



2026 Annual All Staff Safety Training

Springfield Public Schools



Who are we?

Institute for Environmental Assessment

Providing Environmental, Health, and Safety services to your district, as well as other organizations

Based out of Brooklyn Park with regional offices in:

- Brainerd
- Mankato
- Marshall
- Rochester
- Virginia

John Schaefer

Environmental, Health and Safety Manager

Training Schedule Overview

- Enforcement (OSHA)
- AWAIR
- Employee Right-to Know
- Bloodborne Pathogens
- Fire Extinguishers
- OSHA Violations



Occupational Safety & Health Administration

The mission of OSHA is to assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education, and assistance.

How does OSHA carry out its mission?

- Developing job safety and health standards and enforcing them through worksite inspections
- Providing training programs to increase knowledge about occupational safety and health



OSHA – Fine Level Increase

MNOSHA increased maximum fine levels to match federal levels:

- ❖ **Non-serious violation: \$15,625**
- ❖ **Serious violation: \$15,625**
- ❖ **Willful/repeat violation: \$156,259**
- ❖ **Failure to abate: \$15,626**
- ❖ **Fatality Penalty: \$50,000**



EDUCATION FACILITY OSHA ITEMS OF NOTE

Fall Protection: Most inspectors interviewed staff regarding work they complete near edges of roof & if they implement fall protection.

Machine Guarding: Inspectors focused on machine guards in Industrial Arts and maintenance areas; special attention to grinder wheel spacing.

Pool Area Respirator Use: If a pool is on premises, respirator program and documented hazard assessment was checked.

Secondary Chemical Containers: Thorough assessment for labeling of secondary chemical containers.

Garage Doors: Verified that garage doors have safety stop.

Blocked Electrical Panels

PPE Hazard Assessment PPE documentation

Online Safety Trainings: Verified completion and training assignments.

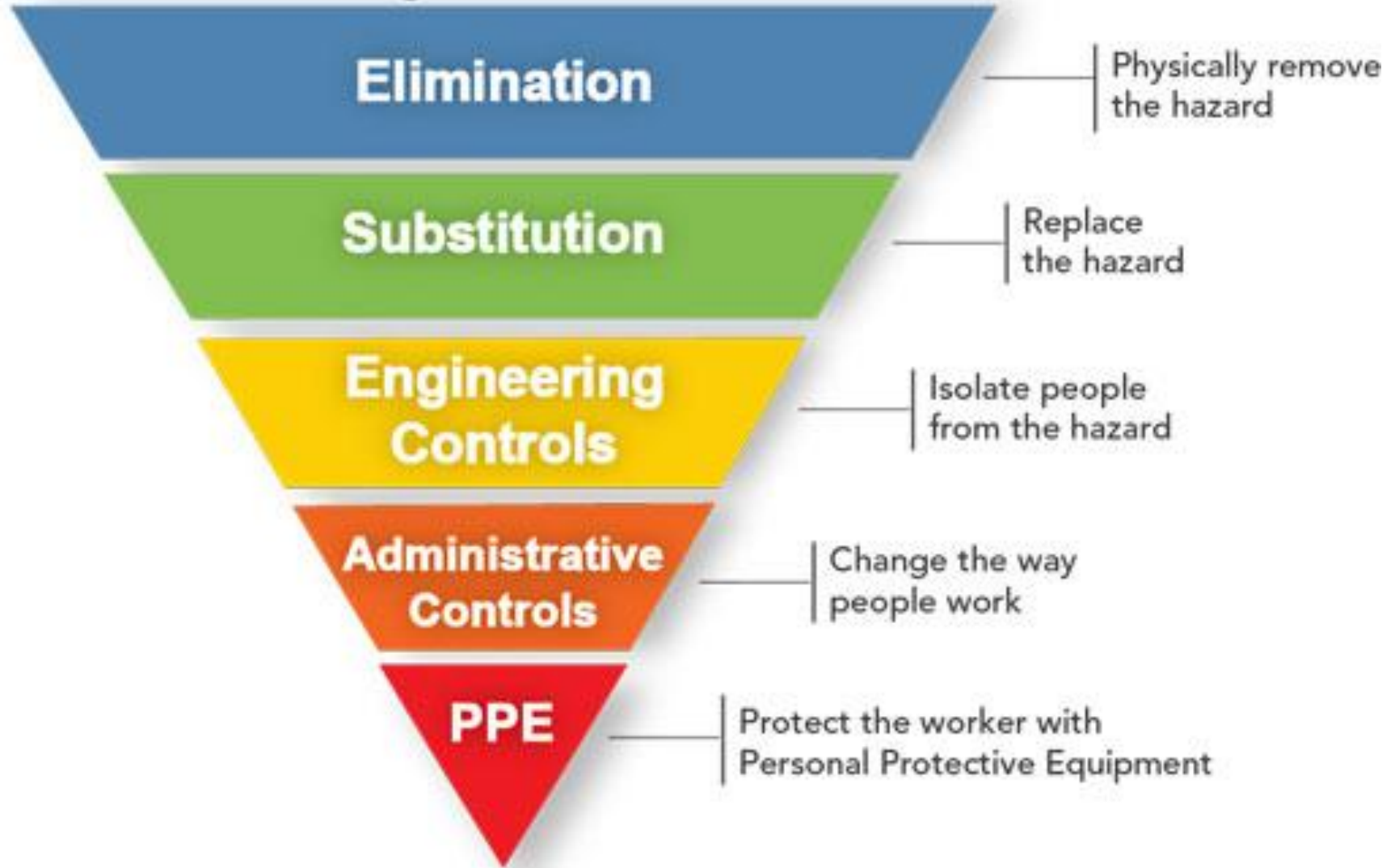


Hierarchy of Controls

Most
effective



Least
effective





MN AWAIR

- A Workplace Accident and Injury Reduction Act
- January 1, 1991, MN adopted an amendment to MNOSHA statutes that requires many employers to develop and use a formal safety and health program.
- Annual program review required by MNOSHA
- All North American Industry Classification System (NAICS) codes listed by OSHA must have a program.

What does the AWAIR plan entail?

Roles and Responsibilities

- Management, supervisors, employees

Hazard ID, Analysis, Controls

- Inspections, checklists, JHA

Communication

- Program
- New employees
- Training

Accident Investigation

- Hazard ID
- Prevention and corrective action

Enforcement

- Accountability and responsibilities

AWAIR Compliance

Written program maintained

- Reviewed annually
- Includes:
 - Goals and objectives determined by the district
 - Staff responsibilities
 - Reporting systems
 - Hazard assessments

Safety Committee defines safety related goals every year

Examples of AWAIR plan activities:

- Mock – OSHA Inspections
- Eyewash/Shower Inspections
- Accident Investigations
- Near-Miss Reporting

Safety Suggestions

- Staff members with safety-related suggestions can fill out forms for the Safety Committee to review.
- Safety suggestion forms are available to staff in the main office.

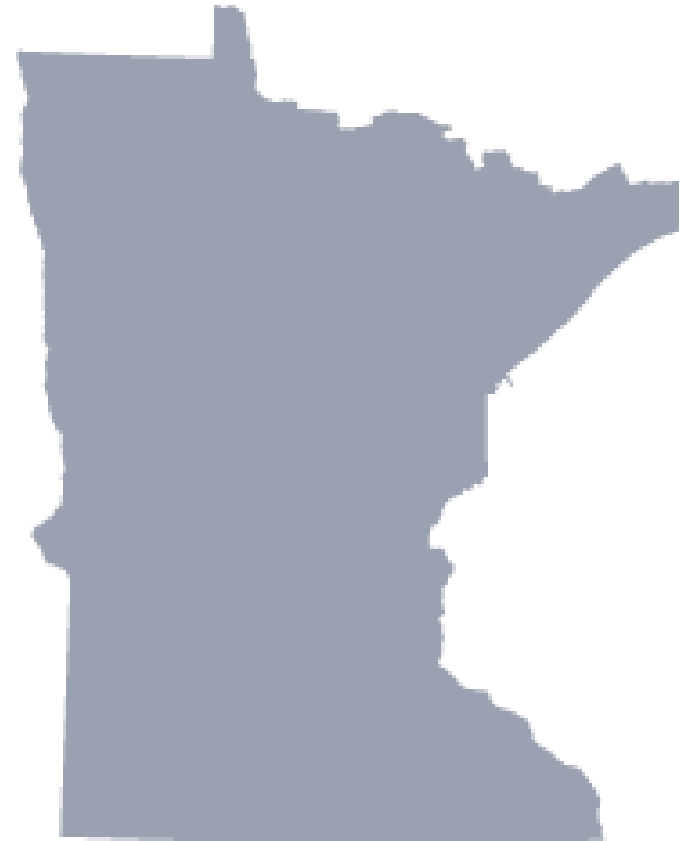


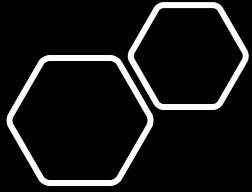
Employee Right-to-Know



Employee Right-to-Know

- MN Statutes Chapter 5206
 - MN adopted Federal Hazard Communications OSHA 29 CFR 1910.1200 with some additions
- Employee Right-to-Know Act requires employers to make employees aware of hazards that may be encountered at work:
 - Hazardous substances
 - Physical agents
 - Infectious agents – BBP
 - Chemical Physical and Health hazards





Written Program

The program must include:

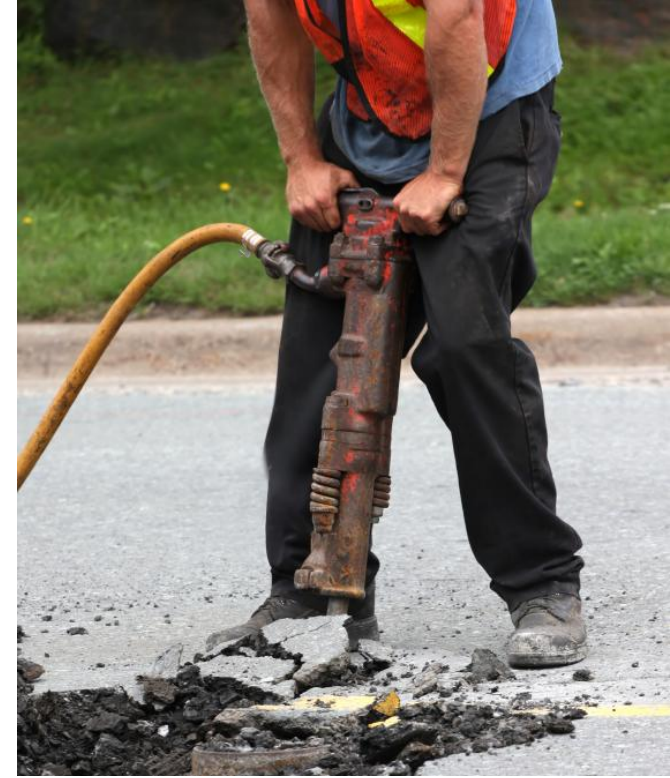
- Identification of exposed employees
- Inventory of hazardous substances and agents
- Safety Data Sheets
- Training components
- Training records

Program must be reviewed and updated annually.

Employer must provide staff training each year.

Physical Agents

- Heat
- Noise
- Vibrations
- Ionizing radiation
- Non-ionizing radiation



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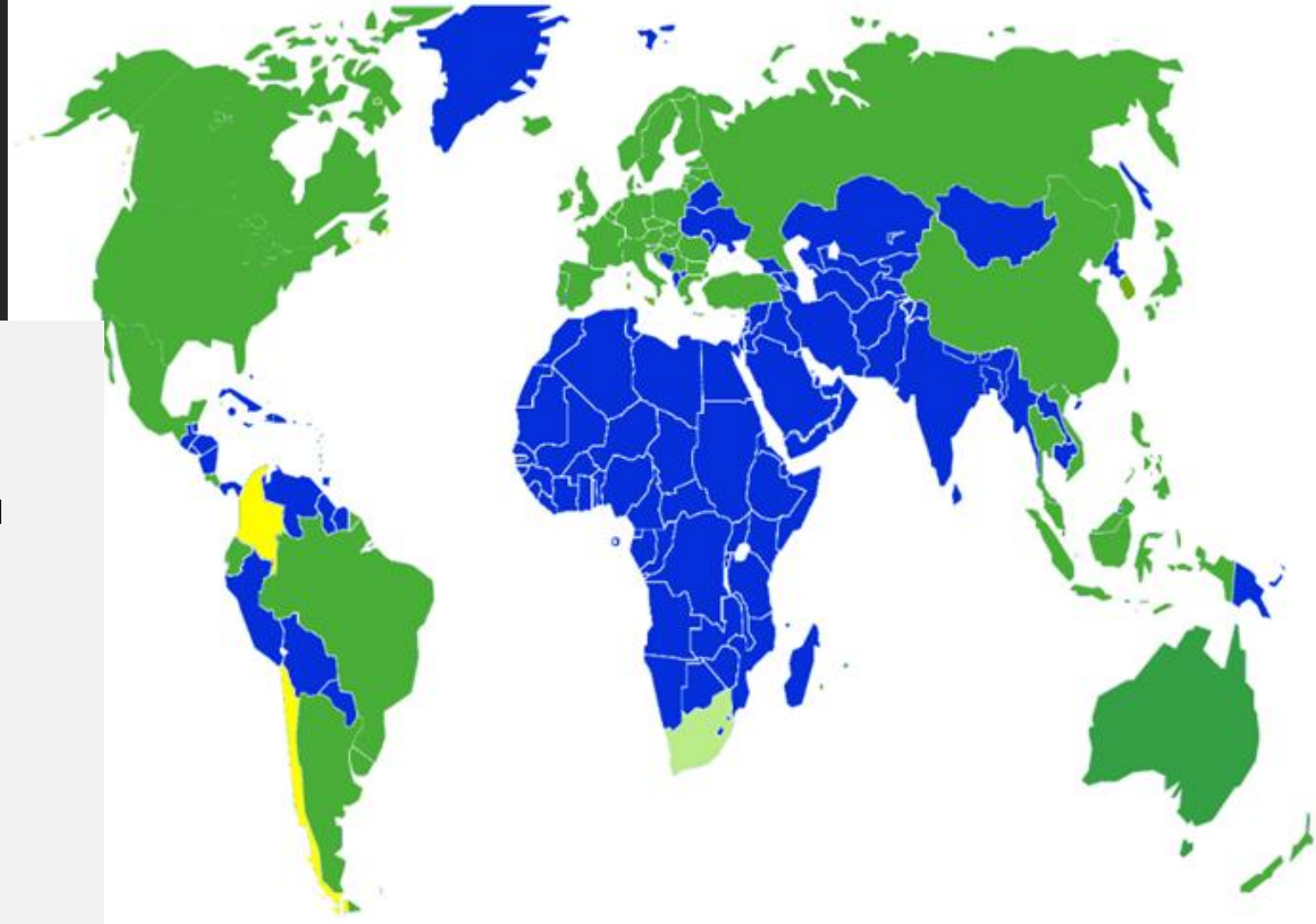


What is GHS?

- Globally Harmonized System
- Logical and comprehensive approach to standardize hazardous information
 - Defines health, physical, and environmental hazards of chemicals
 - Created a classification process that uses available data on chemicals for comparison with defined hazard criteria
 - Communicates hazard information, as well as protective measures, on labels and SDS
- GHS was designed to replace the 100's of classification and labeling standards used throughout the globe, into one consistent criteria.

GHS implementation - world map. Click on the map to view detailed information.

■ : Countries/regions that have already implemented GHS. ■ : Countries/regions where GHS is voluntary.
■ : Countries/regions that are in the process of implementing GHS. ■ : Countries/regions where GHS is not implemented or not available.



12-02-2018

Physical and Health Hazards

- A **physical hazard** can cause harm without contact.
 - Explosive
 - Flammable – Liquid, Gas, Aerosol
 - Oxidizing – Liquid, Solid, Gas - enhances combustion of materials
 - Gas under Pressure
 - Self-Reactive
 - Pyrophoric – Liquid, Solid, Gas (liable to ignite spontaneously on exposure to air)
 - Self-Heating
 - Organic Peroxide
 - Corrosive
 - Combustible Dust
 - Chemicals that emit flammable gases on contact with water
- A **health hazard** could cause a direct impact to the user's health.
 - Toxic – kills living cells
 - Irritant – causes inflammation of tissues
 - Corrosive – irreversibly destroys or alters tissues
 - Sensitizer – causes exaggerated allergic-type response
 - Carcinogen – causes cancer or has the potential to cause cancer
 - Mutagen – causes mutation of DNA or chromosomes
 - Teratogen – causes physical defects of developing embryo or fetus
 - Reproductive Agents – cause sexual dysfunction, sterility, infertility

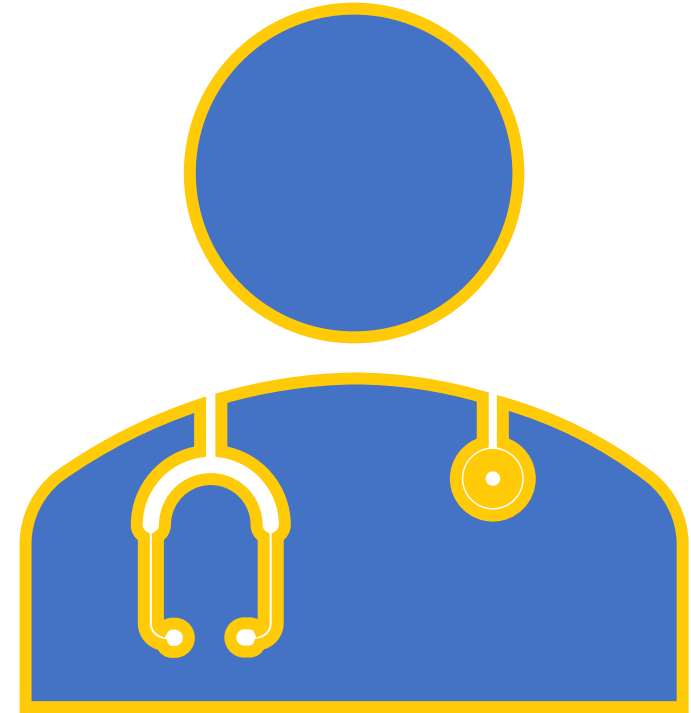
Health Effects

Acute

- Generally, manifests quickly (either immediately or within days after an exposures)

Chronic

- Takes longer to develop through repeated exposures
- Usually target certain organs
- An individual may not be able to sense the exposure



Health Hazard Pictogram- Corrosion

- Skin Corrosion/Burns
- Eye Damage
- Example:
 - Calcium Oxide
 - Sodium Hydroxide
 - Hypochlorite Bleach



Health Hazard Pictogram- Exclamation Mark

- Irritant (skin and eye)
 - Skin Sensitizer
 - Acute Toxicity
 - Narcotic Effects
 - Respiratory Tract Irritant
 - Hazardous to Ozone Layer (non-mandatory)
-
- Example
 - Charcoal
 - Ammonium Hydroxide
 - Sulfuric Acid



Health Hazard Pictogram- Health Hazard

- Carcinogen
- Mutagen
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Example

- Asbestos
- Phenolphthalein
- Petroleum Ether



Health Hazard Pictogram- Skull & Crossbones

Acute Toxicity (fatal or toxic)

Example

- Potassium Chromate
- para-Nitrophenol
- Chlorine Gas



Physical Hazard Pictogram- Flame

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactive
- Organic Peroxides

Example:

- Acetone
- Rubbing Alcohol
- Gas

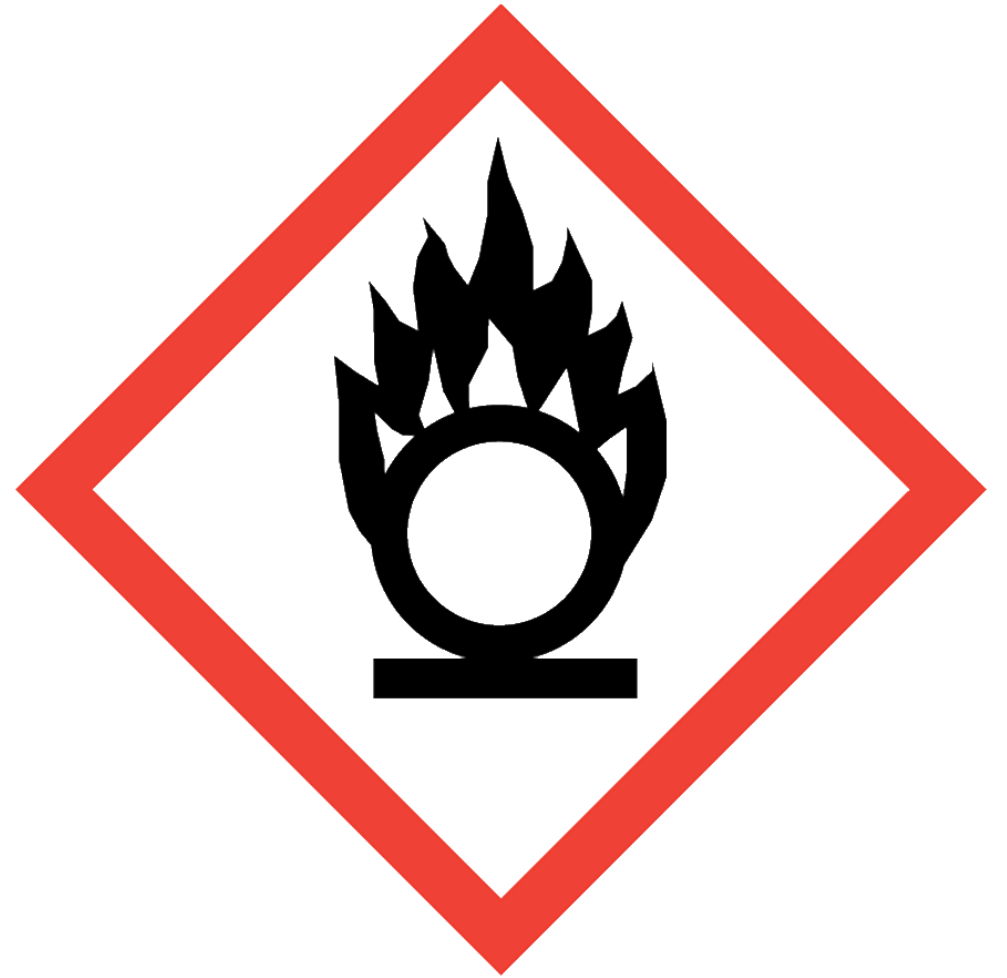


Physical Hazard Pictogram- Flame Over Circle

- Oxidizer
 - Causes or contributes to the combustion of other material

Example

- Hydrogen Peroxide
- Potassium Chlorate
- Nitric Acid



Physical Hazard Pictogram- Gas Cylinder

- Gas under pressure

Example

- Oxygen
- Argon
- Carbon Dioxide



Non-mandatory Pictogram- Environment

- Aquatic Toxicity

Example:

- Motor Oil
- Herbicides
- Pesticides





Signal Words



Labeling Requirements

- Product identifier
- Pictogram
- Signal words “Danger” or “Warning”
- Hazard statements – standard phrases assigned to a hazard class and category
- Precautionary statements
- Supplier information

Shipping containers (vendors/distributors)

- All containers shipped from chemical manufacturers must have appropriate labeling

Secondary containers (spray bottles)

- Name of product, hazard warnings

The Basic Parts of A GHS-Compliant Label

1



n-Propyl Alcohol

UN No. 1274

CAS No. 71-23-8

2



DANGER

3



Highly flammable liquid and vapor. Causes serious eye damage.
May cause drowsiness and dizziness.

4



Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing fumes/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present. Continue rinsing.

Fill Weight: 18.65 lbs.

Gross Weight: 20 lbs.

Expiration Date: 6/21/2020

Lot Number: B56754434

Fill Date: 6/21/2013

See SDS for further information.

5



Acme Chemical Company • 711 Roadrunner St. • Chicago, IL 60601 USA • www.acmechem.com • 123-444-5567



6





- What's wrong with these pictures?





Secondary Container Exemptions

- The chemical will be used only by the person who transferred it from the labeled container.
- It will be under the control of the same person.
- The chemical in the container is going to be used during the work-shift.

The product must still be identifiable!



PRODUCT IDENTIFIER

HEALTH

FLAMMABILITY

REACTIVITY

PERSONAL PROTECTION

SEE MATERIAL SAFETY DATA SHEET

HMIS Numbering System

Hazardous Materials Information System

Informs workers about the hazards of chemicals in workplace under normal conditions of use and foreseeable emergencies

Numbering system 0-4

- 4 – most severe hazard
- 0 – least severe hazard

Numbering is not required on labels.

This was changed with the update to GHS, when numbering was previously reversed.

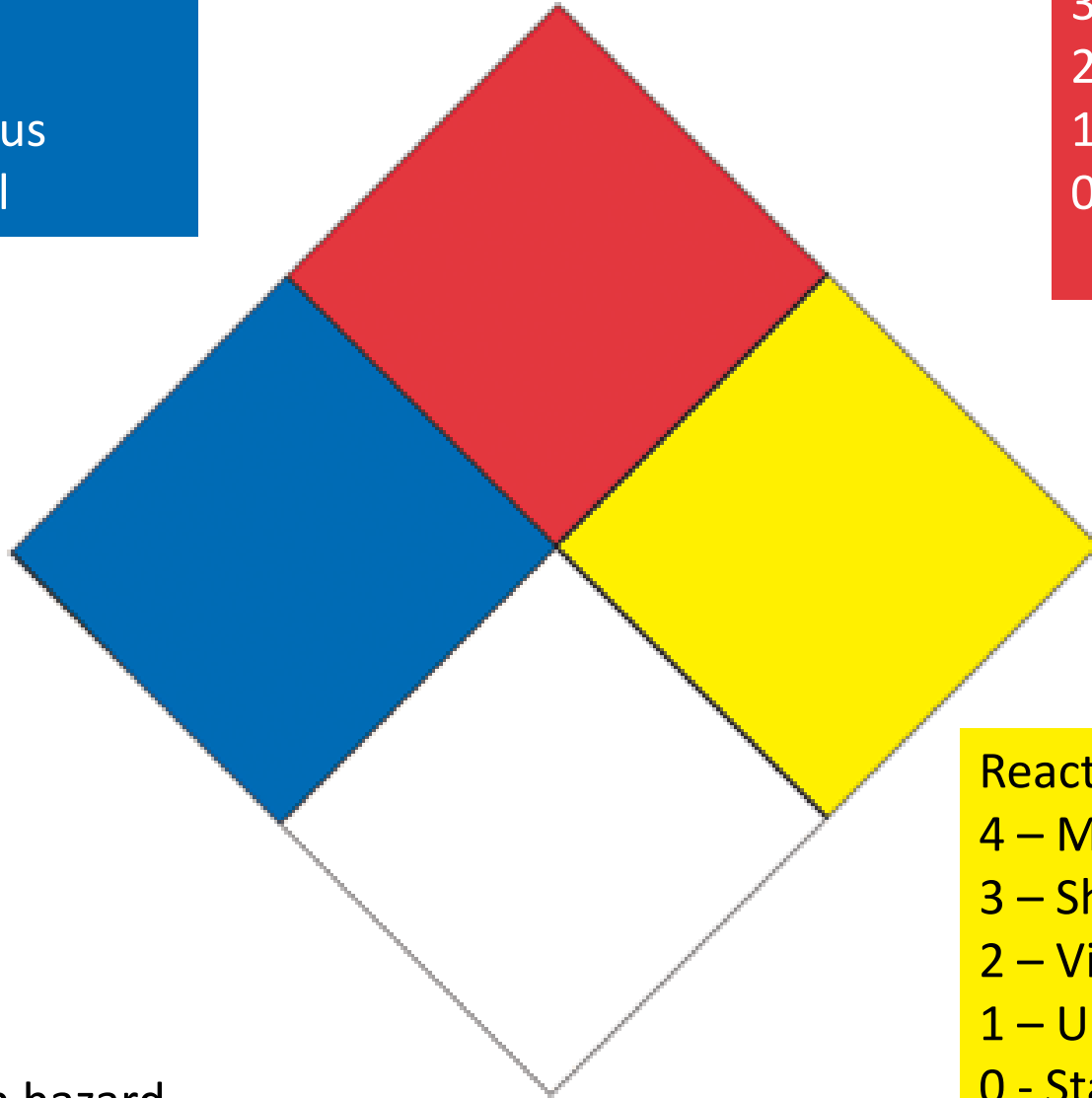
NFPA 704 Labeling

Health Hazard

- 4 – Deadly
- 3 – Extreme danger
- 2 – Hazardous
- 1 – Slightly hazardous
- 0 – Normal material

Fire Hazard – Flash Points

- 4 – Below 73
- 3 – Below 100
- 2 – Below 200
- 1 – Above 200
- 0 – Will not burn



Specific Hazard

OXY - Oxidizer

ACID - Acid

ALK - Alkali

COR - Corrosive

~~W~~ — Use no water



- Radiation hazard

Reactivity

- 4 – May detonate
- 3 – Shock and heat may detonate
- 2 – Violent chemical change
- 1 – Unstable if heated
- 0 - Stable

HMIS | NFPA

0



Minimal
Hazard

1



Slight
Hazard

2



Moderate
Hazard

3



Serious
Hazard

4



Severe
Hazard



NEW GHS

1



Severe
Hazard

2



Serious
Hazard

3



Moderate
Hazard

4



Slight
Hazard

5



Minimal
Hazard

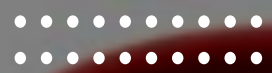
Safety Data Sheets

- SDSs list all important information about a product.
- Can and should be used in an emergency or for research
- Previously referred to as Material Safety Data Sheets

1. Product identification
2. Hazard identification
3. Composition information
4. First aid measures
5. Firefighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure control/PPE
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal consideration
14. Transportation information
15. Regulatory information
16. Other information

Where are SDSs located

- Staff can access SDSs through District or Maintenance Offices



Bloodborne Pathogens and Infectious Agents

A scanning electron micrograph showing numerous red blood cells. The cells are biconcave discs, appearing as bright red, ring-like structures against a darker background. They are clustered together, with some showing more detail of their surface texture.

⋮⋮⋮⋮ Bloodborne ⋮⋮⋮⋮ Pathogens

- Infectious microorganisms in human blood that can cause disease.
- Pathogens are spread through contact with body fluids.
- OSHA estimates 5.6 million workers are at risk of exposure.
- Most common Bloodborne Pathogens:
 - HIV
 - Hepatitis B & C



Exposure Control Plan

Exposure Control Plans are required by OSHA 1910.1030

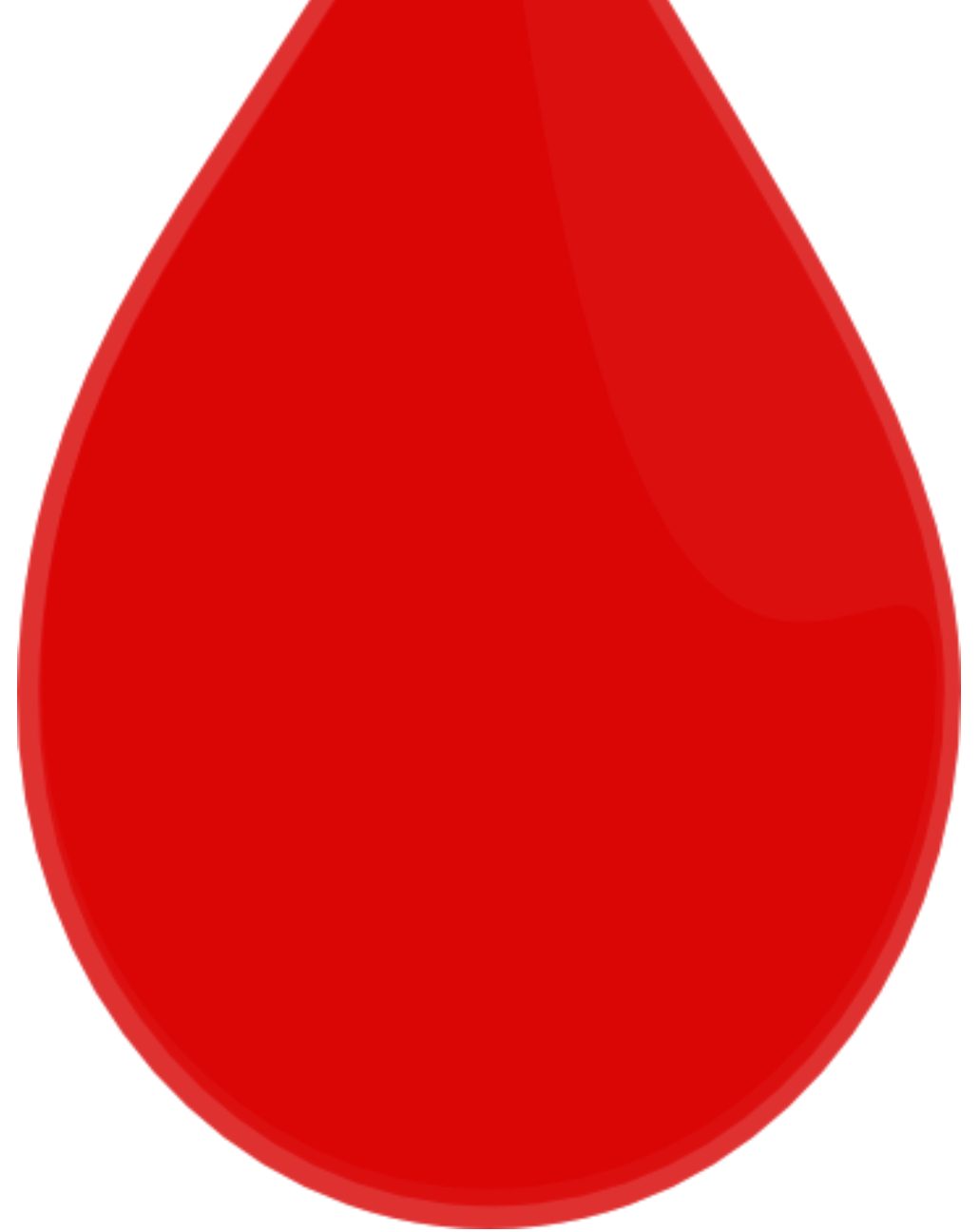
Plans must meet the following criteria:

- Must be written specifically for each facility
- Must be reviewed and updated, at least annually
 - Updates should reflect changes such as new worker positions or technology used to reduce exposures to blood or body fluids
- Must be readily available to all workers
 - For a copy contact District Office or Nurse's Office



Exposure Control Plan

- Evaluation of employee activities
- Designated program coordinator
- Practice universal precautions
- Hepatitis B vaccinations
- Post-exposure procedures
- Personal protective equipment
- Training
- Review
- Recordkeeping



Modes of Transmission

Exposure to another person's blood

- **Blood contact with non-intact skin or mucous membranes (most common in school setting)**
- Contaminated sharps/glass
- Contaminated needle sharing
- Needle sticks
- Transfusions

Sexual contact

Infected mother to child

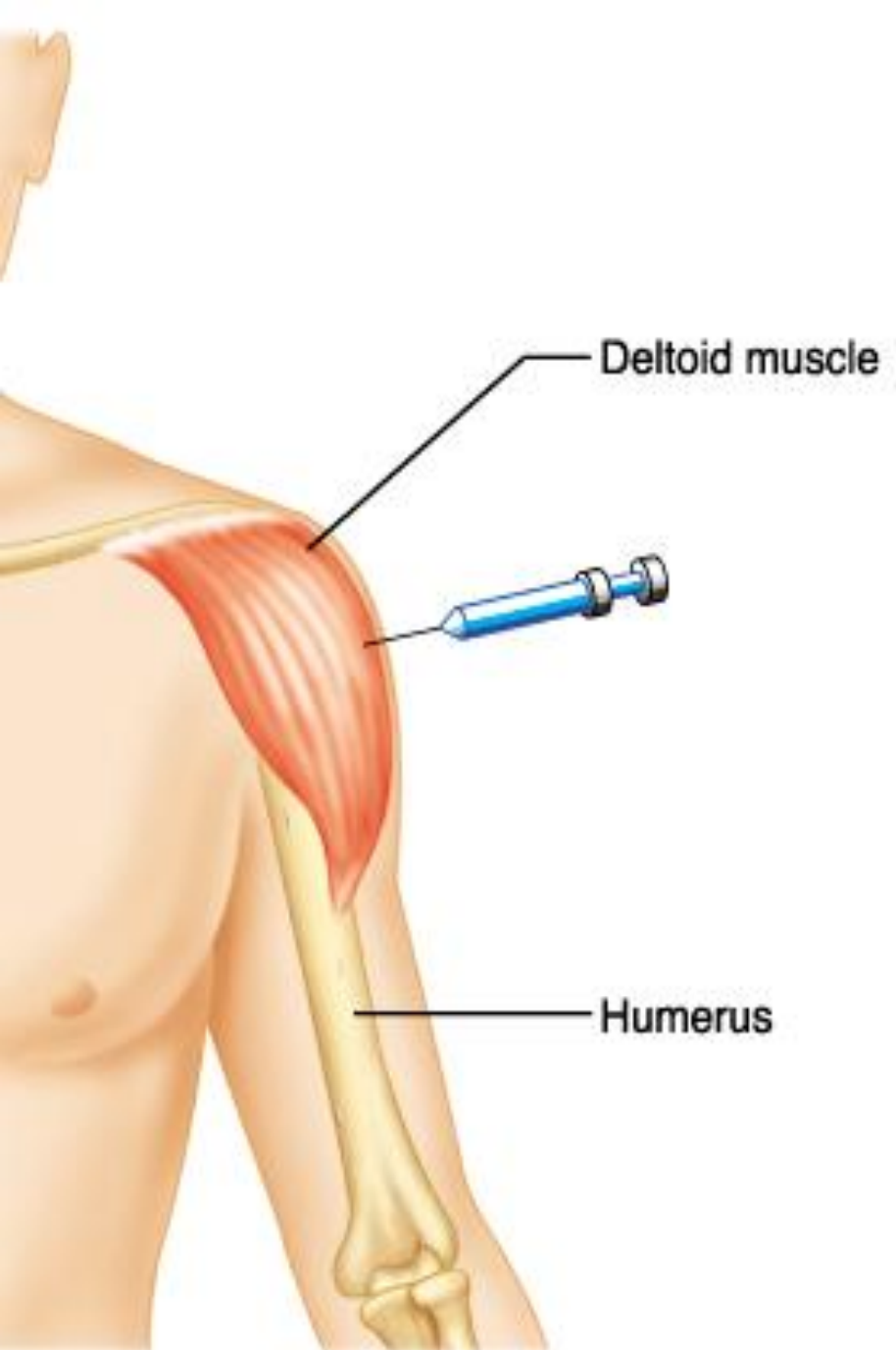
Hepatitis B

- Hepatitis is defined as inflammation of the liver.
- Hepatitis B is a contagious liver disease.
- Hepatitis B can start as an acute disease; it can be cured or become chronic.
 - Acute – sudden onset, will sometimes go away within a few weeks
 - Chronic – disease that persists over a long period of time
- As of December 31, 2018, there were 25,335 persons who were assumed alive and living in Minnesota with HBV.
- The CDC estimates between 850,000 and 2.2 million people live with chronic hepatitis B.

Symptoms of Hepatitis B

- Acute Infection
 - Fever
 - Fatigue
 - Loss of appetite
 - Nausea
 - Vomiting
 - Abdominal pain
 - Dark urine
 - Clay-colored bowel movements
 - Joint pain
 - Jaundice
- Chronic Infection
 - Most individuals do not have any symptoms and can remain symptom-free for decades. When symptoms do appear, they are similar to the symptoms of an acute infection.





Hepatitis B Vaccinations

- Hepatitis B vaccinations are given in 3 doses, usually over 6 months.
- Heplisav-B manufactured by Dynavax, is approved for two doses one month apart (2021).
- The vaccine is administered with a needle into the deltoid muscle.
- Efficacy
 - More than 90% of healthy adult develop adequate antibody responses to the vaccine.
 - The effectiveness does decline with age
 - Booster doses are not recommended for people with normal immune status.

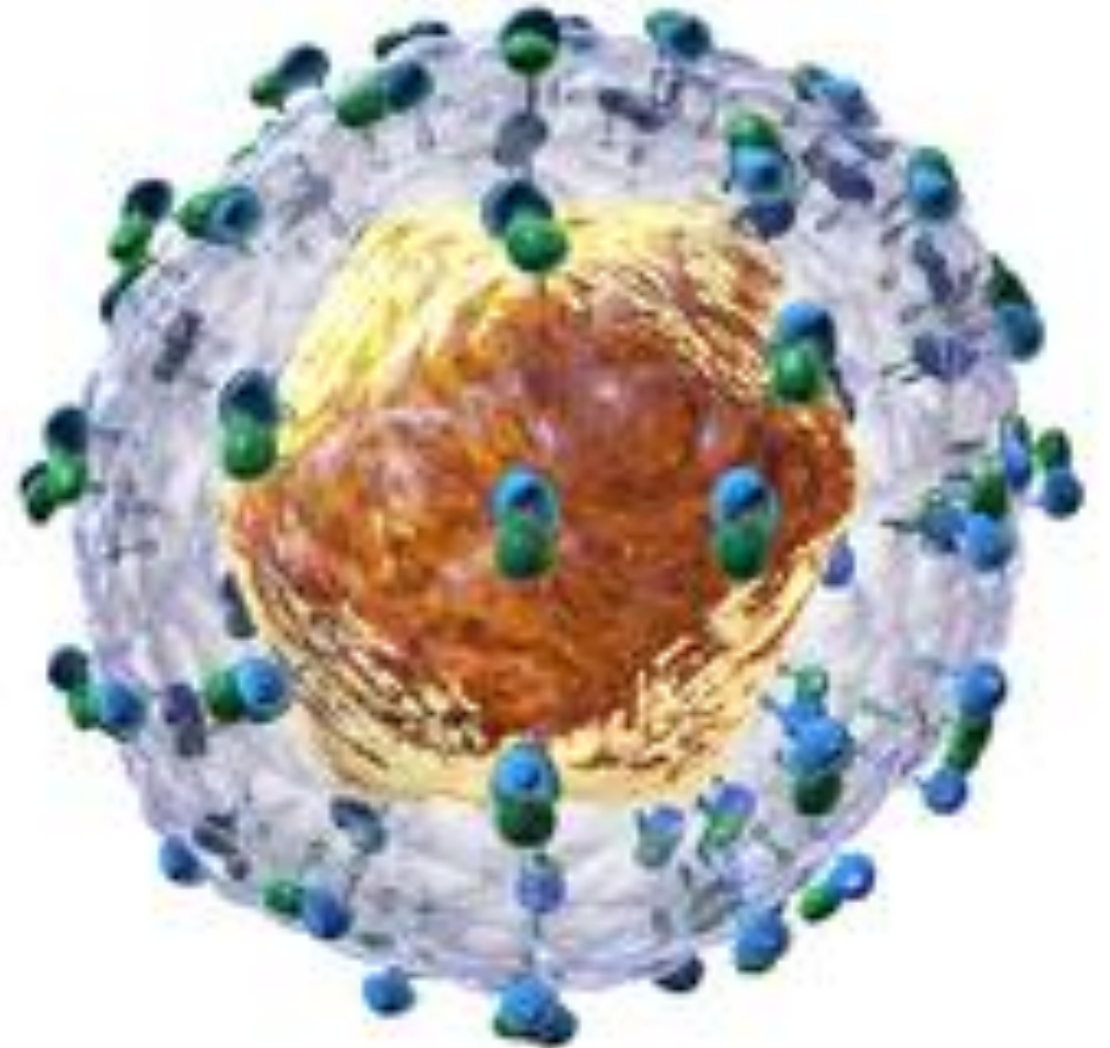
Hepatitis B Vaccinations

- If you could potentially be exposed while at work, you are able to receive Hepatitis B vaccinations at no cost.
- If you are interested in receiving the vaccination series, contact the District Office.



Hepatitis C

- Similar to Hepatitis B – inflammation of the liver
- Hepatitis C becomes a chronic illness in approximately 70-85% of infected people.
- An estimated 2.7 to 3.9 million people in the US have chronic Hepatitis C.
- There is currently no vaccination for Hepatitis C.
- There are a few medications available to help treat Hepatitis C.
- Of every 100 persons infected with HCV, approximately:
 - 75-85 will go on to develop chronic infection
 - 60-70 will go on to develop chronic liver disease
 - 5-20 will go on to develop cirrhosis over a period of 20-30 years
 - 1-5 will die from the consequences of chronic infection
- As of Dec. 31, 2018, there were 33,856 persons who were reported to MDH and are assumed alive and living in Minnesota with HCV.



Hepatitis C Virus (HCV)

Symptoms of Hepatitis C

Acute infection

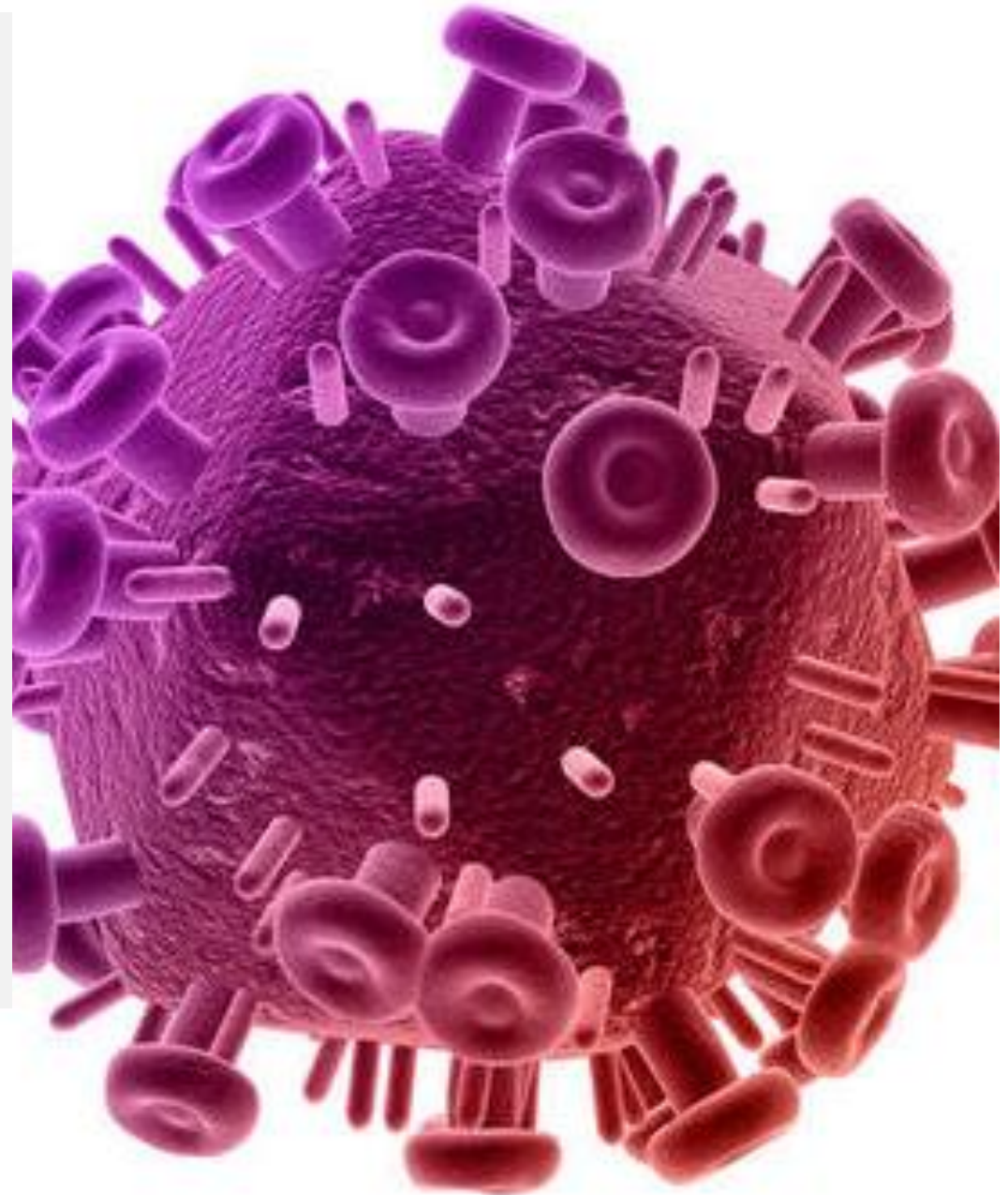
- Individuals may not have symptoms or experience only mild symptoms like:
 - Fever
 - Fatigue
 - Dark Urine
 - Clay-colored bowel movements
 - Abdominal pain
 - Loss of appetite
 - Nausea
 - Vomiting
 - Joint pain
 - Jaundice

Chronic Infection

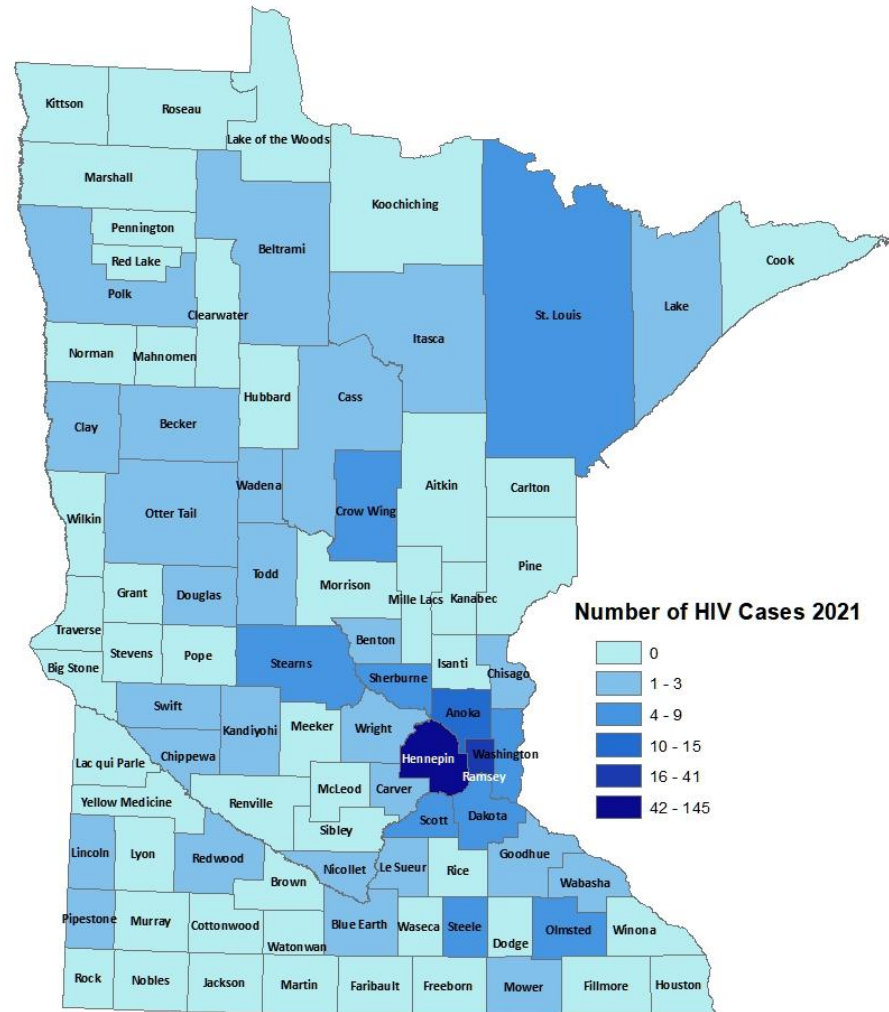
- Individuals may not have symptoms or have general symptoms of chronic fatigue and depression.

HIV/AIDS

- Human Immunodeficiency Virus
- Acquired Immunodeficiency Syndrome
- Over time, HIV attacks and weakens the immune system.
- This increases the chance for opportunistic infections.
 - This stage of the disease is classified as AIDS.
- There is no known cure for HIV or AIDS.
 - Medications can be used to slow progression of the disease.
 - People can typically live full lives.
- The CDC estimates 1.2 million Americans are living with HIV.
- As of December 31, 2020, 9,422 persons are assumed alive and living in Minnesota with HIV/AIDS.



HIV Diagnoses[#] by County of Residence at Diagnosis, 2021



City of Minneapolis	93 cases (31%)
City of St. Paul	34 cases (11%)
Suburban*	95 cases (32%)
Greater Minnesota	76 cases (26%)
Total	298 cases

[#]HIV or AIDS at first diagnosis

*7-county metro area, excluding the cities of Minneapolis and St. Paul

Methods to Prevent or Reduce Exposure

Administrative Controls

- Risk assessments
- Vaccinations
- Training

Sharps Precautions

- Place in appropriate disposal container
 - Do not overfill container
- Do not recap, bend, or break needles
- Consider alternatives to sharps



Methods to Prevent or Reduce Exposure

Personal Protective Equipment

- Whenever there is risk of exposure to infectious material, PPE must be worn.
- PPE must be readily accessible.

Engineering Controls

- Concept of managing materials to reduce or eliminate potential exposures
- Examples: Sharps Disposal Containers and Hand Hygiene
- Hand Hygiene - sends pathogens on the worker's hands down the drain and out of the workplace.
 - Must wash hands with soap and water:
 - Immediately after removal of gloves
 - Whenever you leave the work area, go on break, or before eating
 - Following contact with blood or other potentially infectious materials

Universal Precautions

1. Treat all blood and blood products as if it is infected
2. Always wear gloves when handling injuries, blood, and/or blood products
3. If possible, allow victims to provide self-care



Personal Protective Equipment

The following are examples of PPE that can be worn while cleaning spills:

- **Gloves**

- Made of latex, nitrile or rubber
- Cover any sores or cuts with bandages, before donning gloves
- Inspect gloves for tears or punctures – DO NOT use a damaged glove.
- Take gloves off carefully – DO NOT touch any bare skin.
- Dispose of properly

- Apron

- Eye protection/ Face shield – if risk of splashing

- Paper face mask

- CPR mask

- Booties

For any other PPE you may need, talk to your supervisor.



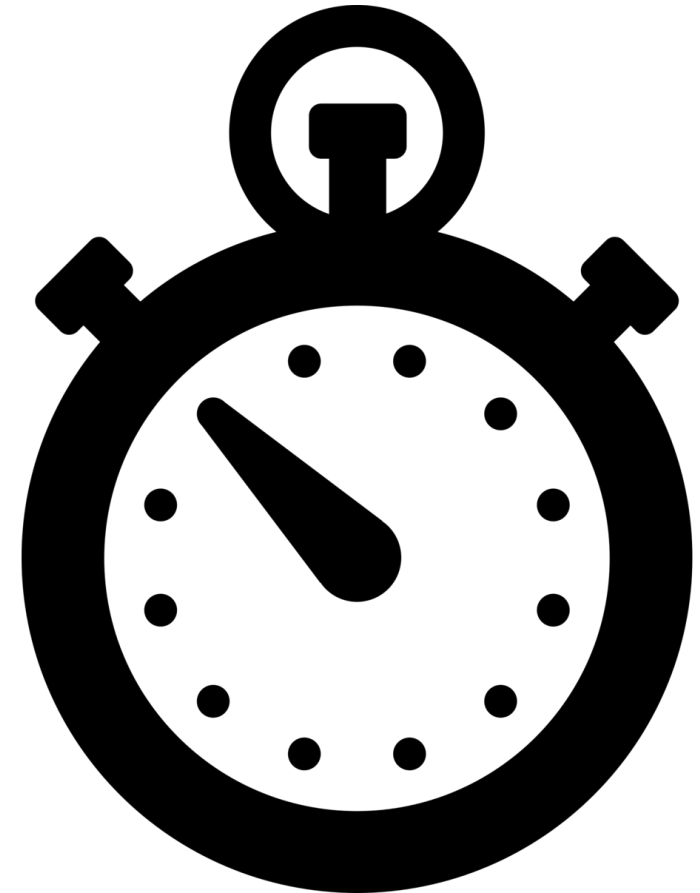
What to do if an exposure occurs?



- Wash exposed area with soap and water
- Irrigate eyes with water, if necessary
- Report the exposure to your supervisor
- Fill out the post-exposure packet by contacting the District Nurse

Cleaning Procedures

- Use gloves
- Use disposable towels to absorb spill
- Clean spill area with soap and water
- Use proper disinfectant
 - The surface not only needs to appear clean, but also needs to be free of bacteria to stop the spread of germs and possible bloodborne pathogens!
 - Note the amount of time that the chemical needs to remain wet on the surface to properly disinfect. Dwell times are different for each chemical, so it is important to note what the dwell time is for the chemical that you use!
- Dispose of waste in proper container
 - **CUSTODIAL STAFF IS RESPONSIBLE FOR CLEAN UP, WHENEVER POSSIBLE!**



Regulated Biohazardous Waste

- Contaminated items that would release blood or other potentially infectious material, in a liquid or semi-liquid state, if compressed
- Contaminated sharps
- Items caked with dried blood that are capable of releasing during handling

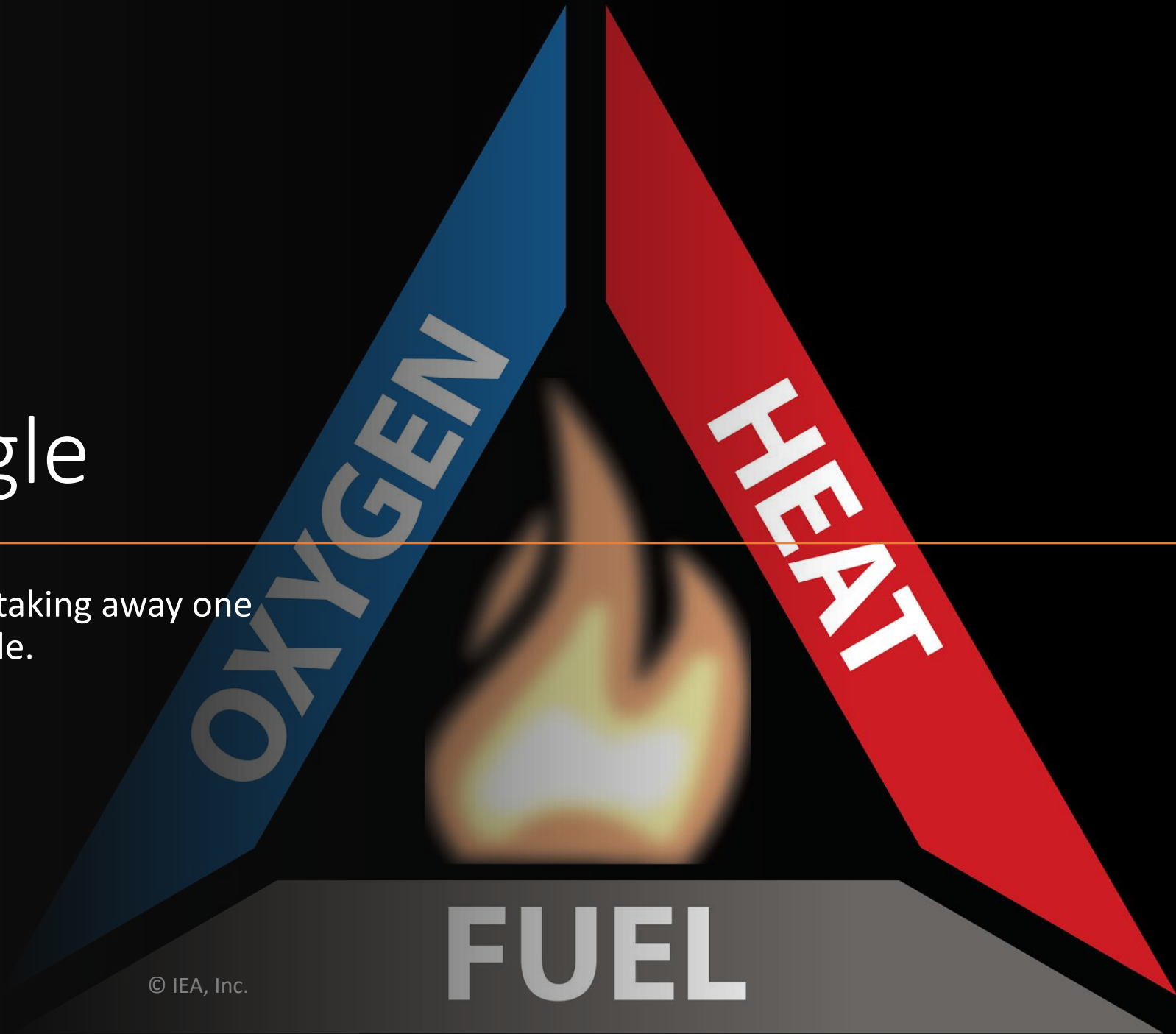
Regulated waste must be disposed of in a biohazard bag.

- Best practice to always double bag!

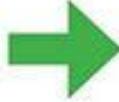
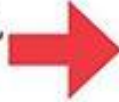


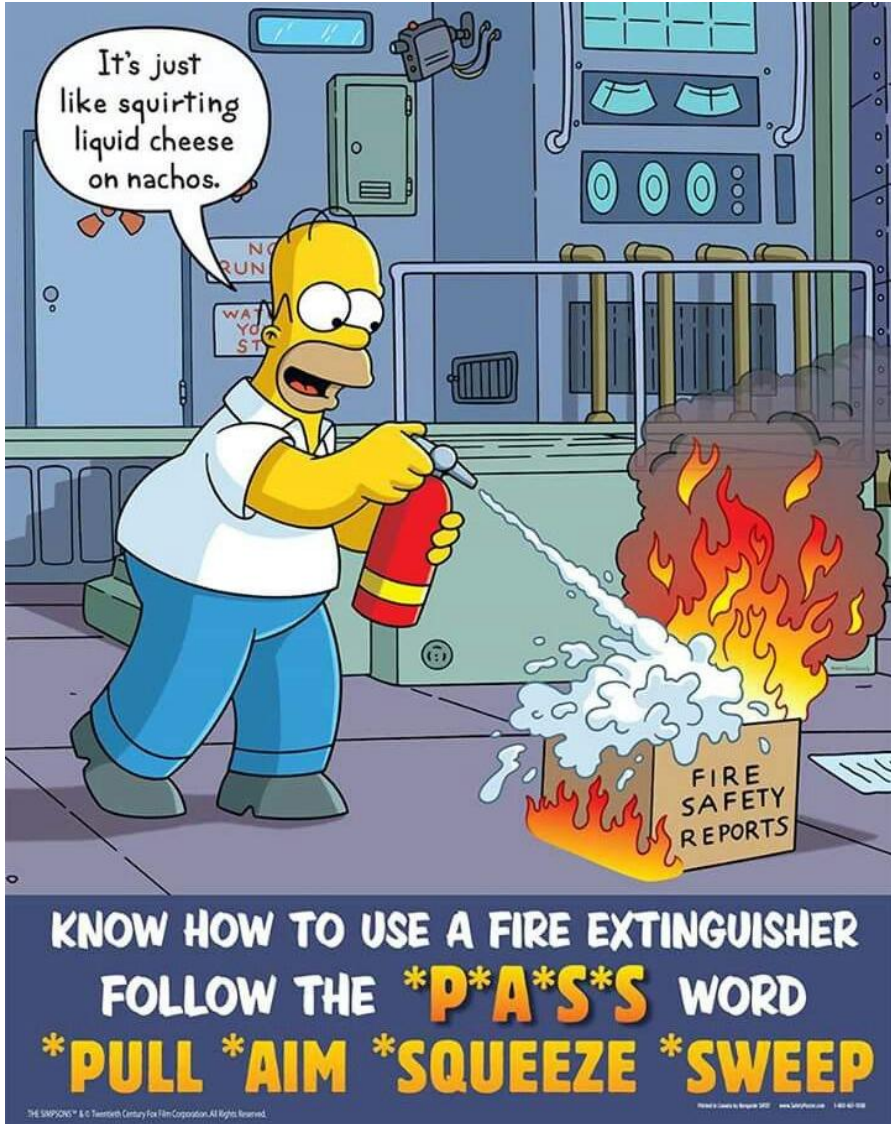
The Fire Triangle

Fire extinguishers put out a fire by taking away one or more elements of the fire triangle.



FIRE EXTINGUISHER SYMBOLS, CLASSIFICATIONS & AGENTS

		<p>CLASS A fires involve common combustibles such as wood, paper, cloth, rubber, trash and plastics.</p>		<p>ABC Dry Chemical (Multipurpose) Halotron Water Foam</p>
		<p>CLASS B fires involve flammable liquids, solvents, oil, gasoline, paints, lacquers and other oil-based products.</p>		<p>ABC Dry Chemical (Multipurpose) BC Dry Chemical (Regular) Purple K Carbon Dioxide Halotron Foam</p>
		<p>CLASS C fires involve energized electrical equipment such as wiring, controls, motors, machinery or appliances.</p>		<p>ABC Dry Chemical (Multipurpose) BC Dry Chemical (Regular) Purple K Carbon Dioxide Halotron</p>
		<p>CLASS D fires involve combustible metals such as magnesium, lithium and titanium.</p>		<p>Dry Powder</p>
		<p>CLASS K fires involve combustible cooking media such as oils and grease commonly found in commercial kitchens.</p>		<p>Wet Chemical</p>



Remember "PASS"

Pull the Pin

Aim at the base of the fire

Squeeze the top handle or lever

Sweep

Key Reminder



You are **NOT** required to use a fire extinguisher



You are **Not** a trained fire fighter. **NEVER** put your life in danger



ONLY use a fire extinguisher if you can do so without putting yourself in danger.

Fire Extinguisher Inspections

Extinguishers should be inspected every month and it should be documented on the tag.

Each extinguisher should be mounted on the wall with a clear path.

The pressure gauge should be in the green.

AED's Know the Basics



Know building locations

Who is authorized to use?

Good Samaritan Law



Cardiac Emergency Response Program

Key requirements for schools:

- **Establish a Cardiac Emergency Response Team:** Form a team, including a coordinator, at each school site.
- **Ensure AED availability:** Place automated external defibrillators (AEDs) in clearly marked, accessible locations, and ensure they are properly maintained.
- **Provide staff training:** Require CPR and AED training for coaches and designated staff members, with a focus on hands-only CPR.
- **Develop and distribute the plan:** Create a written plan and distribute it to all relevant staff and local emergency medical services (EMS) providers.

You are now completed with you Annual OSHA Safety Training.

Make sure you complete the quiz on the next slide.

Questions – contact:

John Schaefer

John.Schaefer@ieasafety.com

507.906.0901



Quiz Link

<https://forms.gle/kgCiNhznK4DZEsb59>