

PRESENTER'S GUIDE

"HAZARD COMMUNICATION IN HEALTHCARE FACILITIES"

**For OSHA's, 29 CFR 1910.1200
Hazard Communication Training Requirements**

OUTLINE OF MAJOR PROGRAM POINTS

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The following outline summarizes the major points of information presented in the program. The outline can be used to review the program before conducting a classroom session, as well as in preparing to lead a class discussion about the program.

- **You've probably heard of OSHA's Hazard Communication Standard. But you may not have thought about how it affects you.**
 - Did you know that an ordinary cleanser can actually be toxic... flammable... even explosive?

- **OSHA's HAZCOM Standard and similar State laws exist so that you have the "right to know" about potentially hazardous materials that you may encounter in your workplace... which is why they are sometimes referred to as the "Right-To-Know" regulations.**
 - Their goal is to make sure that you have the information, training and equipment you need to work safely around hazardous materials.

- **Under the HAZCOM Standard chemical hazard information is communicated to you in three ways.**
 - Safety Data Sheets.
 - Container Labels.
 - Your facility's written Hazard Communication Program.

- **A Safety Data Sheet, (formerly known as a Material Safety Data Sheet) is essentially a guide for how to safely use a specific chemical.**
 - Chemical manufacturers and distributors provide Safety Data Sheets for each of the products that they sell.
 - Your facility keeps copies of SDS's on file so that you can refer to them whenever necessary.

- **Safety Data Sheets are a wealth of information about a chemical product, starting with all of the names a chemical goes by and the company that manufactures it.**
 - If the product contains hazardous ingredients or may present a hazard itself, this information can also be found on its SDS.
- **While working with a chemical the SDS will guide you on how to handle and store a chemical, and what exposure controls and personal protective equipment to use to protect yourself.**
 - If there is an emergency the SDS will tell you the first aid procedures to follow as well as how to clean up a spill involving the chemical.
- **Safety Data Sheets all use a format that was created under the "Globally Harmonized System for Classification and Handling of Chemicals" (GHS for short).**
 - So it's easy to remember where to look on an SDS for the information that you need.
- **OSHA has also incorporated the GHS labeling specifications into the HAZCOM Standard.**
 - As a result, all manufacturers' labels will use the same format and provide the same type of information about the chemical they represent.
- **At a glance the label will provide the material's name and its potential health, fire and reactivity hazards.**
 - It will also list specific precautions to take, situations to avoid, and if necessary, what personal protective equipment to wear when working with the chemical.
- **Before the adoption of the GHS labeling format, all chemical container labels did not present information in the same way.**
 - Some labels were written.
 - Some used shapes, numbers or letters to convey their warnings.
 - Others used "symbols" or "pictures" to represent hazards or indicate required personal protective equipment...which could sometimes make it difficult to find the information you needed.

- **You may see some of these types of labels on older containers, and even under the GHS rules "in-house" labels don't have to follow the GHS format, as long as they contain the information that the GHS requires.**
 - But regardless of the types of container labels that you encounter in your facility, you need to read them carefully before working with any chemical.
 - And any time you transfer a chemical to another container, you should make sure that the "secondary" container is labeled properly.

- **Another place you can find information about hazardous chemicals is in your facility's Hazard Communication Program. This is basically a roadmap showing how your facility is complying with the Hazard Communication Standard and discusses:**
 - What types of potentially hazardous materials are in your workplace.
 - Where they are.
 - How they are labeled.
 - Where SDSs are kept.
 - How employees will receive their training.
 - And anything else you will need to know in order to work with the materials safely.

- **Hazardous chemicals have been divided into groups, or "Classes", based on the hazards they present and the safety precautions you need to take when you work with them.**

- **Unlike many other chemicals, "toxic substances" have the potential to disrupt physical processes, such as breathing, coordination and other bodily functions.**
 - Many products, such as pesticides, cleaners, solvents, gases, fumes and polymers are toxic.

- **"Poisons" are considered to be toxic substances, although not all toxic substances are poisonous.**
 - A poison can cause serious illness or death, even in a very small amount.
 - Fortunately, there are very few true poisons, and their use in the workplace is limited.

- **"Corrosives and irritants" are a group of chemicals that are found in many facilities.**
 - "Corrosives" can cause serious, even permanent, damage to the parts of the body they come into contact with, such as the skin and eyes.
 - Contact can cause redness, swelling, blisters, eye damage and even severe burns.

- **Most acids and bases are corrosive.**
 - Sulfuric Acid, for instance, is one of the most widely used corrosive chemicals.
 - It can be found in dyes, paints, petroleum processing, even automobile batteries.

- **"Irritants" are often diluted forms of corrosive substances.**
 - But unlike corrosives, irritants generally cause only minor, temporary inflammation or swelling at the point of contact.
 - Irritants can include ammonia, antifreeze, degreasers and thinners...as well as by-products generated during combustion.

- **Toxins, corrosives and irritants can all pose a serious risk.**
 - So be sure to take the necessary precautions to protect yourself from these hazards.

- **"Flammables and combustibles" are another common group of hazardous materials.**
 - From the gasoline that runs your car, to the stearic acid used in common lubricants, many of the materials that we come into contact with can burn.
 - But which substances are flammable and which are combustible?
 - And what's the difference?

- **The key to telling whether a material is flammable or combustible is its "flashpoint".**
 - This is the temperature at which it releases vapors that can ignite and burn.

- **Materials that have a flashpoint of less than 100°F are considered "flammable."**
 - Gasoline, for example, has a flashpoint of -45°F, which means it's almost always giving off vapors that can burn.

- **To be considered "combustible," a material must have a flashpoint between 100°F and 200°F.**
 - Combustibles, such as kerosene, are much easier to control because they usually have to be heated up before they'll produce burnable vapors.

- **Liquid fuels aren't the only flammables and combustibles we have to watch out for.**
 - Did you know that paint or rubbing alcohol could cause a fire?
 - These and many other materials...even solids... can ignite easily under the right conditions.

- **Small quantities of flammable or combustible liquids should be stored in containers that hold in vapors and prevent spills.**
 - Larger quantities of paints, solvents or similar flammable materials need to be stored in an approved "flammable materials cabinet".

- **"Flammable gases", such as Hydrogen, Propane, and Acetylene come with their own unique sets of hazards.**
 - They are easily ignited under normal conditions and can cause explosions...and even if they don't catch fire, like many gases they can drive oxygen out of confined spaces.

- **Another group of hazardous chemicals we need to be aware of are "carcinogens and suspected carcinogens".**
 - As you may know, these chemicals are often linked to cancer.

- **Normally, the cells in the human body follow a "pattern" to reproduce and grow.**
 - Carcinogens can disrupt this pattern, causing cells to grow abnormally, which is why cancer can be fatal.

- **Although carcinogens can affect nearly all areas of the body, they most frequently involve specific organs, such as the lungs, liver, kidneys and reproductive system.**
 - Unfortunately there often aren't any immediate symptoms of exposure to carcinogenic substances.
 - So it's especially important to know about any carcinogens you may encounter in your job.

- **One carcinogen that used to be found in a number of products is asbestos.**
 - For years it was used in pipe insulation, floor tiles and fire-proofing.
 - Many automobile brake and clutch linings also used to contain asbestos.
 - And these materials can still be found in older buildings and vehicles.
 - If they are inhaled, microscopic asbestos fibers can damage the delicate tissue inside the lungs... and eventually cause cancer.

- **"Suspected carcinogens" are substances that are believed to increase your chances of getting cancer.**
 - But unlike confirmed carcinogens, no direct link between these materials and developing cancer has yet been established.

- **Another potential workplace hazard you may encounter is "radiation." While you don't normally think of radiation when you discuss hazardous materials, it can cause serious damage to your body's cells and tissues, much like a carcinogen. This group of hazards includes:**
 - Infrared radiation.
 - Ultraviolet (UV) radiation.
 - X-rays, gamma rays and similar forms of radiation.

- **If you work around radiation hazards, you will need to take steps to protect yourself.**
 - Talk to your supervisor to find out more about any radiation hazards that may exist in your workplace.

- **In spite of all the precautions we may take, accidents do happen...and we may be exposed to a hazardous chemical.**
 - The ways a substance can get into your body are called the "routes of entry".
 - They include skin contact, inhalation and ingestion.
 - And you need to know what to do in case of any exposures.
- **Solids, liquids and gases can all be absorbed through the skin.**
 - But liquids pose the biggest threat, because they are the most easily absorbed.
- **For small splashes, you should immerse the affected area in running water for at least fifteen minutes.**
 - For larger exposures, get to a "safety shower" as quickly as possible.
 - Remove any contaminated clothing and stay in the shower stream for at least fifteen minutes.
- **Getting chemicals in your eyes can cause severe damage, so you need to go to an "eye wash station" immediately.**
 - Keep your eyes open, and flush them for at least fifteen minutes.
- **"Inhalation" is when you breathe in, or inhale, a hazardous substance.**
 - Dusts, mists, fumes, vapors and gases can all be inhaled.
 - If someone is overcome, get them out of the area and into fresh air.
 - Check the container label or the chemical's SDS to see if the victim should get immediate medical attention.

- **The third route of entry is "ingestion", or swallowing, and can be extremely dangerous.**
 - This can happen if you eat food that has been contaminated with a hazardous material, or if you accidentally transfer a material to your mouth or face with your hands.
 - If this occurs, consult the SDS immediately.
 - It may be necessary to dilute the chemical with water or milk... or induce vomiting.
 - However, in some cases vomiting may cause more damage, so read the SDS carefully.

- **When a hazardous situation occurs you need to consider the "dose" and "duration" of the exposure.**
 - The "dose" is the amount of the substance you're exposed to, and is an important factor as far as possible health effects are concerned.
 - The larger the dose, the more serious your reaction may be.

- **The "duration of exposure" is the period of time that you're exposed to a substance and is often classified as "short term" or "long term" exposure.**
 - In most cases, a short-term exposure will cause no long-term health problems.
 - However, exposure to some hazards can cause sudden reactions, or "acute effects", such as a rash or burn.

- **On the other hand, "long-term exposure" to some hazardous chemicals can cause long-term, or "chronic", health effects.**
 - However if the dose and duration are low enough, a hazardous material may not cause any negative health effects at all.

- **Various government agencies have set limits for how much of any substance you can be exposed to safely.**
 - This limit is called either the "Threshold Limit Value" (TLV) or the "Permissible Exposure Limit" (PEL).
 - You can find the TLV or PEL of any particular hazardous substance listed on its SDS.

- **But no matter what the limits for a hazardous material are, you should get medical attention after any exposure, no matter how "minor" it may seem.**
 - And be sure to supply medical personnel with a copy of the chemical's SDS.
- **One of the things that Safety Data Sheets and container labels tell you is how to protect yourself from any hazardous chemicals that you may work with.**
 - So you need to pay particular attention to sections on personal protective equipment.
 - Which equipment you should use will depend on the type of chemical you're working with and the likely routes of entry it can take into your body.
- **Substances that give off hazardous fumes or vapors call for some type of respiratory protection.**
 - There are a number of types of respirators and cartridges to choose from, and it's important to get the right ones for the substance you're working with.
- **Chemical splashes can be common with liquids, so some type of "skin protection" is always necessary.**
 - Depending on the chemical, protection can range from gloves to an apron to a full body "chem-suit".
- **As we've discussed, our eyes are particularly vulnerable to chemical splashes and need their own protection.**
 - For substances whose hazards aren't particularly severe, safety glasses may do.
 - But the best protection is provided by goggles, since they seal to your face.
 - For especially hazardous chemicals you may need to use a face-shield as well.

- **How you store a chemical can also affect your potential for exposure.**
 - For chemicals that may emit hazardous vapors or fumes, ventilation is very important.
 - Other chemicals may be sensitive to temperature or humidity.
 - So, make sure the environment is appropriate for the materials you're storing.
 - And it should never be difficult to identify the chemicals you are looking for (storage areas should be organized and well lit).
- **Shelving and racking can make a difference as to whether you are exposed to a chemical as well.**
 - It should be strong, stable and easily accessible.
 - Cramped quarters or awkward "reaches" can cause spills or damage to containers.
- **In the event of a leak or spill of a hazardous chemical you must act quickly.**
 - The first concern is people's health and safety.
 - Tend to injuries immediately.
 - Evacuate the area if necessary.
 - Notify the appropriate personnel.
- **If the spill is of a flammable or combustible substance, you should remove sources of heat or ignition as quickly as possible.**
 - But don't unplug machinery or other electrically powered equipment.
 - This can cause sparks, which could ignite the substance's vapors.
- **If you're going to be involved in cleaning up a hazardous spill, make sure to use the proper PPE and clean-up equipment.**
 - Check the SDS or your company's Hazard Communication Program to determine what you need.

- **First, work to contain the spill and minimize contamination.**
 - Create a barrier around the spill with an absorbent material.
 - If your facility has a "clean-up kit", use it!
- **In most cases, once the spill is contained you'll need to absorb it with a neutral material.**
 - Some substances will require special procedures.
 - For example, you should use non-sparking tools when cleaning up a flammable substance.
- **It's important to remember that you can't just throw hazardous materials into the trash.**
 - Many chemicals are classified as "regulated waste", and must be removed by licensed disposal companies.
 - Check with your supervisor or your facility's Safety Manager if you have any questions.
- **There's a lot to learn about the chemicals that we work with.**
 - But OSHA has done things to help.

*** * * SUMMARY * * ***

- **Your facility's Hazard Communication Program provides a "roadmap" to handling the chemicals in your work area.**
- **Container labels give you a quick reference about a chemical and its hazards.**
- **Safety Data Sheets supply detailed information about a chemical.**
- **The effects of being exposed to a chemical depend on the "dose" and the "duration of exposure."**
- **Be sure to wear appropriate PPE when working with a hazardous chemical.**

- **And know what to do in a spill or other exposure situation.**
- **OSHA's Hazard Communication Standard and other "Right-To-Know" laws are there to get us the information we need about the hazardous chemicals we work with.**
 - But it's up to you to use that information to work with chemicals safely!