



Departmental Occupational Health and Safety Program

Module II Hazard Prevention Program (HPP)

Version 1.4

September 2016





1. PURPOSE

The purpose of the Hazard Prevention Program (HPP) is to prevent the occurrence of accidents, diseases and other losses in the workplace and provides for the education of employees in occupational health and safety (OHS) matters

This document is to ensure consistency throughout Employment and Social Development Canada (ESDC) for the identification and assessment of hazards (including ergonomics-related) and in the development of appropriate preventive measures that will address the hazard. It will also outline the requirements for program evaluation.

The HPP is a proactive tool that will play a key role in reducing workplace injuries and illnesses and their associated costs.

2. AUTHORITIES AND REFERENCES

ESDC's HPP facilitates compliance with section 125.(1)(z.03) *Canada Labour Code, Part II*, and the *Canada OHS Regulations, Part XIX – Hazard Prevention Program*.

3. SCOPE

This module applies to all employees within the ESDC portfolio, including Service Canada and the Labour Program, (hereafter referred to as the Department).


4. RESPONSIBILITIES

Under the scope of the Departmental HPP, responsibilities are as follows:

4.1 Employer Representative

(Employer includes all senior management officials, directors, managers, team leaders, supervisors, management leads, and site leads)

- a) Ensure hazard information is available to employees;
- b) Review hazard assessments for their workplace;
- c) Participate in updating or completing new hazard assessments;
- d) Participate in the development of preventive measures for hazards identified;
- e) Lead the development and implementation of Action Plans; and
- f) Provide education to employees:
 - i. on the nature of the work place and the hazards associated with it;

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- ii. whenever new hazard information becomes available; and
 - iii. before an employee is assigned a new activity or exposed to a new hazard.

4.2 Workplace Health and Safety Committee/Representative

- a) Participate in the implementation and monitoring of the HPP;
- b) Maintain an inventory of hazards identified and assessments for their workplace, including preventive measures for each hazard; and
- c) When a “unique” hazard is identified or a work process changes in the workplace, notify the Regional OSH Advisor and participate in the hazard assessment process.

4.3 Policy Health and Safety Committee (PHSC)

- a) In conjunction with the National OHS Office, the PHSC will monitor the HPP at the national level.

4.4 Regional Health and Safety Advisory Committees (Regional Advisory Committees)

- a) In conjunction with the Regional OHS Advisor, the Regional Advisory Committees will monitor the HPP at the regional level.

4.5 National OHS Office

- a) Maintains the overall responsibility for managing all aspects of the HPP;
- b) Conducts Hazard Assessments in conjunction with the Regional OHS Advisors for new hazards as required;
- c) Provides advice and guidance to senior Departmental officials on the HPP;
- d) Coordinates the evaluation of the HPP;
- e) Prepares program evaluation reports as per sections 19.7 and 19.8 of the *Canada OHS Regulations*.

4.6 Regional OHS Advisors

- a) Advises the Workplace Health and Safety Committees or Representatives on the HPP; and
- b) Participates in updating or creating new Hazard Assessments as required, in consultation with the National OHS Office.



5. PROCEDURE

5.1 Hazard Identification and Assessment Methodology

The process that was used to identify and assess existing hazards for ESDC is as follows:

- a) Create a workforce occupational profile;
- b) Establish Hazard Profile Groups (HPG), for the purpose of sorting occupations that are expected to have similar hazards;
- c) Assign occupations to HPG;
- d) Survey each HPG, for the purpose of validating/verifying the placement of all occupations into their respective HPG;
- e) identify hazards by analyzing job descriptions, conducting an on line survey to all employees, reviewing hazardous occurrence reports, reviewing safety and health committee minutes and on site observation.
 - i. Hazards identified will be recorded on the Hazard Identification Form Appendix B - side 1.
 - ii. The level of the Hazard is then determined using Appendix C, Hazard Ranking Matrix and recorded on Appendix B - side 2.
- f) This methodology will be reviewed at the time of evaluation, June 30, 2013.


5.2 Preventive Measures

- a) Preventive measures will be established by the employer in consultation with the Health and Safety Committee for all hazards ranked at level A and B.
- b) The Hazard Assessment Action Plan found in Appendix D will be used as the recording document.

5.3 Priority

The order of priority is:

- a) to eliminate the hazard, including by way of engineering controls which may involve mechanical aids, equipment design or redesign that take into account the physical attributes of the employee;
- b) the reduction of the hazard, including isolating it;
- c) the provision of personal protective equipment, clothing, devices or materials; and

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- d) administrative procedures, such as the management of hazard exposure and recovery periods and the management of work patterns and methods.

Note: Although Action Plans are not required for hazards ranked at level C and D, there is still a requirement for them to be monitored and addressed.

5.4 Assessing New Hazards

The process of assessing new hazards is undertaken by reviewing any available information about the hazard (e.g. a law, regulation, standard, Industry Code of Practice or guidance material about the hazard) and by using personal work experience about what type of incident/accident or illness the hazard could create and how likely this would be to happen. When determining how likely it is that a person could be exposed to a hazard or hazardous event, consideration needs to be given to these “exposure factors”:

- a. Whether there are any other risk factors that increase the likelihood of exposure;
- b. How often the person is exposed (frequency);
- c. For how long the person is exposed (duration);
- d. How many people are exposed;
- e. The likely dose to which the person is exposed;
- f. Any legislative or recommended exposure levels required by statutory authorities; and
- g. Existing controls which are in place.

When a new hazard is identified, the process to assess the hazard is to:

- a) review hazardous occurrence reports, health and safety committee minutes, any updated information about the hazard (i.e. circulars, memos).
 - a. New hazards will be recorded on the Hazard Identification Form Appendix B - side 1.
 - b. The level of the Hazard is then determined using Appendix C, Hazard Ranking Matrix and recorded on Appendix B - side 2.
- b) update the employee education program to reflect the addition and/or change; and
- c) communicate the change to the employer, employees, and the Workplace Health and Safety Committee/Representative.



5.5 Employee Education

5.5.1 Curriculum

The Department will provide health and safety education to employees, including education relating to ergonomics, on the following:

- a) the Departmental HPP, including the hazard identification and assessment methodology;
- b) the nature of the work place, the hazards associated with it, and the preventive measures taken by the employer;
- c) whenever new hazard information in the work place becomes available to the Department; and
- d) shortly before the employee is assigned a new activity or exposed to a new hazard.

5.5.2 Curriculum Review

The Department will review the employee education program,

- a) at least every three years;
- b) whenever there is a change in conditions in respect of the hazards; and
- c) whenever new hazard information in respect of a hazard in the work place becomes available to the employer.

5.5.3 Records

- a) When education is provided to an employee, the employee and Department official shall acknowledge it in writing.
- b) The Department shall keep records of the education provided to each employee, which shall be kept for a period of two years after the employee ceases to be exposed to a hazard.

6. COMMUNICATION

The National OHS Office, in consultation with the PHSC, will ensure that the HPP is communicated to the Workplace Health and Safety Committees/Health and Safety Representatives, supervisors, managers and employees.

This Program will be posted on the Department's OHS Intranet to allow maximum accessibility by all workplace parties.



7. EFFECTIVE AND REVIEW DATE

Version 1.4 of this module takes effect on September 28, 2016 and replaces all previous versions.

Version	Date	Made By	Description
1.0	April 2009	Stephen Ramsay	1 st Version
1.2	June 2012	Stephen Ramsay	Updated Template / Minor wording changes
1.3	March 2016	David Zanetti	Updated Template
1.4	September 2016	Sylvie Thériault	Minor wording changes

8. EVALUATION AND REVIEW

8.1 Frequency of Review

The Department will evaluate the effectiveness of this HPP, including the ergonomics-related components as follows:

- a) At least every three years;
- b) Whenever there is a change in conditions in respect of the hazards; and
- c) Whenever new hazard information in respect of a hazard in the work place becomes available to the employer.

8.2 Review Criteria

The evaluation of the effectiveness shall be based on the following:

- a) Conditions related to the workplace and the activities of the employees;
- b) Workplace inspection reports;
- c) Hazardous Occurrence Investigation Reports;
- d) Safety audits;
- e) First-Aid records and injury statistics; and
- f) Other relevant information.

9. ENQUIRIES

Enquiries concerning the HPP should be sent to your Regional OHS Advisor.



ANNEX A: Implementation Plan

The departmental implementation plan* is a five stage approach:

Stage	Component	Timeline
Stage I	Create a hazard identification and assessment methodology.	March 30, 2007
Stage II	Identify hazards for all ESDC occupation titles and assess hazard severity. Identify and rate existing preventive measures and recommended additional measures when warranted.	March 31, 2010
Stage III	Develop a management action plan, an employee education plan, which includes the nature of the work place, the hazards associated and preventive measures	March 31, 2011
Stage IV	Implement the management action plan and employee education program.	December 31, 2012**
Stage V	HPP evaluation and report.	June 30, 2013

* The Implementation Plan timeline was revised on March 31, 2010 following the release of the report identifying and assessing hazards. This timeline is subject to operational requirements.

** Refer to section 19.2 (1)(c) of the Canadian Occupational Health and Safety Regulations



ANNEX B: Hazard Identification

DEFINITIONS:

Note: These definitions are not intended to be all-inclusive but can be used as a guideline in the identification process. The employer and employees must remember that they have an obligation to report and investigate any situations they believe might constitute a hazard to their personal health and safety or the health and safety of others.

A **hazard** is any source of potential damage, harm or adverse health effects on something or someone under certain conditions at work.

1. HEALTH HAZARDS

A health hazard has the potential to cause adverse health effects. There are five major categories:


1.1. Physical Hazards

Noise: Noise is unwanted sound. As a general rule, if you need to shout to be heard by a person one foot or less away, the noise is in a range that can cause hearing damage. An assessment of sound pressure level should be conducted in accordance with the *Canada OHS Regulations, Part VII*. Limits of exposure are identified in section 7.4 of the Regulation.

Temperature: Temperature is considered extremely hot or cold when the body has difficulty maintaining its normal temperature of 37-38 degrees C (oral) or 38-39 degrees C (core). The Treasury Board Secretariat has issued a directive for office environments (Part II – Use and Occupancy of Buildings – Permanent Structures) which recommends that air temperature during working hours should be maintained within the 20-26 degrees C range.

Illumination: Light is the electromagnetic radiation to which the human eye is sensitive. The level of lighting required depends on the visual task to be performed. The average level of lighting required is set out in the *Canada OHS Regulations, Part VI*.

Vibration: Vibration is a mechanical energy transmitted from a rapid alternating or reciprocating motion to all or part of the body. The American Conference of Governmental Industrial Hygienists (ACGIH) publishes Threshold Limit Values (TLV's) to limit worker exposure to hand-arm vibration and whole-body vibration. These TLV's are generally accepted as best practices



Radiation: Radiation is a form of energy that can be ionizing (x-rays) or non-ionizing (lasers, sunlight). The ACGIH publishes TLV's as best practice guidelines for employers. Part X (Section 10.26) of the *Canada OHS Regulations* deals with specific requirements for radiation.

1.2. Chemical Hazards

Chemical hazards refer to any controlled product, material or substance determined in accordance with Part IV of the *Controlled Products Regulation* (Canada) to be included in a class listed in Schedule II of the *Hazardous Products Act* (Canada). These products are regulated under Part X (Division III) of the *Canada OHS Regulations*.

1.3. Biological Hazards

Biological hazards refer to organisms or toxic substances that are produced by living things and can cause illness or disease in humans. These products are regulated under Part X (Division I) of the *Canada OHS Regulations*.

1.4. Ergonomic Hazards

Ergonomic hazards arise from doing work in an environment that has not been suitably matched to the person doing the work. Ergonomic hazards like static or awkward postures, excessive force and repetitions are likely to cause musculoskeletal injuries (i.e. injuries that affect muscles, tendons, ligaments, nerves, discs and/or blood vessels). The probability for an injury increases when more than one hazard applies to one task or applies for a continuous period (i.e. to lift repetitively a heavy object above the head).

Static or Awkward Postures: Hazards related to static or awkward postures might arise if employees bend, twist or stretch limbs. The neck, back, shoulders, upper arms and wrists are especially vulnerable.

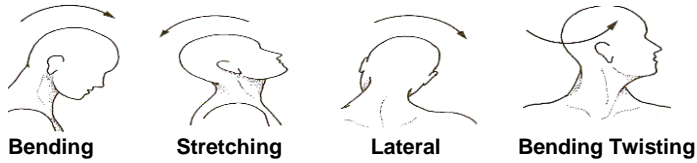
Excessive Force: Hazards related to excessive force might arise if employees lift, push, pull, carry, grip or use tools. The back, shoulders, arms, wrists and hands are especially vulnerable.

Repetition: Repetition is not clearly defined in ergonomics. The word "repetitive" has been used variously in three ways. First, it has been used as a qualitative term to describe doing high frequency actions or doing monotonous actions. Secondly, it has been used to describe when few rest breaks between movements is required during fast manual work. Third, it has been attempted to be quantified based on efforts/hour, cycle time, etc. The back, shoulders, arms, wrists and hands are especially vulnerable.

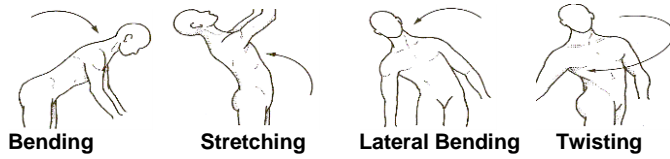
Various postures are illustrated on the following page to help you identify and assess

the risks. Please note that the list is not all inclusive as ergonomic principles can apply to almost any part of the body.

Neck:



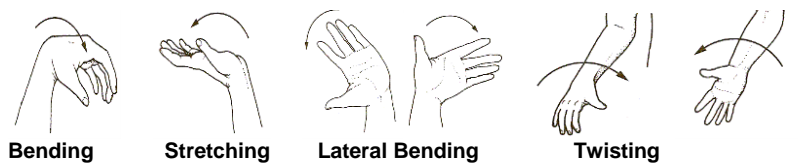
Back:



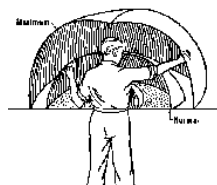
Shoulder/Arm:




Wrist/Hand:



Overextension





*Based on information from the Occupational Health and Safety Council of Ontario Musculoskeletal Disorders Prevention Series.

1.5. Psychosocial Hazards

Workplace Violence: Includes any conduct, threat or gesture of a person toward an employee in their workplace that can reasonably be expected to cause harm, injury or illness to that employee. Workplace violence is not limited to incidents that occur in the workplace. Work-related violence can also occur at off-site business-related functions, such as trade shows, or events related to work or in clients' homes. For example, a service delivery agent who receives a threatening telephone call from a client at his or her home is a victim of workplace violence. The aggressor may be anyone, including the employer, a co-worker, a member of the public, a client or a family member.

2. SAFETY HAZARDS

A safety hazard has the potential to cause injury. Safety hazards include but are not limited to:

2.1. Mechanical Hazards include all hazards associated with machinery and their respective motions – rotational, reciprocal and transverse.

2.2. Working at Heights includes but is not limited to work done from a ladder, platform or scaffold. The *Canada OHS Regulations, Part XII*, addresses requirements for each of these situations. Fall protection systems are identified under section 12.10 of the Regulation.

2.3. Mobile Equipment

Materials Handling Equipment includes equipment used to transport, lift, move or position persons, materials, goods or things. Use of this equipment is regulated by the *Canada OHS Regulations, Part XIV*.

Vehicles include any vehicle used by the Department for the purposes of operation on a public road in accordance with the *Highway Traffic Act* or equivalent provincial legislation. This also includes snow mobiles and all terrain vehicles used by the Department for the transportation of employees for work-related activities.

ANNEX C: Hazard Ranking Matrix

Definitions:

PROBABILITY	
Highly likely	Likely to occur several times this year; has happened several times before
Likely	Expected to occur more than once a year
Possible	Expected to occur at least once; foreseeable under unusual circumstances
Unlikely	Not expected to occur; has never happened before; no known history; unlikely sequence of events

FREQUENCY (Exposure)	
Frequent	Occurs one or more times per day
Regular	Occurs one or more times per week
Occasional	Occur one or more times per month or season
Rare	Occurs rarely or has never occurred, but is possible

LIKELIHOOD	
Almost certain	The most likely and expected result if a hazard exists
Quite possible	Not an unusual occurrence
Remotely possible	Unusual occurrence or possible, occurred in the past
Unlikely	Has not or never occurred but is conceivable

Step 1: Identify the Probability
(Frequency x Likelihood= **Probability**)

PROBABILITY					
(Frequency x Likelihood = Probability)					
Frequency	Likelihood				
		Unlikely	Remotely Possible	Quite Possible	Almost certain
	Frequent	Possible	Likely	Highly Likely	Highly Likely
	Regular	Possible	Possible	Likely	Highly Likely
	Occasional	Unlikely	Possible	Likely	Likely
	Rare	Unlikely	Unlikely	Likely	Likely

Step 2 – Identify the SEVERITY
If the hazard were to occur, the following would result (pick appropriate one)

SEVERITY	
Critical	Fatality or permanently disabling injury or illness; limb amputation, major fracture, burn on a large part of the body
Severe	Disabling injury resulting in loss of work time; laceration, burn on several parts of the body
Serious	Minor injury; sprain, light burn
Minimal	Non-disabling injury

Step 3 – Hazard Ranking: (Probability x Severity)
Based on the definitions of Probability and Severity, identify where the hazard lies on the matrix.

		SEVERITY			
		Minimal	Serious	Severe	Critical
PROBABILITY	Highly Likely	C	B	A	A
	Likely	C	C	B	A
	Possible	D	C	B	B
	Unlikely	D	D	C	C



Hazard Levels

- A** These hazards are the highest ranking and require an action plan to identify and implement preventive measures. These hazards are a priority as they could result in a significant disabling injury if adequate preventive measures are not implemented.
- B** Hazards are also considered to require immediate attention. An action plan should be developed in order to implement appropriate preventive measures.
- C** Hazards are hazards that have a relatively low level of severity. This group should never be ignored but are not a priority
- D** Hazards are the lowest level but should not be ignored. No immediate action plan is required.

Note: these ratings are made without taking into consideration the presence of preventive measures. Once preventive measures are introduced, the rating will be lowered, as the hazard will be well controlled.



ANNEX D: Hazard Assessment Management Action Plan

Step 4: MANAGEMENT ACTION PLAN

ACTION PLAN

In order to effectively and efficiently address the hazards found in the workplace, Management Action Plans should use the following **SMART** Principles:

- S** – Specific
- M** – Measurable
- A** – Achievable
- R** – Relevant
- T** – Time-bound

Adhering to these principles will ensure the action plan includes:

- A series of preventive measures that the Department must implement in order to reduce the probability of a hazard from occurring
- Specifies who will assume ownership of the objectives
- Includes milestones and timelines which must be respected
- Identifies criteria for monitoring, measurement and evaluation
- Documents the steps taken (use attached Hazard Assessment Action Plan)

PREVENTIVE MEASURES

The employer's fundamental obligation, according to the *Canada Labour Code*, Part II, is to identify hazards and first attempt to eliminate the hazards and then reduce and/or protect against the hazards. Preventive measures include any measure that the employer puts into place in order to eliminate the hazard or reduce the probability that the hazard will occur.

The attached Action Plan template should be used to document the implementation of specific Preventive Measures with respect to the identified hazards. The preventive measure, once implemented, will lower the chance (probability) of the hazard from occurring.

Action Plan							Assessment No.:
Hazard	Hazard Ranking	Action	Responsibility	End Dates	Sign off	Monitor effectiveness	Other actions
		The measures required to reduce the probability of the hazard occurring to the lowest level practicable.	Who is responsible for ensuring these actions are carried out?	When are these actions required to be completed?	When further actions are completed?	What are some of the trends to watch?	Any other actions required? (Does the Hazard Assessment need to be reviewed?)

Annex E: Hazard Identification Form and Assessment Worksheet

OCCUPATION / TASK : _____

PHYSICAL			
Noise <input type="checkbox"/>	Temperature : High <input type="checkbox"/> Low <input type="checkbox"/>	Illumination <input type="checkbox"/>	
Vibrations <input type="checkbox"/>	Radiations : Ionizing <input type="checkbox"/> Non-Ionizing <input type="checkbox"/> Infrared <input type="checkbox"/> Ultraviolet <input type="checkbox"/> Microwave <input type="checkbox"/> Laser <input type="checkbox"/>		
CHEMICAL			
Dust/Fibers <input type="checkbox"/>	Fume <input type="checkbox"/>	Smoke <input type="checkbox"/>	Confined Space <input type="checkbox"/>
Mist/Aerosol <input type="checkbox"/>	Gas <input type="checkbox"/>	Compressed Gas <input type="checkbox"/>	Explosive <input type="checkbox"/>
Solvent <input type="checkbox"/>	Vapor <input type="checkbox"/>	Fire suppression <input type="checkbox"/>	Liquid <input type="checkbox"/>
ERGONOMICS			
Awkward posture <input type="checkbox"/> Static posture <input type="checkbox"/> of:		Repetition <input type="checkbox"/>	Excessive force <input type="checkbox"/>
Neck <input type="checkbox"/> Back <input type="checkbox"/> Shoulder/Arm <input type="checkbox"/> Wrist/Hand <input type="checkbox"/>			
BIOLOGICAL			
Molds, mildew, fungi <input type="checkbox"/>	Blood-borne pathogen <input type="checkbox"/>	Virus <input type="checkbox"/>	
PSYCHOSOCIAL			
Workplace violence:	Interaction w/ colleagues <input type="checkbox"/>	Interaction w/ clients <input type="checkbox"/>	Visit to client <input type="checkbox"/>
MECHANICAL			
Electrocution <input type="checkbox"/>	Struck by <input type="checkbox"/>	Struck against <input type="checkbox"/>	
Rotation <input type="checkbox"/>	Reciprocal <input type="checkbox"/>	Continuous <input type="checkbox"/>	
WORKING AT HEIGHTS			
Ladder <input type="checkbox"/>	Scaffolding <input type="checkbox"/>	Work platform <input type="checkbox"/>	
MOBILE EQUIPMENT			
Material handling equipment <input type="checkbox"/>	Use of vehicle <input type="checkbox"/>		
OTHER HAZARDS (Add any hazards not listed)			

WORKPLACE NAME & ADDRESS	WORKPLACE HEALTH & SAFETY COMMITTEE MEMBER(S)/REP/REGIONAL OHS ADVISOR	DATE OF ASSESSMENT	DATE OF REVISION	SIGNATURE

OCCUPATION / TASK: _____ ASSESSMENT No. : _____

Hazard			Probability Frequency X Likelihood = Probability		Hazard Level Probability X Severity = Hazard Level			
No.	Category	Hazard	Frequency (Exposure)	Likelihood	Probability	Severity	Level	Action Plan Required (Y/N) and Comments
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								