Maintaining Occupational Health, Safety and General Housekeeping

US ID 8016

Learner Guide

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ISS Training & Development

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UNIT STANDARD 8016

Unit Standard Title

Maintaining Occupation Health, Safety and General Housekeeping

NQF Level

3

Credits

8

Purpose

A learner accredited with this standard will be able to demonstrate applied competence in occupational health, safety awareness of environmental issues and general housekeeping based on statutory and industry requirements.

Learning assumed to be in place

NQF 1 or General Education and Training Certificate;

Fire Fighting Standard (NQF level 1);

Emergency Care Standard (NQF Level 1).

Unit standard range

The applied competence expressed in this standard cover largely familiar scenarios requiring limited discretion and judgement. The learner will have significant responsibility however, for ensuring the quality of health, safety, environmental and general housekeeping across a wide range of freight handling contexts.

Specific Outcomes and Assessment Criteria

Specific Outcome 1 - Use the correct protective clothing and equipment.

Assessment criteria:

- Explain his/her understanding of what constitutes safety, health and environment appreciation in the broader working environment, and how this relates to good practices within such environments.

- Demonstrate application of relevant legislation to ensure compliance with national, and where applicable, international safety and health requirements and environmental standards.
- Select, demonstrate and/or describe the application of appropriate reporting mechanisms for unsafe working practice and conditions.
- Promptly identify possible contingency plans according to the type and scale of a simulated emergency.
- Select, explain and demonstrate good housekeeping practices (e.g. preparing dunnage, stacking within demarcated areas).
- Determine and explain means for possible improvements in health, hygiene, environmental and safety practices in a given scenario.

Specific Outcome 2 - Implementing and complying with the relevant procedures.

Assessment criteria:

- Explain his/her understanding of what constitutes safety, health and environment appreciation in the broader working environment, and how this relates to good practices within such environments.
- Demonstrate application of relevant legislation to ensure compliance with national, and where applicable, international safety and health requirements and environmental standards.
- Select, demonstrate and/or describe the application of appropriate reporting mechanisms for unsafe working practice and conditions.
- Promptly identify possible contingency plans according to the type and scale of a simulated emergency.
- Select, explain and demonstrate good housekeeping practices (e.g. preparing dunnage, stacking within demarcated areas).
- Determine and explain means for possible improvements in health, hygiene, environmental and safety practices in a given scenario.

Specific Outcome 3 - Implementing selected mechanisms for the minimising of risks.

Assessment criteria:

- Explain his/her understanding of what constitutes safety, health and environment appreciation in the broader working environment, and how this relates to good practices within such environments.
- Demonstrate application of relevant legislation to ensure compliance with national, and where applicable, international safety and health requirements and environmental standards.
- Select, demonstrate and/or describe the application of appropriate reporting mechanisms for unsafe working practice and conditions.
- Promptly identify possible contingency plans according to the type and scale of a simulated emergency.
- Select, explain and demonstrate good housekeeping practices (e.g. preparing dunnage, stacking within demarcated areas).
- Determine and explain means for possible improvements in health, hygiene, environmental and safety practices in a given scenario.

Essential embedded knowledge

The learner can understand, explain and apply:

1. Legislation pertaining to general health, safety and environmental issues (e.g. OHS Act, NOSA) ISO 1400 local authority regulations and company policies and procedures.

2. Support systems and emergency services available.

3. The information sources available to maintain and improve awareness of the need for good housekeeping and health (e.g. AIDS Awareness) in the work place in line with statutory health and safety requirements.

4. Safety signs and symbols (national and, where applicable, international).

5. Safety, health and environmental awareness.

6. Potential safety, health and environmental hazards resulting from poor practices in housekeeping, hygiene and safety.

7. The complete range of assigned safety, health and environmental housekeeping duties for which the individual is accountable.

8. Hygiene issues in the workplace.

Critical Cross-field Outcomes (CCFO)

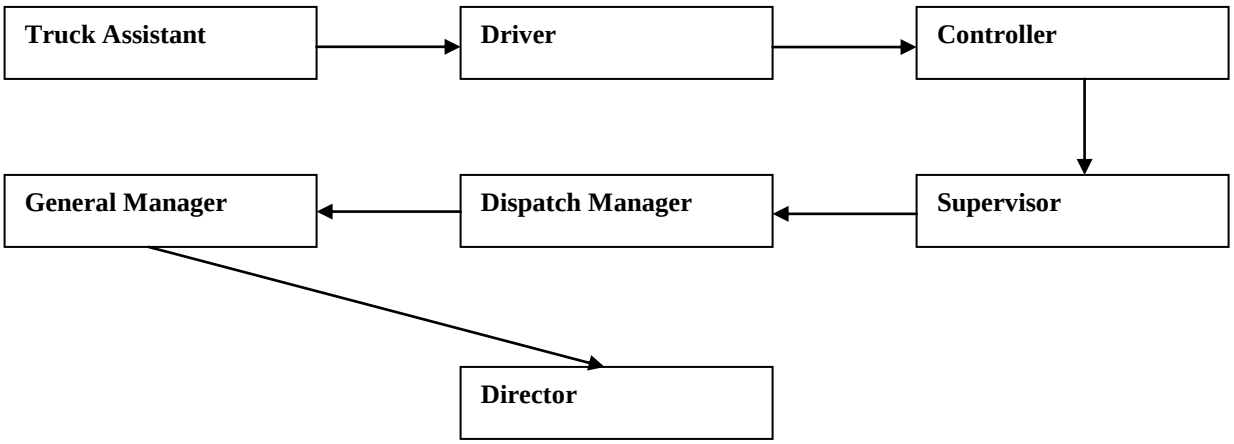
Unit Standard CCFO Identifying: Identify and solve problems by recognising potential non-compliance situations in and around the work environment and demonstrate initiative in recommending and applying corrective measures in accordance with relevant legislation, regulations and company policies and procedures.

Unit Standard CCFO Working: Working effectively with others and in teams by encouraging others to maintain hygiene standards.

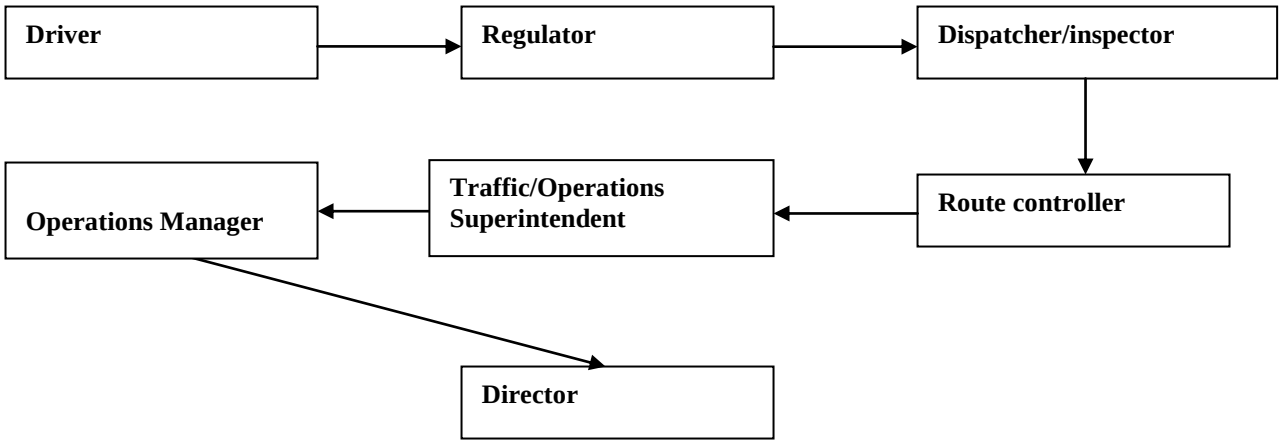
Unit Standard CCFO Collecting: Collect, analyse, organise and critically evaluate information to select the most appropriate method for preventing/minimising impact of, and responding to safety, health and environmental incidents.

- ✓ **A typical career path is shown below**

Freight services



Passenger Services



Definitions

1.	Safe	Safe means free from any hazards
2.	Safety	Safety is a technique which when supplied continuously, influences the state of mind of the human being and thereby people are constantly made aware of the possibilities of accidents.
3.	Accident	Accident means an undesired and unplanned event that results in physical harm to a person, property damage, work process interference's, or any combination of such incidents.
4.	Incident	Incident means an undesired and unplanned event that could or does affect the business operations efficiency.
5.	Risk	Risk means the probability or likely hood that a danger exists.
6.	Hazard	Hazard means a source of, or an exposure to danger.
7.	Danger	Danger means a source which may cause injury or damage to persons or property.
8.	Loss Control	Loss Control is a program designed to control all types of accidents and incidents which could downgrade the business system.
9.	Damage Control	Damage Control is the prevention and protection against accidental damage to property, plant and equipment.
10.	Prevention	Prevention means the pro-active precautionary measures taken to eliminate or reduce the possibility that persons may be injured, property might be damaged, or that losses may occur.
11.	Workplace	Any premises or place where an employee performs work in the course of his/her employment.

Abbreviations

1	OHSACT	Occupational Health and Safety Act 85, 1993
2	COID Act	Compensation for Occupational Injuries and Diseases Act, 1993
3	OEL	Occupational Exposure Limit
4	TWA	Time Weighted Average

Other

SECTION 1: HOUSEKEEPING PRACTICES AND PROTECTIVE EQUIPMENT

Specific Outcome

Use the correct protective clothing and equipment in relation to specific freight/commodities and environments

Assessment criteria

- Explain his/her understanding of what constitutes safety, health and environment appreciation in the broader working environment, and how this relates to good practices within such environments
- Demonstrate application of relevant legislation to ensure compliance with national, and where applicable, international safety and health requirements and environmental standards
- Select, explain and demonstrate good housekeeping practices (e.g. preparing dunnage, stacking within demarcated areas
- Select, demonstrate and/or describe the application of appropriate reporting

All Employees are exposed to numerous occupational hazards at work every day. Some are simple to detect or avoid. Many, however, are not visible to the untrained eye. Many of the worst health hazards do not appear dangerous, but are subtle and insidious, taking years to do their damage. In this techno-industrial age of increasingly complex hazards, you must adopt a sophisticated approach to protecting yourself and solving these problems.

Preventing diseases and injury on the job is one of the most important and rewarding aspects being involved in the Health & Safety programme. An Employee who actively works to eliminate occupational hazards may be more valuable to his fellow Employees than doctors who treat illness and injuries after they occur.

1.1 Accidents in the Workplace

a. 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.

b. Causes of Accidents

The three contributing factors that result in accidents are as follows.

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

98 % of all accidents can be prevented due to the causes of these accidents are things people do wrong in the work place.

2 000 000 Accidents were investigated and it was 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 was required, and 30 accidents that caused property damage.

1.2 Basic Causes of Accidents

a. Personal Factors

✓ *Lack of knowledge/skill, by the worker.*

In short this means that the worker was not trained to do his/her job properly and safely.

✓ *Improper motivation.*

The worker is not interested in his/her job.

✓ *Physical and mental problems.*

The worker is not fit to do the job properly or he /she is not capable of doing the job safely. It cannot be expected for a code 14 drivers to perform a brain operation on a patient. The person working in a wood and coal business should be a person who is able to pick up heavy objects and therefore should be a strong person

✓ *Attitudes.*

The attitudes of people often relate to the following:

- Home influence
- Education and training

- Job experience
- Personal habits
- Mentally and physically unsuited to do the job
- Work problems and grievances

b. Job factors

The following will also contribute to accidents:

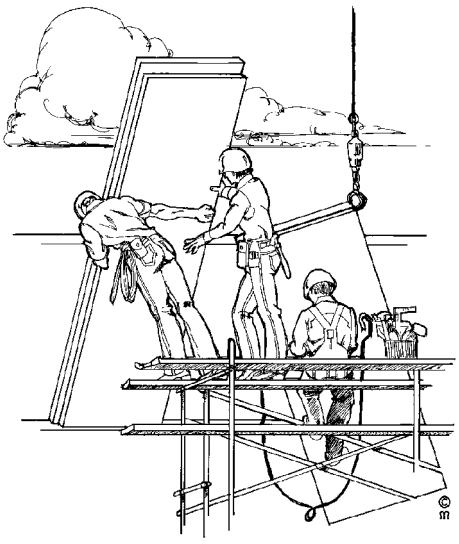
- Inadequate work standards (no safe working procedures)
- Inadequate design (equipment that is not properly designed to do the job
- Normal wear and tear (no proper and regular inspection on equipment

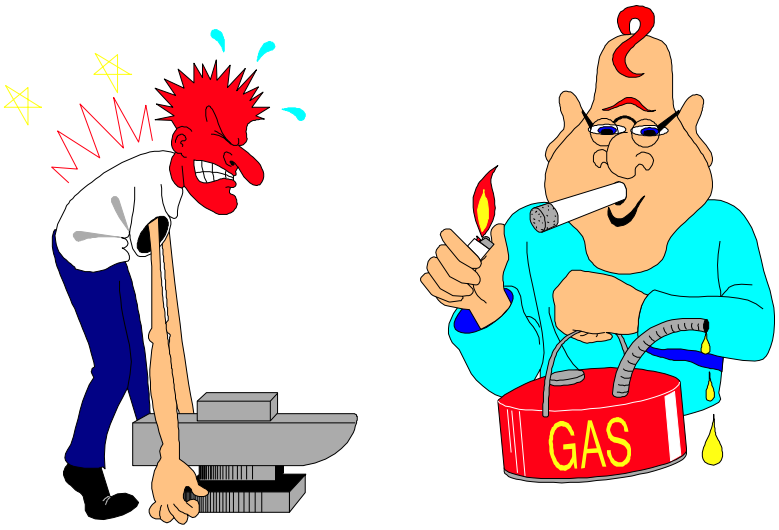
Abnormal usage (substantial equipment that is used, like household equipment used for industrial purpose)

c. Effects

✓ *Unsafe Acts:*

- Failure to warn (not telling the worker of the dangers in the workplace)
- Failure to secure (fail to fasten the top of a ladder while working on a roof)
- Operating at improper speed (working to fast to get the job done, chasing production)
- Making safety devices inoperative (bypassing circuit breakers that keeps on tripping)
- Removing safety devices (removing thermostats from equipment or bypassing earth leakages)
- Using defective equipment (Using electrical equipment where open wiring is visible)
- Failure to use personal protective equipment ***(PPE)*** (not using proper cloves when removing hot foods from the oven)
- Improper loading (unsafe loading of goods on a vehicle or trolley which can fall off and injure people)
- Improper placement (storing of foods stuff in the same are were cleaning materials are kept, this can result that the food stuff can be affected and become poi send.
- Improper lifting (picking up heavy objects the wrong way.)
- Improper position for task (taking up a unsafe position while working)
- Horseplay (playing in the work place chasing each other or to through a fellow worker with objects or water)
- Alcohol and drugs (workers working while under the influence of alcohol or drugs can result in injuring them self or fellow workers)





✓ *Unsafe Conditions:*

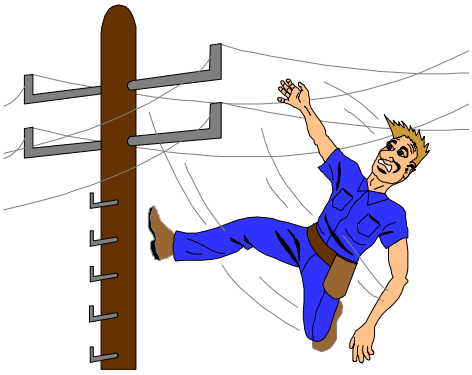
- Inadequate guards and barriers (open components of machinery that can have the result that the worker's hands or clothing can be caught)
- Inadequate PPE (No or little personal protective equipment or the wrong type of PPE)
- Defective tools, equipment or materials (Using a teaspoon to remove chips from the hot oil in a pot. Working at the stove while the extractor unit is out of order)
- Congestion or restricted action (Working in the kitchen where to many workers are. This can result in workers bumping into each other)
- Inadequate warning system (No fire alarm that can be activated if a fire breaks out in the work place)
- Fire and explosion hazard (Flammable liquids stored in areas with extreme temperatures. Storing chemicals in the same area that reacts with each other)
- Bad house keeping (Every thing in its place and a place for every thing. Keep your work place clean, neat and free from obstruction and keep it bacteria free. This is very important in the food preparation process)
- Noise exposure (A area that exceeds a noise level more than 85 disables)
- Temperature extremes (If good ventilation in the workplace are not adequate, this can result in worker are exposed to heat exhaustion, and can become unconscious)
- Inadequate or illumination (Good lighting is very important in the work place to ensure that the worker can do his/her job properly. Where lighting is to extreme workers can also damage there eyes by not using PPE)
- Inadequate ventilation (ventilation in the work place is from utmost importance, lack of proper ventilation can cause workers to become drowsy and this will result in accidents)

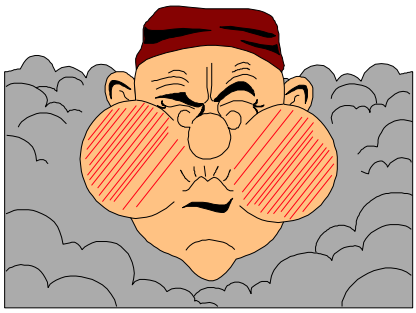
Formative Assessment 1

1.3 Occupational Safety

Some of the main causes of accidents in the workplace that result in injuries, fatalities (Death), or health hazards are as follows.

- Contact with moving machinery (Hands in the mixer while it is in operation)
- Contact with stationary objects (Good or machinery placed in the working are where workers can bump or trip over resulting in falling or injuring themselves)
- Vehicles (Run over by a car or delivery truck, Forklift, or any vehicle that is used in the workplace)
- Falling objects (Goods stacked on top of places were it can fall of and injure workers)
- Sharp point (Knives, forks and any other sharp objects that can result in cutting or penetrating the body parts of the worker)
- Hard surfaces (Floors, walls machinery that can cause injury by slipping, bumping or falling on)
- Contact with hazardous substances (getting drain cleaner in the eyes or on the skin which is corrosive and can cause blindness, or irritation of the skin)
- Extreme temperatures (Improper ventilation will cause drowsiness and poor performance of the worker and the will lead to injuries)
- Physical exertion (Carrying out tasks, such as lifting or moving objects that are heavy for long periods of time)





a. Common Hazards

Hazards will differ from work place to work place, and they could be the following, depending on the circumstances.

✓ *Confined spaces*

Areas, which is very small, or ventilation is inadequate, resulting in dangerous circumstances.

✓ *Electricity*

Electricity is one of the main causes of injuries and fires in the workplace. ***DO NOT*** work with faulty electrical equipment, ***DO NOT*** work on equipment before isolating the electricity and use the correct lockout procedures.

✓ *Fire and explosions*

Flammable liquids used in an unsafe way, chemicals that are mixed that react with each other. Eg. Striking a match when smelling gas, wrongly installed gas installations and many other examples.

✓ *Housekeeping:*

If proper housekeeping standards aren't followed it will result in using substandard equipment when the correct equipment cannot be found.

✓ *Mechanical devices*

Mechanical devices such as hand mixers, hand operated food processors, which can injure workers if not operate properly.

✓ *Radiation*

Radiation can not only be chemicals that can cause long term effects on the body but can also be heat radiation from working in front of a stove for long periods without specified intervals to recover from the exposed heat and to prevent dehydration of body fluids of the worker. It is therefore very important to take in lots of fluids when working in these environments.

✓ *Chemicals*

Chemicals such as cleaning agents can be corrosive, flammable and even explosive. Chemicals that are not used in the correct and prescribed manner as stipulated by the manufacturer can be dangerous and even fatal to the user.

✓ *Pressure*

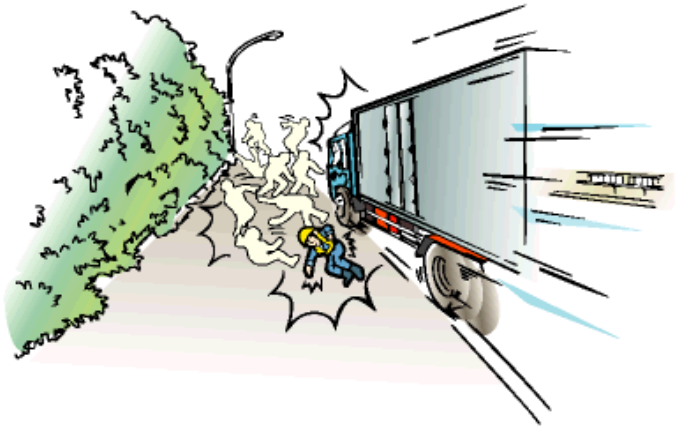
Pressure cookers in kitchen have caused many accidents in the past. Many working environments use steam for cooking purposes and extreme caution should be taken when working with this medium for many burs are caused by steam operating equipment. Gas bottles are also classified as pressure vessels and can cause burns and explosions.

✓ *Tools and equipment*

Tools and equipment used in the kitchen such as knifes, blenders, stoves, refrigeration, microwave ovens, food processors, extraction fans, and many more can be potential dangers if not properly operated. Safe working procedures must therefore be introduced for each and every task in the profession of the worker for the task to be performed.

✓ *Vehicles and machinery*

In accordance with the **O H S Act** every worker must be trained for the specific job that he/she performs or is. In sum cases a worker are not allowed to operate a machine or a vehicle without a special license after undergoing training by an accredited company and found competent to operate the machine or vehicle, and a special license must be issued. These examples can be lifting equipment, forklift trucks and motor vehicles and trucks.

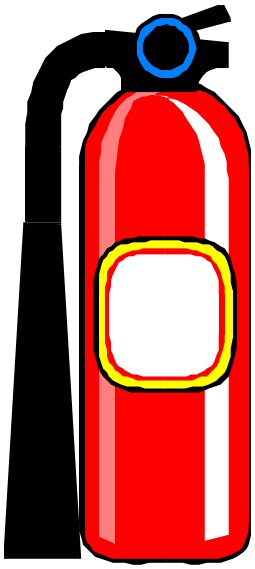


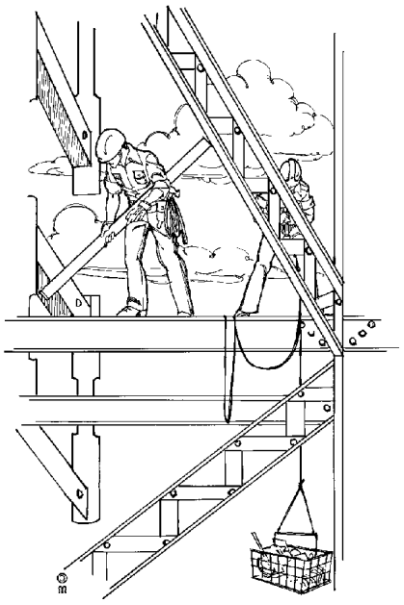
✓ *Welding, cutting and grinding operations*

Welding can cause severe harm to the eyes of the welder if the proper PPE is not used during the performance of the task. This does not only comply with the welder but also the workers working in the same area. This can be overcome by either the workers wearing the same PPE as the welder or by leaving the area where the welding takes place. Grinding and cutting is as dangerous to fellow workers as to the worker performing the job. The reason is that during grinding and cutting small parts of the material that is worked on can be flung in fellow workers eyes and can cause severe injury or permanent disablement.

✓ *Working at heights and excavations:*

Proper training must be must be given to workers before performing these tasks. These tasks include working on ladders, scaffolding, heights and trenches that is dug. Ladders can be dangerous if not in good working order and inspected regularly, if scaffolding has no firm base were it is erected it can collapse, and if special precautions is not taken when trenches is dug collapse of the side walls can cause workers to be buried alive if the side walls collapse.





b. Working with Substances

From time to time we may be working with a substance that has certain potential dangers and we need to know how to handle store or transport these substances.

We should always treat all substances we come into contact with, with extreme care.

Always find out how to handle the substance before an accident or an incident occurs involving the substance. Once the incident occurs it is too late to try and find out what to do.

✓ *Precautions*

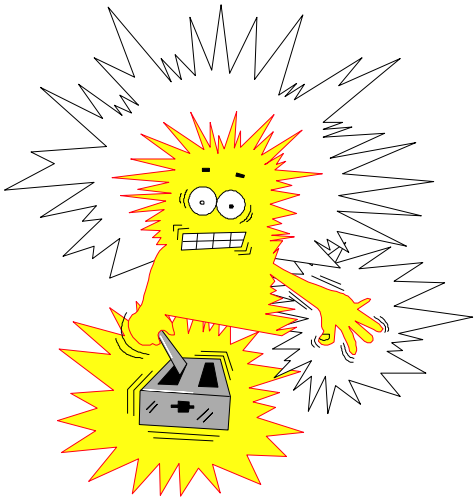
- Read and follow the instructions on the label or data sheet. It will tell or explain to you exactly the dangers, the handling and the procedures to follow in case of a fire or the first aid procedures to perform in case of accidental contact with the substance. If you walk in the forest with your friend and you see a snake will you catch it with your bear hands, obviously not? Why not? Because you do not know if the snake is venomous or not. Chemicals and substances are exactly the same. Do not attempt to handle, store, or transport the substance if you do not know the dangerous of it.
- If you are not sure what the substance is, then find out.
- Select and use the right PPE if it is required.
- Always wash your hands, face, clothes, equipment etc. after use.
- Never use flammable solvents to clean your hand or clothes.

- Ensure there is good ventilation when working with chemicals.
- Report strange chemical smells
- Waste chemicals and empty containers must be disposed of correctly. (Do not use empty chemical containers to store water or foodstuff in)

c. Electricity

Electricity is one of the main causes of accidents and fires and extra precautions should be taken when working with electricity. The following precautionary measurements should be taken in consideration.

- Inspect the appliance for faults before working with it. If you are not familiar with the appliance or received no training in the inspection of the appliance request a competent person to inspect the appliance and to train you to do it in future.
- Ensure that all the covers, guards and screens are in place as per manufacturers requirements are in place before proceeding to work with the appliance and to prevent electrical shock.
- Make sure that the switches are off before removing the plug. Make use of proper lockout procedures before commencing to clean or to work on the appliance, and when changing a light bulb.
- If you see sparks or smell smoke, switch off immediately.
- Never work with electricity equipment in water or while standing in a puddle or on any whet surface.



d. Working With / Machinery, Plant And Tools

Plant tools and machinery are also potential dangers in the workplace. It is essential that you are properly trained for the job you have to perform. The following precautions should be taken in consideration while working with plant, machinery and tools.

- Only allow authorized and trained people to work with equipment.
- Never allow passengers on moving machines that are not designed for passengers. (Forklifts, trolleys, etc.)

- Ensure all safety guards and covers are in place as per manufacturer's directions.
- Use the right equipment when goods have to be removed from high places. (Do not use chairs, boxes or drums) The correct equipment shuts as scaffolding or ladders must be used.

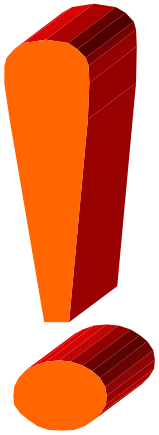
e. Hazards and risks

The OHS Act defines a hazard as "a source of or exposure to danger" and a risk as "the probability that injury or damage will occur". Each hazard thus has risk(s) involved. If you don't disconnect the electricity supply before working on an electrical appliance you run the risk of being electrocuted.

The degree of risk involved varies according to the situation. When using a sharp knife to peel an apple, a two year old toddler will run a much greater risk of cutting himself than an adult performing the same exercise.

For better understanding we will group hazards as follows:

✓ *Physical Hazards*



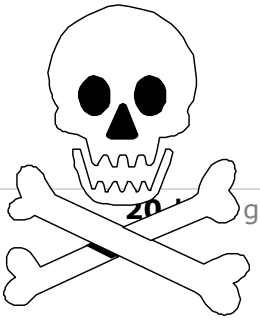
These hazards can harm the body and/or influence or stop the effective functioning thereof.

Examples include:

- Fire and explosion – The hazard is the fire, where you are exposed to danger, while the risk is that the fire can cause severe burns and injuries.
- Extreme heat – working in a steel mill or very deep underground. The hazard is the extreme heat and the risk is injury due to heat exhaustion
- Extreme cold – working outdoors in winter or in a cold room. The extreme cold is the hazard while the risk is injury due to frost bite.
- Noise – working with pneumatic (powered by compressed air) tools and equipment such as drills and jackhammers or being a member of *The Rolling Stones*. The hazard is the loud noise, while the risk is damage to your hearing due to the loud noise.
- Radiation – from exposure to arc welding, X-rays or radioactive material. Being exposed to radiation is a hazardous condition and the risk is damage to your health due to the radiation
- Water – drowning and flooding. Water is the hazard and the risk is drowning.
- Extreme physical conditions – continuous vibration experienced by drivers of heavy vehicles, the effect of extreme g-forces on fighter- and aerobatic pilots, the effect of high pressure on divers, etc. The physical conditions are the hazards and the risks are injury due to the hazards.

✓ *Chemical Hazards*

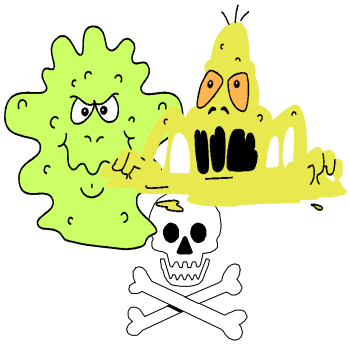
There are many categories of chemicals, each with unique properties and potential hazards.



Examples include:

- Acids – sulphuric acid, "spirits of salts", pool acid, etc. are highly corrosive and can cause severe burns. The nitrous fumes caused when nitro-glycerine based explosives like dynamite explode contain enough nitric acid to burn and cause blistering inside the lungs if inhaled, often with fatal results if not treated timely, as the blisters burst and fills the victim's lungs with liquid and he drowns. So, the hazard would be the presence of acid and the risk is injuries caused by inhaling the acid.
- Alkalis – caustic soda, soda ash, etc, are also very corrosive and can cause severe burns. Caustic soda is a hazard and the risk is injury if it comes into contact with the human body.
- Air pollution – harmful gases and dust is often released into the atmosphere and breathed in by living creatures or carried over great distances and deposited as acid rain, affecting life.
- Water pollution – toxic chemicals are released into river systems with disastrous effect on life and the environment.

✓ *Biological Hazards*

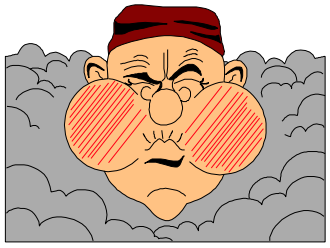


Biological hazards involve living organisms, like bacteria, spores, fungi, etc.

Examples include:

- Infections caused by bacteria, fungi, parasites, etc. The bacteria is the hazard and the risk is infection when it enters the human body.
- Farm workers and animal handlers get infections from animals. The hazardous condition exists when working with farm animals and the risk is infection due to handling the animals.
- Health workers get infected through exposure to used needles, inhaling or swallowing bacteria or viruses. A used needle is a hazard that becomes a risk when it is used.
- Sewage or waste disposal workers are continuously exposed to bacteria and viruses. Sewage is a hazard and the risk is infection when you come into contact with it.

✓ *Ergonomic Hazards*



These hazards relate to how "worker friendly" the worker's working environment is. Working under unfavourable conditions can cause discomfort and injury. Factors like having to stand for long periods, working in cramped spaces, not having adequate ventilation, etc. can all cause discomfort and eventual injury. The hazard is present in the working condition and the risk is the injury that could happen as a result of the hazard.

✓ *Psychosocial Hazards*

This normally goes hand in hand with stress and tension in the workplace. A disgruntled worker might be so upset that it affects his ability to concentrate properly. If he works with dangerous

machinery or equipment his lack of concentration may cause him to overlook safety precautions, resulting in injury or damage to property. Working with machinery is hazardous and the risk is injury or damage to property if the machine is not operated safely.

✓ *Risks*

Risks arise when a hazardous condition exists. This means that safety precautions must be undertaken:

- work according to laid down safety procedures
- wear protective clothing
- be alert to the hazard and the risk involved

1.4 General Housekeeping

✓ *Definition of housekeeping*

A place for everything, and everything in its place.

- Good lighting.
- Good ventilation
- Hygiene facilities to be kept clean
- All aisles and storage areas clearly marked
- Good stacking and storage practices
- Stacked goods must not endanger life
- Factory yards must be kept tidy
- All refuse to be placed in bins

a. Poor housekeeping

- Unnecessary rubbish, waste and vegetation in the yard
- Poor stacking/storage practices
- Unsafe handling of flammable liquids
- Compartments not kept in good condition.

Remember the definition of housekeeping; the following steps should be practiced in the housekeeping concept.

- Passages, aisles and walkways should be marked and kept clear of obstacles to prevent workers and visitors from injuries.
- Waste bins should be provided. If there is no waste bins workers tend to through waste materials and papers on the floor, this will create a fire hazard in the work place.

- All spillages must be cleared and cleaned immediately to prevent workers to slip, or be contaminated if chemicals are involved.
- Report any unusual parcels or packages to security
- Place everything in the correct place and store all products correctly.
- Clean up your work place at the end of every shift. (Do not leave it for the follow-up shift to clean.

Formative Assessment 2

1.5 Legislation

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.

The above is true because we must consider that the human factor as well as environmental factors, plays a big role in the causes of accidents.

Human beings are of nature lazy and will always look for a short cut to complete a task or assignment and we will often "get away with it", but then we will run out of luck, and someone will get hurt or killed.

We must remember and understand that …

accidents don't just happen –

they are caused by unsafe acts

and/or unsafe conditions.

Common Law requires management to take reasonable care for the Health and Safety of his or her employees.

The duty to take care of his/her employees is divided into three categories:

- The employer must provide safe premises
- The employer must provide safe machinery and tools
- The employer must provide a safe way of doing the work

Statute Law - legislation in its various forms is by far the most important source of law.

A legislative body such as parliament makes the Law. It is very important to note that legislation always supersedes the Common Law.

a. OHS

✓ *What are the objectives of the Act?*

"To provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith."

The duty of Management cannot be determined by referring to only one or two of the sections or regulations within the Act. Various general duties, as well as specific duties, are incorporated into the Act. In order to obtain a global view of the management's duties, the objective of the Act and Section 8 and 9 are to be referred to. Section 8 continues to provide a number of specific duties which must be understood to refine these duties.

It must be noted that the first six duties are subjected to the requirement of reasonable practicable, while the last four duties are not, they create their own standards which must be complied with.

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 in to the following.

That the workplace is free of hazardous substances, such as benzene, chlorine, and micro organisms, 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 responsible that they must adhere to, regarding certain regulations within this legislation.

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

✓ *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 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 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.

b. 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 with in 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.

c. General duties of Employers

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 practicable, 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.

d. The right to be informed

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.

✓ *Articles*

Manufacturers, Designers, importers, Sellers and Suppliers must ensure that the following is adhere 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 are 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 bees 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.

e. General Duties of the Employee in the workplace

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.

✓ *Duty to Inform (Section 13)*

This section of the Act actually deals with a fundamental right. Every employer must make sure that every employee is informed of the following:

- Make every employee conversant with the hazards that can affect his / her health and safety with respect to the equipment, material and the environment he / she has to operate in.
- He also has to inform the employees what steps have been taken to prevent possible injuries to employees or to mitigate the said hazard.
- Inform the Health and Safety representative of the following
  - Inspections
  - investigations or
  - Formal enquiries by the Department of Labour.
- Inform the Health and Safety representative of any incidents that occurred within his area of responsibility.

✓ *The rights of the worker*

The Occupational Health and Safety Act has 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 revered 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.

1.5 Reporting unsafe acts and conditions

a. Health and Safety Representatives

✓ *What are Health and Safety Representatives?*

They are fulltime workers nominated or elected and designated in writing by the employer after the employer and workers consulted one another and reached an agreement about who will be Health and Safety Representatives.

They must at least be familiar with the circumstances and conditions at that part of the workplace for which they are designated.

Agreement must also be reached on the period of office and functions of the Health and Safety representative and must be settled amongst the employer and the workers.

How many Health and Safety representatives must be designated?

- A representative must be designated for every workplace consisting of 20 or more workers. Therefore, where only 19 workers are employed, it is not necessary to designate a representative.
- In the case of ***shops and offices*****,** one representative must be designated for every 100 workers or part thereof. For example, one representative must be designated in the case of 21 to 100 workers.
- But two representatives must be designated where 101 to 200 workers are employed, etc.
- In the case of ***other workplaces*****,** one representative must be designated for every 30 workers or part thereof. For example one representative must be designated in the case of 21 to 50 workers.
- But two representatives must be designated where 51 to 100 workers are employed.
- Depending on the circumstances an inspector may require the designation of more representatives, even in the case where the number of workers is less than 20. For example,

the layout at the plant may be of such a nature that the designation of only one representative is insufficient. The inspector may then require the designation of more representatives.

However if the employer and workers so agree, more than the prescribed number of representatives may be designated.

✓ *When must Health and Safety Representatives be designated?*

Within four months after commencement of the employers business.

An employer with more than 20 workers, whose business is operative for less than four months, does not have to designate representatives.

In the case where, for example, seasonal workers are employed on farm, causing the number of workers to exceed 20 for a period less than four months the designation of representatives is also not necessary.

✓ *When must Health and Safety representatives perform their duties?*

All activities regarding the designation, function and training of representatives must be performed during normal working hours.

✓ *What may Health and Safety Representatives do?*

Health and Safety Representatives are entitled to do the following:

- ***Health and Safety Audits:*** Representatives may check the effectiveness of Health and Safety measures by means of Health and Safety audits.
- ***Identify potential dangers:*** Representatives may identify potential dangers in the workplace and report them to the Health and Safety Committee or the employer.
- ***Investigate incidents:*** Representatives may together with the employer investigate incidents, investigate complaints from workers regarding Health and Safety matters, and report about the findings in writing.
- ***Make representations:*** Representatives may make representations regarding the safety of the workplace to the employer or the Health and Safety committee or, where the representations are unsuccessful, to an inspector.
- ***Inspections:*** As far as inspections are concerned, representatives may
  - Inspect the workplace after notifying the employer of the inspections.
  - Participate in discussions with inspectors at the workplace and accompany inspectors on inspections.
  - Inspect documents
  - With the consent of his or her employer, be accompanied by a technical advisor during an inspection.
- ***Attend committee meetings:*** Representatives must attend Health and Safety committee meetings of which they are members.

✓ *Section 24: Report to Inspector regarding Certain Incidents*

All incidents which occur at work or which arise out of or in connection with the activities of persons at work must be reported if led to one of the following:

- Death of a person
- Unconsciousness of a person
- The loss of a limb or part of a limb by a person
- Injury/illness of a person to the degree that he/she is likely to either die or suffer a permanent physical defect
- The endangerment of the Health and Safety of any person where a dangerous substance was spilled
- The endangerment of the Health and Safety of any person where the uncontrolled release of any substance under pressure took place
- Where any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
- Where machinery ran out of control

b. Health And Safety Committees

✓ *What is the purpose of Health and Safety committees?*

Members meet in order to initiate, promote, maintain and review measures of ensuring the Health and Safety of workers.

✓ *When must Health and Safety committees be established?*

At least one committee must be established when two or more representatives are designated.

✓ *How many members does a Health and Safety committee comprise?*

- The employer determines the number of Health and Safety committee members, based on the following:
- If only one committee has been established for a workplace, all the representatives must be members of that committee.
- If two or more have been established for a workplace, each representative must be a member of at least one of those committees.
- Therefore, every representative must be a member of a committee.
- The employer may also nominate other persons to represent him or her on a committee but such nominees may not be more than the number of representatives designated on that committee.

- If however, an inspector is of the opinion that the number of committees in the workplace is inadequate, he or she may determine the establishment of additional committees

✓ *How often do Health and Safety Representatives meet?*

They meet whenever it is necessary, but at least once every three months.

The committee determines the time and place.

However, if 10% or more of the workers put a request for a meeting to the inspector, the inspector may order that such a meeting be held at a time and place which he or she determines.

✓ *Who determines the procedure of the meetings?*

The members of the committee elect the chairperson and determine his or her period of office, meeting procedures, etc.

✓ *May Health and Safety Committees consult experts for advice?*

Yes, committees may co-opt persons as advisory members for their knowledge and expertise on Health and Safety matters.

However, an advisory member does not have any voting powers.

✓ *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.
- ***Other Functions:*** Committee members must perform any other functions required of them by regulation.

✓ *Deductions*

An employer may not make any deduction from a worker's salary with regard to anything he or she is required to do in the interest of Health and Safety in terms of the Act.

✓ *Report to the Chief Inspector regarding Occupational Diseases*

If a medical practitioner examines or treats someone for a disease that he or she suspects arose from that worker's employment, the medical practitioner must report the matter to the workers employer, to the Chief inspector and notify the patient.

c. Co-operation with the Inspector

✓ *Compliance with directions, subpoenas, requests or commands.*

Employers and workers must comply with the directions, subpoenas, requests or orders of inspectors. In addition, no one may prevent anyone else from complying.

✓ *Answering questions*

The inspector's questions should be answered, but no one is obliged to answer a question by which he or she might incriminate him or herself. To incriminate oneself means that one is suggesting that one is responsible for a contravention.

✓ *Investigations*

When the inspector so requires, he or she must be provided with the necessary means and be given the assistance he or she may need to hold an investigation. The inspector may also request that individuals attend investigations that may assist the inspector with the investigation. No one may insult the inspector or deliberately interrupt the investigation.

✓ *Prosecutions*

When the worker does something which in terms of the occupation Health and Safety act is regarded as an offence, the employer is responsible for that offence, and he or she could be found guilty and sentenced for it, unless the employer can prove that:

- He or she did not give his or her consent
- He or she did take all reasonable steps to prevent it from happening
- The worker did not act within the scope of his or her competence, in other words, that the worker did something, which he or she knew he or she should not have done

d. Reporting Unsafe Work Practice and Conditions

When you witness someone performing unsafe acts in the workplace, or you notice unsafe conditions in the workplace it is your responsibility to report these conditions.

You can report these acts or conditions either to your health and safety representative or if there isn't a representative, you can report it to your superior. Another alternative is to report to the Department of Labour, who will then send an inspector to investigate the complaint.

When reporting an unsafe act or condition, it is best to do your report in writing so that there is some sort of record of your report.

Conclusion

REMEMBER THAT ALL THE RESPONSIBILITY DOES NOT ONLY LIE WITH THE COMPANY, OR THE EMPLOYER, THE WORKER HAS RESPONSIBILITIES AS WELL.

BY EXECUTING ALL THE ABOVE IN A PROPER MANNER, IT WILL ENSURE A WELL STRUCTURED, AND HEALTHY, HEALTH AND SAFETY PROGRAM IN YOUR WORKPLACE

Formative Assessment 3

1.6 Compensation for Occupational Injuries and Diseases Act no 133, 1993

a. Purpose of the Act

It is hereby notified that the Acting State President has assented to the following Act which is hereby published for general information: -

No. 130 of 1993: Compensation for Occupational Injuries and Diseases Act, 1993

To provide for compensation for disablement caused by occupational injuries or diseases sustained or contracted by employees in the course of their employment, or for death resulting from such injuries or diseases; and to provide for matters connected therewith.

b. Definitions

CHAPTER I

Interpretation of act

Definitions

1. In this Act, unless the context indicates otherwise-

(i) "accident" means an accident arising out of and in the course of an employee's employment and resulting in a personal injury, illness or the death of the employee;(xxiv)

(ii) "actuary" means any Fellow of an institute, faculty, society or chapter of actuaries approved by the Minister; (v)

(iii) "airman" means an employee employed in any capacity in an aircraft; (xlii)

(iv) "annual earnings" means-

(a) the amount referred to in section 82(1)(a) if accepted by the Director-General as correct;

(b) the amount determined by the Director-General if in his opinion the amount referred to in paragraph (a) is less than the amount 1 actually paid; or

(c) the estimated amount referred to in section 82(5); (xvii)

(v) "assessment" means an assessment made in terms of section 83 ; (ii)

(vi) "assessor" means a person appointed under section 8 as an assessor; (vii)

(vii) "Board" means the Compensation Board established by section 10; (xxviii)

(viii) "business" means any industry, undertaking, trade or occupation or any activity in which any employee is employed; (x)

(ix) "chiropractor" means a person registered as a chiropractor in terms 2 of the Associated Health Service Professions Act, 1982 (Act No. 63 of 1982); (xii)

(x) "commissioner" means the Compensation Commissioner appointed under section 2(1)(a); (xviii)

(xi) "compensation" means compensation in terms of this Act and, where applicable, medical aid or payment of the cost of such medical aid; (xl)

(xii) "compensation fund" means the fund established by section I5; (xli)

(xiii) "continental shelf" means the continental shelf referred to in section 7 of the Territorial Waters Act, 1963 (Act No. 87 of 1963); (xxxviii)

(xiv) "contractor" means a person referred to as a contractor in section 89 ; (i)

(xv) "dependant of an employee" means-

(a) a widow or widower who at the time of the employee's death was married to the employee according to civil law;

(b) a widow or widower who at the time of the employee's death was a party to a marriage to the employee according to indigenous law and custom, if neither the husband nor the wife was a party to a subsisting civil marriage;

(c) if there is no widow or widower referred to in paragraph (a) or (b), a person with whom the employee was in the at the time of the employee's death living as husband and wife;

(d) a child under the age of 18 years of the employee or of his or her spouse, and includes a posthumous child, a step-child, an adopted child and a child born out of "wedlock';

(e) a child over the age of 18 years of the employee or of his or her spouse, and a parent or any person who in the opinion of the Director-General was acting in the place of the parent, a brother, a sister, a half-brother or half-sister, a grandparent or a grandchild of the employee;

(f) a parent of the employee or any person who in the opinion of the commissioner was acting in the place of the parent,

and who was in the opinion of the Director-General at the time of the employee's death wholly or partly financially dependent upon the employee; (iv)

(xvi)"Director-General" means the Director-General of the Department of Labour;

(xvii) "disablement" means temporary partial disablement, temporary total disablement, permanent disablement or serious disfigurement, as the case may be; (vi)

(xviii) "earnings" means the remuneration of an employee at the time of the accident or the commencement of the occupational disease as calculated in terms of this Act; (xxxix)

(xix) "employee" means a person who has entered into or works under a contract of service or of apprenticeship or learnership, with an employer, whether the contract is express or implied, oral or in writing, and whether the remuneration is calculated by time or by work done, or is in cash or in kind, and includes-

(a) a casual employee employed for the purpose of the employer's business ;

(b) a director or member of a body corporate who has entered into a contract of service or of apprenticeship or learnership with the body corporate, in so far as he acts within the scope of his employment in terms of such contract;

(c) a person provided by a labour broker against payment to a client for the rendering of a service or the performance of work , and for which service or work such person is paid by the labour broker;

(d) in the case of a deceased employee, his dependants, and in the case of an employee who is a person under disability, a curator acting on behalf of that employee;

but does not include-

(i) a person, including a person in the employ of the State, performing military service or undergoing training referred to in the Defence Act, 1957 (Act No. 44 of 1957), and who is not a member of the Permanent Force of the South African Defence Force;

(ii) a member of the Permanent Force of the South African Defence Force while on "service in defence of the Republic" as defined in section 1 of the Defence Act, 1957;

(iii) a member of the South African Police Force while employed in terms of section 7 of the Police Act, 1958 (Act No. 7 of 1958), on "service in defence of the Republic" as defined in section 1 of the Defence Act, 1957;

(iv) a person who contracts for the carrying out of work and himself engages other persons to perform such work;

(v) a domestic employee employed as such in a private household; (xlvii)

(xix) "employer" means any person, including the State, who employs an employee, and includes-

(a) any person controlling the business of an employer;

(b) if the services of an employee are lent or let or temporarily made available to some other person by his employer, such employer for such period as the employee works for that other person;

(c) a labour broker who against payment provides a person to a client for the rendering of a service or the performance of work , and for which service or work such person is paid by the labour broker; (xliv)

(xx)"employer individually liable" means an employer who in terms of section 84(1)(a) is exempt from paying assessments to the compensation fund; (xlv)

(xxi) "employers' organization" means an employers' organization as defined in section 1 of the Labour Relations Act, 1956 (Act No. 28 of 1956) ; (xlvi)

(xxii) "financial year" means the period between the first day of March in any year and the last day of February in the following year, both dates included; (xi)

(xxiv) "medical aid" means medical, surgical or hospital treatment, skilled nursing services, any remedial treatment approved by the Director-General, the supply and repair of any prosthesis or any device necessitated by disablement, and ambulance services where, in the opinion of the Director-General, they were essential; (xv)

(xxv) "medical practitioner" means a person registered as a medical practitioner in terms of the Medical, Dental and Supplementary Health Service Professions Act, 1974 (Act No. 56 of 1974) (xiv)

(xxvi) "Minister" means the Minister of Labour; (xx)

(xxvii) "mutual association" means a mutual association licensed under section 30; (xxiii)

(xxviii) "National Revenue Fund" means the fund established by section 213 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 0f 1996)

(xxviii) "natural resources" means the natural resources referred to in section 7 of the Territorial Waters Act, 1963 (Act No. 87 of 1963); (xxi)

(xxix) "occupational disease" means any disease contemplated in section 65(1)(a) or (b); (ix)

(xxx) "occupational injury" means a personal injury sustained as a result of an accident; (viii)

(xxxi) "pension" means a pension referred to in section 49 or 54; (xxvi)

(xxxii) "periodical payment" means a periodical payment of compensation in respect of temporary disablement; (xxvii)

(xxxiii) "permanent disablement", in relation to an employee and subject to section 49, means the permanent inability of such an employee to perform any work as a result of an accident or occupational disease for which compensation is payable;

(xxxiii) "person under disability" means a minor, a lunatic or any person who by law is subject to curatorship or tutorship; (xxii)

(xxxiv) "prescribed" means prescribed in terms of this Act or by regulation; (xliii)

(xxxv) "presiding officer" means any officer appointed in terms of section 2(1)(a) or (b) and designated as such by the Director-General;

(xxxv) "regulation" means a regulation made in terms of this Act; (xxix)

(xxxvi) "reserve fund" means the fund established by section 19; (xxx)

(xxxvii) "seaman" means an employee employed in any capacity on board a ship by the owner or person in command of the ship; (xxxi)

(xxxviii) "serious and wilful misconduct" means-

(a) being under the influence of intoxicating liquor or a drug having a narcotic effect;

(b) a contravention of any law for the protection or the health of employees or for the prevention of accidents, if such contravention was committed wilfully or with a reckless disregard of the provisions of such law; or

(c) any other act or omission which the Director-General having regard to all the circumstances considers to be serious and wilful misconduct; (xiii)

(xxxix) "South African aircraft" means an aircraft registered or licensed in the Republic in terms of a law governing the registration or licensing of aircraft, and the owner of which is resident m the Republic or has a place of business in the Republic; (xxxiii)

(xl) "South African ship" means a vessel used in navigation which-

(a) is registered in the Republic in terms of any law governing the registration of ships and is not registered in any other state in terms of a similar law; or

(b) is owned or chartered by a person whose head office or place of business is in the Republic or by a person who resides in the Republic; (xxxiv)

(xli) "deleted (xxxii)

(xlii) "tariff of assessment" means the tariff of assessment referred to in section 83(1); (iii)

(xliii) "temporary partial disablement", in relation to an employee, means the temporary partial inability of such employee as a result of an accident or occupational disease for which compensation is payable to perform the whole of the work at which he or she was employed at the time of such accident or at the commencement of such occupational disease or to resume work at a rate of earnings not less than that which he or she was receiving at the time of such accident or at the commencement of such occupational disease; (xxxvi)

(xliv) "temporary total disablement", in relation to an employee, means the temporary total inability of such employee as a result of an accident or occupational disease for which compensation is payable to perform the work at which he was employed at the time of such accident or at the commencement of such occupational disease or work similar thereto; (xxxv)

(xlv) "this Act" includes the Schedules thereto and any regulation; (xvi)

(xlvi) "trade union" means a trade union as defined in section 1 of the Labour Relations Act, 1956 (Act No. 28 of 1956), and includes an employees' organization recognized by law and functioning; (xxxvii)

(xlvii) "Workmen's Compensation Act" means the Workmen's Compensation Act, 1941 (Act No. 30 of 1941). (xxv)

(3) (a) The accident fund established by section 64 of the Workmen's Compensation Act shall, as from the commencement of this Act, cease to exist, and all amounts credited to the accident fund immediately before such commencement, shall as from such commencement vest in the compensation fund.

(b) All liabilities and rights, existing as well as accruing, of the accident fund shall devolve upon the compensation fund as from the commencement of this Act.

c. Compensation Fund and Reserve Fund

Compensation fund

15. (1) There is hereby established a fund to be known as the compensation fund.

(2) The compensation fund shall consist of

(a) any moneys vested in the compensation fund in terms of subsection (3);

(b) the assessments paid by employers in terms of this Act;

(c) any amounts paid by employers to the Director-General in terms of this Act;

(d) any penalties and fines imposed in terms of this Act other than by a court of law;

(e) any interest on investments of the compensation fund and the reserve fund;

(f) any amounts transferred from the reserve fund;

(g) the payments made to the Director-General in terms of section 88;

(h) any other amounts to which the compensation fund may become entitled.

Application of compensation fund

16. (1) The compensation fund shall, subject to the provisions of this Act, be under the control of the Director-General and its moneys shall be applied by the Director-General to-

(a) the payment of compensation, the cost of medical aid or other pecuniary benefits to or on behalf of or in respect of employees in terms of this Act where no other person is liable for such payment;

(b) the maintenance of the reserve fund;

(c) the payment of expenses incurred in or in connection with the performance of his functions in terms of section 4(2);

(d) the reimbursement of the National Revenue Fund in respect of remuneration paid in terms of section 2(2);

(e) the payment of the prescribed remuneration and travelling and subsistence allowances to assessors;

(f) the payment of the cost of or in connection with the medical examination of employees;

(g) the payment of witness fees in terms of section 6(6);

(h) the payment of any other expenditure incurred by the Director-General in the performance of his functions in terms of this Act.

(2) The Director-General may transfer any surplus in the compensation fund to the reserve fund.

Reserve fund

19. (1) There is hereby established a fund to be known as the reserve fund, consisting of cash or investments or both.

(2) The amount of the reserve fund shall be determined by the Director-General.

(3) The objects of the reserve fund are-

(a) to provide for unforeseen demands on the compensation fund;

(b) to stabilize the tariffs of assessment.

(4) Payments out of the reserve fund shall take place on the authorization of the commissioner.

(5) The reserve fund established in terms of section 66 of the Workmen's Compensation Act shall, as from the commencement of this Act, cease to exist, and all amounts credited to the said reserve fund immediately before such commencement shall as from such commencement vest in the reserve fund established by subsection (1).

d. Compensation For Occupational Injuries

CHAPTER IV

Compensation for occupational injuries

Right of employee to compensation

22. (1) If an employee meets with an accident resulting in his disablement or death such employee or the dependants of such employee shall, subject to the provisions of this Act, be entitled to the benefits provided for and prescribed in this Act.

(2) No periodical payments shall be made in respect of temporary total disablement or temporary partial disablement which lasts for three days or less.

(3) (a) If an accident is attributable to the serious and wilful misconduct of the employee, no compensation shall be payable in terms of this Act, unless-

(i) the accident results in serious disablement; or

(ii) the employee dies in consequence thereof leaving a dependant wholly financially dependent upon him.

(b) Notwithstanding paragraph (a) the Director-General may, and the employer individually liable or mutual association concerned, as the case may be, shall, if ordered thereto by the Director-General, pay the cost of medical aid or such portion thereof as the Director-General may determine.

(4) For the purposes of this Act an accident shall be deemed to have arisen out of and in the course of the employment of an employee notwithstanding that the employee was at the time of the accident acting contrary to any law applicable to his employment or to any order by or on behalf of his employer, or that he was acting without any order of his employer, if the employee was, in the opinion of the Director-General, so acting for the purposes of or in the interests of or in connection with the business of his employer.

(5) For the purposes of this Act the conveyance of an employee free of charge to or from his place of employment for the purposes of his employment by means of a vehicle driven by the employer himself or one of his employees and specially provided by his employer for the purpose of such conveyance, shall be deemed to take place in the course of such employee's employment.

Liability for payment of compensation

29. If an employee is entitled to compensation in terms of this Act, the Director-General or the employer individually liable or the mutual association concerned, as the case may be, shall be liable for the payment of such compensation.

1.7 Claims for Compensation

CHAPTER V

Claims for compensation

Notice of accident by employee to employer

38. (1) Written or verbal notice of an accident shall, as soon as possible after such accident happened, be given by or on behalf of the employee concerned to the employer, and notice of the accident may also be given as soon as possible to the commissioner in the prescribed manner.

39. (1) Subject to the provisions of this section an employer shall within seven days after having received notice of an accident or having learned in some other way that an employee has met with an accident, report the accident to the commissioner in the prescribed manner.

(7) For the purposes of this section an accident includes any injury reported by an employee to his employer, if the employee when reporting the injury alleges that it arose out of and in the course of his employment and irrespective of the fact that in the opinion of the employer the alleged accident did not so arise out of and in the course thereof.

(12) An employer shall at the request of an employee or the dependant of an employee furnish such employee or dependant with a copy of the notice of the accident furnished by the employer to the commissioner in respect of a claim for compensation by such employee or dependant.

Particulars in support of claim

41. (1) An employee who has met with an accident shall, when reporting the accident or thereafter at the request of the employer or commissioner, furnish such information and documents as may be prescribed or as the employer or commissioner may direct.

(2) Subject to section 62, an employer shall within seven days after having received a claim medical report or other documents or information concerning such claim send such claim, report, documents or information to the commissioner.

Claim for compensation

43. (1)(a) A claim for compensation in terms of this Act shall be lodged by or on behalf of the claimant in the prescribed manner with the commissioner or the employer or the mutual association

concerned, as the case may be, within 12 months after the date of the accident or, in the case of death, within 12 months after the date of death.

(b) If a claim for compensation is not lodged as prescribed in paragraph (a), such claim for compensation shall not be considered in terms of this Act, except where the accident concerned has been reported in terms of section 39.

44. All rights to benefits in terms of this Act shall lapse if the accident in question is not brought to the attention of the commissioner or of the employer or mutual association concerned, as the case may be, within 12 months after the date of such accident.

1.8 Personal Protective Equipment

Personal Protective Equipment or PPE is the primary control measure to personal safety. When using Personal Protective Equipment, the hazards are still present in the environment. The protective device merely provides a barrier between the hazard and the worker.

It is imperative to understand that the issuing of Personal Protective Equipment is the last resort when all other methods fail to render the hazard safe.

The personal protective equipment supplied to you by your employer is for your personal safety and should be used by you only. This PPE remains the property of the COMPANY and should you misuse or abuse any safety equipment, action will be taken against you.

It is the responsibility of the workers to look after the safety equipment provided and to use it where required to by safety signs, and management ruling. It is your responsibility to report any defects of your safety equipment to your supervisor immediately.

When entering the client's premises, boards indicating the required PPE/PPC are displayed to inform people entering the site what to wear.

You should also take into consideration the type of freight (commodities) you transport e.g Dangerous goods – The PPE/PPC is indicated on the TREMCARD.

No person will be allowed to move around on site or do any work without the correct PPE/PPC. This will include the driver of a vehicle.

To ensure that the Personal Protective Programme is successful the following steps must be put in place:

- Write a policy on the usage of Personal Protective Equipment and inform employees and visitors on the use of Personal Protective Equipment.
- Select the proper/correct type of equipment
- Implement a thorough training programme
- Enforce the use of Personal Protective Equipment
- Risk assessments can and will identify were Personal Protective Equipment should be used

a. Types of personal protective equipment.

✓ *Head Protection*

Hard hats provide protection for the head in areas where the danger of falling or flying objects exists, or where the head could be bumped against low structures.

However, this protection could also be lost when a hard hat is cracked or the insert is damaged or missing. Hard hats must never be used as a seat or a bucket or for any other purpose except that for which they were designed. Hardhat linings must be washed when dirty and at least on a monthly basis

✓ *Hearing Protection*

Earplugs and earmuffs provide protection for the ears in noisy, hazardous areas, to prevent loss of hearing. Ear protectors must be maintained in an efficient and sanitary condition at all times. They should be stored in clean, dust-free containers; otherwise, users could suffer from infection of the ears.

✓ *Eye and Face Protection*

Different situations will require different safety equipment. It is important that the most effective eye protection be worn and that the care must be taken when storing and cleaning these safety equipment as the lenses can scratch and thus causing a reduction in sight. Store these equipment in such a way that the lenses will not scratch.

Safety spectacles provide protection for the eyes and must be worn where the danger of flying particles exists, e.g. where metal hand tools are used, such as chisels.

Full-face shields must be worn when grinding work is done, and where splashing hazards exist.

Safety goggles must be worn in all dusty areas. All employees involved in flame cutting, welding or brazing operations must wear welding goggles.

✓ *Hand Protection*

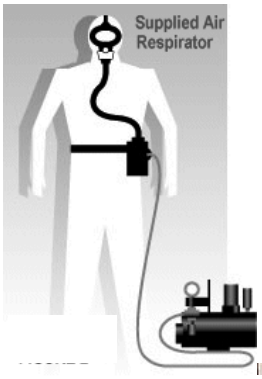
Safety gloves provide protection for the hands and must be worn if there is a chance that employees could suffer injuries to the hands, e.g. cuts or severe abrasions. Safety gloves must be kept clean and in a good condition and must never be neglected and left to lie around haphazardly.

✓ *Breathing Protection*

There are two kinds of protection available

- ***Filter type***

These respirators have filters, cartridges, or canisters that remove contaminants from the air by passing the ambient air through the air-purifying element before it reaches the user. These filters have a limited life span an have to be replace at regular intervals



- ***Air supplied type***

These supply clean air directly to the user from a source other than the air surrounding the user. The clean air is supplied by means of an “air hose” and this hose will have to be attached to the worker. Care must be taken as not to damage the “air hose”.

Some of these filter type respirator can only be worn ***once*** or have a ***limited effective lifetime*****,** and are to be changed when the user feel that little protection is offered.

Respirators must be stored in such a manner that they will not be damaged and exposed to any substance. It is important to clean and inspect the respirator after it has been used.

Before using a respirator, make sure that the respirator will offer the required protection and that all the parts are in a good working condition

✓ *Foot Protection*

Safety shoes are fitted with steel toecaps and provide protection to the feet against falling objects. Safety shoes and lasses must be kept in a good condition (cleaned and polished regularly) and must never be neglected.

✓ *Protective Clothing*

Overalls are issued to employees to reduce the possibility of injury caused by contact or radiated heat, cold, abrasive or sharp surfaces. Loose, tattered clothing worn by employees is not only indicative of an untidy method of working, but is also a hazard as it is likely to get caught in moving machine parts.

✓ *Safety Harness*

Safety belts, harness, lifelines, and climbing shoes are essential to protect employees carrying out hazardous work above ground level. These items must be kept in an excellent state of repair and maintenance must be done under strict supervision. This equipment must be stored as per the equipment manufacture's instructions.

b. Important information about PPE

Wear your personal protective equipment and clothing, you have everything to gain!

Remember that these items are expensive and in order to gain maximum protection from them, one must treat them with respect.

The PPE will only be effective if it is used correctly and for the purpose that it was designed for.

You must report defective equipment of ineffective PPE to your supervisor or Health and Safety Representative immediately. Using damaged or ineffective PPE will damage your health and will lead to other injuries

Everyone can benefit from PPE

c. PPE in the freight industry

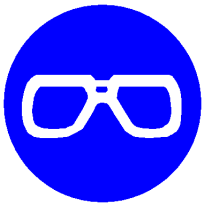
Typical protective clothing in the freight industry could include:

- Head Protection: e.g. hard hats
- Eye and Face Protection: e.g. safety goggles
- Hand Protection: e.g. gloves, welding shields
- Foot protection: e.g. safety shoes
- Protective clothing: e.g. overalls, waterproof clothing and high visibility clothing

Typical protective equipment in the freight industry could include:

- Safety signs
- Fire extinguishers and fire hoses
- Guards on moving parts of machinery
- Warning gauges in machinery and vehicles
- Gates for access control, etc.

d. DIFFERENT TYPES OF SIGNAGE PERTAINING TO PPE

Safety Sign	Meaning
 	**Safety Shoes** It is recommended that approved safety shoes be worn to protect your feet. Different safety shoes for different conditions e.g. shoes that offer protection against slipping, acids, crushing, liquids, etc.
	**Eye Protection** Proper eye protection must be worn when the nature of the operation presents a potential eye or face injury. Examples of these hazards include: Flying objects, dust, hot or splashing metals, harmful rays, caustics or acids.

	
	**Respiratory Equipment** Approved respiratory equipment shall be worn when the worker is exposed to toxic chemicals or dusts, spray-painting, or other inhalation hazards.
	
	
	**Head protection** Hardhats shall be worn in all designated areas and construction areas. Hardhats offer protection against bumps and falling objects.
	**Gloves** Appropriate gloves and aprons shall be worn when handling hazardous chemicals and abrasive materials.
	**Hearing protection** Hearing protection will be worn. There are many different types of hearing protection available, each with its own noise reduction capabilities, use the type as prescribed by your employer.

	**Safety harness and fall protection.** Use a safety harness and Lanyard. This safety equipment must be used when working on scaffolding or any elevated surface that is higher than 2meters.
	**Aprons shall be worn** Wearing of protective aprons. Workers working with or cutting and welding of metals will normally do this.

e. Maintenance of your PPE

PPE must be used and maintained in a sanitary and reliable condition.

Maintenance must be carried out on respirators, safety shoes, gloves etc. as this will ensure that the equipment will function properly and this will increase the life of the equipment.

Damaged or broken equipment must be replaced.

Slack, worn-out, sweat-soaked, or twisted headbands of hardhats must be replaced. Visual inspection can determine when the headband elasticity is reduced to a point below proper function.

✓ *Cleaning*

Only clean equipment to the manufactures specifications. Making use of other methods will cause undesired functioning of the equipment.

✓ *Storage*

Goggles should be kept in a case when not in use. Spectacles, in particular, should be given the same care as one's own glasses, since the frame, nose pads, and temples can be damaged by rough usage.

Items such as respirators and hearing protection equipment should be placed in a clean, dust-proof container, such as a box, bag, or plastic envelope, to protect them until reissue.

Only store equipment according to the manufactures specifications

Formative assessment 4

SECTION 2: IMPLEMENT AND COMPLY WITH PROCEDURES

Specific Outcome:

Implement and comply with the relevant procedures, material requirements and methodologies in maintaining prescribed safety, health and environmental standards in the workplace

Assessment criteria

- Determine and explain means for possible improvements in health, hygiene, environmental and safety practices in a given scenario
- Promptly identify possible contingency plans according to the type and scale of a simulated emergency mechanisms for unsafe working practice and conditions

2.1 The Need for Procedures

a. The disease and injury rate

It is important to measure the number of incidents that take place at work. This will tell you whether your organisation is "Healthy and Safe" and is the only way to determine whether your efforts to prevent diseases and injuries are working. The popular measurements used are the "DIIR" or "DIFR" (Frequency or Incident Rate). A Disabling injury is defined as "the loss of one or more shift/s other than the shift on which the Employee was injured". These measurements could be inaccurate for the following reasons.

Incidents often are deliberately re-classified as "Non-disabling injuries" so as to not spoil the safety performance record. This is deceptive and short sighted. Examples that have been encountered are where victims are compelled to return to work so that "they do not lose one or more shifts!" Others are the deliberate failure to include incidents where the Employee is injured on the last day of work before his rest period because then "they do not lose one or more shifts". This has also occurred where the victim is a temporary or casual Employee as they will not be returning to work.

As most injuries manifest immediately, they are easy to quantify and are included in the statistics. But as diseases are usually only diagnosed some time after the exposure, they are frequently never reflected in current statistics. This creates a totally false picture of the safety performance.

The severity of the incident is not reflected properly. There is, for instance, no difference between the loss of a shift resulting from a sprained ankle or one that results in death.

The period used to measure the safety performance was far too short. It merely covered a 12 month cycle, which meant that an organisation that had one or more deaths during that year, would be regarded as safe, a mere 12 months later. Some of the historic disasters or incidents demonstrate how easy it is to forget about the past and declare that the organisation is "Safe"!

The measurement must cover a more representative period such as for instance the past 10 years. It must take the severity of the incident also into account and should include every single incident

treated by a medical practitioner or clinic. This new measurement should be designed and adopted by your Health & Safety Committee. While a new measurement is sought, it is advisable to be very suspicious of the declared Safety achievements.

Any Supervisor, Manager or Responsible Person has common areas of loss control which includes any of the following:

- Doing Inspections
- Doing Investigations
- Preview Rules and Procedures
- Give proper Job Instruction
- Indoctrinating New Employees

Should the responsible employees not be carrying out the abovementioned acts, the supervisor is losing control.

The Supervisor, Manager or Responsible Person who manages professionally will:

- Know the Health and Safety Programme
- Know all Health and Safety Programme standards
- Plan and organize Health and Safety work to meet these standards
- Lead his/her people to achieve standards
- Correct problems as soon as they are identified

b. Workplace procedure

A workplace procedure should include the following steps:

✓ *Identification*

Identify hazardous work practices, machinery and individuals. Do regular risk assessments.

✓ *Set Standards*

Standards can be set as follows: The health and Safety Representatives will on a monthly basis do a full inspection and report on the following:

- Fire equipment
- Hazardous areas in his/her area of responsibility
- Ladders
- All accidents that occurred in his section etc.

Accurate job Health & Safety specifications must be written for each of the hazardous jobs or tasks. A comprehensive Health & Safety manual should evolve based on the Hazard/Job Analysis.

✓ *Measure the performance of those standards*

Ensure that inspections are carried out to the best of the responsible person's ability. Inspections should show when health and safety specifications are adhered to as well as when they are not adhered to.

✓ *Evaluate*

Should the results not meet the standard, identify the needs which should receive attention to rectify the problem..

Suggestions by Employees and members of the Health & Safety committee regarding various ways of regulating or controlling the tasks must be considered by the Employer.

✓ *Correct*

Problem areas where the hazard exists or non-compliance becomes evident must be remedied. This can be done by removing or reducing the hazards, repairing the faults, or rectifying the behaviour of the individual.

Address the needs via training, meetings, show videos etc. All Employees and drivers must be trained or re-trained so as to create a heightened awareness, change attitudes and behaviour and provide the skills necessary to dot the job.

✓ *Review the standards*

The effectiveness or practicality of current methods must regularly undergo close scrutiny by the Employee and Health & Safety Committee, to ensure they are still relevant.

✓ *Record the findings*

The entire history of findings, recommendations, remedial steps and actions must be well documented. These documents must be archived until needed and should not be destroyed indiscriminately.

✓ *Repeat the above*

Recognition of the dangers and hazards must be ongoing, and must include all the new substances and activities that have been included or introduced at work.

✓ *Rights of the employee / the right to be informed:*

The fundamental rights of every Employee have been entrenched in the law. It clearly spells out the duties of Employers in respect of their Employees. Employees must know precisely what they are working with, how to do the job and what precautions to take.

RIGHT TO KNOW

Employees have the right -

- To be fully informed and trained
- The right to refuse work when it is unsafe. Anything, job or machinery they come into contact, or have to work with!

2.2 How to Work Safely

- You should not commence work if a risk assessment has not been completed for the task
- Before work starts at every shift, your supervisor should have a crew talk explaining all the safety instructions for the job
- You have the right to refuse to work if you feel the conditions are unsafe.
- Always identify the things that can cause injury
- Apply control measures as specified in your risk assessment
- Remember the topics discussed at the weekly Toolbox Talks
- If you are not sure, ask your supervisor and follow instruction
- The company, your family and your colleagues need you and depend on you!

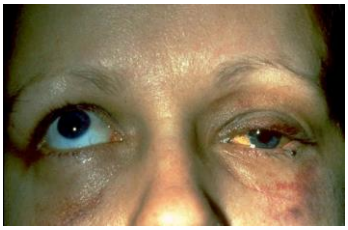
a. Safety rules

Never:

- Enter a work area that you have not been authorised to enter.
- Operate any equipment that you have not been trained to operate

Always wear:

- suitable protective clothing
- safety boots
- hard hats
- overalls



Also wear proper eye protection:

- when grinding or welding
- where notices say eye protection must be worn
- in any other place where your eyes

- could be injured.
- when instructed by your supervisor.

Use gloves, aprons other special clothing when handling:

- rough materials
- chemicals
- hot or cold objects.

- Wear hearing protection whenever notices indicate that your are in an area that requires you to wear hearing protection.

Wear respirators when:

- spray painting
- welding and cutting
- the area is very dusty
- there is any other toxic danger
- in other areas where it is required

Keep your working area clean by:

- regularly sweeping scraps,
- cleaning oil spills and
- putting refuse in the bins provided.
- be proud of your workplace
- clean as you go.
-

Keep access ways safe by:

- not blocking fire exits or traffic lanes with tools or equipment
- keeping loose material off the stairs and walkways.

Get to know your work place, in particular:

- warning and prohibitory signs
- location of fire fighting appliances

- your safety representative and first-aider
- emergency exits.

Be aware of other work near you. In particular:

- do not walk under suspended loads and be aware of persons working above you
- watch out for vehicles
- mobile equipment.

When carrying something make sure that:

- you bend your knees and keep your back nearly straight when lifting
- you get help with heavy or bulky materials
- there is only one person giving orders when a team is lifting big loads
- there is a clear path to where you want to go before starting the lift.

When using hand or power tools, make sure that:

- you are using the right tool for the job
- handles are not split
- cutting tools are sharp
- power tools are not
- being overloaded.

Only qualified people are allowed to repair tools and equipment.

Before starting machinery

- make sure all guards are in place
- check for safety of other persons in the area.

Before repairing or adjusting machinery stop and lock out the machine. Do not work on a machine while it is in operation.

You must not operate any equipment or vehicles unless you are qualified and authorized to do so.

When using oily rags:

- store them after use in covered metals bins or dispose of them safely
- keep oily rags away from oxygen cylinders.

Alcohol and Drugs

A worker may not work when under the influence of alcohol or drugs (Dagga, Mandrax etc.). Any worker who uses alcohol or drugs while working will face severe disciplinary action (Dismissal) or criminal charges.

When a worker, works while intoxicated he will put himself and his fellow workers at risk, this is very dangerous and will cause an accident.

Medication with high alcohol content, like cough mixtures, can also cause intoxication and drowsiness. This medication will also cause delayed reaction and reduced concentration. It is very important that you ask the chemist if the medication that you are using will have these side effects or read the pamphlet supplied with the medication. If it does, ask for medication that does not have these side effects. It is very important to inform your supervisor and Health and Safety Representative of your medication that you are taking and of its side effects.

Work Area Housekeeping

Good Housekeeping is an essential part of every job. Work areas, aisles, walkways, and equipment shall be kept clear of loose materials, tools, and scraps.

Materials such as lumber and pipe shall be stored in an orderly and secure manner.

Spills such as grease, water, or oil shall be cleaned up as soon as possible; a delay could result in an accident to you or a fellow worker.

A safe access shall be maintained to work areas. Short cuts should be avoided. Never block aisles, traffic lanes, or fire exits with equipment or materials.

First Aid & Occupational Hygiene

Every workplace, however small, is equipped with a First Aid Box. First Aid Boxes will be allocated to certified first-aiders. Every injury must be treated and reported to the person in charge. Injuries, which require professional medical treatment, an appropriate accident report form has

to be made out immediately by the person in charge and the injured person taken to the site clinic.

First Aid Boxes must be kept properly stocked with the minimum required contents.

Fire prevention

Smoking and open fires are not permitted in any storeroom or area, which contains flammable liquids, or any no smoking areas indicated by a non-smoking sign.

Misuse or tampering with fire prevention equipment can result in severe disciplinary action being taken.

Office and other electrical equipment must be switched off after normal working hours, over weekends or when the room in which they are installed is unoccupied.

Manholes

Work in manholes is governed by rules of work conducted in confined spaces.

- Dangerous Places

All open holes, as well as open sides of buildings must be made safe by respectively boarding over and / or by barricading to prevent people from falling to another level.

- Barricading

All minor and excavations must be barricaded by means of solid barricading.

Barrier (chevron) tape will be allowed as a means of demarcation only.

Removal or tampering with Safety Appliances

- No persons shall wilfully interfere with or misuse any means, appliances or other devices (including barricades, coverings of openings in floors etc.) providing for securing the health, safety and welfare of employees.
- Where anything for securing the health, safety and welfare of employees is provided for the use of any employee in any process, that employee shall use such equipment whilst engaged
- No person shall wilfully and without reasonable cause do anything liable to endanger the health, safety or welfare of himself or others.

Motor Vehicles

- Only authorised persons may drive Company vehicles.
- The driver must have the appropriate licence for the vehicle he is driving.
- If involved in any accident onsite / off site resulting into damages to the vehicle, the Responsible Person must be notified and required accident report form completed.

Transporting Personnel / Material

No person is allowed to be transported on the loading platform of a truck or LDV unless the following conditions are met:

The driver of any vehicle must ensure that before reversing his vehicle there are no people in his path or if so they are aware of his vehicle's movements at all times.

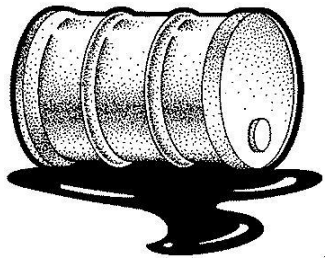
- All construction vehicles, and mobile equipment shall be fitted with a reverse alarm/hooter.
- A driver / operator must conduct a walk around test of his vehicle daily before the start of his operation. All defects found must be recorded in a log sheet and handed promptly to his supervisor for action.
- Should he identify a serious defect he must report it to the responsible manager before operating the vehicle.

General

- Use special safety equipment when required as indicated by mandatory signs.
- Report to your supervisor loss or damage immediately of any protective clothing or safety equipment, and ensure that it is replaced.
- Obey "No Smoking" signs.
- Know where the nearest fire extinguishers are and how to use them.
- Know where you're nearest emergency point is and it's number
- Store flammable liquids only in small amounts and in approved safety cans.
- Keep portable heating equipment and engines in buildings away from combustible materials.
- Do not interfere with electrical equipment until it has been isolated.
- Do not use electrical power tools or equipment while standing in water.
- Make sure the cords of electrical tools are in good condition

b. Environmental Rules

We must all be committed to ensuring that we operate to the highest environmental standards. With this in mind you are required to help with the following:



- Do not waste water
- Prevent pollution of surface and underground water.
- Ensure waste is placed in its correct containers, which are marked and placed around the site.
- Prevent spills of oil, paint and fuel.
- Use latrines placed on site- do not make use of the bush.
- Do not burn waste.
- Do not harvest fruit, crop or firewood from the surrounding area. Respect natural vegetation.
- Do not hunt animals, birds or set traps.
- Certain areas of the site will remain natural – do not destroy these trees and plants.
- Stagnant water must be reported to your supervisor to be removed.

c. ISO 14000

The ***ISO 14000*** environmental management standards exist to help organizations minimize how their operations negatively affect the environment (cause adverse changes to air, water, or land), comply with applicable laws, regulations, and other environmentally oriented requirements, and continually improve on the above.

ISO 14000 is similar to ISO 9000 quality management in that both pertain to the process (the comprehensive outcome of how a product is produced) rather than to the product itself. The overall idea is to establish an organized approach to systematically reduce the impact of the environmental aspects which an organization can control. Effective tools for the analysis of environmental aspects of an organization and for the generation of options for improvement are provided by the concept of Cleaner Production.

As with ISO 9000, certification is performed by third-party organizations rather than being awarded by ISO directly. The ISO 19011 audit standard applies when auditing for both 9000 and 14000 compliance at once.

✓ *Standards*

- The material included in this family of specifications is very broad. The major parts of ISO 14000 are:
- ISO 14001 is the standard against which organizations are assessed. ISO 14001 is generic and flexible enough to apply to any organization producing any product or service anywhere in the world. ISO 14001 is an internationally accepted specification for an environmental management system (EMS). It specifies requirements for establishing an environmental policy, determining environmental aspects and impacts of products/activities/services, planning

environmental objectives and measurable targets, implementation and operation of programs to meet objectives and targets, checking and corrective action, and management review.

- ISO 14004 is a guidance document that explains the 14001 requirements in more detail. These present a structured approach to setting environmental objectives and targets and to establishing and monitoring operational controls.

✓ *Environmental goals*

The following environmental effects are covered:

1. EFFECT: Oil from vehicles
2. EFFECT: Dust emissions
3. EFFECT: Spillage from material transportation
4. EFFECT: Vehicle exhaust emission

Effect 1: oil from vehicles

Source: Poorly maintained vehicles and whenever vehicle maintenance occurs.

Frequency: Oil leaks occur at any time and whenever machine maintenance occurs.

Control or Minimisation Method:

a. Large spillages are reported to the Superintendent and the Environmental Manager.
b. All spillages can be controlled by using an oil absorbing material, which is placed in a Waste skip bin. Oil polluted soil must be removed and placed in the Waste skip bin.

Emergency or Notification Process: The Supervisor must be notified of any oil leaks from the vehicle and arrange for immediate maintenance.

A large spillage must be reported immediately to the Supervisor and the Environmental Manager. An Environmental Incident Report must also be completed.

Effect 2: dust emissions

Source: Driving on gravel roads.

Frequency: Depending on the delivery schedule.

Control or Minimisation Method: The driver monitors dust visually.

Environmental Health:

a. Drivers must wear the appropriate PPE.
b. Annual Environmental Health Survey.
c. Annual medical examination of drivers.

Emergency or Notification Process: None

Environmental: If dust arising is significant, the driver will report it to the Supervisor and inform him/her of the road condition. Alternative routs can be scheduled if possible.

Effect 3: spillages from material transportation

Source: Spilled material from vehicles.

Frequency: In Gauteng there are on average 6 incidents per month.

Control or Minimisation Method:

a. Speed limits must be adhered to.
b. Training of driver in correct loading and transporting of material.
c. Visual inspection during loading process and before/during transportation.
d. No overloading of vehicles.

Emergency or Notification Process:

a. Drivers must report and contain spillages where possible.
b. Supervisor must arrange to clean the area.

Effect 4: vehicle exhaust emission

Source: Exhaust emissions from the vehicles.

Frequency:

a. Vehicles are moving continuously in various locations around the area.
b. Increased emissions occur when the fuel filters are dirty.
c. Lack of maintenance

Control or Minimisation Method:

a. Preventative maintenance system.
b. Pre-shift inspection of vehicles by drivers.

Emergency or Notification Process: If there is excessive exhaust emissions the Supervisor must be notified and the vehicles serviced.

d. Safety code of practice for freight lifting

As you go about your daily tasks, you need to be sure that everyone, including yourself, is working to the same set of rules and standards.

If we all know and apply the same high standards, then our working environment will be a safer and better place.

To ensure that we all perform to the same standards and quality, we need a certain code of practice that stipulates what the standards are.

We must know and understand these standards, and apply them at all times.

If we see someone not abiding by the code of practice, then we must inform that person or our supervisor, before something goes wrong and someone is injured.

The following points are some of the more important code of practice aspects we need to know.

1. Do not engage in any practices, which will divert your attention whilst engaged in slinging tasks.
2. When physically or otherwise unfit, refrain from slinging tasks.
3. Everyone MUST respond to signals from the person appointed to direct the lift.
4. If the safety of any lift is in doubt, consult the Supervisor.
5. The slinger shall be familiar with the lifting tackle and it's proper care.

6. Any defects are to be reported to the appointed person.
7. Extreme caution shall be taken where two, or more cranes are being used for a lift.
8. Always stand at least 5 metres away from a suspended load. If this is not possible, ensure that you have an escape route in case the load falls
9. Never turn your back on a suspended load.
10. Avoid turning your back on the crane operator while giving hand signals.
11. Refrain from touching the load if the base of the load is above waist level. Use a tagline to stabilise the load.
12. Unused sling legs on multi-leg slings should be hooked back into the master link.
13. When multi-leg slings are not in use, all sling legs should be hooked back into the master link, out of harm's way.
14. Place packing at sharp edges to protect the sling from damage.
15. Do not twist or knot a sling to shorten a sling. On chain slings we may use a shortening clutch.
16. Never tip load a hook.
17. Never lower a load onto a sling.
18. Remove or tie down any loose items in or on the load, which could fall off, or get hooked on something.
19. Make sure the load is free to lift and not obstructed.
20. Ensure a safe landing place is available for the load.
21. Check the path of travel of the load to ensure that it will move freely without obstructions.

e. Handling the load

✓ *Attaching the load*

The load must be attached according to prescribed safety standards.

✓ *Moving the load*

The appointed person shall not move the load, unless it is well secured, correctly balanced and positioned in the sling before moving.

✓ *Before commencing the lift, ensure:*

- The Hoist Ropes are not kinked.
- The Ropes to the Hook are not twisted around each other.
- The Hook is brought directly over the centre of the load to minimise swing.

✓ *Care to be taken during lifting:*

- No sudden acceleration or deceleration of moving load.
- Load does not contact any obstacles.
- Crane shall not be used for side pulls
- Operator shall not lift, lower or travel with passengers on the load or hook.
- Avoid carrying loads over people.

✓ *You should remember these safe practices:*

- Know the safe working load of the crane, equipment and tackle being used.
- Determine the load weight before slinging it.
- Examine all equipment, tackle and slings before using it.
- Sub-standard (defective) equipment should not be just discarded. It should be destroyed to prevent other personnel from using it.

Any person who has reasonably come to think any piece of equipment or lifting tackle supplied to him is unsafe or unsuited to the task, should not use or operate that equipment until the defect or hazard has been reported to a Supervisor, and instructions to proceed have been issued by that Supervisor, who should then be responsible for the safety of all personnel exposed to the unsafe condition.

✓ *Alcohol*

IT IS AN OFFENCE to be in a state of intoxication, or any other condition which may render, or is likely to render a person incapable of taking care of himself, or of a person under his charge, and shall not be allowed to enter a working place, or to be in the proximity of any moving machinery. No intoxicating liquor shall be taken by any person into the works, or to any place of work, unless special permission of the Manager is obtained.

f. General housekeeping for freight lifting

- As with all tasks, it is always important to ensure that we clean up after the task.
- We must ensure that the load has been placed safely and that it is blocked safely and will not fall over or roll away.
- We must ensure that all the slings, eyebolts, shackles etc., are collected, cleaned and returned to the store for safekeeping.
- There is nothing more frustrating than not being able to find good working equipment when we need it in a hurry.
- To ensure that we can find what we need, when we need it, and in good clean working condition, we all need to commit to the cause and “play the game”.
- If we always take everything back to the stores, then when someone else or ourselves need it again, we know exactly where to get it, and we can be sure that it will be clean and safe to use.

- Remember that if something goes wrong, and someone is trapped under a load, we will need to get other equipment and slings quickly, and not have to run around searching for these things, while someone's life is in danger.
- It may just be your own life that relies on others finding that shackle that you never returned to the store.

g. Stacking Of Articles/General Safety Regulation 8

According to the OHS Act, the following must be adhered to when stacking articles:

No employer shall require or permit the building of stacks which consist of successive tiers, one on top of another, unless -

a) the stacking operation is executed by or under the personal supervision of a person with specific knowledge and experience of this type of work;

b) the base is level and capable of sustaining the weight exerted on it by the stack;

c) all the articles which make up any single tier are consistently of the same size, shape and mass;

d) pallets and containers are in good condition; and

e) any support structure used for the stacking of articles is structurally sound and can support the articles to be stacked on it.

An employer shall not permit -

a) articles to be removed from a stack except from the top most tier or part of that tier; and

b) anybody to climb onto or from a stack, except if the stack is stable and the climbing is done with the aid of a ladder or other safe facility or means.

An employer shall take steps to ensure that -

a) persons engaged in stacking operations do not come within reach of machinery which may endanger their safety;

b) stacks that are in danger of collapsing are dismantled immediately in a safe manner; and

c) the stability of stacks is not endangered by vehicles or other machinery or persons moving past them.

Unless a stack is otherwise supported, an employer shall take steps to ensure that tiers of stacked material consisting of sacks, cases cartons, tins or similar containers

d) are secured by laying up articles in a header and stretcher fashion and that corners are securely bonded; and

e) are stepped back half the depth of a single container at least every fifth tier or that, alternatively, successive tiers are stepped back by a lesser amount:

    1. Provided that at least the same average angle of inclination to the vertical is achieved
    2. Provided further that where the containers are of a regular shape and their nature and size are such that the stack will be stable, they may be stacked with the sides of the stack vertical if the total height of the stack does not exceed three times the smaller dimension of the underlying base of the stack

Notwithstanding the provisions of sub-regulation (4), freestanding stacks that are built with the aid of machinery may, with the approval of an inspector, be built to a height and in a manner permitted by the nature of the containers being stacked:

Provided that -

a) the stacks are stable and do not overhang: and

b) the operator of the stacking machinery is rendered safe as regards falling articles

h. Important factors for packing and securing

1. It is essential to make the cargo in a container or vehicle secure against any reasonably foreseeable movement. At the same time the method of securing the cargo should not itself cause damage or deterioration either to the cargo or the container or vehicle.
2. Where goods of regular shape and size are concerned, a tight stow from wall to wall should be sought. However, in many instances some void spaces will occur. These can be tolerated if security is obtained by the frictional effect between adjacent packages. If there is an insufficient frictional effect, or if the spaces between the packages are too large, then the stow should be completed by using dunnage, folded cardboard, air bags or other suitable means.
3. If air bags are used, the manufacturer's instructions as to filling pressure should be scrupulously observed. Allowance should be made for the possibility of a considerable rise in the internal temperature of the container above the temperature at the time of packing which might cause the bags to expand and burst, thereby making them ineffectual as a means of securing the cargo. Air bags should not be used as a means of filling space at the doorway unless precautions are taken to ensure that they cannot cause the door to open violently when the locking bars are released.
4. The cargo weight should be evenly distributed over the floor of a container or vehicle. Where cargo items of a varying weight are to be packed into a container or vehicle or where a container or vehicle will not be full (either because of insufficient cargo or because the maximum weight allowed will be reached before the container or vehicle is full), the stow should be so arranged and secured that the approximate centre of the weight of the cargo is close to the mid-length of the container or vehicle. In no case should more than 60 per cent of the load be concentrated in less than half of the length of a container measured from one end.
5. Heavy goods should not be placed on top of lighter goods and liquids should not be placed on top of solids. The centre of gravity should be below the half-height of a container.
6. In order to avoid cargo damage from moisture, wet cargoes, moisture inherent cargoes or cargoes liable to leak should not be packed with goods susceptible to damage by moisture. Wet dunnage, pallets or packaging should not be used. In certain cases, damage to equipment and cargo can be prevented by the use of protective material such as polythene sheeting.
7. Damaged packages should not be packed into a container or vehicle unless precautions have been taken against harm from spillage or leakage.
8. Permanent securing equipment incorporated in the design of a container should be used wherever necessary to prevent cargo movement.

9. Where open-sided vehicles are concerned, particular care should be taken to secure cargo against the forces likely to arise from the rolling of the ship. In other words, a check should be made to ensure that all side battens are fitted or other adequate precautions are taken.
10. Special packing instructions shown on packages, or otherwise available, should be followed, e.g.:

- goods marked protect from frost should be packed away from the walls of a container;
- goods marked this way up should be packed accordingly.

2.3 Contingency plans

An organisation should have a contingency plan in place in the case of an emergency. Here's an example: A fire has broken out in an office building and all employees have to be evacuated. In the case of fire it is **not** safe to use the elevator but rather use the fire escape (stairs) to evacuate the building. All organisations must have emergency evacuation procedures.

If the fire has spread to the stairs, another contingency plan has to be put in place immediately. The most likely scenario from here would be for the fire brigade to step in and evacuate people through windows with a ladder that is attached to the fire truck, or be airlifted off the roof with a helicopter.

Regardless of the situation (emergency), a contingency plan has to be put in place before there is an emergency to ensure that everyone gets out of the emergency situation safely and as fast as humanly possible.

Another example of a contingency plan in transport is the back window of a bus. If there is a fire in the bus or passengers are trapped due to an accident, they can push out the back window and escape the bus through there (as calmly as possible of course).

Formative Assessment 5

2.4 Improvements to health and safety practices

Formative Assessment 6

SECTION 3: MINIMISE RISKS

Specific Outcome

Implement selected mechanisms for the minimising of safety, health and environmental impacts and risks as specified in current legislation

Assessment criteria

- Support systems and emergency services available
- The information sources available to maintain and improve awareness of the need for good housekeeping and health (e.g. AIDS Awareness) in the work place in line with statutory health and safety requirements
- Safety, health and environmental awareness
- Potential safety, health and environmental hazards resulting from poor practices in housekeeping, hygiene and safety
- Hygiene issues in the workplace
- Safety signs and symbols (national and, where applicable, international

3.1 Emergency Procedures

An emergency is an unexpected incident that requires urgent and immediate action. The possibility exists in every workplace that emergencies may occur. You also need to know what to do. Most emergencies will fall into these categories. Determine the emergencies and procedures to be followed should they occur at your workplace according to your companies' procedures. Examples of such emergencies are:

- Fire on vehicles (trucks, busses and lift trucks)
- First aid emergencies (driver, co-driver or passenger injuries)
- Accidents
- Spillages

Emergencies can take many forms, fire, bomb scare, explosion, spillage, release of toxins etc. Your employer will have plans to deal with all possible emergencies that can occur at your workplace. These plans will have been discussed with you during your induction training and it will also be

posted on notice boards. These plans rely on the employees to act in a certain manner during an emergency to ensure that no one else is injured or killed during these situations.

During a fire, everyone's safety depends on good preparation and efficient evacuation.

a. Prepare for an emergency

The first step is to find out what the emergency telephones numbers are for the area you are working in and to make sure that every health and safety representative has the numbers available.

The numbers should also be given to all the department and section heads and should be displayed in prominent places all over the workplace.

THE NATIONAL EMERGENCY TELEPHONE NUMBER IS 10177

✓ *Employers should*

- Post fire escape plans in a prominent location (notice boards, toilets and change rooms) on every level.
- Ensure all employees are familiar with exit locations; escape routes and fire extinguisher locations.
- Conduct regular fire drills.
- Post the emergency numbers on or near all telephones.
- Make provisions for safe evacuation of employees with disabilities by appointing someone to assist them.
- Appoint and train a fire warden on each level of the building to ensure safe evacuation and ongoing safety programs.

✓ *Employees should*

- Know the location of all building exits.
- Know the location of the nearest fire alarms and how to use them.
- Count the doors or desks between their work area and the nearest exit. During a fire, exit signs may not be visible due to smoke or a power failure

b. If a Fire Occurs

- Sound the alarm and leave the building immediately, closing all doors behind you. If you have been trained as a fire fighter, you must try to extinguish the fire but if it is to big then exit the building and join up with the other fire fighters.
- If smoke blocks your primary exit, use another one. If you must exit through the smoke, stay low by crawling on your hands and knees. Help the injured and lead others to the exits.
- Check doors before opening them. Kneel or crouch at the door, reach up and touch the door, knob and frame. If you feel warmth on or around the door, use another escape route. If the door feels cool, open it slowly and

carefully with your shoulder against it. Slam the door shut if you see flames or smoke on the other side.

- Call the local emergency number, no matter how small the fire appears to be.
- Follow directions from fire and security personnel. Once outside, move away from the building to the designated meeting location, out of the way of fire fighters. Here roll call will be held to determine if anybody is missing. Remain outside until the operations manager or the fire department says you may go back in

c. How to alert the Emergency Medical Services

Alerting the emergency services or telephoning for the fire brigade during a crisis situation can turn out to be a very complex procedure, unless a pre-plan is made, as to how you go about reporting the necessary facts and information.

By making use of a systematic approach, the information can be reported in a "to the point" manner without wasting any time or causing any further confusion, which enviably is present during emergency situations. As a First Responder you must know your local fire department's number and have clearly marked on all telephones at work and at home.

✓ *If somebody arrives to assist you, ask him/her the following:*

- Do you understand Afrikaans or English?
- Do you know anything about first aid?
- Please phone the Emergency Services on …
- As soon as you get through to the E.M.S. state your name and telephone number and from where you are calling.
- Supply them the reason for calling, (Coking, C.P.R. Severe bleeding, Unconscious etc.)
- Supply your exact address with landmarks and nearest crossroads.
- Find out operators name and ask the operator to repeat the address, so that you know that he knows where to send the ambulance.
- Never replace the receiver of the telephone first always wait for the operator to end off, as this will ensure the rapid response and arrival of the ambulance.
- Do you understand? What is the number?
- Are you able to make a call?
- Come back to me and report.
- Please hurry!!
- Report back to the health and safety representative or evacuate the building

- ✓ ***If nobody arrives to assist you, you will have to carry out the above procedures by yourself.***

Make sure that . . .

- You give your name & number
- Explain what is burning (house, car, factory)
- You give the address / Landmark / Nearest cross road etc.
- You point out any possible complications (20th Floor, chemical spill etc.)
- You take the operators name, and ask him to read back the address
- You let the operator end the conversation and not just cut them off
- You report back to your fire co-ordinator and await new orders

Remember . . . Your life . . . And the lives of others. . . Are much more important than property!!! Always consider your own safety first

The three "B's"

"B" AWARE

"B" ALERT

"B" CAREFUL

DO NOT . . .

"B" SORRY ???

d. The emergency scene

The First Responder (the person who is first at the scene) should protect him/herself from injury and death, since an injured or dead First Responder is useless to any emergency situation or victim/patient.

In order to prevent mishap the First Responder must always remember to first **observe the scene** to determine of danger exists and if additional help (i.e. fire department) is needed, before attempting to provide assistance.

First and foremost ***identify the presence of hazards***. Then identify, if possible, the ***cause of the emergency and the immediate environmental dangers***.

Are you as a First Responder trained and able to handle the particular hazards that are found on the scene? If not, The First Responder must call for the appropriate trained personnel to deal with the problem.

Remember the First Responder should never endanger him/herself.

The following are possible hazards that may be encountered in the field:

1. Fire or the potential of the fire.
2. Hazardous materials – chemicals, gases, etc.
3. Traffic.
4. Weather.
5. Hostile bystanders – riot and other similar situations.
6. Electricity in a dangerous capacity – leakage etc.

e. Examples of emergency procedures

✓ *Fires*

Fire spreads rapidly and has the potential to destroy anything in its path. Vehicles are expensive pieces of equipment and can easily "burn-out" if a fire is not immediately put out. Follow the Health and Safety rules and you will eliminate many of the dangers. If a fire should occur, you must raise the alarm. There are people trained to use the fire fighting appliances.

The following procedure can be followed in case of a fire on a bus:

1. Announce to the passengers what the problem is and ask that they leave the bus in an orderly fashion(if applicable)
2. Switch off the ignition and the battery switch
3. If it is not an electrical fire, disconnect the battery
4. Try and get back-up assistance because it will be easier to fight the fire with some help
5. Make sure that you have an escape route mapped out before you start tackling the fire
6. If you are outdoors, approach the fire with your back to the wind
7. Do not place yourself at risk – if the fire is too big or spreads too quickly, get out of the area
8. Remain alert – fires can change their direction and also intensify rapidly
9. Use the fire extinguishers available to put out the flames – use short, sweeping movements from the ground up and from the closest edge of the fire inwards towards the fire's centre
10. Use the fire extinguisher to extinguish the cause of the fire, instead of just extinguishing the flame
11. Once the fire has been put out, never turn your back on it. Ventilate the area and get out of any confined spaces – there may still be carbon monoxide present that is highly dangerous

12. Never use water on a fire involving equipment in the cab or engine – use dry powder extinguishers. If these are not available use earth or sand.
13. When there is a fire involving the tyres or wheels, use water. First soak the tyre and then attempt to cool the hub and the wheel. Dry powder will also work if used in short bursts
14. Report all fires, no matter how small, to your supervisor before or on your return to the depot

✓ *Road accidents*

As stipulated in the National Road Traffic Act of 1996 the following procedure must be followed in the event of an accident were anybody (Person or bovine animal) has been injured or killed.

1. Immediately stop the vehicle.
2. Ascertain the nature and extent of any injury sustained by any person or bovine animal.
3. If a person is injured, give any assistance you are capable of.
4. Ascertain the extent of any damage sustained.
5. The following information should be given to a person having grounds for requesting it:
   5.1. Name and address of driver
   5.2. The owner's / company's name and address (If applicable)
   5.3. The registration number of the vehicle involved.
   5.4. Any contact number where the driver / owner could be reached.
6. All accidents should be reported within 24 hours to the nearest police station. The driver must produce his/her driver licence and furnish his/her ID document on reporting the accident. The company may require that the driver report to their supervisor within an hour or immediately.
7. The driver may not make use of any drugs or alcohol prior to reporting the accident unless prescribed by a medical practitioner.
8. Unless authorized by a police officer, a vehicle may not be moved if anybody was injured or killed in the accident, or if the vehicle causes a complete obstruction to traffic in which case the position of the vehicle should be marked on the road surface before moving it.

Do not blame anyone or admit a mistake at the scene of the accident. Do not sign any statements or admissions of guilt. Provide information as mentioned above (5).

The insurance company and police may require a sketch of the accident scene therefore the driver should draw a sketch. All company documentation should be completed and handed to the relevant parties for further investigation.

✓ *Medical emergencies*

Any medical emergency must be reported to your supervisor. If you are qualified as a first aider assist the casualty.

✓ *Evacuation*

Determine the precise evacuation procedures at your company.

The company has an evacuation plan which includes evacuation routes and assembly points. Signs have been posted up showing you the way. It is very important that you familiarise yourself with the routes and signs.

3.2 Risk Control Measures

a. Definition of risk and loss control

"Loss Control" is a program designed to control all types of incidents which could have an affect on the business. (Loss Control is the management of anything that may cause a loss).

A "Risk" is defined in the OHS Act, as the probability or likelihood for a danger to exist. A better definition would have been: Risk means the probability that a hazard can result in injury or damage.

(Simply a "risk" means a chance of loss, and the "risk" must always be the indicator for action to be taken.)

"Risk Control" can be defined as "effective control measures implemented to control all elements and activities of the business, so as to protect people and profits".

b. Elements of business

The following elements are essential to start and maintain prosperous organisation. It is in these areas that one encounters losses.

✓ *Elements of business*

- Employees
- Material
- Equipment
- Finance
- Environment

c. Cost of incidents

All unwanted incidents cost money. Total costs are often difficult to measure, but we do know that there are always hidden expenses that must be identified and taken into account. Even a basic

incident costs a great deal. Costs must be measured in terms of the effect on the individual, the community, as well as the financial loss.

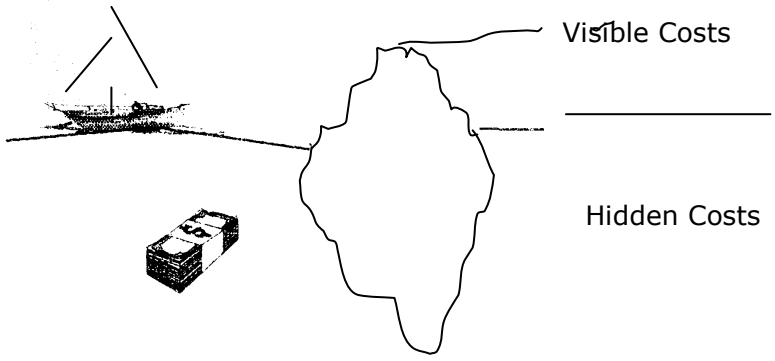
d. Social impact

Victims and their dependants could suffer great pain, discomfort, hardship, sorrow and even psychological effects for many years, following a disabling occupational disease or injury. The loss of earning power of someone who has contracted asbestosis or lost an arm will affect him or her in an unimaginable way.

e. Financial impact

The iceberg (shown on the next page) depicts the situation quite clearly, i.e.: the portion below the surface is far greater than the exposed peak. This applies to the cost of a loss-producing incident. The accumulative effects of all the incidents have a dramatic effect on the organisation's profits, as well as the national economy.

f. Cost of incidents



g. Definition of an incident

From the following definition you will see that incidents are not limited to damage!

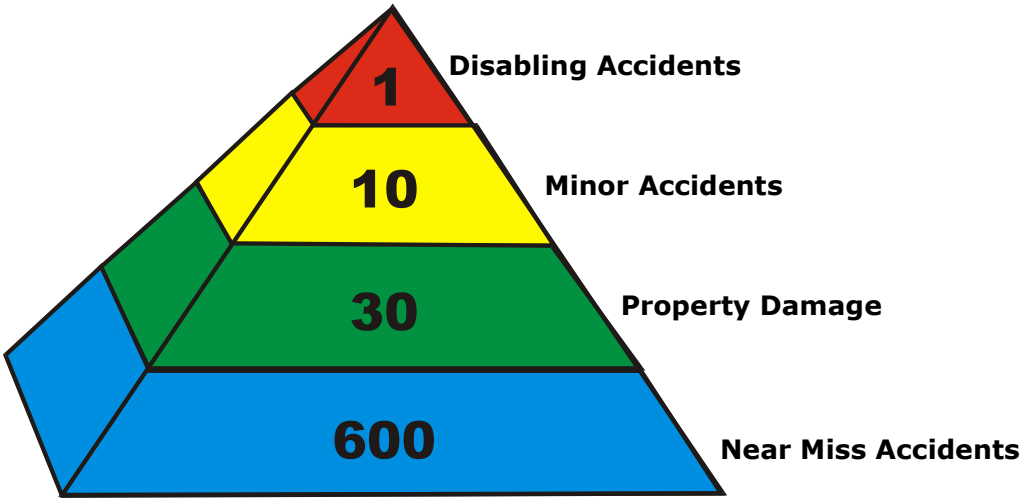
Incident means an undesired and unplanned event that could or does affect the business operations efficiency.

h. Incident ratio

As we have seen, incidents result in some or other loss. The severity depends on a number of factors, including the position of the victim or object at the time, the length of exposure, the amount of energy or force exerted and so forth.

Some incidents may have no noticeable loss, while others are catastrophic. The well known American accident prevention expert, Frank Bird Jnr, has determined that a ratio exists between the results.

Based on this, we can see that one way of eliminating the serious incidents is by reducing the base of the pyramid. This means paying attention to the numerous minor things or "Near miss" incidents that constantly occur at work.



i. Causation models / domino sequence theory:

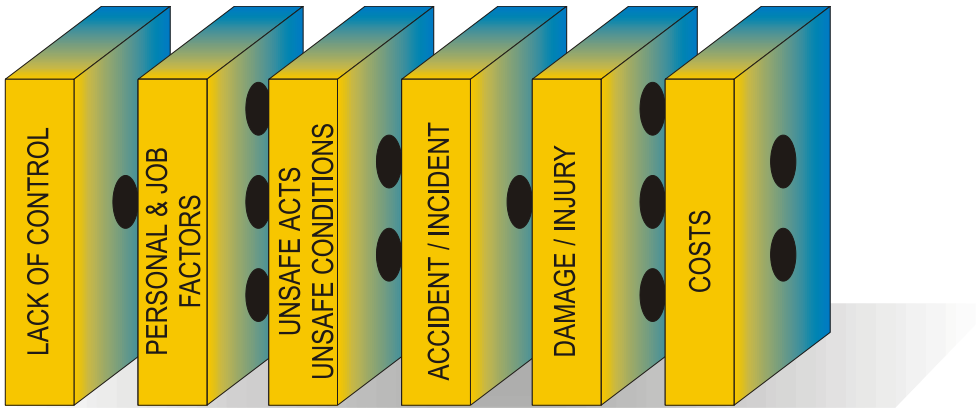
Numerous loss causation models have been introduced over the years. A large number of these are difficult to understand and remember. For this reason we focus on the illustrated domino sequence and effect as described below.

There are different circumstances that lead to a loss. During the occurrence of an incident a chain reaction follows when certain components are present at the right place and the right time. These components are constantly present in the workplace.

The end results normally vary in nature and severity e.g. injury and/or damage, near miss and/or production loss, etc.

There may be more than one cause of an incident - the theory of multi causation is that various causes normally combine together in a random fashion to result in an incident.

The domino theory is the most practical and colourful, and widely applied theory of incident causation. Hence, we focus on the domino theory.



NOTE: The factors are of a fixed and logical nature. Each one is dependent on the one immediately preceding it, so that if one is absent, no injury or damage can occur.

✓ *Lack of management control*

This describes the failure to adequately control the people and the working environment and to:

- initiate and manage Health & Safety programme
- insist on the compliance of Health & Safety standards by everyone

✓ *The personal & job factor*

This one describes the failure to adequately address the "people question" in the area of:

- awareness, complacency and commitment
- education and training
- physical or mental ability
- social and personal matters

These factors were discussed in section 1

✓ *Actual causes*

When the Human Factor domino is present, it provides the opportunity for below standard conduct or conditions. We regard the Actual Causes as the result of the first two dominoes, and divide them into two groups.

✓ *Incident or event*

Where we allow unsafe conduct or conditions to exist, the potential for an incident is greatest. This incident is the culmination of the first three factors.

✓ *Result or outcome*

The end result of the chain reaction is ultimately the loss we want to prevent. The severity of the result is essentially a matter of chance. We have seen it could range from minor to catastrophic. The results will probably take the form of a combination of illness, injury, death, damage or time loss.

✓ *Causes of incidents*

The causes of incidents are many and varied. There are both indirect and direct causes of incidents and indirect and direct results of incidents. Unsafe conduct is the single largest cause of all incidents. When planning a Health & Safety Programme, focus your attention on changing conduct or behaviour patterns. Do everything possible to bring about a positive attitude. You can achieve this by creating a pleasant working environment, providing a motivational programme, and ongoing, relevant Health & Safety training.

The old saying "you can lead a horse to water, but you cant make him drink" is true when it comes to Health & Safety. It is a personal matter and requires a commitment from each employee.

✓ *Conclusion*

A combination of factors under just the right circumstances brings about the unwanted events. Loss producing events are seldom, if ever, the result of a single cause.

j. Identify workplace hazards

To control hazards in the workplace they first need to be identified. Refer to the section where workplace hazards are discussed. Also refer to the section about working safely to give you guidelines on what to check for.

This can be done in three ways:

- Collecting Information.
- Checking records of accidents, medical and occupational hygiene reports.
- Conducting an Inspection of the Workplace.

✓ *Collecting Information*

Collect all the information you can about your workplace.

What information should you collect ?

- Information about the dangerous processes in the workplace
- Information about all the substances (raw materials, by-products and waste products used

Where Can You Get This Information?

You can find out more about safety and occupational health hazards by:

- Asking management to provide more information about a substance or process.
- Reading the Material Safety Data Sheet (MSDS)
- Asking the Supplier
- Ask the company Doctor
- Ask your union
- Do your own research or call The Industrial Health Unit (031)260-4528

Checking Records

Look at occupational hygiene and/or medical reports to ensure that these reports have not identified any areas which may be hazardous or are causing workers to become ill because of their work.

Workplace Inspections

Workplace inspections are the most important method of identifying health and safety hazards in the workplace. Later in this module we will look at how to conduct workplace inspections. In terms of the OHSA, "health and safety representatives may inspect the work place..." at regular intervals. Section 18(1)

k. Controlling workplace hazards

The purpose of controlling hazards in the workplace is to prevent workers from coming into contact with a particular hazard and thereby protecting their health and safety.

There are two basic requirements when considering the control of hazards at the workplace, these are:

- Organisation issues
- Practical measures to control the hazard

l. Organisation issues

✓ *Health And Safety Programme*

For any workplace to be safe and healthy, there has to be a clear health and safety programme. This programme should include at least the following issues:

✓ *Education and Training*

All workers must be informed of the hazardous processes with which they are working. This information must include how the processes and substances affect the body, precautions to be taken and what to do in an emergency.

✓ *Environmental Monitoring*

There must be a clear programme and schedule to monitor the hazardous processes and substances. These programmes must include workplace inspections, occupational hygiene measurements, and a careful investigation of all incidents which occur.

✓ *Medical Monitoring*

Workers must have access to a free and confidential health service provided by management. This service must carry out biological monitoring of workers for any disease which might result from the work processes or the use of hazardous substances.

✓ *Accountable Health and Safety Structures*

There must be an accountable health and safety structure at the workplace which is responsible for ensuring that the workplace is maintained in a safe and healthy condition. This structure should have an equal number of management and union representatives. The OHS Act provides for the structure and functions of a health and safety committee at the workplace.

m. Practical Measures to Control Hazards

- Control at the source
- Substitution Or Replacement
- Change the Process
- Mechanise the Process
- Enclose the Operation
- Control Along The Path
- Local Exhaust Ventilation
- Barriers
- Housekeeping
- Control At The Worker
- Personal Protective Equipment
- Administrative Controls

n. Workplace inspections

✓ *Why Do We Conduct Inspections?*

The following are at least four types of inspections that can be used. The choice depends on your Aims:

- Accident inspections.
- Special inspections.
- Inspections of documents or information.
- General inspections.

Some of the reasons for conducting inspections are:

- It enables one to identify potential hazards before they become a serious problem
- It acts as an early warning system.
- To identify health and safety hazards in the workplace with the aim of removing or controlling them.
- To discover and correct causes of accidents and/or ill health.
- To check if relevant standards and laws are being obeyed.
- To check if agreed improvements are carried out.
- How often should you conduct an inspection?

✓ *Preparing For An Inspection*

You will need the following:

- A floor plan of the workplace in order to
  - ➢ mark areas where people work.
  - ➢ write down the number of people working in each area.
  - ➢ work processes and machinery in each area.
- A health and safety checklist
- Materials Safety Data Sheets (MSDS) from management

✓ *What To Look For*

- Noise
- Very cold or hot working areas.
- Dust or fumes.
- Any noticeable smells.
- Unguarded machinery.
- Ease of entry and exit from workplace.
- Ease of movement within and around the workplace.
- Storage of articles and substances.

- Location of fire extinguishers/ first aid boxes.

✓ *The Most Important Tools You Need For Workplace Inspections Are:*

- Eyes to spot hazards
- Nose to smell bad odours as indication of hazards.
- Mouth to talk to health and safety representatives
- Brain to be always thinking and learning
- Ears to listen to workers complaints and suggestion for improvements.
- Guts to be strong enough to fight to get the hazards corrected,
- to stop work which you see is of immediate danger.
- Feet to regularly inspect the workplace.

✓ *Special Inspections*

Special workplace inspections are used to concentrate in more detail on a particular aspect of the workplace or process, where a hazardous chemical substance may be used or hazardous process is carried out. A special workplace inspection might be carried because of a change in the working conditions and could be in addition to regular inspections or general inspections.

Aims Of Special Workplace Inspection:

- To focus on specific aspects of the work environment or process.
- To investigate a problem because of workers' complaints.
- If new machines or materials have been introduced.
- If there has been a change in the work process.
- To check that correct personal protective equipment is used.
- To check warning and labelling notices.

If an accident has occurred (will be discussed in detail later)

o. Levels of observation

There are two levels of observation. They comprise the obvious and the concealed hazards.

✓ *Obvious*

These are easily identified and would include those things that are visible to the eye, such as:

- Diesel spills,
- Oil spills,
- Handrails loose, etc.

✓ *Concealed*

These hazards are not so obvious to the Observer and require some exploration. These include:

- Brakes not working,
- Air leaks, etc.

p. Classification of Hazards

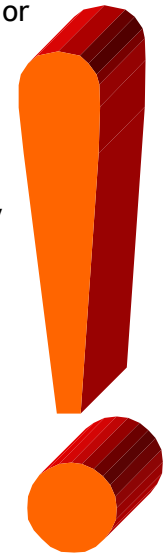
In order to effectively manage risks, it is necessary to classify hazards identified during the safety inspections and allocate points to different hazards according to severity, frequency and possible exposure.

The effect of this action will be that incidents can now be prioritised and dealt with according to priority, i.e. the most serious incident will be dealt with first and then the others in order of priority. Any classification system may be used as long as it works effectively and reflects the real state of affairs.

Normally three factors are used for this classification exercise namely severity *(how serious it is)*, frequency *(how often it occurs)* and exposure *(how many people will be exposed)*.

Severity

Class A – (Major, catastrophic, high priority, 4 points) – an incident that causes death or permanent disability or extensive damage to property or the environment.



Class B – (Serious, medium priority, 3 points) – such incidents may cause serious injury or disease or sufficient property damage to cause disruption, but without permanent far-reaching effects.

Class C – (Minor, low priority, 2 points) – these incidents normally cause minor injury or disease, if any, and minor disruption in the workplace.

Class D – (Negligible, 1 point) – no injury or loss of property involved.

Frequency

A – Likely to happen immediately. (4 points)

B – Probably will happen in time. (3 points)

C – Possible to happen in time. (2 points)

D – Unlikely to happen. (1 point)

Exposure

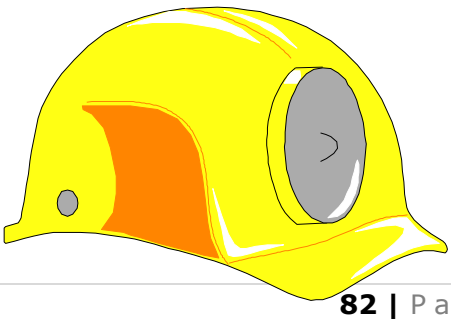
The number of people likely to be exposed to the hazard:

A – More than 50. (4 points)

B – 10 – 49. (3 points)

C – 5 – 9. (2 points)

D – Fewer than 5. (1 point)



Example:

A major hazard (4 points), which is likely to become a major incident immediately (4 points) and likely to involve more than 50 people (4 points) will score a total of 16 points, the worst case scenario.

By repeating the same exercise on other incidents the total points scored will determine the priority of the situation.

Hazards with a high score (12 – 16 points) will take high priority, demanding immediate corrective action; while hazards with a low score (1 – 5 points) will not be treated with the same urgency.

q. Implementing Risk Control Measures

Once the risk or hazard has been identified and assessed, employers must either prevent the risk arising or, alternatively, control it. Much will depend upon the magnitude of the risk in terms of the control applied. A typical hierarchy of control, from high risk to low risk, is indicated below:

1. Eliminate the hazard completely: e.g. prohibiting a certain practice or the use of a certain hazardous substance.
2. Substitution: By something less hazardous or risky.
3. Enclosure: Of the risk in such away that access is denied.
4. Guarding / safety devices: To prevent access to danger points or zones.
5. Safe systems of work: That can reduce the risk to an acceptable level.
6. Written procedures: Job safety procedures, that are known and understood by those affected.
7. Adequate supervision: Particularly in the case of young or inexperienced persons.
8. Training: Of staff to appreciate the risks and hazards.
9. Information: Safety signs, warning notices.
10. Personal protective equipment

In many cases, a combination of the above control methods may be necessary. It should be appreciated that the amount of management control necessary will increase proportionately for the controls lower down the list.

In the implementation step special emphasis must be placed on both:-

- ***Technical decisions*** - to put a chosen risk control technique into practice, and
- The ***managerial decisions*** that must be made in co-operation with other managers throughout the organisation to implement the chosen technique.
- Inform employees
- Train employees
- Supervise the performance

r. Maintaining risk control measures

- Institute a health and safety program
- Implement preventative inspections
- Health and Safety representative inspections
- Statutory inspections, tests and examinations
- Safety tours and inspections
- Occupational Hygiene inspections
- External safety and health audits

✓ *Health and safety programme*

For any workplace to be safe and healthy, there has to be a clear health and safety programme. This programme should include at least the following issues:

✓ *Education and Training*

All workers must be informed of the hazardous processes with which they are working. This information must include how the processes and substances affect the body, precautions to be taken and what to do in an emergency.

✓ *Environmental Monitoring*

There must be a clear programme and schedule to monitor the hazardous processes and substances. These programmes must include workplace inspections, occupational hygiene measurements, and a careful investigation of all incidents which occur.

✓ *Medical Monitoring*

Workers must have access to a free and confidential health service provided by management. This service must carry out biological monitoring of workers for any disease which might result from the work processes or the use of hazardous substances.

✓ *Accountable Health and Safety Structures*

There must be an accountable health and safety structure at the workplace which is responsible for ensuring that the workplace is maintained in a safe and healthy condition. This structure should have

an equal number of management and union representatives. The OHS Act provides for the structure and functions of a health and safety committee at the workplace.

✓ *Checklists*

This is a prepared list of critical points which is used as a reminder of what to look for. It must be short and motivating. Tick the relevant item and provide basic information. Attach separate sheets of paper with your comments and recommendations.

✓ *Regular inspections must be done*

To ensure that inspections are conducted regularly, the Employer must assign the duty to the Employees who have a thorough knowledge of the workplace and the hazards they will encounter there.

These duties then become part of their regular daily activities and must be completed and recorded e.g. inspecting the vehicle for any defects.

An inspection is one of the most common pro-active methods used to test and control sub-standard conditions involving people, machinery, equipment, and the environment. Once detected, remedial action and control measures can be implemented to ensure the Health and Safety of Employees.

When the hazard has been identified you must report it to the employer or committee as soon as possible. Failure to do so could result in people being exposed to the hazard, and is also illegal.

3.3 Signs and Symbols

Next we will look at signs that help minimising health and safety risks.

Symbolic signs are the way to communicate information to workers regardless of RACE, COLOUR, and LANGUAGE, OR LITERACY. It is important to ensure that all employees are informed on the meaning of symbolic signs. The Occupational Health and Safety Act and its regulations require throughout the Act that symbolic signs be displayed to inform employees about potential hazards or other information.

Five different types of signs are used within companies, administration buildings etc. all of them are based on the following.

✓ *Mandatory*

If you see this type of sign it means you must do what the picture says.

✓ *Prohibit Signs*

This sign is white a red edge and a red strip going across a black picture; it is telling you not to do something.

✓ *Fire Equipment Signs.*

This sign consist of a red picture in a white square with a thin red edge, it informs you about the type of fire equipment in the area.

✓ *Warning Signs.*

These yellow signs with a black pictogram warn employees of the hazard within the area and special care must be taken to avoid exposure to the hazard

✓ *Information Signs.*

It is necessary to give information to employees or visitors on what to do in an emergency or where specific facilities are located.

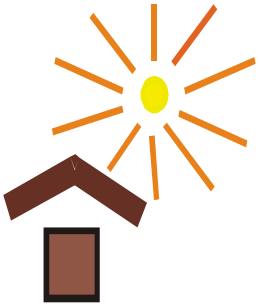
FRAGILE –
HANDLE WITH CARE

USE NO HOOKS

THIS WAY UP

CLAMP HERE

STACKING LIMIT



KEEP AWAY FROM

DO NOT ROLL

SLING HERE

NO FORKS

- ✓ *Dangerous goods symbols (DANGER)*

To handle dangerous goods you need special training that complies with all the regulations of the National Road Traffic Act 1996 Chapter VIII and all relevant SABS codes.

Class 1: Explosives

Explosives with a mass explosion hazard	
Explosives with a projection hazard	
Explosives with predominantly fire hazard	
Specific Knowledge ▫ Maybe a solid or liquid substance or mixture of both. ▫ May react chemically. ▫ Maybe flammable. ▫ Maybe unsuitable with age. Maybe poisonous / toxic.	

Class 2: Gases

Flammable gas	 

Class 4: Flammable Solids

Readily combustible and self-reactive substances	
Substances liable to spontaneous combustion	
Substances which in contact with water emit flammable gases	 

Specific Knowledge

- Easily ignited and burns fiercely.
- Water application may cause fire.
- May burn for long periods.
- May also be toxic.
- The substance may generate it's own heat, causing self-ignition.

Class 5 Oxidizers and Organic Peroxides

Oxidizing substances	
Organic peroxides	
Specific Knowledge ▫ May react with other materials. ▫ Causes combustible material to burn fiercely. ▫ May be toxic. ▫ May be unstable with age.	

Class 6: Toxic and Infectious Materials

Toxic substances	

Infectious substances	
Specific Knowledge ▫ Swallowing, absorption or inhalation will cause illness or death. ▫ Will affect foodstuff. ▫ May affect health (short or long term). ▫ Difficult to dispose of and may be dangerous for long periods of time. ▫ Severe pollution problem.	

Class 7: Radioactive Materials

Class 7 is subject to the National Road Traffic Act 93 / 1996 Dangerous Goods regulations, except were provisions of the Nuclear Energy Act, 1993 (Act 131 of 1993) are in conflict, in which case the Nuclear Energy Act provisions take precedence. We will therefore only mention this class so that you are aware of it. You will have to be given additional training and information.	  

Class 8: Corrosives

Specific Knowledge ▫ Attacks skin, clothing and materials causing burns. ▫ Leaks will damage road surfaces. ▫ Corrosion may give off flammable vapours. ▫ Have to be neutralised.	

Class 9: Miscellaneous dangerous substances

Specific Knowledge ▫ Pollution of the environment, air or water. ▫ Damage to plant and wild life.	

3.4 Inspect Damaged Packaging and Labelling

a. Product defects / damage

Product defects / damage often occur, because of various reasons. The most common is that the load has not been secured correctly and fell off the truck or shifted and bumped against the sides of the truck. These defects should be reported to the relevant personnel as soon as possible.

In refrigerated transport it is imperative that the correct temperature for the products are maintained during the delivery. For every 3 degrees Celsius above the product required temperature the shelf life of it would be reduced by half. All temperature deviations should be noted and reported to the relevant parties.

✓ *When the packaging/label is damaged*

The following suggested procedure could be followed:

- Take the necessary precautions.
- Treat the load as dangerous.
- Examine documentation from sender/ receiver.
- Examine the container

✓ *Verify the contents of containers / boxes / other freight*

This could be verified by:

- Reading documentation
- Look for identification labels on the product

Remember: It is the operator's responsibility to ensure that the product is correctly labelled.

On completion of the loading the operator should, if required complete the necessary documentation and hand it to the relevant parties.

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3.5 Occupational Health and Hygiene

a. Difference between health and safety

"Safety" is the activity that generally focuses on preventing workplace accidents. To be" safe" means FREE from any hazards. Prevention programmes have been used with varying degrees of success. They concentrated on controlling physical conditions and equipment but failed to adequately address the people issue. Many believe that as they do not work in a "dangerous" environment, the prevention programmes or laws did not apply to them.

These "Safety" factors generally result in amputations, fractures, bruises, contusions, burns, cuts, death, drowning, scratches, suffocation and so forth. They are unmistakable and fairly easy to add up, as they require first aid or medical attention. In the past Employers were not compelled or advised to follow international practices or standards, such as those of the International Labour Organisation or World Health Organisation. Laws and popular safety systems became outdated and as a result, every little time was spent looking at the problem of occupational diseases. This situation is changing rapidly. New legislation and methods of prevention are being introduced, which means we are now going to be actively looking at the problem of occupational diseases.

Personal health and hygiene relates to regular washing of the individual's body, clothing and eating utensils. It looks at food preparation and disease control, i.e. the transfer of common germs to people, etc. Conjunctivitis or "Pine eye" is an example of a non-occupational disease that is often contracted at work.

Occupational health on the other hand, covers a very broad area. It is concerned with the protection of people's health at work (occupational health) and the identification, control and monitoring of contaminants, such as noise and radiation, which could affect the health of people at work. It is also concerned with various forms of health surveillance eg. Pre-employment and periodic health screening.

b. Occupational health

"Occupational Health" focuses on the prevention of those things which could adversely affect your health or cause you to become sick. This means that we must become suspicious of those substances and activities that we previously ignored or thought were not dangerous. People were not created to cope with some of the complex substances they are exposed to either at work or at home, eg exposure to asbestos fibres could cause asbestoses, exposure to silica dust particles could cause silicoses, exposure of body/skin to askarel oil could cause blood cancer.

An Occupational Health Programme concentrates on the identification, elimination or reduction of the hazards. This is accompanied by the ongoing monitoring and protection of Employees who are exposed to the hazards. The monitoring is usually done by specialists, such as Occupational Medicine or Health practitioners and includes Biological monitoring, which is the testing of body fluids, body tissue, excreta or exhaled air and periodic Medical tests or clinical examinations.

c. Occupational health vs. personal health/hygiene

As we have seen Occupational Health concentrates mainly on those factors which could cause the employee to get an occupational disease. Occupational Hygiene focuses on the research,

identification, measurement, evaluation and control of the condition found in the workplace. These conditions include dust, mist, gasses, vapours, fumes, smoke, lighting, noise, heat, ventilation and vibration. What is often not know is that:

- Health hazards such as dust, fumes, chemicals and noise are some of the worst because so little is known about them.
- Occupational diseases are poorly recognised, rarely diagnosed and sometimes not made known to the victim.
- Little or no scientific research has been done to identify safe exposure levels of workplace chemicals, if indeed any such "safe levels" actually exist.
- Many diseases are slow and painful, such as black lung disease, asbestosis and cancer.
- The latency periods for many occupational poisons and toxins are long. Asbestos workers are dying today from exposure they had some twenty years ago. Other workers will die in the year 2020 from exposure today
- Some industrial hazards, such as noise in manufacturing operations, have become worse because of modern high-speed machinery and mass production techniques.

✓ *Extent of the problem*

Current statistics on injuries and illness are not readily available. However various attempts have been made to measure the extent of the occupational Health & Safety problem. The Workmen's Compensation Commissioner keeps statistics on the claims that his organisation receives. These statistics do not reflect the diseases diagnosed by medical practitioners who no not link them to some or other occupational influence, nor does it include those occupational diseases that were treated by traditional healers or by the person himself. In any cases the person has retired. Finally it does not take those diseases into account where the person has died of another cause.

d. Definition of Occupational Hygiene:

Occupational Hygiene is the scientific study to identify, evaluate and control the environmental factors of stress in the workplace, which may lead to sickness or health in the workplace. It may also have an impact on the workers welfare.

✓ *The following must be taken in consideration when studying occupational hygiene*

- Chemical
- Physical
- Biological
- Ergonomically
- Psychological

✓ *Types of dangers that must be taken into consideration*

- Air pollution
- Skin infections
- Noise
- Temperature extremes
- Lighting
- Radiation

✓ *Ways of contamination*

- Inhaling
- Absorption
- Swallowing
- Injecting (snake bite)

✓ *Personal hygiene*

Personal hygiene is one of the most important aspects in a food-processing and industrial environment. The following aspects must always be adhered to, and must never be neglected.

- Clean uniforms every shift.
- Wash your hands before every shift and after every visit to the toilet.
- Wash hands before tea or lunch breaks.
- Make use of an anti-bacterial soap when washing your hands.
- Always wear a head cover.
- Always make use of a nailbrush during the hands washing process.
- Clean your working space before placing any foodstuff or chemicals on it.
- Floors must be washed after every shift with an anti-bacterial cleaner.
- Good housekeeping must be practiced at all times.

e. Identification /Anticipation

Identification/Anticipation requires knowledge of the stresses arising from the environment, operations and processes. Use your senses: eyes, nose, ears, and feelings. A basic systematic procedure that may be followed in the identification of environmental health hazards, is by following the under mentioned steps.

What is produced?	
What raw materials are used?	

What materials are added in the process?	
What by- products are produced?	
What equipment is involved?	
What operational procedures are used?	
Is there a written procedure for the safe handling and storage of materials?	
What about dust control, clean up after spills and waste deposal?	
Is ventilation adequate?	
Any other comment that you would like to add!	

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3.5 Aids Awareness

a. What Is Aids

AIDS can be described as a condition, which develops when the body's defence mechanism (immune system) is not working properly. As a result, the victim of AIDS is more likely to get illnesses, which his/her body would normally have been able to fight off easily.

What basically happens is that the AIDS-Virus attacks the body's immune system. In order to understand this better, study the following on the immune system and the AIDS-Virus.

✓ *The Immune System*

We know that the body is made up of millions of cells. There are many different types of cells, each with it's own function.

The function of the white blood cells and their controlling cells – the T-helper cells – is to defend the body from harmful bacterial, viral, fungal and parasitic germs, which causes disease. They do this in different ways. Some white blood cells attack and destroy the harmful germs. Other white blood cells produce antibodies, which grab the harmful germs and render them harmless, or bind them so that other white blood cells can attack and destroy them.

This internal defence system of the body, which protects it from disease and infection, is known as the Immune System.

✓ *The AIDS – Virus*

A Virus is a tiny agent, or particle, which can only re-produce inside a living cell. AIDS is caused when the Human Immune-deficiency Virus (HIV) attacks the white blood cells, which normally protect the body against disease and infection. As the HIV Virus multiplies, more white blood cells are rendered useless. This result in Immune Deficiency, a situation in which the body's defence system against disease does not work properly, the HIV virus itself does not kill. It makes way for other life-threatening diseases.

It must be said, however, that the HIV Virus is slow growing and may remain dormant for up to six and a half years before it reproduces in the body, or before the carrier of the virus shows any symptoms.

b. Transmission Of HIV

REMEMBER: The Human Immune-deficiency Virus (HIV), which is the cause of AIDS, is found only in body fluids, namely blood, semen, vaginal secretions, breast milk, saliva, tears, bone-marrow and amniotic fluid. The blood, semen and vaginal secretions, however, are high in concentration.

This virus can, therefore, only be transmitted from one person to another by means of body fluids and in the following ways:

- An infected person can pass it on to an uninfected person through sexual intercourse and anal sex, or oral sex. It can be passed from male to male, male to female and female to male participants.
- HIV can also be transmitted through exposure to infected blood, i.e. sharing needles and syringes, razor blades, toothbrushes and blood transfusions, although the latter is very unlikely, since all donated blood and blood products are tested and treated with heat.
- HIV may be passed on from an infected mother to her child during pregnancy, birth or breastfeeding.
- It may be transmitted via the transplanting of body organs or tissues and the transfer of semen from HIV infected donors.

Casual contact such as sharing toilets and eating or drinking utensils, using the same swimming pool and casual body contact like holding hands, does not transmit HIV. It is only transmittable via infected body fluids.

c. The Risks of Contracting HIV

The risk of being infected by HIV can either be high or low, depending on the person, his habits and situation in which he is present.

For example, involvement in an accident, either as a helper or a victim, can expose a person to HIV infection, though the risk is low because accidents do not afflict or involve that person everyday. (People in the medical profession, are at high risk, because of the nature of their work).

Human behaviours, such as sex and drug abuse, are high transmission risks due to their regular and widespread practice. People are exceptionally vulnerable to HIV infection through high-risk behaviours:

- Anal sex is the highest risk practice whether a condom is worn or not.
- Engaging in sex with many different partners or with someone who has many partners is also an extremely high-risk practice.
- Engaging in sex without a condom with someone whose sexual history you do not know.
- Vaginal or oral sex with someone who practices anal sex, or who injects drugs.
- Sharing needles and syringes, razors and toothbrushes, is also a high risk.
- Other sexually transmitted diseases like Gonorrhoea and Syphilis increase the chance of the infected person catching the HIV Virus, due to the presence of ulcers and open sores on the genitals.

d. Prevention Of HIV Transmission

Because there is no cure, or vaccine for AIDS, the emphasis at the moment lies in the prevention of transmission of the HIV Virus from one person to another.

People's sexual habits are the chief cause of the HIV Virus' quick spread and it has now become necessary for them to re-assess and adjust these habits in order to prevent the spread of the virus:

- They should stick to one partner
- If they don't know their partner, they should use a condom
- They should stick to someone who does not have many sexual partners
- They should stick to someone who does not share needles and syringes to inject drugs
- They should stick to someone who is not infected with HIV
- They should not engage in sexual activities if they are infected with HIV

Other preventative measures are:

- People should go for regular medical check-ups
- They should not share needles, syringes, razors or toothbrushes
- They should wear some form of protection when working with accident victims

- They should use recommended sterilization methods with objects that are contaminated with blood

e. Safer Sex Practices

✓ *Guidelines for safer sex*

We have already mentioned that unsafe sexual habits pose a high HIV transmission risk. Unsafe sexual acts also heighten this risk. Some unsafe sexual acts are:

- Oral, vaginal and anal intercourse without using a condom
- Oral sex carried out so climax
- Sharing sex toys
- Rubbing semen onto the penis or broken skin

To reduce the risk of transmitting the HIV Virus, it is best to safe practices during sexual intimacy.

These safe sexual practices are:

- Body – to – body rubbing
- Masturbating alone, or together
- Massage
- Hugging and cuddling
- Dry kissing
- Clean sex toys that are shared

Remember: Use A Condom during oral and vaginal intercourse

f. Condoms

Latex rubber condoms are the best to use for the protection against HIV infection, because, unlike the natural membrane condoms, they do not have pores in the material. An additional precaution against the HIV infection is to use condoms with spermicide. Spermicide protects the user by killing the actual virus and is most effective when smeared on the tip and the outside of the condom.

In order for condoms to act effectively, they should be used correctly:

- Condoms with spermicide can lose their efficiency over a long period and the user therefore must check the expiry date before use.
- The condom's teat should be squeezed as the condom is rolled down the length of the erect penis.
- After climax, the user should withdraw, holding the condom in place as he does so.
- Condoms must be used only once and then discarded.
- Condoms are safer when they are used with a lubricant, but don't use Vaseline, as this causes the condom to break. Only water based lubricants should be used, such as K Jelly (available from most pharmacies

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3.6 Tuberculosis Awareness

Tubercle bacilli are transmitted through sputum, mainly in airborne droplets, or by dust particles of dried sputum. Excreta or food products rarely spread it.

Unlike other infectious diseases, tuberculosis has no specific incubation period. A single attack does not confer lasting immunity; rather, the bacilli may remain latent in the body for a long period, until a weakening of the body's resistance affords them the opportunity to multiply and produce symptoms of the disease.

Although more than a quarter of the population harbours tubercle bacilli, the disease becomes evident in only a relatively small percentage of people. It is most prevalent in areas of overcrowding and poverty. In some countries in Asia, Africa, South America, and Eastern Europe, the prevalence of tuberculosis is several hundred cases per 100,000 population.

a. Treatment

Hospitalisation is often required during early stages of treatment, but once the disease has been brought under control the patient may return to normal activity; complete treatment usually takes from six months to two years.

Antibiotics such as Rifampicin, Rifabutin, Isoniazid, and Pyrazinamide are effective against TB when given in varying combinations. Capreomycin is a powerful drug used where resistance to others is evident.

When the original infection returns to the original patient it becomes very difficult to treat further. Increasing numbers of people with AIDS (Acquired Immune Deficiency Syndrome) have also developed tuberculosis.

b. Re-Emergence of TB

While TB has long been a major problem in developing countries it was widely thought to have been eliminated in the developed world as a result of improved social conditions, mass screening, and the effective use of antibiotics and the BCG vaccine. However, in the 1980s it re-emerged in the West, for example in New York, where several thousand cases were reported.

Rising poverty and homelessness, increased migration, overcrowding, drug abuse, and inadequate, or reduced, public health services are all contributing factors. In developed countries many research facilities have been closed, and screening programmes for disadvantaged groups, such as the homeless, are no longer readily available as was the case in previous decades.

A major problem is the emergence of new, drug-resistant strains of TB as a result of patients not completing courses of treatment because they feel better. Non-completion of treatment also causes the original infection to return to the original patient in a form that is very difficult to treat further.

Increasing numbers of people with AIDS (Acquired Immune Deficiency Syndrome) have also developed tuberculosis. The WHO predicts that by 2020 nearly 1 billion people will be newly infected with TB, and of them 70 million will die.

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