Level 3 Award in Health and Safety for Supervisors in the Workplace

Sessions 1 - 5

1. Legal Requirements for Health, Safety & Wellbeing
2. Health & Safety Management Systems
3. Assess Hazards, Risks and Controls
4. Procedures for Responding to Accidents and Incidents in the Workplace
5. Reviewing & Monitoring Health & Safety Systems

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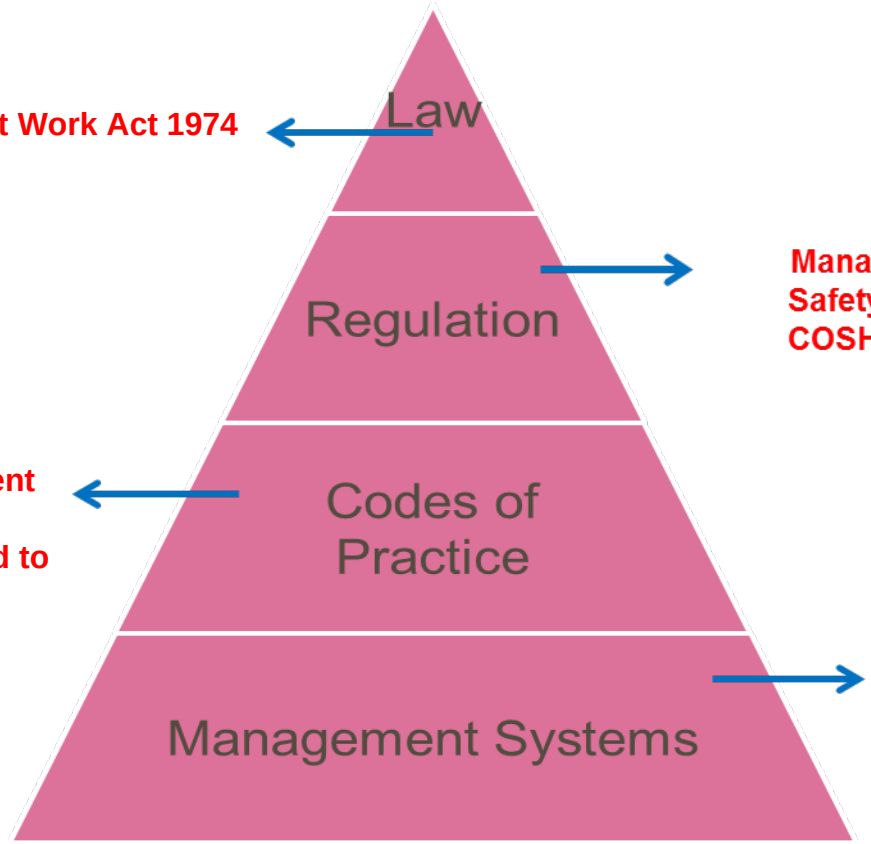
Legal Requirements for Health, Safety & Wellbeing

Criminal Law

This is made by Parliament and put in Statute Books



Health and Safety at Work Act 1974

Management of Health & Safety at Work Regs.
COSHH, Manual Handling

L8 – Legionella
Safe use of Lifting Equipment
HTM Standards
Level of compliance needed to satisfy Regulations

BS OHSAS 18001 Occupational Health and Safety Management

ISO 14001 Environmental Management (EMS)

HASAWA 1974

Section 1 – Purpose and Aims

- Welfare
- Controlling dangerous substances
- Control of emissions
- Protecting others from hazards.

Section 2.1 – General Duties of employers

- It shall be the duty of every employer to ensure, so far as reasonably practicable the Health, Safety & Welfare of all employees.

Section 2.2 – Duties of Employer

- Safe Plant, Equipment and Safe Systems of Work
- Safe Handling, Storage or Articles & Substances
- Information, Instruction, Training & Supervision (IITS)
- Safe place of work inc. Access & Egress
- Welfare Arrangements

HASAWA 1974

Section 2.3 – If there are 5 or more staff then there **MUST** be a written policy.

Section 2.4-2.7 –

- Trade Unions have a right to appoint Safety Reps
- Employees must consult with Reps
- Establish a Safety Committee if requested by 2 or more Reps

Section 3 – Employers & Self Employed have a duty of care to non-employees

Section 4 – Those in control of premises who make these available to non-employees as a place of work must make sure they are safe.

HASAWA 1974

Section 6 – Duties of Manufacturers

Section 7 – Employees must take care of themselves, others & cooperate with the employer

Section 8 – All employees must not interfere with or misuse health & safety measures and equipment

Section 9 – No employer can charge the employee for equipment needed to carry out work safely

Section 36/37 – Offences committed by others

OFFENCES AFTER 12TH MARCH 2015	SUMMARY (Magistrates Court)	INDICTABLE (Crown Court)
Sections 2 – 6 HASAWA	12 Months imprisonment and/or Unlimited fine	2 years imprisonment or Unlimited fine
Section 9 HASAWA	Unlimited fine	Unlimited fine
Section 7 & 8 (employees)	6 months imprisonment and/or Unlimited fine	2 years imprisonment or Unlimited fine
• Attempting to prevent person speaking to Inspector • Failure to comply to H&S Regs • False statement	6 months imprisonment and/or Unlimited fine	2 years imprisonment or Unlimited fine

For offences committed before the 12th March 2015:

- Employers could receive 6 months imprisonment and/or fine up to £20,000 in Magistrate Court.
- Employees could receive 6 months imprisonments and/or fine up to £5,000 in Magistrates Court.

On 1st February 2016, the new sentencing guidelines for health and safety offences came into force.

The guidelines require an assessment of turnover in order to set a starting point for a fine that is intended *“to bring the message home to the directors and shareholders of offending organisations”*

Welfare at Work –

Workplace Regulations 1992

Facilities –

- Drinking Water
- Sanitary Facilities
- Wash Facilities
- Rest & Eating
- Changing Facilities if applicable

Environment –

- Ventilation
- Temperature – no maximum, minimum of 16 C
- Lighting
- Housekeeping
- Workspace, Dimensions & Workstations

Welfare at Work –

Workplace Regulations 1992

The law states that toilets and washing facilities must be adequate.

- Employers should arrange for separate facilities for men and women. If this isn't possible, toilets and washing facilities must have locks.
- The facilities must be clean and easy to maintain. Walls and floors should be waterproof.
- Toilets and washing facilities should have both cold and hot running water. They should have soap or a similar cleaning product. And a hot air dryer or paper towels should be available.
- Washing basins must be a reasonable size. People should be able to wash hands and forearms in them.
- The toilets should have toilet paper. In the female toilets, there should be a disposal point for sanitary dressings.

Welfare at Work –

Workplace Regulations 1992

The law says that workers should not have to queue for long periods to use toilets and washing facilities.

- For women only or for mixed use, there should be 1 toilet and washbasin for 1-5 employees.
- 25-50 staff should have 3 toilets and 3 washbasins between them.
- 76-100 employees should have 5 toilets and 5 washbasins.
- For men only, there should be 1 toilet and 1 urinal for 1-15 employees. This rises to 2 toilets and 1 urinal for 16-30 staff, and 4 toilets and 4 urinals for 91-100 staff

Management of H&S Regulations 1999

These Regulations were introduced to reinforce the Health & Safety at Work Act.

Some of the items they cover:

- Risk Assessments
- H&S Arrangements
- Emergency Procedures
- Information
- Cooperation & Coordination
- Training
- Health Surveillance

Legal Proceedings

What are the costs to business?

- Prosecution made public
- Damaged reputation
- Legal fees and fines
- Increased insurance premiums
- Loss of future business

Powers of the HSE Inspector

- Enter the premises at any reasonable time
- Take police officer/authorised personnel
- Examine & Investigate
- Ensure premises remains undisturbed
- Take photographs & measurements
- Sample & retain unsafe substances
- Order testing & examination
- Take copies of documents
- Provide assistance

Actions of the HSE Inspector

1. Verbal discussions & advice
2. Written advice
3. Enforcement Notices:

- Improvement Notice – breach of regulations/legislation
- Prohibition Notice – immediate danger

4. Prosecute

Any appeals against enforcement notices must be made within 21 days. An improvement notice will be lifted until the appeal is heard. However, a prohibition notice will stay in force.

The HSE charge **£124p/h*** for investigations.

*As at July 2017, charges are liable to change

Other External Agencies

1. Fire & Rescue Authority –

- Enforces fire safety law
- Undertakes fire inspections
- Can issue alterations, improvement and prohibition notices
- Needs to be informed during planning stage of building alterations

Other External Agencies

2. Environmental Agency

- Responsible for authorising and regulating emissions
- Setting standards and issuing permits for collections, transporting, processing and disposal of waste
- Enforcement of Waste Electrical and Electronic Directive

3. Insurance Companies

- Insure against liability for injury or disease
- Offer fire and public liability insurance
- Influence H&S standards by weighting premium offered against H&S record.

Is the HSE the correct Enforcing Authority for you?

The HSE is responsible for:

- Factories
- Farms
- Building sites
- Mines
- Schools and colleges
- Fairgrounds
- Gas, electricity and water systems
- Hospitals and nursing homes
- Central and local government premises
- Offshore installations

Is the HSE the correct Enforcing Authority for you?

The Local Authority is responsible for:

- Offices (except government offices)
- Shops
- Hotels
- Restaurants
- Leisure premises
- Nurseries and playgroups
- Pubs and clubs
- Museums (privately owned)
- Places of worship
- Sheltered accommodation and care homes

Is the HSE the correct Enforcing Authority for you?

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Examples of other Enforcing Authorities:

- Poor food hygiene – Environmental Health
- Pollution, inc noise – Environmental Health
- Goods & services you have bought – Trading Standards
- Road, highways & pavements – Highways Dep.
- Road traffic issues – police
- Care of patients and users of health and social care services in England – Care Quality Commission

Construction (Design and Management) Regulations 2015

These lay out the roles and responsibilities of contractors:

- Sensibly plan the work so the risks involved are managed from start to finish
- Have the right people for the right job at the right time
- Cooperate and coordinate their work with others
- Have the right information about the risks and how they are being managed
- Communicate this information effectively to those who need to know
- Consult and engage with workers about the risks and how they are being managed

Criminal Law & Civil Law

	Criminal Law	Civil Law
Who does the court case focus on?	The accused – individual or organisation	The injured party
Who makes this kind of law?	Parliament	Judges
Who initiates legal proceedings?	HSE or Local Authority	Anyone affected
What is the most likely outcome?	Possible imprisonments and/or fines	Compensation
Who is responsible for providing the case?	The State	The claimant
What is the standard proof required?	Beyond reasonable doubt	On the balance of probabilities
How soon must legal action start?	6 months (can be extended)	3 years from discovery of harm (can be extended)

Beyond Reasonable Doubt (Criminal Law)

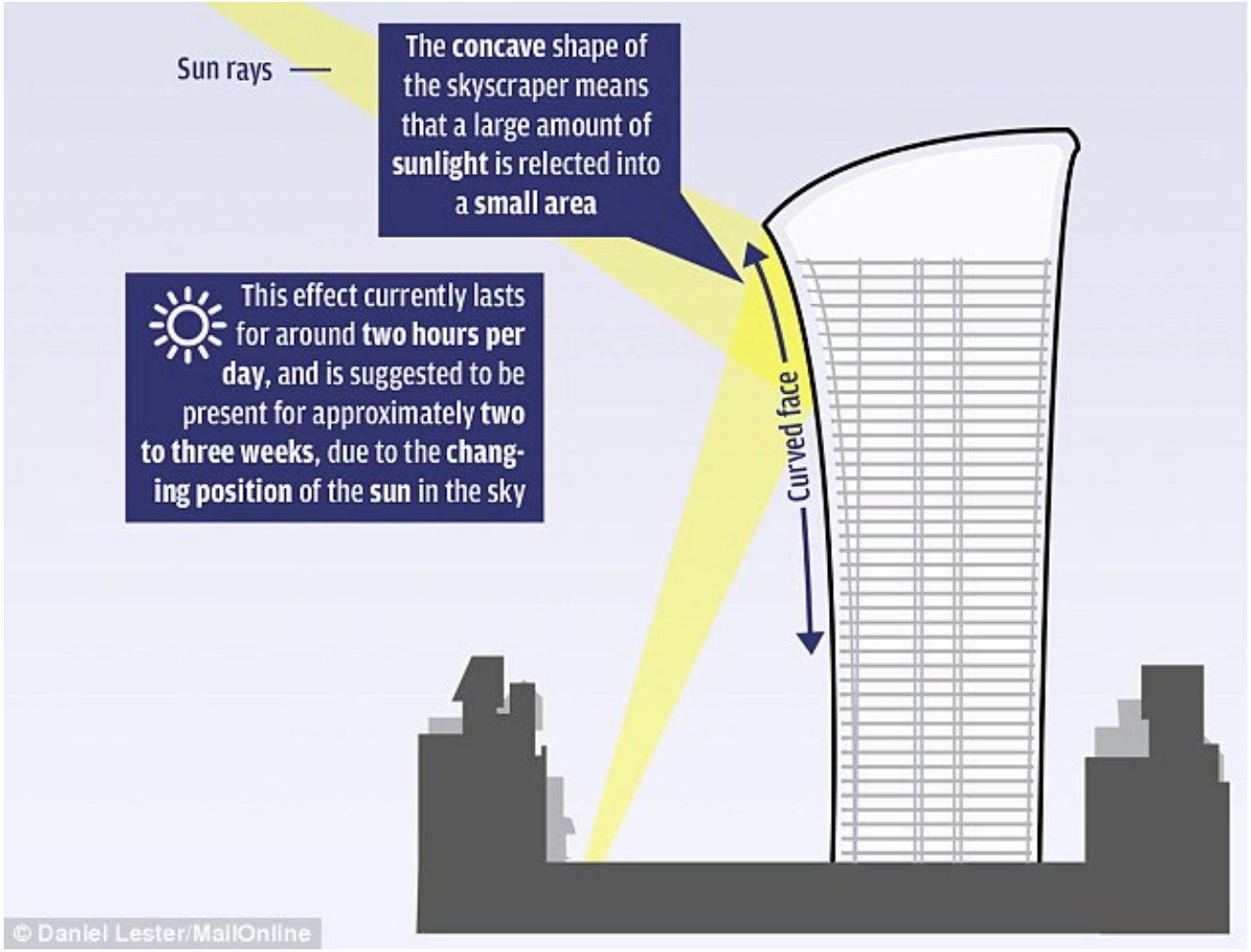
The law requires you to be responsible only for reasonably foreseeable risks -

- Common Knowledge
- Industry Knowledge
- Expert Knowledge

Balance of Probabilities (Civil Law)

- The defendant owed the person a duty of care
- The duty of care was breached
- The injury was caused by a breach of duty

Example


Sun rays
The concave shape of the skyscraper means that a large amount of sunlight is relected into a small area
This effect currently lasts for around two hours per day, and is suggested to be present for approximately two to three weeks, due to the changing position of the sun in the sky
Curved face
© Daniel Lester/MailOnline

Quiz 1

1. What are the 5 welfare facilities requirements?
2. What is the minimum acceptable temperature in the workplace?
3. What are the powers of the HSE?
4. What are the 2 enforcement notices issued by the HSE?

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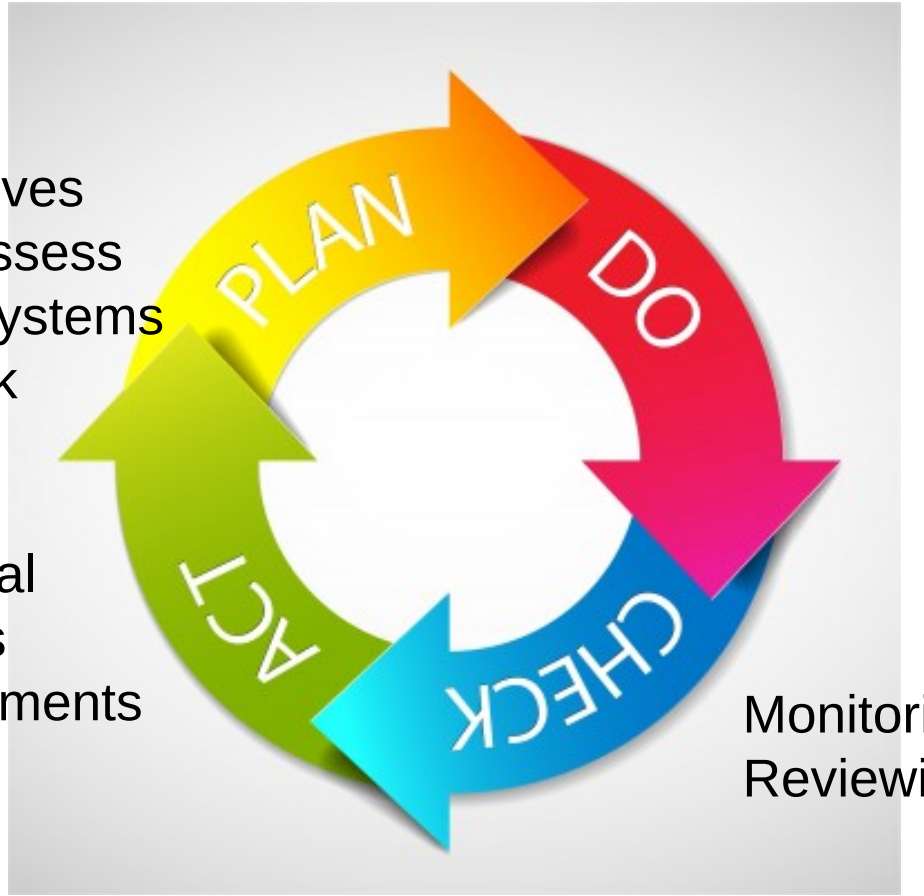
Health & Safety Management Systems

Key Elements & Benefits of a Safety Management System

HSG 65

Policy
Objectives
Risk Assess
Safe Systems of Work



Beneficial changes Improvements

Monitoring & Reviewing

Purpose of a Policy

- Ensure everyone is aware of H&S
- Effective development of H&S
- Involvement of Senior Managers
- Enhanced performance
- Improved business efficiency

Why Review a Policy?

- Significant organisational changes
- Changes in legislation
- Enforcement Notices or Serious Incidents
- Period of time
- Findings from External Audit
- Poor H&S Performance

What Should a Policy Include?

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1. Statement of Intent

- Aims & Objectives – SMART
- Signed by most senior person

2. Organisation

- Responsibilities
- Allocation of resources
- Communication
- Monitoring system
- Organisational chart

3. Arrangements

- Fire precautions
- Emergency planning
- Accident reporting & investigation
- Risk assessments
- Safe systems of work
- PPE
- Contractors/visitors
- Terms of reference

Employees must be informed of any changes to policy or procedures **immediately.**

Safe Systems of Work

The integration of personnel, articles and substances in a laid out and considered method of working, which takes proper account of the risks to employees and others.

Components:

People – behaviour, experience, knowledge

Equipment – design, hazards, ergonomics

Materials – handlings, quantity

Environment – indoor/outdoor, public

Safe Systems of Work

Development of SSOW:

1. Assess the task
2. Identify significant hazards
3. Define safe methods for performing task
4. Implement SSOW
5. Monitor SSOW and review
6. Train workforce in procedures

Permits to Work–
Formal written SSOW required to be signed on/off by a responsible person. Describes tasks, durations, safety measures, acknowledgement.

Health & Safety Culture

Group values, attitudes, perceptions, competencies and patterns of behaviour.

Benefits of a Positive H&S Culture

- Mutual trust throughout the Organisation
- Fewer accidents
- Prompt accident reporting from employees
- Fewer complaints
- Better staff morale
- Decrease in sickness/absence rates

Health & Safety Culture

Human Failure

- **Mistakes –** doing the wrong thing believing you're doing the right thing.

- **Routine violations** – breaking a rule has become a normal way of working within a work group. This can be due to :
  - Saving time & energy
  - Lack of enforcement
  - Saving money
  - Perceptions and attitudes

Positive Health & Safety Culture

Control

Cooperation

Communication

Competence

The four C's!

Training and Competence

What Makes an Employee Competent?

Knowledge

Ability

Training

Experience

Training and Competence

What makes a contractor competent:

- Approved membership/approved list
- References
- Qualifications
- Method statements
- Risk assessments
- Experience
- Training

Training and Competence

Legal requirements

- Take into account employees' capabilities
- Pay particular attention to young workers
- Take account of any change
- During working hours
- Records of training to be kept
- Pay attention to existing, new or increased risks

Training and Competence

Types of Training include:

- Induction
- Toolbox talks – quick brief summary of H&S at the beginning of shift
- Refresher - depends on the level of risk
- E Learning

Training Needs Analysis identifies what training each member of staff needs to undertake.

Training records show what training each member of staff has undertaken.

Four Levels of Training Evaluation

1. Reaction – training/course feedback
2. Learning – knowledge, identifies whether training objectives are being met
3. Behaviour – competence, have the skills learned been applied?
4. Results - organisational

Training Barriers to Communication

- Language & Dialect
- Acronyms & Jargon
- Various physical & mental disabilities
- Attitudes & perceptions of staff

Health and Safety Information

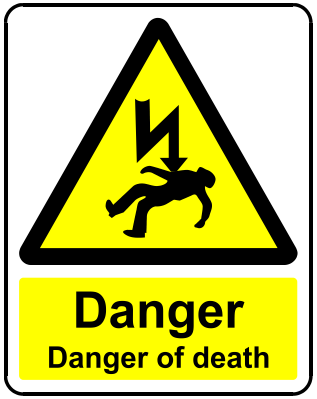
Internal Sources:

- H&S notice boards
- Training Records
- Incident records
- Risk Assessments
- Audit reports
- Policies & Procedures
- Minutes of Meetings
- Method statements

Health and Safety Information

H&S (Safety & Signals) Regulations 1996

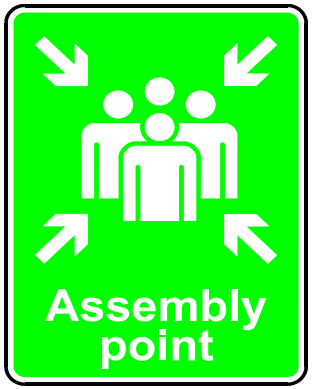
Prohibition



Warning

Mandatory

Fire Equip



Safe Condition

Health and Safety Information

External Sources:

- HSE Website
- ROSPA Website
- Publications – magazines
- Conferences
- Regulations
- ACOPs
- Guidance
- Information from Manufacturers

Health and Safety Information

Consultation with employees

- Safety representatives
- Safety committees
- Elected health and safety representative
- Consult on measures that can affect the health and safety of employees

Consultation with Contractors

- Health & Safety File

Quiz 2

1. What are the four elements of the HSG 65?
2. When should you review a policy?
3. What makes an employee competent?
4. What do yellow triangle signs represent?
5. What do blue information signs represent?

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Assess Hazards, Risks and Controls


FIRE
DOORS
FIRE

Identifying Hazards

Definition of a ‘hazard’

“Something in your workplace that has the potential to cause harm”.

Factors:

Task

Individual

Environment

Risks

Definition of a ‘risk’

“The likelihood that harm will occur and the consequences of that harm”.

Likelihood X Consequence

What are the risks of these hazards?

Hot works

Exposure to loud noise

Un-guarded machinery

Uneven surfaces

Working with Electricity

Working at height

Inhalation of dust or fumes

Risk Assessment

What is a ‘risk assessment’?

“A careful examination of anything in your workplace that can cause harm to people”.

A risk assessment must be

Significant

Sufficient

Suitable

Risk Assessment

Purpose of a ‘risk assessment’

“To enable the employer to evaluate if enough protective measures are in place, or if more should be done to prevent harm to employees”.

Risk Assessment

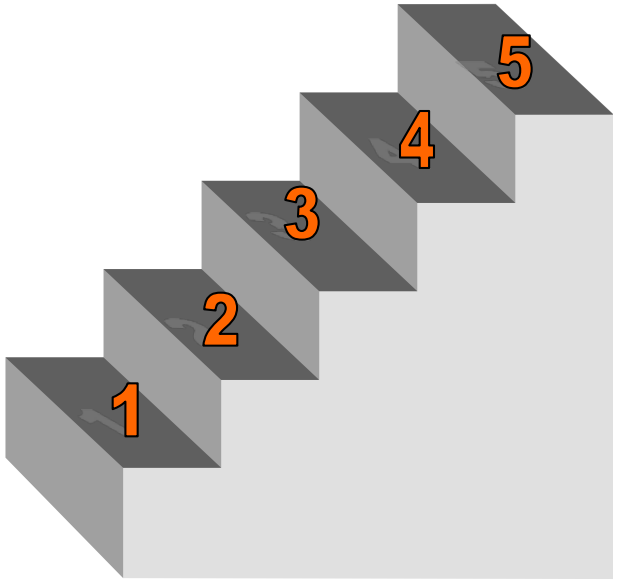
Specific risk assessments

- Disabled workers
- Young persons
- Expectant / nursing mothers
- Lone workers
- Substances (COSHH)

Risk Assessment Process

5 Steps:

1. Identify the hazards
2. Identify who might be harmed
3. Evaluate the risks
4. Record the findings
5. Review & Monitor



Risk Control Hierarchy

Elimination

Reduction/substitution

Isolation

Control – SOW

PPE – last line of defence

Discipline – supervision, training

Reasonably Practicable:

Time

Inconvenience

Money

Effort

Control Hierarchy Task

A window cleaner works on a daily basis cleaning house windows within his local towns. The use of a wooden ladder means he faces the risk of falls from height. Put the controls below in order to best mitigate the risk:

- Provide appropriate PPE
- Ensure the work that is being carried out is kept safe from the public
- Ensure the ladder is inspected on a regular basis
- Use an extendable window cleaner
- Use an aluminium ladder

Control Hierarchy Task

A manufacturing company uses sheet metal guillotine cutters in the production of steel fan covers. There is a risk of crushing, cutting and amputation. Put the controls below in order to best mitigate the risk:

- Ensure safe systems of work are in place
- Create a new product design so no cutting of sheets is necessary
- Provide adequate PPE
- Ensure there are fixed guards in place
- Purchase new lower risk machinery

Example of Risk Assessment

Hazard Identification & Risk Assessment

Risk Evaluation		Company	Royal Society for Public Health	Date	30- 08 -2011		
Likelihood (L)	Consequences (C)	Activity	Movement around the workplace	Review Date	30- 08- 2012		
1 = Unlikely	1 = No Injury	Location	RSPH Headquarters	Assessed by	RSPH Risk Assessor		
2= Conceivable	2 = Minor	Risk Assessment (No Controls)		Existing Controls	Additional Controls	Risk Assessment (With Controls)	
3 = Possible	3 = Major						
4 = Certainty	4 = Fatal	L	C	RR		L	C	RR
Risk category **Slips trips and falls** **Hazards** • Fixed power cables; • Extension leads; • Wet floors; • Carrying awkward bulky supplies; • Torn flooring; • Uneven surfaces. **Risks** • Bruises and grazes; • Cuts, slashes; • Fractured or broken bones. **Persons Affected** • Employees • Visitors • Facilities personnel		3	2	6	• RSPH has removed all extension leads and re-routed fixed power cables were possible to **avoid danger**, although **some** may still be present; • All employees are aware of the location of all extension leads, and remaining fixed power cables; • Cable tidy covers have been placed over the location of any extension leads that cannot be re-routed; • Any damaged or wet flooring is to be reported to your supervisor. **Warn others** of the dangers discovered until repairs can be made or any spillage is cleaned up; • **Warning signage** and **portable barriers** are available and should be placed at the damaged area until repairs can be made, or until the wet surface area can be cleaned, dried and made safe.	• Ensure **new employees** read or have read to them a copy of this risk assessment; • Do not block any walkways or exits doors with office supplies or rubbish; • Manual handling activities in areas where trip hazards are present should be co-ordinated by your supervisor; • In frosty conditions the appointed person will ensure salt or grit is dispersed at the entrance and exits to reduce the potential of employees or visitors to the RSPH Headquarters slipping and falling. • First aiders' are always available and a sufficient number of first aid supplies are retained at the first aid station.	1	2	2

Risk Assessment

Employees responsibilities

- Take care for their own health and safety and that of others
- To co-operate with the employer, in order for the employer to comply with his duties

Risk Assessors:

- Need training
- Leader should have H&S experience
- Competent to assess risks
- Know own limitations
- Include local Line Manager
- Given time to carry out

Risk Assessment

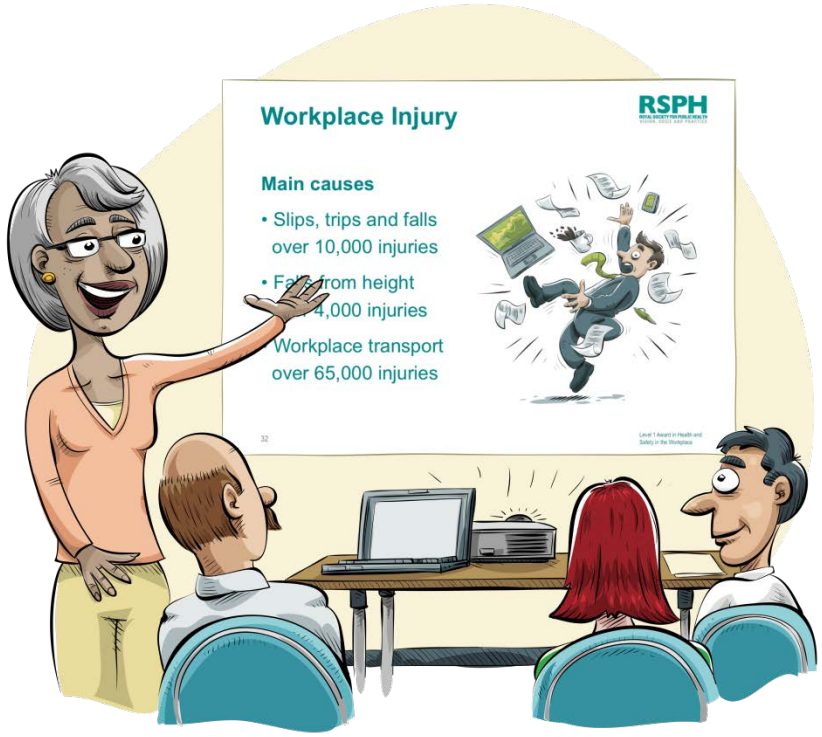
Why and when?

- Legal, moral and economic
- Prevents accidents
- Prevents ill-health
- Work that gives rise to the risk

Communicating Risk Assessments

Communicating information

- Team briefings
- Skills training
- Supervision
- Formal training



Workplace Hazards

Hazard groups

- Mechanical
- Ergonomic
- Physical
- Psychological
- Biological

Common Workplace Hazards

Ergonomic

- Poor equipment design
- Constrained posture
- Repetitive movements
- Over-reaching

Common Workplace Hazards

Physical

- High noise levels
- Excessive vibration
- Poor lighting
- Extreme temperatures

Common Workplace Hazards

Psychological

- Excessive job demands
- Bullying, harassment or violence
- Alcohol or drug misuse
- Discrimination, racial, sexual

Common Workplace Hazards

Biological

- Fungal
- Viral
- Bacterial
- Land and water

Potential Effects of Hazards

Business-related

- Loss of production
- Damaged plant or equipment
- Increased insurance costs
- Legal expenses
- Fines and court costs

Potential Effects of Hazards

Environmental

- Air, (sulphur dioxide, carbon monoxide)
- Water, (mercury, zinc, chromium)
- Ground, (heavy metals, effluent)

Chemical & Biological Hazards

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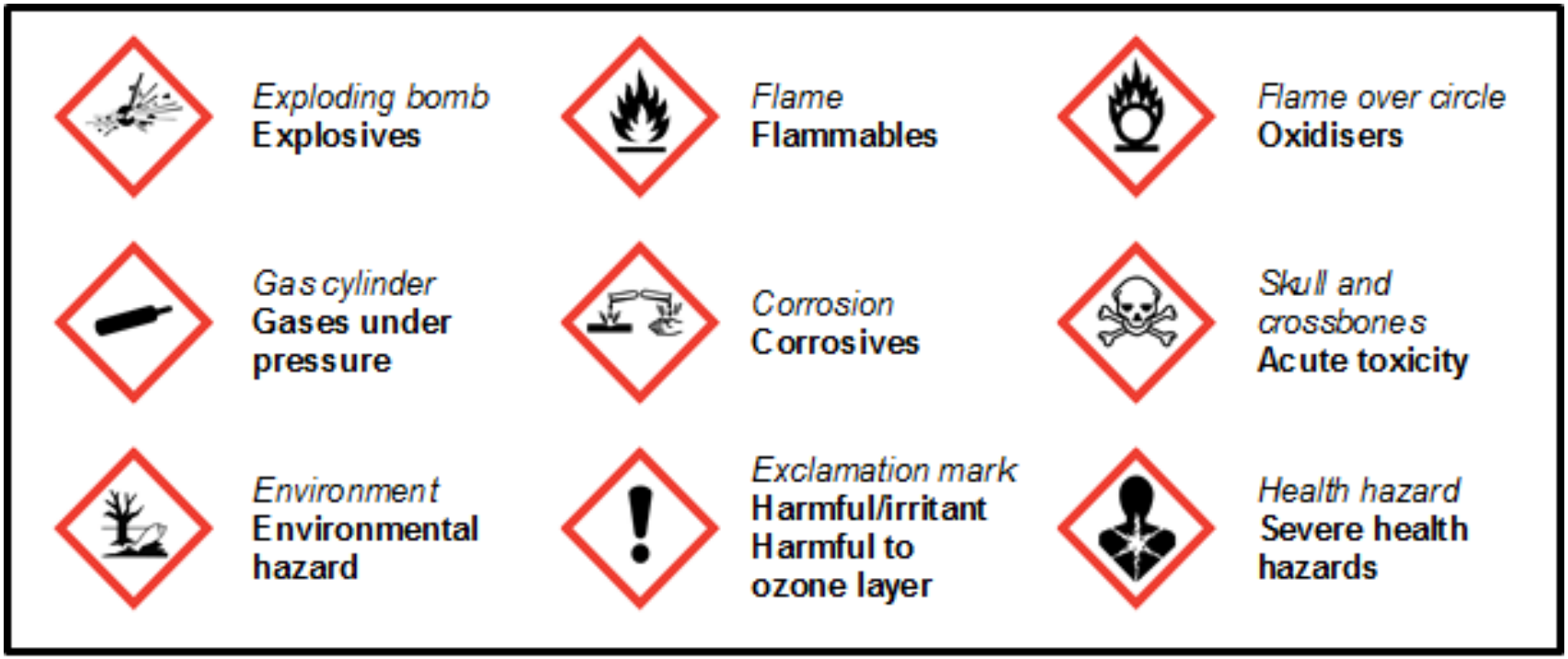
Control of Substances Hazardous to Health Regulations 2002 (COSHH)

Forms:

- Liquids
- Solids
- Dusts & Powders
- Vapours
- Fumes
- Gases

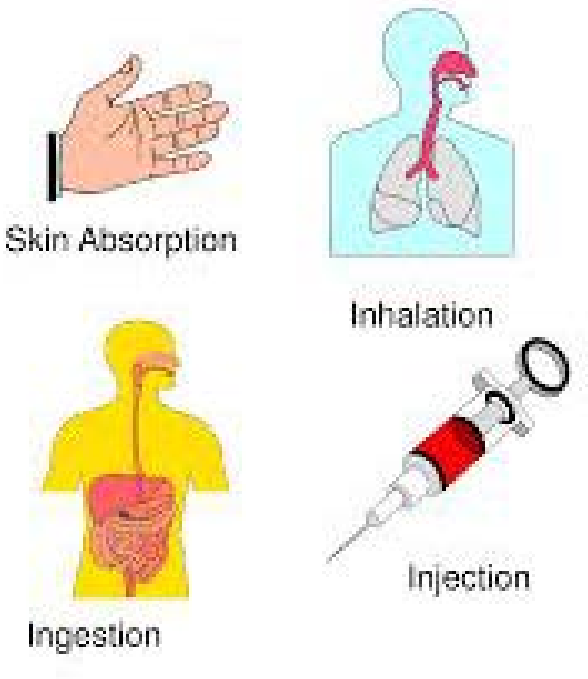
Chemical & Biological Hazards

Classes:



Routes of Entry

1. Inhalation – dust, fumes, gases, viruses
2. Absorption – skin or mucus membranes
3. Injection – forcing through the skin
4. Ingestion – via mouth



COSHH Risk Assessments

1. Identify substances
2. Gather information (Safety Data Sheets)
3. Evaluate
4. Decide on controls
5. Record & Review

Safety Data Sheets include information about health risks, measures to take to minimise, first aid, PPE. It is your duty to read these.

COSHH Risk Assessment

Deciding on Controls:

- Eliminate or find safer alternative
- Use a paste rather than powder
- Change or enclose the process
- Local exhaust ventilation
- Segregation of people from process (fume cupboard)
- Provide PPE equipment

COSHH Risk Assessment

- Reduce the number of worker exposed
- Reduce time exposure (Workplace Exposure Limits WELS)
- Health Surveillance – for high risk substances checks should take place once a year and records must be kept up to 40 years.

PPE

Personal Protective Equipment (PPE)

- Risk assess the work activities
- Identify the hazards to choose PPE
- Select controls for hazards that affect the:
  - Eyes, head, breathing, hands and arms, feet, legs and the body

Noise Risk Controls

- Hearing loss caused by work is preventable, but once your hearing has gone it will not come back. Some 17,000[1] people in the UK suffer deafness, ringing in the ears or other ear conditions caused by excessive noise at work
- The level at which employers must provide hearing protection and hearing protection zones is now **85 decibels** (daily or weekly average exposure) and the level at which employers must assess the risk to workers' health and provide them with information and training is now **80** decibels

Noise Risk Controls

The Control of Noise at Work Regulations 2005

- Co-operate with your employer by using any noise enclosures or acoustic barriers provided to reduce noise
- Wear your hearing protection at all times
- Make sure you receive training and information on the use of PPE
- Health surveillance

Noise Risk Controls

Noise

- Look after your hearing protection, store it properly after use
- Keep your hearing protection clean and don’t stretch the headband
- Make sure the hearing protection seals around your ears
- Make sure earrings, hats or glasses do not interfere with the seal
- Report any damaged hearing protection
- Let your employer know if you are having any hearing difficulties

STF Risk Controls

Slips, trips and falls

- Cleaning procedures for spillages
- Cleaning floors out of hours
- Warning signage displayed
- Barriers around spillages
- Issue non-slip footwear

Musculoskeletal Risk Controls

Display Screen Equipment (DSE) Regulations 1996:

- Adequate breaks away from the screen – 10 minutes every hour
- Suitable & Sufficient Risk Assessments
- Information, Training & Supervision

Risks to health

- Affects users who work with monitors, CCTV screens, numerical key pads etc.
- Work Related Upper Limb Disorders (WRULDs), pains in neck, arms, elbows, wrists, hands, fingers, ‘RSI’
- Fatigue and stress, backache
- Eye strain (not eye damage) and headaches

DSE Risk Controls

Display Screen Equipment

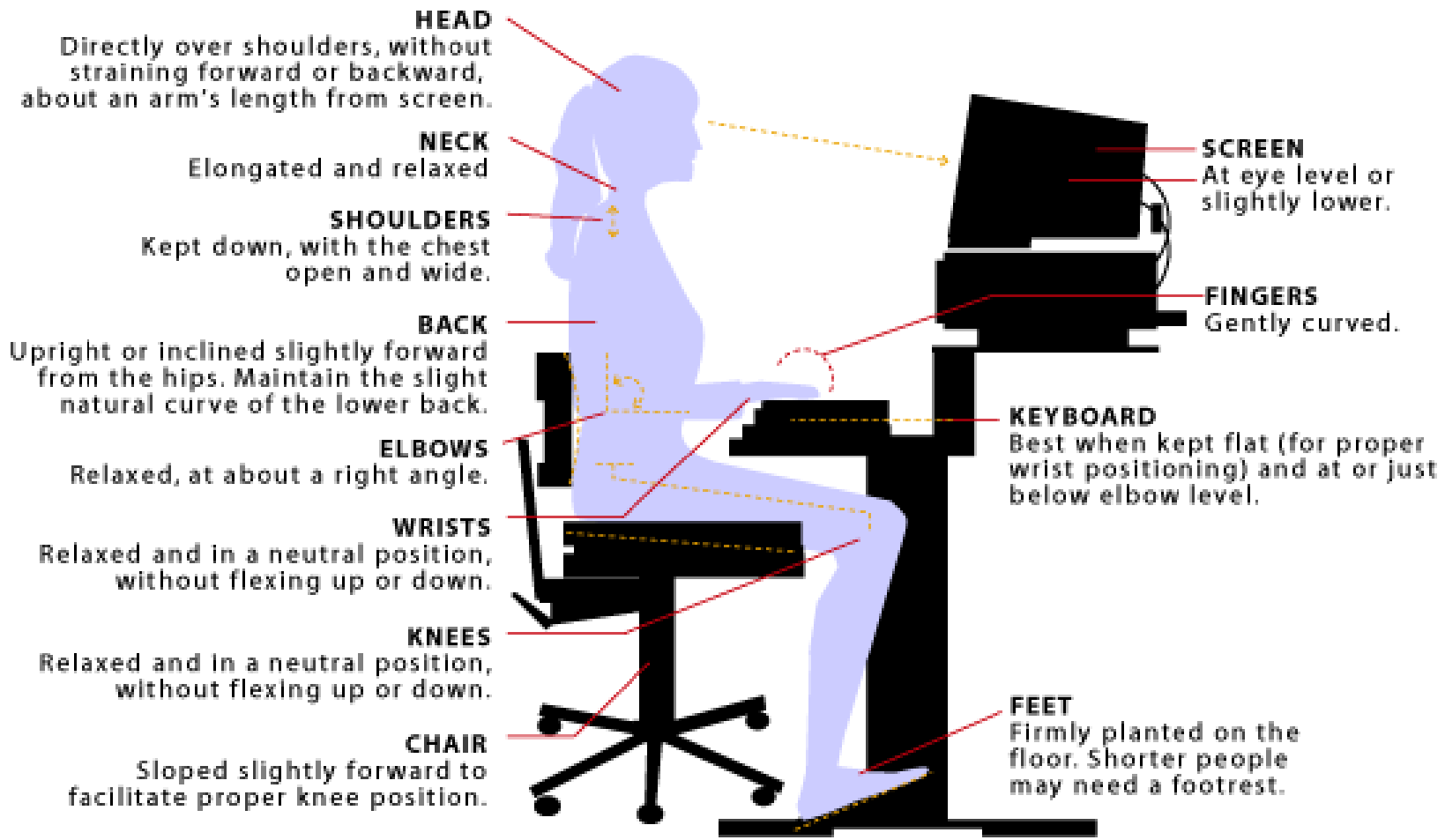
- Assess the risks and reduce by:
  - Completing checklists and make adjustments to workstations, provide user friendly software
  - Provide fully adjustable chairs, screens, keyboards, antiglare screens, footrests if required
  - Position workstations away from reflections
  - Investigate any reports of ‘RSI’

DSE Risk Controls

Display Screen Equipment

- Train DSE users on safe practices:
  - Good posture, how to make own adjustments
  - Avoid repetitive stretching movements
  - Avoid reflections, glare on screen
  - Adjust and clean mouse, keyboard and screen
  - Report any concerns

DSE Risk Controls



Setting up your workstation

DSE Risk Controls

Display Screen Equipment

- Plan changes to activities
  - Make telephone calls, walk over to a colleague to get information
  - Do filing or photocopying, or collect documents from the printer
  - Stretch your position, look away from the screen regularly and blink
  - Take a spell at alternative work

Manual Handling Risk Assessment

Manual handling can involve any load movement by human effort only – lifting, pushing, pulling, carrying or supporting.

Factors to consider:

Task – twisting, reaching, work rate, distances

Individual – physical condition, illness, pregnancy

Load – heavy, bulky, difficult to grasp, unstable

Environment – space, floors, lighting

Manual Handling Risk Controls

- Avoid manual handling if possible
- If unavoidable undertake a risk assessment
- Instigate risk controls and review
- Give employees information on loads
- Remove any obstructions
- Ensure the flooring is suitable
- Avoid lifting over steps and steep ramps

Manual Handling Risk Controls

- Improving any workplace or task lighting
- Wearing PPE that is less restrictive
- Ensuring footwear is suitable
- Assess the individual and reduce risks – physical weaknesses, pregnant workers
- Provide employees with adequate and suitable training
- Safe systems of work

Manual Handling Risk Controls

Manual handling lifting technique

- **Plan the lift –** determine where the load is going and if you need any help, remove any obstructions
- **Position the feet –** place your feet either side of the load in the direction of travel, leading leg forward
- **Adopt a good posture –** bend your knees slowly, straighten your back, lean forward and keep your shoulders and hips facing the same direction

Manual Handling Risk Controls

- **Get a firm grip –** keep your arms within boundary formed by the legs, use a hooked grip with fingers
- **Move the load –** lift the load to waist height close to the body, move slowly and avoid jerky movements
- **Lower the load -** lower the load slowly, keep your back straight, bend the knees, avoid crushing your fingers and put the load down

Manual Handling Training

1. Types of injury
2. Risk Assessment findings
3. Correct use of manually operated load moving equipment
4. Correct use of mechanical aids
5. Correct use of PPE
6. Good housekeeping
7. Good lifting technique

Lifting Operations & Lifting Equipment Regulations 1998 (LOLER)

Equipment for lifting or lowering loads, includes its attachments for anchoring, fixing or supporting it.

- If the equipment lifts people then it must be examined every 6 months
- All lifting accessories must be examined every 6 months
- All other lifting equipment must be examined every 12 months.

Mechanical Lifting Equipment Includes:

- Conveyor belts
- Fork lift trucks
- Cranes
- Lifts
- Hoists
- Pallet trucks
- Cherry pickers

LOLER Employer Responsibilities

Employers shall ensure that every lifting operation is:

- Properly maintained
- Properly planned by competent person
- Supervised
- Carried out safely

If lifting equipment is conductive then it must not be within 15m of overhead power lines.

If non-conductive then it must not be within 9m of overhead power lines.

LOLER Examination & Inspection

When?

- Before first service use, but after installation
- After assembly, before first service or new location
- Where exposed to conditions that may cause deterioration
- After exceptional circumstances have occurred that may have adversely affected the equipment

Work Equipment Risk Controls

Provision and Use of Work Equipment Regulations 1998 (PUWER)

Definition:

Any equipment used by an employee at work, such as hand tools, machines, apparatus, lifting equipment, cleaning, transportation, any other equipment.

Work Equipment Risk Controls

- Eliminate if possible
- Guard dangerous parts of work equipment

1. Fixed – around a fan
2. Adjustable – band saw
3. Interlocking – gates of a lift
4. Trip device – photo-electric systems
5. Two-handed control – lawn mower

Work Equipment Risk Controls

- Information, Instruction, Training & Supervision
- Correct installation
- Emergency stop controls
- Inspections, testing and maintenance
- Suitable warning signs
- Suitable lighting and ventilation
- Risk assessments
- Safe systems of work/permits to work

Work Equipment Risk Controls

Mechanical Machine Hazards

Impact – crushed by moving parts

Cutting – circular saws

Crushing – between a fixed and moving part

Entanglement – clothing, hair caught in moving parts

Entrapment – fingers caught in moving parts

Drawing in – counter rotating parts

Puncture – needle in a sewing machine

Ejection – hit by parts flying out or off machinery

Abrasion – sides of grinding wheel

Shearing – table and blade of a guillotine

Work Equipment Risk Controls

Non Mechanical Hazards

- Vibration
- Noise
- Dust
- Electricity
- Falls
- Manual Handling
- Overturning
- Hot surfaces
- Fire
- Biological
- Chemical
- Access/Egress

Work Equipment Risk Controls

Factors that Increase the Risk:

- Lack of Information, Training & Supervision
- Drugs/alcohol
- Incorrect usage
- Poorly maintained
- Space
- Duration
- Weather
- Fatigue
- Working at Height
- Lighting
- Lack of PPE

Working at Height Controls

Working at Height Regulations 2005

Above or below ground level as soon as a solid surface or stairwell has been left, where you can fall off or into somewhere, where an accident or injury can occur.

1. Avoid if possible
2. Provision of a properly constructed working platform, complete with toe boards/guardrails
3. If not practicable, suspension equipment used
4. Collective fall arrest equipment
5. Where not practicable, individual restrains
6. Only when no other measures are practicable should ladders and step ladders be used

Working at Height Controls

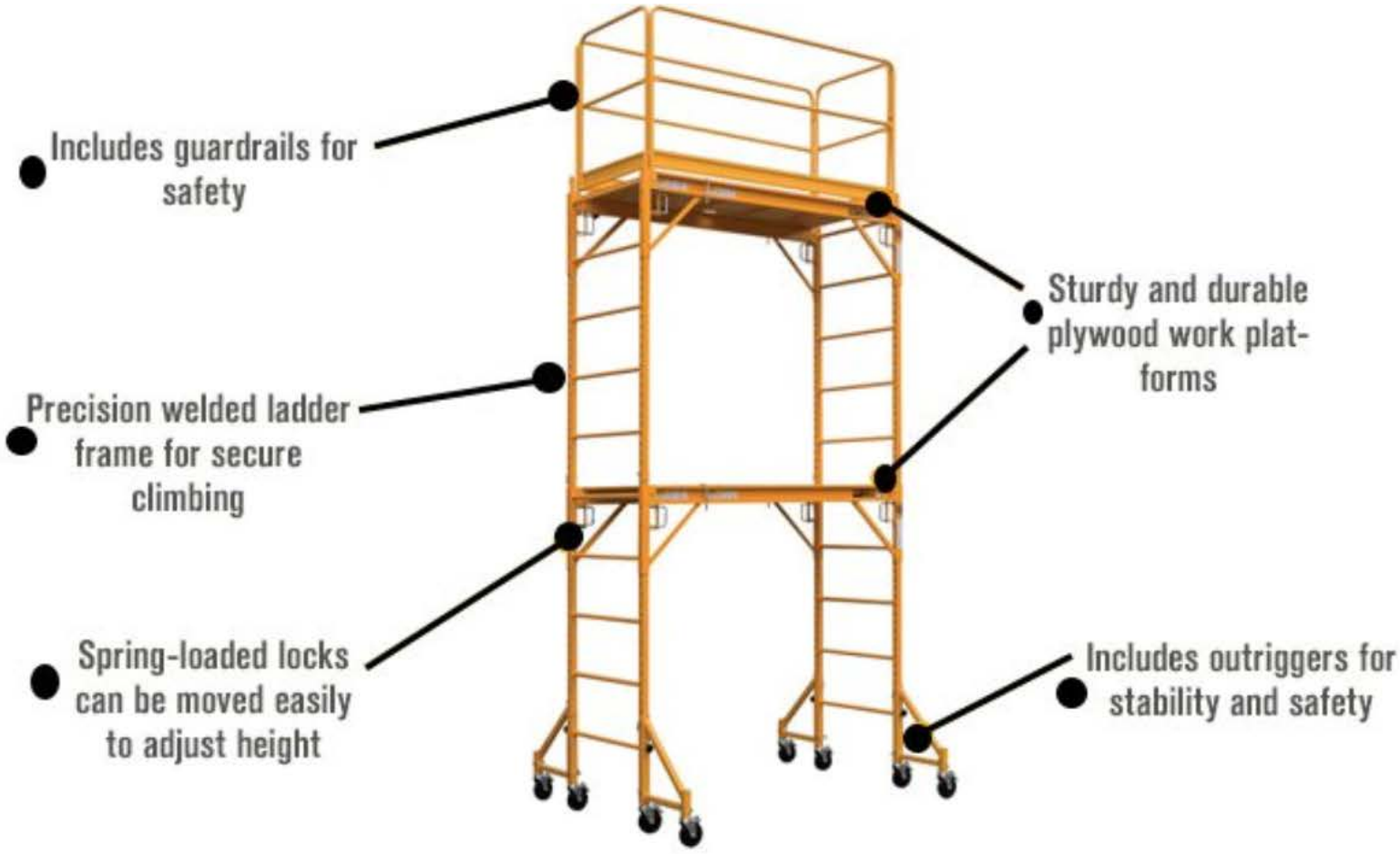
Ladder Safety

- Aluminium ladders are light but should not be used in high winds or near electricity
- Timber ladders need regular inspection for damage and should not be painted
- Ladders need to be stable in use with a safe inclination (1 in 4)
- Foot of ladder should be tied to a rigid support
- Workers must be trained
- Over reaching must be eliminated
- Short term duration only
- Not suitable for carrying heavy loads
- Rest against a solid surface

Working at Height Controls
Scaffold Safety

- Guard rails (minimum 950mm from platform)
- No unprotected gap greater than 470mm
- Correct platform width (minimum 600mm)
- Harness warn during erection and dismantling
- Erected by a qualified scaffolder
- Regular inspections
- Protected from traffic routes
- No tipping or tripping hazards
- Public protected at all times

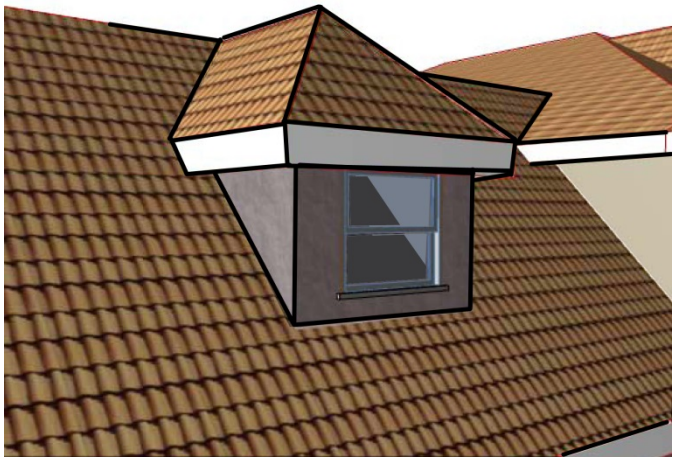
Working at Height Controls
Scaffold Safety



Working at Height Controls
Roof Work

Hazards:

- Fragile roofing materials
- Exposed edges
- Unsafe access equipment
- Fragile roof lights
- Overhead obstructions
- Presence of asbestos
- Manual Handling



Working at Height Controls
Roof Work

Fragile rooves can be caused by:

- General deterioration
- Corrosion
- Quality of original installation and selection of materials
- Thermal and impact damage
- Weather damage
- Deterioration of supporting structure

Working at Height Controls
Roof Work

Controls:

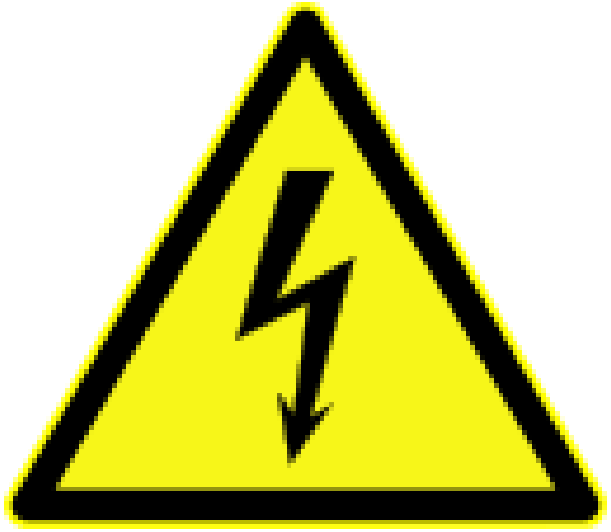
- Risk assessments and method statements
- Suitable means of access equipment
- Suitable barriers, guard rails or covers
- Safe means of getting material to roof
- Good housekeeping
- Information, Training & Supervision
- Warning signs
- COSHH assessments

Electrical Safety

The flow of electrons through conductive materials.

Hazards:

- Direct – exposed live conductors
- Indirect – equipment becomes live
- Electric shock
- Heart fibrillations
- Death
- Burns
- Explosions
- Fires



Electrical Safety Controls

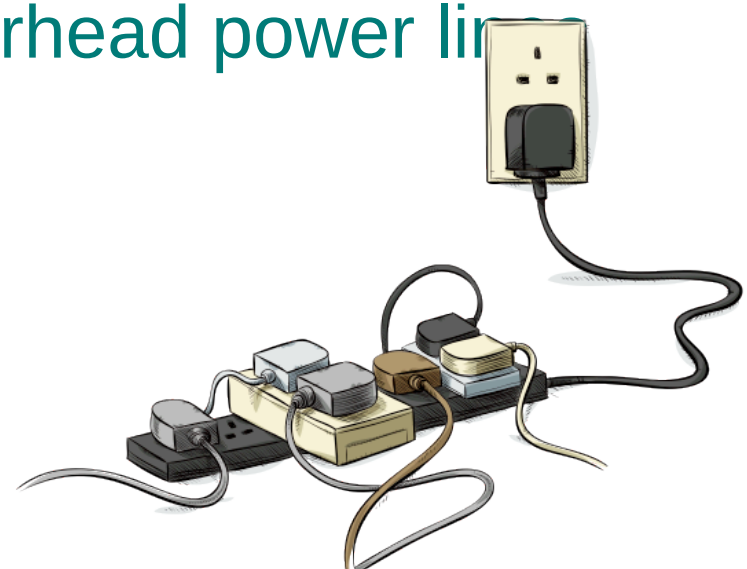
- PAT Testing
- Limited access
- Insulation/shielding live parts
- IITS
- PPE
- Trip devices – fuses, residual current devices RCDs (reduce/eliminates the effects of electric shock)

Electrical Safety Controls

- Visually inspect equipment for damage before use
- Report any damaged equipment to your supervisor
- Always uncoil extension leads
- Never work in wet surroundings
- Use air, hydraulic or hand tools preferably
- Use portable battery equipment as safest alternative

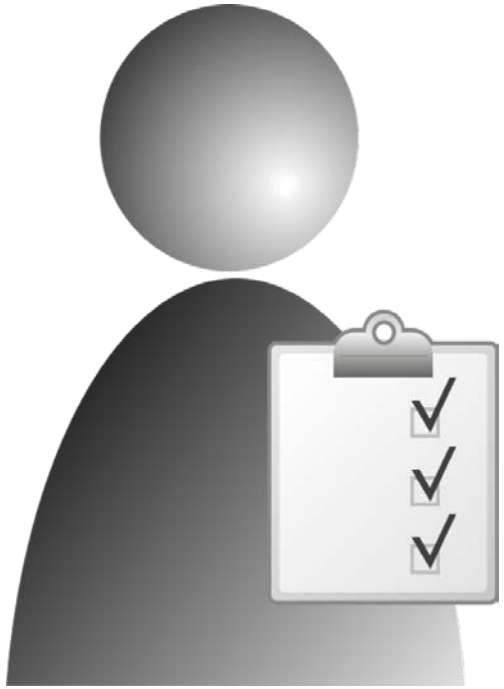
Electrical Safety Controls

- Don’t overload socket-outlets
- Reduce the voltage to 110 volts by using an adaptor
- Do not attempt to repair any electrical equipment unless qualified to do so
- Avoid working close to overhead power lines



User Checks Include:

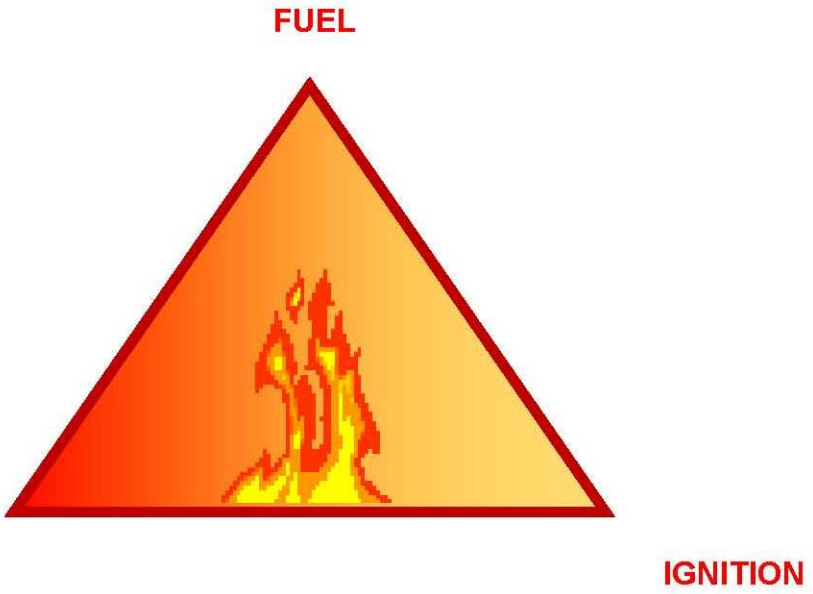
- PAT labels
- Bare wires
- Burn marks
- Cable length
- Plug condition
- Outer casing
- Cable cover undamaged



Fire Risk Controls

Regulatory Reform (Fire Safety) Order 2005

For a fire to start, three things are needed:



If one of the elements is missing, a fire cannot start.

Avoid the three elements coming together!

Fire Risk Controls

Fire precautions

- Alarm systems installed for early detection
- Call points linked to sounders
- Automatic smoke and heat detectors

- Emergency lighting in escape routes and final exits, can be continuous

Fire Risk Controls

Fire precautions

- Fire extinguishers or hose reels at suitable points in the building
- Extinguishers inspected every month and tested annually
- Emergency lighting tested and maintained at regular intervals
- Fire drills annually

Fire Risk Controls

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Types of fire extinguishers

Type (Fire / Extinguisher)	CLASS A **Combustible materials** (e.g. paper & wood)	CLASS B **Flammable liquids** (e.g. paint & petrol)	CLASS C **Flammable gases** (e.g. butane and methane)	CLASS D **Flammable metals** (e.g. lithium & potassium)	Electrical **Electrical equipment** (e.g. computers & generators)	CLASS F **Deep fat fryers** (e.g. chip pans)	Comments
Water	✓	✗	✗	✗	✗	✗	Do not use on liquid or electric fires
Foam	✓	✓	✗	✗	✗	✗	Not suited to domestic use
Dry Powder	✓	✓	✓	✓	✓	✗	Can be used safely up to 1000 volts
CO2	✗	✓	✗	✗	✓	✗	Safe on both high and low voltage
Wet Chemical	✓	✗	✗	✗	✗	✓	Use on extremely high temperatures

Fire Risk Controls

Minimising fuel sources

- Use small quantities of flammable liquids
- Store flammable substances externally in fire-resisting stores
- Good housekeeping, minimising waste
- Keep all means of entry and exit clear of obstructions

Fire Risk Controls

Reducing ignition sources

- Don’t overload any electrical equipment
- Smoking is prohibited in all workplaces
- Operate a Permit to Work for ‘hot work’ e.g. welding, metal grinding
- Never cover the top of radiant heaters

Fire Risk Controls

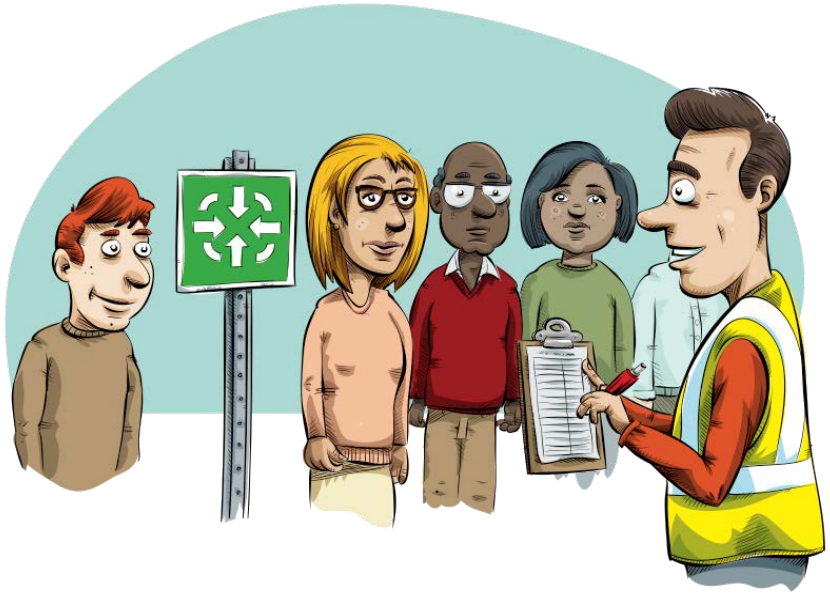
Reducing oxygen sources

- Close doors, windows and other openings
- Shut down ventilation systems
- Do not store oxidising materials near to any heat source or flammable materials
- Store oxygen cylinders in a well ventilated area

Fire Risk Controls

Co-operating with your employer

- Attend fire awareness training
- Take part in all fire drills
- Report any concerns, i.e. damaged plant or equipment
- Take care for your own health and safety



Transport Safety & Risk Controls

Hazards in Vehicle Operation:

- People struck, run over or crushed
- Vehicles colliding with each other or plant/equipment
- Falling from vehicles – people and objects
- Communication problems

Transport Safety & Risk Controls

Causes of these hazards:

- Poor working practices
- Lack of safety checks
- Defective maintenance, steering, brakes
- Poor road surfaces
- Overloading
- Inadequate IITS

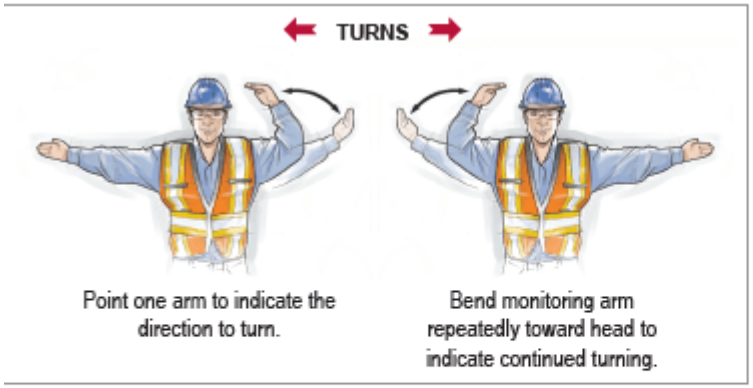
Transport Safety & Risk Controls

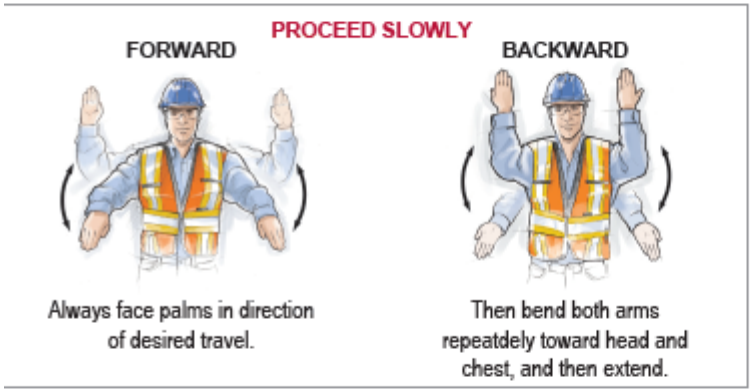
Controls:

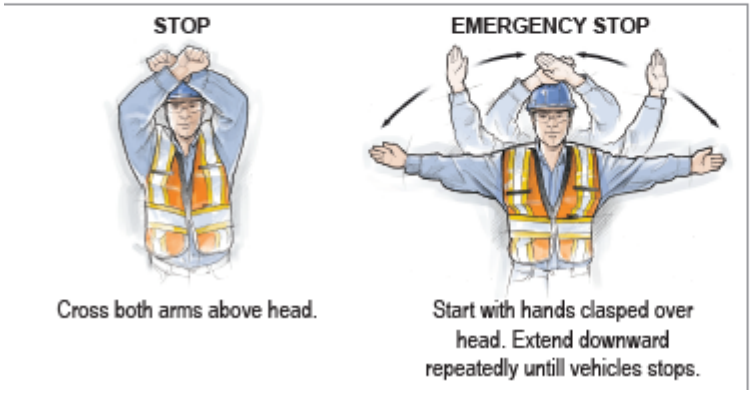
- Roads wide enough for largest vehicle
- One way systems where necessary
- Avoid routes close to vulnerable plant
- Avoid sharp/blind bends
- Use mirrors
- Sensible speed limits
- Use speed bumps
- Display prominent signs

Transport Safety & Risk Controls

Hand Signals for Directing Vehicles – must be trained







Transport Safety & Risk Controls

Hazards for Pedestrians:

- Reversing of vehicles
- Roadways too narrow
- Insufficient parking
- Roadways poorly marked out
- Unfamiliar signs
- Lack of crossing points and barriers
- Poor visibility
- Speed limits not enforced

Transport Safety & Risk Controls

Controls for Pedestrians:

- Separate routes
- Barriers/rails at entrances/exits
- Crossings
- Sign posting
- Separate doors with vision panels
- Sufficient lighting

Violence at Work Controls

- Access controls (swipe cards, security locks)
- CCTV
- Alarms –
  - Intruder alarms
  - Panic alarms
  - Personal alarms
- Radios and pagers
- Mobile phones

Psychological Health Hazards

Stress is an adverse reaction to external pressure. Effects of stress include:

- Anxiety
- Irritability
- Poor concentration
- Increased heart rate
- Sweating
- Headaches
- Skin rashes

Psychological Health Hazards

Controls:

- Changes in management culture
- Early identification
- Job redesign
- Sympathetic policy
- Team building
- Regular breaks
- Work-life balance
- Counselling
- Supervision

Quiz 3

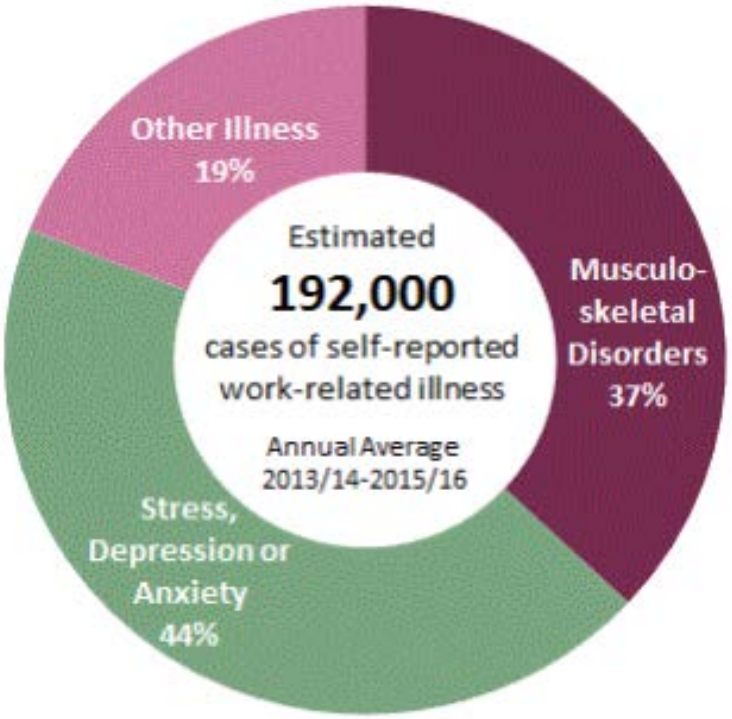
1. What is the definition of a hazard?
2. What is the definition of a risk?
3. What should a risk assessment be?
4. What are the 5 steps of Risk Assessment?
5. What is the Hierarchy of Control?
6. What are the three elements in the fire triangle?

Session 4

Procedures for Responding to Accidents and Incidents in the Workplace

HSE Statistics for 2015 to 2016

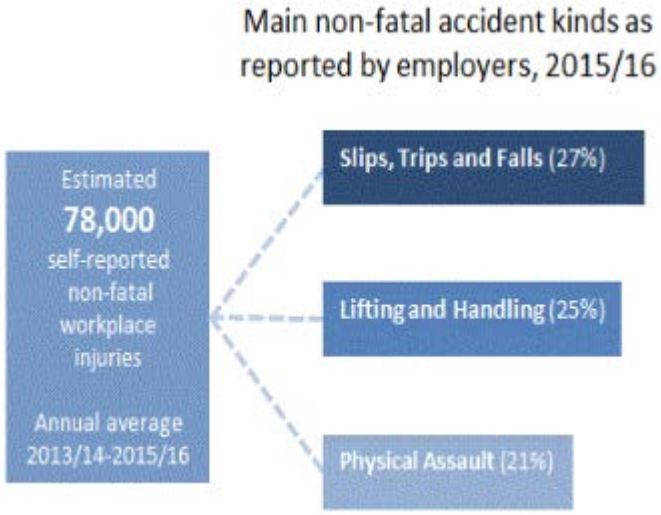
- **1.3 million** working people suffering from a work-related illness
- **2,515** mesothelioma deaths due to past asbestos exposures (2014)
- **144** workers killed at work
- **72,702** other injuries to employees reported under RIDDOR
- **621,000** injuries occurred at work according to the Labour Force Survey
- **30.4 million** working days lost due to work-related illness and workplace injury
- **£14.1 billion** estimated cost of injuries and ill health from current working conditions (2014/15)



Health and Social Care sector

Each year in the Health and Social Care sector around
5% of workers suffer from an illness they believe to be work-related

and 2% of workers sustain a work-related injury



Leading to


4.8 million working days lost
Annual average 2013/14-2015/16
2.1 million days
Work-related Stress, Depression or Anxiety
1.2 million days
Work-related Musculoskeletal Disorders
0.6 million days
Workplace injury
0.9 million days
Other work-related illness conditions

Causes of Accidents / Ill-Health

Job factors

- Poor workstation design
- Noisy environment
- Constant interruptions
- Unpleasant working conditions
- Poor housekeeping

Causes of Accidents / Ill-Health

Individual factors

- Low skill level
- Bored, lack of interest
- No promotion prospects
- Personal or medical reasons
- Over confidence

Causes of Accidents / Ill-Health

Organisational factors

- Poorly planned work
- Poor communication
- No safe system of work
- Lack of supervision

Actions Following an Incident

First aid - help given to a sick or injured person until full medical treatment is available.

- Normally by the first aider or assisted by an appointed person
- First aid supplies should always be available

Actions Following an Incident

Your priorities

- Not to put yourself in danger
- Switch off any machinery, electrics etc.
- Shout for help, summon the first aider
- Send for ambulance without delay

Actions Following an Incident

First aid supplies (low hazard workplace)

- 20 sterile plasters, 2 sterile eye pads
- 4 triangular bandages
- 2 large sterile un-medicated dressings
- 6 medium sterile un-medicated dressings
- 1 pair of disposable gloves
- A sterile eye wash

Actions Following an Incident

Record keeping

- The time and date of the incident
- Where the incident took place
- Name of the injured employee
- Details of the nature of injury
- First aid treatment administered
- Did they return to work? Go home? Were they sent to hospital? If not, notify next of kin
- First aider's name and signature

Why Investigate an Accident?

- Eliminate the cause & future occurrence
- Determine the direct & indirect causes of an accident
- Identify any defects in risk assessments
- Define any corrective or preventative actions
- Legal requirement
- Good practice
- Identifies training needs
- Defence for a civil claim
- Prevents increased insurance premiums

How to Investigate an Incident

- Scene management and scene assessment (secure the scene, make sure it is safe for investigators to do their job).
- Witness management (provide support, limit interaction with other witnesses, interview).
- Investigate the incident, collect data.
- Analyse the data, identify the root causes.
- Report the findings and recommendations.
- Develop a plan for corrective action.
- Implement the plan and evaluate
- Make changes for continual improvement.

How to Investigate an Incident

Root Cause Analysis:

Is a method of problem solving used for identifying the **root causes** of faults or problems.

Root Cause Analysis Example

The Piper Alpha disaster which **killed 167 workers** on 6 July 1988 off the coast of Aberdeen is the world's deadliest ever oil rig accident.
The day of the disaster, the pressure safety valve on one of Piper Alpha's two large compressors was removed for an overhaul.
At 6pm, with the job unfinished, the tube was temporarily sealed with a plate and the engineer completed a form stating that compressor A was not ready and should not be switched on.
At 9.45pm, the platform's second compressor stopped and could not be restarted. Failing to find the paperwork on compressor A's safety valve because it was filed in a separate folder, operators restarted compressor A. The gas leaking from the system found an ignition source and exploded around 10pm. A second blast followed 20 minutes later as the riser on the gas pipeline from Tartan — which had not shut down production — burst.

RIDDOR

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013

Fatalities

- Reportable by quickest means possible
- Must submit the 2508 form within 10 days
- If there is an over 7 day sickness then this must be reported within 15 days *(used to be 3 days in 2012)*
- Reportable if death occurs within 1 years of the incident

RIDDOR

Specific Injuries:

- Fractures, excluding fingers, thumbs & toes
- Amputation
- Burns – more than 10% of body
- Scalping
- Loss of Consciousness
- More than 24 hours in hospital
- Member of public taken into hospital for treatment

RIDDOR

Disease & Ill Health

- HIV
- Hepatitis
- Dermatitis
- Lymes Disease
- Legionnaires Disease
- Weils Disease
- Musculoskeletal
- Asbestosis

RIDDOR

Dangerous Occurrences

A specified near miss that could lead to a serious injury of loss of life.

- Collapse of scaffolding
- Overturning or failure of load bearing part on lifting equipment
- Explosions/fire resulting in suspension of normal working for 24hrs

Over 7 Day Injuries

Must be notified within 15 days of the incident.

IS IT A RIDDOR???

1. **Our receptionist was injured when she was hit at work. The assailant was her partner and the argument was about their personal life, not work. Is this reportable?**

No.

Although acts of non-consensual physical violence to a person at work are included in the definition of an accident, the accident must be work-related. This was not, it was a personal matter.

IS IT A RIDDOR???

2. **One of our staff was verbally abused. Although she was not physically hurt, she was shaken up. She took two weeks off sick because of this incident.**

No.

RIDDOR only requires you to report deaths and physical injuries in relation to accidents.

IS IT A RIDDOR???

3. **During the construction of a concrete wall, the timber structure built to contain the wet concrete and reinforcement during the concrete pour collapses. There are no injuries. Is this reportable?**

YES.

All failures of false works are reportable.

IS IT A RIDDOR???

4. **A customer is accidentally scalded while being served hot soup by staff and is taken to hospital for treatment. Is this reportable?**

YES.

The accident arose from a work activity – serving soup

Arrangements for Emergencies

The **business continuity planning** (BCP) is the creation of a strategy through the recognition of threats and risks facing a company, with an eye to ensure that personnel and assets are protected and able to function in the event of a disaster.

A BCP could include strategies for dealing with:

- Major traffic accidents
- Flooding, severe weather
- Pandemic Flu
- Terrorism
- Fire/explosions
- Major IT failure

Arrangements for Emergencies

- Emergency procedures must be appropriate to the building and service.
- Arrangements for young and the disabled
- Isolation of gas, machinery, power supply
- Competent persons appointed e.g. fire marshals – fire wardens
- Liaise with emergency services

Arrangements for Emergencies

Procedures for first aid

- Quantities of first aid supplies
- Adequate number of trained first aiders or appointed persons
- Provision of information to employees
- Signs for first aid treatment

Quiz 4

1. What is your first priority if you witness an incident?
2. What are some reasons to investigate an incident?
3. Name some specific injuries reportable under RIDDOR
4. What is the reporting deadline for an over 7 day injury?

Session 5

Reviewing & Monitoring Health & Safety Systems

What is the Purpose of Monitoring?

- Assess how health & safety systems are working
- Assess effectiveness of aims, objectives & arrangements
- Provides making of recommendations for a health & safety review.
- Legal requirements
- Staff Morale

Reactive Monitoring

- Review of accident and ill health reports
- Review of complaints
- Non-conformances
- Fines, compensation and enforcements

Proactive Monitoring

- Active monitoring before incidents occur
- Observation of working practices
- Workplace inspections
- Audits
- Risk assessments
- Training

Health & Safety Audits

The independent collections of information of the efficiency, effectiveness and reliability of the health and safety management system measured against specific standards.

They check the following are in place:

- Appropriate management arrangements
- Adequate risk control systems exist and implemented
- Appropriate documents and records
- Appropriate workplace precautions

They should take place at regular intervals for continuous improvement.

Internal Audits

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Advantages

- Cheaper
- Good knowledge
- Regular audits
- Familiar
- Systems in place

Disadvantages

- Biased
- Interruptions
- Distractions
- Pressure
- Perceptions
- Audit training

External Audits

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VISION, VOICE AND PRACTICE

Advantages

- Larger scale
- Unbiased
- New ideas
- Authority
- Quality of reports
- Independent
- Competent

Disadvantages

- Unfamiliar
- Expensive
- Target meeting
- Own agenda

Communicating Monitoring

All forms of monitoring, whether it be proactive or reactive must be communicated to **all** employees and safety representatives.

Revision

Exam

Duration: 90 minutes

45 Multiple choice questions

Pass score: 30/45