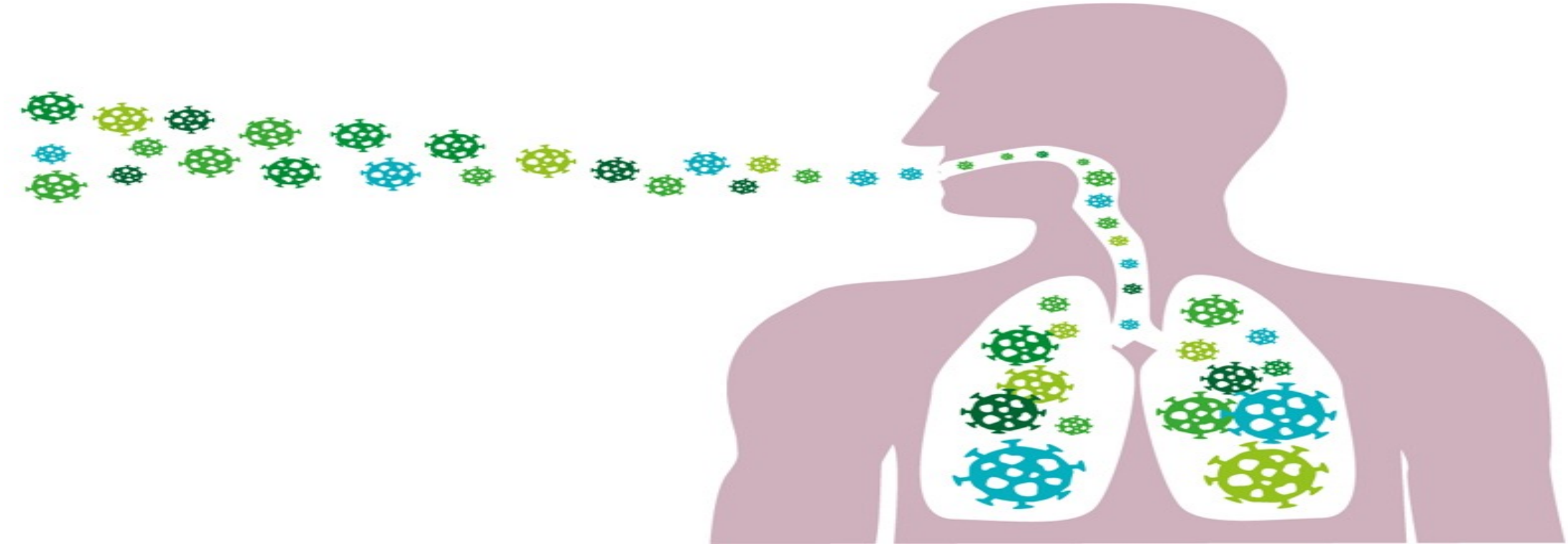
MIS
MAKE IT SAFE



Respiratory Protection

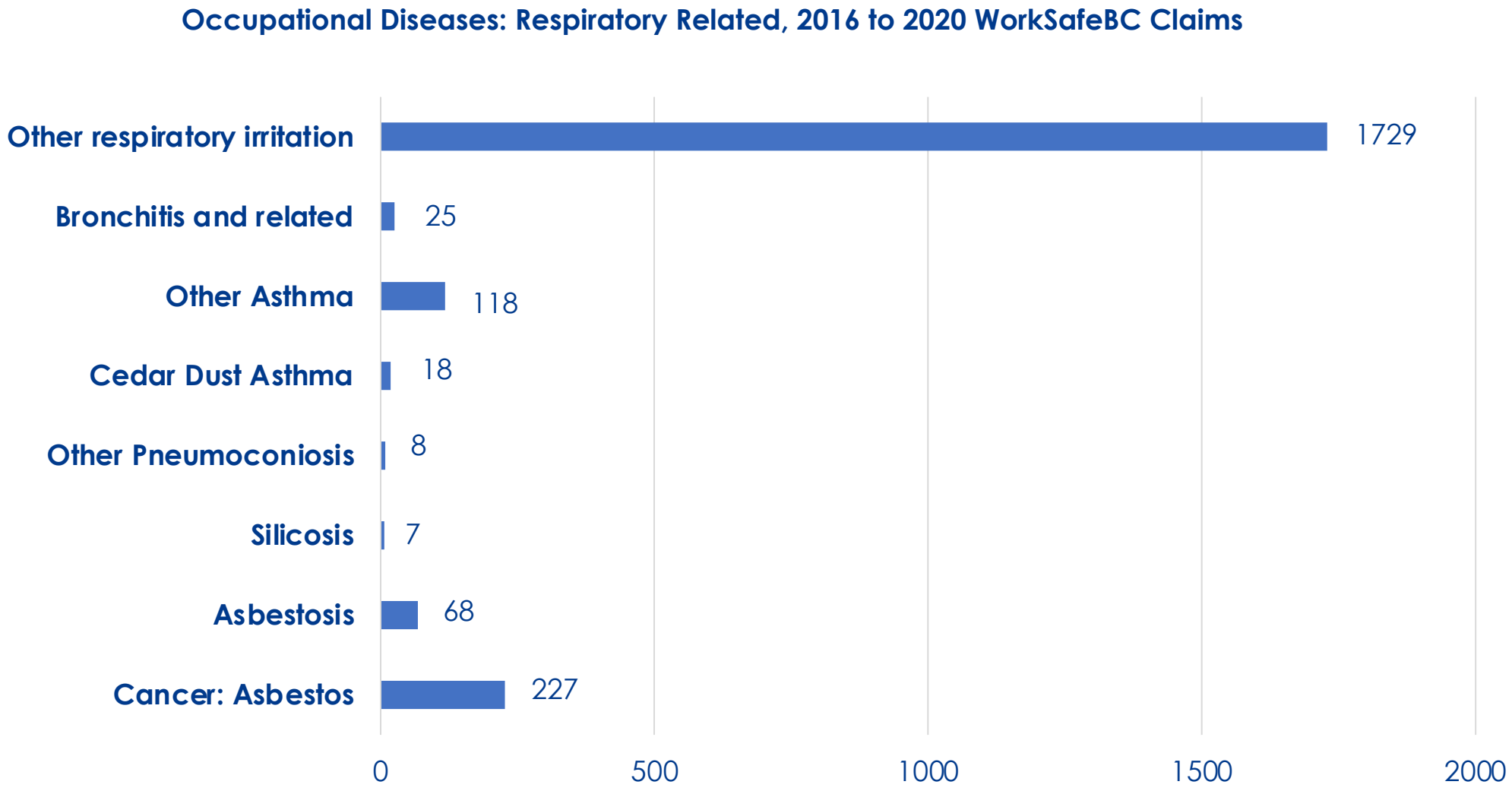
DISCLAIMER

This session is only for awareness and discussion purposes only.

This session does NOT qualify you to use a respirator.

Participants are encouraged to take specific respirator training that meets the Occupational Health and Safety Regulation requirements and other legal requirements.

Why is this topic important



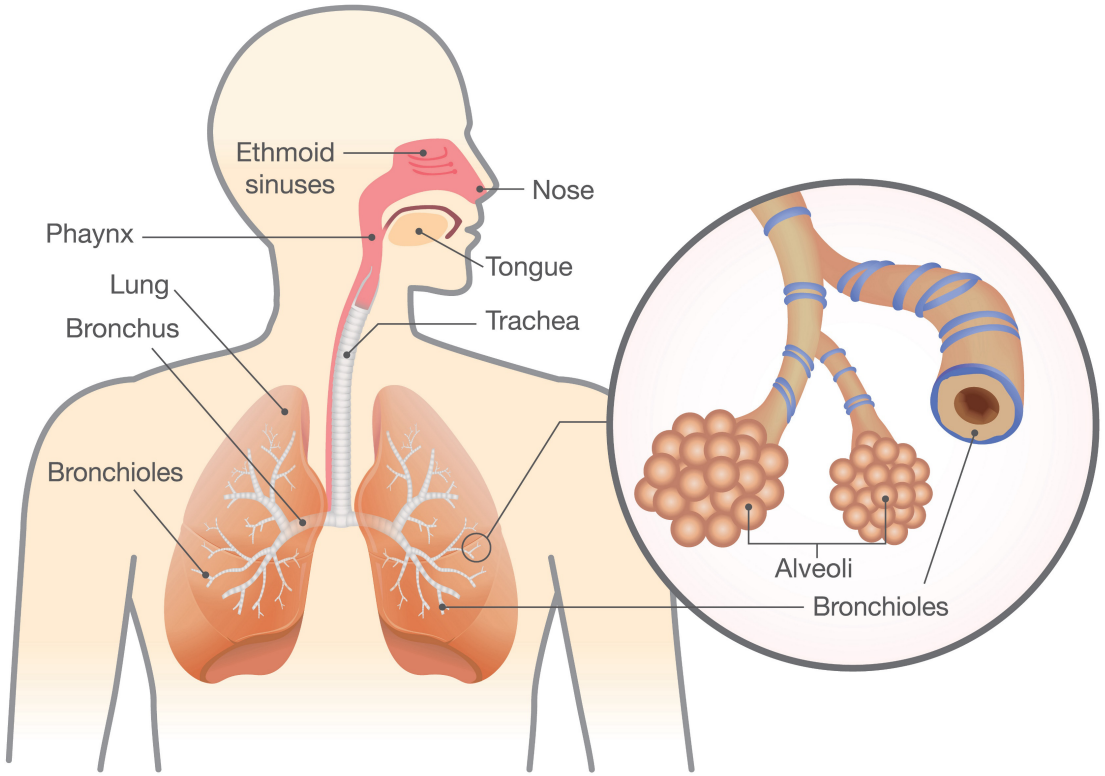
Examples of WSBC recent incidents

- A worker experienced respiratory distress after exposure to spray paint that another worker was applying in the warehouse.

- A bleach-based drain cleaner was used to clear a blockage from a slow-draining urinal four days after an acid-based drain cleaner had been used in the same line. A chemical reaction ensued that resulted in eight workers reporting to hospital with upper respiratory irritation.

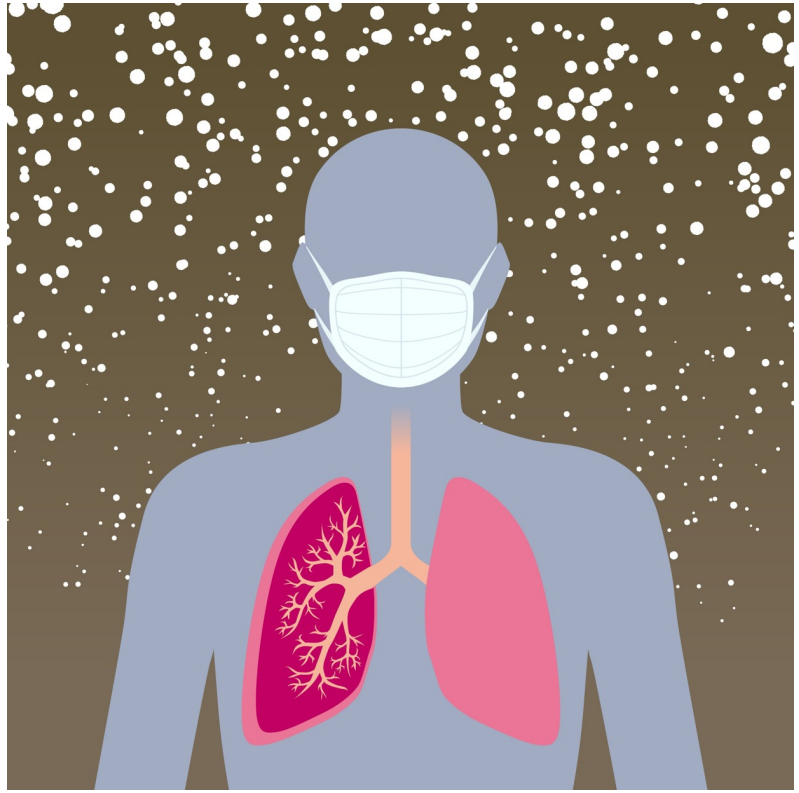
Respiratory system

The respiratory system consist of organs and structures that allow us to breath by taking in oxygen and expelling carbon dioxide.



Definition: particulates

Particulates also known as atmospheric aerosol particles, atmospheric particulate matter, particulate matter (PM) or suspended particulate matter (SPM) – are microscopic particles of solid or liquid matter suspended in the air.



Hazard: particulate contaminants

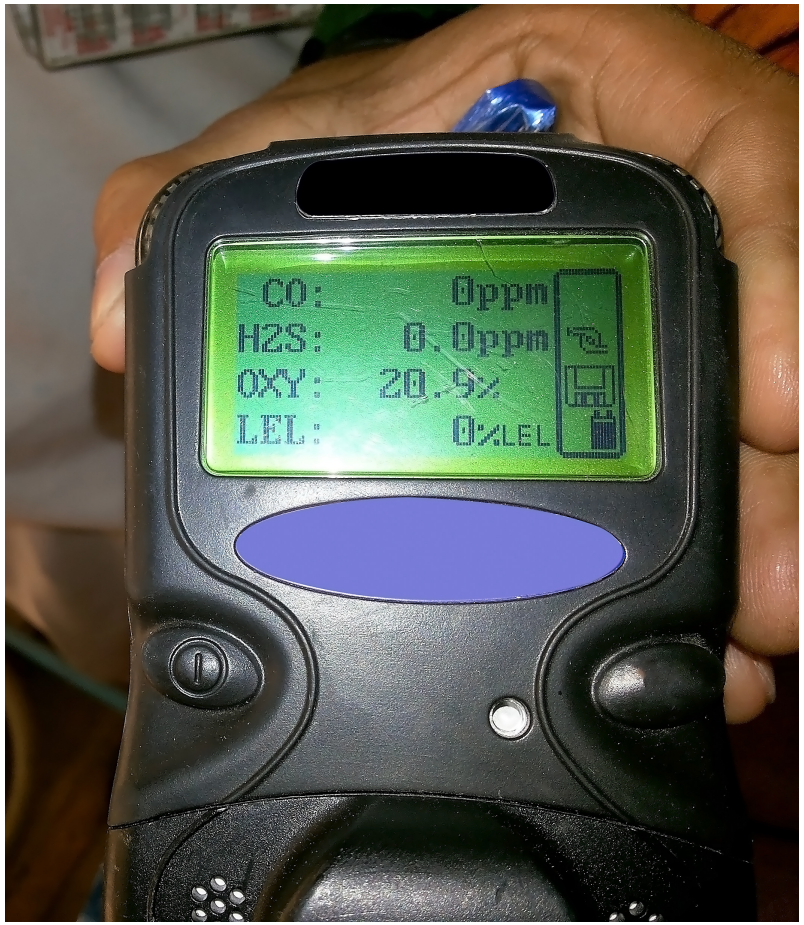
Particulate contaminants come in many forms:

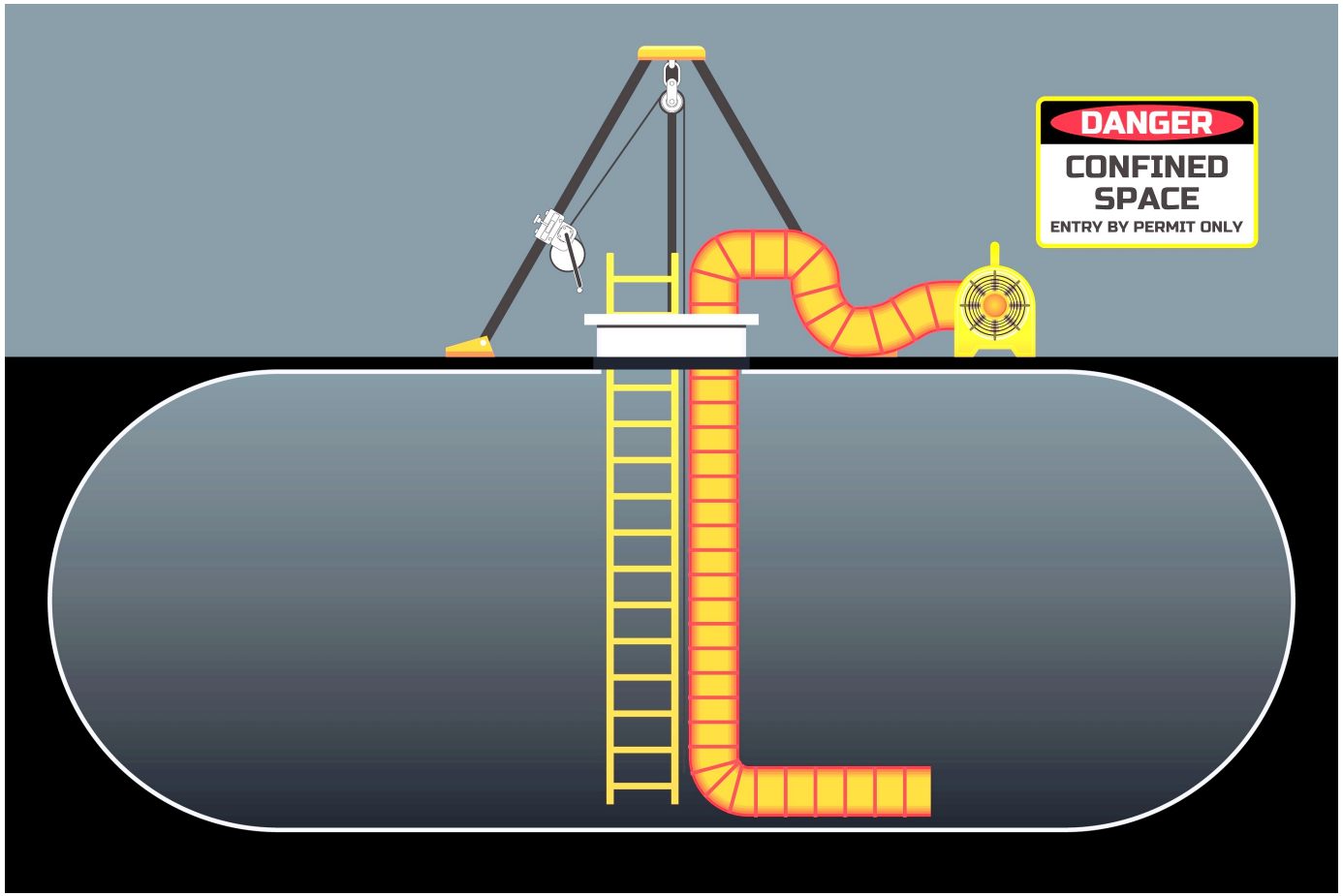
- Dust and fibres (small solid particles)
- Mist (small liquid drops)
- Fumes (tiny solid particles)
- Biological contaminants

Hazard: gas and vapour

- Gases are materials that exist as individual molecules in the air at normal room temperature and air pressure
- Vapours are the gaseous form of substances that are normally liquid or solid at room temperature

Hazard: oxygen deficient atmospheres

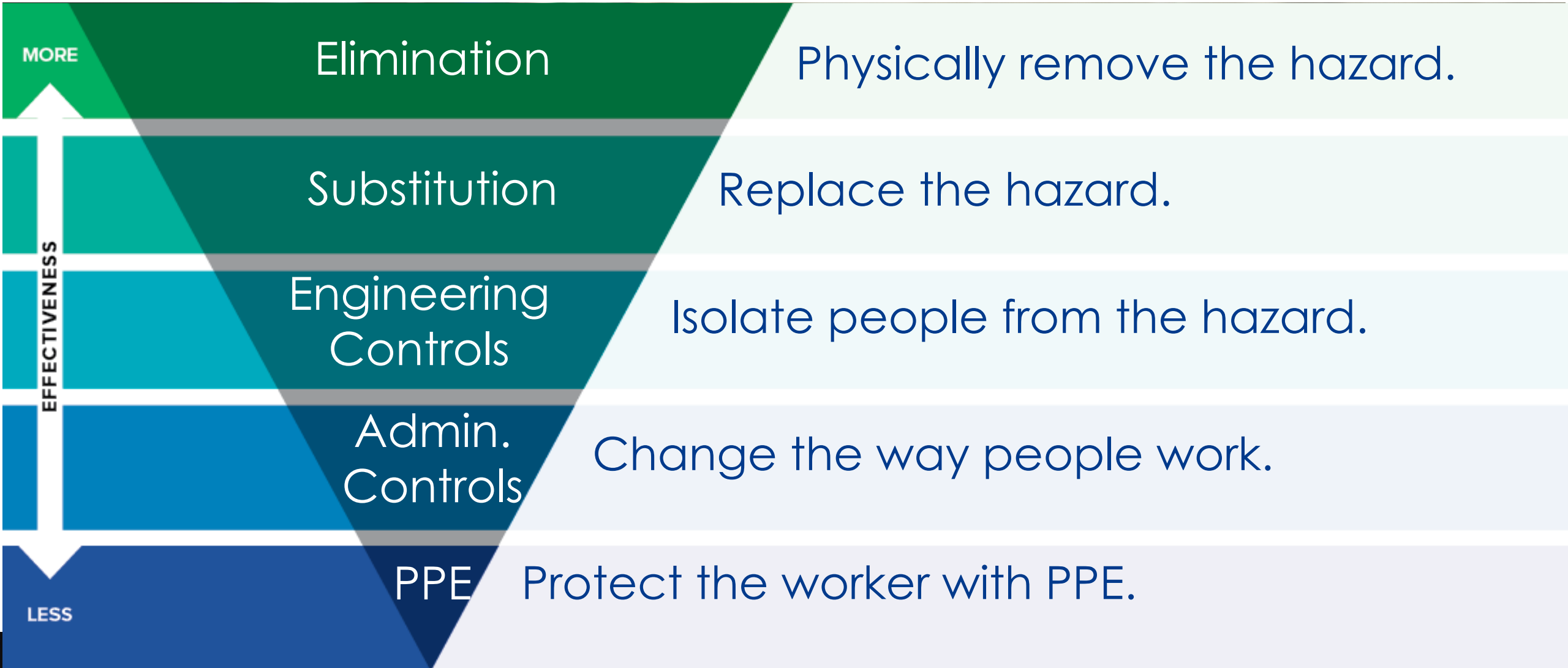




Call to action/next steps

- Hazard Identification and Control
- WHMIS and Safety Data Sheets
- Exposure limits, sampling, Exposure Control Plans
- Respiratory Program
- **Training**
- Types of respirators
- Fit testing

Hazard identification and control



WHMIS & Safety Data Sheets

- Have the SDS for all hazardous products in your workplace
- Review the SDS before using any hazardous product

SAFETY DATA SHEET

Ammonia

Airgas
an Air Liquide company

Section 1. Identification

GHS product identifier	:	Ammonia
Chemical name	:	ammonia
Other means of identification	:	ammonia; anhydrous ammonia
Product type	:	Gas.
Product use	:	Synthetic/Analytical chemistry.
Synonym	:	ammonia; anhydrous ammonia
SDS #	:	001003
Supplier's details	:	Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
24-hour telephone	:	1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	:	FLAMMABLE GASES - Category 2 GASES UNDER PRESSURE - Liquefied gas ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 AQUATIC HAZARD (ACUTE) - Category 1

GHS label elements

Hazard pictograms :

Signal word	:	Danger
Hazard statements	:	Flammable gas. May form explosive mixtures with air. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation. Harmful if inhaled. Causes severe skin burns and eye damage. Very toxic to aquatic life.

Precautionary statements

General	:	Read and follow all Safety Data Sheets (SDS'S) before use. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution.
Prevention	:	Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing gas. Wash hands thoroughly after handling.

Exposure limits, sampling, and ECP

- SDS outlines the exposure limits to the hazardous product
- Walkthrough survey and air sampling
- Exposure Control Plans (ECP)

Ingredient name	Exposure limits
Ammonia	ACGIH TLV TWA: 25 ppm 8 hours TWA: 17 mg/m^3 8 hours STEL: 25 ppm 15 minutes STEL: 24 mg/m^3 15 minutes

Respiratory Program

A Respiratory Program is designed to help reduce exposure to occupational airborne contaminants such as dust, fumes, mists, gases, vapors and microorganisms.

Where feasible, prior to relying on personal respiratory protection exposure to Contaminants will be eliminated by either:

- The elimination of or substitution of a less hazardous process or material.
- The implementation of *Engineering Controls* (e.g. general/local exhaust ventilation or isolation)

When the elimination or substitution of a hazard, or effective engineering controls is not feasible, the employer must ensure that appropriate respiratory protective equipment; safe work procedures, education and training are provided to employees

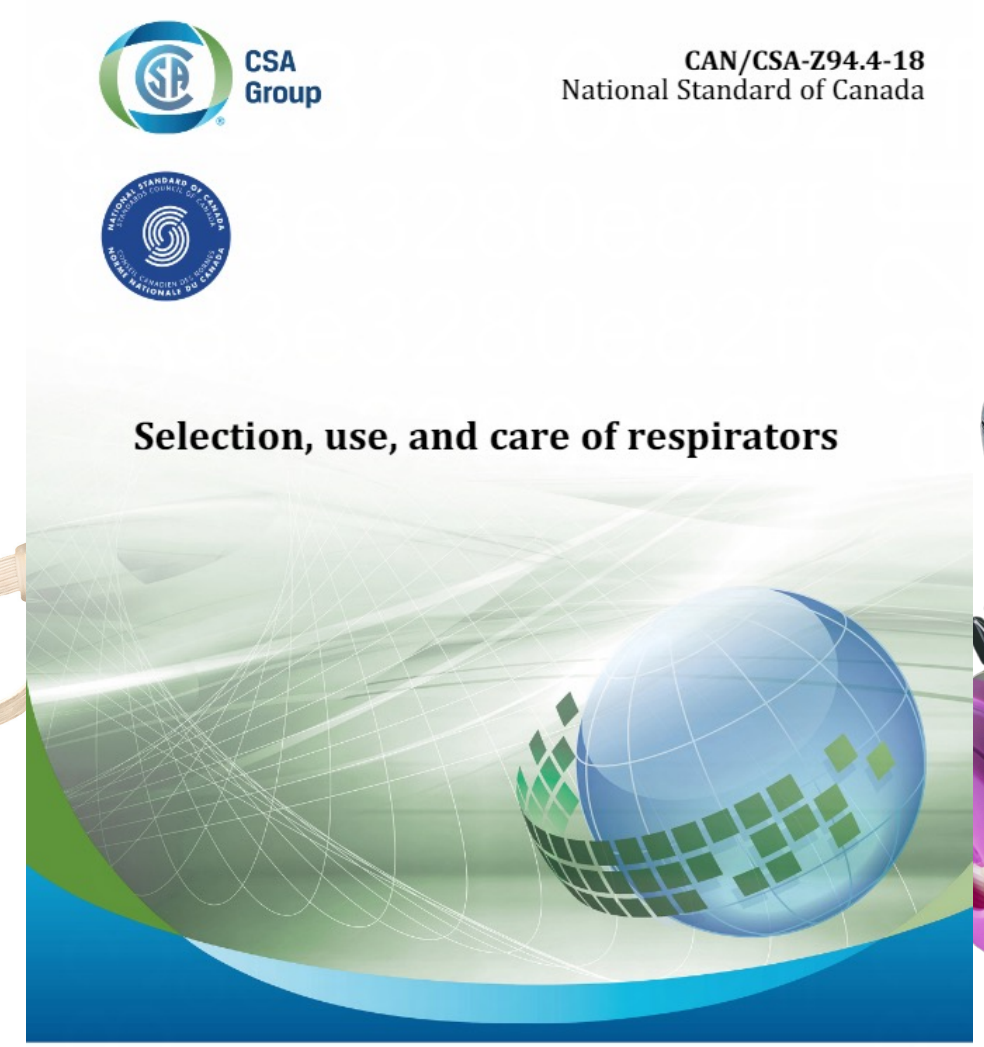
Training

Users must be trained in the Program elements:

- Roles and responsibilities
- Medical assessment
- Fit testing
- General knowledge
- Care and practical use
- Limitations

Types of respirators

N95



Full face APR

Types of respirators ….

PAPR

SABA

SCBA

Fit testing

- Fit testing required for most respirators
- Health survey
- Quantitative and Qualitative fit testing methods are available
- Annual requirements


Q&A