Foot rests for workers who remain seated for prolonged periods; and

- Wrist splints and braces to limit arm and wrist movements that can cause or aggravate MSI.

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

Step 9. 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 for should cover:

- What MSIs are;
- The causes of MSIs and how workers can get them from the job tasks they perform;
- 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 to maintain safe posture;
- Other measures in place to protect workers from MSIs;
- The symptoms and signs of an MSI and what workers should do if they experience them; and
- The procedures for reporting injuries and hazards.

Verify that workers actually understand and are capable of applying their training on the job by:

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

Step 10. Protect Telecommuters & Remote

Workers from MSI Risks

The employer's duty to protect workers from MSIs and other workplace hazards may extend to those who work from home or a remote location. While the issue remains unresolved, OHS liability for the safety of telecommuters is likely of greatest risk to employers who aren't in Ontario, Manitoba, New Brunswick or Yukon. To carry out your OHS obligations, consider doing a walk-through inspection of the telecommuter's work area and identifying health and safety hazards as comprehensively as you do at your own facilities. Be on the lookout for MSI hazards, like improperly configured workstations, desk chairs and keyboards. Require telecommuters to take measures to correct the hazards you identify and provide you video or other verification of those corrections.

Step 11. Monitor Your Ergonomic Controls

You need to continually monitor the controls you implement to ensure they're effective, identify problems and make the necessary corrections. Carry out monitoring on a regular basis, perhaps as part of monthly work inspections and scheduled safety audits, and in response to indications that current measures may be inadequate. Red flags to look for:

- Workers exhibit or report signs and symptoms of MSIs;
- Workers report or complain about ergonomic hazards;
- 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.

Step 12. Document Your Ergonomic Control Measures

Last but not least, keep careful records documenting the program you implement to assess and correct MSI hazards so you

can review the effectiveness of your efforts and demonstrate compliance with OHS requirements.