

Subject: Management

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Paper: 01
Human Resource Management

Module: 34
Employee Health and Safety



Principal Investigator	Prof. S P Bansal Vice Chancellor Maharaja Agrasen University, Baddi
Co-Principal Investigator	Prof Yoginder Verma Pro-Vice Chancellor Central University of Himachal Pradesh, Kangra, H.P.
Paper Coordinator	Prof. Dr. Rajeev Jain Department of Commerce and Management Studies University of Kota, Kota
Content Writer	Prof. Dr. Rajeev Jain Department of Commerce and Management Studies University of Kota, Kota

Items	Description of Module
Subject Name	Management
Paper Name	Human Resource Management
Module Title	Employee Health and Safety
Module Id	Module No.34
Pre- Requisites	Knowledge of human resource management
Objectives	To have a knowledge of various employee health and safety schemes
Keywords	Health and safety programme, safety engineering, Health provisions, Safety provisions

QUADRANT-I

Module 34: Employee Health and Safety
1. Learning Outcome
2. Introduction
3. Health and safety program
4. Industrial accidents
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6. Safety education and training
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11. Summary

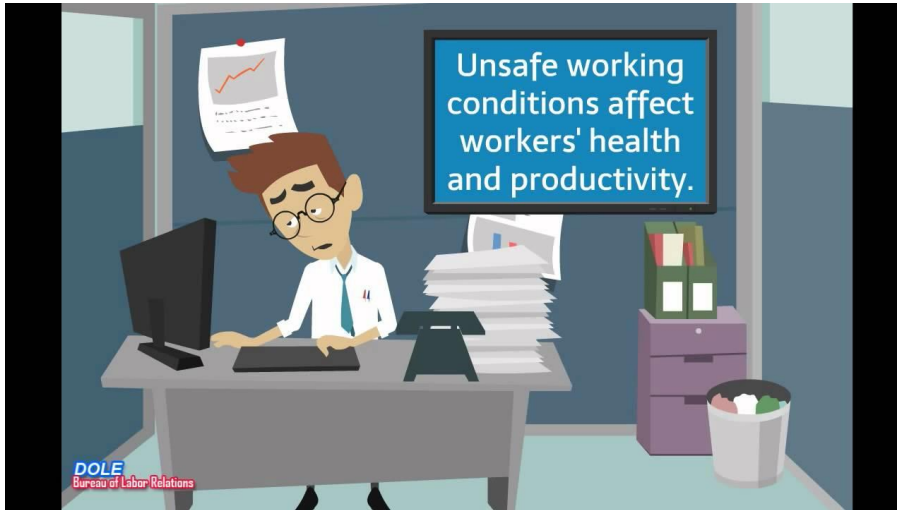
1. Learning Outcome

After completing this module the students will be able to:

- Understand the Health and safety program.
- Understand the guidelines for developing health and safety program.
- Have a knowledge of the provisions of employee Health and safety.

2. Introduction

Human resources professionals play an important role in ensuring employee health and safety, as they know the workplace, the employees and their job demands. While human resources professionals are not expected to know the technical aspects of workplace health and safety, they should know when and how to use existing resources to respond to employee concerns. In many organizations, health and safety responsibilities are within the human resources department. In order to meet these responsibilities, human resources professionals must:



Source: <https://i.ytimg.com/vi/s0CGgjQOC00/maxresdefault.jp>

- Understand the health and safety responsibilities of employers, managers, supervisors and employees within the organization;
- Implement personnel management policies to ensure that everyone in the workplace is aware of his/her responsibilities;
- Establish effective ways of meeting health and safety responsibilities; and
- Ensure that employees fulfill their health and safety responsibilities as outlined in the organizational policies and programs.

The general guidelines for integrating workplace health and safety in human resources management practices are:

- Preventing work related injuries and illnesses;
- Fostering a workplace safety culture in which employees and their supervisors work together to ensure workplace safety;
- Establishing administrative procedures that encourage employees to report unsafe conditions and unsafe practices to their supervisors without fear of being disciplined;
- Developing appropriate hiring, training and performance appraisal practices;
- Recruiting and retaining the best employees who care about their own well being and the well being of co-workers;
- Ensuring that the health and safety policies and procedures conform with the applicable occupational health and safety legislation and accepted best practices in similar organizations;
- Establishing procedures for enforcing company safety rules;
- Helping reduce costs associated with losses due to absenteeism injuries, Workers' Compensation, disability, and health care;
- Maintaining records of injuries, illnesses and workers' compensation;
- Coordinating first aid training and the provision of first aid to employees;
- Providing advice to employees and the employer in matters of occupational health and safety.

3. Health and Safety Program

A Health & Safety Program consists of clearly defined actions to implement the health and safety policy. In a large company it is desirable to have a full time safety director in addition to analysts, engineers, safety inspectors. The safety director serves as an innovator, advisor, and analyzer. He has to organize safety programmes throughout the plant and organize meetings with the line managers.

Simonds and **Grimaldi** suggest that “*as a rule one full time safety director should be appointed for each 2000 employees*”.

The safety director must investigate and report on every accident. He should periodically summarise all the injuries which have been sustained by the employees during a particular period of time and classify them plant wise, department wise and shift wise.

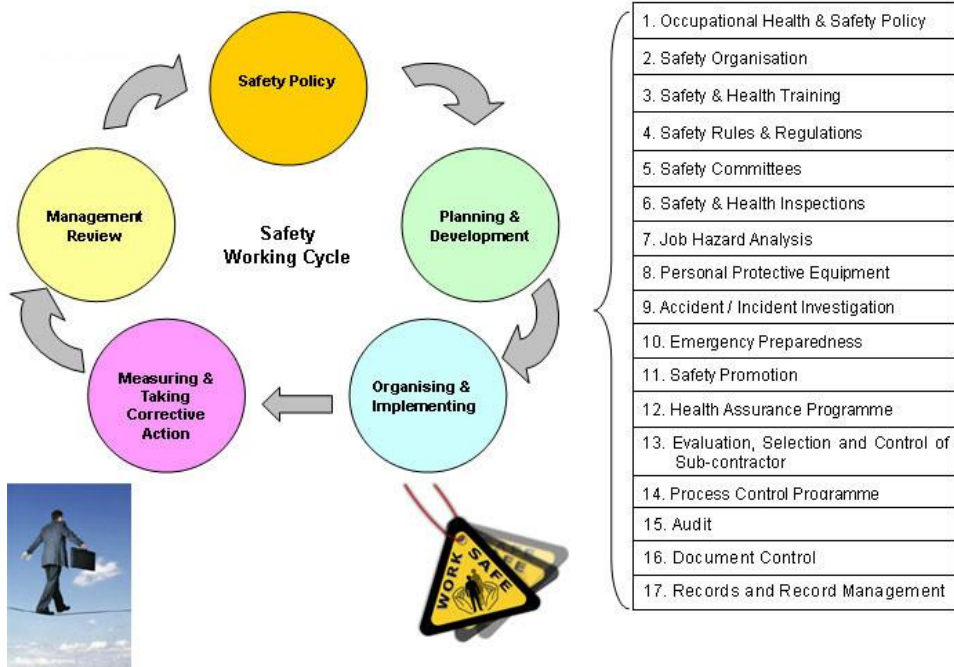
The job of a safety manager is to educate and train the line managers in the safety measures that should be adopted to prevent accidents and to tell these managers that the safety of employees is in their hands.

In some organizations safety work is carried out by a safety committee. Its function is to ensure safe working conditions in an organisation. The size of the committee depends on the size of the organisation and generally includes two or more persons from amongst the employees. The idea is that the workers should themselves be involved in the safety programmes designed for them.

The numbers of elements depend on organizational needs. Following are common elements of a health and safety program:

- Leadership and administration
- Management training
- Workplace inspections
- Task analysis and procedures
- Accident/incident investigation
- Task observation
- Emergency preparedness
- Organizational rules
- Accident/incident analysis
- Employee training
- Personal protective equipment (PPE)
- Program evaluation system
- Engineering controls
- Personal communications

- Group meetings
- General promotion
- Hiring and placement
- Purchasing controls
- Off-the-job safety
- Evaluation and continuous improvement



Source: <http://www.projectsjugaad.com/wp-content/uploads/2011/11/4-safety-and-welfare-measur.jpg>

4. Industrial Accidents

4.1. Losses due to accidents

4.1.1. Direct Losses:

These are the losses to the employer which he pays to the worker for the compensation. Employer also pays for medical expenses incurred on the worker.

4.1.2. Indirect Losses:

These losses arise from the following sources:

- Loss of time of the injured person.

- Loss of time of his fellow workers who stop working at the time of accident to help him or to show sympathy or for curiosity.
- Loss due to damage caused to the machines.
- Loss due to the reduction in the efficiency of the workers when he returns after recovery.

4.2. Causes of Accidents

4.2.1. Dangerous Machines

These accidents occur from boilers, pressure vessels, prime movers transmission system etc.

4.2.2. Unsafe physical conditions

It includes improper guards, improper illumination, improper ventilation, unsafe clothing.

4.2.3. Moving objects

Sometimes moving object or falling objects causes accidents.

4.2.4. Personal factors

Sometimes accidents occur due to some personal factors like lack of knowledge, physical weakness.

4.2.5. Exposure to harmful substances

Injuries due to accidents are also caused due to exposure to harmful substances like toxic gases, fumes, dust, vapors, mist and aerosols.

5. Safety Engineering

The adoption of proper engineering procedures to minimize and if possible eliminate the work hazards is very crucial for any safety program. New products, processes and machines are designed, and full attention is paid to safety engineering in design, layout and installation. The most important function of safety engineering is to eliminate the risks posed by the operation of machines, by the processes of the manufacture of products and by the structure and layout of plants and equipment. The machinery which poses danger to the employee working on it is generally covered or fenced carefully when it is in operation. Use of Personal Protective equipments shall be ensured like:



Figure 1 Safety provisions in an organisation

7.1. Fencing of machinery

Every moving part of a prime mover, every flywheel, Head race and tail race of every water turbine shall be properly fenced in every factory. Every part of an electric generator, a motor, or a rotary convertor must be properly safeguarded.

7.2. Work on or near machinery

The work on or near machinery must be done by a trained person wearing a tight fitted clothing. No woman or young person is allowed to clean lubricate or adjust any part of a prime mover or any transmission machinery when it is motion.

7.3. Casing of machinery

Every screw, bolt, key, wheel or pinion shall be so effectively guarded as to prevent danger, every toothed or friction gearing shall be effectively encased.

7.4. Hoists and lifts

Every hoist and lift shall be of good mechanical construction and of adequate strength. They shall be properly maintained and examined regularly. Every hoist way and lift way shall be sufficiently protected by an enclosure fitted with gates.

Hoists and lifts used for carrying persons shall have at least two ropes or chains separately connected with the cage and balance weight and each rope or chain with its attachment shall be capable of carrying the weight of the cage together with its maximum load.

7.5. Lifting machines, chains ropes and lifting tackles

Lifting machines means a crane, crab, pulley block etc.

All parts including the working gears, lifting machines, chains, ropes or lifting tackles shall be of good construction and of adequate strength. These must be maintained and thoroughly examined at least once in a year.

7.6. Excessive weights

No person is employed in the any factory to lift, carry or move any load so heavy as to cause him injury.

7.7. Protection of eyes

For protection of eyes screens, goggles shall be provided to the persons involved in welding, cutting, rivet cutting, dressing of metals etc.

7.8. Protection against dangerous fumes

In any factory no person is permitted to enter any chamber, tank, pit, pipe or other confined space in which dangerous fumes are likely to be present to such an extent as to involve risks to persons, unless it is provided with a manhole of adequate size.

7.9. Precautions against Fire

Every factory shall be provided with means of escape in case of fire. Doors exit from any room shall not be locked or fastened so that they can be easily and immediately opened from inside while any person is inside the room.

There should be well designed system for detection control and prevention of fire. Adequate firefighting equipment, including foam, vapor liquid, carbon dioxide, dry chemical fire extinguishers, high pressure water lines, fire pads, sand and axes should be maintained.

Effective means of giving warning in case of fire to every person shall be provided.

8. Health

The term health is a positive and dynamic concept and implies more than an absence of illness. The WHO has defined health as a state of complete physical, mental and social well being and not merely the absence of disease. Industrial health refers to a system of public health and preventive medicine which is applicable to industrial concerns.

8.1. Objectives of industrial health programme

The basic objective of industrial health is the prevention of disease and injury rather than the cure of disease. It involves a programme of health conservation and prevention of occupational disease. The main focus in occupational health is on three different objectives:

- The maintenance and promotion of workers' health and working capacity;
- The improvement of working environment and work to become favourable to safety and health development of work organizations and working cultures in a direction which supports health and safety at work and in doing so also promotes a positive social climate and smooth operation and may enhance productivity of the undertakings;
- The concept of working culture is intended in this context to mean a reflection of the essential value systems adopted by the undertaking concerned. Such a culture is reflected in practice in the managerial systems, personnel policy, principles for participation, training policies and quality management of the undertaking.

A comprehensive industrial health programme should include:

- A Professional staff of physicians and nurses.
- Adequate facilities for emergency care and injuries sustained in the course of work and for the conduct of pre-employment and post-employment medical check-ups.
- Proper first aid treatment for occupational injuries and diseases.
- Reasonable first aid treatment of employees for non-occupational ailments-for example for cold, sore throat, skin disorders, headaches and gastrointestinal upsets.

8.2. Importance of Industrial Health

The industry exposes a worker to many hazards which he would not meet elsewhere and which may affect his health. It is with the intention of reducing these hazards and improving the workers health that the discipline of industrial health came into being as a branch of public health in its own right.

The symptoms of bad health are a high rate of absenteeism and turnover, industrial discontent and indiscipline, poor performance and low productivity. That is the reason why when industrial health programmes are introduced both employers and workers benefit and due to this there is a reduction in the rate of labour turnover, absenteeism, accidents and occupational diseases.

9. Occupational Health and Safety in India

The health and safety of employees working in factories and mines have been given high importance in India. The constitution of India has provisions to ensure that the health and well being of employees are protected and the government has the duty to ensure this protection.

Occupational Health & Safety



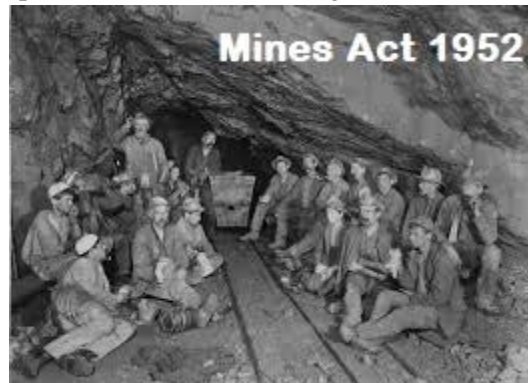
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9.1. The Factories Act of 1948

It regulates the health and safety of workers working in factories. The act is enforced by state governments through their factory inspectorates. The Directorate General Factory Advice Service and Labour Institutes (DGFASLI) coordinates matter concerning safety, health and welfare of the workers in the factories along with the respective state governments. It conducts training, studies, and surveys through the Central Labour Institute in Mumbai and three other labour institutes in Calcutta, Chennai, and Kanpur.

9.2. The Mines Act of 1952

It has provisions related to the health safety and welfare of workers in coal, metal and oil mines. The Director General of Mines Safety conducts inspections and inquires issues, for the purpose of appointment to various posts in the mines and organizes seminars/conferences on



topics related to safety of workers.

Source: <https://lawsenate.files.wordpress.com/2014/03/mines-act-1952.jpg>

9.3. The Dock Workers (Safety, Health, and Welfare) Act of 1986

It contains provisions for the health, safety, and welfare of workers working at the ports/docks. Overall emphasis is on the number of accidents occurring at the ports.

Companies like Accenture India, Infosys and Pfizer India have health clubs equipped with modern equipment and qualified trainers at the company premises. Public sector units like National Thermal Power Corporation (NTPC), Steel Authority of India Limited (SAIL) and Bharat Heavy Electricals Limited (BHEL) provide such facilities in their residential townships for employees. Sessions on yoga, meditation and other relaxation techniques are introduced at the workplace as stress busters.



Source: <https://www.schletker.com/photos/dockworker.jpg>

10. Health provisions in an Organisations

10.1. Cleanliness

Every factory shall be kept clean and free from gases arising from any drain or their nuisance. For this purpose following steps should be undertaken: The dust and refuse must be removed daily by sweeping from the floors and benches of workrooms, from staircases and from passages. Effective means of drainage shall be provided and maintained. All inside walls, partitions, ceilings of rooms must be regularly painted and whitewashed.

10.2. Ventilation temperature

Effective and suitable provisions shall be made for:

- Adequate ventilation must be there by the circulation of fresh air in the workroom.
- Reasonable comfort must be provided to the workers.
- Walls and roofs must be of such material and designed in such way that temperature is not exceeded and kept low in the working area.
- Hot parts of the machinery are kept insulated.

10.3. Artificial humidification

If there is an artificial humidification it shall be of prescribed standard and created by the prescribed methods. The water used for such humidification shall be clean and free from dirt.

10.4. Lighting

Sufficient and suitable lighting whether natural or artificial or both should be maintained and provided at the working places. All the glazed windows and skylight shall be kept clean on both the inner and outer surfaces. Glare and formation of shadows should be prevented to avoid eyestrain or risk of accident.

10.5. Drinking water

Drinking water should be made available to all workers at all working hours and should be provided and maintained at suitable points.

10.6. Bath rooms

If the work in the factory is of such nature which involves dirt a sufficient number of bath rooms shall be provided.

10.7. Latrines and urinals

Separate enclosed accommodation for male and female workers shall be provided. The accommodation shall be adequately lightened and ventilated and shall be maintained in clean and sanitary conditions at all times.

10.8. Spitoons

Sufficient number of spittoons shall be kept at convenient places and they shall be washed regularly and kept clean.

11. Summary

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A Health & Safety Program consists of clearly defined actions to implement the health and safety policy. In a large company it is desirable to have a full time safety director in addition to analysts, engineers, safety inspectors. The safety director serves as an innovator, advisor, and analyzer. He has to organize safety programmes throughout the plant, investigate and collect accident data, organize meetings with the line managers.

There are some health provisions like providing cleanliness, proper ventilation, proper lighting, drinking water, bathrooms etc. There are some safety provisions like providing casing of machinery, hoists and lifts, protection of eyes, precautions against fire, precautions against dangerous fumes etc.