

EBCE220E6-
ENVIRONMENT,
HEALTH AND SAFETY
IN INDUSTRIES

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UNIT I: INTRODUCTION

UNIT II: OCCUPATIONAL HEALTH AND HYGIENE

UNIT III: WORKPLACE SAFETY AND SAFETY SYSTEMS

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UNIT I: INTRODUCTION

- Need for developing Environment, Health and Safety systems in work places
- Relationship of Acts, Regulations and Codes of Practice
- Role of trade union safety representatives
- Ergonomics and work place

ENVIRONMENT, HEALTH AND SAFETY

Environment, health and safety is an interdisciplinary field focused on the study and implementation of practical aspects in environmental protection and safeguard of people's health and safety, especially at company level and in an occupational context. It is what organizations must do to make sure that their activities do not cause harm.

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NEED FOR DEVELOPING ENVIRONMENT, HEALTH AND SAFETY SYSTEMS IN WORK PLACES

Accidents:

- An "**accident**" is an unplanned, undesired event which may or may not result in injury or property damage that interferes with the completion of an assigned task
- A "**near miss**" is a form of an accident that does not result in injury or property damage
- **Unsafe conditions** are hazardous conditions or circumstances that could lead directly to an accident
- An **unsafe act** occurs when a worker ignores or is not aware of a standard operating procedure or safe work practice designed to protect the worker and prevent accidents

Causes of accidents:

An accident often has more than one cause. Accidents can be prevented by removing their causes.

Basically there are two causes of accidents:

1.Unsafe acts

Using short cuts, Unauthorized operation, Smoking inside the site premises, Wearing loose clothes, Inappropriate use of equipment

2.Unsafe conditions

The person who gets injured does not always cause the accident. However, accidents are caused by some person(s) failing to act safely or to correct an unsafe condition.

Many accidents are preceded by 'near misses' in which an accident or injury was narrowly avoided. These are free lessons in safety and identify areas where safety control strategies are needed.

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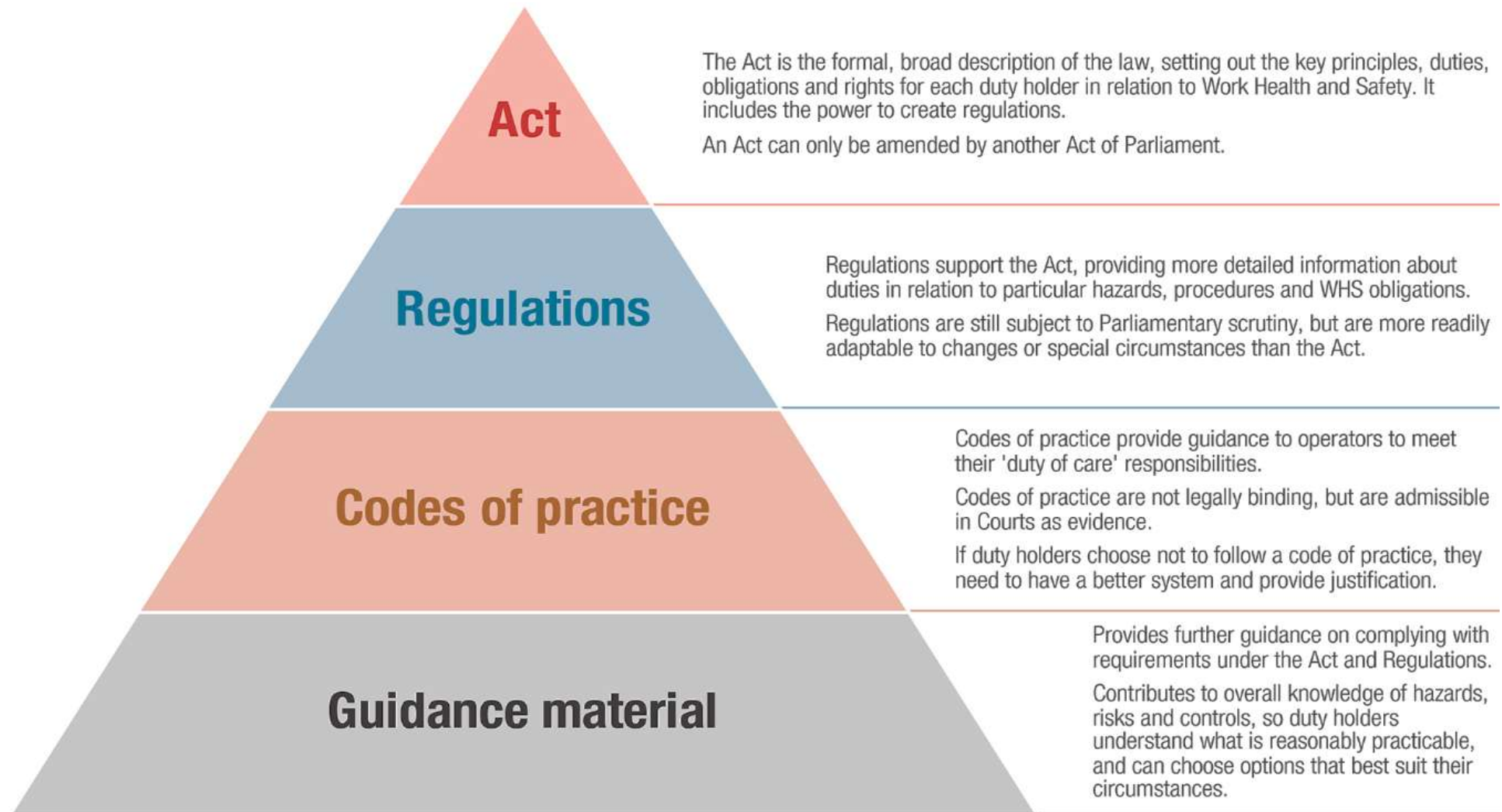
NEED FOR DEVELOPING ENVIRONMENT, HEALTH AND SAFETY SYSTEMS **IN WORK PLACES**

EHS management system is designed to help organizations streamline and centralize their EHS programs into a single platform. Making it easier to manage and monitor compliance, track incidents and improve overall safety performance.

- Data collection and incident tracking
- Compliance management
- Risk assessment and mitigation
- Safety inspections and audits
- EHS training and certification
- Reporting and analytics
- Integration and collaboration
- Sustainability tracking
- Mobile data collection
- Health and wellness programs

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RELATIONSHIP OF ACTS, REGULATIONS AND CODES OF PRACTICE



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RELATIONSHIP OF ACTS, REGULATIONS AND CODES OF PRACTICE

Example: relationship diagram between the WHS Acts, regulations, codes of practice and guidance material

The following diagram provides an overview of the relationship between the WHS Acts, regulations, codes of practice and guidance material.



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RELATIONSHIP OF ACTS, REGULATIONS AND CODES OF PRACTICE

In India, the legal framework for EHS requirements is governed by various statutes such as

- ❖ The Factories Act, 1948
- ❖ The Environment Protection Act, 1986
- ❖ A revised Occupational Safety, Health and Working Conditions (OSH) Code enacted in 2020. It applies to workers engaged in factories, mines, plantations, motor transport sector, bidi and cigar workers, contract, and migrant workers
- ❖ The Contract Labor (Regulation and Abolition) Act, 1970
- ❖ The Mines Act, 1952
- ❖ The Dock Workers (Safety, Health and Welfare) Act, 1986
- ❖ The Building & Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996
- ❖ The Plantations Labor Act, 1951

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ROLE OF TRADE UNION SAFETY REPRESENTATIVES

- A safety representative is a fellow worker elected by other union members to look after the health and safety at work of people they work with. The work that they do benefits everyone in their section, both union and non-union workers
- Safety representatives will give confidential help and advice. They know about health and safety procedures, how to take out a grievance if necessary, and how to help in resolving a problem at work

Role of safety representative:

- Your workplace
- The hazards in your workplace
- What your members think about health and safety
- The attitude of your management to health and safety

The Functions of a safety representative:

Safety representatives are not restricted to inspections and involvement in the risk assessment process.

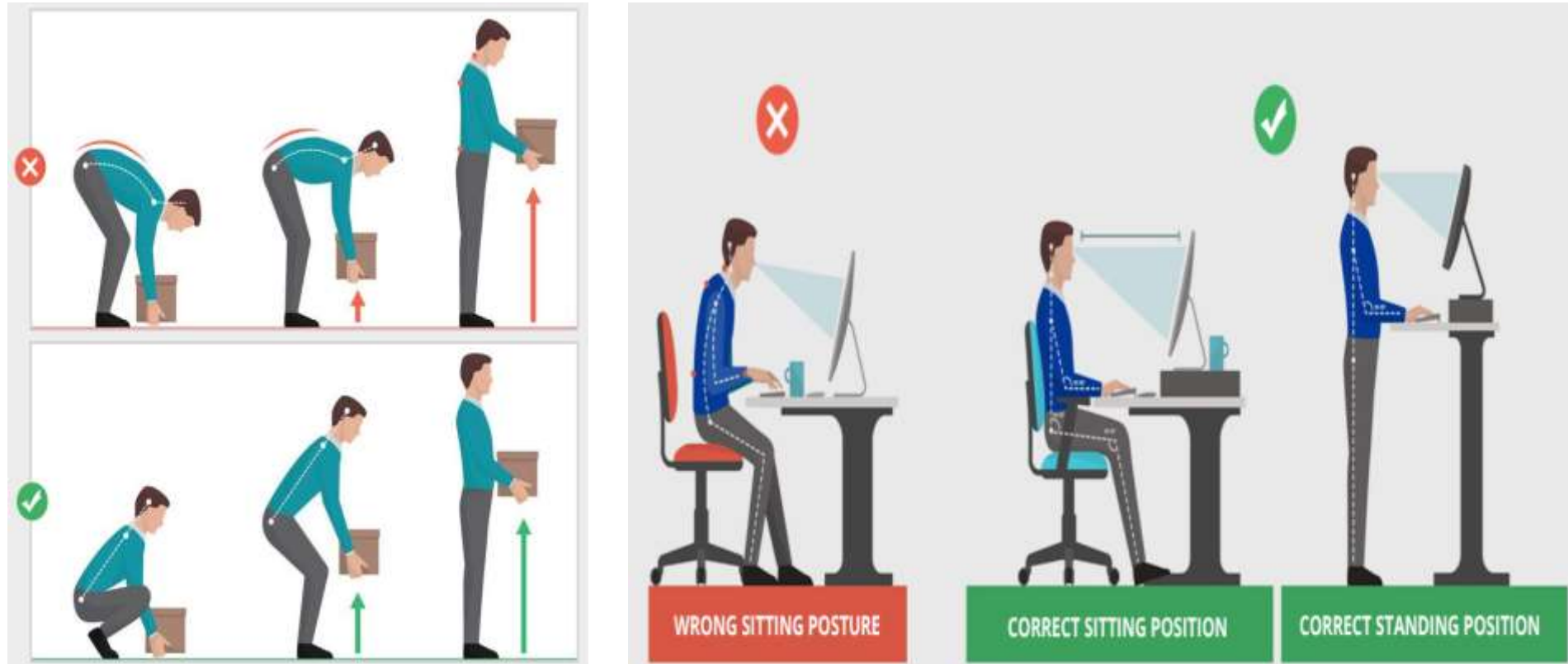
The safety representatives can investigate:

- Potential hazards
- Dangerous occurrences
- Causes of accidents and occupational ill-health
- Complaints from their members

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ERGONOMICS AND WORK PLACE

The **study of people in their working environment**. More specifically, an ergonomist designs or modifies the work to fit the worker, not the other way around. The **goal is to eliminate discomfort and risk of injury due to work**.



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Other ergonomic goals include:

- Increase worker productivity and performance
- Decrease worker discomfort
- Improve the overall quality of the work environment

Common Ergonomic Risk Factors:

- Repetition
- Uncomfortable Body Postures
- Force
- Contact Stress

Some early warnings of potential injury associated with improper work space setup are:

- ❑ Pain in back, neck, shoulder, arm or wrist
- ❑ Eye strain
- ❑ Numbness
- ❑ Stiffness
- ❑ Inability to hold objects or loss of grip strength

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Ergonomic process:

Implementing an ergonomic process is effective in reducing the risk of developing MSDs in high-risk industries as diverse as construction, food processing, firefighting, office jobs, healthcare, transportation and warehousing.

The following are important elements of an ergonomic process:

- ✓ Provide Management Support
- ✓ Involve Workers
- ✓ Provide Training
- ✓ Identify Problems
- ✓ Encourage Early Reporting of MSD (Musculo Skeletal Disorder) Symptoms
- ✓ Implement Solutions to Control Hazards
- ✓ Evaluate Progress

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THANK YOU

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