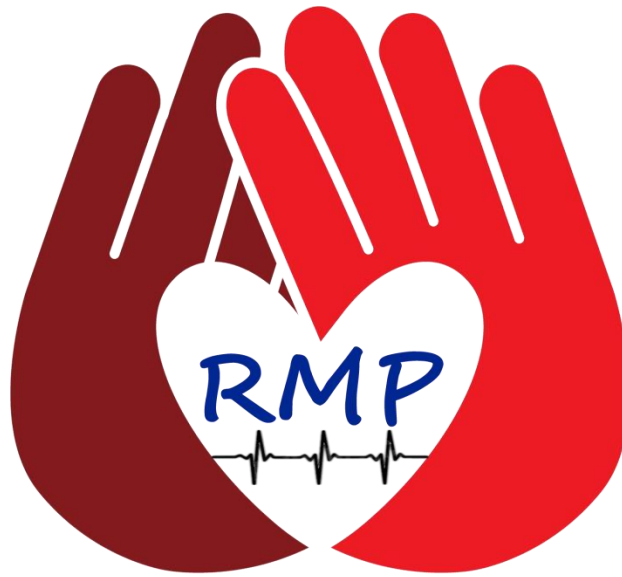




Medical Training and Events

**HEALTH AND SAFETY
COURSE
NQF25639**

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Not All Heroes Wear Capes!



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Introduction

Health and safety at work describes measures designed to protect the health and safety of people at work and that of others, such as visitors and members of the public, who are affected by work activities.

Unfortunately we all work in industries that have potential hazards to health and safety which could result in accidents and occupational diseases; where people can get injured, disabled or even killed.

No matter how aware we all are of the health and safety factors related to our tasks, we will never be able to eliminate incidents or accidents completely.

It is not always possible for the employer to be everywhere at all times. He has a variety of tasks to perform and meetings to attend. In order to ensure that all functions proceed as may be required by client-demand, deadlines, production-cost, etc., he may appoint other persons to assist him.

Normally there is somebody responsible for finances, operations, production, and in some cases even a dedicated person for Health, safety and Environmental issues.



Keywords

Accident – an unplanned, uncontrolled event with the potential to cause injury, damage or other loss

Hazard – something with the potential to cause harm.

Health – a state of well-being, with the absence of illness or disease

Health and safety executive (HSE) – the body that regulates health and safety and a major enforcement authority

Health and safety policy – a document outlining an employer's general policy and commitment to health and safety. It will also include an outline of the organization and people's responsibilities, together with arrangements for implementing the policy.

Occupational illness – health problems associated with work.

Risk – the chance (or likelihood) that a hazard will cause harm. In assessing the risk, consideration needs to be given to the degree of harm and the number of people who may be affected.

Safety – the absence of risks.

Workplace – any building or area where people work.

Enforcement authority – the organization responsible for enforcing health and safety legislation

Enforcement officers – environmental health officers, health & safety inspectors and others who are responsible for enforcing legislation

Legislation – a general term for laws, including acts, regulations, orders and directives

Local authority – the local council

Reasonably practicable – a legal expression that balances risk against the time, trouble, and money to prevent or reduce risk

Welfare – issues concerning the well-being of employees, such as the provision of toilets

Acute – an effect on the body that occurs rapidly after a short exposure to a health hazard

Carcinogen – a substance that can cause cancer in humans

Chronic – an effect on the body that occurs after a long period of exposure or after repeated exposure

Exposure – contact with a health hazard

Health hazard – anything with the potential to cause ill health

Hierarchy of controls – control measures listed in order of priority

Occupational health – the activity of predicting and preventing work related ill health. Also health issues associated with work.

Accident – an unplanned, uncontrolled event with the potential to cause injury, damage or other loss

Control or control measure – an item or action designed to remove a hazard or reduce the risk from it

Reportable accident – an accident that must be reported to the appropriate enforcement authority



Fall – where a slip or trip causes a person who was upright (walking or running) to fall to the ground or floor surface.

Slip – a term used to describe where the surface of footwear (or the sole of the foot) loses grip with the floor surface

Trip – where an obstruction or uneven surface causes the foot or leg to ‘catch’ the obstruction, making a person lose balance

Electric shock – where a current of electricity passes through the body’s organs, muscles and nerves and may affect their function, e.g. stopping the heart

Evacuation route – the designated way out of a building in case of fire or other emergency

Fuel – anything that can be burned in a fire, such as paper, wood, furnishings and flammable chemicals

Appointed person – someone with specific duties relating to first aid, but not necessarily training in first aid

First aider – someone trained to a recognized standard to administer first aid

Stress – a feeling of anxiety and unwanted pressure that causes harm to the body and a major cause of absenteeism at work

Welfare – the provision of facilities and other measures to ensure a person’s well-being

Control or control measure – an item or action to remove a hazard or reduce a risk

Risk – the chance (or likelihood) that a hazard will cause harm. In assessing the risk, consideration needs

Safety signs – specially designed signs with the shape and colours having a particular meaning. The four main safety signs are: mandatory, safe condition; prohibition and warning signs

Safe working procedures – the methods and the sequence in which people do things at work that have been devised to prevent and reduce the risk of harm to people who are carrying out a particular task.

Workplace – any place where people are working including within buildings, while on scaffolding or ladders, outside or in a confined space.

Workstation – the particular place where anyone might work; e.g. at a desk with display screen equipment or a woodworking machine cutting pieces of wood.

Fail to safety – a mechanism incorporated into the design of a product that keeps the product safe even when something has gone wrong

PPE – equipment and clothes used and worn to protect the wearer against hazards

Respiratory protective equipment – personal protective equipment designed to protect the airways from inhaling hazardous substances in the air such as fumes or dust

Work equipment – machines and tools for use at work. This includes equipment of all kinds, including photocopiers, drills, fork-lift trucks, ladders, food slicers and tractors

Display screen equipment – equipment, such as a computer, with a visual display or monitor

Ergonomics – the interaction between people, equipment and their environment

Musculoskeletal disorders – conditions, often affecting the back, involving symptoms such as aches, pains, swelling and restricted movement



Workstation – arrangement of equipment, such as desks and production lines, at which people work

WRULDS – work-related upper limb disorders affecting the neck, shoulders, arms and hands

Load - an object or person to be moved, held or positioned at work

Manual handling – using the body to lift, carry, push or pull a load

Reportable accident – one that must be reported to the appropriate enforcement authority

At height – a place where a person could be injured falling from it, even if it is at or below ground level

Elevating work platform – a mechanical platform that lifts a person, such as in a cage, to provide safe access for working at height

Ladder – includes a fixed ladder and a step ladder

Scaffold – a temporary structure providing a safe place for working at height

Working at height – working where falling is likely to cause personal injury

Pedestrians – anyone on foot, including employees, contractors, visitors and the public

Traffic routes – the specific marked areas to be used for workplace vehicles

Workplace transport – includes vehicles used in or around workplaces, such as fork-lift trucks, delivery vans, dumper trucks

Noise – unwanted sound, often loud

Sound – vibration in the air made by sources and received by the hearer

Tinnitus – a medical condition involving ringing in the ears

Vibration – the small but rapid and repetitive movement of, e.g. piece of work equipment



Module 1: Workplace accidents and illness

What is an accident

An Accident is an undesired event caused by unsafe acts or unsafe conditions that cause physical harm or has the potential for harm or the potential for loss.

There are hundreds of thousands of accidents in the workplace every year. In, Britain alone, it has been estimated that 2.3 million people suffer from work-related ill health. The statistics for fatal and major injuries cover members of the public as well as employees and self-employed people. The absences of longer than three days relate to employees.

Official figures for workplace incidents are categorized into the following:

- Fatalities
- Major injuries
- Injuries leading to more than 3 days absence from work

Figures for these categories cannot be accurately documented as not all incidents are officially reported.

There are three contributing factors that result in accidents

- Unsafe acts 88%
- Unsafe conditions 10%
- Acts of providence 2%

98 % of all accidents can be prevented due to unsafe acts performed by people in their workplace.

2 000 000 Accidents were investigated and it has been found that for every one major accident that caused death or disablement there can be 10 accidents that only caused minor injuries where only First Aid treatment is required, and 30 accidents that caused property damage.

Fatal accidents are most commonly caused by

- Falls from height
- Being struck by a moving object or vehicle
- Being struck by a moving, flying or falling object

Major injury accidents are most commonly caused by

- Slipping, tripping or falling
- Falls from height
- Injured while handling, lifting or carrying

Absences of over three days are most commonly caused by

- Being injured while handling, lifting or carrying
- Slips, trips and falls
- Being struck by a moving, flying or falling object



Other categories of accidents include

- Coming into contact with moving machinery
- Coming into contact with harmful substances, such as chemicals
- Making contact with electricity
- Being injured by an animal
- Becoming trapped
- Various effects of fire, such as heat and smoke
- Explosion
- Drowning and asphyxiation

Occupational illnesses – those linked to work activities or the workplace – include diseases and conditions, such as

- Stress, depression and anxiety
- Musculoskeletal disorders
- Breathing and lung illnesses, e.g. asthma
- Skin diseases, e.g. dermatitis
- Hearing damage
- Vibration injuries

The cost of accidents and illness

Accidents and illness cause a great deal of personal pain and suffering for individuals, as well as worry and financial difficulty for families.

Employers have to provide temporary cover during staff absence and can lose money as a result of disrupted business activities.

The indirect costs caused by the loss of customers and business opportunities, especially for the self-employed or small business proprietor, can also lead to hardship.

Accidents and ill health can also be expensive for society as a whole.

While there are certainly some direct costs involved in developing good health and safety standards at work, e.g. providing training and new equipment, there are huge potential long-term savings that can benefit individuals, families, companies and society as a whole.

Results of poor health and safety standards

- Accidents, illness and stress
- Deaths
- Increased sick leave
- Loss of production
- Loss of earnings and increased personal costs
- Bad publicity, resulting in a loss of reputation



- Lowered staff performance and morale
- Reduce company performance
- High staff turnover
- Prosecution, fines and imprisonment
- Prohibition and closure
- Compensation claims
- Increased insurance costs
- Legal costs
- Treatment costs – first aid etc
- Costs to health service and society as a whole

Benefits of good health and safety standards

- Healthy, happy and motivated work teams
- A safer working environment
- Fewer accidents
- Reduction in sick leave
- A good reputation
- Increased performance and profitability
- Orderly working environment and procedures
- Confidence in health and safety standards
- Increased job security
- Lower insurance premiums
- Less chance of civil actions and compensation claims
- Less chance of prosecutions

Health and safety at work

Most people spend a significant part of their lives at work and do not expect their health to be damaged through work related illness, disease or injury. Health and safety measures are concerned with controlling and reducing risks to the health and safety of anyone who might be affected by work activities.

Influences on health and safety

- **Occupational factors** – people may be at risk from certain illnesses or injuries because of the work they do.
- **Environmental factors** – the conditions in which people work may cause problems
- **Human factors** – poor behavior and attitudes can contribute to accidents, including error, carelessness, poor concentration, haste and ignorance of correct procedures



Achieving high standards

There will always be risks in the workplace, but they can be controlled by high standards of health and safety, such as

- An effective management system and health and safety policy that sets the standards and keeps work activities under control
- Good communication amongst everyone in the workplace and with other people that the business deals with
- Positive attitudes towards health and safety, with everyone being involved and taking it seriously
- An effective risk assessment strategy aimed at reducing the likelihood of accidents and ill health
- Buildings and equipment designed with health and safety in mind
- Carrying out safe working practices
- Good standards of cleaning and maintenance
- Well informed and trained managers and staff
- An efficient reporting system for accidents, ill health and safety defects
- Careful monitoring and the undertaking of remedial action to improve any deficiencies – a commitment to continual improvement in the workplace

Question and Answers

1. How many accidents take place every year?

2. Common causes of accidents include?

3. Various illnesses and diseases can be work related, list three?

4. Name the three categories of workplace incidents?

5. Apart from causing pain and discomfort to people, what other burden does accidents and illnesses result in?



Module 2: Health and safety law

Most countries have developed legislation to protect the health and safety of people at work. Employers must take reasonable care to protect employees from the risks of injury, disease or death, while employees must take care to protect themselves and others who may be affected by their activities whilst at work.

It is the responsibility of the employers, the self-employed and those with specific responsibilities for health and safety to ensure that they are familiar with all the relevant legal obligations affecting their workplace. They must also ensure that they are sufficiently informed, trained and qualified to make decisions aimed at achieving appropriate health and safety standards. This may involve obtaining specialist advice and help.

Some aspects of health and safety might be covered by more than one branch of the country's legal system. In some cases, it is also possible for claims to be made through civil courts for financial compensation for harm, injury or damage.

Subjects covered by specific legislation

- Workplaces
- Safety signs
- Electricity
- Fire
- Working at height
- Highly flammable liquids
- Display screen equipment
- Manual handling
- Hazardous substances
- Noise
- Personal protective equipment
- First aid
- Reporting of injuries, diseases and dangerous occurrences
- Consultation with employees
- Health and safety management

Work related legislation

Legislation covers a wide range of health and safety issues.

- Particular types of workplace, such as factories and construction sites
- A specific topic affecting a variety of workplaces and work activities
- General issues that affect every workplace, such as the management of health and safety



Legal responsibilities

Employers, employees and other groups have specific legal responsibilities for health and safety at work. These duties are covered by the OHS Act. These give legal responsibilities to:

- Employers
- Employees
- The self employed
- Designers, manufacturers and suppliers
- People in control of work premises

OHS (Occupational Health and Safety Act)

The O.H.S. ACT 85 of 1993 (Occupational Health and Safety) requires the employer to bring about and maintain, as far as reasonable practicable, a workplace that is safe and without risk to the health of the workers.

This means the employer must look into the following:

That the workplace is free of hazardous substances, such as benzene, chlorine, and microorganisms, articles, equipment, processes, etc. that may cause injury, damage or disease. Where this is not possible, the employer must inform workers of these dangers, and how to work safely, and provide personal protective equipment for a safe workplace.

However, it is not the sole responsibility of the employer to adhere to the O.H.S. ACT. The workers also have responsibilities that they must adhere to, regarding certain regulations within this legislation.

In short this means that the worker and the employer share responsibility regarding Health and Safety in the workplace.

Objectives of the Act

The purpose of the Act is to provide for Health and Safety of persons at work or in connection with the use of plant and machinery. . It further provides for the protection of persons other than persons at work from hazards arising out of or in connection with the activities at work.

The Occupational Health and Safety Act

Supports every worker's right to a safe and healthy workplace. The duty for creating and maintaining a healthy and safe workplace falls on every person in the workplace; to the degree they have the authority and ability to do so. Whether they are the Chief Executive Officer or the newest worker hired, everyone has a personal and shared responsibility for working together co-operatively to prevent occupational injuries and illnesses.

The Act and Regulations

The Act known as the Occupation Health and Safety Act (Act 85 of 1993) consists of 50 sections approved by parliament. The purpose of the Act is to provide for Health and Safety of persons at work or in connection with the use of plant and machinery. It also provides for the protection of persons other than persons at work from hazards arising out of or in connection with the activities at work. The Minister of Labour incorporates various regulations, on specific topics, into the Act from time to time. The Act or regulations can be purchased from the Government printer in Gazette form or bound form from various publishers.



Duties of the Employer: Section 8

The Employer must provide and maintain all the equipment that is necessary to do the work, and all the systems according to which work must be done, in a condition that will not affect the Health and Safety of workers.

Before personal protective equipment may be used, the employer must first try to reduce any danger that may affect the Health and Safety of his workers. Only when this is not practical, should he resort to personal protective equipment.

The employer must take measures to protect his or her workers' Health and Safety against hazards that may result from the production, processing, use, handling, storage or transporting of articles or substances, in other words, anything that workers may come into contact with at work.

To ensure that these duties are complied with, the employer must do the following

Identify potential hazards, which may be present while work is carried out, something is being produced, processed, used, stored or transported, and any equipment is being used.

Establish the precautionary measures that are necessary to protect his or her workers against the identified hazards and provide the means to improve the means to implement these precautionary measures.

Provide the necessary information, instructions, training and supervision while keeping the extent of workers' competence in mind. In other words, what they may do and may not do.

Not permit anyone to carry on with any task unless the necessary precautionary measures have been taken. Take steps to ensure that every person under his or her control complies with the requirement of the Act. Enforce the necessary control measures in the interest of health and safety.

See to it that the work being done and the equipment used, is under general supervision of a worker who has been trained to understand the hazards associated with the work. Such a worker must ensure that the precautionary measures are implemented and maintained.

Articles

Manufacturers, Designers, importers, Sellers and Suppliers must ensure that the following is adhered to regarding Articles:

- Their articles are safe and without risk to health and comply with all prescribed requirements.
- When a structure or an article is installed on any premises, it must be done in such a way that neither an unsafe situation nor a health risk is created.

Substances

Manufacturers, Designers, importers, Sellers and Suppliers must ensure that the following is adhered to regarding substances:

- Such substances are safe and without risk to the Health of persons when properly used.



- Information is available on the following:
- Use of the substance at work
- Health and Safety risk associated with the substance
- Conditions that is necessary to ensure that the substance will be safe and without risk to health when properly used.
- Procedures in case of an accident are in place.

If a person to whom an article or substance has been sold or supplied, undertakes in writing to take specified steps to ensure that the article or substance will meet all the prescribed requirements, and will be safe and without risk to health, the duties of the importer, designer, seller, supplier or manufacturer will subsequently shift to the person who undertakes to take such steps.

Key Notes

Summary:

Employers must ensure that the health, safety and welfare of employees are protected, so far as is reasonable practicable. In particular, employers must:

- *Provide and maintain equipment and work systems that are safe and healthy*
- *Deal with substances, such as chemicals, safely*
- *Provide information, instruction, training and supervision*
- *Maintain safe and healthy workplaces with the necessary facilities*
- *Provide a health and safety policy statement when employing five or more people*

They must also ensure that workplaces and work activities do not put visitors, members of the public and other at unnecessary risk.



Duty to inform employees: Section 13

The Employer must see to it that every worker is informed and clearly understands the Health and Safety hazards in the workplace or any work he or she are to do, anything being produced, processed, used, stored, handled or transported, and any equipment or machinery being used. The Employer must then provide information about precautionary measures against these hazards.

The Employer must inform Health and Safety Representatives when an inspector notifies him or her of inspections and investigations to be conducted at the premises. The Employer must also inform Health and Safety Representatives of any application for exemption made, or of any exemption granted to him or her in terms of the Act. Exemption means being exempted from certain provisions of the Act, regulations, notices or instructions issued under the Act.

The Employer must, as soon as possible, inform the Health and Safety representatives of the occurrence of an incident in the workplace. An incident is an event that occurs in the workplace where a person is killed injured or becomes ill. It is also the spillage of hazardous chemical substance, for example, where a tank leaks formaldehyde (a chemical product used in industry) due to a faulty valve, or where machinery runs out of control, without killing or injuring anyone.

Duties of the employee: Section 14

It is the duty of every worker in the workplace to ensure that he or she complies with the following:

Take care of his or her own health and safety, as well as that of fellow workers in the workplace, who may be affected by his/her actions or negligence to act. This includes playing at work. Many people have been injured and even killed due to horseplay in the workplace, and that is considered a serious contravention.

- Where the Act imposes a duty or requirements on the worker, to cooperate with the employer.
- Give information to an inspector from the Department of Labour if he or she should require it.
- Carry out any lawful instruction which the employer or authorized person prescribes with regard to

Health and Safety.

- Comply with the rules and procedures that the employer gives him or her.
- Wear the prescribed safety clothing or the prescribed safety equipment where required.
- Report unsafe or unhealthy conditions to the employer or Health and Safety Representative as soon as possible
- If he or she is involved in an accident or incident that may influence his or her health, report it to the employer or authorized person or the Health and Safety Representative as soon as possible, but not later than the end of his or her shift.

The rights of the worker

- The Occupational Health and Safety Act have extended workers' rights that include the following:
- The right to information
- The right to participate in inspections
- The right to comment on legislation and make representations



- The right not to be victimized
- The right to appeal

The right to information

The worker must have access to:

- The occupational Health and Safety Act and Regulations.
- Health and Safety rules and Procedures of the workplace.
- Health and Safety standards of the workplace that must be kept by the employer. The worker may request the employer to inform him or her regarding the following:
 - Health and Safety hazards in the workplace.
 - The precautionary measures, which must be taken.
 - The procedure that must be followed if a worker is exposed to substances hazardous to health.

The worker may request that his or her private medical practitioner investigate his or her medical and exposure records. If the worker is a Health and Safety Representative, he or she may investigate and comment in writing on exposure assessments and monitoring reports

The right to comment on legislation and make representations

The worker may comment or make representations on any regulation or safety standard published under the Occupational Health and Safety Act.

The Right Not To Be Victimized

An employer may not dismiss a worker from his service, reduce a worker's salary or reduce a worker's service conditions because:

The worker supplied information, which is required of him or her in terms of the Act, to someone who is charged with the administration of the Occupational Health and Safety Act the worker complied with a lawful notice, (e.g. a prohibition, contravention notice, etc.)

- The worker did something in terms of the Act that should have been done.
- The worker did not do something in terms of the Act that is prohibited.
- The workers have given evidence before the Labour Court or a court of law on matters regarding Health and Safety.

The right to appeal

The worker may appeal against the decision of an inspector. Appeals must be referred in writing to

The Chief Inspector Occupational Health and Safety Department of Labour
Private Bag X117
Pretoria, 0001



Duty not to interfere with or misuse of objects

No one may interfere with or misuse any object that has been provided in the interest of health and safety. A person may, for example not remove a safety guard from a machine and use the machine or allow anybody else to use it without such a guard.

1. Take care of him and others who may be affected by his acts or omissions
2. Co-operate with his employer apply Act
3. Carry out lawful orders; obey H&S rules and procedures
4. Reports unsafe unhealthy situations
5. Report any incident ASAP

Key Notes

Summary:

Employees also have legal responsibilities. They must

- *Take care of their own health and safety at work*
- *Take care of the health and safety of others*
- *Co-operate with their employer*
- *Report dangerous situations to their supervisor or employer*
- *Not misuse or interfere with anything provided for health and safety purposes*
- *Ensure that duties of the employer is discharged*
- *May assign duties - but still stays responsible and liable*

POWERS OF DELEGATION

OHS Act Sect 16. Chief Executive Officer Charged With Certain Duties

Rights, Powers, Functions & Duties

As far as inspections are concerned, representatives may:

1. Inspect the workplace after notifying the employer of the inspection
2. Participate in discussions with inspectors at the workplace and accompany inspectors on inspections
3. Inspect documents
4. With the consent of his/her employer be accompanied by a technical advisor during an inspection.

What do Health and Safety Committees do?

The committees only deal with Health and Safety matters in the workplace or sections thereof, for which such committees have been established.



Generally, Health and Safety committees have the following functions

- **Make recommendations:** A committee must make recommendations about the Health and Safety of workers to the employer. Where these recommendations do not lead to solving the matter, the committee may make recommendation to an inspector.
- **Discuss Incidents:** A committee must discuss any incident that leads to the injury, illness, or death of any worker and may report about it in writing to an inspector.
- **Record Keeping:** A committee must keep record of every recommendation to the employer and every report to an inspector.

Contractors, visitors & the public

Everybody in the workplace must be made aware of the potential hazards that exist. This is why you will find notices of wet floors in supermarkets, etc. When a member of the public, a contractor or a visitor goes into an area that is unsafe, they must also wear protective clothing. The hazards or unsafe conditions must also be explained to them, so that they can make a choice whether to enter the area or not.

Other Relevant Legislation Includes:

- Road Traffic Act 93, 1996.
- Mine Health and Safety Act 29, 1996.
- Compensation for Occupational Injuries and Diseases Act 130, 1993. (COIDA)
- Environmental Conservation Act 73, 1989.
- Water Act 54, 1956 and Water Amendment Act 1993.
- Smoking Act 12, 1999.
- National Environmental Management Act 107, 1998.
- Atmospheric Pollution Prevention Act 45, 1965.

Department of Labour

Chief directorate of Occupational Health and Safety

The Chief Directorate of Occupational Health and Safety of the Department of Labour administrates the occupational Health and Safety Act.

In order to ensure the Health and Safety of workers, provincial offices have been established in all the provinces. To this end, occupational Health and Safety inspectors from these provincial offices carry out inspections and investigations in the workplaces.

Inspections

Inspections are usually planned on the basis of accident statistics, the presence of hazardous substances, such as the use of benzene in laundries, or the use of dangerous machinery in the workplace. Unplanned inspections, on the other hand, usually arise from requests or complaints by workers, employers or members of the public. These complaints or requests are treated confidentially. Powers of inspectors



If an Inspector finds dangerous or adverse conditions at the workplace, he or she may set requirements to the employer in the following ways:

- Prohibition notice
- Contravention notice
- Improvement notice
- Other powers

Prohibition notice

In the case of threatening danger an inspector may prohibit a particular action, process, or the use of a machine or equipment, by means of a prohibition notice. No person may disregard the contents of such a notice and compliance must take place with immediate effect.

Contravention notice

If a provision of a regulation is contravened, the inspector may serve a contravention notice on the workers or the employer. A contravention of the Act can result in immediate prosecution, but in the case of a contravention of a regulation, the employer may be given the opportunity to correct the contravention within a limit specified in the notice, which is usually 60 days.

Improvement notice

Where the Health and Safety measures which the employer has instituted do not satisfactorily protect the Health and Safety of the workers, the inspector may require the employer to bring about more effective measures. An improvement notice, which prescribes the corrective measures, is then served on the employer.

Other Powers

To enable the inspector to carry out his or her duties, he or she may enter any workplace or premises where machinery or hazardous substances are being used and question or serve a summons on persons to appear before him or her. The inspector may request that any documents be submitted to him or her, investigate and make copies of the documents, and demand an explanation about any entries in such documents. The inspector may also inspect any condition or article and take samples of it, and seize any article that may serve as evidence.

Note: The above-mentioned powers of inspectors are not absolute. Any person, who disagrees with any decision taken by the inspector, may appeal against that decision in writing to the Chief Inspector Occupational Health and Safety at Department of Labour.



Questions and Answers

1. Who is the responsible to ensure they are familiar with all the relevant legal obligations affecting their workplace.

2. The inspector is entitled to?

3. Who has specific legal responsibilities at work?



4. What must employees at work ensure?

5. What are the rights, powers, duties and functions of the health and safety representative?

Module 3: Review of Health and Safety Measures

The review of H&S measures can be done by means of:

- a. Inspections
- b. Interviews with individuals or a group of people
- c. Informal inspections
- d. Formal inspections
- e. Incident assessments
- f. Internal audits
- g. External auditors

Identification of potential hazards and major incidents

The identification of potential hazards and potential major incidents is steps taken to determine risk from exposure to a hazard at the workplace, in order to identify the steps needed to be taken to remove, reduce, and control such a hazard. This will include the anticipation, recognition, evaluation and control of such hazards in the workplace.

Before potential hazards can be identified, it is important to understand the terminology **Hazard** and **Risk** correctly.

Hazard

“Hazard” means a source of or exposure to danger (OHS Act)

Types of Hazards

1. **People:** the irresponsible actions people take i.e. taking shortcuts when tasks are being performed, not using PPE although PPE is available and training on the correct use of it has been done.
2. **Occupational Environment (Micro environment):** the factors workers are exposed to in the work place.
3. **Natural Environment (Macro Environment):** pollution, temperature extremes.
4. **Materials:** the materials employees work with which can injure them and can cause employees to fall ill
5. **Equipment:** electricity, rotating parts, speed of operation, failure of equipment
6. **Process:** the processes followed to perform a task
7. **Plant / Facilities:** the buildings, facilities and other installations in and around the workplace that makes the enterprise work.

Risk

“Risk” means the probability that injury or damage will occur (OHS Act)

It also indicates the presence of uncertainty of an event and the severity of the event.



Types of Risk

- a. Struck against
- b. Struck by
- c. Fall to below
- d. Fall on same level
- e. Caught in
- f. Caught between
- g. Contact with:
- i. Electricity
- j. Heat
- j. Cold
- k. Radiation
- l. Caustics
- m. Noise
- n. Toxic or noxious substances

Module 4: Health

Some dangers, such as trapping a hand in moving machinery, are easy to spot, but many health problems develop gradually.

Staff may breathe in dangerous substances that eventually cause respiratory problems or they may strain their arms or back from working at a badly-arranged workstation.

As many occupational health problems are irreversible, it is important to consider the possibility of health hazards in order to prevent them from causing illness and disease.

Health hazards

There are various types of health hazards:

- **Chemical** – such as harmful powders and liquids
- **Biological** – such as infectious diseases
- **Physical** – such as noise, heat and radiation
- **Ergonomic** – such as badly-designed tasks, areas and equipment

Health effects

The effects of occupational health hazards may be:

Acute – occurring shortly after exposure to a hazard

Chronic – occurring after a long period of exposure or repeated exposure.

Harmful effects can include:

- Skin diseases – dermatitis
- Respiratory diseases – silicosis
- Suffocation – carbon monoxide poisoning
- Cancer – to with carcinogens such as asbestos
- Disorders of the central nervous system
- Damage to body organs
- Blood poisoning
- Birth defects – as a result of certain substances that damage human genes
- Heat stroke – working in high temperature environments
- Work related upper limb disorders – through repetitive movements
- Work related stress

The human body has many defenses to prevent the entry of harmful substances. These include the skin, airways and gut.

There are also defense mechanisms to expel harmful substances such as:

- Coughing
- Sneezing
- Diarrhea and vomiting



Tears and mucous trap particles and wash them away.

Nonetheless, highly toxic substances, or high, long or repeated exposure may cause illness and disease.

There are a number of ways in which hazardous substances can enter the body:

- **Absorption** – where a hazardous substance gets into contact with the skin and is absorbed into the body and the bloodstream
- **Ingestion** – through swallowing a hazardous substance or splashed into the mouth
- **Inhalation** – through breathing in a hazardous substance such as toxic fumes
- **Injection** – where a sharp object, such as a needle cuts or punctures the skin

Preventing ill health in the work place hazards

Health hazards must be identified whether they are within the workplace or associated with work activities. If possible, hazards should be avoided altogether. Where this is not reasonably practicable, managers must measure the extent of the hazard and risks. This may involve complex techniques and comparisons. In certain cases government set levels must not be exceeded.

Appropriately qualified and experienced professionals may need to be consulted for advice, such as an ergonomist or occupational hygienist.

It is important to identify occupational health hazards and to prevent them whenever possible. Good practice involves:

- Identifying and avoiding health hazards
- Measuring and assessing the hazards and risks
- Applying control measures, such as good design, safe working procedures and/or the use of personal protective equipment/clothing
- Regular reviews to check for changes

Control Measures

If the hazard cannot be avoided, control measures must be put in place to minimize the likelihood of harmful effects and their consequences. Some types of control measures are more effective than others.

The list below shows various types of control measures. They are listed in order of priority and are sometimes referred to as the 'hierarchy of controls'.

- **Elimination** – can the hazard be eliminated?

If not then:

- **Substitution** – providing a safer alternative
- **Isolation** – moving a process to another area
- **Enclosure** – physically separating a process
- **Local ventilation** – removing the hazard directly from the process
- **General ventilation** – using normal room ventilation to reduce the hazard



- **Good housekeeping** – reducing risks from spills, dust and debris
- **Exposure time reduction** – reducing the time that people spend in contact with the hazard
- **Training** – to help individuals to reduce risks
- **Personal protective equipment/clothing** – to protect people on an individual basis
- **Welfare facilities** – to assist in minimizing the risk, such as washing facilities

Health surveillance and medical testing may also be necessary to detect early signs of ill health and to identify anyone who is particularly susceptible to a hazard and may need special consideration.

Surveillance and testing can help to indicate the effectiveness of the control measures but should not be relied upon as proper safety controls because they can only detect and not prevent ill health.

First aid and emergency facilities must also be provided. Again, these should not be relied upon as safety controls, although early treatment of symptoms will help to reduce harmful effects.

Staff should be given training in work-based hazards and risks and in the measures necessary to protect themselves and others. They also need to know about the possible harmful effects of their activities and to understand that they must report the first symptoms immediately.

Other management practices, such as regular inspections, supervision, good communication, maintenance and the identification of changes in the workplace or work tasks, measures continue to reduce hazards and risks to an acceptable level.

Questions and answers

1. Health hazards can be?

2. Health hazards may cause a variety of effects, including



3. Substances can enter the body by

4. To prevent ill health caused by workplace hazards it is important to"

5. Control measures must be applied where health hazards cannot be avoided. If the hazard cannot be eliminated, then other measures must be considered, such as

6. Health surveillance can be used to

Module 5: Accident prevention

An accident is an unplanned, uncontrolled event which may cause major or minor injury, disease, illness, death, damage or other loss, such as delays incurring overtime costs. Safety is about not having accidents and reducing the risk of accidents and injury by putting in place appropriate control measures.

There are always reasons why accidents occur; they do not just 'happen'. It is therefore, essential to:

- Examine the workplace and all its activities to assess what could go wrong
- Select safety controls to prevent accidents from happening
- Examine what has caused accidents in the past and why
- Implement health and safety measures and check them regularly to ensure that they remain effective'

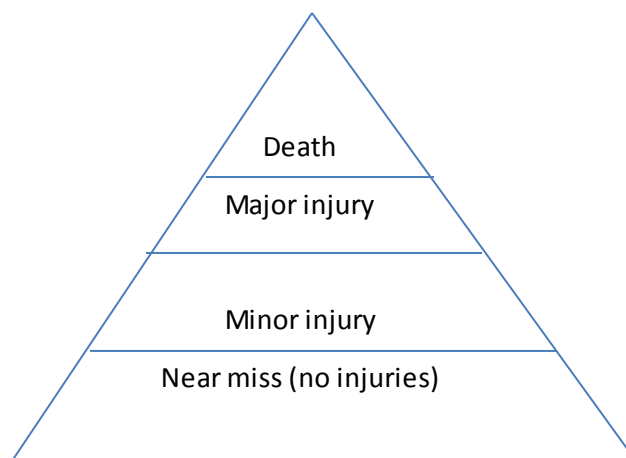
A structured way to prevent accidents is called 'risk assessment'.

- Identifying what can harm people and how
- Assessing the existing control measures
- Seeing if there is anything more that can be done to reduce the risk of harm

Accidents where people escape injury are commonly called 'near-misses'. These should also be investigated to help develop measures that will prevent future injuries.

Accident Statistics

This can be viewed as a triangle. The accident triangle shows the relative number of outcomes of accidents at work – from the rare accidents resulting in death to the most common incidents, or near misses, resulting in no injury. It is important to recognize that some of the situations that lead to incidents without injury could also lead to an accident with injury.



Causes of accidents

The following examples show how accidents can be caused:

1. A butcher cuts off his finger when cutting meat with a band saw

Possible causes - butcher

- Selected the wrong type of equipment for the product
- Used an unguarded or badly guarded band saw
- Was using an unsafe working practice
- Had not been properly trained
- Was in a hurry because the shop was short staffed and a number of customers were waiting

2. A customer falls down the cellar steps of a pub, causing neck and spinal injuries

Possible causes -

- The pub was badly designed, with the cellar opening off the main passageway next to the toilet door.
- The manager had forgotten to lock the cellar door
- The customer had been drinking in the pub for three hours
- The customer mistook the cellar door for the door to the toilet because there was no sign
- There was no handrail and the steps were steep

3. An employee's hand is trapped in a machine with hot parts, causing severe burning and crushing injuries

Possible causes – the employee

- Had removed the guards, Allowing access to the dangerous parts
- Was wearing loose clothing
- Was chatting to his work mates

Factors contributing to accidents

Many situations and actions can cause accidents, and a combination of several factors often leads to accidents that end in serious injury.

Factors that contribute to accidents at work include:

- Poor design and structure of buildings
- Poorly designed, selected, constructed, guarded or maintained equipment
- Bad housekeeping standards, such as blocked gangways and spilled liquids
- Poor lighting or ventilation
- Lack of information, instruction, training and supervision



- Dangerous working practices
- Distractions and lack of attention
- Playing games or practical jokes
- The use of alcohol or drugs, or both
- Working while ill or tired
- No or poor supervision
- Working too quickly
- Ignoring rules
- Wearing unsuitable clothing
- Not wearing the correct personal protective equipment

Accident reporting

Employers need to know that accidents have occurred so that they can prevent them from happening again. All accidents, including near-misses, and all health problems must be reported to supervisors or managers immediately by following the reporting procedure in the organization.

The management should then investigate the accident or circumstances to discover the cause, and set up appropriate controls to prevent health or safety problems from recurring.

All the important points about the accident, near-miss or instance of all ill health must be noted in an accident book. The information is needed for the investigation and also provides a written record.

Some accidents must be reported to the enforcement authorities. They include accidents that result in:

- Death
- Any type of injury, dangerous occurrence or disease that is specified by law
- On injury resulting in absence from work for more than three days
- A member of the public needing to go to hospital immediately

Employers, the self-employed and others with the responsibility for reporting incidents should familiarize themselves with the relevant reporting requirements.

Co-operation and communication

The management of health and safety standards and the behavior of everyone in a company both play crucial parts in preventing accidents and ill health. It is important that managers make health and safety one of their priorities and take the lead on establishing good practices.



However, high standards cannot be achieved unless everyone in an organization takes health and safety seriously. Everyone at work must, therefore, follow health and safety instructions and training and report any defects or problems. In this way, employees are then reliant on each other for their safety and wellbeing.

Some staff, such as safety representatives are given additional safety responsibilities. Good communication between staff and management is essential and there are legal requirements for consultation and safety committees. Managers should consult staff during risk assessments and when plans are made for changes, such as re-designing the workplace.

Organizations with good health and safety records often use a variety of techniques to involve staff in health and safety issues. These include formal communications through a safety committee and informal day-to-day discussions.

Questions and Answers

1. What incidents at work need to be reported to the employer or person in charge?

2. Why do accidents, near misses and work related health problems need to be investigated?

3. Why are incidents in the workplace recorded?

4. Which accidents need to be reported to the enforcement authorities?

5. What measures help to prevent accidents and ill health?



Module 6: Safety – trips, slips and falls

Everyone is exposed to the risk of tripping, slipping and falling regardless of where they work. Trips, slips and falls account for over a third of all reported accidents at work and are the number one cause of major classified accidents to workers. Trips, slips and falls are a risk to the public, causing 50% of all accidents

Causes of trips, slips and falls

- Wet floors
- Stairs that are damaged (tread and nosing)
- Obstructions and things left lying around on the floor
- Trailing cables and wires
- Worn carpets, rugs and mats placed in the wrong place
- Floor surfaces that are holed, cracked, uneven or damaged in some other way
- Poor lighting
- Wearing the wrong type of footwear
- People's behavior (running instead of walking)
- Carrying too many items (obstructing the view ahead)
- Using chairs instead of stepladders or proper foot stools

Control measures

Slips are very difficult to control in certain environments, such as in swimming pools and kitchens where – for hygiene reasons – floors need to be kept quite smooth and may become slippery. Equipment is also available that can measure how slippery a surface is by measuring its 'roughness'.

Measures to prevent trips, slips and falls

- Maintaining floors and floor surfaces in good condition
- Keeping floors free from obstruction through good housekeeping
- Covering or re-routing cables and wiring
- Maintaining the premises and equipment to prevent leaks of water and fluids
- Mopping up spillages as soon as they are spotted
- Putting up warning notices and signs
- Good lighting and having adequate space to do jobs
- Wearing the correct footwear, including anti-slip soles for some workplaces
- Putting in place rules to follow for workers and the public, such as no running (always seen in swimming pools) and reporting of any slip or trip hazards they might spot While ensuring that floor surfaces and all environmental factors are as good as possible to prevent trips, slips and falls, much is down to human behavior. If there are certain rules in place, such as no running or to wear a certain type of slip-resistant footwear, the advice **MUST** be followed. Otherwise, you may be prosecuted or disciplined by your employer; worse still, you may have an accident.



Questions and Answers

1. What is a major risk in the workplace and may cause accidents

2. How do you reduce these risks?

3. Floors and stairs need to be kept in

4. _____ needs to be worn and in
certain areas will include _____



Module 7: Electricity

Electricity can cause electric shock, burns, fires and death. The fatality rate from injuries caused by electricity is high. It is, therefore essential that electrical systems and equipment are designed, constructed, selected, maintained and used with care. Electricity is used in virtually every workplace and even our safety stems involved the use of electricity so everyone must use electricity in the safest possible way.

Reducing electricity risks

It may be possible to remove an electrical hazard by using a manual tool. If it is not feasible to avoid the hazard or substitute equipment, it is important to find appropriate controls to improve electrical safety.

- **Insulation** – to protect people against direct contact with electricity
- **Earthing** – to provide a connection to earth, so protecting against contact with electricity
- **Fuses** – protective strips of metal that melt and break if overheating occurs, stopping the supply of electricity and prevent overheating and fire
- **Circuit breakers** – to detect excess flow of electrical current and stop the electricity supply to the circuit, proved that they are of the correct type of rating
- **Residual current circuit breakers** – to protect against electric shock
- **Voltage reduction** – so that the lowest possible voltage is used

All cables, plugs and sockets must be suitable for their use

If you are involved in selecting and purchasing electrical equipment, you should consider the following points.

- Whether the design and construction suits the purpose required, especially the likely degree of wear and tear
- Whether the item is designed to suit the environment in which it will be used, e.g. specialized equipment is needed in wet and explosive conditions
- Whether it complies with legal requirements
- Possible additional risks from second-hand equipment
- The need to avoid adapters and trailing cables when the item is installed or in use
- Use competent, suitably qualified electricians or electrical engineers to maintain, install and regularly check equipment
- Equipment and systems that use electricity must be tested regularly and maintained thoroughly by competent personnel.

Using electrical equipment

Organizations should establish safe working procedures, which should always be followed. Employers should ensure that employees receive full information, training and instructions on using electrical equipment safely and that they are supervised appropriately.



Always ensure the power supply is turned off when;

- Equipment is not in use
- Before opening, dismantling, maintain or cleaning equipment
- When a fault, such as overheating, is evident or suspected
- Before inserting a plug into a socket or removing it

As water conducts electricity, you must ensure that you never

- Use electricity equipment in wet conditions (unless it is specifically designed for that purpose)
- Touch electrical equipment, switches, plugs or other electric items with wet hands

Reporting defects

Everyone who uses electrical equipment or works in an area where electricity is used must look out for problems and report them immediately. Some signs of a problem include:

- Damaged sockets, plugs or cables
- Evidence of overheating, such as burning smells or blackened sockets
- Frequently blown fuses or electrical shocks

Qualified and experienced personnel must then examine the equipment and make any necessary repairs or improvements.

Dealing with an emergency

A person who has received an electric shock may not be breathing and the heart may have stopped pumping blood around the body. The skin may be burned or look pale or bluish and there may not be a pulse.

- Seek medical help. One person can ring for the emergency services while another assists the casualty
- Do not put yourself in the position where you can be electrocuted
- Switch the electrical current off before touching the casualty
- If you are a qualified and competent first aider, follow your training for dealing with electric shock.
- If you are not qualified, carry out any instructions given by the first aider and ensure that any other people in the vicinity do not put themselves in harm's way

Questions and answers

1. What are the possible risks to using electricity?



2. How would you improve the safety of electrical systems and equipment?

3. What are some of the general precautions when using electricity?

4. In the event of an emergency, _____

5. Employees have a legal duty to _____ and _____ with their employer



Module 8: Fire Prevention

Fire prevention is an important obligation for all businesses. Not only are people at work at risk from fire, but visitors, contractors, fire fighters, neighbours and anyone else in the vicinity may be affected.

Fire hazards and causes of fires

Key hazards associated with fire are:

- Flames and heat
- Smoke and toxic fumes
- Reduced oxygen
- Collapse of buildings

They may result in injury and death, possible with many fatalities.

Fires may be caused in a variety of ways:

- Sparks from electrical equipment
- Overheated equipment
- Hot surfaces, such as lighting and heating equipment
- Tools or equipment with a naked flame
- Hot liquids, such as fat in fryers
- Smoking
- Arson

Fire Prevention

In order for fire to burn it needs a combination three things; fuel, oxygen and heat also known as the 'fire triangle'

The emphasis must always be on preventing a fire from starting, rather than on putting it out. Fire risk assessments help employers to consider how to prevent fires.

Control of fuel

Material which could become fuel, either intentionally or by accident must be kept to a minimum; e.g. waste and rubbish should be removed regularly, the storage of flammable substances should be avoided or kept to the minimum and dusty atmospheres must be well ventilated.

Fuel must be kept well away and protected from sources of ignition; e.g. flammable substances must be kept in properly designed and selected fireproof stores or enclosures.

Sources of ignition should be kept away from fuels; e.g. smoking should be banned in paper stores and near stores of liquefied petroleum gas.



Control of oxygen

It is not possible to control the oxygen in the air, but fires can be put out by smothering them as this restricts the supply of oxygen that a fire needs to continue burning.

Control of heat

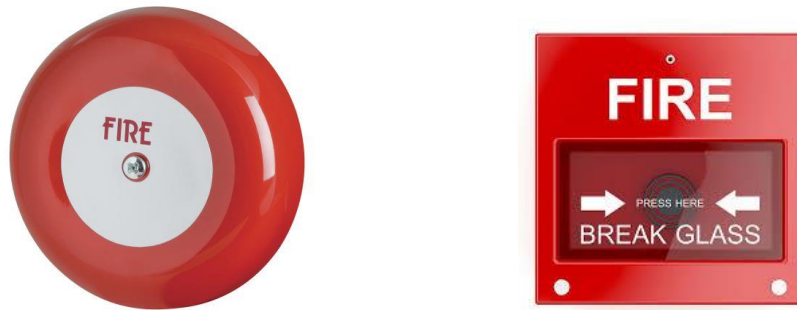
Excessive heat and naked flames may start fires. These may be produced by friction in machines, hot surfaces, smoking, gas cookers and open fires.

Detectors and Alarms

Detection systems are available, when linked to a warning device, give early warning of a fire. The systems may detect high temperatures, smoke, radiation or certain gases produced by a fire.

Manual or automatic fire alarms normally give the warning of danger by a loud sound, such as a ringing bell. Fire alarms must be checked regularly to ensure that they are working properly and everybody can hear them.

Employees and regular users of a building should be made familiar with the sound of the fire alarm and the alarm signal should be explained to other people on their arrival.



Evacuation routes and procedures

All buildings must have a safe exit in case of fires. Emergency exits enable people to get out of a building in the opposite direction from a fire. Escape routes in large buildings need to be planned carefully so that they do not become too complicated.

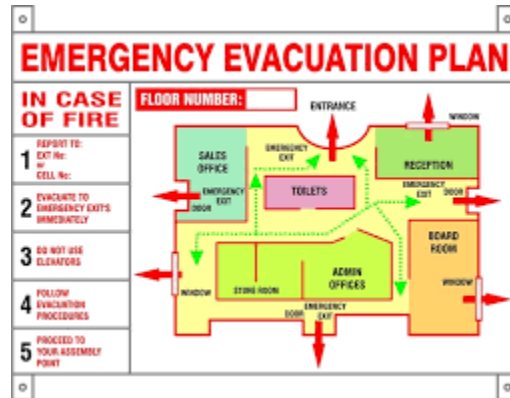
Additional fire safety measures need to be installed in some buildings to protect the escape routes. These may include fire doors, emergency exits and fire resisting fire staircases. Emergency exit doors must open outward to outdoors. They must not be locked unless strictly necessary. If they are locked, then there must be a safe emergency opening system that is labelled and explained.

There must be permanent signposting that clearly shows the way out in an emergency. Escape routes and fire doors must be kept clear at all times. Internal fire doors must be kept closed as they help to prevent the spread of fire and smoke from spreading and limit the air supply to the fire.

There should also be an emergency lighting system that is checked regularly and maintained. Lifts must not be used as part of an evacuation route or during a fire because of the risk of people becoming trapped.

Managers need to know who is in a building, so staff, visitors and others should be asked to sign in and out. A register should be taken after evacuation to ensure that everyone has escaped.

Once evacuated, everyone should remain at the designated assembly point until told by someone in authority, such as a fire officer or senior manager that it is safe to re-enter the building. Anyone who has to leave a building in an emergency should follow the instructions of the people in authority.



Training and information

Everyone who uses a workplace should be trained what to do in case of a fire, explosion or other emergency. Where it is not possible to train people, such as visitors and contractors, a safety briefing should be given on their arrival.

Notices should be displayed at strategic points to give guidance on what to do in case of fire. Notices should describe the sound of the fire alarm, what to do when it sounds, what action to take on discovering a fire and where to assemble after leaving the building. Directions and diagrams should be provided in buildings where people may be unfamiliar with the layout, while translations into other languages may also be appropriate in some buildings, such as hotels.

Some staff may be nominated as fire officers and give the responsibility for checking that everyone has been evacuated. They may be given extra training, such as firefighting. On some premises, all staff must be trained in firefighting because of the risk of fire or explosion.

Fire Drills

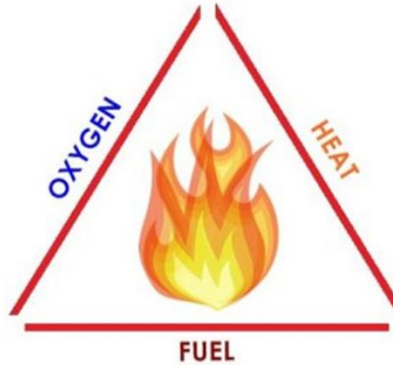
Regular fire drills should be carried out to check that the facilities and procedures are effective and that everyone understands what they should do. Remedial action must be taken if evacuation has been slow or incomplete.

Firefighting

It is more important to evacuate people from a building than to stop and fight a fire. However, there are occasions when simple fire-fighting techniques can eliminate a fire before it takes hold, such as when dealing with burning fat in a pan.

Fire-fighting techniques, which may be automatic or manual, eliminate one of the factors in the fire triangle, such as by;

- Starving the fire of fuel
- Restricting oxygen
- Cooling the heat



Sprinkler systems

These automatically detect and control a fire at an early stage. They need to be permanently connected to a water supply and must be properly designed and maintained.



Hose reels

These are normally provided for use by the fire brigade. They must be easily accessible and should not be tampered with. They need to be serviced on an annual basis.



Portable fire extinguishers

It is important that any fire extinguisher used is of the correct type. Extinguishers are colour coded and contain one of the number substances that can put out fires.

- Water – paper, wood and textile fires
- Foam – flammable liquids, paper and wood
- Powder – most other types of fire
- CO2 – electrical fires



When operated, pressure releases the substance that can be directed onto the fire.

It is dangerous to attempt to tackle a fire unless you have been trained how to use an extinguisher and have made sure that you can get out of the building.

Portable fire extinguishers should be fixed in suitable, accessible positions no more than 1.5m above the ground, usually by doors along exit routes and must be clearly indicated by specific safety signs. There should be enough of them for the type of premises and risk involved in the work activities. Extinguishers must be regularly check and maintained, they must be serviced every 6 months and pressure tested annually.

Question and answers

1. What are the systems that need to be maintained for fire prevention?

2. Detection, warning and evacuation systems, routes and procedures must be _____

3. After evacuation, _____

4. How is guidance in case of a fire displayed?

5. When would you attempt to tackle a fire?

Module 9: Welfare

Welfare is not just health and safety – it is about a person's wellbeing at work. Employers have to provide welfare facilities, such as toilets, washing facilities, drinking water and places to rest.

Welfare facilities

Every workplace must provide:

- An adequate number of toilets that are kept clean
- Washing facilities with hot and cold water, soap and hand-drying facilities
- A supply of drinking water
- Facilities for storing clothing and where necessary changing facilities
- Facilities for staff during work breaks – this may mean providing seating, separate eating areas and smoking areas
- Suitable rest facilities for pregnant women and nursing mothers

Smoking

Smoke in the atmosphere can be considered a form of air pollution. Research has linked passive smoking to lung cancer in non-smokers, irritation of the respiratory system and other harmful effects. It is, therefore, important that everyone at work should comply with company policies and restrictions on smoking; e.g. by using only designated areas for smoking. In some workplaces, smoking must be banned altogether because of the danger of fire or explosion, such as where flammable chemicals are used.

Stress

Stress creates the production of hormones in the body which have physical effects. A certain amount of stress may help us to perform tasks to the best of our abilities but excessive stress for long periods can cause tiredness, anxiety and various physical symptoms. Health problems that have been linked to stress include stomach and skin conditions, heart disease and depression

Various factors have been shown to increase stress levels, such as working in poor or cramped conditions, lack of communication with managers, overworking, concern about the risk of injury or illness and lack of job security.

Employers can help to reduce stress levels by considering the causes and taking appropriate action, such as redesigning a job, improving working conditions improving communication and providing support. Individuals may be able to help to decrease their stress levels by modifying their lifestyles and improving their fitness, while others may find relaxation techniques helpful.

Alcohol

Alcohol increases the time taken to react to a situation, affects behavior and reduces performance on jobs, such as driving or operating dangerous machinery.



Many employers have strict policies on alcohol and drugs, e.g. staff may be banned from drinking at work during breaks and before starting work. The policy may be supported by testing for alcohol with the employee's consent. It is important to remember that levels of alcohol in the body may still be high the morning after drinking the previous evening.

Excessive alcohol consumption is normally viewed on a condition that can be treated, with the cooperation, and employers may encourage people with a drinking problem to seek professional help. However, as a last resort, employers may have to take disciplinary action, possibly even dismissing someone, to protect the drinker and others whose safety may be at risk,

Drugs

Substance abuse, the use of illegal drugs or the misuse of prescription drugs may cause health problems and can cause safety risks in the workplace. Many drugs are particularly dangerous because they can change people's moods and perceptions. It is important to check that prescribed drugs will not affect performance at work. If there is an increased risk to safety, staff should tell their manager or supervisor. Suitable arrangements can then be taken to protect everyone's safety.

Employers must not ignore drug abuse but should take action to help the person involved and to protect others from safety hazards that could occur as a result of the abuse.

Violence

Verbal abuse, threats or assault can cause stress and anxiety as well as physical injury. Staff should always report violence, including verbal abuse, to their managers who should record and investigate the incident and, if necessary, report it to the relevant enforcement authority. As with other hazardous situations, employers and the self-employed should carry out risk assessments and put in place appropriate controls.

These could include measures such as improving the design of buildings to help create a more calming environment, giving staff training and information on how to deal with potentially difficult situations, re-designing jobs and reducing the handling of cash.

Harassment and bullying

The effects of bullying cause those who are bullied a huge amount of anxiety or distress, which can often be one of the causes for absenteeism from work and contribute to stress.

Employers need to have a policy in place to make it clear that harassment and bullying is unacceptable and is something that would lead to disciplinary action. Any policy will also make sure that there is a responsible person to go to if anyone is being harassed or bullied.



First aid provision

Risk assessments must be carried out to show the level of first aid provision needed. The minimum provision is a suitably stocked first aid kit and an 'appointed person'. Various factors affect the level of risk and the requirements for first aid, such as:

- Working with hazardous substances or dangerous equipment
- The number of people
- People with special needs or inexperienced workers
- Work in remote areas
- Lone of shift work
- Interaction with staff from another company or organization, or the presence of members of the public

In some workplaces and circumstances, it may be necessary to provide more than the required minimum. This could involve training additional first aiders or providing extra first aid kits, mobile telephones or a first aid room. It may be necessary to liaise with the emergency services.

Everyone at work must be made aware of first aid arrangements, e.g. instructions and notices.

Self-employed people must also make sure that adequate and suitable provision is made for first aid at work.

First aid kits

The contents of a first aid kit should be linked to the risks at the site. Additional items may be needed where there are specific hazards, e.g. eye washing facilities may be needed where certain chemicals are handled.

Medicines or tablets must never be kept in first aid kits because only qualified medical personnel are allowed to dispense them.

Minimum requirements of a first aid kit

- Wound cleaner / antiseptic (100ml)
- Swabs for cleaning wounds
- Cotton wool for padding (100g)
- Sterile gauze (minimum quantity 10)
- 1 pair of forceps (for splinters)
- 1 pair of scissors (minimum size 100mm)
- 1 set of safety pins
- 4 triangular bandages
- 4 roller bandages (75mm x 5m)
- 4 roller bandages (100mm x 5m)
- 1 roll of elastic adhesive (25mm x 3m)
- 1 Non-allergenic adhesive strip (25mm x 3m)
- 1 Packet of adhesive dressing strips (minimum quantity 10 assorted sizes)



- 4 First aid dressing (75mm x 100mm)
- 4 First aid dressings (150mm x 200mm)
- 2 Straight splints
- 2 Pairs large and 2 pairs medium disposable latex gloves
- 2 CPR mouth pieces or similar devices

Appointed persons and first aiders

An appointed person must be available whenever people are working. The responsibilities include looking after the first aid equipment, making sure it is always available, taking control when somebody is injured or ill and calling the emergency services if necessary. An appointer person does not have to be a trained first aider although basic training is recommended.

First aiders must be specially trained and certificated by organizations approved by the Health and Safety Executive. They should give treatment only in the techniques they have been trained to carry out; otherwise they could cause further injury. First aiders may need additional training where there are special workplace hazards.

The numbers of appointed persons and first aiders needed in a workplace depend on factors such as risk, layout and number of employees. It is recommended that provision should also cover non-employees, such as customers.

Question and Answers

1. Why are welfare facilities required in a workplace?

2. Why is it illegal to consume alcohol at work?

3. What arrangements need to be made for first aid?

4. An appointed first aid person must be _____



5. What illegal activities at work need to be reported?

Module 10: Risk Assessment

Risk assessment is a technique for preventing accidents and ill health by helping people to think about what could go wrong and ways to prevent problems.

Risk assessment is good practice and a legal requirement. It often enables organizations to reduce the costs associated with accidents and ill health and to help them to decide their priorities, highlight training needs and assist with quality assurance programmes.

Hazards and Risks

Hazard

A hazard is anything with the potential to cause harm. A range of hazards can be found in any workplace.

- Fire
- Electricity
- Harmful substances
- Sharp tools
- Noise
- Damaged flooring

Risks

A risk is the likelihood that a hazard will cause harm. Risk depends on a number of factors; e.g. the risk of tripping on a damaged floor surface will depend on:

- The extent of damage
- The number of people walking over it
- The number of times they walk over it
- Whether they are wearing sensible shoes
- The level of lighting

Control measures

Hazards in the workplace should be removed whenever possible. Using the example of the damaged floor, this would mean repairing the damage. Sometimes, however, there is no alternative but to keep a hazard. In such cases, it is important to reduce the risk, of an accident by introducing appropriate control measures. In the example about the floor, this could include placing a barrier around the damage or putting up warning signs.

Carrying out risk assessments

Everyone carries out informal risk assessments every day. For example, before crossing a road, we stop and look. We estimate the speed of the traffic and consider factors such as bad weather and poor visibility. On occasions, we may decide that it is too dangerous to cross at that place at that time and we may move to a pedestrian crossing where risks, such as traffic speed and visibility problems, may be reduced.



Formal risk assessments must be carried out in every workplace. The assessors are usually specially trained, competent managers and supervisors who are familiar with the task or issue being assessed and suitable safety controls. They must also be up-to-date with relevant legal requirements.

The assessment process involves analyzing tasks carefully to estimate the nature and level of hazards and risks. Staff is often asked to become involved in the process.

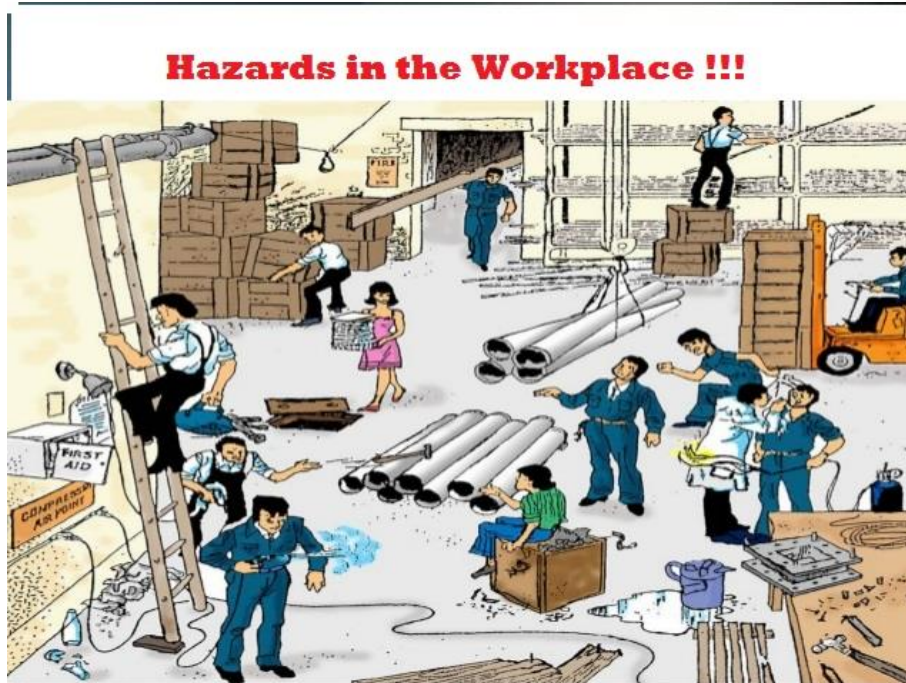
There are a number of stages to carrying out a risk assessment and the people involved need to find answers to the following questions.

- What are the hazards
- Who is at risk
- How big is the risk
- Can we introduce additional control measures
- What other action is needed



What are the hazards?

The workplace and activities must be carefully examined. Some hazards will be obvious, such as cables trailing across a gangway. Others may be hidden, such as access to dangerous parts of machinery during cleaning.



Who is at risk?

Everyone or only certain people in an area may be at risk. For example, a loud noise may affect everyone or only those working on a specific machine. Some groups of people may need special safety consideration as they may be more vulnerable to certain hazards, e.g. pregnant women may be particularly at risk when lifting heavy objects, while young people may not be aware of all the workplace hazards and the need to follow safe procedures. Specific risk assessments need to be carried out for young persons and for pregnant women.



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How big is the risk?

Three questions need to be asked?

1. What are the consequences of the injury or harm?

- The consequences could range from a scratch to a death
- The most severe hazards need the most urgent attention

2. What is the likelihood of injury or harm?

- Something very likely will need remedying before something that is unlikely

3. How many people are affected?

- Fire in a building could possible harm everyone, but a trailing cable in an office might only affect one or two people.

Can we introduce additional control measures?



Where a hazard or risk is not already adequately controlled, it may be possible to introduce extra measures.

Various types may be used, although it is always best to remove a hazard if this is possible. It would be better to repair a damaged floor surface, so removing a tripping hazard, than to leave the surface as it is and put up a warning sign.

It is not always possible to remove a hazard, but it may be possible to separate people from it. A guard can separate a machine operator from a sharp or hot piece of equipment. Sometimes it is possible to make a substitution; such as by replaced a dangerous chemical with a less hazardous one.

As a last resort, staff may be provided with personal protective equipment (PPE). It is important to remember that the hazard is not sufficiently controlled, even though people are protected.

All control measures must be checked on a regular basis to ensure that they are working effectively.



What other action is needed?

Information and training on all hazards and control measures must be provided. Records of the assessments should be kept.

Risk assessments must be reviewed from time to time to ensure that the control measures continue to be appropriate.

A review should always take place when changes are made, such as the introduction new equipment. Managers and staff who carry out assessments need full training in the technique and the legal requirements.

Questions and Answers

1. What is the difference between a hazard and a risk?

2. What is the aim of control measures?

3. Why are risk assessments important?

4. What are the benefits of a thorough risk assessment?

Module 11: The workplace

The workplace itself can create risks to people at work, as can the equipment and machinery used in them. There are numerous types of workplace, including offices, shops, factories, hotels, catering establishments, places of entertainment, hospitals and educational establishments.

Even though these premises vary, there are certain features and issues that need to be considered in every workplace to ensure the health, safety and welfare of the people who work there and anyone else affected by the work activities. While some people have specific responsibilities for buildings, everyone has a duty to keep the workplace in a safe condition.

Design, layout and space

A good design and effective layout are essential in every workplace and the design should take into account the likely hazards of the work activities.

There must be enough space for people to be able to do their jobs safely. Cramped conditions can result in accidents, particularly if people are working with sharp tools or chemicals, or if they are involved in other hazardous activities.

There should also be enough space for people and vehicles to move around easily. People must also be protected from other hazards, such as exhaust fumes and falling loads.

Appropriate safety precautions must be provided wherever there are hazardous areas, such as loading bays, pits, ladders, platforms and roofs. Wherever possible, they should be prevented by physical means, such as rails and guards.

Structure

Buildings must be solid, secure and constructed from materials that are appropriate to the work activities and their hazards, such as allowing for damp atmospheres, hazardous chemicals and the need for fire resistance. Fixtures and materials must be suitable and secure.

Floors

Floors must be strong enough for the purpose, with an even surface without holes and sudden changes in level. Anti-corrosion and non-slip finishes may be necessary in some workplaces.

Stairs, escalators and moving walkways

Staircases should be designed to enable safe use – not too steep or slippery and without any loose edges which could make someone trip. There should always be a handrail. Open staircases are best avoided or should at least be guarded.

Escalators and moving walkways must have various safety devices to ensure that they work safely. They should have at least one easily identifiable and accessible emergency stop control.

Stairs, escalators and moving walkways should be properly constructed and maintained.



Doors and windows

Various safety measures such as sight panels are needed for swing doors, while powered doors need safety devices to prevent crushing and trapping.

It must be easy to open and close windows and this must be possible without endangering other people; e.g. where a window opens onto a walkway. The design must also make it possible to clean the window safely.

Some areas of glass and other transparent materials need to be constructed of safety material or protected against breakage. They should be marked, such as with textured or coloured strips, if there is any risk of people walking into them.

Services

Heating and cooling

The temperature at work should not be too hot or cold. The precise temperature set depends on a number of factors, including the type of work being carried out, the level of physical activity undertaken and the typical clothing worn.

The **Workplace** (Health, Safety and Welfare) Regulations 1992 says that your employer must maintain a reasonable **temperature** where you **work**, there is a **minimum temperature** of 16°C, or 13°C if your **work** involves considerable physical activity.

Whilst there is no legal requirement for a maximum temperature in a workplace, a risk assessment should be undertaken if the temperature is felt to be excessive.

Where it is not possible to achieve a suitable overall air temperature, organizations should consider:

- Insulating hot equipment
- Increasing ventilation levels
- Providing local heating or cooling equipment
- Providing suitable clothing
- Reducing the time that people spend in hot or cold conditions, e.g. by job rotation or more frequent breaks
- Providing those who are working in hot conditions with easy access to drinking water and changes of clothes
- Providing information, instruction, training and supervision to ensure

Ventilation

Good ventilation can significantly improve working conditions and efficiency. Natural or artificial ventilation, or both, is required to remove moist, warm or contaminated air and replace it with fresh air.



Lighting

Poor lighting is likely to increase the risk from other hazards, such as trailing cables. Adequate levels of lighting must be achieved everywhere in order to maintain safety and reduce eyestrain. Particular consideration should be given to areas such as stairways, gangways, entrances and exits. Emergency lighting should also be provided where necessary.

Where display screen equipment is used, such as in offices, lighting is very important and should provide minimum levels of glare and reflection on the display screen. At the same time, sufficient lighting is necessary to enable paper documents to be read and other tasks to be undertaken safely.

Maintenance and housekeeping

Buildings, facilities and equipment must be regularly and thoroughly checked and maintained to ensure that they remain safe.

All working environments must be kept safe on a continual basis. Rubbish and waste materials must not be allowed to accumulate. They should be kept in appropriate containers and removed regularly. The workplace must be kept clean and tidy, without any obstructions or blockages of walkways, particularly fire evacuation routes.

Storage and stacking

Many accidents result from unsafe storing, racking and stacking, so various safety measures must be taken. For example, there must be an appropriate design and construction using suitable materials. Measures must be taken to prevent damage, such as regular checking and maintenance, defect report, limits on loads and heights, careful working practices and training and supervision.

Keeping storage areas clean and tidy will reduce the likelihood of accidents.

Workstations and seats

Workstations and seats must be suited to the task and the person using them. Seats must give good back support and footrests should be provided where needed.

Special environments

Some workplaces present particular hazards because of their use. For example, swimming pools have slippery floor surfaces and a large volume of water, while construction sites have unfinished structures. Additional safety controls may be necessary as a consequence. Employers and the self-employed must make themselves familiar with their legal obligations and the recommendations for their particular working environments.

Procedures, training and supervision

Safe working procedures must be established. They are particularly important where the hazards are severe and the risks are great, such as in roof work or when using vehicles in the workplace. Staff must be given information, instruction, training and supervision appropriate to the hazards and safety procedures of the workplace.



Safety signs

Safety signs communicate information, such as warning of a hazard, showing the way to a fire exit or instructing employees to wear personal protective equipment. Regulations specify certain types to be used, helping to make them easy to recognize and understand wherever they appear.

There is a range of standard safety signs, including visual, audio, hand signals and pipework marking. Safety signs must be displayed in appropriate places and kept in good condition.

The main categories of safety signs are:

- **Warning signs** – for hazards
- **Prohibition signs** – where certain actions are not allowed
- **Mandatory signs** – telling people that they must do something
- **Information signs** – giving information about safety features



Questions and Answers

1. Why are safety signs important in the workplace?

2. Buildings must _____, Rubbish should be _____
_____, walkways must not be _____
and stock should be _____

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3. Who is responsible for keeping the workplace in a safe condition?

4. How must buildings be constructed?

5. Why is it necessary for people to have enough work space?



Module 12: Work Equipment

Equipment and machinery used in the workplace can create risks to people at work. As a result, it is often necessary for people to wear and use personal protective equipment and clothing to protect themselves. PPE is an essential last resort in circumstances where hazards cannot be controlled in other ways. The various types of PPE, include safety glasses and goggles, head protection, gloves, footwear, masks, breathing apparatus, ear protection and outdoor clothing.

Hazards from work equipment

There are many hazards associated with work equipment. For example, hot parts and potentially harmful toner in a laser printer, sharp edges on cutting tools, rotating parts in a mixer, moving parts in a press, gas from heaters and fire from fryers. Machines can cause injury in five main ways:

1. **Entrapment** – where parts of the body, e.g. fingers are caught in parts of the machine
2. **Impact** – where the body is crushed by moving parts or by items being processed
3. **Contact** – where the body touches sharp edges, hot items, live electrical items or abrasive surfaces
4. **Entanglement** – where parts of the body, e.g. hair, clothing or jewelry become caught in parts of a machine
5. **Ejection** – where parts of a machine or materials being used fly out and hit the body

Preventing injuries

Many jobs involve the use of machines and most have associated hazards. However, a variety of actions can be taken to make equipment safer and reduce the risks:

Remove the hazard

The best methods of preventing injuries are by redesigning a task so that dangerous machinery is not needed or by eliminating hazards at the design stage. As this may not be possible, other methods have to be considered.

Minimize access to the hazard

If the hazard cannot be removed completely, it may be possible to make dangerous machine parts inaccessible or to improve safety by enclosing moving parts or by using automatic devices to free machines. It may also be possible to restrict access to rooms with dangerous machines. All such machines should always be positioned safely where operators cannot be easily knocked or distracted.



Designed for safety

Good design and construction should:

- Ensure the safety of machines by providing suitable operating controls that are easy to see and use
- Provide operating controls that prevent equipment from being turned on accidentally
- Incorporate a suitable emergency stop control
- Ensure that a machine will 'fail to safety' so that, e.g. it will not operate if there is a fault
- Provide, where necessary, a means of disconnecting a machine from a power source
- Minimize risks during maintenance and cleaning as well as during normal operation

Guarding

Where hazards cannot be avoided, guards must be provided to prevent people getting close to any dangerous parts. There are different types of guards, including:

- Guards fixed over dangerous parts
- Guards that will not allow the machine to operate unless they are in place
- Barriers to prevent people getting near dangerous machines
- Devices that ensure that the operator's hands are away from danger

Guards vary in their effectiveness and the people they protect, so they must be chosen with care.

Selecting and purchasing equipment

It is important to select the safest possible option for any particular activity. Purchasing new machinery that is well designed and constructed is often a way of reducing the risk of injuries. If you are involved in the selection and purchase of equipment, it is important to:

- Ask technical questions and compare the information provided by different suppliers
- Check that the machine has a CE Mark
- Satisfy yourself that you have obtained all the relevant safety information
- Ensure that there will be adequate training provision

The work environment

To make work equipment safer to use, other issues must also be considered, such as lighting levels and the condition of the surrounding environment. Installation must be carried out carefully to ensure stability and safe operation.

Safe working procedures

Organizations must:

- Use work equipment for the correct purpose and only in the manner specified by the manufacturer
- Establish safe working procedures for all work equipment in line with the manufacturer's instructions and recommendations
- Train and instruct operators properly



- Supervise work with machinery
- Ensure that safety procedures are followed diligently

Safety procedures depend on the work activity and the work equipment used, but they are likely to include:

1. A ban on:

- Wearing loose clothing, ties, jewelry and long hair that is not tied back
- The consumption of alcohol and non-prescription drugs and certain prescription drugs
- Tampering with any guard or other safety device
- Hurrying or cutting corners
- Working with equipment unless already trained to do so

2. A duty to:

- Maintain a safe environment around a machine
- Clean up spills and remove obstacles
- Report defects or faults in equipment
- Take simple precautions, such as not reaching into machines and following pre-start checks
- Follow all safety instructions and procedures, including actions to be taken in the event of an unusual occurrence, such as a blockage in machinery

Information and training

People who operate work equipment and anyone else who may be affected must be made aware of the likely hazards involved – instructions, warnings and safety signs all play a part in this.

Organizations must ensure that machine operators and people who clean, maintain or go near to machines are trained to use them safely and understand and carry out the appropriate safety precautions. Everyone must be made aware that it is not safe to operate or come into contact with a piece of machinery unless they have been trained and given permission to do so.

There must be careful supervision to ensure that the equipment is safe and that operators and others are following safe working procedures.

Key Points

People operating machines should ensure that they:

- *Follow instructions and comply with safe working procedures*
- *Do not wear loose clothing or jewelry*
- *Tie up long hair and cover it*
- *Report defects and faults immediately*
- *Keep the working area clean and tidy*
- *Switch off machines when not in use*
- *Think about their safety and the safety of others and take care to prevent accidents*
- *Do not use machines if they have been drinking alcohol or taking drugs*
- *Do not tamper with guards or safety devices*



The use of personal protective equipment and clothing

Personal protective equipment and clothing may need to be worn when using certain kinds of work equipment or when hazards cannot be controlled in other ways, such as when handling dangerous but essential chemicals. Organizations must select PPE carefully to ensure that it does not add to the risks.

PPE should be used only as a last resort or as additional back up to other health and safety measures. As the hazard remains when PPE is in use, there could be severe consequences for health if the PPE does not function correctly, is put on incorrectly or is poorly maintained.

Risk assessments help employers and the self-employed to identify when they need to provide PPE and which PPE is the most appropriate for the task and environment.

Protective clothing

Special protective clothing can be used to protect the body from physical damage, chemicals, radiation and high and low temperatures.

- Safety helmets for head protection
- Various types of clothing designed to protect against particular hazards, e.g. wet weather garments, high visibility clothing, chemical-resistant garments, groin protectors and anti-static-clothing
- Gloves to help protect against cuts, hot and cold temperatures, chemicals, electricity and other hazards
- Footwear – possible with special features as anti-static, non-slip and steel cap toes

Respiratory protection

There are two main types of equipment for respiratory protection:

- **Mask and respirators** – to filter contaminants, such as dust from the air before they are inhaled
- **Breathing apparatus** connected to a source of clean air – to supply air that is not contaminated by the immediate environment

Eye protection

Eyes must be protected from dust, flying debris, chemicals, and other hazards. Eye protection equipment includes safety glasses, goggles and face shields.

Hearing protection

Ear protections or ear plugs may need to be worn in noisy areas or to reduce the likelihood of hearing damage or loss when noisy equipment is used.

Other protective equipment

Safety harnesses and other protective equipment may be necessary as a back up to other safety measures.



It is important to choose the correct type of PPE, so an assessment must be carried out to identify when it is needed and which type is most appropriate. Technical advice on suitability may be required. All protective equipment must:

-

All PPE must be properly used, maintained, cleaned and stored and it must be replaced when appropriate. If you need to use PPE, you must be provided with information, instruction, training and supervision to ensure that you understand the hazards and how to use, care for and store the equipment. To protect your own safety and that of others, you must follow instructions and report any defects or problems to your manager or supervisor.

- *PPE should be used only as a last resort when a hazard cannot be sufficiently controlled by other health and safety measures*
- *A range of PPE exists to protect various parts of the body, including eyes, ears, lungs, head, trunk, hand and feet*
- *The hazard remains when PPE is worn*
- *An assessment must be carried out to ensure that the correct PPE is provided*
- *Staff must be informed, instructed, trained and supervised to ensure that they understood the hazards, the need to wear their PPE and how to care for it*

Risk Assessments

Before any equipment is installed or used, a risk assessment must be carried out. It should cover all the issues mentioned in this chapter and any others relevant to the work being carried out.

Maintenance, inspection and testing

Equipment, guards and safety devices must be checked regularly to ensure that they are in good working order. Only competent, qualified and where necessary, named authorized persons must be permitted to inspect, test and maintain specific pieces of equipment. The recommendations of specialists about the safety of equipment must be followed.

Questions and answer

1. What are the main dangers associated with machinery?

2. When is PPE used?

3. What types of PPE are used?

4. How is the correct PPE ascertained?

Module 13: Ergonomics and workstation design

Ergonomics is concerned with the interaction between people, equipment and their environment. Ergonomics should be considered when a new workplace is being designed, when new equipment is being selected and installed or when jobs and procedure are being considered. As employers become more aware of the human and financial costs associated with poorly designed workplaces and tasks so the application of ergonomic principles increases.

Design

It is the general principle of ergonomics that each workstation should be designed to suit the individual worker to improve his or her safety, comfort and productivity. However, as people range in height, shape and ability, it is normally uneconomic to design and create an individual workstation. Design must, therefore, reach a compromise and, where possible, should include adjustable features, such as seat height adjustment and adjustable platforms.

Musculoskeletal disorders

Poorly designed workstations and tasks may lead to musculoskeletal disorders causing aches pain, swelling and poor performance. The back and arms are most commonly affected. Back problems may also be caused by lifting and carrying.

People may also be at risk from upper limb disorders – a variety of conditions affecting the arms, hands and upper back. Where problems are linked to tasks at work, they are called work-related upper limb disorders (WRULDS). People are more likely to have such problems if they:

- Carry out a particular action repetitively
- Use force
- Maintain an awkward posture
- Have inadequate rest periods

People may be at risk in a variety of jobs, e.g. repetitive factory, office or agricultural work. Where there are risks, employers should carry out a risk assessment of the tasks and seek expert advice if necessary. Where it is identified from risk assessment that there are safer or healthier ways of doing things, then employers will need to implement the recommendations from risk assessment. This needs to be undertaken through discussion and agreement with the people involved and some information and training will be needed.

Typical measures to help to prevent WRULDS include:

- Re-designing workstations to reduce the risk caused by stooping, overreaching and similar actions
- Reducing repetitive movements, such as by automation or job rotation
- Reducing the force needed to carry out a task
- Reducing stress levels, which may contribute to poor posture
- Training staff in correct posture and safety precautions associated with the task
- Making environmental improvements where possible, such as providing heating in cold areas



Display screen equipment

Various ill effects, such as eyestrain, headaches and WRULDS, have been associated with jobs involving the use of display screens. Some of the methods that employers can take to prevent problems are:

- Carrying out an assessment of the equipment and task and making any necessary improvements
- Providing height-adjustable seats, with back rests and foot rests if needed
- Allowing plenty of room for movement
- Maintaining and selecting equipment, software and screen options to minimize flicker and reduce eye strain
- Planning work to allow for breaks
- Reducing stress levels
- Reducing noise distractions
- Providing appropriate training and information
- Arranging for eye tests for certain staff

Staff can also help to prevent health problems by:

- Sitting comfortably at the correct height with forearms parallel to the surface of the desktop and every level with the bottom of the screen
- Maintaining a good posture
- Avoiding repetitive and awkward movements by using a copy holder and keeping frequently used items within easy reach
- Changing position regularly
- Using a good keyboard and mouse technique with wrists straight and not using excessive force
- Making sure there are no reflections or glare on screens by carefully positioning them in relation to sources of light
- Adjusting the screen controls to prevent eye strain
- Keeping the screen clean
- Reporting to their manager any problems associated with use of the equipment

Other uses of ergonomics

Ergonomics can assist with other issues, such as the layout of control panels on machines. Various aspects need to be considered; e.g. the ability to reach emergency stop buttons and the clarity of controls and instructions.

Question and Answers

1. What may cause health problems?

2. Why is ergonomics important?

3. List the common techniques of preventing ill health

4. If staff is suffering from work-related aches and pains, what should they do?

5. List the recommendations for using display screen equipment.

Module 14: Manual handling

Almost one-third of reportable accidents results from handling, lifting and carrying activities. Virtually all workplaces have staff involved in some form of manual handling and the cost of injuries from poor or careless practice is extremely high.

Responsibilities of employers and employees

Manual handling regulations were introduced to try to reduce the number of employees being injured through lifting and moving loads at work. Employers have to assess the risk of injury to employees from manual handling and where practicable eliminate, automate or mechanize the movement of loads. Where this is not possible, employers have to consider the best way of moving loads with least risk to employees and ensure that employees are trained in manual handling and the methods devised.

Employees have to follow the training and methods devised by their employer and must not do anything that would put themselves or others at harm. Trying to do something that you know might injure or harm yourself, such as lifting something too heavy.

Manual handling injuries

A variety of injuries may result from poor manual handling. These are most commonly to the back, but hands, arms and feet may also be damaged. Typical injuries include:

- Ruptured discs
- Sprained ligaments
- Sprained and inflamed tendons
- Muscular injuries
- Trapped nerves
- Hernias
- Fractures
- Cuts and crushing to parts of the body; e.g. when a load is dropped onto fingers or feet

Some injuries occur immediately, but many develop gradually. Most cause significant pain and result in absence from work.

Preventing injuries

As with other health and safety issues, the most effective method of prevention is to eliminate the hazard, in this case to remove the need to carry out hazardous manual handling altogether. It might be necessary to re-design the workplace so that items do not need to be moved from one area to another. Alternatively, it may be possible to provide mechanical means, such as a conveyor belt, to move items. Any alternative means of moving objects must also be assessed and controlled to ensure that they do not cause injuries or other health problems.



Where manual handling tasks cannot be avoided, they must be assessed. This involves examining the tasks and deciding what the risks associated with them are and how these can be removed or reduced by adding control measures.

As part of manual handling assessment, the following should be considered:

- The task to be carried out
- The load to be moved
- The environment in which handling takes place
- The capability of the individual involved in the manual handling

A number of factors increase the risk of manual handling injuries, and these should be considered and controlled.

The task

To prevent injury:

- Carry loads close to the body, because lifting and carrying with the load at arm's length increase the risk of injury
- Avoid awkward movements, such as stooping, reaching and twisting
- Ensure that the task is well designed and that procedures are followed
- Try to avoid lifting from the floor or above shoulder height
- Limit the distance for carrying
- Mechanical aids may assist in reducing the force needed to move a load
- Minimize repetitive actions by re-designing and rotating tasks.
- Ensure that there are adequate rest periods and breaks between tasks
- Plan ahead – use teamwork where the load is too heavy for one person

The load

To prevent injury:

- Reduce the size and weight of loads to make handling easier. This could involve suppliers in packing items into small consignments before delivery
- Make loads easier to grasp and increase the stability of loads which may move suddenly and unpredictably
- Control harmful loads; e.g. by covering sharp edges or by insulating hot containers
- Wear suitable PPE such as non-slip gloves, safety footwear or overalls

The environment

To prevent injury:

- Ensure that the surroundings are safe – flooring should be even and not slippery, lighting should be adequate, and the temperature and humidity should be suitable
- Remove obstructions and ensure that the correct equipment is available



The individual

To prevent injury:

- Never attempt manual handling unless you have been trained and given permission to do so
- Ensure that you are capable of undertaking the task – people with health problems and pregnant women may be at particular at risk of injury

Correct lifting procedure

As it is not possible to eliminate manual handling altogether, correct lifting procedures must be followed to minimize the risks of injury. The technique outlined below should be followed at home as well as at work.

Although the manual handling operations regulations do not specify what weight a person can lift, it is now recognized that one person should not lift any load **exceeding 20kg**.

Take care of yourself by following these guidance notes:

Planning and preparation

- Think about the task to be performed and plan the lift
- Consider what you will be lifting, where you will put it and how you are going to get it there
- Assess the weight and centre of gravity of the load
- Assess the size of the load to make sure that you can grip it safely and see where you are going
- Assess whether you can lift the load safely without help. If not, get help. Bear in mind that it may be too dangerous to attempt to lift some loads, such as an office safe, even with a team
- If more than one person is involved, plan the lift first and agree who will lead and give instructions
- Plan your route and remove any obstructions. Check for any hazards, such as uneven flooring
- Avoid lifting unsafe loads, such as damaged glass or badly packed chemicals
- Check whether you need any PPE and obtain the necessary items, if appropriate. Check the equipment before use and check that it fits you
- Ensure that you will be able to maintain a firm grip
- Ensure that you are wearing the correct clothing, avoiding tight clothing and unsuitable footwear
- Remove any unnecessary packaging if this will make the task safer
- Consider a resting stage before moving a heavy load or carrying something any distance

Position

- Stand with your feet apart and your leading leg forward.
- Your weight should be even on both feet
- Position yourself so that the heaviest part is next to you. If the load is too far away, move toward it or bring it nearer before starting the lift



Lift

Always lift using the correct posture:

- Tuck the chin in on the way down
- Lean slightly forward if necessary and get a good grip
- Keep the shoulders level, without twisting or turning from the hips
- Try to grip with the hands around the base of the load
- Bring the load to waist height, keeping the lift as smooth as possible

Move the load

- Move the feet, keeping the load close to the body
- Proceed carefully, making sure that you can see where you are going

Lower the load

- Lower the load, reversing the procedure for lifting
- Avoid crushing fingers or toes as you put the load down
- Position and secure the load after putting it down

When two or more persons lift a load, one of the team must be nominated to give instruction to ensure that each person lifts an equal share and the team works together!

Dealing with problems

Report any problems, such as strains and sprains, immediately. Where there are changes; e.g. to the activity or load – the task must be reassessed.

Question and answers

1. What are some of the typical manual handling injuries?



2. If manual handling cannot be avoided what needs to be done?

3. If it's not possible to eliminate manual handling what should be considered?



Module 15: Hazardous substances

Hazardous substances are used in many workplaces and may lead to a range of conditions, including dermatitis, asthma and infectious diseases. Visitors and the general public may be at risk from hazardous substances, as well as the person using them.

Types of hazardous substance

Hazardous substances include anything that could cause ill health to people who come into contact with them. There are many reasons why a substance may be hazardous; e.g. it may be

- Explosive or inflammable
- Associated corrosive, harmful or irritating to parts of the human body
- Toxic, corrosive, harmful or irritating to parts of the human body
- The cause of diseases or allergies

Hazardous substances come in many forms, including:

- **Liquid** – cleaning chemicals
- **Dust** – lead and asbestos
- **Fumes** – from industrial chemicals
- **Gases** – carbon monoxide
- **Living organisms** – fungal spores

Routes of entry

There are a number of ways in which hazardous substances can enter the body:

- **Absorption** – where a hazardous substance gets onto the skin and is absorbed through it into the body and bloodstream
- **Ingestion** – through swallowing a hazardous substance or where one might be splashed into the mouth
- **Inhalation** – through breathing in a hazardous substance, such as toxic fumes
- **Injection** – where a sharp object, such as a needle has a hazardous substance on it and cuts or punctures the skin

Prevention of accidents and ill health

The best method of preventing accidents and ill health from hazardous substances is to avoid using or storing them altogether. Where this is not possible, an assessment must be carried out and appropriate control measures put in place to reduce the risks to an acceptable level.

Identifying hazardous substances

It is important to identify substances that could cause harm. Purchases substances must be in their original containers and have safety labels and safety information. If dangerous chemicals have to be decanted before use, they should be poured into containers approved by the manufacturer and labelled appropriately. Other sources of information, such as government



Assessing the risks

Companies must assess the risks from all hazardous substances used or created. The person carrying out the assessment must have the necessary legal and technical knowledge as well as access to the correct information. In some cases, this may mean obtaining specialist expertise.

The assessor should read the suppliers' safety data sheets and consider various issues, such as:

- How hazardous the substance is
- How much is used
- How often it is use
- Whether levels exceed government limits

When an assessment is thorough, a range of details is considered, covering all eventualities. Assessments should be reviewed at regular intervals or when updating is needed; e.g. when changes are made to processes or materials used.

Preventing exposure

Exposure should be prevented whenever possible by avoiding the need for, or production of, hazardous substances. Safer substances should be substituted.

Controlling exposure

Various techniques can be sued to reduce risks even where hazardous substances are used; e.g.

- Enclosing a process
- Using local and general ventilation
- Using safe systems of work and good housekeeping to minimize spills and leaks
- Reducing the number of people and time for which people are exposed
- Using suitable PPE

The controls chosen must be checked on a regular basis to make sure that they are performing efficiently. In some cases, the levels of hazardous substances in the air must be monitored. Staff must report any defects in control measures to managers immediately.

Health surveillance

Staff working with some hazardous substances need regular health checks; e.g. to check the skin for dermatitis or the functioning of lungs

Information and training procedures

All employees should be given information, instruction and training to ensure that they are aware of hazards and the risks and know which precautions to take. In particular, staff must know how to operate the control measures, use PPE and take appropriate action in an emergency.



It is important for safe working procedures to be established and followed carefully. Quite often, simple procedures can prevent injury and illness.

Never

- Mix different chemicals together
- Decant chemicals to unlabeled or incorrectly- labelled containers
- Never use chemicals you are not trained and authorized to use

Always

- Use the correct PPE
- Report any defects or operational problems, such as poor ventilation
- Keep your workplace clean and tidy
- Avoid blocking walkways, to prevent tripping while handling chemicals
- Store chemicals in a secure area
- Report any symptoms of ill health immediately

Supply, transport and large-scale storage

Additional stringent safety measures are necessary in these cases to ensure the health and safety of users and the general public. Suppliers must label goods and provide appropriate information, while haulage companies must consider the additional risks posed by the movement of dangerous substances.

Question and answers

1. What health problems can hazardous substances cause?

2. The best way of preventing accidents and ill health is to



3. What is required of people working with hazardous material?

4. Always follow the _____ of your workplace.



Module 16: Working at height

Working at height can be dangerous and is the biggest cause of fatal accidents at work to employees and the self-employed. Most people work at height from time to time even if the height is not very high. Specific regulations apply to working at height and there are a number of precautions employers and employees need to take.

Working at height accidents

A variety of situations can result in falls from height. The most common ones are:

- Using ladders – this might be for a simple job, such as cleaning windows or cleaning out gutters
- Working on scaffolding and other access equipment – used extensively in the construction industry and for building repair work
- Going onto roofs or into roof spaces to clean or carry out maintenance work
- Using chairs or other unsuitable means of gaining access to places that are not very high but cannot be reached from the ground
- Falling through ceilings and fragile roofs
- Materials and objects falling from where people are working at height and striking persons below

The main reasons for falling from height accidents

As with accidents, there are a number of common reasons and factors that contribute to working at height accidents. Some common ones include:

- Not having a safe system of work in place
- Not following a safe system of work
- Not recognizing the risk of working at height
- Not providing proper information, instruction and training
- Not providing the proper equipment for the job

Accidents can often be caused by the simplest things. In the case of ladders, this includes over stretching, placing the ladder incorrectly and not securing it properly. Other accidents involve carrying loads and slipping off ladders due to unsuitable footwear being worn.

General precautions

All instances of working at height require some thought as to how it should be carried out safely. Some general principles apply:

1. Assess the risk of working at height
2. Plan the job – decide on the safest way to do it after considering all the circumstances, including the environment, height, duration, tasks and means of escape in an emergency
3. Select the right equipment for the job
4. Select the right people for the job – those that are competent, have experience and have been trained
5. Supervise the job to ensure that it is done as planned
6. Consider using fall arrest equipment, such as harnesses



7. Frequently check the equipment to ensure that it is working properly and is safe

Equipment for working at height

A variety of access equipment is available for working at height. The most common ones are:

Ladders and stepladders

- Scaffolds
- Mobile towers
- Elevating platforms
- Safety harness



Ladders and stepladders

Although very useful and often essential, ladders and stepladders are often used incorrectly. Ladders should be provided to gain access to workplaces and should not normally be used as the workplace.

Ladders and stepladders should only be used for short and simple tasks. Consideration should first be given to the use of an alternative to ladders, such as a mobile tower, elevating work platforms or scaffold. If, however, ladders have to be used, then the following rules should be followed:

- Only use ladders that are sound, with no damage or defects. Anyone using a ladder needs to check for damage or defects
- Ladders need to be set at the correct angle of 75 degrees to prevent the risk of slippage or falling
- Ladders need to be secured or tied at the top end and secured or 'footed' at the bottom by someone holding the ladder
- Ladders must only be placed on sound, level surfaces



Not All Heroes Wear Capes!



Scaffolds

Scaffolds are designed for people to work safely at height. However, there are many accidents that involve such scaffolding and these accidents that involve the people who erect and dismantle it. All working platforms need to be:

- Stable and on firm footings
- Of sufficient strength of the job and loads to be placed on them
- Erected by competent persons and inspected frequently by a competent person
- Provided with barriers/handrails at the working level to prevent objects falling from the working platform
- Provided with safe means of access
- Provide for materials to be safely stacked
- Fully boarded out to provide a safe platform



Mobile towers

Mobile towers can be quickly erected and moved from place to place. Mobile towers should often be used in place of ladders as they provide a much more stable and secure place to work. The following rules apply when using mobile towers:

- Follow the manufacturers' instructions for erection and dismantling
- Make sure that the tower is on a level and firm surface (the tower is vertical) and that the wheels are locked
- Provide a safe means of access and egress – normally via an internal ladder
- Provide toe boards and guard rails
- Ensure that the maximum load is not exceeded
- Ensure that only trained persons use the platform and supervise them
- Only move the tower when no-one is on it and loads have been removed
- When moving the tower, check the ground and watch for anything overhead – e.g. power lines
- Never climb up the outside of a tower as it might tip over

Elevating work platforms

Elevating work platforms can provide very good and safe access to working at height, but like all other pieces of equipment, there are some key safety features that need to be in place.

- Only trained and competent staff must operate the equipment
- The working platform (like a low-level cage) should be provided with toe boards and a barrier to prevent a person from falling
- The equipment should be used only on a level and firm surface
- Emergency procedures must be in place
- Tyres should be properly inflated
- Dangerous parts should be properly guarded
- Warning signs and notices must be displayed to warn others that people are working overhead/at height



Question and answers

1. What is the main risk when working at heights?

2. All equipment involved in working at height must be:

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3. List the different types of access equipment available?

4. When working at height people must be



Module 17: Transport and vehicles

The movement of goods and people at work in transport and vehicles is the second greatest cause of fatal accidents at work. It also accounts for over 1 000 serious injuries each year. The causes of accidents and injury to drivers and passengers are normally from collisions, overturning or impact. Pedestrians are injured most often by being struck or knocked over by vehicles or being struck by loads falling from vehicles. Reversing vehicles can be a particular hazard.

Causes of work transport and vehicle accidents

There are a number of common reasons and factors associated with work transport and vehicle accidents, which include:

- Using the wrong vehicle or an unsuitable vehicle for the job
- Driver error, sometimes due to poor training and lack of competence
- Driver error due to tiredness resulting from working long hours
- Driving too fast
- Using the vehicle in the wrong area, such as on slopes leading to overturning (driving too fast)
- Poorly maintained or defective vehicles; e.g. brakes or warning hazards not working properly
- Misuse of vehicles and horseplay

As with other areas of health and safety, most transport and vehicle accidents are preventable. There are three main areas to consider:

- The workplace
- Drivers
- The vehicle

The workplace

The workplace can be designed and maintained so as to minimize the risk of accidents and injury due to transport activities and vehicles. Some of the main ways to reduce the risk include:

- Planning traffic routes and providing a one-way system if possible
- Providing marked parking areas or bays for vehicles
- Trying to avoid blind or sharp bends on traffic routes
- Ensuring that traffic routes are wide enough for vehicles and for turning where needed
- Ensuring that surfaces are level and well maintained
- Providing safe areas for loading and unloading
- Ensuring that traffic routes are well marked and signed
- Providing adequate lighting for all traffic routes, which includes lighting for night and evening working or in areas where there is poor natural light
- Getting roads and traffic routes in icy conditions to try to reduce the risk of skidding and sliding
- Ensuring that traffic routes are free from obstructions and other hazards and away from such things as chemical or gas tanks



Drivers

Whatever is being driven, anyone using vehicles needs to be trained and competent to use them. For some types of vehicles, such as fork-lift trucks, this means passing a test of competence to demonstrate being able to drive safely before being allowed to use the vehicle. Some of the basic rules include:

- Testing drivers' competence or ensuring that they have the right experience, qualifications or a certificate – instruction and training will nearly always be required
- Selecting and authorizing named drivers only
- Checking that drivers follow the rules, use the correct routes and keep to speed limits. Like other areas of health and safety, drivers need to be supervised and managed properly
- Ensuring that drivers have sufficient time to do any job safely
- Ensuring that drivers take breaks and that work patterns are such that they do not become overtired and increase the risk of making mistakes

In addition to employees, it is often visitors or other company drivers who may be making a delivery that causes the greatest risk. Employers need to ensure that those drivers also follow the rules and routes and drive safely. This may mean providing them with the rules and information on how to move around safely, speed limits and where to report and park. Keys should not be left in parked vehicles so as to prevent the risk of unauthorized use.

The vehicle

Appropriate vehicles need to be provided that are suitable for the job to be done. Once in use, they need to be maintained in good working order and be checked regularly for faults and defects. The main points about vehicles and their safety include:

- Suitability for the work and the environment
- Safe means for the driver to get in and out of the vehicles
- Good visibility
- Horn, vehicle lights and other warning devices, such as a reversing alarm, being present and working
- Guarding of dangerous moving parts
- Protecting the driver from adverse weather conditions or from other environmental factors, such as rain, wind, the dust
- Seat belts or other form of securing the driver safely in the case of an accident or sudden stop

Before vehicles are put into service, they need to be checked. A number of checks should also be made before a driver uses a vehicle, such as:

Brakes

- Steering
- Tyres
- Alarms and warning devices
- Mirrors and windscreen wipers
- Instruments
- Any damage to the vehicle



Prevent pedestrian accidents

Being hit by a moving vehicle is very serious, causing either death or serious injury to a pedestrian. There are a number of ways to protect persons from injury from moving vehicles.

- Keep vehicles and pedestrians separated as much and as far apart as possible and provide each with safe routes and safe access
- Provide physical barriers so that it is difficult for vehicles to stray into pedestrian areas
- Mark routes so that it is clear where vehicles and pedestrians are allowed to go
- Display signs and warning notices to remind people of the rules
- Provide safe marked places for pedestrians to cross over traffic routes
- Ensure that there is a safe speed limit set for workplaces and enforce the limit
- Ensure that vehicles are maintained and that everything is working properly

Reversing vehicles

Reversing a vehicle carries a specific risk that must be controlled to ensure that pedestrians are not run over. Reversing needs to be kept to a minimum, but where there is the need for reversing, such as in delivery areas or bays, the following should apply:

- Mark reversing areas
- Ensure that vehicles have audible and visual warning, where possible, to alert people to the reversing vehicles
- Limit or restrict the people that are allowed in reversing areas
- Have someone responsible on the ground to assist the vehicle driver in reversing
- Ensure that the vehicle is fitted with side-mounted and rear-view mirrors to assist the driver to see properly
- Ensure that reversing speed limits are very low
- Put up visible warning notices
- Ensure that there is sufficient space for safe reversing

Legal requirements

Workplace transport and vehicles can be subject to a number of general legal requirements and some more specific ones. However, risk assessments need to include transport and vehicle safety, which is also covered.



Module 18: Noise and Vibration

Exposure to excessive noise can cause hearing damage and even loss, the effects from which may be cumulative and irreversible. Noise also interferes with communication, can cause distraction and may, therefore, compromise safety. Designers, importers,, suppliers, manufacturers, employers, employees and the self-employed all have obligations towards noise control and the protection of hearing.

Source of noise

Noise is produced by people and many types of equipment, including printers, vehicles, radios and motors. It can cause a nuisance or stress. Where noise is very loud, it may cause hearing damage or loss of hearing. The level of risk is linked to the amount of sound energy to which the ear is exposed.

Noise is controlled by legislation that requires employers to protect the hearing of people affected by the noise from work. At a certain level, where hearing damage will occur if exposed for a sustained period, employers have to ensure that all persons in that area wear ear defenders.

Excessive noise over a period of time can cause tinnitus, which is ringing in the ears. This can sometimes be felt temporarily when exposed to hours of noise, such as when at a pop concert. The ringing in the ears eventually subsides after a few hours and is known as temporary threshold shift. If exposure continues for a long time, permanent damage is done to the hearing hair cells, which can cause continue tinnitus and loss of hearing at certain frequencies.

Risk assessment

To determine whether noise in an area is likely to cause damage to hearing, noise readings need to be taken. These noise surveys must be carried out by suitably qualified and experienced personnel using specialist equipment. Noise is measured in decibels (dB) and readings are taken throughout the day/week to determine the average level of noise and to identify which periods are particularly loud. There are levels of noise exposure that must not be exceeded (a daily or weekly exposure of 87dB)

Some levels of noise (currently between 80-85dB) may cause damage to the ear and employers have to provide hearing protection. It is the responsibility of the employee to decide whether to use hearing protection or not – unless the employer decides that it is necessary at that level.

If daily or weekly noise exposure exceeds 85dB, hearing protection is mandatory.

In addition to average noise, where there is sudden impact noise over a certain level or short bursts of loud noise over a period. It may again be necessary for persons in the area to use hearing protection.





Controls

The risks from exposure to noise must be reduced as far as is reasonable practicable and a number of control measures can be considered.

Everyone has responsibilities for noise, although the individual responsible for each control varies. The controls include:

- Design and layout that takes into account the source of noise and the relative position of people
- Purchasing quieter equipment or using quieter processes or silencers
- Enclosing the source of the noise with sound-absorbing materials
- Screening noisy processes
- Lagging noisy pipework
- Providing acoustic wall or ceiling panels
- Isolating staff in noise-protected areas
- Controlling the time that individuals are exposed to noise
- Maintaining equipment and machinery, including lubrication
- Providing hearing protection (ear defenders or plugs)

The best controls are those that reduce the amount of noise being produced, followed by enclosure and noise proofing. As a last resort, hearing protection may need to be worn.

Personal protective equipment

Hearing protection prevents some of the sound energy reaching the ear and should be used when noise cannot be reduced by other measures. Ear defenders and plugs must be:

- Selected carefully –expert advice may be required
- Fitted correctly
- Compatible with other forms of PPE, such as bump hats and goggles
- Properly looked after
- Worn whenever it is appropriate



There should be signs to indicate areas where hearing protection is needed. Staff who is affected must be appropriately informed, instructed, trained and supervised.

Vibration

The body can be harmed through excess exposure to vibration. Most commonly this is by using hand-held vibrating power tools, such as drills and grinders. If used for too long over a period of time. It can cause pain in the muscles, nerves and bones of the arms and hands. It is often referred to as vibration white finger (VWF). Such conditions need to be reported immediately.

To prevent harm from vibration, it is best to avoid using vibrating tools and find another way to do the job. However, if vibrating tools are needed, then their use should be kept to a minimum. Good maintenance of equipment helps to reduce the amount of vibration.

Vibrating equipment and tools are often a source of noise, which can be a problem to the user in addition to the vibration itself. Because of the closeness of the equipment to the operator, one of the few controls is the use of ear protection.

Question and answers

1. What is the result of excessive noise?

2. _____ must be provided for staff working in noisy areas or carrying out noisy activities.

3. Hearing protection must be _____

4. Vibration can cause _____



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

REGISTERED UNIT STANDARD:

Explain basic health and safety principles in and around the workplace

SAQA US ID	UNIT STANDARD TITLE			
259639	Explain basic health and safety principles in and around the workplace			
ORIGINATOR				
SGB Occupational Health and Safety				
PRIMARY OR DELEGATED QUALITY ASSURANCE FUNCTIONARY				
-				
FIELD			SUBFIELD	
Field 09 - Health Sciences and Social Services			Preventive Health	
ABET BAND	UNIT STANDARD TYPE	PRE-2009 NQF LEVEL	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	NQF Level 02	4
REGISTRATION STATUS		REGISTRATION START DATE	REGISTRATION END DATE	SAQA DECISION NUMBER
Reregistered		2018-07-01	2023-06-30	SAQA 06120/18
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT		
2024-06-30		2027-06-30		

In all of the tables in this document, both the pre-2009 NQF Level and the NQF Level is shown. In the text (purpose statements, qualification rules, etc), any references to NQF Levels are to the pre-2009 levels unless specifically stated otherwise.

This unit standard replaces:

US ID	Unit Standard Title	Pre-2009 NQF Level	NQF Level	Credits	Replacement Status
116527	Demonstrate knowledge pertaining to basic health and safety principles in and around a workplace	Level 1	NQF Level 01	2	Complete

PURPOSE OF THE UNIT STANDARD

This unit standard is for those people giving an induction of health and safety principles to new personnel and the person credited with this unit standard is able to explain the duties of both the employees and employers with regard to Occupational Safety and Health in the workplace. Learners will be able to understand the requirements that apply to persons entering the workplace and performing any duties therein as well as the requirements for the use of Personal Protective Equipment (PPE), housekeeping and emergency procedures that apply to the workplace.



The qualifying learner is capable of:

- ☐ Explaining both employer and employee duties with regard to occupational safety and health in the workplace.
- ☐ Explaining the general safety rules in a workplace.
- ☐ Explaining the use and application of Personal Protective Equipment in a workplace.
- ☐ Explaining the need for good housekeeping in the workplace.
- ☐ Explaining and applying emergency procedures in the workplace.

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

- ☐ Communication at NQF Level 1 or equivalent.
- ☐ Mathematical Literacy at NQF Level 1 or equivalent.

UNIT STANDARD RANGE

N/A

Specific Outcomes and Assessment Criteria:

SPECIFIC OUTCOME 1

Explain both employer and employee duties with regard to occupational safety and health in the workplace.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The employer's duties are described with regard to occupational safety and health in the workplace.

ASSESSMENT CRITERION 2

The employee's duties are described with regard to occupational safety and health in the workplace.

ASSESSMENT CRITERION 3

The occupational health and safety representation structure and activities are described in terms of legislative requirements.

ASSESSMENT CRITERION 4

Hazards and associated risks in the workplace are identified and addressed to ensure the health and safety of themselves and other persons.

ASSESSMENT CRITERION 5

The importance of identifying hazards and risks in the working environment is explained in terms of the consequences to the employer and employees.

ASSESSMENT CRITERION 6

The reporting procedure of hazards and risks is described in terms of organisational policies and procedures.



SPECIFIC OUTCOME 2

Explain the general safety rules in the workplace.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The requirements that apply to persons that may be medically and non-medically intoxicated are explained in terms of the consequences to general safety in the workplace.

ASSESSMENT CRITERION 2

Authorised access requirements to the workplace are explained in terms of legal and organisational requirements.

ASSESSMENT CRITERION 3

The use of motorised and mobile equipment in the workplace is explained in terms of legal and organisational requirements.

ASSESSMENT CRITERION 4

Lock out procedures in the workplace are explained in terms of legal and organisational requirements.

ASSESSMENT CRITERION 5

Symbolic and other signage applicable to the workplace is explained in terms of legal and organisational requirements.

ASSESSMENT CRITERION RANGE

Symbolic and other signage may include but is not limited to mandatory, information, warning signs and colour coding.

SPECIFIC OUTCOME 3

Explain the use and application of Personal Protective Equipment in the workplace.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Specific workplace Personal Protective Equipment (PPE) requirements are explained in terms of the correct usage and application.

ASSESSMENT CRITERION 2

Maintenance and storage practices for PPE are explained in order to ensure functionality.

ASSESSMENT CRITERION 3

Reporting and replacement procedures of substandard PPE are explained in order to ensure functionality.

ASSESSMENT CRITERION 4

The importance of wearing PPE and the consequences of non-compliance are explained with in terms of the effects on employer and employees.

ASSESSMENT CRITERION 5

The limitations of PPE used in and around the workplace are explained in terms of its protective restrictions.

SPECIFIC OUTCOME 4

Explain good housekeeping in the workplace.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The need for good housekeeping in the workplace is explained in terms of the impact on health and safety to people and the immediate environment.

ASSESSMENT CRITERION 2

Specific requirements pertaining to stacking and storage of materials are explained in terms of health and safety.

ASSESSMENT CRITERION 3

Demarcation and colour coding practices in the workplace are explained in terms of health and safety.

SPECIFIC OUTCOME 5

Explain and apply emergency procedures in the workplace.

ASSESSMENT CRITERIA



ASSESSMENT CRITERION 1

Emergency escape routes, assembly points and refuge bays in the work area are explained according to the organisational emergency plan.

ASSESSMENT CRITERION 2

Emergency communication procedures in the workplace are explained according to the organisational emergency plan.

ASSESSMENT CRITERION 3

A simulated exercise of an emergency situation is planned and carried out to assess the response/reaction of all employees.

UNIT STANDARD ACCREDITATION AND MODERATION OPTIONS

- ☐ An individual wishing to be assessed (including through RPL) against this unit standard may apply to an assessment agency, assessor or provider institution accredited by the relevant ETQA or an ETQA that has a Memorandum of Understanding in place with the relevant ETQA.
- ☐ Anyone assessing a learner against this unit standard must be registered as an assessor with the relevant ETQA or an ETQA that has a Memorandum of Understanding in place with the relevant ETQA.
- ☐ Any institution offering learning that will enable achievement of this unit standard or assessing this unit standard must be accredited as a provider with the relevant ETQA or an ETQA that has a Memorandum of Understanding in place with the relevant ETQA.
- ☐ Moderation of assessment will be conducted by the relevant ETQA at its discretion.

UNIT STANDARD ESSENTIAL EMBEDDED KNOWLEDGE

Knowledge and understanding of workplace health and safety requirements.

UNIT STANDARD DEVELOPMENTAL OUTCOME

N/A

UNIT STANDARD LINKAGES

N/A

Critical Cross-field Outcomes (CCFO):

UNIT STANDARD CCFO IDENTIFYING

Identify and solve problems pertaining to understanding basic health and safety principles in and around the workplace.



UNIT STANDARD CCFO ORGANISING

Organise and manage oneself and one's activities so that one is aware of all the rules and regulations that impact on safety and health in and around the workplace.

UNIT STANDARD CCFO COLLECTING

Collect, analyse, organise and critically evaluate information in order to make decision regarding responding to an emergency situation.

UNIT STANDARD CCFO DEMONSTRATING

Demonstrate an understanding of the world as a set of related systems where not understanding the basic health and safety principles in and around the workplace could have a devastating impact on both the employee and employer.

UNIT STANDARD ASSESSOR CRITERIA

N/A

REREGISTRATION HISTORY

As per the SAQA Board decision/s at that time, this unit standard was Reregistered in 2012; 2015.

UNIT STANDARD NOTES

This unit standard replaces unit standard 116527, "Demonstrate knowledge pertaining to basic health and safety principles in and around a workplace", Level 1, 2 credits.

Terminology:

"Specified requirements" include legal and site-specific requirements and are contained in the following documents.

Legal:

- ☐ Relevant current legislation, regulations and directives pertaining to mining and occupational health and safety.
- ☐ Mandatory Codes of Practice.
- ☐ South African National Standards and other relevant Standards.

Site Specific:

- ☐ Hazard Identification and Risk Assessments (HIRA).
- ☐ Occupational Health and Safety Risk Management Programmes.
- ☐ Managerial Instructions.
- ☐ Organisational Standard Procedures.



- ☐ List of Recorded OHS Risks.
- ☐ Working Guides.
- ☐ Equipment and Materials Specifications.
- ☐ Acceptable subject related theory.

QUALIFICATIONS UTILISING THIS UNIT STANDARD:

	ID	QUALIFICATION TITLE	PRE-2009 NQF LEVEL	NQF LEVEL	STATUS	END DATE	PRIMARY OR DELEGATED QA FUNCTIONARY
Core	66269	General Education and Training Certificate: Lumber Milling	Level 1	NQF Level 01	Reregistered	2023-06-30	FPMSETA
Core	67569	National Certificate: Electronics Manufacturing and Assembly	Level 2	NQF Level 02	Passed the End Date - Status was "Reregistered"	2015-06-30	MERSETA
Core	74269	National Certificate: Occupational Health, Safety and Environment	Level 2	NQF Level 02	Reregistered	2021-06-30	As per Learning Programmes recorded against this Qual
Elective	66029	General Education and Training Certificate: Chemical Operations	Level 1	NQF Level 01	Reregistered	2023-06-30	As per Learning Programmes recorded against this Qual
Elective	93997	National Certificate: Contact Centre and Business Process Outsourcing Support	Level 3	NQF Level 03	Reregistered	2021-06-30	As per Learning Programmes recorded against this Qual
Elective	49795	National Certificate: Rail Construction and Maintenance	Level 3	NQF Level 03	Reregistered	2023-06-30	TETA

PROVIDERS CURRENTLY ACCREDITED TO OFFER THIS UNIT STANDARD:

This information shows the current accreditations (i.e. those not past their accreditation end dates), and is the most complete record available to SAQA as of today. Some Primary or Delegated Quality Assurance Functionaries have a lag in their recording systems for provider accreditation, in turn leading to a lag in notifying SAQA of all the providers that they have accredited to offer qualifications and unit standards, as well as any extensions to accreditation end dates. The relevant Primary or Delegated Quality Assurance Functionary should be notified if a record appears to be missing from here.

1. ACADEMY BUSINESS SCHOOL
2. Action Training Academy
3. Agency For Re-Innovation And Development
4. AMATHUBA HUB
5. Ambu Training CC
6. ASARA Training Academy (Pty) Ltd
7. BRIGHT IDEA PROJECTS 447 PTY LTD T/A MIND -THE- GAP
8. CAMBLISH TRAINING INSTITUTE PTY LTD
9. CBM TRAINING PTY LTD
10. Coalition Trading 1238 cc
11. CUSTOMER CENTRIC SOLUTIONS PTY LTD
12. DEKRA Industrial (PTY) Ltd
13. DIBANISA LEARNING
14. DIMENSIONAL & EDU TRAINING
15. ENB Training Service (PTY) Ltd
16. Ingelosi Trading 269 cc
17. Integral Risk Advisors cc
18. IRCA (Pty) Ltd
19. Kbc Health And Safety (PTY) Ltd
20. KUKHULA GLOBAL PROJECTS PTY LTD
21. LEARNING AND PERFORMANCE ACADEMY
22. Legal Environment Safety & Health Requirements cc
23. Lomkhethi Trading Enterprise
24. MINERAL MINING TRAINING INSTITUTE (PTY) LTD
25. MONTSONYANA STAFFING SERVICES
26. MPACT
27. Phiwokuhle Projects CC
28. QUALITY SOLUTIONS
29. RISKCOM RCCT
30. SELLDIRECT MARKETING PTY LTD
31. Take Note Trading 227 cc
32. TSHIREDO TRAINING ACADEMY CC
33. Tubular Holdings (Pty) Ltd (EMALAHLENI) (TP)
34. UCADEMY PTY LTD
35. UKWAKHILE TRAINING
36. Umbuso Training Services
37. Wavelength T.T.I
38. York Timbers Pty Ltd

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Not All Heroes Wear Capes!

