

# Appendices

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## Appendix I: WorkSafeBC ergonomics (MSI) requirements

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This appendix reprints the ergonomics requirements detailed in Sections 4.46 to 4.53 of the Occupational Health and Safety Regulation. These requirements represent the minimum standards that must be complied with at workplaces that fall under WorkSafeBC jurisdiction and within the scope of the *Workers Compensation Act*.

### Ergonomics (MSI) Requirements

The purpose of sections 4.46 to 4.53 is to eliminate or, if that is not practicable, minimize the risk of musculoskeletal injury to workers.

**Note:** WorkSafeBC provides publications to assist with implementing the Ergonomics (MSI) Requirements. *Preventing Musculoskeletal Injury (MSI): A Guide for Employers and Joint Committees* provides a seven-step process to assist with the application of the ergonomics requirements along with procedures to investigate incidents of MSI and a table of common control measures. *Understanding the Risks of Musculoskeletal Injury (MSI)* is intended to help employers with the requirements of Section 4.51(1) to educate workers in risk identification, signs and symptoms of MSI, and their potential health effects.

#### 4.46 Definition

In sections 4.47 to 4.53 (the Ergonomics (MSI) Requirements)

*“musculoskeletal injury” or “MSI” means an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue including a sprain, strain and inflammation, that may be caused or aggravated by work.*

#### 4.47 Risk identification

The employer must identify factors in the

workplace that may expose workers to a risk of musculoskeletal injury (MSI).

#### 4.48 Risk assessment

When factors that may expose workers to a risk of MSI have been identified, the employer must ensure that the risk to workers is assessed.

#### 4.49 Risk factors

The following factors must be considered, where applicable, in the identification and assessment of the risk of MSI:

- (a) the physical demands of work activities, including
  - (i) force required,
  - (ii) repetition,
  - (iii) duration,
  - (iv) work postures, and
  - (v) local contact stresses;
- (b) aspects of the layout and condition of the workplace or workstation, including
  - (i) working reaches,
  - (ii) working heights,
  - (iii) seating, and
  - (iv) floor surfaces;
- (c) the characteristics of objects handled, including
  - (i) size and shape,
  - (ii) load condition and weight distribution, and
  - (iii) container, tool and equipment handles;
- (d) the environmental conditions, including cold temperature;
- (e) the following characteristics of the organization of work:
  - (i) work-recovery cycles;
  - (ii) task variability;
  - (iii) work rate.

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#### **4.50 Risk control**

- (1) The employer must eliminate or, if that is not practicable, minimize the risk of MSI to workers.
- (2) Personal protective equipment may only be used as a substitute for engineering or administrative controls if it is used in circumstances in which those controls are not practicable.
- (3) The employer must, without delay, implement interim control measures when the introduction of permanent control measures will be delayed.

#### **4.51 Education and training**

- (1) The employer must ensure that a worker who may be exposed to a risk of MSI is educated in risk identification related to the work, including the recognition of early signs and symptoms of MSIs and their potential health effects.
- (2) The employer must ensure that a worker to be assigned to work which requires specific measures to control the risk of MSI is trained in the use of those measures, including, where applicable, work procedures, mechanical aids and personal protective equipment.

#### **4.52 Evaluation**

- (1) The employer must monitor the effectiveness of the measures taken to comply with the Ergonomics (MSI) Requirements and ensure they are reviewed at least annually.
- (2) When the monitoring required by subsection (1) identifies deficiencies, they must be corrected without undue delay.

#### **4.53 Consultation**

- (1) The employer must consult with the joint committee or the worker health and safety representative, as applicable, with respect to the following when they are required by the Ergonomics (MSI) Requirements:
  - (a) risk identification, assessment and control;
  - (b) the content and provision of worker education and training;
  - (c) the evaluation of the compliance measures taken.
- (2) The employer must, when performing a risk assessment, consult with
  - (a) workers with signs or symptoms of MSI, and
  - (b) a representative sample of the workers who are required to carry out the work being assessed.

## Appendix II: Occupational health and safety programs

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### Why is an occupational health and safety program needed?

Part 3 of the Occupational Health and Safety Regulation describes the requirements of an occupational health and safety program for the prevention of workplace injury and disease. Effective occupational health and safety programs help prevent:

- Incidents that result in work-related injuries or diseases
- Near misses (incidents that cause no visible injury or damage but that could result in a serious injury, death, or property damage)
- Human impacts of incidents (for example, pain, suffering, and disability)
- Financial impacts of incidents (for example, the costs of hiring replacement workers or paying overtime)
- Damage to property, equipment, and the environment

An effective occupational health and safety program will also:

- Clarify the responsibilities and roles of management, supervisors, and workers for ensuring a healthy and safe workplace
- Provide direction to those responsible for specific sections of the program
- Clarify health and safety policies and procedures
- Encourage workers to freely express their concerns about health and safety
- Help ensure compliance with the Regulation

Depending on the hazard classification of a facility and the number of workers employed, an employer may be permitted to have a less formal health and safety program than the one described in this Appendix. This generally applies to facilities that are a “C” hazard and have fewer than 50 workers.

### Elements of an occupational health and safety program

Each health and safety program must include the following seven elements:

1. A written occupational health and safety policy that:
  - States the employer’s commitment to making health and safety a priority
  - States the program’s objectives
  - Defines the roles and responsibilities of the employer, supervisors, and workers
2. Written safe work procedures and emergency response procedures
3. Education and training for workers
4. Regular workplace inspections
5. Regular (at least monthly) health and safety meetings
6. Incident investigations
7. Records and statistics (for example, reports of inspections and incident investigations)

#### Other WorkSafeBC publications

For more information on occupational health and safety programs, see the WorkSafeBC publications *How to Implement a Formal Occupational Health and Safety Program* and *Effective Health and Safety Programs: The Key to a Safe Workplace and Due Diligence*.

#### 1. A written occupational health and safety policy

A written occupational health and safety policy is a formal expression of an employer’s commitment to health and safety that states the roles and responsibilities of the employer, supervisors, and workers. Expressing a general commitment to preventing and addressing MSI in the workplace

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lends support to the more specific processes of risk identification, assessment, and control. A policy can also help define key words and concepts, specifically the concept of a no-lift environment.

## **2. Written safe work procedures and emergency response procedures**

Written safe work procedures clarify how workers should perform their duties in a safe manner. Written safe work procedures can:

- Identify hazards and explain what must be done to eliminate or minimize these hazards
- Guide and direct workers in the safe performance of their jobs
- Be used as training standards

Written safe work procedures should include patient handling procedures that can be used in the worker training component of the health and safety program. These procedures are useful references during inspections and incident investigations. Written safe work procedures form the basis of an employer's ongoing training program.

It is also important to provide written emergency response procedures that explain what workers should do in situations such as patient evacuation.

## **3. Education and training for workers**

Employers are responsible for providing workers with thorough, site-specific training and continued instruction in the facility's health and safety program and procedures. Employers must also document training and instruction. Employers should ensure that education and training for health care workers include the following:

- Hands-on practical training in patient handling techniques (for example, orientation, crew talks, on-the-job training, and refresher training).

- Competency testing for the techniques taught, preferably in the care setting.
- Information on the potential areas of injury or risk in each patient handling procedure so that workers will be aware of and able to avoid these risks.
- Patient and work environment risk factors that may warn a worker to abort a particular lift or transfer. This instruction supports the worker completing a pre-handling assessment to confirm if the patient is still suitable for the given technique that has been designated.
- On-site direction and instruction by supervisors to ensure that workers perform their jobs safely.

## **4. Regular workplace inspections**

Regular workplace inspections are part of maintaining a healthy and safe work environment. Inspections help:

- Determine if the workplace, machinery, equipment, and safe work practices meet health and safety standards
- Identify unsafe conditions and acts that have the potential to cause injury, so that corrective measures can be taken

Employers must ensure that workplace inspections are conducted at intervals that will prevent the development of unsafe working conditions. Lifts, transfer aids, beds, and other equipment should be inspected regularly to ensure that they are in safe operating condition. Also, safe work practices should be examined to ensure the safe handling of patients. Workplace inspections combined with preventative maintenance programs and hazard reporting systems will help ensure a healthy and safe environment for both workers and patients.

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## 5. Regular health and safety meetings

Regular management meetings must be held to review program activities and incident trends and to determine necessary courses of action.

## 6. Incident investigations

Employers are required to investigate incidents in which workers required medical treatment or there was only a minor injury but the potential for serious injury was present. Incident investigations help:

- Determine causes of incidents, near misses, injuries, and diseases so that corrective actions can be taken to prevent them from recurring
- Identify unsafe conditions, unsafe acts, and unsafe work procedures and recommend solutions to prevent them from recurring

MSI investigations can be difficult because causative and contributing factors are not always evident. When investigating MSIs or early signs of MSI, consider the risk factors listed in Section 4.49 of the Regulation. Division 10 of the Act specifies requirements for incident reporting and investigations.

## 7. Records and statistics

Accurate and complete records and statistics are necessary for the prevention of work-related injuries and diseases. Having the right records and statistics helps employers, supervisors, and workers make informed decisions about health and safety matters and determine whether prevention goals are being met. Records and statistics help:

- Document the history of the occupational health and safety program and improvements made to it
- Provide a record of program activities such as orientation, training, inspections, incident investigations, and sampling

- Identify trends, unusual conditions, and problem areas

In general, the most useful injury and disease statistics are those that pinpoint incident and injury types, hazards, tasks, and conditions—specifically by location and occupation, if possible.

Health care records and statistics may include:

- Risk assessment reports
- Hazard investigation reports
- Inspection reports
- First aid records
- Incident investigation reports
- Injury and disease claims forms
- Education and training records
- Hepatitis B vaccination records

Maintaining records and statistics helps employers, managers, and joint health and safety committees (or worker health and safety representatives) answer important questions, including the following:

- How many time-loss injuries have there been this month? This year? How do these counts compare with the counts for the same periods last year?
  - What are the most common injury types? Incident types? Causes? Body parts injured?
  - What is the injury rate (the number of time-loss claims per 100 person-years of employment) for our organization? How does this rate compare with those of other employers who provide similar services?
  - What are our claims costs so far this year?
  - Have incident investigations been completed for all recordable incidents?
  - Have workplace inspections been completed for each month? Have all deficiencies been corrected?
  - Have all new workers received a health and safety orientation?
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### *First aid records*

Detailed records of first aid treatment provide employers and joint health and safety committees (or worker health and safety representatives) with information they can use to:

- Identify the type and severity of work-related injuries
- Identify work areas and practices that may be causing injuries
- Identify potential problems that require closer examination during workplace inspections
- Determine corrective actions
- Assess the effectiveness of first aid and safety programs and safe work procedures

Employers must ensure that records are kept for 10 years of all work-related injuries and diseases that have been reported or treated, whether or not the injuries lead to further treatment or the filing of a time-loss claim. In workplaces where a first aid attendant is required, the attendant is responsible for keeping records of all first aid treatment.

These records must be clear, concise, and correct. It is essential to keep accurate and factual accounts of an injured or ill worker's condition, from the time of the incident until their arrival at a medical facility. If some of the information is not available at the time of the incident, it must be gathered and recorded as soon as possible. When information on work-related injuries and diseases is unavailable or incorrect, it is more difficult to identify problems and take corrective action.

### **A joint health and safety committee**

Employers must establish and maintain a joint health and safety committee in each workplace that employs 20 or more workers. A joint committee

must have at least four members—two worker representatives and two employer representatives. Workplaces that employ more than 9 but fewer than 20 workers are usually required to have a worker health and safety representative rather than a joint health and safety committee. In some cases, however, a WorkSafeBC officer may require a workplace with fewer than 20 workers to establish and maintain a joint health and safety committee.

A well-functioning joint health and safety committee (or a worker health and safety representative) is critical for all health and safety initiatives. Joint health and safety committees:

- Identify situations that may be unhealthy or unsafe for workers
- Recommend to management ways to eliminate or control potential hazards
- Recommend to management ways to improve the health and safety program and the overall work environment
- Consider and respond to health and safety complaints or recommendations from workers
- Ensure that incident investigations and regular workplace inspections occur

The joint health and safety committee must be consulted throughout the MSI prevention process. Committee members should have a clear understanding of MSI and the factors that contribute to MSI. Without this knowledge, their ability to inspect, consult, and make recommendations will be hindered.

### **Other important health and safety elements**

Other elements that are an important part of an occupational health and safety program include worker supervision, first aid, and disability management.

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### **Worker supervision**

Supervisors are responsible for ensuring the health and safety of all workers under their direct supervision. Supervisors must ensure that health care workers performing patient handling activities use the lowest-risk handling procedures wherever practicable. It is also important for supervisors to support the evaluation process for identifying, assessing, and controlling the risks of MSI. Supervisors should observe work practices and provide feedback to ensure that actual work practices are consistent with designated safe work practices.

### **First aid**

First aid in the workplace must address acute single-incident injuries as well as chronic injuries or diseases that develop over time. Workers need to be aware of their responsibility to report injuries and early signs and symptoms of MSI. Supervisors who are aware of workers with early signs or symptoms of MSI can take steps to examine the possible contributing factors and

minimize their effects so the worker will be able to remain at work. In the case of patient handling, this may mean reviewing safe work practices with the worker and examining the work environment and patient characteristics to identify factors that may be contributing to the risk of injury.

### **Disability management**

Disability management (a return-to-work program) is important for maintaining a healthy workforce. If workers experiencing an MSI are able to return to work on a gradual basis, they may be able to build up strength and tolerances for the work activities and have a better chance of successfully returning to their jobs. Utilizing information and risk reduction measures from both MSI risk assessments and incident investigations will help minimize, as much as practicable, risks that may have contributed to an injury or that may lead to a recurrence. It is also helpful to coach and mentor workers on patient handling techniques, to ensure that they will use the lowest-risk handling procedures.

## Appendix III: Safe patient handling policy (example)

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### 1. Purpose

This policy promotes safe patient handling in high-risk patient and resident care areas. It describes the responsibilities of the employer, supervisors, and workers in this facility.

### 2. Definitions

Manual lifting may occur when workers lift, transfer, or reposition patients.

*Lift* refers to the lifting of the whole or a large part of the weight of a patient.

*Transfer* refers to the movement of a patient from one surface to another.

*Reposition* refers to the movement of a patient on the same surface.

*Mechanical lifting equipment* refers to equipment used to lift, transfer, or reposition patients. Examples include portable base lifts, ceiling lifts, and stand assist lifts.

*Patient handling aids* refers to equipment used to assist with lifting, transferring, or repositioning tasks. Examples include gait belts with handles, stand assist aids, slide boards, and low-friction slide devices.

### 3. No-lift policy

[Insert name of facility] will ensure that its patients and residents are cared for safely, while maintaining a safe work environment for workers. To achieve this, [the facility] has adopted a no-lift policy for patient handling. The aim of a no-lift policy is to eliminate manual lifting of patients and residents in all but exceptional or life-threatening situations.

To accomplish this, direct care workers in patient and resident care areas must assess high-risk patient handling tasks in advance to determine the safest way to accomplish them. Approved mechanical lifting equipment and patient handling aids should be made available to workers and be used by them to avoid the manual handling of patients and residents except when absolutely necessary (for example, in a medical emergency).

### 4. General duties

#### Compliance

The *Workers Compensation Act* requires all employees (including managers, supervisors, and workers) to take reasonable care of their own health and safety, as well as that of their co-workers and patients, by following this policy during patient handling activities. Non-compliance will indicate a need for retraining and possibly disciplinary action.

#### Patient handling requirements

Workers will:

- Be aware of the facility's policy for safe handling of patients and residents
- Avoid hazardous patient handling tasks whenever possible
- Use approved mechanical lifting equipment and patient handling aids, where appropriate, for patient handling tasks, except when manual lifting is absolutely necessary (for example, in a medical emergency)
- Use approved mechanical lifting equipment and patient handling aids in accordance with instructions and training
- Follow established handling protocols developed by the joint health and safety committee

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## **Training**

Workers will complete training initially, annually, and as required to correct unsafe work practices and ensure that they understand safe patient handling procedures. The employer must maintain training records for all employees.

## **Mechanical lifting equipment and patient handling aids**

Supervisors will ensure that:

- Workers have sufficient access to appropriate mechanical lifting equipment and patient handling aids
- Mechanical lifting equipment and patient handling aids are inspected and maintained regularly so they are kept in good working order

Supervisors and workers will ensure that mechanical lifting equipment and patient handling aids are stored conveniently and safely.

## **Reporting injuries and other incidents**

Workers must report all injuries and other incidents resulting from work activities.

The employer must maintain first aid records, incident reports, and supplemental injury statistics, as required by the facility and WorkSafeBC.

## **5. Delegation of authority and responsibility**

*The employer will:*

- Support the implementation of this policy
- Supply sufficient mechanical lifting equipment and patient handling aids so workers have access to them when necessary for safe patient handling

- Supply acceptable storage locations for mechanical lifting equipment and patient handling aids
- Provide sufficient staffing levels to comply with this policy

*Supervisors will:*

- Ensure that patient handling tasks are assessed as soon as a patient arrives at the facility and updated periodically or when there is a change in the functional abilities of a patient or resident
- Ensure that patient handling tasks are assessed before transfers, lifting, and repositioning, and that these tasks are completed safely, using approved mechanical lifting equipment and patient handling aids and appropriate techniques where necessary
- Ensure that mechanical lifting equipment and patient handling aids are available, maintained regularly, in proper working order, and stored conveniently and safely
- Ensure that workers complete initial and ongoing training, as well as any training required if workers demonstrate non-compliance with this safe patient handling policy
- Maintain training records
- Investigate all incidents in which injuries result from patient handling tasks
- Maintain incident reports and supplemental injury statistics, as required by the facility

*Workers will:*

- Comply with this policy (and supplemental patient handling support material)
- Where necessary, assess patients or residents before conducting patient handling tasks
- Use approved mechanical lifting equipment and patient handling aids during performance of high-risk patient handling tasks

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- Notify supervisors of injuries sustained while performing patient handling tasks
  - Notify supervisors of a need for retraining in the use of mechanical lifting equipment, patient handling aids, and lifting or moving techniques
  - Notify supervisors of mechanical lifting equipment or patient handling aids in need of repair
  - Supply feedback to supervisors on safe patient handling protocols or equipment

Engineering service workers will ensure that mechanical lifting equipment is installed and maintained in proper working order.

## Appendix IV: Terms and acronyms

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### **Act, the**

The *Workers Compensation Act*.

### **ADL**

Activities of daily living. An ADL chart is a summary of the functional capacity of a patient in relation to various daily living activities.

### **ceiling lift**

A mechanical lifting device that moves along a track suspended from the ceiling.

### **ergonomics**

The application of scientific information concerning humans to the design of objects, systems, and the environment, with the goal of making them safer, more efficient, and easier to use.

### **hazard**

According to the Regulation, a hazard “means a thing or condition that may expose a person to a risk of injury or occupational disease.”

### **joint health and safety committee**

Joint health and safety committees help create a safe work environment, recommend ways to improve the health and safety program, and promote compliance with the Occupational Health and Safety Regulation and the *Workers Compensation Act*.

All workplaces that regularly employ 20 or more workers must establish and maintain a joint health and safety committee (as detailed in Division 4 of the *Act*). (*Regularly employed* means employed for at least one month, whether full-time or part-time.) The committee must include at least four members – two employer representatives and two worker representatives. Workplaces that regularly employ more than 9 but fewer than 20 workers are required to have at least one worker health and safety representative rather than a joint health and safety committee. See *worker health and safety representative*.

### **musculoskeletal injury (MSI)**

According to the Regulation, a musculoskeletal injury (MSI) “means an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue including a sprain, strain and inflammation, that may be caused or aggravated by work.”

### **no-lift policy**

A no-manual-lifting approach to patient handling that aims to eliminate manual lifting of patients in all but exceptional or life-threatening situations. A no-lift policy is typically one component of an overall patient handling policy. A no-lift policy may have a different name such as “safe-lift policy” or “minimal-lift policy.”

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**OHSAH**

The Occupational Health and Safety Agency for Healthcare in British Columbia.

**practicable**

According to the Regulation, practicable “means that which is reasonably capable of being done.” For a more detailed explanation of the term *practicable*, see page 55.

**Regulation, the**

The Occupational Health and Safety Regulation of British Columbia.

**reposition**

To change the position of a patient on the same surface.

**risk**

According to the Regulation, a risk “means a chance of injury or occupational disease.”

**transfer**

To help move a patient from one surface to another. An activity in which a patient or resident is able to reliably bear his or her own weight, thereby allowing the caregiver to direct and guide the patient’s or resident’s movements rather than lifting all of their weight.

**Note:** Based on the definitions for *reposition* and *transfer*, both repositioning and transferring tasks may involve lifting, depending on the patient’s condition and the technique used to carry out a movement.

**worker health and safety representative**

A worker who represents workers on health and safety matters in a workplace where there is no joint committee (usually a workplace with more than 9 but fewer than 20 workers). See *joint health and safety committee* for duties.

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