

WHMIS 2015 / GHS



The Safety Cat





WHMIS came into effect in **1988** to assist Canadian Workers realize their **Right to Know** about hazardous materials in the workplace

- The Globally Harmonized System (**GHS**) is an international system to **standardize** classification & communication
- Feb 2015, Canada **aligned** to the GHS
- While adoption of GHS has resulted in **changes**, it offers the same, & in some cases, additional protection to Workers & a better classification system



What is GHS?

GHS is a global system developed by the United Nations

United Nations held Conference in Rio de Janeiro, also known as the “*Earth Summit*” & issued a **mandate** calling for the development of a globally harmonized chemical classification & labeling system





WHMIS Exemptions

Certain products are not regulated under WHMIS, they have specific Legislation

- ❌ Cosmetic, device, drug or food
- ❌ Pest control products
- ❌ Consumer products/commodities
- ❌ Wood or products made of wood
- ❌ Nuclear substances
- ❌ Hazardous waste for disposal
- ❌ Tobacco and tobacco products
- ❌ Manufactured articles

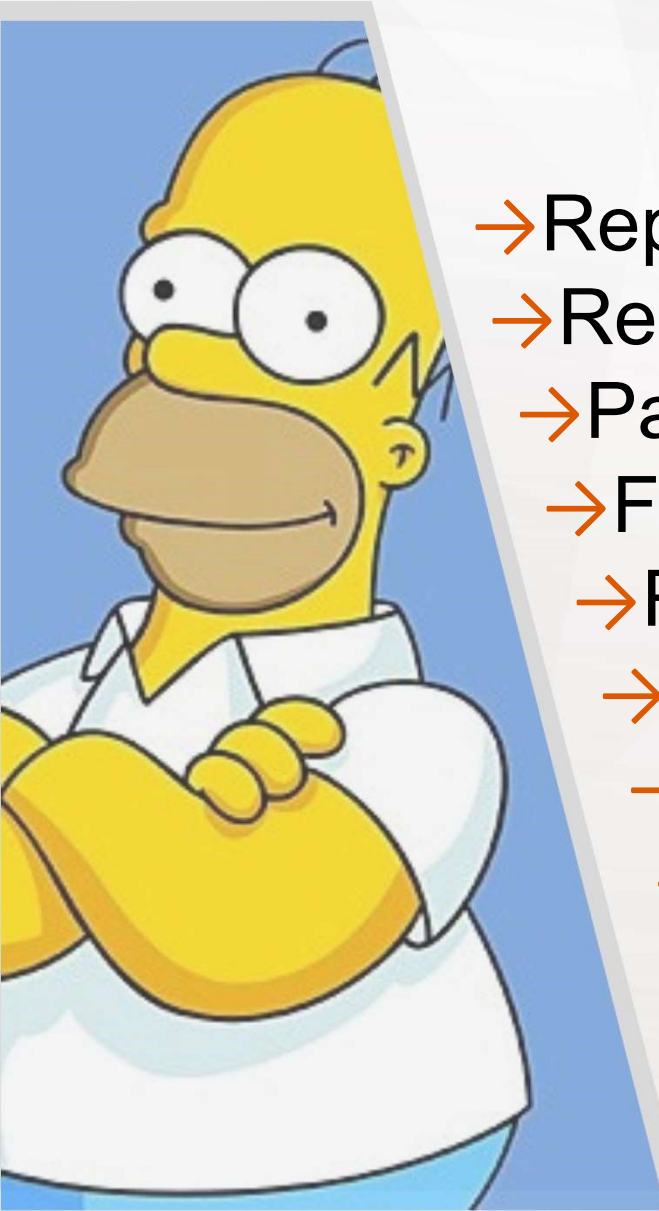
EXEMPT



Ontario Regulation 860

- **3** ~ Assessment
- **6** ~ Worker Education
- **8** ~ Labels
- **12** ~ Placard Identifiers
- **14** ~ Laboratory Samples
- **19** ~ Confidential Information
- **24** ~ Disclosure, etc...





The Worker

- Report hazardous materials discovered
- Report spills/leaks
- Participate in training
- Follow training/policies/procedures
- Report personal exposure
- Work in a safe manner
- Be familiar with hazardous materials
- Talk to H&S Rep/JHSC, etc...

- Right to Know
- Right to Participate
- Right to Refuse



General Education is also known as **awareness**: learning about WHMIS

- What is WHMIS
- Duties & Responsibilities
- Health Effects
- Routes of Entry / Exit
- Labels
 - Pictograms
 - Safety Data Sheets
 - General Requirements





Workplace Specific training is exactly that: about your workplace


- Specific materials you have
- Where are the materials
- How do we handle the materials
- Our Policies & Procedures
- How do we use the materials
 - Spill/leak response
 - Where are the SDS's
 - What Personal Protective Equipment (*PPE*) do we use



Sometimes the full effects of exposure are not readily seen or felt

There may be a **delay** between exposure & symptoms appearing

- **Latency Period** is the delay in time between exposure & symptoms
- The Latency Period could be **very short**: common cold = a couple days
- The Latency Period could be **quite long**: months, even years = HIV



Hazardous materials also affect the body in different ways

- **Local Effects** only the local exposure point is affected: skin rash
- **Systemic Effects** hazardous materials enter the body & circulate through the body via the different **systems**: circulatory, digestive, respiratory, etc...
- The Systemic Effects may not be felt until **after** a latency period



In order for a material to become hazardous to a person's health, it must first **contact** or **enter** the body, & the chemical must have some biological effect on the body

There are 4 primary
Routes of Entry

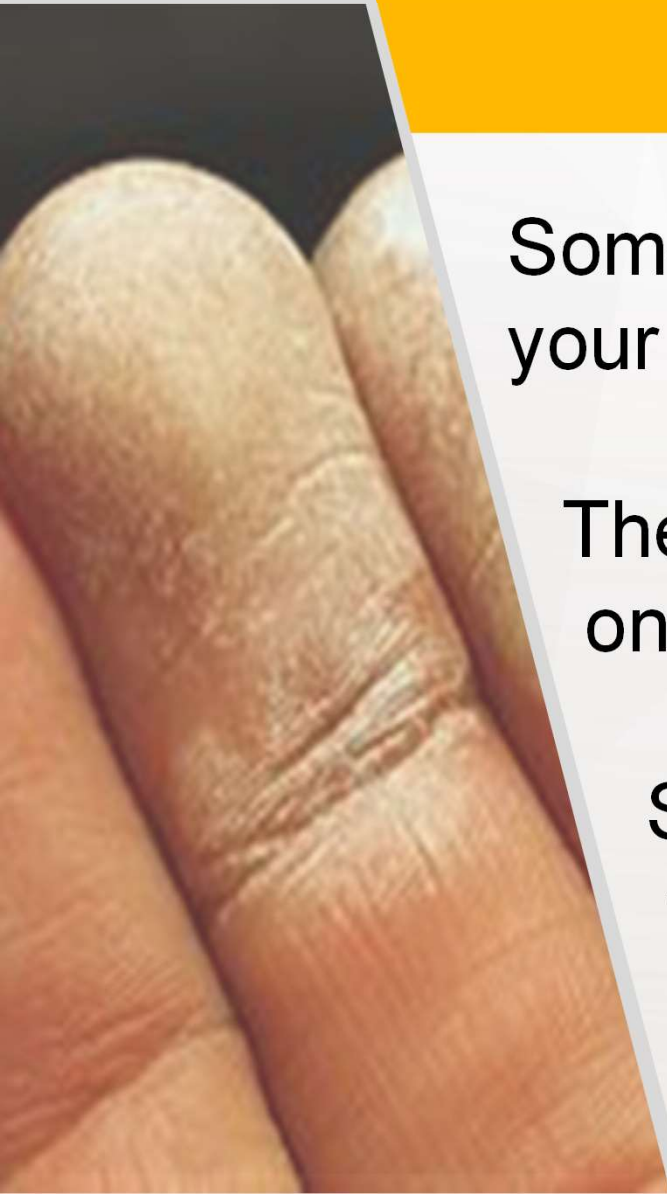


Absorption

Some hazardous materials can also enter your body by **passing through** your skin

The severity varies drastically depending on **what chemical** you were exposed to

Some hazardous materials will cause your skin to become very **sensitive**, while others may pass directly through the skin & into the blood stream





Although Routes of Exit are **not commonly** spoken about in WHMIS training, once hazardous materials are “*in*” the body, how we “*get them out*” can pose **another risk**

How do we **expel** hazardous materials from our body

- Vomiting (*voluntarily/involuntarily*)
- Going to the washroom





3 Hazard Groups



Physical Hazards

Classified according to their physical/chemical properties such as reactivity, flammability, compressed gases or corrosiveness

Health Hazards

Classified in this group based on their ability to cause adverse health effects such as toxicity, respiratory sensitization, eye irritation or carcinogenicity

Environmental Hazards

Exists in the GHS but Canada has not adopted into WHMIS 2015



Health Hazard *Classes*

(12 Health Hazard Classes)

- Acute Toxicity
- Skin Corrosion & Irritation
- Serious Eye Damage/Eye Irritation
- Respiratory or Skin Sensitization
- Germ Cell Mutagenicity
- Carcinogenicity
- Reproductive Toxicity
- Specific Target Organ Toxicity: Single Exposure
- Specific Target Organ Toxicity: Repeated Exposure
- Aspiration Hazard
- Biohazardous Infectious Materials (1988 Class D3)
- Health Hazards not otherwise classified





The **geometric shape** of hazardous materials symbols helps to identify what **Legislation** governs that material



A **round** symbol, black border, white background with a black pictogram centered = **WHMIS 1988**



A **square-on-point** symbol, red border, white background with a black pictogram centered = **WHMIS 2015 / GHS**



Any other shape: triangle, inverted triangle, hexagon, octagon, decagon, etc... same pictogram: typically centered = **Manufacturers Warning**

Who Applies Labels?

Supplier/Importer

Add labels to products prior to providing them to buyers

Employer

Ensure products being received & used in the workplace are correctly labeled

Manufacturer/Scientist

Determine Group, Class & Category/Type: label appropriately





- **Product Identifier** ~ the name by which the product is known
(may be shelf/brand name)
- **Pictograms** ~ a product may have 1 or more-than-1 hazard
- **Signal Word** ~ 2 signal words
 - *Danger* = more hazardous
 - *Warning* = less hazardous
- **Hazard Statement** ~ what the product may do on exposure



uses severe eye irritation.

me – No smoking. Take precautionary measures against static
Keep container closed when not in use. Store in a cool/dry
away from heat and ignition sources. Use only in a well-ventilated area.
thing. Wear appropriate personal protective equipment, avoid direct

eyes with water for at least 15 minutes while holding eyelids open.

g or mist. Dry chemicals. Halon. Powder, foam or CO2.

tails regarding safe use of this product.

n, NJ 07000, Tel: 555 123 4567



Workplace Labels

The following information must be displayed on a workplace label

- **Product Name** (*matching SDS*)
- **Safe Handling Precautions**
- **A Reference** to the SDS

***Note:** *additional info may be included*

Workplace label requirements fall under Provincial, Territorial or Federal jurisdiction

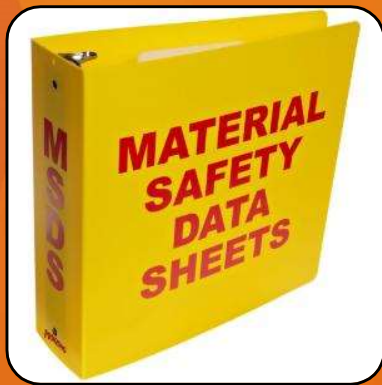




What has changed?

WHMIS 1988

Material Safety Data Sheet
minimum 9 categories of
information in an order chosen
by the Manufacturer



WHMIS 2015

Safety Data Sheet
16 categories of information
in a specific order as
determined by Legislation





Safety Data Sheet Information

13. Disposal Considerations

Provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, & safe handling practices

14. Transport Information

Provides guidance on classification information for shipping & transporting by road, air, rail, or marine (*sea*)

15. Regulatory Information

Identifies the safety, health, & environmental regulations specific for the product that is not indicated anywhere on the SDS

16. Other Information

When the SDS was prepared or the last known revision made
May also state changes made
You may contact the Supplier for an explanation of the changes



Safety Data Sheet Terminology

Carcinogen ~ known or suspected to cause Cancer

Mutagen ~ Known to induce heritable mutations or positive results showing mutagenic effects in the germ cells of humans

Teratogen ~ Agent that can disturb the development of an embryo or fetus, may cause a birth defect in the child or may halt the pregnancy outright

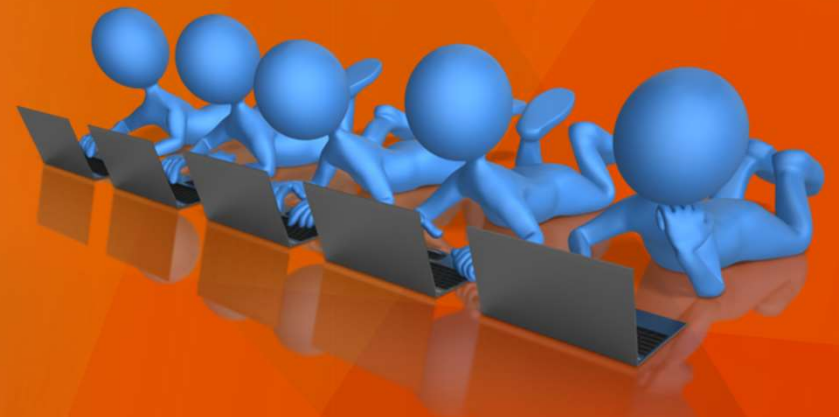
LC₅₀ ~ Lethal Concentration 50%, airborne concentration that kills 50% of test species

LD₅₀ ~ Lethal Dose 50%, ingested concentration that kills 50% of test species



Take a moment to
look-up an SDS online
or from your workplace

let's discuss the
information & specifics

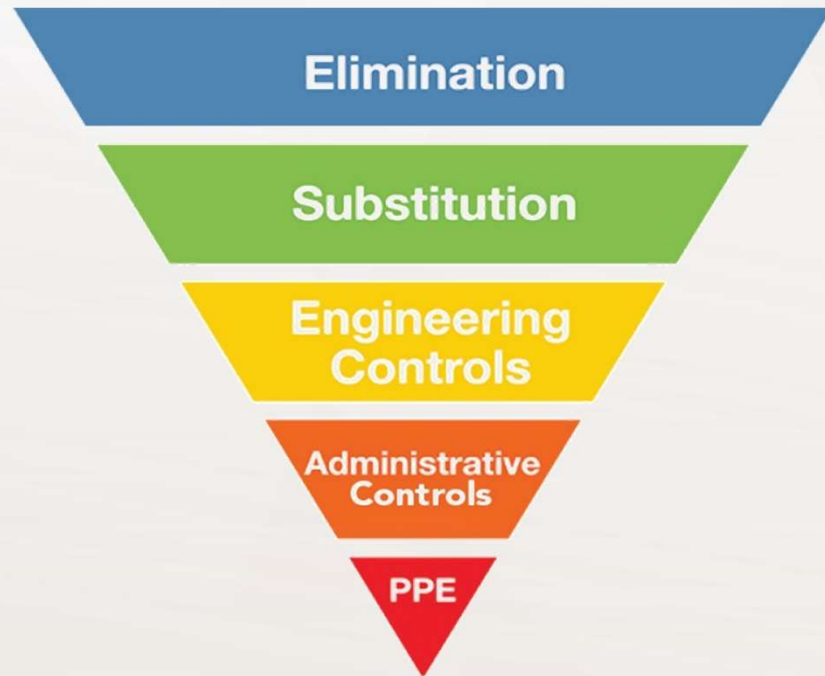




The Hierarchy of Control

Hierarchy of Control is a system used to minimize or eliminate exposure to hazards

The hazard controls in the hierarchy are, in order of **decreasing** effectiveness





Personal Protective Equipment

- Where is it?
- Which PPE do I use/need?
- When do I use/need it?
- How does it fit?
- Can it be re-used?
- How do I clean it?
- When do I need to replace it?
- Where do I get replacements?

