

FINDING HAZARDS



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Learning Objectives

By the end of this lesson, students will be able to:

- Define the term “*job hazard*”
- Identify a variety of health and safety hazards found at typical worksites where young people are employed.
- Locate various types of hazards in an actual workplace.

Time Needed: 45 Minutes

Materials Needed

- Flipchart Paper
- Markers (5 colors per student group)
- PowerPoint Slides: #1: *Job Hazards*
#2: *Sample Hazard Map*
#3: *Finding Hazards: Key Points*
- Appendix A handouts (Optional)



Preparing To Teach This Lesson

Before you present this lesson:

1. Obtain a flipchart and markers or use a chalkboard and chalk.
2. Locate slides #1-3 on your CD and review them. If necessary, copy onto transparencies.
3. For the Hazard Mapping activity, you will need flipchart paper and a set of five colored markers (black, red, green, blue, orange) for each small group.

Detailed Instructor’s Notes

A. Introduction: What is a job hazard? (15 minutes)

1. Remind the class that a job hazard is anything at work that can hurt you, either physically or mentally.

Explain that some job hazards are very obvious, but others are not. In order to be better prepared to be safe on the job, it is necessary to be able to identify different types of hazards.

Tell the class that hazards can be divided into four categories. Write the categories across the top of a piece of flipchart paper and show PowerPoint Slide #1, *Job Hazards*.

- **Safety hazards** can cause immediate accidents and injuries. Examples: hot surfaces or slippery floors, trip hazards, sharp edges, etc.
- **Chemical hazards** are gases, vapors, liquids, or dusts that can harm your body. Examples: cleaning products or pesticides.

Slide #1

Job Hazards: A job hazard is anything at work that can hurt you either physically or mentally.

■ **Safety hazards:** Can cause immediate accidents and injuries

- ◆ *Examples: knives, hot grease, trip hazards, sharp edges, etc.*

■ **Chemical hazards:** Are gasses, vapors, liquids, or dusts that can harm your body

- ◆ *Examples: Cleaning products, pesticides*

■ **Biological hazards:** *living things that can cause sickness or disease*

- ◆ *Examples: Bacteria, viruses, or parasites*

■ **Other health hazards:** Are harmful things, not in the other categories, that can injure you or make you sick. These hazards are sometimes less obvious because they may not cause health problems right away.

- ◆ *Examples: noise, repetitive movements*

- **Biological hazards** are living things—bacteria, viruses, or insects—that can cause diseases such as flu, AIDS, hepatitis, Lyme disease, tuberculosis, and methicillin-resistant *Staphylococcus aureus* (MRSA). In the workplace, you can be exposed to biological hazards through contact with used needles, sick children, animals, etc.
 - **Other health hazards** include harmful things, not in the other categories, that can injure you or make you sick. These hazards are sometimes less obvious because they may not cause health problems right away. Some examples might be noise, repetitive movements, and mental stress.
2. Ask students to think about places they have worked, or workplaces with which they are familiar (restaurants, stores, movie theaters, offices, etc.).

On the board or flipchart paper, create a table with four columns. Add the following headings to each column: Safety Hazards, Chemical Hazards, Biological Hazards, and Other Health Hazards.

Have students call out possible job hazards and identify each as a safety hazard, chemical hazard, biological hazard, or other health hazard.

List each hazard the students call out in the matching column on the table. Alternatively, have the class generate one list of hazards and then work in small groups to categorize them.

* **NOTE:** Students may confuse the effects of hazards with the hazards themselves. They may mention “cuts” for example, instead of knives, which cause cuts. The cause is the hazard and should be listed on the chart. If people give effects rather than causes, ask them what causes the problem they mention. This will help later when students discuss how to eliminate hazards.

Safety Hazards	Chemical Hazards	Biological Hazards	Other Health Hazards
<ul style="list-style-type: none"> • hot surfaces • slippery floors • unsafe ladders • machines without guards • sharp knives • hot grease • unsafe electric circuits • lack of fire exits • motor vehicles • cluttered work areas • falling objects • violence 	<ul style="list-style-type: none"> • cleaning products • pesticides • solvents • acids • asbestos • lead • ozone (from copiers) • wood dust • mercury • poor air quality • gasoline 	<ul style="list-style-type: none"> • viruses * bacteria • molds • animals • birds • insects • poison ivy • poison oak • used needles 	<ul style="list-style-type: none"> • noise • vibration • radiation • heat or cold • repetitive movements • awkward posture • heavy lifting • fast pace of work • stress • areas too dark or too bright

B. Hazard mapping (30 minutes)

1. You may choose to select workplaces specifically relevant to your program or the experiences of your students for this exercise.

Divide the class into small groups. Assign each group a type of workplace. You and your students can choose workplaces where young workers often work, such as fast food restaurants, grocery stores, movie theaters, and offices. Appendix A also contains other examples of hazards found in work settings where teens may be employed.

2. Have students draw a simple floor plan for their workplace on flipchart paper using a black marker. The floor plan should show typical rooms, work areas, furniture, equipment, work processes, doors, and windows. Explain that the floor plan can be very simple.

- Next, each group should mark the location of various hazards on their floor plans. Using the following color code can help reinforce the different categories of hazards. It's not necessary to color code the categories if it feels too complicated.

Red = safety hazards

Green = chemical hazards

Orange = biological hazards

Blue = other health hazards.

Show students PowerPoint Slide #2, *Sample Hazard Map*.

Slide #2

Sample Hazard Map

Students will draw maps in color:

Red = Safety Hazards **Green** = Chemical Hazards **Orange** = Biological Hazards **Blue** = Other Health Hazards

SAFETY (RED)
HOT GRILL
HOT GREASE
SHARP KNIVES
SLIPPERY FLOORS

CHEMICAL (GREEN)
CLEANING PRODUCTS
DISHWASHING PRODUCTS

BIOLOGICAL (ORANGE)
BACTERIA
USED NEEDLES

OTHER (BLUE)
CUSTOMERS/STRESS
ROBBERY
STANDING
LIFTING

FAST FOOD RESTAURANT

- (Optional) If you wish, also ask the groups to indicate how dangerous each hazard is. They can highlight hazards they consider especially serious or severe by coloring them more prominently.
- Ask each group to choose someone to present their map to the entire class later. The presenter should be ready to explain to the class what they believe are the major hazards in this workplace.

6. Have the person selected by each group present and explain its map. The explanation should include a list of the major hazards in this type of workplace. As each group presents its map, list any hazards people mention that were not previously listed on the chart created during the Introduction.

C. Review (5 minutes)

1. Show PowerPoint Slide #3, *Finding Hazards: Key Points*. Review the key points covered in this lesson.
 - a. Every job has health and safety hazards.
 - b. You should always be aware of these hazards.

Slide #3



Finding Hazards: *Key Points*

- Every job has health and safety hazards
- You should always be aware of these hazards



SALESPERSONS & SALES CLERKS

Retail salespersons and sales clerks sell or rent goods and services.

Description of Job

Main Duties:

- Greet customers and discuss the type, quality, quantity, use and care of merchandise for purchase or rental;
- Estimate or quote prices, credit terms, trade-in allowances, warranties and delivery dates;
- Prepare merchandise for purchase or rental;
- Prepare sales contracts and do payment transactions;
- Assist in the display of merchandise.

Health and Safety Hazards

Biological:

- Potential hazard from breathing micro-organisms such as molds and bacteria which may grow in air-conditioning and humidifying systems, evaporative condensers and cooling towers in buildings may cause symptoms such as allergies and respiratory infections.

Chemical:

- Possible respiratory, eye and skin irritation from poor indoor air quality caused by poor ventilation design, sealed buildings and the build-up of contaminants from building materials and office equipment.

Ergonomic:

- Cumulative trauma disorders such as carpal tunnel syndrome, tendonitis and tenosynovitis can develop in cashiers
- Discomfort in the neck, shoulder, elbow and back from awkward positions in check-out stands
- Discomfort in legs, knees and feet, varicose veins and back pain from compressive forces from prolonged standing
- Back injuries from moving heavy or large merchandise.

Psychosocial:

- High stress from need to work efficiently and at a fast pace
- Shift work
- Competing for sales commission between co-workers
- Dealing with irate or difficult customers
- Being on the lookout for and coping with shoplifters.

Source: <http://www.ccohs.ca/youngworkers/retail.htm>



CAREGIVERS/HOUSEKEEPERS

Description of Job

Caregivers, housekeepers, domestic workers and babysitters have similar functions in the workplace. Their general tasks may include the following:

- Kitchen work, including shopping for food, cooking and meal preparation
- House cleaning, housekeeping, and washing dishes
- Laundry
- Childcare, which may involve diaper changing, bathing and supervision
- Elder care, which may involve bathing, companionship, and assistance with doctor visits.

What are some health and safety issues for caregivers and housekeepers?

There are several potential health and safety hazards associated with caregiving and housekeeping duties:

- Risk of illness or infection from changing diapers, performing first aid, etc.
- Exposure to chemicals in household cleaning products
- Working in awkward postures or performing repetitive tasks
- Risk of pain or injury from lifting or carrying heavy loads
- Slips, trips and falls
- Working with sharp knives or other potentially hazardous tools
- Risk of burns from ovens, deep fryers, and steam from pots
- Stress
- Fatigue and other health problems from long hours of work
- Working alone.

What are some preventive measures for a caregiver or housekeeper?

- Learn safe lifting techniques
- Wash your hands frequently—an important step in preventing infection
- Always wear appropriate personal protective equipment for the task
- Wear shoes with non-skid soles.

What are some good general safe work practices?

- Practice safe lifting techniques
- Follow or establish safety procedures for working alone or avoid working alone wherever possible
- Get current training on chemical hazards and MSDSs
- Know basic and emergency first aid
- Follow company safety rules
- Know how to report hazards
- Practice good housekeeping procedures.

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LANDSCAPERS

Under the label “landscaper” we are referring to gardeners, greenkeepers, lawn care specialists and horticultural workers. These people work in businesses or homes, indoors or outdoors.

Description of Job

Some of the main duties of a landscaper include the following:

- Plan, create and maintain landscaped environments, which may include flowers, plants, trees, lawns, fences, decks, patios or water features
- Prepare and spray chemical mixtures using various types of equipment
- Operate powered equipment and hand tools.

What are some health and safety issues for landscapers?

Depending on exact occupation or geographic location, the following are possible risks:

- Exposure to infectious human and animal waste
- Irritation or allergic reaction from plants, or from insect bites or stings
- West Nile virus, Lyme disease or Rocky Mountain Spotted Fever
- Histoplasmosis from bird droppings
- Hantavirus from mouse droppings
- Exposure to pesticides and other toxic chemicals
- Pain or injury from working in awkward positions, lifting and carrying heavy objects
- Noise
- Exposure to extreme temperatures.
- Work with heavy machinery, manual and power tools, and ladders
- Working near electrical lines
- Stress

What are some preventative measures for landscapers?

- Wash hands frequently
- Remove contaminated clothing and footwear to avoid transferring chemicals to your home or other “clean” spaces
- Wash contaminated items before re-wearing or discarding
- Read the Material Safety Data Sheet (MSDS) for each chemical used
- Keep limbs covered to avoid insect bites
- Wear protective clothing against the sun and extreme heat or cold
- Learn safe lifting techniques
- Wear appropriate personal protective equipment
- Know how to safely use equipment and tools.

What are some good general safe work practices?

- Practice safe lifting techniques
- Work safely with equipment, tools, and ladders
- Follow MSDS recommendations when working with chemicals
- Use, maintain and store personal protective equipment according to manufacturers' recommendations
- Stay hydrated to avoid heat stress
- Follow company safety rules
- Know how to report a hazard
- Follow good housekeeping procedures.

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PAINTERS

A painter applies paint and other decorative finishes to interior and exterior surfaces of buildings and other structures.

Description of Job

Some of the main duties of a painter are to:

- Prepare surfaces to be painted (includes scraping, removal of wallpaper, etc.)
- Determine what materials will be needed
- Use, clean and maintain various equipment
- Supervise apprentices or other workers
- Provide estimates and invoices for clients.

What are some health and safety issues for painters?

Painters can work at a variety of workplaces, construction sites, homes, etc. and face a constantly changing set of hazards. Hazards can include the following:

- Working at heights on ladders, platforms, and scaffolds
- Working in confined spaces
- Risk of eye injury
- Slips, trips and falls
- Risk of injury from falling objects
- Exposure to molds, fungi and bacteria
- Exposure to paint products, solvents, lead and other toxic substances
- Proximity to flammable or combustible materials
- Working in awkward positions, or performing repetitive physical tasks
- Standing for long periods of time
- Lifting heavy or awkward objects
- Exposure to heat and ultraviolet radiation
- Noise
- Stress
- Shift work or extended work days

What are some preventive measures for painters?

- Learn correct procedures for working at heights.
- Avoid awkward body positions or take frequent breaks.
- Learn safe lifting techniques.
- Keep tools and equipment, and their safety features, in good working order.
- Wear appropriate personal protective equipment and footwear.
- Keep work areas clear of clutter and equipment.
- Learn safety procedures for working in confined spaces.

What are some good general safe work practices?

- Practice safety procedures for:
 - Working at heights
 - Lifting
 - Repetitive physical tasks
 - Selection, use, maintenance and storage of personal protective equipment
 - Confined space entry
- Follow company safety rules.
- Learn about chemical hazards and MSDSs.
- Know how to report a hazard
- Follow good housekeeping procedures.

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GENERAL OFFICE CLERKS

General office clerks type and file correspondence, statements and other material. They also operate office equipment, answer telephones, respond to faxes and emails, and do general clerical duties. They work in the public and private sectors.

Description of Job

Main Duties:

- Receive and forward telephone or personal enquiries and provide general information to clients
- Photocopy and collate documents for distribution, mailing, couriers and filing
- Maintain and update manual or computerized filing, inventory, mailing and database systems
- Open, sort and route incoming mail and courier packages
- Send and receive email or fax messages
- Sort, process, type, proofread and verify reports, statements, applications, receipts, expenditures, forms, invoices, bank deposits and other documents using computers or typewriters.

Health and Safety Hazards

Biological:

- Potential hazard from breathing micro-organisms such as molds and bacteria that may grow in air-conditioning and humidifying systems
- Evaporative condensers and cooling towers in buildings may cause symptoms such as allergies and respiratory infections.

Chemical:

- Possible respiratory, eye and skin irritation from poor indoor air quality caused by poor ventilation design, sealed buildings and the build-up of contaminants from building materials and office equipment.

Ergonomic:

- Cumulative trauma disorders such as carpal tunnel syndrome, tendonitis, tenosynovitis, bursitis, thoracic outlet syndrome can affect the upper limbs and neck;
- Prolonged work with a computer may cause inflammation in the muscles, joints and tendons;
- Prolonged sitting can reduce blood circulation and increase blood pooling in the legs and feet and cause lower back pain;
- Eye strain and headaches from poorly designed lighting or uncorrected eyesight

Physical:

- High noise levels generated by the combination of copiers, typewriters, printers, phones

Safety:

- Slips, trips and falls from cluttered, slippery or wet floors
- Sprains, strains and fractures
- Collisions with open file cabinet drawers
- Back injuries from moving heavy objects
- Cuts and bruises
- Abrasions
- Burns and electric shock.

Source: <http://www.ccohs.ca/youngworkers/clerks.html>