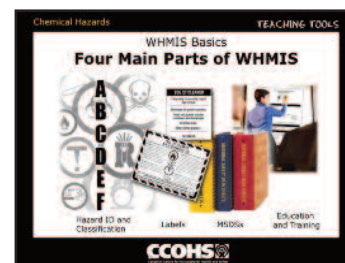


Chemical Hazards > WHMIS Basics

Components of WHMIS

The four components of WHMIS are:

- hazard identification and product classification
- labels
- material safety data sheets (MSDS)
- worker education and worksite specific training.



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For more information on hazard identification and product classification, please see [Symbols Notes](#). For more information on labels, please see [WHMIS Labels Notes](#).

Material Safety Data Sheet (MSDS)

MSDSs are prepared by the supplier or manufacturer of the material. The MSDS is intended to tell:

- what the hazards of the product are,
- how to use the product safely,
- what to expect if the recommendations are not followed,
- how to recognize symptoms of overexposure, and
- what to do if accidents occur.



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In Canada, every material that is controlled by WHMIS must have an accompanying MSDS that is specific to each individual product or material (both the product name and supplier on the MSDS must match the material in use).

There are nine (9) categories of information that must be present on an MSDS in Canada. These categories are specified in the Controlled Products Regulations and include:

- Product Information (product identifier, manufacturer/supplier's contact information, emergency phone numbers)
- Hazardous Ingredients
- Physical Data











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Chemical Hazards > WHMIS Symbols



Get to Know These Symbols

WHMIS Hazard Symbols

Hazard Description	WHMIS Symbol
<p>POISONOUS INFECTIOUS</p> <p>Causes immediate poisoning or long-term harmful health effects, disease or sensitization, or irritates skin/eyes.</p>	  
<p>FLAMMABLE & COMBUSTIBLE</p> <p>Catches fire very easily.</p>	
<p>OXIDIZING</p> <p>Causes or speeds up a fire.</p>	
<p>CORROSIVE</p> <p>Burns skin and eyes. Burns throat if breathed in.</p>	
<p>DANGEROUSLY REACTIVE</p> <p>Explodes or gives off toxic vapours.</p>	
<p>COMPRESSED GAS</p> <p>Can explode or "rocket" if dropped, damaged, heated or crushed. Can cause suffocation or frostbite.</p>	

Physical Hazards

LIGHTING LEVELS BASED UPON TASK	
Type of Activity	Range of Illumination (Lux**)
Public spaces with dark surroundings	30
Simple orientation for short temporary visits	50
Working spaces where visual tasks are only occasionally performed	100
Performance of visual tasks of high contrast or large scale	300
Performance of visual tasks of medium contrast or small size	500
Performance of visual tasks of low contrast or very small size	1000
Performance of visual tasks near threshold of person's ability to recognize an image	3000-10000

* Modified from: IESNA Lighting Handbook. 9th ed. Illuminating Engineering Society of North America, 2000. p. 10-13.

** Lux = Lumens (quantity of light) per square metre.

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CCOHS

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Glare

There are two types of glare; direct glare and indirect glare. Direct glare occurs when a bright light source is directly in the field of vision of a worker. This can impair the worker's vision or distract him/her from their work. To reduce direct glare, shield the light source from the workers line of sight. For natural light, this could mean the installation of blinds, and for other light sources, this could mean using lamp shades or other similar devices.

Indirect glare occurs when bright light is reflected from a nearby surface into the worker's eyes. This normally occurs because the background of the work surface is composed of a dark and glossy or shiny surface. For indirect glare, move lighting sources or move the worker away from the light source. Also, alter any dark or shiny finishes to those that are light or matte.



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Physical Hazards

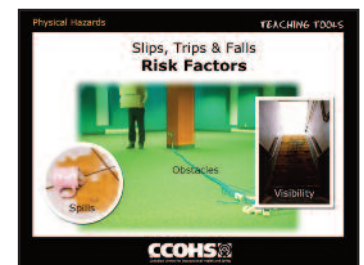
Slips, Trips and Falls

Slips, trips and falls can occur anywhere. Therefore, to minimize their risk, you must understand their risk factors. These include:

- Obstacles on the floor – extension cords, boxes, dirt and dust, etc.
- Spills and slippery surfaces – when a liquids (water or oil) and solids (dust or ice), coat a surface they decrease the amount of traction you have, therefore making it easier to slip and fall.
- Visibility – This risk factor usually combines with the previous two risk factors in that, if there are obstacles or slippery surfaces and you can't see them, you will likely make contact with them, increasing your risk of falling.



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Preventing Slips and Trips



CLEAN up floor spills immediately.

PUT salt or sand on ice.

WEAR shoes with good traction. Discard worn out shoes.

REMOVE obstacles from walkways.

KEEP floors and walking surfaces free of clutter.

EXERCISE care when walking on wet floors
(e.g. wet kitchen floor) and icy walkways.

USE non-slip mats under loose area rugs.



DO NOT LEAVE trash, clutter, obstacles, or torn rugs in walkways or on the floor.



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Biological Hazards

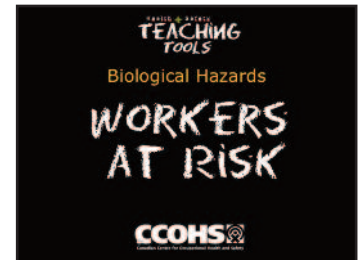
Workers at Risk

There are many work environments which put people at risk of exposure to biological hazards.

When working with children and adults be aware that there are a number of infectious diseases, which can be transmitted casually from person to person, such as colds, flus and pneumonia.

Some diseases such as E.coli or Salmonella can be spread from hand contact with dirty surfaces, which have been contaminated by these bacteria – such as kitchens (from raw meat contact) or toilets (from human waste).

Hepatitis and AIDS are usually the result of exposure to infected blood or from contaminated needlestick injuries.



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Personal Protective Equipment (PPE)

No matter where learners work, even as cooks or gardeners, they should be adequately protected from hazards in their surroundings. For example, handling raw chicken and then touching your mouth or eyes – causing potential ingestion of harmful “germs”. Here are some guidelines:

Clothing – should be snug fitting and usually cover all exposed skin

Footwear – should always cover the entire foot surface

Aprons or Coats – worn to protect clothing from hot materials or to protect clothing from bacterial or other contamination

Gloves – worn to avoid contamination of food or exposure to worker

Goggles – worn when splattering or spraying can occur

Hairnets – worn to keep food clean - people lose 50 hairs a day!

Dust Mask – where dusts or mists should be avoided.

Biological Containment Hoods – may be required for some biological samples in labs or hospitals. Not all PPE shown helps to protect workers from “biological” hazards.



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Sociability Issues > Assessing H&S Issues

Categories of hazards include:



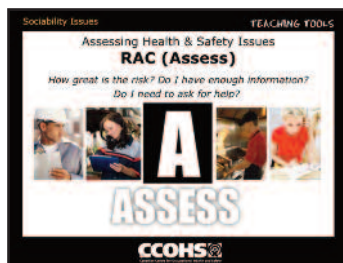
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- Biological (molds, fungi, viruses, bacteria)
- Chemical (inhalation of dusts, fumes, mists, vapours, or gases, contact with toxic liquids or solids)
- Physical (noise, heat, radiation)
- Ergonomic (sprains and strains)

"Recognize" means that you should STOP to think how you will perform a task or how the job will be done BEFORE you do it. Go through all steps in your mind and figure out if there is a potential for injury. If you think there is some danger, DO NOT perform the task until you follow the rest of the RAC steps, or talk to your supervisor.

Assess

It is important to think about the hazards you have just "recognized". When doing the assessment step, questions to ask include:



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- *What do I know about this hazard or activity? How great is the risk?*
- *Do I have enough information to understand what the dangers are?*
- *Do I need to ask someone (parent or supervisor) for more information?*

Control



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Control of a hazard can happen in a number of ways. If you're at work, control will be handled by the supervisor or employer. But, it is important that you know about these controls so you are able to recognize when something is "not right". At home or at a social occasion, you may need to ask for help if you cannot safely take control of the hazards yourself.

I think my employer is breaking safety laws at work... *What can I do?*

*How high can I work without a safety harness?
How many hours do I have to work before I get paid overtime?
Can my boss really make me do this?*

Here is some information that will help if you think your employer might be breaking safety laws at work.

First, yes – there are laws about safety at work. In Canada, it is the occupational health and safety laws that outline the general rights and responsibilities of the employer, the supervisor and the worker. Each of the ten provinces, three territories and the federal government has its own set of laws (or legislation). In each province or territory, there is an Act – typically called the Occupational Health and Safety Act or something similar – that applies to most workplaces in that region.

About 90% of Canadian workers are covered by the legislation of the province or territory where they work. There are some exceptions (such as in a private home or on a farm) so the legislation should be consulted to find out which workplaces are covered and which are not. The laws of the federal government cover the remaining 10% of workers such as federal government employees or people involved in the transportation, broadcasting, or banking industries.

Second – there are several steps you can take to find out who can help you with your concerns. If your workplace has a health and safety representative, a health and safety committee, company safety officer or a union, you should start by asking these people first. You may also ask your supervisor for help. Check to see if there is a set of reporting procedures that you can follow.