Nursing Student Orientation

Workplace Hazardous Materials Information System (WHMIS)
The Purpose of WHMIS

- WHMIS is designed to give all working Canadians a uniform and appropriate quantity and quality of information about hazardous materials used in the workplace.

- By setting standards of the type and amount of information to be given to the users of hazardous materials, it is expected that accidents and illness caused by hazardous materials in the workplace will be reduced.

- *Hôtel-Dieu Grace Healthcare* encourages workers to seek materials information, to consult data sheets and to participate in and actively support the precautionary workplace measures instituted in the interest of employee health and safety.
# A Shared Responsibility

When a product is a “controlled product” according to the WHMIS legislation, a supplier must:

- Label the product or container. The purpose of the label is to clearly identify the contents of the hazardous material.
- Provide a Material Safety Data Sheet (MSDS) to customers. MSDS’s give detailed information about hazards and safe use of products.

### Suppliers

### Employers

Employers are required to do the following:

- Establish education and training programs for workers exposed to hazardous products in the workplace.
- Ensure that controlled products are properly labeled and up-to-date MSDS’s are present for each product and readily available to workers.

### Workers

Workers are required to do the following:

- Required to participate in the training programs and to use this information to help them work safely with hazardous materials.
- Inform employers when labels on containers have been accidentally removed or if the label is no longer readable.
WHMIS Labeling Requirements

What is a WHMIS label

The WHMIS label is one of the ways health hazard information is made available to anyone using the material.

Labels are required by law.

Why label materials?

They are the first alert there may be hazards associated with using the product.

Labels tell what precautions to take when using the product.

They inform the person that there is a Material Safety Data Sheet (MSDS) available.

Types of labels. Supplier and Workplace
Supplier Labels

The product label is your first source of information about the hazards of a product and how to protect yourself. Controlled (hazardous) products from a supplier must display a WHMIS label with a hatched border and the following seven categories of information:

1. Product Identifier
2. Supplier Identifier
3. Hazards
4. Risk Phrases
5. Precautionary Measures
6. First Aid Measures
7. MSDS Reference
WHMIS Workplace Labels are required when:

- A controlled product is delivered to the workplace in bulk and a supplier label is not available.
- A controlled product is transferred to a smaller portable container for use in the workplace.
- The supplier labels on a container of a controlled product becomes unreadable, damaged or detached and a replacement supplier label is not available.
Material Safety Data Sheets are required to be supplied when products are sold into a workplace or when in-house products are prepared for use.

At Hôtel-Dieu Grace Healthcare Material Safety Data Sheets (MSDS) can be found on the HDGH Intranet under Health & Safety, WHMIS/MSDS.
There are four main routes of exposure by which chemicals can contact and/or enter our bodies. Many chemicals can cause direct effects at the point of contact, such as irritation of the skin, eyes, mouth or nose. Some chemicals can also be absorbed into the body and cause harmful effects on other bodies systems like the blood, liver or nervous system.

**Inhalation (Breathing)** – Chemicals in the air can be inhaled into the body through the mouth or nose. In the workplace airborne chemicals may occur in different forms such as gases, vapours, dusts or mists.

**Eye Contact** – Chemicals can also come in contact with the eyes as dusts, mists, gases, vapours, or when liquids are splashed. Some chemicals can be absorbed through the eyes causing harmful effects elsewhere in the body.

**Ingestion (Swallowing)** – Chemicals can be ingested through the mouth. In workplaces, ingestion can result from hand-to-mouth contact, consuming contaminated food or drink, or smoking cigarettes that have come into contact with a chemical or unclean hands.

**Skin Contact** – Many chemicals can cause direct effects at the point of contact with the skin. Some chemicals can be absorbed into the body through the skin.

**Note:** *Injection* is also a possible route of exposure. Biological or chemical substances can be injected into the body by accidentally puncturing the skin with a contaminated needle or other sharp device. **Following Universal Precautions is the best means of protection.**
WHMIS uses classifications to group chemicals with similar properties or hazards. The Controlled products Regulations specifies the criteria used to place materials within each classification. There are six classes although several classes have divisions and subdivisions. Each class has a specific symbol to help people identify the hazard quickly.

Hazard symbols appear on product containers as a visual alert. Products are classified by the supplier to identify hazardous properties such as toxicity, flammability and reactivity. A product that has hazardous properties, is called a controlled product, and one or more WHMIS symbols must appear on the product label. These eight symbols alert you immediately to a product's potential hazards.
Classes of WHMIS Controlled Products

**Class A**
**Compressed Gas**

Any material that is normally a gas which is placed under pressure or chilled, and contained by a cylinder. Dangerous because they are under pressure. Cylinder may explode or burst when heated, dropped or damaged. Leaking cylinders are also a danger because the gas that comes out is very cold and it may cause frostbite if it touches your skin.

**Examples:** compressed air, carbon dioxide, oxygen, nitrous oxide

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**Class B**
**Flammable & Combustible Material**

Flammable means that the material will burn or catch on fire easily at normal temperatures. May catch fire when exposed to heat, spark or flame. May burst into flames. The material may be a solid, liquid or gas.

**Examples:** propane, acetone, turpentine, butane
Classes of WHMIS Controlled Products

Class C
Oxidizing Material
May cause fire or explosion when in contact with wood, fuels or other combustible material.
They may be a solid, liquid or gas.

Examples: oxygen, nitric acid, sodium chlorite

Division 1 - Materials Causing Immediate & Serious Toxic Effects
These are materials that are very poisonous and immediately dangerous to life and health.
Serious health effects such as burns, loss of consciousness, coma or death within just minutes or hours after exposure are grouped in this category.

Examples: chlorine bleach

Class D
Poisonous and Infectious Material

Division 2 - Materials Causing Other Toxic Effects
These materials are poisonous.
Exposure may have serious consequences such as cancer, allergies, birth defects, or irritation/sensitization.

Examples: mercury, acetone, benzene
Classes of WHMIS Controlled Products

Division 3 - Biohazardous Infectious Materials
These materials are organisms or the toxins they produce. They can cause diseases in people or animals. Included are bacteria, viruses, fungi and parasites.

Examples: medical wastes, contaminated sharps

Can cause severe burns to skin and other human tissues such as the eye or lung. They can also attack other materials including metal.

Examples: chlorine, ammonia gas, nitric acid

Class E
Corrosive Material

Class F
Dangerously Reactive Materials

May react violently causing explosion, fire or release of toxic gases, when exposed to light, heat, vibration or extreme temperatures.

Examples: acetylene
Personal Protective Equipment

- Chemical Goggles
- Face Shield
- Protective Apron
- Disposable Dust Mask
- Cartridge Respirator
- Supplied Air Respirator
- Hand Protection
- Foot Protection
- Full Body Protective Clothing