



THE QUEEN'S AWARDS
FOR ENTERPRISE:
2016

Health & Safety

HANDBOOK

Christian M.R. Sprenger



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Health & Safety

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Published by
©Highfield Products Limited 2017
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Highfield Products is part of the Highfield Group, a global leader in regulated, international and work-based learning qualifications, end-point assessment, training materials and e-learning, and the winner of the Queen's Award for Enterprise.

ISBN 978-1-910964-87-3
14th Edition November 2017

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Introduction to health and safety

Every year, thousands of people in the UK are forced to take time off work due to health and safety-related issues. For most, this is a number of days. However, in some cases people suffer major injuries and even death. The vast majority of these incidents could have been avoided if standards of health and safety in the workplace had been better.

The government agency responsible for health and safety at work, the **Health and Safety Executive (HSE)**, publishes accident figures every year.



In 2016/2017 there were 137 fatal injuries to workers



31.2 million working days were lost due to workplace injury/illness

** Source HSE Statistics

The costs of **poor** health and safety



- ➔ **compensation** – including legal costs
- ➔ **loss of production** – if someone is not at work due to injury or illness
- ➔ **treatment** – first aid
- ➔ **accidents**
- ➔ **prosecution** – including legal costs
- ➔ **reputation** – it is far easier to lose a good reputation than it is to build one
- ➔ **pain, suffering and possible disability for the injured party** – we have a moral obligation to our workforce to take all reasonable precautions to prevent this

The benefits of **good** health and safety



- ➔ a safer working environment
- ➔ fewer accidents
- ➔ more productive workforce
- ➔ less chance of prosecution
- ➔ less chance of civil action
- ➔ greater profits and improved reputation
- ➔ lower insurance premiums

Causes of accidents and ill health

The most common causes of accidents and ill health in the workplace are:

- ➔ slips and trips
- poor handling, lifting and carrying technique
- falls from height
- being struck by a vehicle
- being struck by a moving or falling object
- misuse or abuse of machinery
- sharp objects
- using harmful substances
- horseplay
- not following instructions
- noise-induced illness
- stress



There are **3** factors to be considered when identifying the causes of accidents.

1 ENVIRONMENTAL FACTORS - these are associated with the area in which we work and include safe floors, safe entry and exit routes, noise, facilities, space, lighting, heating and ventilation.



2 HUMAN FACTORS - these refer to behaviour and ability of the individual, what we do and why we do it. The following human factors can cause injuries:

- **lack of knowledge** - due to insufficient training or instructions
- **lack of concentration** - due to tiredness, complacency, boredom, monotony or distraction. Drinking alcohol or long working hours can contribute towards this
- **horseplay** - the workplace is not an area in which to fool around
- **lack of capability** - sometimes, however well trained, certain people can still not do the job safely



3 OCCUPATIONAL FACTORS - these are directly related to the job or task and include manual handling of loads, use of equipment and the use of hazardous substances.



REMEMBER: horseplay can cause accidents



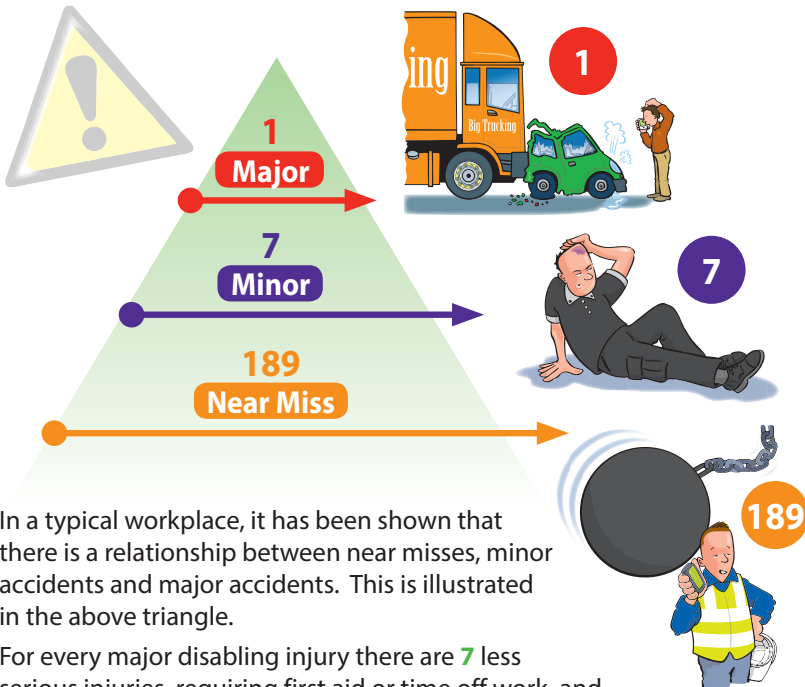
Accidents and ill health



DEFINITION: Accident

An accident is an unplanned and uncontrolled event that results in injury or ill health of people, damage to property or other loss.

The Accident Triangle



THE ACCIDENT TRIANGLE

In a typical workplace, it has been shown that there is a relationship between near misses, minor accidents and major accidents. This is illustrated in the above triangle.

For every major disabling injury there are 7 less serious injuries, requiring first aid or time off work, and 189 near misses. This shows the great importance of reporting and recording all **incidents** (even if they seem small) as trends can be established and action taken to prevent the same kind of accident recurring. The second time it may result in a major injury.

Record keeping (legal requirement)

An employer must keep an accident book readily accessible in which all appropriate particulars of any accident-causing injury must be entered. All accident books have to be kept for 3 years.

An employee must inform the employer, either verbally or in writing, of any injury caused by an accident.

A completed entry in the accident book is sufficient notice of the accident. The employer should investigate the circumstances of every accident that is reported.



Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) (legal requirement)

Certain accidents/incidents at work require the employer to notify the Incident Contact Centre (ICC). The ICC will inform the relevant enforcing authority of the event. The ICC can be notified of a reportable accident/incident online and in the case of fatalities and specified injuries only by telephone.

Accidents and incidents that require immediate reporting

➔ Deaths.

➔ Specified injuries – such as amputations, loss of sight and most fractures**.

Over-seven-day injuries

Employers must notify within 15 days any injury that causes an employee to be off work or not able to perform their usual job for more than 7 days. These are reported online on a F2508 form.

Work-related diseases

Work-related diseases should be reported online using an F2508a form.



** Specified injuries – for further information see www.hse.gov.uk



Slips and trips



Slips and trips are the main cause of accidents in the workplace. Consequences include:

- minor injuries - cuts, bruises and sprains
- broken bones
- injuries to the back
- time off work
- major injuries - head injuries or concussions
- legal proceedings
- death



Reasons for slips, trips and falls	Examples	How this can be prevented
1. Poor working practices	<ul style="list-style-type: none"> • Rushing or working too quickly • Not paying attention or carelessness • Not wearing the appropriate footwear 	<ul style="list-style-type: none"> • Always follow safety procedures • Never run inside the premises • Always pay attention to what you are doing and to the people and objects around you • Always wear the recommended footwear
2. Poor housekeeping	<ul style="list-style-type: none"> • Obstructing walkways and corridors • Damaged floors, surfaces, railings and ladders 	<ul style="list-style-type: none"> • Walkways and corridors should never be obstructed • All spillages should be cleaned up immediately • Floors and any other flooring surfaces such as tiles and carpets should be kept clean and in good condition • Hand and balcony railings and ladders should be regularly checked and maintained in good condition • Suitable warning signs should be displayed
3. Poor design of premises	<ul style="list-style-type: none"> • Uneven flooring • Poor quality, unsuitable shelving or storage units • Poor lighting • Not meeting health and safety design standards 	<ul style="list-style-type: none"> • Floors should be even and non-slip • Shelving and storage areas should be appropriate for use • Drainage and lighting should be adequate • There should be hand-railings on all balustrades, slopes and stairs



Health and safety law



Health and safety legislation is perceived to be complex and difficult to understand. However, in actual fact, a large proportion is common sense and it is only important to understand the areas that apply to your organisation.

There are two types of legislation.

What is criminal legislation?

This allows the state to punish a business/person for breaking the law of the land. The venue for the case would be a magistrates' or crown court, or in Scotland a sheriff court or High Court.

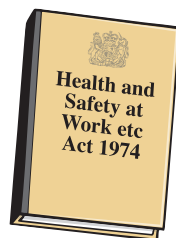
What is civil legislation?

This allows an action from one person against another for negligence. The purpose of this is to claim compensation. The venue for the case would be a county court or High Court, or in Scotland a sheriff court or Court of Session.

The Health and Safety at Work etc Act 1974

(including subsequent regulations passed)

This law places duties on employers, employees, designers and manufacturers, some self-employed and the occupiers of buildings in which persons work (not their own employees).



Health and safety policy

It is the duty of every employer (of five employees or more) to prepare and regularly revise a written statement of the health and safety policy. The essential elements of this policy are:

- a) A statement of intent.
- b) Organisation – to clearly state to people, their duties and accountability.
- c) Arrangements – systems/procedures that ensure that work is carried out safely.

EMPLOYERS must:

Ensure, so far as is reasonably practicable:

- ➔ the health, safety and welfare of all employees
- ➔ provide necessary information, instruction, training and supervision
- ➔ provide a safe place of work including access and egress
- ➔ provide a safe environment and safe systems of work
- ➔ the safe use, handling, storage and transport of articles and substances

Ensure, so far as is reasonably practicable, the health and safety of others – this includes visitors, contractors, customers and patients

Employers must also:

- ➔ carry out risk assessments
- ➔ appoint competent person(s)
- ➔ plan, organise, control, monitor and review preventive and protective measures



EMPLOYEES must:

- ➔ take reasonable care of themselves and others, and cooperate with their employer
- ➔ not recklessly interfere with or misuse anything that is used for health and safety provision
- ➔ report any serious or imminent danger and any shortcomings in the employer's protective health and safety arrangements



Designers' and manufacturers' products must be:

- safe and without health **risk**
- suitably tested and provided with adequate information

Self-employed (prescribed undertakings) must:

- look after their own health and safety
- look after any other persons' health and safety who may be affected by their actions whilst at work



Worker involvement and consultation

Employees and contractors should be encouraged to take part in making decisions about health and safety at work. This can include information, instruction, training from the employer to the employee, consultation via meetings, safety committees and worker surveys and also participation in risk assessment and hazard spotting. There are legal duties to consult employees about health and safety. However, worker involvement encourages a positive health and safety culture at work.

Occupiers of buildings

The persons in control of buildings have duties to all persons working within those premises even though they are not in their employment.

Enforcement of health and safety law

Enforcement will be carried out either by the HSE or the relevant local authority depending upon the nature of the workplace. The HSE inspectors are generally responsible for schools, factories, hospitals etc, whilst authorised officers from the local authority (usually Environmental Health Practitioners/Officers EHPs/EHOs) are responsible for shops, offices and warehouses, etc.



Inspectors, to carry out their work effectively, are given many powers under the Health and Safety at Work Act. Inspectors can:



- gain access to any workplace at any reasonable time
- direct that locations remain undisturbed after an accident
- ask questions and give advice
- take measurements, photographs and samples
- order removal and testing of equipment



If a contravention of legislation is discovered during an inspection (i.e. the organisation is breaking the law) the inspector will most commonly give advice, usually in writing. However, in more serious cases it may be necessary to take one of the following actions: (Following the introduction for Fees For Intervention, the HSE will recover their costs by invoicing the employer for their time where a material breach of health and safety legislation is discovered.

1. Serve an **improvement notice** on the employer/person. This notice gives a time limit in which corrective action must be taken.

2. Serve a **prohibition notice** on the employer/person. This notice is served when there is a serious risk of personal injury. It may require work to cease immediately. The notice will remain in force until the inspector removes it.

3. Commence criminal proceedings against the employers, directors, managers, employees etc. This is the last resort and is only likely if there is a serious health and safety problem or if notices have been ignored. Penalties can be severe upon prosecution, resulting in up to two years' imprisonment and/or an unlimited fine.



Risk assessment

The Management of Health and Safety at Work Regulations state employers must carry out **risk assessments**.



“ Risk assessment is the cornerstone of health and safety legislation and is absolutely essential to a safe working environment.”

Source: European Agency for Safety and Health at Work



DEFINITION: Hazard

Something with the potential to cause harm, e.g. the presence of a dangerous substance, excessive noise, a knife or a piece of electrical equipment.



DEFINITION: Risk

The likelihood that someone will be harmed by the hazard, e.g. being burnt by a chemical, going deaf, being cut or receiving an electrical shock.



DEFINITION: Risk assessment

The identification of hazards, the calculation of risk and the reduction of that risk either completely or to an acceptable level.

5 STEPS

Five steps to risk assessment

There are five steps to carrying out a risk assessment:

PRINCIPLES OF RISK ASSESSMENT



Step 1 Identify the hazard

Look only for the hazards you could reasonably expect to result in significant harm under the conditions in your workplace. Examples include:

- ➔ slipping/tripping hazards (floors and stairs)
- ➔ **fire**
- ➔ chemicals and hot liquids
- ➔ vehicles
- ➔ moving parts of machinery
- ➔ tools and equipment
- ➔ dust, fumes and poor ventilation
- ➔ human factors
- ➔ electricity
- ➔ working at height
- ➔ manual handling
- ➔ noise
- ➔ poor lighting
- ➔ high or low temperatures
- ➔ work-related stress



Step 2 Identify those who might be harmed

Think about groups of people such as:

- ➔ employees
- ➔ young persons
- ➔ cleaners
- ➔ contractors
- ➔ disabled people
- ➔ New or expectant mothers
- ➔ inexperienced staff
- ➔ lone workers
- ➔ visitors
- ➔ residents



Step 3 Evaluate risk by considering existing precautions

- ➔ Are the risks adequately controlled?
- ➔ Do you meet legal requirements?
- ➔ Are you following relevant published guidance?
- ➔ Is the practised method to a good standard?
- ➔ Have the risks been reduced so far as reasonably practicable?
- ➔ Have adequate instruction and training been provided?
- ➔ Are the systems and procedures adequate?



If existing precautions are not to an acceptable level, suitable control measures should be identified that will reduce the risk to an acceptable level.

The hierarchy of control should be used when evaluating which controls are to be used. For example, eliminating the hazard should be considered before using personal protective equipment (PPE) to protect employees from the hazard. Start at the top and work down the list.

Hierarchy of control

- ➔ Can the hazard be eliminated?
- ➔ Can the hazard be substituted with a reduced risk?
- ➔ Can the hazard be isolated or enclosed?
- ➔ Would the introduction of a safe system of work reduce the risk?
- ➔ Would information, training or supervision reduce the risk?
- ➔ Would PPE help?

Step 4 Record the findings

It is recommended that all businesses have a written record of significant findings. However, if the company has five or more employees it is a legal requirement.



Step 5 Review and revise as necessary

Risk assessments must be reviewed and revised as necessary. Particular attention should be paid when changes occur in the workplace or if there is an accident or a near miss.

If there is a significant risk, it must be evaluated and a decision made as to what measures need to be taken to reduce the risk to an acceptable level. Many different types of risk assessment forms are used (please see example on page 52). These forms are used to record the significant findings of the risk assessment.

RISK ASSESSMENT MATRIX

	Slightly harmful	Harmful	Extremely harmful
Highly unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate Risk	Substantial Risk	Intolerable Risk

Risk	Action and timescale
Trivial	No action nor documentary records needed - but good practice to record the assessment.
Tolerable	Improvement not mandatory, but recording and monitoring required to ensure controls are maintained. Go for cheap improvements where possible.
Moderate	Aim to reduce risk but costs of prevention may be limited. Measures should be tied to a timetable.
Substantial	Where the risk involves work in progress urgent action should be taken otherwise work should not start until the risk has been reduced. Considerable resources may have to be allocated.
Intolerable	Work should not be started or continued until the risk has been reduced. If it is not possible to reduce risk even with unlimited resources, work has to remain prohibited.

Risk assessments should take into account any specific risk factors for:

- ➔ New or expectant mothers.
- ➔ Young persons (between the ages of 16 and 18).

Practical example

Risk assessments are a simple tool that we use in everyday life. Consider the following short example, which has nothing to do with the business environment:

Say you are going on holiday to Florida and you want to swim in the sea. You decide it is necessary to carry out a risk assessment.

Identify the hazards

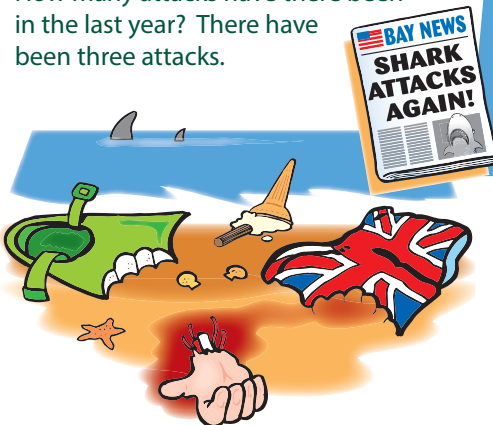
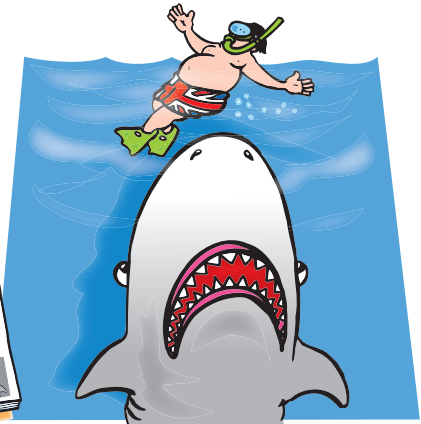
One hazard that you identify is the possibility of being attacked by a shark in the sea.

Identify those who may be harmed

You may be harmed or killed.

Evaluate the risk

How many attacks have there been in the last year? There have been three attacks.



What existing precautions are there?

There are no existing precautions.



Can the hazard be eliminated or reduced to a safe level?

You decide that you can **eliminate** the hazard by destroying all the sharks in the sea. This is obviously not practicable.

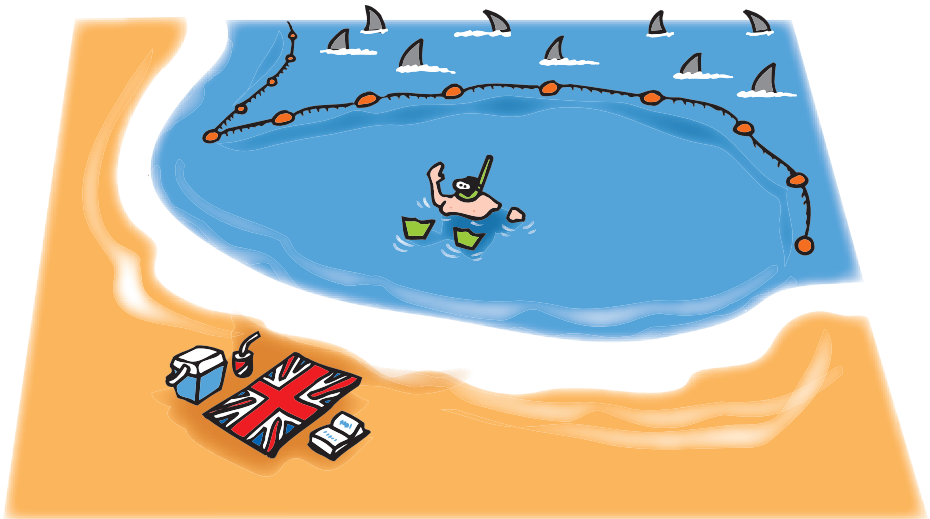
You can **isolate** the hazard by using shark nets. This would cost \$3 million dollars and so is not reasonably practicable.

You could use a 'shark suit' (**PPE**). This is also too expensive.

You decide that the potential risk of attack is too great and that you will swim in the pool instead.

Review and revise as necessary

Five years later, you are going back to the same resort and decide that you will review the situation on swimming in the sea. You find that the US government erected shark nets enclosing a shark-free bay and there have been no attacks in three years. You decide that the risk is now moderate and you are prepared to swim in the sea.





Hazardous substances



One of the most common hazards found in the workplace is the use, handling and storage of hazardous substances. The Control of Substances Hazardous to Health (COSHH) Regulations have been introduced to guide employers on how to safely control the use of hazardous substances and reduce risks that may potentially cause harm.

Hazardous substances can enter the body via inhalation, ingestion, injection or absorption. Types of substances hazardous to health include:

- **fumes and smoke** – lead poisoning is associated with the inhalation of lead fumes, which are common
- **dust**, often created from operations such as grinding, milling, sanding and demolition
- **liquids**, including cleaning materials
- **carcinogens** – substances that cause cancer
- **gases** – chlorine is an extremely aggressive gas that can cause serious lung damage. It is very commonly used in water treatment
- **biological agents** – bacteria, viruses and fungi that cause illness and disease

Controlling hazardous substances

Exposure to hazardous substances should be prevented if it is reasonably practicable to do so. Employers should consider eliminating the process so the hazardous substance is not needed or generated or substituting the substance for a safer alternative. If this is not possible an assessment should be carried out and methods of control established using one or more of these measures:










- enclosing the process
- providing good ventilation
- using systems of work and handling procedures that minimise the chances of materials spilling, leaking or otherwise escaping
- reducing the number of employees exposed, or the duration of their exposure
- providing suitable training
- using PPE (last resort)

It is the responsibility of the employer to ensure that a suitable assessment of risk to the health of employees is carried out.

Safety signs

Manufacturers and suppliers must label hazardous substances and mixtures in accordance with the Classification, Labelling and Packaging (CLP) Regulation.

The hazardous properties from these substances can be identified from their warning label and the employer must provide a data sheet and assessment for each of them. The following warning signs make hazards clearly identifiable.

Classification	CLP Symbol	Classification	CLP Symbol
Gas under pressure		Health hazard/hazardous to the ozone layer	
Explosive		Acute toxicity	
Oxidising		Serious health hazard	
Flammable		Hazardous to the environment	
Corrosive			

Training and authorisation

Employers must ensure that staff understand the risks from the hazardous substances to which they could be exposed. Control methods will not be fully effective if staff do not know how to use them properly, e.g. deal with spillages, or understand the importance of reporting faults. Staff should be made fully aware of how to use equipment and of the emergency procedures for the workplace. Authorisation for the use of hazardous substances must be kept to a minimum and records should be kept, listing authorised usage personnel and the training they have received.





Personal protective equipment

PPE is designed to protect the wearer from one or more risks.

PPE should only be considered, after risk assessment, when the risk from a specific hazard cannot be controlled effectively in any other way.

Responsibilities

Employers must ensure:

- ➔ suitable PPE is provided to their employees who may be exposed to health and safety risk at work
- PPE is suitable, maintained and stored correctly
- employees have the information, instruction and training on how to use PPE



Employees must ensure:

- ➔ they use PPE as instructed
- they report any defects to PPE



Examples of PPE

- | | |
|--------------------------|-----------------------|
| ➔ Safety helmet | ➔ Waterproof clothing |
| ➔ Ear defenders | ➔ Hi-visibility vest |
| ➔ Overalls | ➔ Life jacket |
| ➔ Ear plugs | ➔ Safety harness |
| ➔ Cold weather cap | ➔ Safety footwear |
| ➔ Fire retardant mask | ➔ Wellington boots |
| ➔ Respirator protection | ➔ Gloves |
| ➔ Safety goggles/glasses | ➔ Disposable gloves |





Workplace health, safety and welfare



It is the employer's responsibility to protect the health and safety of everyone in the workplace and to ensure that adequate welfare facilities are provided. The best results can be seen by those organisations that can establish a health and safety culture. There are many accidents each year in the workplace that could have been easily avoided by careful planning when determining design and layout. The main points to consider are highlighted below.

Building structure

– should be solid and fit for purpose. An assessment should be carried out to ensure that buildings are made from materials that meet legal requirements.

Design

– rooms should have sufficient floor area, height and unoccupied space for the purpose of health, safety and welfare. When designing, consideration should be given to employees who deal with hazardous substances and materials.

Traffic

– the routes should be clearly laid out and signposted. Vehicle and pedestrian routes should be separated where possible.

Ventilation

– should be provided, preferably by opening windows. Every occupied room must be provided with a means of ventilation.

Temperature

– during working hours, temperature in the workplace should be reasonably comfortable without the need for special clothing. The temperature should be at least 16°C unless work involves severe physical effort when it should be at least 13°C. There is no legal requirement for maximum temperature, although a risk assessment should be done if the temperature is excessive.

Lighting



– every workplace should have suitable and sufficient lighting to maintain safety and reduce eye strain; if practicable, this should be natural light. Suitable and sufficient emergency lighting should be provided.

Workstations

– should be designed to be safe and comfortable, e.g. controls should be within easy reach. A suitable seat and footrest must be provided if the task can be accomplished seated (see section on workstation design, page 39).

Floors

– should be constructed and maintained to prevent slipping and falling. Arrangements should be made for the minimisation of risks from snow and ice.

Doors and windows

– should be suitably constructed and all should function safely. Suitable provision should be made for the cleaning of windows and skylights. Necessary precautions should be taken to prevent persons falling from a window.

Storage and racking

– the design of storage areas is important in ensuring safety in the workplace. Keeping areas clean and tidy will reduce the likelihood of accidents. Employers should consider:

- ➔ design and layout
- ➔ regular checks of racking
- ➔ establishing load levels
- ➔ reporting of defects
- ➔ cleaning and tidying of storage areas
- ➔ use of safety steps or other safe means of access
- ➔ teamwork when stacking



Welfare facilities

– workplaces must be provided with:

- ➔ suitable and sufficient toilets and washing facilities, including provision for the disabled
- ➔ an adequate supply of drinking water
- ➔ facilities for clothing storage and changing facilities where required



- ➔ facilities for expectant and nursing mothers
- ➔ facilities for persons at work to eat meals

Safety representations

Safety representatives and safety committees are used within organisations to review the measures taken to ensure the health and safety at work of employees.

Safety signs

– used to communicate health and safety instructions must be kept in good condition and displayed in a suitable position where they can be easily seen. The colour and shape of the sign identifies its meaning.

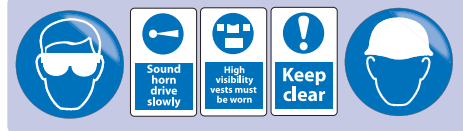
Green signs indicate a SAFE condition (useful information).



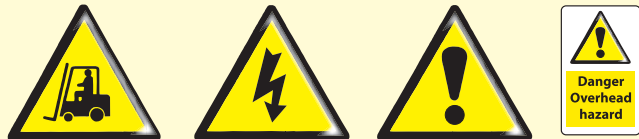
Red signs indicate a PROHIBITION.



Blue signs indicate MANDATORY instruction.



Yellow signs indicate a WARNING (hazard or danger).

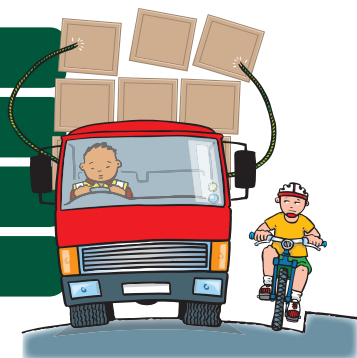




Vehicles at work

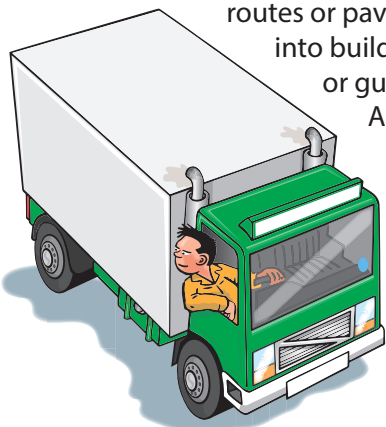
There are many accidents in the workplace involving workplace transport. The most common vehicle accidents at work are caused by:

- people hit by vehicles
- people falling from vehicles
- objects falling from vehicles onto people
- vehicles toppling over



Some of the factors that contribute to injuries are poor housekeeping, lighting, inadequate separation of people and vehicles, reversing vehicles, blind spots and unfamiliar drivers.

Control measures to reduce risk should include keeping people and vehicles apart. These areas should be marked out with paint. Provide separate routes or pavements including access into buildings. Erect suitable barriers or guardrails and crossing areas.



All routes should be clearly signposted. Train staff working in these areas with regards to procedures for reversing and manoeuvring vehicles. Provide site information to visiting drivers and ensure all areas where vehicles operate are well lit.



Fire safety



Each year, fire and the effects of fire lead to a substantial loss of life. Fire costs money and many businesses do not re-open. Employers must carry out a fire risk assessment of the workplace using a competent person. Common causes of fire include:

- cooking
- faulty electrical equipment
- hot work
- naked flames
- arson
- flammable products
- accumulations of rubbish

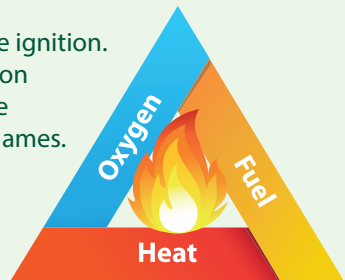


THE FIRE TRIANGLE

OXYGEN – this is approximately 20% of the atmosphere. If a fire has started then smothering the flames will deprive the fire of oxygen and will put the fire out.

HEAT – there has to be an initial source to spark the ignition. Fire can be prevented by controlling possible ignition sources, for example, by ensuring smoking bans are implemented in the workplace or not using open flames.

FUEL – such as paper or wood and flammable substances. Fire can be prevented by storing fuels safely within the workplace, removing waste and ensuring ignition sources and fuels are kept apart.



Fire prevention

By controlling the three elements of fire, the risk can be reduced.

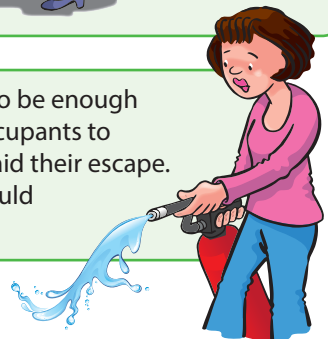
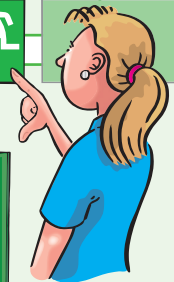
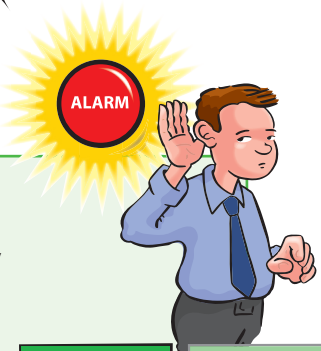
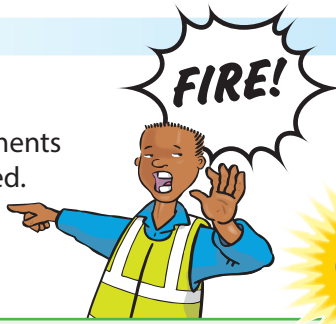
Protecting people and property

Detection and warning – all workplaces should have arrangements for detecting and giving warning of fire so occupants can escape. In most cases, an electrically operated device should be installed with break glass call points situated next to exit doors. However, in smaller, lower risk premises a shout of ‘fire!’ can be effective.

Means of escape – everyone in a workplace should be able to evacuate quickly without being placed at risk. There should be alternative routes to evacuate.

The design of the building should include routes of escape. These should be clearly signed with green signage and offer occupants the shortest, safest route to a place of safety. While the workplace is in use, doors on evacuation/escape routes should not be locked or fastened. It must always be possible to easily and immediately open doors from the inside and they should never be blocked.

Means of fighting fire – there needs to be enough firefighting equipment in place for occupants to extinguish a fire in its early stages, or aid their escape. The use of firefighting equipment should not put anyone at risk.





Fire procedures and training – in the event of a fire, all occupants must know what to do. Employers must write a plan of the procedures that everyone should follow. The plan should be rehearsed regularly (Fire Practice). Everyone should know the evacuation routes, assembly point, particular procedures for their area of work and provisions for disabled persons. The employer must bring the plan to everyone's attention by publishing it, putting it near escape routes and providing training and information on a regular basis.



Other measures:

- ➔ ensure good housekeeping is maintained
- ➔ check escape routes are kept clear, alarms function and equipment works
- ➔ test and maintain electrical and gas equipment
- ➔ ensure good security to reduce the chance of arson



Controlling fires

Sprinkler systems can be used to control fires in their early stages, as can fire blankets and fire extinguishers. Extinguishers must only be used by trained staff who understand that they are not to put themselves or others at any risk.

Fire Extinguishers



WATER: Type of fire: wood, paper and fabrics

FOAM: Type of fire: general and flammable liquids

POWDER: Type of fire: general and plastics

CO²: Type of fire: electrical

FIRE BLANKET: Type of fire: oil, fats. Use: smothering flames (starvation of oxygen)

WET CHEMICAL: Type of fire: cooking oil and fat fires



First Aid



First Aid is the immediate care given to a person who has been injured, or who has become ill prior to the arrival of qualified medical assistance. First aid has **3** purposes:

- 1 To preserve life
- 2 To prevent the condition getting worse
- 3 To promote recovery



There are three levels of first aid personnel.

1 FIRST AIDERS

These are members of staff who have attended training for first aid at work which meets the prescribed standards, enabling the first aider to administer effective first aid to a range of injuries and illness. The training is normally conducted over 3 or more days and the certificate will last 3 years and a requalification is required.



2 EMERGENCY FIRST AID AT WORK PERSONNEL

Emergency first aid at work training enables a first aider to give emergency first aid to someone who is injured or becomes ill at work. The training is normally provided over a one day course.

3 APPOINTED PERSONS

Where first aiders are not necessary, an employer must appoint a person to take charge of first-aid arrangements, including looking after the equipment and facilities and contacting the emergency services when required.



How do employers decide on their requirements?

The guidance available for the type and number of personnel required is in the First aid at work Guidance on Regulations, published by the HSE. Employers have to provide facilities based on the risk within their premises and must therefore carry out a risk assessment. In assessing needs, employers should consider:

- workplace hazards and risks
- the size of the organisation
- the history of accidents
- nature and distribution of workforce
- remoteness from medical services
- annual leave and absence of first aiders and appointed persons



First-aid equipment

The employer should provide suitable materials and facilities needed to ensure that first aid is available at all times. The minimum level of first-aid equipment is a suitably stocked and identified first aid container. In December 2011 the British Standards Institute launched the new workplace First Aid Kit (BS 8599).



If mains tap water is not readily available for eye irrigation then there should be at least one litre of sterile water or sterile normal saline (0.9%) in a sealed, disposable container provided. The eye irrigation container should be safely secured or wall-mounted and located in close proximity to the first-aid box.



CONTENTS	Leaflet	Contents list	Medium dressing	Large dressing	Triangular bandage	Safety pins	Eye pads	Plasters	Wipes	Adhesive tape	Nitrile gloves (pairs)	Finger dressing	Resus face shield	Foil blanket	Eye-wash (250ml)	Burn dressing	Safety shears	Conforming bandage*
	Type of Kit																	
SMALL	1	1	4	1	2	6	2	40	20	1	6	2	1	1	0	1	1	1
MEDIUM	1	1	6	2	3	12	3	60	30	1	9	3	1	2	0	2	1	2
LARGE	1	1	8	2	4	24	4	100	40	1	12	4	2	3	0	2	1	2
TRAVEL	1	1	1	1	1	2	0	10	4	1	1	0	1	1	1	1	1	1

The first aider should regularly check the first-aid box, ensuring that it is suitably stocked and items are in date and undamaged. There should be no creams, lotions, potions, medicines or tablets.

*A flexible bandage, capable of moulding to an area.



Work equipment



Equipment is defined as 'any machinery, appliance, apparatus, tool or installation for use at work'. This is a very wide-ranging definition and includes toolbox tools, photocopiers, hoists and slings, ladders, laboratory equipment, lathes and drills, etc. By carrying out simple risk assessments, the risks involved with using pieces of equipment can be controlled.

Work equipment can cause injury in many ways. These include:

- ➔ entanglement – hair and clothing is easily tangled in driveshafts and drills
- ➔ entrapment – for example, power presses, paper guillotine, in-running nip between rollers
- ➔ ejection – equipment may throw off particles
- ➔ contact – with equipment, sharp edges, hot surfaces, etc.



Control measures

Control measures can be put in place to remove or reduce the risks associated with work equipment. There is only one way of eliminating the risk completely, which is by not using the equipment. This is usually not possible, so methods of reducing the risk are established such as guards and safe working procedures.

Design and construction

Equipment should be suitable for each process and the conditions under which it will be used. When employers are selecting equipment they should take into account all the risks and ensure the equipment complies with UK legislation and EU directives. **Guarding** and emergency stops are vital parts on certain pieces of machinery.



Working environment

Ventilation, lighting, space, floors and moving vehicles must be considered when determining where to site equipment.



Safe working procedures

Employers must ensure that they establish procedures for using equipment. They should then train employees to the correct standard and provide a suitable level of supervision.

Training and authorisation

The employer should ensure that every user of equipment has received adequate health and safety training, including understanding the risks in using the equipment and precautions necessary. Managers should observe employees to ensure that they are competent in using the equipment. A record of authorised users should be developed for each piece of equipment; this can be kept with training records. Employers should make it very clear to all employees that only authorised users can use equipment.



Personal protective equipment

Employers should provide PPE and training. Employees have an obligation to use PPE when provided.



Maintenance

Equipment should be maintained in efficient order and in a good state of repair. Regular maintenance and checking should be carried out by competent persons and must be carried out in accordance with manufacturers' instructions.





Electricity



Every year many accidents at work involving electricity are reported to the HSE. Hazards arising from the use of electricity can broadly be divided into two categories, namely: the risk of death and serious injury arising from contact with live parts, and the risk of fire and explosion where electrical discharge could be the source of ignition.

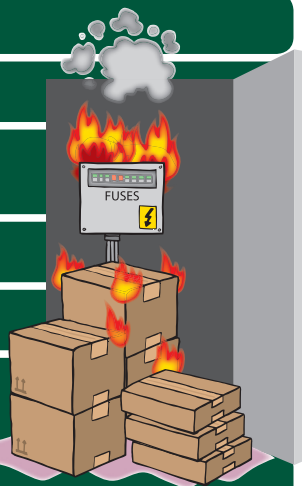


Electric shocks

Staff working with electrical supplies should be trained in the steps to take if someone receives an electric shock. Rescue safety is paramount; this will include the need to switch off the power supply, attend to the injured person and then take appropriate first aid action.

Prevention is better than cure and there are a number of common-sense precautions that can be taken to prevent electric shocks. These include:

- wherever possible, use of double-insulated equipment and/or transformers
- use of residual current devices
- earthing, providing connection to the earth
- use of appropriate fuses – this is an essential safety device, preventing overloading of the circuit
- testing and examining equipment regularly
- good standard of installation and maintenance
- reporting procedure – staff should be trained to detect problems and report them immediately
- use of PPE





Maintenance

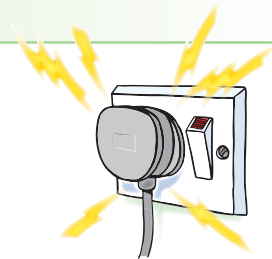
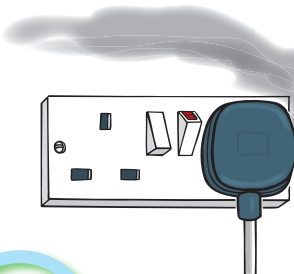
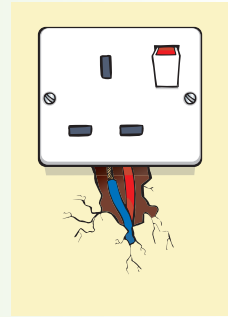
Any maintenance, servicing or repair must be carried out by a competent person. Installations (i.e. wiring and sockets) should be checked every five years. Portable appliances (appliances that have a plug and can be easily moved) need to be checked visually by users. Formal checks by a competent person are recommended periodically dependent on the risk.

Users can reduce the risks of electrical accidents by carrying out a simple visual check of the equipment before use.



REMEMBER to switch off and unplug the equipment before you carry out any checks

- Check that the plug is intact and that the cable is properly secured and no internal wires can be seen.
- Check the cable (lead) is not damaged and that no repairs have been carried out using insulating tape or an unsuitable connector.
- Check that the outer cover of the equipment is not damaged.
- Check for burn marks or staining on the equipment, plug or socket that indicates there may be overheating.
- Ensure that trailing wires do not create a trip hazard or may be damaged.





Occupational health



Occupational health is concerned with the health of people at work. Work-related ill health is by far the biggest cause of lost working days. Statistics indicate that at least twice as many people will suffer with ill health caused or made worse by work than workplace injuries. Occupational health hazards in the workplace include:

- **physical hazards** – including temperature, noise, dust and vibration
- **chemical hazards** – including metals, acids and cleaning agents
- **biological hazards** – including animal-borne and human-borne diseases
- **work-related (ergonomic) hazards** – including job movement (e.g. cramp due to handwriting and typing position)

Some of the more common examples of occupational illness and diseases are:

- **dermatitis** – scaling, cracking and crusting of the skin (often affects hairdressers and cleaners)



- **heatstroke** – encountered in high-temperature environments
- **asbestos-related illnesses** – arising from past inhalation of asbestos fibres
- **work-related upper limb disorder** – this is often due to repetitive strain injuries, often suffered by keyboard operators and tool operators
- **respiratory diseases** – asthma usually caused by inhalation of harmful substances, and pneumoconiosis, (often affects vehicle spray painters and bakers)



- **noise and vibration-induced disorders** - hearing loss, vibration white finger (often affects machine operators)
- **work-related stress** - work pressure, traumatic events, bullying and harassment
- **infections** - e.g. tuberculosis or diarrhoea (can affect care assistants)



OCCUPATIONAL HEALTH SPECIALISTS

Occupational health practitioners and services help to identify, manage and reduce work-related health risks. Services can be general, e.g. an occupational health nurse carrying out pre-employment health checks, or very specialised, e.g. a dermatologist checking workers' hands for dermatitis. Employers may need specialists to help them assess the risks in their workplace.



STRESS

The majority of lost working days through ill health are currently caused by stress. Work-related stress could lead to increased health problems such as heart disease, anxiety or depression. The business can also suffer from the effects of stress; consequences include increase in absence, reduced morale, reduced performance and increased turnover of staff. The business has an obligation to ensure that stress is minimised, as it is a major part of ensuring the health and safety of employees. Internal factors that should be considered include the pressure of work, working hours, group relationships, culture and management.

WORK-RELATED VIOLENCE

Includes physical or verbal abuse, threat or harassment. Physical attack can cause injury; however, persistent verbal abuse through harassment or bullying can cause damage to health through anxiety and stress. This can cost the business financially through low staff morale and high staff turnover.

All work-related violence must be reported.

The employer also has to assess the risk in their workplace from violence, harassment and bullying. Control procedures suitable for the business must be put in place.

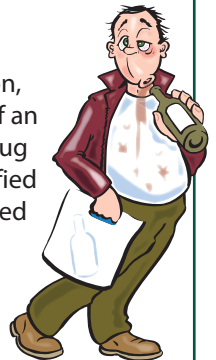
SMOKING IN THE WORKPLACE

All enclosed workplaces must be smoke-free.



DRUGS AND ALCOHOL

The effects of drugs and alcohol can lead to a lapse in concentration, tiredness or horseplay, all of which considerably increase the risk of an incident. Employees should be encouraged to report alcohol or drug abuse to management immediately. A programme to assist identified alcohol and drug users to break the habit may need to be considered by employers.



EMPLOYEE RESPONSIBILITY

Everyone should report any physical or mental symptoms as they may indicate a risk that is not being controlled in the workplace.



Noise and vibration

Noise can be defined as an unwanted sound that can cause stress, distraction and, in some cases, hearing damage or loss. The danger presented is dependent on how loud the noise is and how long there is exposure to it. Hearing loss can be attributed to two factors:



- 1 SHORT-TERM EXPOSURE** – this is where a person has had specific exposure to a high noise level. An example of this is gunfire or an explosion. It can often lead to a temporary threshold shift where the sufferer can lose hearing for a short period of time.



- 2 LONG-TERM EXPOSURE** – this is where a person has been subjected to noise over a long period of time. It is often associated with machine workers, for example, in a shoe repair shop. Permanent hearing loss can result from this type of exposure.



Controls

Employers, employees, designers and the self-employed all have obligations to ensure that noise does not compromise safety. Risk assessments should be carried out to assess the risks from noise. The assessment may need to be carried out by a competent specialist. The assessment may suggest the following controls in order of priority:



1. discontinue the use of a particular machine
2. replace the noisy machine with a quieter one
3. enclose the machine with a sound-absorbing material
4. screen off the machine from staff
5. place the machine on acoustic buffers
6. remove the staff from the area of the machine
7. reduce the time allowed for the employee to be in the area
8. as a last resort, use hearing defenders (PPE). Where hearing defenders are necessary it is essential that all necessary persons have a clear understanding of when and where they should be worn. There must be suitable signs clearly displayed in all areas where either the regulations or a risk assessment indicates that defenders should be worn

Vibration

Vibration is the transmission of force from work processes into the worker. It is measured by looking at how strong the force is and how frequently it occurs. There are two types of vibration that need to be considered.

Whole-body vibration

Vibration transmitted to the whole body via the feet or seat. It can cause injury to the spine and lower back area. A common example is the seat of a vehicle, e.g. a fork-lift truck, excavator or dumper truck. Alternative processes and equipment can be used to avoid or reduce the use of vibrating equipment.



Hand-arm vibration

Nearly 2 million workers are at risk from hand-arm vibration**. It can be caused by operating hand-held power tools, e.g. road breaker, and hand-guided equipment, e.g. chain saw, lawnmower. It can also be caused by holding materials being processed by machines, e.g. grinders and sanders.

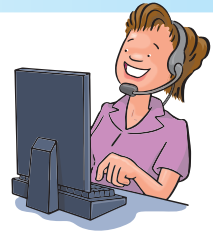
Occasional exposure is unlikely to cause ill health. Regular and frequent exposure can lead to permanent health effects. For example, vibration white finger and carpal tunnel syndrome. These are also known as hand-arm vibration syndrome.



** Source HSE Statistics



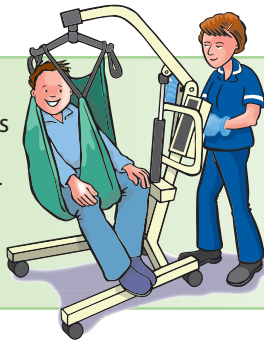
Ergonomics and workstation design



Ergonomics is all about the interrelationships between people and their work; designing the workplace, equipment, workstations and day-to-day tasks in a way that suits the operators, reduces operator errors, accidents and ill health, and can save the organisation money.

To assess the 'fit' between a person and their work, the following aspects are considered:

- the job and the demands it places on the operator
- equipment



- information used - how it is presented, assessed and changed
- environment - temperature, humidity, noise and lighting
- social environment - teamwork and supportive management

Ergonomics also assesses the individual, e.g. body size, shape, fitness, strength, posture, senses, stresses and strains on muscles, joints, nerves, mental abilities, knowledge and experience. There are several injuries and conditions that can be caused by poor work and workstation design.

- **Work-related upper limb disorder (WRULD)** – this is caused by the user sitting in the same position for many hours every day and/or carrying out repetitive tasks. Examples are injuries and pain to the fingers, hands, wrists, neck and shoulders. Sometimes these injuries are known as repetitive strain injuries and may be due to the posture of the user and/or repeated body movements.



- **Musculoskeletal disorders** – these affect mainly the back, neck and arms and can be caused by badly designed workstations. Musculoskeletal disorders can lead to swelling, discomfort and pain.

➔ **Visual fatigue** – this may be caused by prolonged activity at the screen causing the muscles in the eyes to tire. Every time the user moves their eyes from the screen, the eyes automatically refocus using tiny muscles on the lens. This happens thousands of times a day and the eyes tire. The use of a document holder has been shown to reduce visual fatigue.

➔ **Stress** – all workstations must be risk assessed, e.g. supermarket checkouts, laboratory benches and CCTV monitoring rooms.

Display screen equipment

Computer equipment and its use forms a very common workstation that poses ergonomic risks.



Risk assessment

The assessment consists of a detailed inspection of the workplace and particular workstation. Four items are considered for the assessment:

- 1 the equipment
- 2 job design
- 3 environment
- 4 the user

When carrying out an assessment, the following must be considered:

- ➔
- chairs should be on five castors and be adjustable in height
 - user's feet must reach the floor or be supported by a foot rest
 - the monitor must be directly in front of the user with the top of the screen level with the eyes of the user
 - the screen should not be affected by **glare**
 - the user should plan their workload to include regular breaks
 - users are entitled to eye and eyesight tests on request
 - users should receive training about the hazards and potential health effects of using display screen equipment
 - noise levels need to be satisfactory
 - plenty of room should be allowed for movement

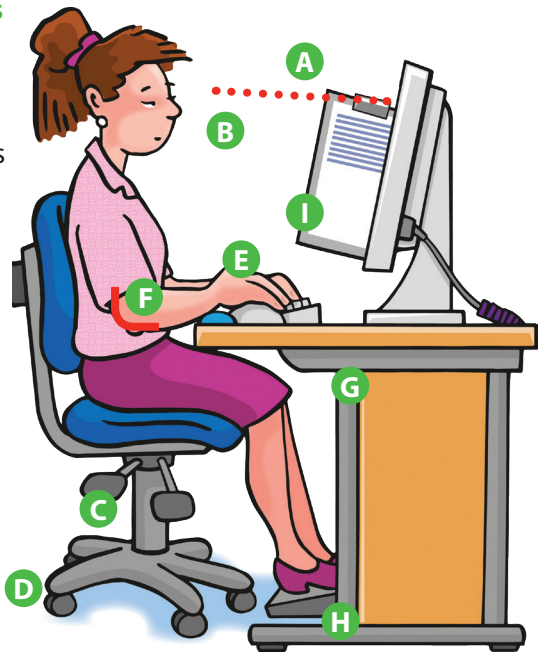
Employees' role

Employees have an important part to play in preventing health problems from arising. All of the earlier points have dependency on the user, for example, employees can position their screens in a way that minimises glare, and this may change throughout the day. Employees have a duty to follow instructions and procedures set out by employers and to report any problems associated with the use of equipment.



Workstation guidance rules

- A** 350 – 600mm
(700 max.)
- B** Eyes at the same height as
the top of the VDU
- C** Fully adjustable seating
- D** Stable base
- E** Wrist supports
- F** Approximately 90°
- G** High clearance
- H** Footrest if required
- I** Document holder





Manual handling



Manual handling is the movement or support of any load by physical effort including:

- lifting
- moving
- carrying
- putting down
- pushing
- pulling

Manual handling injuries are various and include:

- fractures
- damage to muscles, ligaments and tendons
- spinal disc injuries
- abrasions and cuts
- trapped nerves
- burns
- **hernias**

Poor manual handling in the workplace is by far the greatest reason for time off work.

Time off work

Around a third of all workplace injuries are caused by manual handling**. Manual handling should be avoided whenever practical. It is important that any work that involves the need to move awkward or heavy loads is assessed. When manual handling is required, the risk of injury can be reduced by carrying out a risk assessment. Detailed next is an easy step-by-step process.



** <http://www.hse.gov.uk/statistics/causinj/handling-injuries.pdf>

The LITE stairway to safety

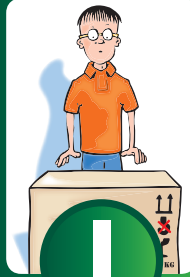
LOAD:
The load
being moved



L

Look at the load.
If it is too heavy, can
it be lightened
or split?
If it is unstable,
can handles be
fitted or the load
reapportioned?

INDIVIDUAL:
The individual
moving the load



I

Consider the
capability of the
person.
Are they strong or fit
enough?
Have they completed
a pre-employment
medical?
Are they adequately
trained?

TASK:
The task being
undertaken



T

Carefully evaluate
the job to be done.
Does the task
involve stretching,
twisting or bending?
Can machinery
be used to help
or can team
handling be used?

ENVIRONMENT:
The working
environment



E

Control the
environment where
the operation takes
place.
Is the floor slippery
or uneven?
Can the layout or
floor condition be
improved?

Employees' responsibilities

Employees also have other responsibilities; to cooperate by following procedures and to look after themselves and others.

Safe lifting techniques

There are six steps to safe lifting (if an assessment shows it is appropriate):



- Step 1.** Stop and think
- Step 2.** Position the feet
- Step 3.** Bend the knees

- Step 4.** Get a firm grip and keep the back slightly flexed
- Step 5.** Raise with the legs
- Step 6.** Keep the load close to the body

To see a visual illustration of this technique, please see the back cover of this book.



Working at heights

Falls from height are a common cause of fatal injury. When people use equipment while working at height, this can fall onto persons below causing death and injury. Working at height can range from using a footstool to stack shelves in a supermarket,



to hanging wallpaper using a ladder, window cleaning five storeys high or constructing a roof on a building.

Common causes of falls from height include employers failing to recognise a problem, or not providing safe systems of work to prevent goods falling from racking. The employer must ensure staff follow procedures and are trained to use equipment provided.



Control measures should include the following:

- ➔ avoid working at height.
- ➔ use equipment to prevent falls where work has to be carried out at height, e.g. mobile elevated work platform, fixed scaffolding, mobile towers.
- ➔ where a fall risk cannot be eliminated, use equipment to minimise the distance of the fall or injury should one occur.



When the use of ladders is unavoidable, they must be placed on an even, safe flooring, with someone 'footing' it to prevent movement. Always check ladders for damage before use and ensure the ladder is suitable for the task that is being carried out. Never use a broken or defective ladder. If you find any damage, don't use it, take it out of use and label it appropriately. Arrange speedy repair or replacement.

1

APPENDIX 1 Definitions



Accident

An accident is an unplanned and uncontrolled event that results in injury or ill health of people, damage to property or other loss.

Approved code of practice (ACOP)

The Health and Safety Executive (HSE) is empowered under the Health and Safety at Work Act (HSWA) to approve and issue codes of practice for the purpose of supplementing information contained in statute and regulations. A code of practice can be drawn up by the HSE or some other body. In every case, however, any relevant government department or other body must be consulted beforehand and the approval of the Secretary of State for Employment must be obtained. Failure to comply with an ACOP can raise the presumption that the offender was in breach of the legislation unless 'works of an equivalent nature' are undertaken, which satisfy the requirements of the ACOP.

Breathing apparatus

This is generally taken to mean apparatus that replaces the surrounding air supply and provides the user with sufficient air to breathe normally. The use of breathing apparatus may be necessary in atmospheres contaminated with smoke and other airborne pollutants.

Competent persons

The appointment by an employer of suitable competent persons to undertake a range of examinations, inspections, operations and supervisory duties is well recognised in health and safety law. Generally, a competent person should

have the appropriate skill, knowledge and experience to deal with the particular circumstances.

'Corrosive' classification

Substances and preparations that may destroy living tissues on contact with them.

Danger

Liability or exposure to harm; a thing that causes peril.

Display screen equipment

Alphanumeric or graphic display screen.

Ear protection

Ear or hearing protection is designed to protect people from the risk of noise-induced hearing loss (occupational deafness). It takes two principal forms:

- ear plugs: fitted into the auditory canal; and
- ear defenders, muffs and pads. These cover the whole ear and can reduce exposure by up to 50 dBA at certain frequencies.

Emergency lighting

This is provided to ensure safety when a normal lighting installation fails and may take the form of standby lighting or escape lighting.

Employer's liability

Under the Employer's Liability (Compulsory Insurance) Act 1969, most employers are required to carry insurance against common law liability to their employees resulting in injury, disease and/or death. Failure to do so is a criminal offence. A current employer's liability insurance certificate must be displayed in a prominent position or accessible electronically to the workforce.

Enforcing authority

The enforcing authorities are:

- the Health and Safety Executive (HSE)
- local authorities
- fire authorities for certain delegated matters

Enforcement of health and safety legislation is undertaken by inspectors appointed under Section 20 of the HSWA and authorised by written warrant from the enforcing authority.

Ergonomics

The study of how a workplace and equipment can be designed for comfort, safety, efficiency and productivity.

Evacuation

The process of moving people from a building or area to an identified assembly point.

Eye protection

Eye protection is designed to prevent injury arising from flying particles, dust, fumes, welding glare and splashes of hazardous substances such as acids.

Fire

A spectacular example of a fast chemical reaction between a combustible substance and oxygen accompanied by the evolution of heat.

Fire alarm

Fire alarm systems can range from a simple hand bell to electronically actuated systems. Systems are commonly linked with heat and/or smoke detection systems, the detection system actuating the audible alarm and sprinkler systems.

Fire drill

A planned or unplanned evacuation of a building or area in order to train and familiarise occupants with the means of escape.

Fire escape

A commonly used term to indicate the structural means of escape from a building, such as an external metal staircase or fire-protected internal staircase.

Fire exit

A designated door giving direct access to the open air and forming part of a means of escape in the event of fire.

Fire extinguishers

These are appliances designed to be carried and operated by hand. They contain an extinguishing medium that can be expelled by the action of internal pressure and directed at a fire.

First aid

The actions taken to prevent an injured person's condition from deteriorating while awaiting professional assistance. First aid has 3 aims: to preserve life, to prevent the condition worsening and to promote recovery.

Glare

The effect of light that causes discomfort or impaired vision, which is experienced when parts of the visual field are excessively bright compared with the general surroundings.

Guard

A physical barrier to protect persons from danger.

Hand protection

This includes gloves and gauntlets principally concerned with protecting the hands from injuries such as cuts, abrasions and burns or injuries arising during manual handling operations or extremes of temperature.

'Harmful' classification

Substances and preparations that may cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin.

Hazard

Something with the potential to cause harm. This can include substances or machines, methods of work and other aspects of work organisation.

Health and Safety Executive (HSE)

This is the national health and safety enforcing authority. HSE inspectors have wide-ranging powers, including the power to serve improvement notices and prohibition notices.

Health and Safety Executive guidance notes

The HSE issues guidance notes that have no legal status and are purely of an advisory nature, sometimes to supplement information in an ACOP.

Hernia

A protrusion of an organ from one compartment of the body into another, e.g. a loop of intestine into the groin or through the frontal abdominal wall.

Hoists and lifts

General requirements for hoists and lifts are incorporated in the Lifting Operations and Lifting Equipment Regulations. Every hoist or lift shall be of good mechanical construction, sound material, adequate strength and properly maintained. Every hoist or lift shall be examined by a competent person. Passenger-carrying lifts must be examined every six months and non-passenger-carrying lifts every 12 months. Findings should be recorded and, where defects are found, a report must be sent to the relevant enforcing authority. The safe working load of the hoist or lift must be clearly marked and must not be exceeded.

Human error

Limitations in human capacity to perceive, attend to, remember, process and act on information are all relevant in the context of human error.

Ignition

Ignition of a substance is brought about by the introduction of energy sufficient to raise a volume of the substance to its ignition temperature.

Improvement notice

An improvement notice is served on an employer and other persons when, in the opinion of an enforcement officer, a person, business or undertaking is not complying with the relevant statutory provisions and where action is required by a certain date.



Ingestion

The taking into the body of substances through the mouth.

Inhalation

The principal route of entry of hazardous substances, such as gases, dusts and vapours, into the body via the nose, mouth and respiratory tract.

Injection

A forceful breach of the skin, perhaps as a result of injury, which can transmit hazardous substances past the skin barrier.

Injury

Damage to the body, commonly as a result of an accident.

'Irritant' classification

Non-corrosive substances and preparations that, through immediate, prolonged or repeated contact with the skin or mucous membrane, may cause inflammation.

Management

The effective use of resources in the pursuit of organisational goals. 'Effective' implies achieving a balance between the risk of being in business and the cost of eliminating or reducing those risks.

Mandatory signs

Signs that indicate that a specific course of action is required, e.g. EYE PROTECTION MUST BE WORN. These signs are circular in shape and blue in colour, with a symbol or text in white.

Manual handling operations

This means any transporting or supporting of a load (including the lifting, putting down, pushing, pulling, carrying or moving thereof) by hand or by bodily force (The Manual Handling Operations Regulations).

Near miss

An unplanned and uncontrolled event that could have resulted, but did not result, in human injury, property damage or other form of loss.

Negligence

'Negligence' can be defined as 'careless conduct injuring another'.

Noise

Noise is generally defined as 'unwanted sound'.

Permit to work

A form of safe system of work operated where there is a high degree of foreseeable risk. A formal safety control system designed to prevent accidental injury to personnel, damage to plant, premises and product, particularly when work with a foreseeably high hazard content is undertaken and the precautions required are numerous and complex.

Personal protective equipment (PPE)

All equipment (including clothing affording protection against the weather) that is intended to be worn or held by a person at work that protects them against one or more risks to their health and safety. Any addition or accessory designed to meet this objective. (Personal Protective Equipment at Work Regulations.)



Prohibition notice

Served by enforcement officers where they are of the opinion that a work activity involves or will involve a risk of serious personal injury. The notice places a prohibition on specified activities until remedial measures are implemented to the satisfaction of the issuing officer.

Prosecution

The bringing of a person before a court to answer a charge involving an alleged breach of the law. It is normal for the person charged to be served with a summons to attend court to answer to the charge or charges in question.

Respirators

Respirators are designed to protect the respiratory system of the wearer against harmful dusts, gases, fumes and other forms of airborne contamination.

Risk

Risk expresses the likelihood or probability that the harm from a particular hazard will be realised.

Risk assessment

The identification of hazards, the calculation and reduction of risk either completely or to an acceptable level.

Safe system of work

The integration of people, machinery and equipment in a correct environment to provide the safest possible conditions in a work situation.

Safety representative

An employee appointed by their trade union to represent the members of that trade union in consultation with their employer on all matters affecting health and safety at work.

Safety sign

Under the Health and Safety (Safety Signs and Signals) Regulations, employers must use a safety sign wherever there is a risk to health and safety that cannot be avoided or properly controlled by other means.

Stress

The adverse reaction people have to excessive pressures or other types of demand placed on them at work.

Training

The systematic development of attitude, knowledge and skill patterns required by an individual to perform adequately a given task. (Department of Employment and Productivity (1978) Glossary of Training Terms: HMSO London.)

Ventilation

Ventilation implies the movement of air through a building. This may be by natural or mechanical means or by a combination of both.

Warning signs See SAFETY SIGN.

Work-related upper limb disorder

A group of conditions occasionally experienced by keyboard operators, formerly referred to as repetitive strain injury. These disorders affect the soft tissues of the hand, wrist, arm and shoulder. Typical symptoms include pain, restriction of joint movement and swelling of the soft tissues.



2

APPENDIX 2 Example test questions

Select ONE answer in each case.

1. Which of the following is NOT a legal requirement?

- A** For all accidents to be reported.
- B** For an employer to notify within 15 days of a work-related injury that causes an employee to be off work for more than 7 days.
- C** An employee must inform the employer, either verbally or in writing, of any injury caused by an accident.
- D** The Health and Safety Executive should be notified immediately by the employer whenever any accident occurs in the workplace.

2. A control measure is:

- A** a procedure to determine temperature.
- B** a method to remove or reduce risks.
- C** a record of performance.
- D** a way to keep the costs down.

3. Personal protective equipment (PPE) is:

- A** the easiest way to ensure that employees are kept safe at work.
- B** a last resort after a risk assessment determines that the risk couldn't be controlled in another way.
- C** the responsibility of the employee only.
- D** always coloured red.

4. It is the responsibility of the employee to:

- A** supply PPE when required.
- B** maintain PPE and take it home to repair.
- C** use PPE even if they have not been instructed on how to use it.
- D** use PPE as instructed.

5. Which of the following is not an example of an occupational disease?

- A** Dermatitis.
- B** Asthma.
- C** Asbestosis.
- D** Common cold.

6. If an employee is working at a machine that is creating a high level of noise, what is the best way to reduce the risk of hearing loss?

- A** Ask the employee to wear hearing protection.
- B** Reduce the time allowed for the employee to be in the area.
- C** Open all the doors and windows.
- D** Replace the noisy machine with a quieter one.

7. Whose responsibility is it to ensure that noise does not compromise safety?

- A** The employer's.
- B** The employees'.
- C** Machine designers.
- D** All of the above.

8. The main role of appointed persons in the workplace is to:

- A** administer first aid to customers.
- B** take charge of first-aid arrangements.
- C** train staff how to use the defibrillator.
- D** give emergency first aid to injured employees.

9. Which of the following is not an example of a manual handling injury?

- A** Fractures.
- B** Trapped nerves.
- C** Hernias.
- D** Dermatitis.

10. Who is responsible for ensuring that a suitable assessment of the risk of hazardous substances to the health of employees is carried out?

- A** The employee.
- B** The enforcement officer.
- C** The head of the science section.
- D** The employer.

11. The main role of the first aider is to:

- A** teach first aid to all workers.
- B** stop injuries from getting worse until treatment can be given.
- C** supply antiseptic cream to employees with minor cuts.
- D** inspect the organisation's accident book.

12. First aiders should have:

- A** a valid first-aid qualification.
- B** regular updates with every member of staff.
- C** a qualification in management.
- D** five years' medical experience.

13. What must you do first if you believe that someone has suffered from an electric shock?

- A** Check their pulse.
- B** Switch off the current if you can do so without risk to yourself.
- C** Ring for an ambulance.
- D** Push them away from where you believe the shock was generated.

14. If you start to experience aching wrists when using a keyboard, what is the most important thing you should do?

- A** Take a break.
- B** Report it to your line manager immediately.
- C** Change the keyboard.
- D** Ignore it.

15. Which of the following is a component of the fire triangle?

- A** Nitrogen.
- B** Carbon dioxide.
- C** Oxygen.
- D** Carbon monoxide.

Answers:

8: D 9: D 10: D 11: B 12: A 13: B 14: A 15: C

Example risk assessment: Village Hall

Company Name: Village Hall Date of risk assessment: 1 June 2007

What are the hazards?	Who might be harmed and how?	What are you already doing?	What further action is necessary?	Action by who?	Action by when?	Done
<p>Slips, trips, and falls e.g. uneven surface of car park, cleaning floors etc.</p>	<p>Users of the hall and car park may suffer injuries such as fractures or bruising if they slip, e.g. on spillages or trip over objects.</p>	<ul style="list-style-type: none"> Car park surface maintained to be as even as possible. Parking surfaces for visitors with disabilities available next to hall entrance. Good lighting in car park and all rooms and corridors in hall. Users know (through hire agreement) to clear up spillages immediately and know where equipment for this is kept. Mats at entrances to stop rain water being carried in. No storage in corridors. No trailing electrical leads/cables. 	<ul style="list-style-type: none"> Surface to be inspected regularly and repaired as necessary. Check that hall cleaner knows which products to use on which type of floor. 	<p>Secretary/ Treasurer</p> <p>Secretary</p>	<p>Inspect three-monthly</p> <p>16/6/07</p>	<p>16 June, then every three months</p> <p>8/6/07</p>
<p>Work at height e.g. changing light bulbs, cleaning windows, putting up decorations etc.</p>	<p>Anyone working at any height could suffer injuries; possibly very serious ones, should they fall.</p>	<ul style="list-style-type: none"> Appropriate, commercial stepladder securely stored and available for use. Hall users know (through hire agreement) that they are responsible for using the stepladder safely. Hall committee members and cleaner know how to use the stepladder safely. 	<ul style="list-style-type: none"> Print copies of HSE guidance on safe use of stepladders and make available to those who may use stepladder. 	<p>Secretary</p>	<p>16/6/07</p>	<p>8/6/07</p>
			<ul style="list-style-type: none"> Put in place system for checking condition of stepladder. 	<p>Secretary</p>	<p>16/6/07</p>	<p>8/6/07</p>
			<ul style="list-style-type: none"> Consider implications for work at height of any future alterations to the hall. 	<p>Secretary</p>	<p>As needed</p>	

Source: Health and Safety Executive

Notes

A large rectangular area with a light green border, containing two columns of horizontal dotted lines for writing notes.

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SIX STEPS to SAFE LIFTING



STEP 1
Stop and think



POSITION OF FEET



STEP 2
Position the feet



POSITION OF FEET



STEP 3
Bend the knees



POSITION OF FEET



STEP 4
Get a firm grip, keep the back slightly flexed



POSITION OF FEET



STEP 5
Raise with the legs



POSITION OF FEET



STEP 6
Keep the load close to the body



POSITION OF FEET