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Employee Safety Orientation

For the Manufacturing and Food Processing Industries

PROGRAM MODEL

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Prepared for
Members of the
Manufacturing Safety Alliance of BC

Prepared by
The Manufacturing Safety Alliance of BC

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Disclaimer
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Every effort was made to ensure the accuracy and relevance of this information; however, this material may be subject to change due to various factors. These factors may include regulatory or interpretive changes, and a need to adapt the material to unique situations or procedures.

Nothing in this package and the course program absolve participants from using their sound judgment in the appropriate application of the material learned.

With many thanks to:
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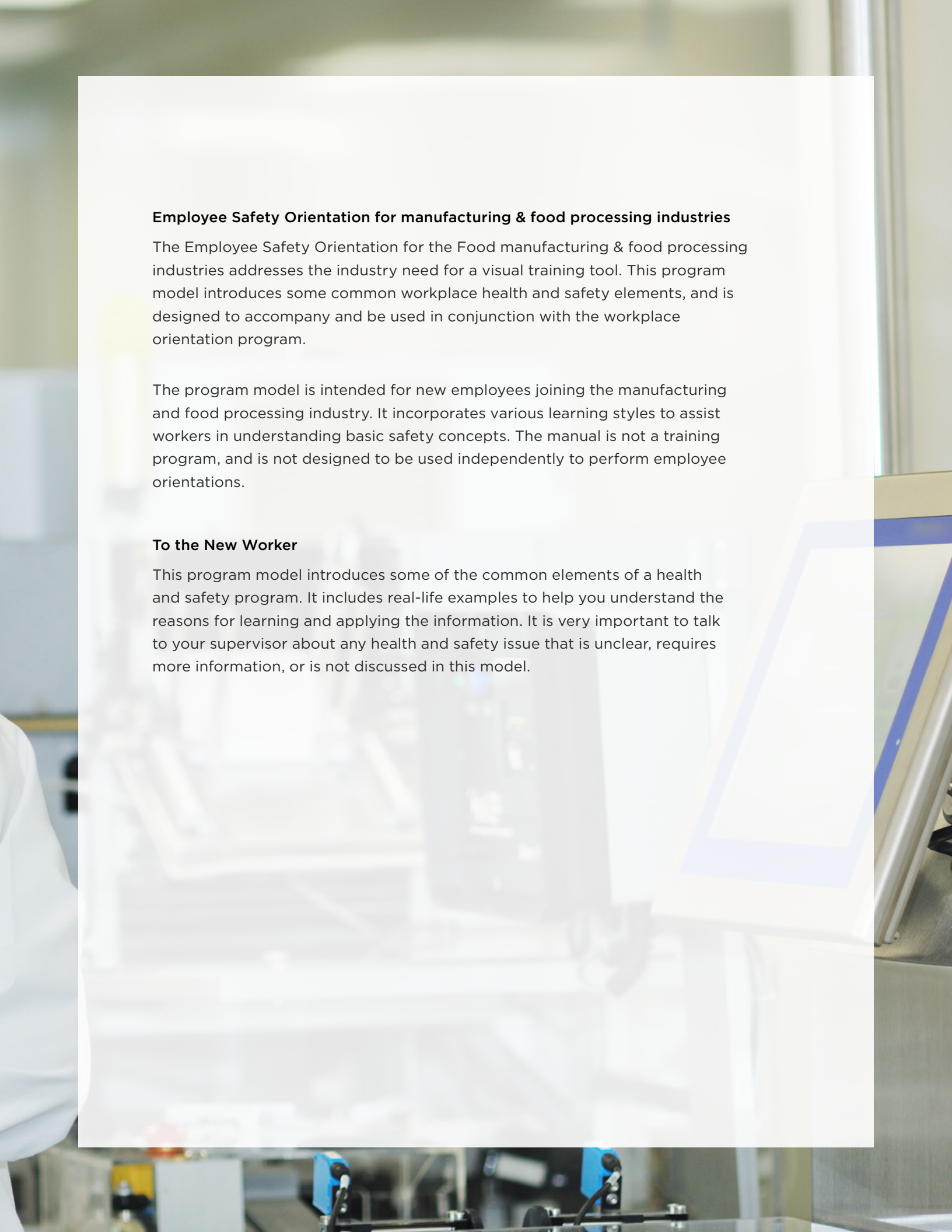

Employee Safety Orientation for manufacturing & food processing industries

The Employee Safety Orientation for the Food manufacturing & food processing industries addresses the industry need for a visual training tool. This program model introduces some common workplace health and safety elements, and is designed to accompany and be used in conjunction with the workplace orientation program.

The program model is intended for new employees joining the manufacturing and food processing industry. It incorporates various learning styles to assist workers in understanding basic safety concepts. The manual is not a training program, and is not designed to be used independently to perform employee orientations.

To the New Worker

This program model introduces some of the common elements of a health and safety program. It includes real-life examples to help you understand the reasons for learning and applying the information. It is very important to talk to your supervisor about any health and safety issue that is unclear, requires more information, or is not discussed in this model.

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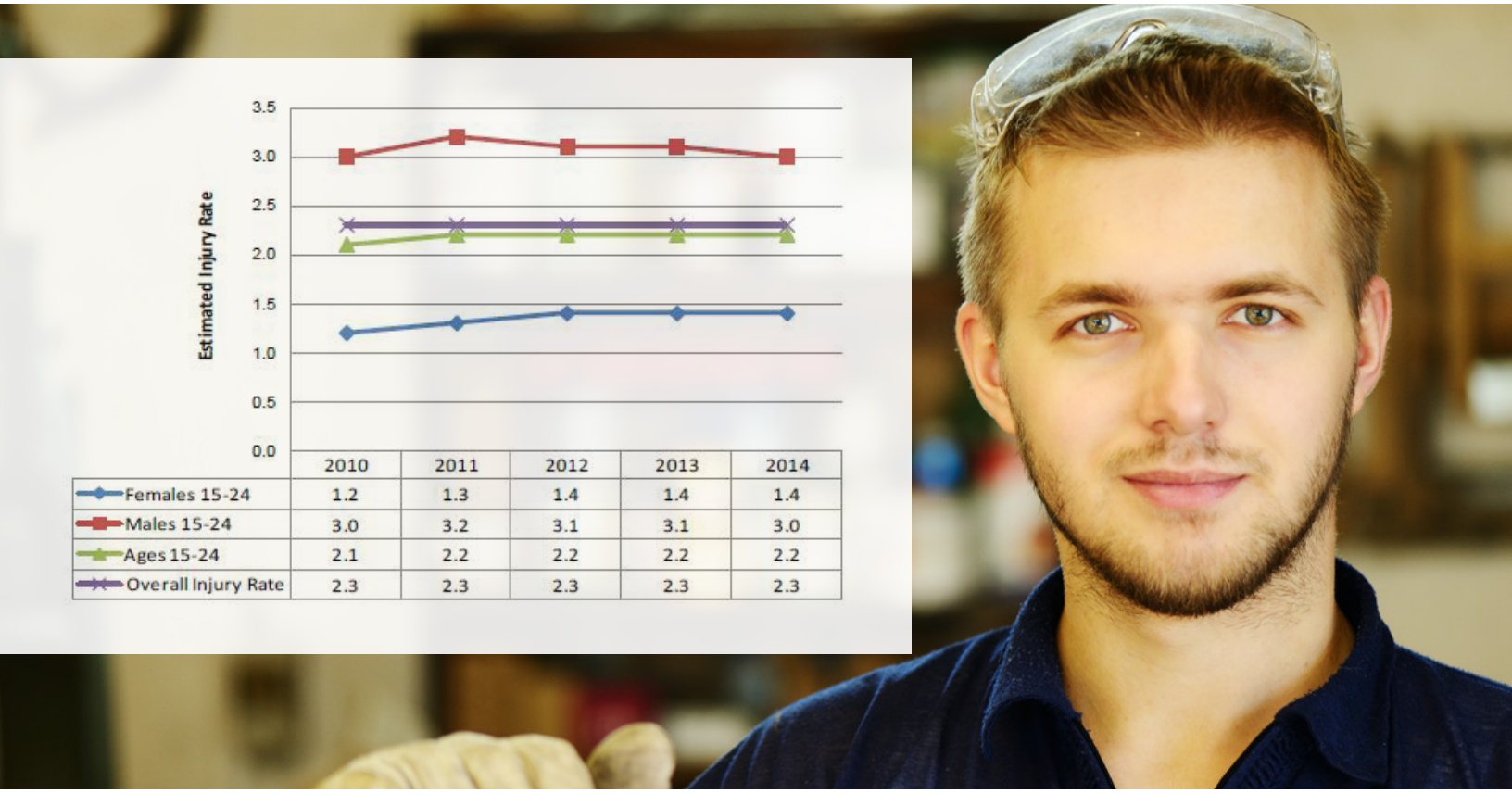
Young workers are at a much greater risk of injury than workers of any other age group

More than half of workplace accidents involving workers aged 15 to 24 occur during the first six months on the job

Almost 20% of incidents occur during the first month on the job

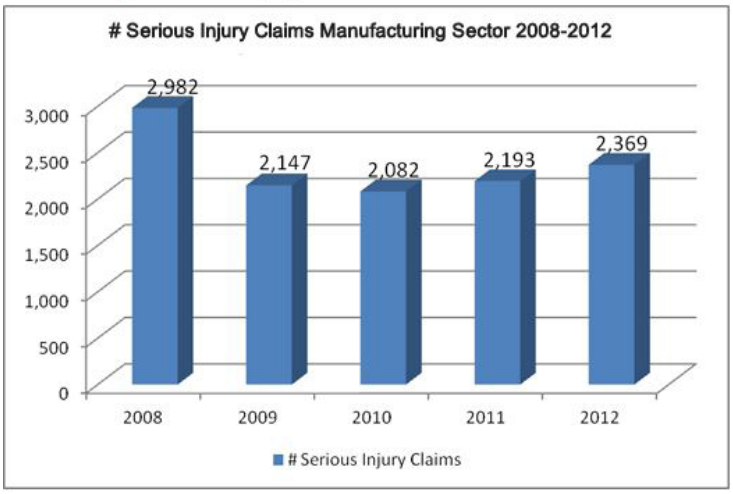
Young men are injured on the job much more frequently than young women

Of the genders, injuries to young males comprise 68% of all young worker injures



	2010	2011	2012	2013	2014
Females 15-24	1.2	1.3	1.4	1.4	1.4
Males 15-24	3.0	3.2	3.1	3.1	3.0
Ages 15-24	2.1	2.2	2.2	2.2	2.2
Overall Injury Rate	2.3	2.3	2.3	2.3	2.3

Manufacturing - # of serious injury claims from 2008 to 2012



	2008	2009	2010	2011	2012
Serious Injury Claims - 71 Manufacturing	2,982	2,147	2,082	2,193	2,369

Leading accident types for serious injuries in the manufacturing and food and beverage industries:

Manufacturing - Accident type profile for serious injuries from 2008 to 2012

Accident Type	# Serious Injury Claims	% Serious Injury Claims
Overexertion	3,508	30%
Struck by	2,090	18%
Caught in	1,227	10%
Fall on same level	1,216	10%
Fall from elevation	1,113	9%
Struck against	955	8%
Other bodily motion	753	6%
Repetitive motion	308	3%
MVIs	226	2%
Exposure to heat, cold	122	1%
Other	255	2%
TOTAL	11,773	100%

Food & beverage products (subsector 7110) - Accident type profile for serious injuries from 2008 to 2012

Accident Type	# Serious Injury Claims	% Serious Injury Claims
Overexertion	825	32%
Fall on same level	467	18%
Struck by	327	13%
Caught in	232	9%
Fall from elevation	218	8%
Other bodily motion	143	6%
Struck against	139	5%
Repetitive motion	75	3%
MVIs	63	2%
Other	79	3%
TOTAL	2,568	100%

1 Overexertion

2 Struck by

3 Caught in

4 Fall on same level

Introduction

Legislative Foundation for Employee Orientation

Everyone has the right to be safe at work. Legislation regulates employer and worker efforts to help ensure this — legal requirements are at the heart of occupational health and safety management. The first health and safety-type legislation was introduced in Canada in the 1800's, when some of the British Factory Acts were adopted to protect workers from poor working conditions.

The Workers Compensation Act (WCA) is the current legislation that governs health and safety administration in British Columbia. The WCA consists of four parts:

1. **Compensation to Workers and Dependants**
2. **Liability of Employers**
3. **Occupational Health and Safety**
4. **Appeals**

The WCA provides a structure for reimbursing lost wages and medical costs when a workplace injury requires time away from work or medical treatment.
The Occupational Health and Safety Regulation (OHSR) is established under the WCA. New employee orientation is a specific requirement of the OHSR.

Purpose of this Manual

This manual meant to be used in the Employee Orientation for the manufacturers and food processors, as well as prompt questions on how the workplace health and safety program functions, and what hazards employees may face in their new work environment.

Summary of Modules

This manual consists of five modules that cover key concepts. Each of the first four modules includes a short quiz to test participants' knowledge and reinforce what they have learned in the module. The trainer should work through the answers with the participants.The answers to the questions are included at the end of this manual. Some answers require specific information from the worksite. Please take the time to answer these questions as well. Employees should keep a copy of the manual, and use it as a reference. The modules include the following:

MODULE 1

Rights, Roles, and Responsibilities

Module 1 describes the rights, roles, and responsibilities of employers, workers, and supervisors, and specific responsibilities related to the following topics: personal protective equipment; housekeeping; incident reporting; hazard identification; refusal of unsafe work; joint health and safety committees; return-to-work programs; a health and safety policy; and safe work procedures.

MODULE 2

Industry-Specific Programs and Procedures

Module 2 describes some of the programs and procedures that are specific to the food processing industry. Topics include lockout, forklift safety, working at heights, confined space entry, and WHMIS.

MODULE 3

Emergency Preparedness

Module 3 provides an overview of the emergency preparedness program and the various types of emergencies that may occur within the workplace.

MODULE 4

Ergonomics and Core Strengthening

Module 4 provides an overview on ergonomics and core strengthening, including ergonomic risk factors and musculoskeletal injuries (MSIs). This module outlines the health risks associated with MSIs, and stresses the value of core strengthening and stretching exercises.

MODULE 5

Summary

Module 5 provides a brief review of the first four modules, and includes references to publications and web links for more information.

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Educational Goals

After completing the five modules, you should have a firm understanding of the following:

- The requirements of the OHSR and the WCA, as well as the moral obligations for employers to provide health and safety orientation and training
- Know who your direct supervisor is, and how to contact the supervisor
- Understand the importance of learning about the hazards you face in your new job
- Be familiar with the rights, roles, and responsibilities of employers, workers, and supervisors
- Be familiar with health and safety program concepts, including lockout, confined space entry, working at heights, WHMIS, and mobile equipment
- Know what types of emergencies can occur and what training you need to fulfill your role in your facility's emergency plans
- Be familiar with key ergonomic risk factors
- Appreciate the importance of core strengthening and stretching
- Be aware of resources that may help keep you safe at work

Personal Objectives

Please write your answers down and discuss any questions with your supervisor.

Why are you here today?

_____

_____

_____

What do you want from this session?

_____

_____

_____

What are your personal educational objectives for this orientation session?

_____

_____

_____

Module 1: Rights, Roles, and Responsibilities

Learning Objectives

- Understand that everyone is responsible for health and safety in the workplace, but employers, workers, and supervisors have different roles and responsibilities
- Understand that you are required by law to perform your roles and responsibilities
- Know who your supervisor is, and how to contact the supervisor
- Understand your employer's responsibility to enforce health and safety rules and procedures
- Understand the importance of reporting incidents
- Understand what a joint health and safety committee is (or a worker health and safety representative, if applicable) and what they do
- Be familiar with the term hazard, and recognize that there are various types of hazards in the workplace
- Know why you have to wear personal protective equipment (PPE) provided by your employer
- Know how housekeeping contributes to a safer workplace
- Know how your employer helps you to return to work if you have been hurt on the job

Legislative Foundation

The Internal Responsibility System (IRS) is the underlying philosophy of occupational health and safety legislation in Canada. The key to the IRS is that everyone in the workplace is responsible for his or her own safety, as well as for the safety of others in the workplace. To ensure a safe workplace, there must be a partnership between the employer and the employees. Think of the pieces of a puzzle — each piece is different, but you need all the pieces to complete the puzzle. The roles and responsibilities of each workplace party are different, but they all add to the same picture, that of a safe workplace.

The OHSR describes general requirements for employers and workers, and specifies roles and responsibilities for each party. For the purposes of this orientation session, we will look at the responsibilities of the employer, workers, and supervisors.

Employer Responsibilities

Employers have the following responsibilities:

- Ensure the health and safety of their workers and other workers at their workplace
- Comply with, and ensure that their workers comply with, the OHSR and WorkSafeBC orders
- Correct any hazardous workplace conditions
- Educate workers about the health and safety hazards in their workplace
- Educate workers about their rights and responsibilities under the OHSR
- Establish occupational health and safety policies and programs.
- Develop and implement safe work procedures
- Provide and maintain personal protective equipment, devices, and clothing.
- Ensure that workers use PPE
- Provide workers with health and safety instruction, training, and supervision
- Ensure that the WCA and OHSR are readily available to workers at the workplace
- Consult and cooperate with the joint health and safety committee or worker health and safety representative, as applicable
- Cooperate with WorkSafeBC

It is your employer's legal responsibility to enforce health and safety rules in the workplace.

Worker Responsibilities

Workers have the following responsibilities:

- Take reasonable care to protect their health and safety as well as the health and safety of others
- Ask for training before you begin work if you don't know how to do something safely
- Comply with the OHSR and WorkSafeBC orders
- Perform work in a safe manner. Follow safe work procedures
- Wear personal protective equipment, devices, and clothing as required by the employer
- Immediate report unsafe situation to their supervisor or employer
- Cooperate with the joint health and safety committee or worker health and safety representative, as applicable
- Cooperate with WorkSafeBC, its officers, and any other person carrying out a duty under the OHSR
- Not participate in horseplay activities
- Not work while impaired by alcohol, drugs, or other causes
- Be aware of and follow the procedure for refusing unsafe work when necessary.

Supervisor Responsibilities

Supervisors play an important role in the workplace. They are responsible for the health and safety of all workers under their direction.

Supervisors have the following responsibilities:

- Understand OHSR requirements that apply to their area of work.
- Comply with the OHSR and WorkSafeBC orders.
- Make workers aware of all known or reasonably foreseeable health or safety hazards.
- Cooperate with the joint health and safety committee or worker health and safety representative, as applicable.
- Cooperate with WorkSafeBC, its officers, and any other person carrying out a duty under the OHSR.

Providing guidance is one of the supervisor's most important roles in the workplace. If you have any questions or concerns about any aspect of your job, please talk to your supervisor.

Personal Protective Equipment (PPE)

Personal protective equipment (PPE) is equipment worn by a worker to protect against hazards that could otherwise cause harm. Examples of PPE include respirators, gloves, aprons, fall protection, and full body suits, as well as head, eye, and foot protection.

Hazards exist in all workplaces. PPE should be selected when all other controls have already been considered to eliminate or minimize worker exposure to the hazard. PPE is the last defense or barrier that provides protection to the worker. Employers are responsible for providing workers with PPE and training on how to use it. Workers who have questions about the use of or access to PPE should ask their supervisor.

Choose PPE that is comfortable and fits well. If it does not fit properly, it may not provide adequate protection. If it is not comfortable (for example, too tight or too loose), you are less likely to wear it. If your employer is providing PPE, make sure you are involved in its selection, in consultation with your Joint Health and Safety Committee or worker representative as applicable.

Housekeeping

Proper housekeeping can eliminate some workplace hazards and help get a job done safely. Housekeeping includes keeping workstations tidy and free from conditions that could cause or contribute to incidents.

Poor housekeeping frequently contributes to incidents by hiding hazards. Incidents that can result from poor housekeeping include:

- Tripping over loose objects on floors, stairs, and platforms
- Slipping on greasy, wet, or dirty surfaces
- Being hit by falling objects
- Cutting, puncturing, or tearing the skin of hands or other parts of the body on projecting nails, wire, or steel strapping
- Striking against projecting or poorly stacked items, or misplaced material

Housekeeping guidelines

Housekeeping is a basic part of accident and fire prevention.

Follow these guidelines for good housekeeping:

- Keep work areas neat and orderly
- Keep halls and floors free of slip and trip hazards
- Remove waste materials (for example, paper and cardboard) and other fire hazards from work areas
- Pay attention to important details such as workplace layout, aisle marking, adequacy of storage facilities, and maintenance

Incident Reporting

If you are injured at work or are aware of a close call (a near miss), you must report it to your employer. Reporting incidents is important because the employer needs to investigate what happened and implement control measures to prevent the incident from recurring. Report all injuries, no matter how minor, to your employer right away.

If you are injured at work and need to seek medical attention as a result, you must also report it to WorkSafeBC and notify your employer. Your employer is also required to report your injury to WorkSafeBC.

Hazard Identification

Hazard identification is one of the most important ways you can contribute to a safe and healthy workplace. Workers must report all hazards to their supervisors immediately. Reporting could mean saving your life or the life someone you work with.

A hazard is any condition or practice that may harm people or damage equipment, materials, or the environment. All workplaces have hazards. It is important to know as much as possible about the hazards in your workplace. Some hazards are easier to recognize than others. There are four categories of workplace hazards: people, equipment, materials, and environmental conditions.

Physical

These include impact noise, temperature, illumination, vibration, pressure extremes, and all forms of radiation, such as lasers and microwaves, electrical energy, fire, explosion, and ergonomic. Responsible personnel should be familiar with these and understand their potential harmful effects. Some harmful effects of physical agents can be felt immediately, others only after long periods of time.

Chemical

Chemical hazards and toxic substances pose a wide range of health hazards (such as irritation, sensitization, and carcinogenicity) and physical hazards (such as flammability, corrosion, and reactivity). Chemicals that pose health concerns include asbestos, dusts, metal fumes, pesticides, detergent, toxic process gases, volatile organic compounds and etc. In order to ensure chemical safety in the workplace, information about the identities and hazards of the chemicals must be available to workers. The following requirements are important:

- Materials must be properly labelled
- Workers need to know what PPE to wear and where to find it
- Transport and disposal procedures must be in place

Biological

Biological hazards involve living organisms such as bacteria, moulds, viruses, blood borne pathogens, or rodents, that transmit diseases to workers. These diseases can produce ill health, or in some cases, death.

Psychological

Psychological hazards can lead to human error and ultimately cause injury, illness, or property/environmental damage. Psychological hazards include violence in the workplace, bullying and harassment, and workplace stress. Bullying is usually seen as acts or verbal comments that could psychologically hurt or isolate a person in the workplace. Sometimes, bullying can involve negative physical contact as well. Bullying usually involves repeated incidents or a pattern of behaviour that is intended to intimidate, offend, degrade or humiliate a particular person or group of people. It has also been described as the assertion of power through aggression.

Refusal of Unsafe Work

According to the OHSR, workers must refuse work that they have reasonable cause to believe may cause harm to themselves or others. The following steps describe how to refuse unsafe work:

1. **The worker must immediately report the circumstances of the unsafe condition or matter to the supervisor or employer.**
   - The supervisor or employer receiving the report must investigate the matter and small ensure that any unsafe condition is remedied or
   - If in his/her opinion the report is not valid, must so inform the person who made the report

2. **If this does not resolve the matter, and the worker continues to refuse to carry out a work process, the supervisor or employer must further investigate the matter. This investigation must be carried out in the presence of the worker who made the report and in the presence of:**
   - A worker representative of the joint health and safety committee
   - A worker who is selected by a trade union representing the worker
   - If there is no joint committee or the worker is not represented by a trade union, any other reasonably available worker selected by the worker who made the report

3. **If this does not resolve the matter, and the worker continues to refuse to carry out a work process, both the supervisor or employer and the worker must immediately notify a WorkSafeBC officer, who will investigate the matter and take whatever actions are necessary.**

- Workers must not be disciplined for refusing to do unsafe work. A worker can be asked to perform other job duties while the investigation is ongoing.
- If you feel you must refuse work, be sure to follow the procedures in the regulations and any other policies that the employer may have. Don't just stop work and go home!
- If you don't follow the procedures, you may be subject to disciplinary action by your employer.

Joint Health and Safety Committee

The role of the joint health and safety committee is to help create a safer workplace by recommending ways to improve workplace health and safety, and promoting compliance with the OHSR and the WCA. The Joint Health and Safety Committee act on your behalf to review, inspect and make recommendations on workplace safety; the members are your "voice" addressing important Health and Safety matters. Committees are required to meet monthly to discuss health and safety concerns.

The committee must include at least four members — usually two employer representatives and two worker representatives. Workplaces that have fewer than 20 employees are required to have at least one worker health and safety representative rather than a joint health and safety committee.

Return-to-Work (RTW) Programs

Return-to-work (RTW) programs are an important part of the recovery process for injured workers. RTW programs are based on the philosophy that many injured workers can safely perform productive work during the recovery process. An effective RTW program helps injured workers stay at work or return to productive and safe employment as soon as possible.

RTW programs have many benefits. Employees are able to maintain their salaries and benefits; feel productive; and maintain their daily routine while injured workers recover. Your company's RTW program should outline the roles of the employer and the worker. It is important for workers to follow the outlined procedures when they are injured on the job. Workers are legally obligated to participate in RTW programs.

Health and Safety Policy and Procedures

A health and safety policy is your employer's written commitment to health and safety within your company. The policy is usually posted at the worksite and signed by the most senior officer in the organization.

Employers are required to develop safe work procedures (SWPs) for every task in the workplace. Workers must follow these procedures to protect their own safety and that of co-workers.

Test Your Knowledge

The OHSR assigns specific employer and worker responsibilities for occupational health and safety.

Match the appropriate workplace party (A–C) with their responsibilities (1–10). You may review this manual, or the OHSR to complete this exercise.
For answers, see page XX.

A. Employer B. Supervisor C. Worker

1. ____Ensure that workers work safely, and that they use PPE, measures, and procedures according to their training
2. ____Do not work while under the influence of alcohol or drugs
3. ____Appoint knowledgeable persons as supervisors
4. ____Establish health and safety policies and procedures.
5. ____Advise workers of potential hazards to their health or safety
6. ____Work in compliance with the OHSR and WCB orders
7. ____Take every reasonable precaution for the protection of workers
8. ____Use or wear required PPE, devices, and clothing
9. ____Provide information, instruction, and supervision to workers to protect their health and safety
10. ____Provide written instructions as to the measures and procedures to be taken for worker protection, as prescribed

Questions for your specific workplace

Where is your company's health and safety policy? What does it say?

Who is your direct supervisor? How can the supervisor be contacted? What type of PPE is required for your job? Where can you get it?

Why should you report hazards? Who should you report them to?

Why should you report incidents?

Who are the members of your joint health and safety committee (or who is your worker health and safety representative)?

Why should health and safety policies and procedures be enforced?

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Module 2: Industry-Specific Programs and Procedure

Learning Objectives

- Know what components are included in a health and safety program
- Understand the importance of safe work procedures
- Be familiar with lockout
- Understand the training requirements for using mobile equipment (forklifts)
- Be aware of the hazards of working at heights, and that it is forbidden to use a fall protection system without being trained
- Be aware that confined spaces are dangerous, and it is forbidden to enter a confined space unless you are properly trained in safe entry procedures
- Know what WHMIS stands for, and know the three major components of a WHMIS program

Health and Safety Programs

The main components of a health and safety program include:

- Training
- Safety inspections
- Investigation procedures
- Emergency preparedness
- Hazard identification and control
- Record keeping

Safe Work Procedures

Safe work procedures are specific instructions for performing job tasks safely to prevent harm to you and your co-workers. Safe work procedures are developed by the employer in conjunction with the employees performing the tasks as well as the joint health and safety committee. It is important for workers to understand and use safe work procedures. Instruction of workers in the safe performance of their duties is critical for preventing workplace accidents. Employers and supervisors are responsible for providing this training.

Tasks that require written safe work procedures

Some of the tasks that require specific written safe work procedures are:

- Working with hazardous chemicals
- Working with equipment
- Emergency evacuation
- Fire fighting
- Use and care of respirators and other PPE
- Use and inspection of power tools
- Use of mobile equipment
- Dealing with workplace violence
- Entering confined spaces
- Hotwork permit
- Working at heights
- Lockout
- Hearing conservation program

The following sections describe in more detail some of the safe work procedures that are common in the food processing industry.

Lockout

Part 10 of the OHSR describes requirements for de-energization and lockout. Lockout is the use of a lock or locks to render machinery or equipment inoperable or to isolate an energy source. The purpose of lockout is to prevent an energy-isolating device such as a switch or circuit breaker from being accidentally operated or turned on while workers are performing maintenance on machinery or equipment.

Lockout protects workers from possible injuries resulting from:

- The movement of machinery
- Engulfment
- Electrocution
- Burns
- Chemical exposure

Workers must have training in lockout procedures before they do any type of work or procedure that places any part of the body at risk of injury from a hazardous energy source. Ask your supervisor if you have any questions or concerns related to lockout.

Forklift Safety

Part 16 of the OHSR describes safety requirements for mobile equipment. Unauthorized use of any type of mobile equipment is forbidden. Workers are not authorized to operate a forklift or any other mobile equipment until they have received adequate safety training. Effective training is mandatory because these machines have the potential to cause serious and fatal injuries. If you need to operate a forklift, you should be trained by a certified forklift trainer in both practical and technical components.

If you're walking or working near forklifts, always keep a safe distance away. Watch for and obey any signs or safety guidelines related to forklift and pedestrian safety in your workplace. If you need to walk near an operating forklift, always make eye contact with the operator before proceeding into the work area.

Working at Heights

Part 11 of the OHSR describes requirements for working at heights. Employers must ensure that a fall protection system is used whenever work is being done at heights of 3 m (10 ft.) or more, or where a fall from a lesser height involves an unusual risk of injury. If a workplace meets the criteria for working at heights, it should have a fall protection policy and procedures to protect you from falling. Workers are required to complete specific training before using any of the fall protection systems at a facility. Ask your supervisor if there are any fall protection systems within your workplace.

Hearing Conservation Program

Noise-induced hearing loss has been listed as one of the most prevalent occupational health concerns. Loud machinery can contribute to hearing loss if you don't wear proper hearing protection. Employers are responsible for providing and enforcing the use of hearing protection.

iPods and other portable devices can also be dangerous at work. As well as potentially causing hearing impairment, these devices can distract you from other important sounds, such as approaching machinery, alarms, sirens, or warning from other workers.

Respiratory protection

Whenever practicable, substitution, engineer controls, or administrative controls must be used before replying on respirators as the main way to control exposure. Properly used, respirators can protect workers from the hazard. Single-strap dust masks and surgical masks do not provide respiratory protection. A non-powered half-mask or full-mask respirator should form a tight seal with your face and they must be fit-tested before initial use and at least once a year.

Confined Space Entry

Part 9 of the OHSR describes requirements for entering confined spaces. A confined space is a space that is:

- Enclosed or partially enclosed,
- Not designed for human occupancy,
- Difficult to enter or exit for rescue, and
- Large enough to enter.

Hazards that may be present include oxygen shortage, toxic gas, slipping hazards, and engulfment hazards. The entry process for confined spaces is regulated by the OHSR; under no circumstances is anyone allowed to enter a confined space without a permit. Each confined space requires a hazard assessment and the development of a safe entry procedure prior to entry. Training is also required before anyone is authorized to enter a confined space.

Workplace Hazardous Materials Information System (WHMIS 2015)

The Workplace Hazardous Materials Information System (WHMIS 2015) protects employees from exposure to hazardous chemicals. The three main components of a WHMIS program include education, product labels, and safety data sheets (SDSs). An SDS tells you about the hazards associated with using a hazardous chemical, how to protect yourself from those hazards, and safe handling and emergency measures.

Make sure you do not work with any chemical unless you are trained in WHMIS and he specific procedures related to the hazards of the chemical that you are using.

As a worker, you should do the following:

- Always check to see if there is a label on the product on before you use it
- Read, understand, and follow the instructions on the label and SDS. And follow any education, instructions, and training your employer provides
- Ask your supervisor if you are not sure about how to use or store the product
- Ask for a new label when you can't see or read the old one properly
- Don't use a product that is not labelled or if the label is unreadable.
  Ask your supervisor for help (For example, to replace the label)

Test Your Knowledge

What are the main elements of a health and safety program?

What are safe work procedures? Why are they necessary? What safe work procedures should you be aware of in your workplace? (Ask your supervisor.)

What do you require to operate a forklift?

What characteristics make an area a confined space? When are you allowed to enter a confined space?

What are the three main components of a WHMIS program?

Module 3: Emergency Preparedness

Learning Objectives

- Know that emergency preparedness is important
- Know that there are different kinds of emergencies
- Know what types of emergencies to expect in your new workplace
- Identify your emergency coordinator
- Know your role in an emergency
- Locate the evacuation map

OHSR Requirements

Sections 4.13–4.18 of the OHSR describe requirements for emergency preparedness and response. Employers have the following responsibilities:

- Perform a hazard assessment to identify hazards that employees could be exposed to during emergency situations
- Develop specific procedures for each of the identified hazards.
- Train employees in the procedures
- Notify local fire departments of any hazardous materials or substances, and methods for their safe handling
- Ensure that emergency drills are conducted at least once a year and documented. Drills help identify areas for improvement

Why is emergency preparedness required?

Normally we do not take the time and effort to plan for emergencies because we do not believe that they will happen to us. However, emergencies can and will occur. Preplanning is necessary to prevent major disasters. Failure to plan or conduct emergency drills can lead to chaos during emergency situations. The lack of an emergency plan could lead to severe losses such as multiple casualties and the financial collapse of an organization.

Each employee needs to know what to do in the event of an emergency. Ask your supervisor what you are required to do if the procedures are unclear. This information may save your life or the life of a co-worker.

Types of Emergencies

There are two types of emergencies that require emergency preparedness planning: business-related emergencies and natural emergencies. Emergency plans must be specifically developed for each type of emergency, if applicable. The procedures that workers are required to follow will differ depending on the type of emergency.

Business-related emergencies

Business-related emergencies include:

- Fires or explosions
- Hostage situations
- Bomb threats
- Major structural failure or building collapse
- Spills of flammable liquids
- Accidental release of toxic substances
- Terrorist activities, including deliberate release of hazardous biological agents or toxic chemicals
- Exposure to ionizing radiation
- Loss of electrical power
- Loss of water supply
- Loss of communications

Natural emergencies

Natural emergencies include:

- Floods
- Earthquakes
- Tornados and other severe wind storms
- Snow or ice storms
- Severe extremes in temperature (cold or hot)
- Pandemic outbreaks such as influenza

Emergency Preparedness in Your Organization

It is critical for you to become familiar with your organization's emergency preparedness plan. Make sure you know the procedures to follow in the event of an emergency. This includes operating emergency equipment that you are trained and authorized to use.

Procedures may differ depending on the type of emergency. Make sure you know the evacuation procedures and the marshalling area for your department. Know where the emergency contact numbers are for your organization. Make sure you are familiar with and properly trained in the following procedures and information:

- Emergency reporting
- Activation of the emergency evacuation plan
- Command structure (area coordinator, incident commander, and incident coordinator)
- Communication methods
- How to alert staff
- How to obtain first aid during evacuations
- Confirmation that the evacuation is complete
- How to request external aid
- How to provide medical aid (if trained and designated as the first aid attendant)
- Ensuring that emergency shut-offs are closed (if trained) for specific process chemicals such as ammonia

If you are unsure of what you are expected to do during an emergency, ask your supervisor

Test Your Knowledge

Questions for your specific workplace

What types of emergencies could be expected at your workplace?

Who is your crisis coordinator? Where is your marshalling station? Who gives the "all clear" command?

What are your responsibilities during an emergency evacuation?

Where can you get first aid during an emergency?

Module 4: Ergonomics and Core Strengthening

Learning Objectives

- Be familiar with the concept of ergonomics and how it relates to your job.
- Know the meaning of the term musculoskeletal injury (MSI).
- Understand the risk factors that contribute to the risk of MSIs.
- Understand the health risks associated with MSIs.
- Know how to identify MSI signs and symptoms.
- Appreciate the importance of core strengthening and stretching exercises.
- Know what you can do to prevent MSIs in the workplace.

OHSR Requirements

Part 4 of the OHSR describes requirements for the prevention of MSIs. Employers are required to minimize the risks of ergonomic hazards by developing and implementing appropriate control measures. These controls include engineering measures (for example, using a hand cart to move items instead of carrying the items) and administrative measures (for example, varying the tasks that a worker performs throughout the day).

What is Ergonomics?

Ergonomics can be defined as planning and designing tasks to fit workers. All workers are not the same size, and everyone has different limits. Ergonomics aims to design workstations, work processes, equipment, and tools to fit the worker.

What are MSIs?

Every day, we use our muscles to lift, carry, sit, stand, walk, move, and perform a variety of other motions or work tasks. Sometimes the tasks we do or the way we do them put too much demand on our muscles, tendons, and other tissues in our bodies, leading to soft-tissue injuries. This can result in pain and discomfort, and possibly a more serious musculoskeletal injury.

According to the OHSR, 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.”

Types of MSIs

Well-known MSIs include:

- Sprains and strains
- Carpal tunnel syndrome
- Bursitis
- Trigger finger
- White finger disease
- Epicondylitis

Signs and Symptoms of MSIs

Every person responds to ergonomic risk factors in different ways. For example, one worker may have symptoms of an injury, while another worker performing the same tasks may have none. Early recognition of MSI signs and symptoms increases your chances of quicker and effective recovery.

Signs

Signs of an MSI are things you cansee, including:

- Swelling
- Redness
- Difficulty moving a body part

Symptoms

Symptoms of an MSI are things you can feel but cannot see, including:

- Numbness
- Tingling
- Pain

If you develop MSI signs or symptoms, report it to your supervisor or first aid attendant right away. Early intervention will help prevent further injury.

Health Effects of MSIs

MSIs usually progress through several stages.

Stage 1

Aching or fatigue may be present at work but subsides with rest (for example, during breaks, overnight or on weekends).

Stage 2

Pain, aching, and fatigue is present at home and at work. Symptoms may affect work performance and may affect sleep.

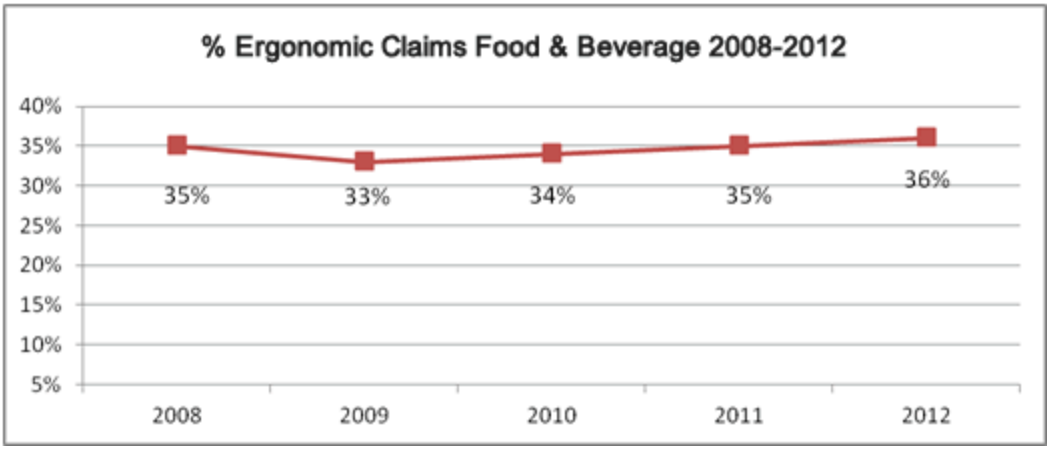
Stage 3

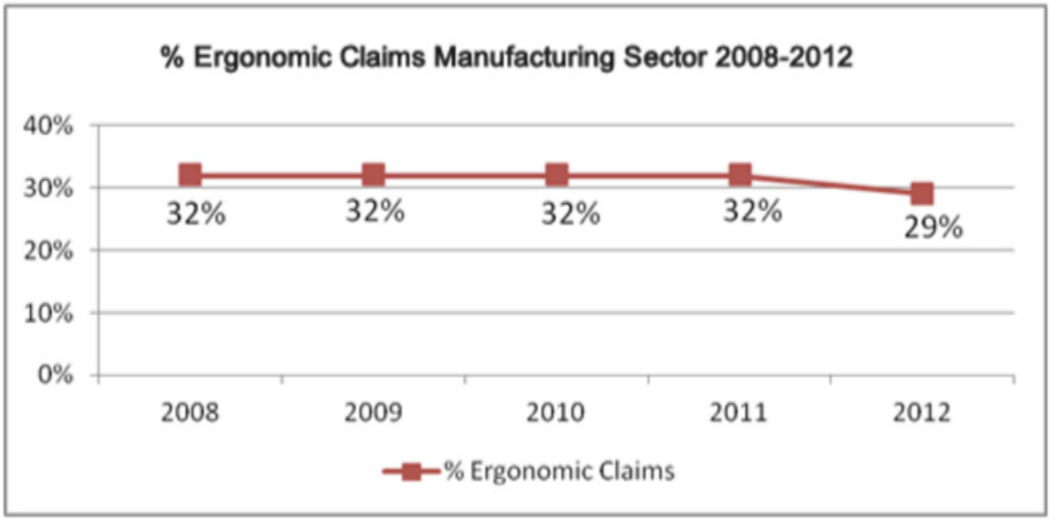
Pain, aching, and fatigue may be present, even when the affected limb is at rest. Performance of work duties is significantly affected, and sleep is affected.

MSIs are easier to treat if they are identified at an early stage, but can worsen over time if early signs and symptoms are ignored. If ignored until late stages, recovery may take longer and pre-injury abilities may not be fully recovered.

An MSI can affect your ability to perform activities. Early signs or symptoms of MSI may develop into a condition with long-lasting effects, such as one of the following:

Sprain — damage to ligament resulting in joint instability
Strain — damage to tendon or muscles occurring when the muscle is forcibly stretched
Tendonitis — inflammation of the tendon
Tenosynovitis — inflammation of the protective covering of a tendon





MSIs have been the leading occupational injuries in the past years. This reflects considerable pain and suffering for the injured workers. It also reflects significant costs to employers for compensation and other expenses as a result of employees being off work.

There is a stronger likelihood of a worker developing an MSI when the workstation does not fit the worker. As a worker, it is important to know how to adjust your workstation to suit you.

Ergonomic Risk Factors

Being aware of the factors that contribute to MSI is the first step toward preventing an MSI. These are some of the factors used when evaluating a job to determine the level of ergonomic risk.

Repetition

Tasks or body movements repeated over and over again.

Awkward postures

Body positions that are not considered neutral or ideal (for example, twisting your neck to view a display panel, or reaching to the side to use your control panel).

Excessive force

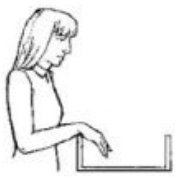
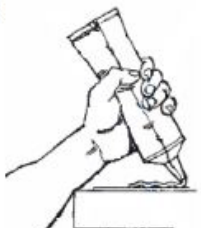
Significant effort used to do a job (for example, lifting a large bag of flour off the floor and emptying it into a mixer).

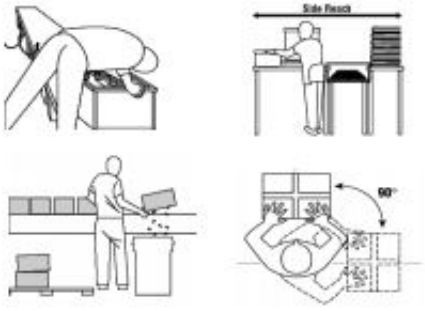
Static force

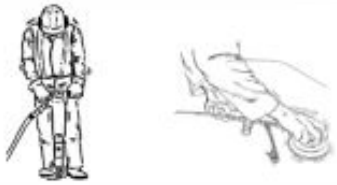
Maintaining the same position for a long period of time (for example, prolonged sitting, viewing a monitor with a bent neck, or standing).

Local contact stress

A hard object coming into contact with the skin (for example, the edge of a working surface on which you are resting your wrists). The nerves and the tissues beneath the skin can be injured by the pressure.

RISK FACTORS	CONTRIBUTING FACTORS
Reaching Frequently 	Performing same tasks over and over Poor workstation design and layout • The location of equipment, machinery, and materials in relation to how the job is performed
Twisting Regularly  	Poor workstation layout Restricted workspace • Limited access to equipment, machinery, and materials Keeping body in one place instead of turning entire body
Intensive Typing 	Performing the same tasks over and over
Forcefully Using Knee or Hand as Hammer  	No proper tools No proper padding
Gripping Repetitively 	Hand tools with ridges or hard edges Hand tools with thin handles No powered hand tools
Applying Continuous Pressure  	Work surfaces with hard edges Materials are hard to reach

RISK FACTORS	CONTRIBUTING FACTORS
Reaching  	• Deep work surfaces • Overhead work surfaces • Limited work spaces • Hard-to-reach storage areas • Working at ground level
Bending 	• Large, awkward boxes • Low-level storage
Twisting 	• Working at ground level
 	• Hard-to-reach storage bins • Using non-powered hand tools • Restricted workspace — limited access to equipment, machinery, and materials • Poor workstation layout — location of equipment, machinery, and materials in relation to how the job is performed • Keeping feet in one place instead of turning entire body
Kneeling continuously 	• Working at ground level • Hard kneeling surface • No comfortable knee pads • Poor workplace layout

RISK FACTORS	CONTRIBUTING FACTORS
Physically Handling Loads 	Large and heavy load size Heavy tools and equipment No powered handling devices
Lifting 	Performing the same tasks over and over No manual handling devices Poor workstation layout
Unbalanced Loads or Loads With Shifting Centre of Gravity 	Containers partially filled with liquid Unevenly weighted loads
High Gripping Forces 	Non-powered hand tools No handles or hand-holds Large container size No manual handling devices
	Vibration results in higher gripping forces
Manually Handling Loads for Long Distances 	Poor workplace layout Difficult to use or the wrong manual handling devices No manual handling devices

Preventing MSIs

Everyone in the workplace plays a role in reducing MSIs. It is your employer's responsibility to make your workplace safe. As a worker, you can also help prevent MSIs by doing the following:

- Identify ergonomic risk factors and inform your supervisor of them
- Maintain good posture at all times
- Do core strengthening exercises and stretching
- Inform your supervisor of MSI signs and symptoms
- Follow safe work procedures
- Always use safe work practices
- Adjust your workstation to fit you
- Use protective clothing such as knee pads or gloves, where applicable

Strengthening Exercises and Stretching

A well-conditioned body has been shown to better withstand the stresses of work and everyday living. You can do various exercises to strengthen your core muscles and improve your conditioning. See below for a few examples.

Standing back extension

Place your hands on the back of your hips and point elbows back.
Bend backwards slightly and hold 15 seconds.

Shoulder blade squeeze

Interlock hands behind head and point elbows back, squeezing the shoulder blades together.
Hold 15 seconds.

Upper back stretch

Push arms out, rolling shoulders forward. **Hold 15 seconds**.

Then slowly bring arms above the head. **Hold 15 seconds.**

Side bend

Stand with your feet shoulder-width apart, do not lock your knees. Reach your right arm over your head to the left side. Your left arm resting on your hip or reaching down along your left leg. Let your body lean into this position until a stretch is felt.

Hold 20 – 30 seconds.

Repeat with opposite side.

Backwards bend

Stand with your feet shoulder-width apart and hands on hips, do not lock your knees Arch backward to make hollow of back deeper.
Hold 20- 30 seconds.
Back to resting position and repeat.

Hamstring

Plant feet one in front of the other, with knees in line with toes. Keep the heel of the front foot planted while leaning back in a half sitting position over the back foot. Raise the toe of the front foot and lean the upper body forward, keeping your back straight.
Hold 20 – 30 seconds.
Repeat with opposite side.

Partial Sit Up

Keeping arms folded across chest, tilt pelvis to flatten back. Raise head and shoulder from floor.
Do 10-15 repetitions.

Partial Sit Up #2

Arms stretch along body, tilt pelvis to flatten back. Raise head and shoulder from floor.

Do 10-15 repetitions.

Posterior Capsule

Gently pull upper arm across chest until a stretch is felt in the shoulder. Do not push right on elbow joint.

Hold 20-30 seconds.

Repeat with opposite side.

Inferior Capsule

Gently push back on raised upper arm until a stretch is felt in shoulder. Do not push right on elbow joint.

Hold 20-30 seconds.

Repeat with opposite side.

Knee to chest

Pull knee towards chest until a comfortable stretch is felt in the lower back and buttocks.

Hold 20-30 seconds.

Repeat with opposite side.

This stretch can also be done laying down. Lie flat with left knee bent and right leg straight. Grasp your left leg with both hands, bring your left knee to your chest, placing your hands on your shin or behind your thigh, do not pull on your knee.

Standing quad

Pull heel towards buttock until stretch is felt in the front of the thigh. Try to keep knees together. Use a wall or stationary object for balance if needed.

Hold 20-30 seconds.

Repeat with opposite side.

Another technique that has been shown to improve the body's ability to cope with the stresses of physical work is warming up muscles through large body movements. Warming up helps increase blood flow to the muscles being stretched, keeping them warm and healthy. Stretching also helps prevent injuries by increasing flexibility.

Test Your Knowledge

Describe three signs and symptoms of MSIs.

What are some ergonomic risk factors?

What are the potential health effects of MSIs if you do not address the signs and symptoms?

What can you do to help prevent MSIs?

What MSI risk factors have you identified in your new job?

Module 5: Summary

- Health and safety is a shared responsibility — employers, workers, and supervisors all play important parts in maintaining a safe and healthy workplace
- Specific health and safety programs have been developed to keep you safe at work. These programs include lockout, working at heights, confined space entry, WHMIS, and forklift safety. If you are not trained in these areas, do not attempt the tasks associated with them
- You should know and understand your organization's emergency preparedness procedures, and understand your role during an emergency
- MSIs are the biggest contributor to workplace injuries in the food processing industry. Make sure you are aware of the ergonomics risk factors that could lead to MSIs, and do your part to prevent MSIs
- If you have any questions or concerns about any aspect of your job, ask your supervisor. Supervisors are there to help you along the way.

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References

Workers Compensation Act

Occupational Health and Safety Regulation:

- Part 3, Rights and Responsibilities
- Part 4, General Conditions
- Part 8, Personal Protective Clothing and Equipment
- Part 9, Confined Spaces
- Part 10, De-energization and Lockout
- Part 11, Fall Protection
- Part 16, Mobile Equipment

Other publications

Managing Safety from the Supervisor's Perspective
(WorkSafeBC publication BK119, April 2008)

Safety on the Job is Everyone's Business:
The Responsibilities of Employer, Supervisor, Worker
(WorkSafeBC publication PH39, August 2006)

The Employer's Health and Safety Manual — British Columbia
(Carswell, 1993)

Web sites

WorkSafeBC **www.worksafebc.com**

Canadian Centre for Occupational Health and Safety **www.ccohs.com**

BC Food Processors Association **www.bcfpa.ca**

Manufacturing Safety Alliance of British Columbia **www.safetyallainancebc.ca**

Appendix 1: Answers

Module 1

A Employer B Supervisor C Worker

1. A Ensure that workers work safely, and that they use PPE, measures, and procedures according to their training

2. C Do not work while under the influence of alcohol or drugs

3. A Appoint knowledgeable persons as supervisors

4. A Establish health and safety policies and procedures

5. A,B Advise workers of potential hazards to their health or safety

6. A,B,C Work in compliance with the OHSR and WCB orders

7. A Take every reasonable precaution for the protection of workers

8. A,B,C Use or wear required PPE, devices, and clothing

9. A,B Provide information, instruction, and supervision to workers to protect their health and safety

10. B Provide written instructions as to the measures and procedures to be taken for worker protection, as prescribed

Module 2

What are the core elements of a health and safety program?

- Training
- Safety inspections
- Investigation procedures
- Emergency preparedness
- Hazard identification and control
- Record keeping

What are safe work procedures?

Why are they necessary?

Safe work procedures are specific instructions on how to perform your job tasks safely. They help prevent harm to you and your co-workers.

What do you require to operate a forklift?

Adequate forklift safety training.

What characteristics make an area a confined space?

When are you allowed to enter a confined space?

Confined spaces are:

- Enclosed or partially enclosed,
- Not designed for human occupancy,
- Difficult to enter or exit for rescue, and
- Large enough to enter

You are only allowed to enter a confined space if all of the following are true:

- You have a permit to enter the confined space
- There has been a hazard assessment
- There is a safe entry procedure
- You have been trained in confined space entry

What are the three main components of a WHMIS program?

- Education
- Labelling
- Material Safety Data Sheets (MSDSs)

Module 3

Answers for this module are found throughout your workplace.

What types of emergencies could be expected at your workplace?
Who is your coordinator?
Where is your marshalling station?
Who gives the "all clear" command?
What are your responsibilities during an emergency evacuation?
Where can you get first aid during an emergency?

Module 4

What are three signs of MSIs?

Swelling, Redness, Difficulty moving a body part

What are some ergonomics risk factors?

Repetition — Tasks or body movements repeated over and over again.

Awkward postures — Body positions that are not considered neutral or ideal (for example, twisting your neck to view a display panel, or reaching to the side to use your control panel).

Excessive force — Significant effort used to do a job (for example, lifting a bag of flour off the floor and emptying it into a mixer).

Static force — Maintaining the same position for a long period of time (for example, prolonged sitting, viewing a monitor with a bent neck, or standing).

Local contact stress — A hard object coming into contact with the skin (for example, the edge of a working surface on which you are resting your wrists). The nerves and the tissues beneath the skin can be injured by the pressure.

What are the potential health effects of MSIs if you do not address the signs and symptoms?

An MSI may affect your ability to perform activities.
Early signs or symptoms of MSI may develop into a condition with long-lasting effects, such as one of the following:

Sprain — damage to ligament resulting in joint instability

Strain — damage to tendon or muscles occur ing when the muscle is forcibly stretched

Tendonitis — inflammation of the tendon

Tenosynovitis — inflammation of the protective covering of a tendon

What can you do to help prevent MSIs?

- Identify ergonomic risk factors and inform your supervisor of them
- Maintain good posture at all times
- Do core strengthening exercises and stretching
- Inform your supervisor of MSI signs and symptoms
- Follow safe work procedures
- Use protective clothing such as knee pads or gloves, where applicable

New Worker Orientation Checklist

"New worker" means any worker who is new to the workplace, returning to a workplace where the hazards in that workplace have changed during the worker's absence, affected by a change in the hazards of a workplace or relocated to a new workplace if the hazards in that workplace are different from the hazards in the worker's previous workplace.

New Worker Orientation Checklist

TOPIC:			INITIALS (Trainer)	INITIALS (Worker)	COMMENTS
EMPLOYEE NAME:		Date of Orientation:			
POSITION:		Supervisor:			
DATE HIRED:					
OHSR 3.23	Name & contact	Supervisor's name			
		Telephone			
WCA DIVISION 4	Joint Health & Safety Committee	Joint Health & Safety Committee			
		Worker Health & Safety representative			

New Worker Orientation Checklist

TOPIC:			INITIALS (Trainer)	INITIALS (Worker)	COMMENTS
OHSR 3.12-3.13	Worker's rights	A safe work environment			
		Health & safety information, instruction & training			
		Know the hazards to which you are likely to be exposed			
		Equipment, including personal protective equipment			
		General duties of employers, workers, & supervisors			
		Worker's right to refuse unsafe work & procedure for doing so			
		Be represented by & participate in health & safety activities			
	Worker's responsibilities	Work responsibility to report hazards & procedure for doing so			
		Cooperate with the joint committee & others working to improve health & safety			
		Not Engage in horseplay or work while impaired			
		Discipline Policy			

New Worker Orientation Checklist

TOPIC:			INITIALS (Trainer)	INITIALS (Worker)	COMMENTS
OHSR 3.12-3.13	Workplace health and safety rules	a)			
		b)			
		c)			
		d)			
		e)			
	Known hazards and how to deal with them	a)			
		b)			
		c)			
		d)			
		e)			
OHSR 4.21	General H&S policies and Procedures	a) Working alone or in isolation			
OHSR 10.1-10.12		b) Lockout procedure			
OHSR 9.1-9.51		c) Confined space procedure			
OHSR 4.19-4.20		d) Drug & Alcohol policy			
OHSR 7.1-7.9		e) Hearing conservation Program			
OHSR 7.5-7.9		f) Forklifts and other mobile equipment safety			
OHSR 19.1-41		g) Electrical safety			

New Worker Orientation Checklist

TOPIC:			INITIALS (Trainer)	INITIALS (Worker)	COMMENTS
OHSR 4.27-4.31	Measures to reduce the risk of violence in the workplace and procedures for dealing with violent situations				
OHSR 8.1-8.45	Personal protective equipment (PPE) - what to use, when to use it and where to find it	a) Hearing protection			
		b) Safety headgear			
		c) Safety footwear			
		d) Gloves			
		e) Other			
OHSR 3.1-3.21	First Aid	a) First aid attendant name and contact information			
		b) Locations of first aid kits and eye wash facilities			
		c) How to report an illness, injury, or other accident (including near misses)			
OHSR 4.13-4.18	Emergency Procedures	a) Locations of emergency exits and meeting points			
		b) Locations of fire extinguishers and fire alarms			
		c) How to use fire extinguishers			
		d) What to do in an emergency situation			

New Worker Orientation Checklist

TOPIC:			INITIALS (Trainer)	INITIALS (Worker)	COMMENTS
OHSR 3.1-3.2	Basic contents of the occupational health and safety program				
	Safe work procedures reviewed	a) Receiving freight			
		b) Process infeed			
		c) Process outfeed			
		d) Warehouse			
		e) Shipping			
		f) Maintenance			
OHSR 5.3-5.9	Hazardous materials and WHMIS	a) What hazardous materials are in the workplace			
		b) Purpose and significance of hazard information on product labels			
		c) Location, purpose and sigbnificance of material safety data sheets (MSDSs)			
		d) How to handle, use, store and dispose of hazardous materials safely			
		e) Procedures for an emergency involving hazardous materials, including clean-up of spills			

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Glossary

BCFPA – BC Food Processors Association

Ergonomics – the planning and designing of tasks to fit workers.

Hazard - any condition or practice that may harm people or damage equipment, materials, or the environment.

IRS, Internal Responsibility System – the underlying philosophy of occupational health and safety legislation in Canada.

JHSC – Joint Health and Safety Committee –Committee comprised of an equal number of worker and employer representatives.

MSABC –manufacturing Safety Alliance of BC

MSI – Musculoskeletal Injury – an injury or disorders of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue including a sprain, strain and inflammation, that may be cause or aggravated by work.

OHSR – Occupational Health & Safety Regulation BC

PPE – Personal Protective Equipment is equipment worn by a worker to protect against hazards that could otherwise cause harm.

RTW – Return to Work – Return to work programs are based on the philosophy that many injured workers can safely perform productive work during the recovery process.

MSDS – Material Safety Data Sheet, MSDS tells you about the hazards associated with using a hazardous chemical and how to protect yourself.

WCA – Workers Compensation Act [RSBC 1996] Chapter 492

WHMIS – Workplace Hazardous Material Information System provides information about many hazardous materials used in the workplace.

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About us

The Manufacturing Safety Alliance of BC, formerly known as FIOSA-MIOSA Safety Alliance of BC, was established in December 2007 to reduce the high injury rate in the food and manufacturing industries.

Our mission

We are catalysts for improving workplace health and safety within the BC Manufacturing Industry. Our leading edge health and safety programs, services and tools enable companies to make a difference in the lives of their employees – every day.

Our vision

Partnering with BC's industry leaders to achieve cultural change that ensures safe workplaces for all employees. The Manufacturing Safety Alliance of BC strives to accomplish our mission and vision through the delivery of a variety of core services including:

- Training in areas such as occupational health and safety (OHS) leadership, program building, and auditing.
- Consultation and advisory services.
- The certifying partner for the Occupational Safety Standard of Excellence (OSSE) in partnership with WorkSafeBC.

For more information please contact us:

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