According to the International Labour Organization, more than 337 million accidents happen in the workplace each year. In some industries, workers are exposed to potentially dangerous injuries, but slips, trips, and falls account for more than 51 percent of all workplace injuries.

Objectives:
1. Explain why accidents occur.
2. Describe ways to prevent accidents.
3. Identify personal protective equipment and how it is used.

Key Terms:
carelessness  earplug  respirator
common sense  eye-wash station  safety glasses
concentration  particulate mask  safety goggles
distraction  personal protective equipment (PPE)  safety shields
earmuffs  safety goggles  safety training

Why Do Accidents Occur?
Accidents occur for many reasons but often because people fail to concentrate. Concentration is the act of exerting mental effort or giving attention to something. Lack of concentration may be due to being distracted or fatigued, working too long without a break, or not getting enough sleep.

Carelessness can result in accidents. Carelessness is the failure to make good decisions about what is being done and the ignoring of safety. Carelessness may be caused by working long hours near hazardous machinery, working in noisy environments, or using substances that alter your ability to concentrate.
Failing to post or observe safety signs or warnings on facilities or equipment can result in accidents. Equipment often has decals that provide safety information. Lack of safety training or unawareness of hazards may lead to accidents. Safety training is education that focuses specifically on performing work in a safe manner. In some cases, safety training may not be offered. Individuals have a responsibility, to both themselves and their employer, to learn and follow safety procedures.

Accidents may involve machinery and tools. All machinery and tools should be used properly and kept in good condition. Worn or damaged parts may fail and cause an accident.

**How to Prevent Accidents**

Avoid distractions. A *distraction* is something that diverts attention from one subject or activity to another. Focus on the task in front of you. If you can’t focus for any reason, take a break, if possible. Try to eliminate distractions near you.

Always use caution around machinery and tools. Wear appropriate safety equipment. Read any instructions, or have someone show you how to use tools, equipment, or processes. When performing hazardous work, have another person there with you in case something goes wrong.

---

**DIGGING DEEPER...**

**UNCOVERING ADDITIONAL FACTS:**

Slips, Trips, and Falls Cause Industrial Accidents

Slips, trips, and falls are among the five major factors in industrial accidents. These accidents can cause head injuries, back injuries, broken bones, cuts and lacerations, or sprained muscles.

When there is too little traction between a shoe and the walking surface, a person slips. When a person’s foot bumps into an unexpected object or suddenly drops to a lower elevation level, balance is lost, and the person trips. A fall occurs when a person loses balance.

Dangers that can cause slips, trips, and falls may be ice, wet spots, gravel, uneven sidewalks, grease, highly polished floors, loose carpeting, clutter, electrical cords, open filing cabinets, and open desk drawers.

Inadequate lighting can make obstacles or changes in a walking surface hard to see. Changes in elevation, such as curbs, ramps, sidewalk cracks, and single steps, can be hazardous if not well marked.

Nearly half of all falls occur on steps. Stairways need secure handrails and guardrails and must be free of loose carpeting, kept clear of obstacles, and be well lit.

Precautions and safety regulations can prevent many accidents where people may lose their balance and footing.
Take breaks every hour or so, depending on the nature of the work. Do not work so long that you have lowered your ability to respond to situations that may arise. Get enough sleep and rest. Do not use substances that impair your ability to think clearly.

Use common sense. **Common sense** is sound, practical judgment. It is an additional attribute to training and skill in performing a task. Don’t take unnecessary risks. Look for and anticipate potential dangers, and try to avoid them. Remove potential dangers from the workplace.

Use proper safety equipment. Wear personal protective equipment. Post signs in plain view near hazardous areas. Install guardrails, handrails, fences, and gates where needed. Install fire extinguishers and first-aid kits in convenient locations.

Organize the work site to remove hazards. Keep the site well organized and clean. Return all tools, equipment, chemicals, and other items to the proper storage area.

Think safety! Attend safety and accident prevention training.

---

**Use Personal Protective Equipment**

**Personal protective equipment (PPE)** is any device used to protect people from injury. Individuals are responsible for having and properly using PPE. No protection is afforded by using PPE improperly. PPE should be kept clean and in good working condition. PPE is used to provide protection from personal injury in several areas.

**EYE PROTECTION**

Eye protection is needed to prevent injury to the eyes from flying objects, splashed chemicals, and bright lights. Common eye PPE includes safety glasses, safety goggles, safety shields and helmets, and eye-wash stations. **Safety glasses** are glasses designed with shatterproof lenses, brow bars, and side panels to prevent tiny solid objects from flying into the eyes. **Safety goggles** are eyewear, usually larger than safety glasses, that fits tightly around the eyes to protect them from flying solid objects, from splashed solutions, and, if tinted, from bright flames. **Safety shields** are devices held in front of the face to protect the eyes and skin from bright light. An **eye-wash station** is a unit containing water or other fluid for washing the eyes in case of a splash or other eye injury.
HEARING PROTECTION

Hearing protection is used to prevent injury to delicate ear structures. It is often needed when operating power tools and other equipment that make loud noise. Earplugs and earmuffs are most commonly used. An **earplug** is a soft, pliable device that fits into the ear canal. **Earmuffs** are a pair of pads that fit over the ears and offer protection from loud noise.

Laboratories, shops, rooms, and other interior areas can be equipped with materials that decrease the noise level. Soft materials absorb sound and reduce the potential for hearing damage.

RESPIRATORY PROTECTION

Respiratory personal protective equipment is designed to protect the respiratory system from hazards that exist in the air. A **particulate mask** is a fabric material that fits over the nose and filters larger particulate from the air. A **respirator** is a device that covers the nose and mouth and filters the air that is breathed. Respirators may remove hazardous gases and other materials that are in the air.

SKIN PROTECTION

Gloves, hats, special clothing, shoes, and other PPE are used to protect the skin and body from chemicals, heat, bright lights, and falling objects. Items should be selected based on the kind of exposure. The equipment needed varies with the potential hazard. Hard hats are worn in areas where objects may fall from above and strike your head. Rubber or plastic gloves are worn to protect the skin on your hands from hazardous substances.

**Summary:**

Accidents often occur because people fail to concentrate. Lack of concentration may be due to being distracted or fatigued, working too long without a break, or not getting enough sleep.
Carelessness, or the failure to make good decisions about what is being done and the ignoring of safety, can result in accidents. Individuals have a responsibility to both themselves and their employer to learn and follow safety procedures. Safety training is education that focuses specifically on performing work in a safe manner.

In an effort to avoid accidents, try to eliminate distractions, and use common sense. Do not take unnecessary risks. Personal protective equipment (PPE) is used to prevent personal injury in several work areas. PPE includes safeguards for the eyes, ears, respiratory system, and skin.

Checking Your Knowledge:

1. How can concentration be a safety factor?
2. What is safety training?
3. What are two ways to control distractions?
4. How can common sense keep you safe?
5. Why is PPE important?

Expanding Your Knowledge:

Industry is safer in the United States than in many other parts of the world. Labor unions were organized to improve the social and economic welfare of workers after the start of the industrial revolution in the mid-nineteenth century. While the function of labor unions today is largely as bargaining units between labor and management, at the time of their origin they helped improve working conditions to protect workers.

Research the history of labor unions in this country, and learn how their efforts were the beginning of worker welfare and safety.

Web Links:

How and Why Accidents Happen
http://www.safety.hku.hk/homepage/DSRMike1.pdf

Accidents Don’t “Just Happen”
http://www.rtc4safety.com/hm_pages%5Caccidentsdontjusthappen.htm

Accident Prevention Plan

Workers’ Compensation
https://en.wikipedia.org/wiki/Workers’_compensation