



# What is HSE



## Health and Safety: An Introduction

Occupational health and safety has a broad scope involving many specialised fields, which aim to:

- Promote and maintain the mental, physical and social well-being of employees.
- Protect employees and others affected by an organisation's activities from risks to health and safety.
- Provide adequate welfare (well-being) facilities.
- Establish management structures to implement policies to:
  - Manage and control risk.
  - Minimise the consequences of failure.
  - Achieve continual improvement in health and safety performance.
  - Be compatible with other business aims, e.g. environmental protection.



### Health

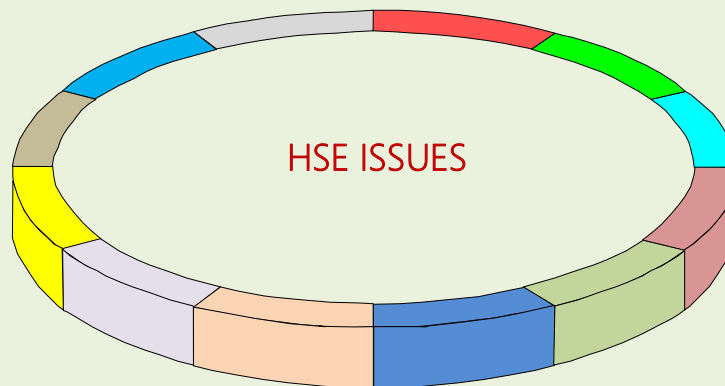
The term 'health', in relation to work, indicates not merely the absence of disease or illness; it also includes the physical and mental elements affecting health, which are directly related to safety and hygiene at work (ILO, 1981).

Health hazards include exposure at work to manual handling, repetitive movements, chemicals, biological infections, radiation, vibration of hand tools, stress, etc.

### Safety

Safety is defined as: 'freedom from unacceptable risk of harm'.

Safety hazards include electricity, machinery, slips and trips, explosions, etc. (HSE, 2000).



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|---------------------------------|--|
| ⊕ Commitment & Leadership       | ⊕ Environmental Protection                     |
| ⊕ HSE Organization & Competency | ⊕ Risk Management                              |
| ⊕ Information & Documentation   | ⊕ Crises & Emergency Management                |
| ⊕ Communication                 | ⊕ Incident Reporting, Investigation & Analysis |
| ⊕ Operation & Maintenance       | ⊕ Contractor & Third Party HSE Management      |
| ⊕ Occupational Health & Hygiene | ⊕ Audit & Continuous Improvement               |

In the past, the focus has been mainly on safety issues, possibly because accidents are often dramatic and very visible. The long-term nature of many occupational health issues makes them less dramatic. It is also easier to suggest that damage to health is not work related. Occupational ill-health is a greater problem than occupational injury.

Typical safety accidents may be:	Typical cases of occupational ill-health may be:
<ul style="list-style-type: none"> <li>▪ Falls from height: death, broken bones</li> <li>▪ Slips, trips, falls: sprains, broken bones</li> <li>▪ Struck by vehicles: death, crush injuries</li> <li>▪ Struck by an object: crush injuries</li> <li>▪ Electrical: burns, heart problems</li> <li>▪ Crushed by a moving part of a machine: broken bones, amputation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Incorrect manual handling: back injuries</li> <li>▪ Exposure to chemicals: cancers</li> <li>▪ Repeated assembly work: upper limb disorders</li> <li>▪ Exposure to glass or sand dust: silicosis</li> <li>▪ Working with hand held tools: vibration white finger</li> <li>▪ Exposure to asbestos dust / fibres: asbestosis, mesothelioma</li> <li>▪ Exposure to dusts or chemicals: occupational asthma</li> </ul>

Table 1: Different Types of Accident and Ill-Health

Occupational health matters are often given less attention than safety issues because occupational health is generally more difficult to manage.

Safety	Health
<ul style="list-style-type: none"> <li>▪ Tends to affect individuals by contact with the hazard</li> </ul>	<ul style="list-style-type: none"> <li>▪ Affects people by exposure to the hazard</li> </ul>
<ul style="list-style-type: none"> <li>▪ Often an obvious danger</li> </ul>	<ul style="list-style-type: none"> <li>▪ Often 'hidden' danger</li> </ul>
<ul style="list-style-type: none"> <li>▪ The results of an accident are immediate</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ill-health often builds up slowly</li> </ul>
<ul style="list-style-type: none"> <li>▪ Foreseeable or known 'loss'</li> </ul>	<ul style="list-style-type: none"> <li>▪ 'Loss' is often difficult to assess</li> </ul>
<ul style="list-style-type: none"> <li>▪ Knowledge since the 'industrial revolution'</li> </ul>	<ul style="list-style-type: none"> <li>▪ Understanding of some occupational health hazards lags behind, e.g. what triggers an allergic reaction to some substances</li> </ul>
<ul style="list-style-type: none"> <li>▪ Hardware or safe place solutions are usually available, e.g. guarding, protection of electrical systems</li> </ul>	<ul style="list-style-type: none"> <li>▪ Often rely on software or behavioural safe person solutions, e.g. use of personal protection, safe systems of work</li> </ul>

Table 2: The Difference between Safety and Health Hazards

## Welfare

Welfare is defined as **'looking after people's basic needs'**.

Welfare, often encompassed in national law, includes the provision of toilets, washing facilities, changing facilities, supply of drinking water, rest facilities, first-aid, etc.

## Environmental Protection

The International Standards Organisation (ISO) defines the environment as:

**'The surroundings in which an organisation operates including air, water, land, natural resources, flora, fauna, humans and their interrelationships'**. (ISO, 1992).

The combination of population growth, technological development and higher human aspirations for achievement, has increased pressure on the earth's ecosystems. This has led to increased demands for resources and an increased level of waste to be disposed of. Environmental protection aims to reduce harm to the following three elements:

- Land.
- Air.
- Water.

## Why Maintain Good Standards of Health and Safety?

Work related risks are varied, affecting all businesses, e.g. from a small office with low risks, requiring a part time health and safety adviser, to a nuclear installation with high risks, requiring a multi-disciplinary health and safety team. The conflicting and competing demands may be internal or external and do not just relate to health and safety itself - but the competing business pressures, which can involve budgetary issues, time, production, etc. For example:

Internally:

- Health and safety v other business priorities and objectives.
- Safe behaviour v cutting corners for speed.
- The organisation culture v peer group pressure.
- Competing business units with separate budgets, which fail to co-operate.

Externally:

- The expectations of society.

- Legal requirements.
- Client requirements for fast completion of a project.

Health and safety considerations apply to all organisations, whether one person or a large multinational. They also apply to every department within an organisation and to every discipline within organisations.

The effective management of health and safety requires leadership, direction, and resources. It is therefore essential that the arguments for managing health and safety are clear and understood throughout an organisation.

The main reasons for managing health and safety are:

- 1) **Moral** - humanitarian reasons.
- 2) **Legal** - to avoid prosecution and compensation claims.
- 3) **Financial** - the costs of accident and ill-health.

## 1. Moral

Organisations regard their staff as their prime assets and they have a moral obligation to prevent unnecessary suffering and loss of life. Most companies do not set out to cause harm, but they fail to take effective steps to manage health and safety with devastating results.

Accidents and ill-health will dramatically affect morale and productivity.

Reference from UK, is taken (for better illustration only), as UK is believed to be one of the pioneer reformers in H& S issues

The Health and Safety Executive (HSE) publishes annual statistics on workplace safety and work related ill-health. The current figures are available on the HSE website: [www.hse.gov.uk/statistics](http://www.hse.gov.uk/statistics)

### Workplace Fatality and Injury

The main features of the 2006/07 injuries statistics are as follows:

Injury Type	2006/07 Statistics (no of injuries)	Trend compared to 2000/2001
Fatal injuries	241	◀ ▶
Reported major injuries	28 267	◀ ▶
Reported over 3-day injuries	113 083	▼

Table 3: UK Injury Statistics for 2006/07

### Occupational ill-health

The main features of the 2006/07 occupational ill-health statistics are:

Ill-health	Number of new cases	Trend
Musculo-skeletal disorders	230 000	▲
Stress, depression, anxiety	242,000	▲
Breathing or lung problem	14 000	▼
Skin problem	11 000	◀ ▶
Infections	31 000	▲
Asbestos related diseases	4000 deaths approx	▲
Vibration white finger	645 (Industrial Injuries Disability Benefit 05/06)	▲
Hearing loss	210 (Industrial Injuries Disablement Scheme)	▼

Table 4: UK Ill-Health Statistics for 2006/07 (from SWI06/07 and other sources)

The information above (from UK) shows conclusively that occupational ill-health is a greater problem than occupational injury.

## 2. Legal

Health and safety law sets minimum standards for organisations to meet in order to control risk. The style of criminal law now demands active management of risks, not just compliance with prescribed standards. Many health and safety laws are 'goal setting'. This means that although the health and safety responsibilities of employers are clearly stated, it is for the employer to develop effective ways of meeting those responsibilities and targets. Management is a fundamental principle to ensure compliance with modern health and safety law.

If an accident or ill-health occurs at work there may be criminal sanctions and civil remedies available:

**Criminal law:** where minimum legal standards are not met the enforcing authority may prosecute the offender in the criminal courts.

**Civil law:** where an individual suffers loss (injury/ill-health, death) the victim, or their dependants, may sue for damages in the civil courts.

### 3. Financial

Accidents and ill-health caused by work cost time and money. It has been estimated that workplace accidents cost the UK between 2.1-2.6% of the gross domestic product. This is between £14.5 and £18.1 billion per annum. These figures include 30 million lost days each year, roughly equivalent to 1.3 days per employee per year.

The true cost of accidents is a lot higher than most people realise. Insurance does not cover all the costs arising from accidents and ill-health, and they can have a dramatic impact on the business.

### The Hidden Cost to Employers

The cost of health and safety control programmes (precautionary and preventive measures) are usually easily recognised and calculated as a bottom-line expense. The cost of failure is less easy to calculate as the losses tend to be absorbed into operating costs and ignored.

Employers' Liability Insurance is mandatory for most businesses. This covers employers for the cost of employee compensation claims for work related accidents and ill-health. Other policies may be bought for fire damage to buildings and processes, business interruption, public liability, etc., but these are not mandatory. The following costs are **not** likely to be covered by insurance:

- Lost time.
- Extra wages, overtime pay, temporary workers.
- Sick pay.
- Fines.
- Legal costs.
- Excess on any claim.
- Damage or loss of product and raw materials.
- Clearing the site.
- Investigation time.
- Repairs to plant and equipment.
- Production delays.
- Loss of contracts.
- Increased insurance premiums.
- Loss of business reputation.

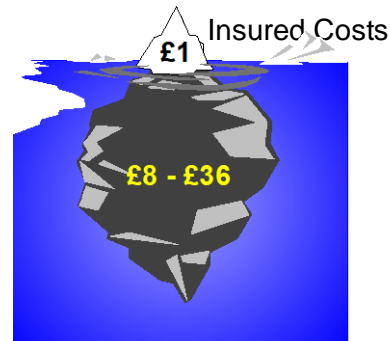


Figure 2: Accident Iceberg (HSE)

Uninsured costs vary between businesses, and types of incident. They are however several times more than the insured costs. They can be likened to an iceberg. The costs recoverable through insurance are visible. But hidden beneath the surface, not being immediately visible, are the uninsured costs.

### Increased Insurance Premiums

There has been, on average, a two-thirds increase in Employers' Liability Insurance premiums (in real terms) over the past decade and a doubling of claims in the past five years. Despite this, insurers have not profited from employers' liability for several years.

Insurance premiums were traditionally based on claims experience. The premiums set thirty years ago failed to anticipate:

- Improved medical diagnosis relating diseases to work activity.
- Increased public awareness and readiness to claim compensation for loss.
- Increased settlements to reflect the true losses suffered.

Therefore, insurers are now taking far more interest in risk management and particularly in the control of long-term health hazards. Organisations that pose a big risk to insurers are likely to receive large rises in premiums and be under significant pressure to implement a sound health and safety management system.

### Business benefits

There are sound business reasons for managing health and safety including:

- Reduced loss through damage and injury.
- Reduced absenteeism.
- Reduced insurance premiums.
- Improved morale.
- Improved company reputation.
- Reduced litigation / legal costs, fines, compensation payments.
- Increased likelihood of securing business, e.g. catering contracts.

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