

PRESENTER'S GUIDE

"HAZARD RECOGNITION"

Part of the General Safety Series

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.

- **"Always look both ways before crossing the street". It's one of the first safety rules we learn.**
 - It's an effective one because when we look both ways, we can see any vehicles that might hit us if we step into the road.
 - We wait until any hazard passes, and then cross the street safely.

- **Staying safe by identifying hazards ahead of time is a simple principle.**
 - When employers, employees, managers and supervisors use this principle to improve safety in their facility, the process is called "hazard recognition".

- **According to OSHA (the Occupational Safety and Health Administration), more than 3 million injuries and illnesses and more than 4500 deaths are caused every year by workplace accidents.**

- **It's natural to think that all of these people are "unlucky", but "luck" has nothing to do with it.**
 - The accidents and injuries that happen on the job are simply a matter of numbers.

- **The more hazards there are in a workplace, the greater the risk that goes with working there.**
 - All that risk is basically "accidents waiting to happen".
 - And if nothing is done to prevent them, eventually those accidents will occur.

- **There's a direct connection between the number of hazards in a workplace and the number of accidents, injuries and fatalities that occur there.**
- **We can see that connection in a "pyramid" diagram.**
 - At the bottom is the total number of hazards that were found in a group of workplaces.
 - The next level up is the number of accidents that almost happened as a result (these are called "near misses").
 - The level above that is the number of minor injuries that resulted from the accidents that did happen.
 - Next is the level showing the major injuries that were caused by the accidents.
 - At the top is the number of deaths that occurred.
- **Every additional hazard at the bottom of the pyramid drives up the numbers of accidents, injuries and fatalities above it.**
 - For every 20,000 hazards that exist, studies show there will be 1,500 "near misses", 300 minor injuries, 27 major injuries and one fatality.
- **Depending on your work environment the ratios between these numbers may vary.**
 - But no matter what your job is, when hazards go unnoticed or unrecognized, and nothing is done to control or eliminate them, accidents will happen.
- **However, the diagram also illustrates something hopeful.**
 - When we drive down the number of hazards in the workplace, the other numbers go down, too.
- **The more hazards we can identify, control or eliminate, the fewer accidents, injuries and fatalities that will occur.**
 - This is the goal of hazard recognition, to make the workplace safer by finding hazards and removing them or reducing their risk.

- **Most workplace accidents and injuries are caused by a combination of "hazardous conditions" and "unsafe acts".**
- **Hazardous conditions are any situations you encounter in the workplace that could harm you.**
 - Spotting these conditions might seem like a no-brainer, especially when they're right in front of you.
 - But many hazards are harder to identify than you might think.
- **Hazard recognition takes a systematic approach to this process, dividing risks into general categories. These can include:**
 - "Physical hazards", such as conditions that have the potential to cause you to fall or be struck by something, crushed, cut, burned or electrocuted.
 - "Ergonomic hazards", such as situations that require frequent lifting, awkward movements and repetitive motions, or that subject you to vibration.
 - "Chemical hazards", including HAZMATS, flammable substances, cleaning solutions, pesticides, and any fumes that these substances produce.
 - And "biological hazards", such as viruses, bacteria, mold, insects and parasites.
- **These are all hazardous conditions that become even more dangerous when they are combined with the unsafe acts that people perform.**
 - Unsafe acts are the opposite of "safe work practices", and they make bad things happen.
- **For example, changing a ceiling light 15 feet above the floor creates the potential for the physical hazard of falling.**
 - Having a forklift operator raise you up to the light fixture on the bare forks of his lift truck is an unsafe act, which makes falling a lot more likely.
- **Climbing up to the fixture on a ladder that you know is damaged is another type of unsafe act that can lead to trouble.**

- **Other examples of unsafe acts include:**
 - Pulling the grounding prongs out of the cords on electric tools so you can plug them into two-prong outlets.
 - Disconnecting a machine guard that "gets in the way".

- **Unsafe acts are not only dangerous, they can also be habit-forming.**

- **Actions always have consequences, and often they're immediate.**
 - Normally, we only have to put our hand on a hot stove once to learn that we shouldn't do it again.

- **At work the consequences don't always occur right away.**
 - When we "get away" with an unsafe act, we may say to ourselves, "Hey, I saved a lot of time here, and nothing bad happened!"
 - Because we don't get "burned" the first time, we're tempted to do the same thing again.
 - But every time we do it, we're coming closer to an accident, injury or worse.

- **Another problem is that some hazardous conditions and unsafe acts can be so "obvious" or "general" in nature that we may tend to overlook them.**
 - Clutter or spills on the floor can lead to trips and falls.
 - Insufficient lighting can hide other hazards so you can't see to avoid them.
 - Exits that are locked or blocked but go unnoticed can be lethal in an emergency.

- **It's easy to get used to seeing these things and not thinking twice about them.**

- **Some unsafe acts can fly under the radar as well, such as:**
 - Having a couple of drinks before coming to work.
 - "Cutting corners" on safety when you're in a hurry.
 - And assuming that "someone else" will deal with a hazard that you just noticed.

- **Acts like these can be easy to get used to, but they can just as easily lead to trouble.**
- **Hazard recognition uses three tools to identify hazards before they cause accidents or injuries.**
 - "Job hazard analysis".
 - Pre-shift and pre-operation inspections.
 - Work permits.
- **In job hazard analysis, a manager or supervisor studies a planned project or new task ahead of time, to identify its potential hazards and develop ways to prevent or control them.**
- **Each job is broken down into lists of specific tasks. The supervisor then examines:**
 - Each step of every procedure.
 - The location where it will be done.
 - Any equipment that will be used to do it.
- **Once the hazards associated with the tasks have been identified, a plan is developed to control or eliminate them. The plan may include:**
 - Administrative controls, such as safe work practices and policies.
 - Engineering controls, which are physical safety measures that are built into the workplace.
 - Having employees wear various types of personal protective equipment.
- **Employees can play an important part in job hazard analysis as well.**
 - Since no one knows your work better than you do, your supervisor may ask for your input on the job and how to do it safely.

- **Checking tools, machinery, and protective equipment before starting a job has always been an effective way to work more safely.**
 - Hazard recognition uses pre-shift and pre-operation inspections to make this process systematic.
 - With hazard recognition these inspections are required at the start of a shift or before beginning a particular task, and detailed checklists are developed to make sure they are thorough.

- **As with job hazard analysis, you may be asked to contribute your knowledge of equipment that you use or tasks that you perform to creating these checklists.**

- **The work permits that are required for some risky procedures are the third tool that a hazard recognition program uses to identify potential hazards.**

- **In filling out a permit, the person who will be doing the work must list:**
 - The task to be accomplished.
 - The hazards that will be involved.
 - The procedures that will control or eliminate the risks those hazards present.

- **A manager or supervisor must review and approve the permit before the work can proceed.**
 - The work permit process helps ensure that no one starts a hazardous job without having a thorough understanding of what the risks are and how to avoid them.

- **To prevent as many accidents and injuries as possible, we also need to be able to identify and deal with hazards in "real time".**
 - The hazard recognition process can help with this too.

- **At the start of the day, and throughout your shift, make a habit of asking yourself "What are the hazards here?"**
 - Try to spot any physical, ergonomic, chemical or biological hazards.

- **You should look for:**
 - Places where you could fall, such as a scaffold or a wet floor.
 - Objects that could hit you, such as materials that are being transported or equipment with unguarded moving parts.
 - What forms of hazardous energy are present (such as electricity, steam or hydraulic pressure)?
- **Watch out for tasks that require heavy lifting and repetitive or awkward motion.**
 - Vibration from hand tools and machinery can also be harmful over time.
- **Be aware of any potentially hazardous chemicals, cleaning products or pesticides that that you come into contact with.**
 - Remember their fumes can be hazardous as well.
- **Look for biological hazards such as mold that is inside a ventilation system, or ticks or fire ant colonies on a job site.**
- **Ask yourself if the tools and equipment you'll be using are appropriate, and in good working order.**
- **There can be some hazards associated with your tools that you should recognize. For instance:**
 - A diesel-powered forklift should not be used where there's limited ventilation.
 - Electric-powered hand tools should not be used in wet conditions.
- **Look for things such as rickety ladders, frayed power cords, hammers with loose heads and cutting tools with dull or broken blades as well.**
 - If you find any of these, fix them or take them out of service!

- **In addition to hazardous conditions, you need to watch out for unsafe acts, too.**
 - You can avoid doing them yourself by sticking to your company's "standard operating procedures" and safe work practices.
- **Keep an eye on your coworkers as well, to see if they're following the SOPs and safe work practices, and that they're wearing the proper PPE.**
- **When you do identify a hazard, you need to take action.**
 - If you can remedy the situation yourself, do it. If you can't correct it yourself, speak up.
 - Report it to your supervisor, so they can take steps to control or eliminate the hazard.
 - Warn your coworkers about the risk so they can avoid it, too.
- **If you see a coworker doing something unsafe, call it to their attention.**
 - Make sure they understand why it's dangerous.
 - Remind them that doing things safely is the only responsible way to do them.
- **As hard as we may try, it's not always possible to eliminate risks before they cause problems.**
 - Recognizing hazards "after the fact" is better than not knowing why something happened at all.
- **When accidents do occur it's crucial to learn as much as possible about why they happened, so that they can be prevented from happening again.**
 - That's the goal of "accident investigation".
- **Accident investigation searches for the "root causes" of what happened.**
 - On the surface these might appear to be "obvious", but the circumstances behind accidents can be more complicated than you might think.

- **For example, take the case of a stockroom worker who fell off a stepladder.**
 - Coworkers say that the employee was standing on the very top step of the ladder when they fell.
 - That's an unsafe act that goes against the company's standard operating procedures, but is it the root cause of the accident?

- **When investigators looked more closely, they discovered that the step ladder was the tallest ladder in the facility, but was still not tall enough to reach the highest shelves in the stockroom safely.**
 - The employee who fell had to stand on the top step to get to those shelves.

- **This type of information can determine what measures will really be effective in controlling or eliminating a workplace hazard.**
 - The "obvious" cause of the ladder accident was an employee performing an unsafe act.
 - The root cause is really an equipment problem.
 - To prevent a similar accident from happening in the future, the company will need to buy a taller ladder for the stockroom.

- **It's important to remember that what you know could be essential to an accident investigation, even if you did not witness the accident firsthand.**
 - If you are familiar with the task being performed at the time of the accident, or the location where it occurred, you could provide key information.

***** SUMMARY *****

- **When you see hazards coming, it's a lot easier to avoid them.**

- **Most accidents and injuries result from a combination of hazardous conditions and unsafe acts.**

- **Hazard recognition tries to find hazards and neutralize them ahead of time.**

- **The hazard recognition process looks for categories of risks, such as physical, ergonomic, chemical and biological hazards.**
- **Once you identify the potential hazards in your work area, you need to do what is necessary to protect yourself and your coworkers.**
- **An accident investigation determines an accident's root cause, so steps can be taken to prevent similar incidents from happening again.**
- **When you understand the principles and procedures behind hazard recognition, you have the tools you need to head hazards "off at the pass", and make your facility a safer place to work... every day!**